Appendix A

NOAA Land Cover Classification Definitions (ArcGIS Data)

Coastal Change Analysis Program (C-CAP)

NOAA Office for Coastal Management

Regional Land Cover Classification Scheme

The following information provides a description of land cover classes used with NOAA's Coastal Change Analysis Program (C-CAP) Regional land cover products. These classes have been targeted as important indicators of coastal ecosystems and have been identified as features that can be consistently and accurately derived primarily through remote-sensing means.

These descriptions have been revised from those originally published in *NOAA Coastal Change Analysis Program (C-CAP): Guidance for Regional Implementation*.



Unclassified

Background (0) – areas within the image file limits but containing no data values.

Unclassified (1) – areas in which land cover cannot be determined; these include clouds and deep shadow.

Developed Land

Developed, High Intensity (2) – contains significant land area and is covered by concrete, asphalt, and other constructed materials. Vegetation, if present, occupies less than 20 percent of the landscape. Constructed materials account for 80 to 100 percent of the total cover. This class includes heavily built-up urban centers and large constructed surfaces in suburban and rural areas with a variety of land uses.

Developed, Medium Intensity (3) – contains areas with a mixture of constructed materials and vegetation or other cover. Constructed materials account for 50 to 79 percent of total area. This class commonly includes multi- and single-family housing areas, especially in suburban neighborhoods, but may include all types of land use.

Developed, Low Intensity (4) – contains areas with a mixture of constructed materials and substantial amounts of vegetation or other cover. Constructed materials account for 21 to 49 percent of total area. This subclass commonly includes single-family housing areas, especially in rural neighborhoods, but may include all types of land use.

Developed, Open Space (5) – contains areas with a mixture of some constructed materials, but mostly managed grasses or low-lying vegetation planted in developed areas for recreation, erosion control, or aesthetic purposes. These areas are maintained by human activity such as fertilization and irrigation, are distinguished by enhanced biomass productivity, and can be recognized through vegetative indices based on spectral characteristics. Constructed surfaces account for less than 20 percent of total land cover.

Agricultural Land

Cultivated Crops (6) – contains areas intensely managed for the production of annual crops. Crop vegetation accounts for greater than 20 percent of total vegetation. This class also includes all land being actively tilled.

Pasture/Hay (7) – contains areas of grasses, legumes, or grass-legume mixtures planted for livestock grazing or the production of seed or hay crops, typically on a perennial cycle and not tilled. Pasture/hay vegetation accounts for greater than 20 percent of total vegetation.

Grassland

Grassland/Herbaceous (8) – contains areas dominated by grammanoid or herbaceous vegetation, generally greater than 80 percent of total vegetation. These areas are not subject to intensive management such as tilling but can be utilized for grazing.

Forest Land

Deciduous Forest (9) – contains areas dominated by trees generally greater than 5 meters tall and greater than 20 percent of total vegetation cover. More than 75 percent of the tree species shed foliage simultaneously in response to seasonal change.

Evergreen Forest (10) – contains areas dominated by trees generally greater than 5 meters tall and greater than 20 percent of total vegetation cover. More than 75 percent of the tree species maintain their leaves all year. Canopy is never without green foliage.

Mixed Forest (11) – contains areas dominated by trees generally greater than 5 meters tall, and greater than 20 percent of total vegetation cover. Neither deciduous nor evergreen species are greater than 75 percent of total tree cover. *Both coniferous and broad-leaved evergreens are included in this category.*

Scrub Land

Scrub/Shrub (12) – contains areas dominated by shrubs less than 5 meters tall with shrub canopy typically greater than 20 percent of total vegetation. This class includes tree shrubs, young trees in an early successional stage, or trees stunted from environmental conditions.

Barren Land

Barren Land (20) – contains areas of bedrock, desert pavement, scarps, talus, slides, volcanic material, glacial debris, sand dunes, strip mines, gravel pits, and other accumulations of earth material. Generally, vegetation accounts for less than 10 percent of total cover.

Tundra (24) – is categorized as a treeless region beyond the latitudinal limit of the boreal forest in pole-ward regions and above the elevation range of the boreal forest in high mountains. In the United States, tundra occurs primarily in Alaska.

Perennial Ice/Snow (25) – includes areas characterized by a perennial cover of ice and/or snow, generally greater than 25 percent of total cover.

Palustrine Wetlands

Palustrine Forested Wetland (13) – includes tidal and nontidal wetlands dominated by woody vegetation greater than or equal to 5 meters in height, and all such wetlands that occur in tidal areas in which salinity due to ocean-derived salts is below 0.5 percent. Total vegetation coverage is greater than 20 percent.

Palustrine Scrub/Shrub Wetland (14) – includes tidal and nontidal wetlands dominated by woody vegetation less than 5 meters in height, and all such wetlands that occur in tidal areas in which salinity due to ocean-derived salts is below 0.5 percent. Total vegetation coverage is greater than 20 percent. *Species present could be true shrubs, young trees and shrubs, or trees that are small or stunted due to environmental conditions.*

Palustrine Emergent Wetland (Persistent) (15) – includes tidal and nontidal wetlands dominated by persistent emergent vascular plants, emergent mosses or lichens, and all such wetlands that occur in tidal areas in which salinity due to ocean-derived salts is below 0.5 percent. Total vegetation cover is greater than 80 percent. *Plants generally remain standing until the next growing season.*

Estuarine Wetlands

Estuarine Forested Wetland (16) – includes tidal wetlands dominated by woody vegetation greater than or equal to 5 meters in height, and all such wetlands that occur in tidal areas in which salinity due to ocean-derived salts is equal to or greater than 0.5 percent. Total vegetation coverage is greater than 20 percent.

Estuarine Scrub/Shrub Wetland (17) – includes tidal wetlands dominated by woody vegetation less than 5 meters in height, and all such wetlands that occur in tidal areas in which salinity due to ocean-derived salts is equal to or greater than 0.5 percent. Total vegetation coverage is greater than 20 percent.

Estuarine Emergent Wetland (18) – Includes all tidal wetlands dominated by erect, rooted, herbaceous hydrophytes (excluding mosses and lichens). These wetlands occur in tidal areas in which salinity due to ocean-derived salts is equal to or greater than 0.5 percent and are present for most of the growing season in most years. Total vegetation cover is greater than 80 percent. *Perennial plants usually dominate these wetlands.*

Barren Land

Unconsolidated Shore (19) – includes material such as silt, sand, or gravel that is subject to inundation and redistribution due to the action of water. Substrates lack vegetation except for pioneering plants that become established during brief periods when growing conditions are favorable.

Water and Submerged Lands

Open Water (21) – includes areas of open water, generally with less than 25 percent cover of vegetation or soil.

Palustrine Aquatic Bed (22) – includes tidal and nontidal wetlands and deepwater habitats in which salinity due to ocean-derived salts is below 0.5 percent and which are dominated by plants that grow and form a continuous cover principally on or at the surface of the water. These include algal mats, detached floating mats, and rooted vascular plant assemblages. Total vegetation cover is greater than 80 percent.

Estuarine Aquatic Bed (23) – includes tidal wetlands and deepwater habitats in which salinity due to ocean-derived salts is equal to or greater than 0.5 percent and which are dominated by plants that grow and form a continuous cover principally on or at the surface of the water. These include algal mats, kelp beds, and rooted vascular plant assemblages. Total vegetation cover is greater than 80 percent.

Appendix B

Standard Operating Procedure for ArcGIS Impervious Cover Analysis

2.4 IMPERVIOUS SURFACE SOP AND TABLE

Table 2.4 Impervious Surface Area SOP and Tables

STANDARD OPERATING PROCEDURE
GLRI
CURRENT IMPERVIOUS COVER PER SUB-BASIN

BY: LISA MATTHIES-WIZA

DATE: JUNE 30, 2013

Problem: Determine the Current Impervious Cover for each sub-basin in the Niagara River Watershed

References:

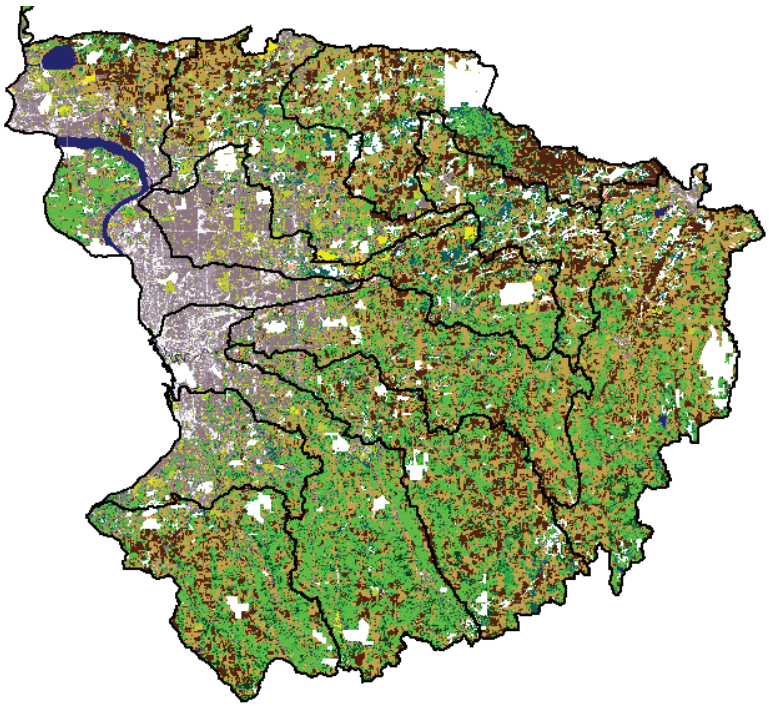
- ***NOAA Coastal Services Center Impervious Surface Analysis Tool (ISAT) for ArcGIS 10.x (Jan. 2013)***
- ***A User's Guide to Watershed Planning in Maryland, CH4***

Step 1: Large areas of known "unbuildable land" are subtracted from the watershed area.

Datasets required:

- 2005 NOAA LULC
- Protected Lands layer previously created for the Niagara River watershed
- Niagara River watershed boundary

1. Use the ArcGIS erase tool to remove the Protected Land layers from the watershed boundary layer
2. Use the new layer with Spatial Analyst 'Extract by Mask' tool with the LULC layer to create a new LULC layer that has the protected lands layer removed from it.



Step 2: The current land use distribution for the remaining buildable portions of the watershed are multiplied by impervious cover coefficients (ICC) to yield a provisional estimate of current IC.

3. The NOAA ISAT tool is used to calculate the percentage of impervious surface area within a user-specified area, and apply impervious surface coefficients to land cover data in its calculation.
Datasets required:

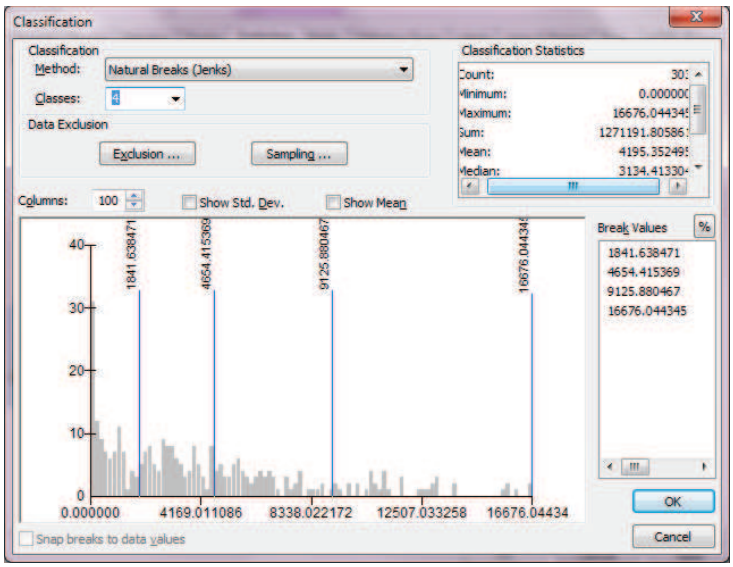
- USGS Hydrologic Units – sub-basin polygons of the Niagara River watershed
- NOAA 30m Land Use/Land Cover, 2005
- NOAA 30m Percent Developed Impervious Cover, 2005
- **Impervious Cover Coefficients**. *What is the Impervious Cover Coefficient? This number represents the percentage of land cover type that would be impervious in a HIGH, MEDIUM, and LOW population density area*
- Population statistics layer – U.S. Census Tracts 2010 population (http://www.census.gov/geo/maps-data/data/tiger-data.html)

4. ArcGIS 10x tool downloaded and used: NOAA ISAT for ArcGIS 10.x (http://www.csc.noaa.gov/digitalcoast/tools/isat)

5. Calculate the Impervious Cover Coefficient:
    - First, calculate population density for the census tract data: population per square mile by census tract:
        - Create a 'MILES' field in the census tract attribute table
        - Use calculate geometry to calculate the area of each census tract
        - Create a numeric field called pop_dens
        - Use the Field Calculator to divide Total 2010 Population by MILES to calculate Population Density
            i. Average 2010 Population in Niagara River Watershed: 4195 people/sq mile

        - In the Properties-->Symbology tab, classify by Natural Breaks, in four classes to determine Low, Medium, and High populations:

          LOW population : < 1842
          MEDIUM population: 1843 9126
          HIGH populations: > 9126



–

6. Following the tutorial, use the Spatial Analyst Zonal Statistics tool to determine the Mean percentage of impervious surface by land cover in High, Medium, and Low areas:

Value	LCName	High	Med	Low
0	Unclassified	0.00	0.00	0.00
2	Developed High Intensity	86.32	81.00	80.02
3	Developed Medium Intensity	62.78	56.92	56.16
4	Developed Low Intensity	31.06	27.63	27.32
5	Developed Open Space	10.17	11.69	12.11
6	Cultivated Crops	3.16	0.93	0.94
7	Pasture/Hay	1.74	0.98	1.01
8	Grassland/Herbaceous	2.50	2.67	2.70
9	Deciduous Forest	1.26	0.53	0.52
10	Evergreen Forest	5.77	0.55	0.44
11	Mixed Forest	2.67	0.69	0.66
12	Scrub/Shrub	1.99	0.90	0.92
13	Palustrine Forested Wetland	0.91	0.82	0.88
14	Palustrine Scrub/Shrub Wetland	4.12	3.87	4.00
15	Palustrine Emergent Wetland	5.56	3.31	3.36
19	Unconsolidated Shore	28.24	17.09	16.07
20	Bare Land	15.62	9.54	9.27
21	Open Water	0.77	1.23	1.32
22	Palustrine Aquatic Bed	9.17	7.81	8.21

Step 3: The contribution of impervious cover from existing freeways and limited access arterial roads is calculated based on their length and width, and incorporated into the IC estimate.

7. Generate a polygon layer of roads in the Niagara River Watershed
    - Datasets required:
        i. CSCIC Roads line layer of the watershed
        ii. FCC (Feature Class Code) in the attribute table denotes each record's road type. The FCC code descriptions can be found here: http://proximityone.com/tgrcfcc.htm
    - Determine the general width of each FCC road class in the project area.
        - Reference: "Highway Standards for Low-Volume Roads in NYS" 2009.
        - http://www.clrp.cornell.edu/PDF/Hwy_Standards_LVRNY_09-09.pdf
            i. MEDIANS : minimum width, 10ft
            ii. SHOULDERS: minimum width, 2ft per side
            iii. STANDARD LANE: minimum width, 12ft
        - Generate a buffer polygon layer for each FCC road class. Use the Dissolve Type option of 'ALL' for each buffer.
        - Merge all resulting buffer layers (using the dissolve ALL option again) to create one polygon layer of road widths.

Road Classes in the Niagara River Watershed	Width (ft)
A11 Primary road with limited access or interstate highway, unseparated	52
A15 Primary road with limited access or interstate highway, separated	62
A21 Primary road without limited access, US highways, unseparated	52
A25 Primary road without limited access, US highways, separated	62
A31 Secondary and connecting road, state highways, unseparated	28
A35 Secondary and connecting road, state highways, separated	38
A40 Local, neighborhood, and rural road	28
A41 Local, neighborhood, and rural road, city street, unseparated	28
A42 Local, neighborhood, and rural road, city street, unseparated, in tunnel	28
A45 Local, neighborhood, and rural road, city street, separated	38
A51 Vehicular trail, road passable only by 4WD vehicle, unseparated	12
A54Vehicular trail	12
A60 Special road feature, major category used when the minor category could not be determined	28
A61 Cul-de-sac, the closed end of a road that forms a loop or turn-around	28
A62 Traffic circle, the portion of a road or intersection of roads forming a roundabout	28
A63 Access ramp, the portion of a road that forms a cloverleaf or limited-access interchange	28
A64 Service drive, the road or portion of a road that provides access to businesses, facilities, and rest	28
A70 Other thoroughfare, major category used when the minor category could not be determined	16
A71 Walkway or trail for pedestrians, usually unnamed	16
A72 Stairway, stepped road for pedestrians, usually unnamed	16
A73 Alley, road for service vehicles, usually unnamed, located at the rear of buildings and property	16
A74 Driveway or service road, usually privately owned and unnamed, used as access to residences,	16
A75 Roads as Other Thoroughfare	16

Step 4: The percentage of imperviousness is calculated for the watershed.

8. Page 11 of the Tutorial. Using a custom "ISAT with Change Scenarios" Tool, run an analysis on the land cover data using the HIGH Impervious Cover Coefficient AND with the polygon road file as the Polygon Layer in the Apply Change Scenarios dropdown.

9. Based on the results on the results of running the ISAT tool, a summary table entitled "CURRENT IMPERVIOUS COVER WITHIN EACH 2005 LAND USE / LAND COVER CLASS BY SUB-BASIN" was created.

Step 5: Sub-basin maps showing impervious cover are created

10. Two map series were created:

    a. DEVELOPED LAND
        i. 11 maps (one for each sub-basin) show developed land use/land cover, the roads using their polygon widths, and Census Tracts of High and Medium population densities

    b. CURRENT IMPERVIOUS

i. 11 maps (one for each sub-basin) show the land use/land cover class that most greatly impacts that watershed. The sub-basin's total % impervious cover and the land cover's contribution to the overall percentage are included.

Limitations/Variables

- High – Medium-Low population density values are chosen by the user. I used ArcGIS's Natural Breaks method, but these ranges can be changed.
- LULC data is from 2005, so impervious data is outdated.
- Road width data is generalized, based on each road's FCC code. Actually road widths will vary from the width assigned.

CURRENT IMPERVIOUS COVER WITHIN EACH 2005 LAND USE / LAND COVER CLASS BY SUB-BASIN
Niagara River Watershed
Current impervious cover based on Impervious Cover Coefficient calculation, using standard operating procedure "CURRENT IMPERVIOUS COVER PER SUB-BASIN" dated June 30, 2013
Prepared by L. Matthies-Wiza for BNR, July 1, 2013

Wooded land and wetland categories are highlighted.
Records are sorted by LULC with the Highest Percentage of Current Impervious Cover

	Cayuga Creek Sub-Basin		Impervious Cover Coefficient	Current Impervious Cover Acreage	Current Impervious Cover as Percentage of Total Sub-Basin Acreage
Land Use/Land Cover	Acres	%			
Developed, Low Intensity	6,777.69	8.33%	0.31	2105.15	2.59%
Developed, Medium Intensity	1,542.08	1.90%	0.63	968.12	1.19%
Developed, High Intensity	646.72	0.79%	0.86	558.25	0.69%
Pasture/Hay	22,420.70	27.55%	0.02	390.12	0.48%
Cultivated Crops	12,084.47	14.85%	0.03	381.87	0.47%
Deciduous Forest	23,756.85	29.20%	0.01	299.34	0.37%
Developed, Open Space	1,369.95	1.68%	0.10	139.32	0.17%
Evergreen Forest	1,706.66	2.10%	0.06	98.47	0.12%
Mixed Forest	3,254.08	4.00%	0.03	86.88	0.11%
Scrub/Shrub	2,279.10	2.80%	0.02	45.35	0.06%
Palustrine Forested Wetland	3,522.51	4.33%	0.01	32.05	0.04%
Grassland/Herbaceous	1,064.16	1.31%	0.03	26.60	0.03%
Bare Land	137.00	0.17%	0.16	21.40	0.03%
Palustrine Emergent Wetland	366.73	0.45%	0.06	20.39	0.03%
Palustrine Scrub/Shrub Wetland	211.94	0.26%	0.04	8.73	0.01%
Unconsolidated Shore	9.34	0.01%	0.28	2.64	0.00%
Open Water	215.06	0.26%	0.01	1.66	0.00%
Palustrine Aquatic Bed	3.34	0.00%	0.09	0.31	0.00%
TOTAL ACRES	**81,368.37**	**100.00%**		**5186.66**	**6.37%**

	Buffalo River Sub-Basin		Impervious Cover Coefficient	Current Impervious Cover Acreage	Current Impervious Cover as Percentage of Total Sub-Basin Acreage
Land Use/Land Cover	Acres	%			
Developed, Medium Intensity	6,109.18	5.80%	0.63	3835.34	3.64%
Developed, High Intensity	4,390.07	4.17%	0.86	3789.51	3.60%
Developed, Low Intensity	9,198.46	8.73%	0.31	2857.04	2.71%
Deciduous Forest	39,197.25	37.20%	0.01	493.89	0.47%
Evergreen Forest	5,452.22	5.17%	0.06	314.59	0.30%
Developed, Open Space	3,001.44	2.85%	0.10	305.25	0.29%
Pasture/Hay	16,117.60	15.29%	0.02	280.45	0.27%
Cultivated Crops	7,550.52	7.16%	0.03	238.60	0.23%
Mixed Forest	4,972.96	4.72%	0.03	132.78	0.13%
Bare Land	394.53	0.37%	0.16	61.63	0.06%
Scrub/Shrub	2,783.27	2.64%	0.02	55.39	0.05%
Palustrine Emergent Wetland	674.30	0.64%	0.06	37.49	0.04%
Palustrine Forested Wetland	3,540.08	3.36%	0.01	32.21	0.03%
Grassland/Herbaceous	1,093.96	1.04%	0.03	27.35	0.03%
Palustrine Scrub/Shrub Wetland	299.34	0.28%	0.04	12.33	0.01%
Unconsolidated Shore	16.23	0.02%	0.28	4.58	0.00%
Open Water	586.01	0.56%	0.01	4.51	0.00%
Palustrine Aquatic Bed	4.00	0.00%	0.09	0.37	0.00%
TOTAL ACRES	**105,381.41**	**100.00%**		**12483.30**	**11.85%**

Land Use/Land Cover	Eighteenmile Creek Sub-Basin Acres	%	Impervious Cover Coefficient	Current Impervious Cover Acreage	Current Impervious Cover as Percentage of Total Sub-Basin Acreage
Developed, Low Intensity	2,434.55	3.17%	0.31	756.17	0.98%
Cultivated Crops	12,446.98	16.20%	0.03	393.32	0.51%
Deciduous Forest	28,334.17	36.87%	0.01	357.01	0.46%
Pasture/Hay	17,322.53	22.54%	0.02	301.41	0.39%
Evergreen Forest	4,189.02	5.45%	0.06	241.71	0.31%
Developed, Medium Intensity	325.36	0.42%	0.63	204.26	0.27%
Mixed Forest	4,457.90	5.80%	0.03	119.03	0.15%
Developed, Open Space	727.45	0.95%	0.10	73.98	0.10%
Developed, High Intensity	81.40	0.11%	0.86	70.26	0.09%
Scrub/Shrub	2,034.02	2.65%	0.02	40.48	0.05%
Palustrine Emergent Wetland	438.78	0.57%	0.06	24.40	0.03%
Grassland/Herbaceous	967.42	1.26%	0.03	24.19	0.03%
Palustrine Forested Wetland	2,557.76	3.33%	0.01	23.28	0.03%
Palustrine Scrub/Shrub Wetland	244.19	0.32%	0.04	10.06	0.01%
Bare Land	60.94	0.08%	0.16	9.52	0.01%
Unconsolidated Shore	11.79	0.02%	0.28	3.33	0.00%
Open Water	207.72	0.27%	0.01	1.60	0.00%
Palustrine Aquatic Bed	1.11	0.00%	0.09	0.10	0.00%
TOTAL ACRES	**76,843.08**	**100.00%**		**2654.10**	**3.45%**

Land Use/Land Cover	Murder Creek Sub-Basin Acres	%	Impervious Cover Coefficient	Current Impervious Cover Acreage	Current Impervious Cover as Percentage of Total Sub-Basin Acreage
Developed, Low Intensity	1,515.84	3.25%	0.31	470.82	1.01%
Cultivated Crops	10,122.29	21.69%	0.03	319.86	0.69%
Pasture/Hay	13,546.27	29.03%	0.02	235.71	0.51%
Deciduous Forest	9,885.66	21.18%	0.01	124.56	0.27%
Developed, Medium Intensity	191.48	0.41%	0.63	120.21	0.26%
Palustrine Forested Wetland	7,119.96	15.26%	0.01	64.79	0.14%
Developed, Open Space	496.16	1.06%	0.10	50.46	0.11%
Developed, High Intensity	52.04	0.11%	0.86	44.92	0.10%
Mixed Forest	1,498.05	3.21%	0.03	40.00	0.09%
Evergreen Forest	457.69	0.98%	0.06	26.41	0.06%
Palustrine Scrub/Shrub Wetland	392.53	0.84%	0.04	16.17	0.03%
Scrub/Shrub	707.44	1.52%	0.02	14.08	0.03%
Palustrine Emergent Wetland	193.26	0.41%	0.06	10.75	0.02%
Grassland/Herbaceous	327.81	0.70%	0.03	8.20	0.02%
Bare Land	29.13	0.06%	0.16	4.55	0.01%
Unconsolidated Shore	4.00	0.01%	0.28	1.13	0.00%
Open Water	126.54	0.27%	0.01	0.97	0.00%
Palustrine Aquatic Bed	0.44	0.00%	0.09	0.04	0.00%
TOTAL ACRES	**46,666.59**	**100.00%**		**1553.63**	**3.33%**

Land Use/Land Cover	Ellicott Creek Sub-Basin Acres	%	Impervious Cover Coefficient	Current Impervious Cover Acreage	Current Impervious Cover as Percentage of Total Sub-Basin Acreage
Developed, Low Intensity	16,882.19	21.97%	0.31	5243.61	6.82%
Developed, Medium Intensity	4,448.56	5.79%	0.63	2792.80	3.63%
Developed, High Intensity	1,965.52	2.56%	0.86	1696.64	2.21%
Developed, Open Space	5,498.70	7.16%	0.10	559.22	0.73%
Cultivated Crops	8,033.11	10.46%	0.03	253.85	0.33%
Pasture/Hay	11,338.78	14.76%	0.02	197.29	0.26%
Deciduous Forest	15,295.63	19.91%	0.01	192.72	0.25%
Bare Land	966.08	1.26%	0.16	150.90	0.20%
Palustrine Forested Wetland	7,544.07	9.82%	0.01	68.65	0.09%
Mixed Forest	1,673.07	2.18%	0.03	44.67	0.06%
Evergreen Forest	750.58	0.98%	0.06	43.31	0.06%
Palustrine Emergent Wetland	302.23	0.39%	0.06	16.80	0.02%
Grassland/Herbaceous	662.29	0.86%	0.03	16.56	0.02%
Palustrine Scrub/Shrub Wetland	338.26	0.44%	0.04	13.94	0.02%
Scrub/Shrub	672.97	0.88%	0.02	13.39	0.02%
Open Water	449.46	0.58%	0.01	3.46	0.00%
Unconsolidated Shore	8.01	0.01%	0.28	2.26	0.00%
Palustrine Aquatic Bed	2.00	0.00%	0.09	0.18	0.00%
TOTAL ACRES	**76,831.52**	**100.00%**		**11310.26**	**14.72%**

Land Use/Land Cover	Niagara River Sub-Basin Acres	%	Impervious Cover Coefficient	Current Impervious Cover Acreage	Current Impervious Cover as Percentage of Total Sub-Basin Acreage
Developed, Medium Intensity	13,558.73	13.19%	0.63	8512.17	8.28%
Developed, Low Intensity	23,786.20	23.13%	0.31	7387.99	7.19%
Developed, High Intensity	7,254.29	7.05%	0.86	6261.90	6.09%
Developed, Open Space	8,304.88	8.08%	0.10	844.61	0.82%
Cultivated Crops	7,929.48	7.71%	0.03	250.57	0.24%
Pasture/Hay	10,928.69	10.63%	0.02	190.16	0.18%
Deciduous Forest	14,916.89	14.51%	0.01	187.95	0.18%
Bare Land	575.56	0.56%	0.16	89.90	0.09%
Open Water	6,762.57	6.58%	0.01	52.07	0.05%
Palustrine Forested Wetland	4,855.76	4.72%	0.01	44.19	0.04%
Palustrine Scrub/Shrub Wetland	786.61	0.76%	0.04	32.41	0.03%
Palustrine Emergent Wetland	557.54	0.54%	0.06	31.00	0.03%
Scrub/Shrub	1,009.45	0.98%	0.02	20.09	0.02%
Grassland/Herbaceous	765.48	0.74%	0.03	19.14	0.02%
Mixed Forest	660.73	0.64%	0.03	17.64	0.02%
Evergreen Forest	139.22	0.14%	0.06	8.03	0.01%
Unconsolidated Shore	25.35	0.02%	0.28	7.16	0.01%
Palustrine Aquatic Bed	7.56	0.01%	0.09	0.69	0.00%
TOTAL ACRES	**102,824.99**	**100.00%**		**23957.67**	**23.30%**

Land Use/Land Cover	Buffalo Creek Sub-Basin Acres	%	Impervious Cover Coefficient	Current Impervious Cover Acreage	Current Impervious Cover as Percentage of Total Sub-Basin Acreage
Developed, Low Intensity	3,238.06	3.48%	0.31	1005.74	1.08%
Cultivated Crops	17,861.84	19.17%	0.03	564.43	0.61%
Pasture/Hay	25,370.99	27.23%	0.02	441.46	0.47%
Developed, Medium Intensity	548.42	0.59%	0.63	344.30	0.37%
Deciduous Forest	26,023.05	27.93%	0.01	327.89	0.35%
Evergreen Forest	4,412.75	4.74%	0.06	254.62	0.27%
Developed, High Intensity	198.60	0.21%	0.86	171.43	0.18%
Mixed Forest	5,799.38	6.22%	0.03	154.84	0.17%
Developed, Open Space	894.92	0.96%	0.10	91.01	0.10%
Scrub/Shrub	2,729.23	2.93%	0.02	54.31	0.06%
Palustrine Forested Wetland	4,184.13	4.49%	0.01	38.08	0.04%
Palustrine Emergent Wetland	539.75	0.58%	0.06	30.01	0.03%
Grassland/Herbaceous	876.68	0.94%	0.03	21.92	0.02%
Bare Land	58.71	0.06%	0.16	9.17	0.01%
Palustrine Scrub/Shrub Wetland	205.05	0.22%	0.04	8.45	0.01%
Unconsolidated Shore	13.12	0.01%	0.28	3.71	0.00%
Open Water	206.16	0.22%	0.01	1.59	0.00%
Palustrine Aquatic Bed	3.78	0.00%	0.09	0.35	0.00%
TOTAL ACRES	**93,164.61**	**100.00%**		**3523.30**	**3.78%**

Land Use/Land Cover	Smoke Creek Sub-Basin Acres	%	Impervious Cover Coefficient	Current Impervious Cover Acreage	Current Impervious Cover as Percentage of Total Sub-Basin Acreage
Developed, Low Intensity	9,711.52	24.57%	0.31	3016.40	7.63%
Developed, Medium Intensity	2,889.79	7.31%	0.63	1814.21	4.59%
Developed, High Intensity	1,833.42	4.64%	0.86	1582.61	4.00%
Developed, Open Space	3,752.46	9.49%	0.10	381.63	0.97%
Deciduous Forest	9,246.05	23.39%	0.01	116.50	0.29%
Pasture/Hay	4,512.38	11.42%	0.02	78.52	0.20%
Bare Land	265.32	0.67%	0.16	41.44	0.10%
Cultivated Crops	1,101.52	2.79%	0.03	34.81	0.09%
Evergreen Forest	594.02	1.50%	0.06	34.27	0.09%
Mixed Forest	1,215.61	3.08%	0.03	32.46	0.08%
Palustrine Forested Wetland	2,368.50	5.99%	0.01	21.55	0.05%
Grassland/Herbaceous	700.32	1.77%	0.03	17.51	0.04%
Palustrine Emergent Wetland	311.57	0.79%	0.06	17.32	0.04%
Palustrine Scrub/Shrub Wetland	314.24	0.79%	0.04	12.95	0.03%
Scrub/Shrub	530.41	1.34%	0.02	10.56	0.03%
Unconsolidated Shore	12.68	0.03%	0.28	3.58	0.01%
Open Water	162.35	0.41%	0.01	1.25	0.00%
Palustrine Aquatic Bed	7.78	0.02%	0.09	0.71	0.00%
TOTAL ACRES	**39,529.96**	**100.00%**		**7218.27**	**18.26%**

Land Use/Land Cover	Upper Tonawanda Sub-Basin Acres	%	Impervious Cover Coefficient	Current Impervious Cover Acreage	Current Impervious Cover as Percentage of Total Sub-Basin Acreage
Developed, Low Intensity	2,847.09	2.24%	0.31	884.31	0.69%
Pasture/Hay	41,338.69	32.48%	0.02	719.29	0.57%
Cultivated Crops	22,733.17	17.86%	0.03	718.37	0.56%
Developed, Medium Intensity	704.32	0.55%	0.63	442.17	0.35%
Deciduous Forest	32,159.80	25.27%	0.01	405.21	0.32%
Developed, High Intensity	314.47	0.25%	0.86	271.45	0.21%
Mixed Forest	7,939.26	6.24%	0.03	211.98	0.17%
Evergreen Forest	2,638.49	2.07%	0.06	152.24	0.12%
Scrub/Shrub	7,137.31	5.61%	0.02	142.03	0.11%
Developed, Open Space	738.13	0.58%	0.10	75.07	0.06%
Palustrine Forested Wetland	5,491.81	4.32%	0.01	49.98	0.04%
Palustrine Emergent Wetland	657.40	0.52%	0.06	36.55	0.03%
Bare Land	184.14	0.14%	0.16	28.76	0.02%
Grassland/Herbaceous	1,107.75	0.87%	0.03	27.69	0.02%
Palustrine Scrub/Shrub Wetland	505.73	0.40%	0.04	20.84	0.02%
Open Water	740.80	0.58%	0.01	5.70	0.00%
Palustrine Aquatic Bed	14.01	0.01%	0.09	1.28	0.00%
Unconsolidated Shore	4.23	0.00%	0.28	1.19	0.00%
TOTAL ACRES	**127,256.58**	**100.00%**		**4194.12**	**3.30%**

Land Use/Land Cover	Middle Tonawanda Sub-Basin Acres	%	Impervious Cover Coefficient	Current Impervious Cover Acreage	Current Impervious Cover as Percentage of Total Sub-Basin Acreage
Developed, Low Intensity	2,791.94	3.53%	0.31	867.18	1.10%
Cultivated Crops	21,244.68	26.86%	0.03	671.33	0.85%
Pasture/Hay	21,571.38	27.27%	0.02	375.34	0.47%
Deciduous Forest	15,999.28	20.23%	0.01	201.59	0.25%
Developed, Medium Intensity	259.31	0.33%	0.63	162.80	0.21%
Palustrine Emergent Wetland	2,168.57	2.74%	0.06	120.57	0.15%
Palustrine Forested Wetland	10,327.56	13.06%	0.01	93.98	0.12%
Developed, Open Space	573.11	0.72%	0.10	58.29	0.07%
Mixed Forest	1,316.13	1.66%	0.03	35.14	0.04%
Developed, High Intensity	35.14	0.04%	0.86	30.33	0.04%
Palustrine Scrub/Shrub Wetland	520.18	0.66%	0.04	21.43	0.03%
Evergreen Forest	332.03	0.42%	0.06	19.16	0.02%
Scrub/Shrub	660.51	0.84%	0.02	13.14	0.02%
Grassland/Herbaceous	359.17	0.45%	0.03	8.98	0.01%
Bare Land	46.93	0.06%	0.16	7.33	0.01%
Open Water	887.80	1.12%	0.01	6.84	0.01%
Unconsolidated Shore	4.00	0.01%	0.28	1.13	0.00%
Palustrine Aquatic Bed	0.22	0.00%	0.09	0.02	0.00%
TOTAL ACRES	**79,097.94**	**100.00%**		**2694.58**	**3.41%**

Land Use/Land Cover	Lower Tonawanda Sub-Basin Acres	%	Impervious Cover Coefficient	Current Impervious Cover Acreage	Current Impervious Cover as Percentage of Total Sub-Basin Acreage
Developed, Low Intensity	10,101.38	12.82%	0.31	3137.49	3.98%
Developed, Medium Intensity	1,764.70	2.24%	0.63	1107.88	1.41%
Developed, Open Space	4,830.85	6.13%	0.10	491.30	0.62%
Developed, High Intensity	563.55	0.72%	0.86	486.45	0.62%
Cultivated Crops	11,693.50	14.84%	0.03	369.51	0.47%
Pasture/Hay	19,156.17	24.31%	0.02	333.32	0.42%
Bare Land	1,721.56	2.18%	0.16	268.91	0.34%
Deciduous Forest	16,102.03	20.43%	0.01	202.89	0.26%
Palustrine Forested Wetland	7,951.72	10.09%	0.01	72.36	0.09%
Mixed Forest	1,200.93	1.52%	0.03	32.06	0.04%
Palustrine Scrub/Shrub Wetland	654.73	0.83%	0.04	26.97	0.03%
Evergreen Forest	387.41	0.49%	0.06	22.35	0.03%
Grassland/Herbaceous	888.69	1.13%	0.03	22.22	0.03%
Palustrine Emergent Wetland	358.94	0.46%	0.06	19.96	0.03%
Scrub/Shrub	828.86	1.05%	0.02	16.49	0.02%
Open Water	577.78	0.73%	0.01	4.45	0.01%
Unconsolidated Shore	14.01	0.02%	0.28	3.96	0.01%
Palustrine Aquatic Bed	1.33	0.00%	0.09	0.12	0.00%
TOTAL ACRES	**78,798.15**	**100.00%**		**6618.70**	**8.40%**

	TOTAL WATERSHED		Impervious Cover Coefficient	Current Impervious Cover Acreage	Current Impervious Cover as Percentage of Total Sub-Basin Acreage
Land Use/Land Cover	Acres	%			
Developed, Low Intensity	89,284.94	9.84%	0.31	27731.90	3.05%
Developed, Medium Intensity	32,341.94	3.56%	0.63	20304.27	2.24%
Developed, High Intensity	17,335.21	1.91%	0.86	14963.75	1.65%
Cultivated Crops	132,801.54	14.63%	0.03	4196.53	0.46%
Pasture/Hay	203,624.18	22.43%	0.02	3543.06	0.39%
Developed, Open Space	30,188.05	3.33%	0.10	3070.12	0.34%
Deciduous Forest	230,916.66	25.44%	0.01	2909.55	0.32%
Evergreen Forest	21,060.09	2.32%	0.06	1215.17	0.13%
Mixed Forest	33,988.11	3.74%	0.03	907.48	0.10%
Bare Land	4,439.88	0.49%	0.16	693.51	0.08%
Palustrine Forested Wetland	59,463.84	6.55%	0.01	541.12	0.06%
Scrub/Shrub	21,372.56	2.35%	0.02	425.31	0.05%
Palustrine Emergent Wetland	6,569.09	0.72%	0.06	365.24	0.04%
Grassland/Herbaceous	8,813.72	0.97%	0.03	220.34	0.02%
Palustrine Scrub/Shrub Wetland	4,472.80	0.49%	0.04	184.28	0.02%
Open Water	10,922.24	1.20%	0.01	84.10	0.01%
Unconsolidated Shore	122.76	0.01%	0.28	34.67	0.00%
Palustrine Aquatic Bed	45.59	0.01%	0.09	4.18	0.00%
TOTAL ACRES	**907,763.20**	**100.00%**		**81394.60**	**8.97%**

Appendix C

Total Maximum Daily Load Discussion

What is a TMDL?

A Total Maximum Daily Load (TMDL) is a calculation of the maximum amount of a pollutant that a waterbody can receive and still safely meet water quality standards. TMDLs are governed by the Clean Water Act (CWA) under Section 303. More specifically, the EPA regulations define a TMDL as the sum of pollutant loads from point sources ("waste load allocations") and nonpoint sources ("load allocations").[1] Such loads shall be established at a level necessary to implement the applicable water quality standards with seasonal variations and a margin of safety.

Water Quality Standard

A water quality standard on the other hand is based on use. It is either a narrative standard or numeric criteria set by states that focus on uses of the waterbody.[2] A narrative standard would be swimming or fishing. Setting numeric criteria states the allowable amount, or calculation, of a pollutant in the implementing regulation.[3] The use is then backed by calculations of pollutant loads which must be met in order to meet the designated use for a waterbody. Each entity that must discharge a categorized pollutant into a waterbody is able to discharge only a certain amount. This amount is known as its "allocation." The allocation of each industry or discharger is directed by a permit. Permits are guided by the National Pollution Elimination Discharge System (NPDES). New York State has its own federally-approved program known as the State Pollution Elimination Discharge System (SPDES). The process is governed by Article 17 of the Environmental Conservation Law (ECL) and administered by the New York State Department of Environmental Conservation (NYSDEC or DEC). The allowable amount of discharge outlined in a permit is informed by two main factors: Water Quality Standards (WQS) and effluent limitations.

Both WQS and effluent limitations are intended to limit the amount of a pollutant or effluent that enters a waterbody. A water quality standard states the intended use of a waterbody while an effluent limitation dictates the amount of a pollutant which may be loaded into a waterbody per discharger. An effluent limitation is the specified level of discharge reduction achievable by the best available technology ("BAT") through the use of Technology based effluent limits or ("TBEL") or other related standards for various sources of water pollution, such as a Water Quality Based Effluent Limitation ("WQBEL"). The intent of the TBEL is to require a minimum level of treatment of pollutants, for point source discharges, based on available treatment technologies, while allowing the discharger to use any available control technique to meet the limits. For industrial (and other non-municipal) facilities, technology-based effluent limits are derived from the following:

[1] 40 CFR § 130.2(i),(g) &(h)

[2] New York's Water Quality Standards can be found at: 6 NYCRR 703. Note, 6 NYCRR §§ 700-06 are currently under revision as of Nov. 2016, per federally mandated triennial review requirements. Specific information on each section under revision is available on NYSDEC's website.

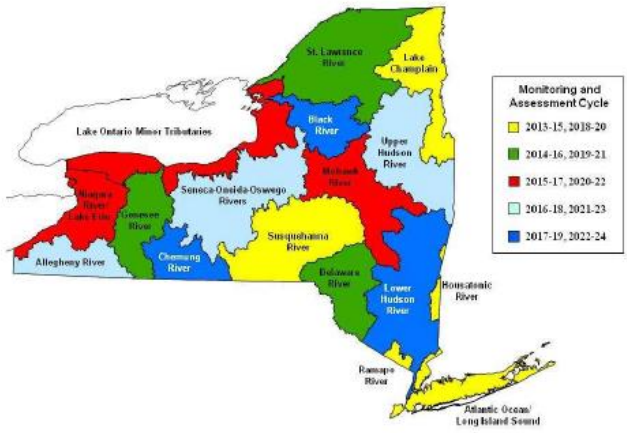
[3] *National Pollutant Discharge Elimination System (NPDES) Permit Writers' Manual*, U.S. ENVTL. PROTECTION AGENCY (Sept. 2010), https://www.epa.gov/sites/production/files/2015-09/documents/pwm_chapt_05.pdf.

- Using national effluent limitation guidelines and standards established by the EPA, and/or
- Using best professional judgement on a case-by-case basis in the absence of national guidelines and standards.
- For municipal facilities (publicly owned treatment works or POTWs), technology-based effluent limits are derived from national secondary treatment standards.
- Chapter 5 of the U.S. EPA NPDES Permit Writers' Manual (PDF) provides overview of the process for establishing technology-based effluent limits.[4]

How to Set a TMDL

A TMDL on the other hand is a calculation of the total amount of pollutants that an entire waterbody, or a delineated segment of a waterbody, can sustain. In short, water quality standards are guided by use. Effluent Limits apply to each physical discharger and TMDLs apply to the waterbody receiving the pollutants. Under the Clean Water Act, States are required to test their waters and report the findings on impaired waters to the EPA. Under Section 305 of the Clean Water Act, New York monitors all 690,000 acres (not including the Great Lakes) of freshwater and over 400 miles of Great Lakes coastline. The Clean Water Act Section 303(d) list is a subset of the total list of waterbodies that do not meet water quality standards. These water bodies are considered "impaired." The state maintains a list of impaired waterbodies, known as the 303(d) list. New York State regularly monitors the health of the state's waterbodies by utilizing a rotating basin schedule for testing. Through this system, the state is able to test all the waters of the state on a five-year schedule. [5]

Statewide Monitoring and Assessment Schedule



This five year testing process is guided by the Consolidated Assessment and Listing Methodology (CALM) process. Note, the Rotating Integrated Basin Studies (RIBS) program is the mechanism through which the testing is done and the data resulting from RIBS testing can be used to inform assessments of the CALM Process.

[4] ENVIRONMENTAL PROTECTION AGENCY, NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) http://water.epa.gov/polwaste/npdes/basics/Water-Quality-and-Technology-Based-Permitting.cfm-

New York then submits its list of impaired waters to the EPA every five years. It is important to note that not all impaired waterbodies are on the 303(d) list. The list includes only those waterbodies that cannot meet their designated uses and may require a TMDL to be set in order to lessen the amount of priority pollutants going into the waterbody. Specifically, there are three categories of impaired waters that are not listed on the 303(d) list:

- Category 4a Waters - TMDL development is not necessary because a TMDL has already been established for the segment/pollutant.
- Category 4b Waters - A TMDL is not necessary because other required control measures are expected to result in restoration in a reasonable period of time.
- Category 4c Waters - A TMDL is not appropriate because the impairment is the result of pollution, rather than a pollutant that can be allocated through a TMDL.

These examples show the potential flexibility of the system. Allowable alternatives exist to meet the metrics set by New York State. The sections below outline some of the hurdles with TMDL implementation and provide examples where a process other than a TMDL was successfully utilized. [6]

TMDL Mechanics

A. Cost: What is the cost of implementing a TMDL?

Setting, monitoring and maintaining a TMDL can be cost prohibitive. A 1995 study conducted by the EPA compared fourteen case studies on the cost of TMDL implementation. Project implementation costs ranged from: $4,039 to $1,023,531. Adjusted for inflation this would be $6,220- 1.58 Million in 2015. These costs were affected by a number of factors outlined below.[7] The study found the following to be the major factors affecting cost:

a. Modeling and data collection/monitoring are, on average, the most costly components of developing a TMDL
b. Types of waterbody and geographic features
c. Complexity of the water quality problem
d. Number and type of pollutants
e. Availability of data
f. Complexity of the model used
g. Number and Type of sources
h. Political sensitivity & level of public involvement

[6] NYS Consolidated Assessment and Listing Methodology, 16 (May 2009).

[7] *NYS Section 303(d) List of Impaired/TMDL Waters*, N.Y. ST. DEPT'T ENVTL. CONSERVATION. (last visited June 13, 2017), http://www.dec.ny.gov/chemical/31290.html.

The cost of implementing a large-scale TMDL can be significant but is generally spread amongst a number of dischargers and producers. The cost can be borne by a municipality and thereby passed onto the consumer. The Long Island Sound is an example of a costly, large-scale implementation. In that instance, the TMDL analysis for Dissolved Oxygen alone cost $650 Million for Point Source Treatment. This figure is markedly less than the $2.5 billion needed for the full Limit of Technology (LOT) alternative; the most comprehensive and stringent alternative presented in the Long Island Sound case study. The total cost of implementation can be defrayed by the different control technologies and spread across agencies and polluters. The changes suggested by the above example included ways to reduce nitrogen and in-water sources of pollution. Control measures for these included, $250 million for boat based alterations and $500 million - $1 Billion dollars to introduce gates to reduce tidal flow. The Long Island Sound serves as one small example of the exorbitant cost that can be associated with implementing a large TMDL. To make implementation feasible, the cost was broken down into its component parts and spread across the cost of individual control technologies for each producer. Specifically, boat owners would be responsible for boat based alternations, whereas the Department of Transportation took on the cost of gates to reduce tidal flow.[8]

B. Duty: When a state doesn't set a TMDL

Under the Federal Clean Water Act, States have a mandatory duty to monitor the water bodies of their state. If a state finds that a waterbody is impaired, they have a duty to consider a TMDL or other strategy to reduce the inputs of pollutants into a state waterbody. What if a state does not set a TMDL for a waterbody listed on the Section 303(d) list as "Impaired"? For example, the Niagara River and some of the tributaries in the watershed have been listed for up to ten years, yet no TMDL has been implemented. The Clean Water Act does not expressly address what duty, if any, the EPA bears under such circumstances.[9]

In New York, The District Court for the Southern District has grappled with this issue. Courts have read into the Act a requirement that EPA treat such state inaction, when the state does not set a TMDL or take other action to offset pollution loadings, as a so-called "constructive submission" of a deficient TMDL. [10] This triggers the EPA's explicit mandatory duties under the Act to disapprove the "submission," and to establish TMDLs for the state.[11]

[8] U.S. ENVTL. PROTECTION AGENCY, TMDL DEVELOPMENT COSTS ESTIMATES: CASE STUDIES OF 14 TMDLS 23 (MAY 1996)

http://www2.bren.ucsb.edu/~keller/courses/esm223/tmdl_cost.pdf

[9] See Clean Water Act § 303(d); 33 U.S.C §1311(d)

[10] *See* Clean Water Act § 1313(d)(2),

[11] *Nat. Res. Def. Council, Inc. v. Fox*, 909 F.Supp. 153, 157 (S.D.N.Y. 1995).

The Court above found that under the Act, the EPA retains discretionary authority, clearly stating that NY's failure to act would *eventually* trigger the EPA's duty under to Act to declare a constructive submission, thus having to set a TMDL. However, the Court made clear that there is no required timeline within which the EPA must act. The Court had found that although the waterbody has been listed for ten years the EPA was within is discretionary duty because the CWA does not require the EPA to take such action by a date certain or within a particular time frame. Thus, the court concluded that it was not yet required to find a constructive submission. Therefore, the EPA was not yet required to step in and set a TMDL due to state of New York inaction.[12]

C. Alternatives to Setting a TMDL

When a TMDL has not been set, and the State of New York courts have shown that the EPA must act, there is no set deadline within which they must do so. There are, however, feasible alternatives. As noted above, the Clean Water Act provides other means that can limit pollutant loadings. New York State sought to delist two water bodies by showing how implementing alternate control measures were sufficient. First, New Yorkers have utilized voluntary consent decrees. To address CSO issues in New York City and impairments to fish consumption in the upper reaches of the Hudson River, a consent decree was agreed upon between the NYSDEC and the New York City Department of Environmental Protection. A second example utilized dredging of sediments to show the EPA that other means to meet water quality standards were feasible. In both cases the EPA agreed that the implementation of a TMDL in light of the other control measures implemented would provide little additional value. However, leery of whether alternate control measures would be sufficient, the EPA would not delist the above water bodies or segments of water bodies. Instead, the parties reached a compromise. The EPA is allowing NYS to implement alternative control measures at both sites but the sites are remaining "listed" under Part 3c, "Waterbodies for which TMDL Development May be Deferred Pending Implementation/Evaluation of Other Restoration Measures." This compromise enabled New York to test alternative remediation techniques while still allowing the EPA oversight to reevaluate the waters and implement a TMDL should the alternative approaches be ineffective.[13]

Foreseeable Challenges

There are a number of other hurdles that can prevent the effective implementation of a TMDL. These can include cost, as discussed above, as well as the type of waterbody and pollutant sources. For example, the nature of a waterbody can make identifying pollutant loadings exceedingly difficult.

[12] *Id.*

[13] N.Y. ST. DEPT. ENVTL. CONSERVATION, NEW YORK STATE CONSOLIDATED ASSESSMENT AND LISTING METHODOLOY. (MAY 2009).

The Niagara River for example is deep, fast flowing and leads to Niagara Falls. Moreover, not only do the physical attributes of the river make pin pointing what pollutants are stemming from what sources difficult, but it is further complicated because it is an international waterbody. The American Federal law cannot regulate foreign sources. How can pollutants be regulated such that a waterbody can be rehabilitated when the law only applies to half the sources? In addition, sources of loadings may come from nonpoint sources. These are sources of pollutants that are not as easily discernable as the end of a pipe, for example nutrient run off from farmland, or pollutants entering waterbodies from impervious surfaces, such as road salt from highways. Since these sources are not regulated under the Clean Water Act, and the quantities and precise source location can be difficult to identify, they cannot be regulated using the CWA and would not fall under pollutants that must be limited by a TMDL.

Nine-Element Watershed Plans

For comparison, the paragraphs below will briefly explain the mechanics of a nine element Watershed Plan or 9e Plan and how it may be different than a state-implemented TMDL. The New York State Dept. of Environmental Conservation highlights the similarities by explaining that both TMDLs and nine element watershed plans are watershed-based plans that identify and quantify sources of pollutants and set pollution reduction targets needed to meet water quality goals. In fact, TMDLs and 9(e) plans are almost interchangeable, however, there are a couple of key differences. See the chart on next page.[14]

First, the New York State Department of State funds the development of watershed plans through the Environmental Protection Fund. Whereas a municipality, state agency or private actors are often the funding sources for TMDL implementation, the 9(e) plan focuses on tapping a larger array of public funding options. For example, the Black River Watershed Plan development was funded by NYSDEC. That watershed plan lists potential funding options to implement a 9(e) plan. The funding sources and alternatives proposed include state and federal grants, organized into agriculture and non- agriculture Nonpoint source funding opportunities as well as Natural Resource Conservation Service programs, regional opportunities and Wastewater infrastructure funding options.[15]

[14] *Nine Element Watershed Plans*, N.Y. ST. DEP'T ENVTL CONSERVATION (last visited June 13, 2017), http://www.dec.ny.gov/chemical/103264.html.

[15] N.Y. ST. DEP'T ENVTL. CONSERVATION, BLACK ROCK NINE ELEMENT WATERSHED MANAGEMENT PLAN, APPENDIX II (June 3, 2016). Available at http://www.dec.ny.gov/docs/water_pdf/9eblackriver.pdf.

Comparison of 9E plans and TMDLs		
Attribute	**9E Plan**	**TMDL**
Pollutant sources	Better for nonpoint sources	Better for point sources
Implementation plan	Required	Optional*
Public comment period	No (public participation is conducted throughout plan development)	Required
Agency approval	NYS DEC	EPA
Funding eligibility	State and federal opportunities	State and federal opportunities

Another critical difference is the inclusion of quantifiable reductions in pollutants. Such a calculation is a required element of a TMDL but does necessarily have to be included in a 9(e) plan.

The 9(e) Plan elements are:

A. Identify water quality target or goal and load reductions needed to achieve goal;
B. Identify the best management practices (BMPs) that will help to achieve reductions needed to meet water quality goal/target;
C. Describe the financial and technical assistance needed to implement BMPs identified in Element C;
D. Describe the outreach to stakeholders, how their input was incorporated, and the role they then played to implement the plan;
E. Estimate a schedule to implement BMPs identified in plan;
F. Describe the milestones and estimated time frames for the implementation of BMPs;
G. Identify the criteria that will be used to assess water quality improvement as the plan is implemented; and
H. Describe the monitoring plan to collect water quality data to measure water quality improvement against criteria in H.

While a TMDL and a 9 element plan may be similar, their creation, focus, and implementation can vary. The TMDL is outlined in federal statutes and implemented by states. The 9(e) Plan is bolstered

by the NYSDEC and while it can be difficult to meet all 9 elements and require a very detailed level of analysis, it can potentially be funded by a broader array of sources.

Suggested Conclusions

Some of the smaller tributaries that Riverkeeper sampled and collected data are listed on the 303(d) list such as: Tonawanda Creek, Bowen Creek, Black Creek, Ransom Creek and Gott Creek. For these more manageable waterbody or waterbody segments, a TMDL could be a viable option provided there is an entity to bear the cost of implementation and oversight. For larger bodies of water, such as the Niagara River itself, however, a TMDL may not be the most efficient or cost effective solution. As with the cases noted above, the Niagara River is extremely large and plagued with numerous different types of pollutants from varying sources. It has been on the 303(d) list for about a decade and NYS has yet to set a TMDL. As case law has shown, the EPA does not have a predetermined time limit denoting when they must step in on behalf of the state.

Furthermore, in order to have a waterbody removed from the 303(d) list through alternate means, the applicant must show that, "Delisting of a previously listed water *prior* to the development of a TMDL can occur only if: (1) The water is shown to be meeting all applicable water quality standards, or (2) If, upon re-examination, the original basis for listing the water is determined to be inaccurate."[16] If a waterbody requires a segment specific TMDL and that TMDL is under development by NYSDEC, or scheduled for future development by NYSDEC, an alternate strategy may be developed. Specifically, according to New York State guidance document, "If an alternative strategy other than a TMDL is identified as appropriate to address waterbody impairments, then that waterbody may be considered for delisting to IR Category 4(b)." A 4(b) delisting is a powerful tool, for it pulls the decision making authority from the top and puts it at a more local level, where water quality attainment goals can be achieved through cooperative agreements and best management practices.

Therefore, the most plausible solution for the Niagara River may be to limit the amount of pollution through best management practices implemented at the local level. This option is particularly feasible because New York is a Home Rule state which means local municipalities can create and enforce laws regarding property at the local level.[17] The Niagara River, or any of the smaller tributaries that are listed, could be delisted to IR Category 4(b) and then meet the water quality goals through identifying and implementing an alternate strategy.

[16] *See* NYS CONSOLIDATED, *supra* note 11.

[17] *See generally* N.Y. MUN. HOME RULE LAW; ART. IX NYS CONST.

Appendix D

Erie County Water Authority 2018 Drinking Water Report

WATER CONSERVATION TIPS

The ECWA encourages water conservation. Although Lake Erie and the Niagara River are a vast source of high quality fresh water, it must not be wasted. A few simple steps will preserve this precious resource for future generations:

- Use low flow shower heads and faucets.
- Repair all leaks in your plumbing system.
- Water your lawn sparingly in early morning or late evening.
- Do only full loads of laundry and dishes.
- Wash your car with a bucket and hose with a nozzle.
- Don't cut the lawn too short; longer grass saves water.

CRYPTOSPORIDIUM & GIARDIA ANALYSIS

Cryptosporidium and *Giardia* are microscopic protozoa that are widely present in the environment and to some degree in most surface water sources throughout the United States. They can cause intestinal illnesses if ingested. Symptoms of infection include nausea, diarrhea and abdominal cramps. Most healthy individuals can overcome the illnesses within a couple of weeks. However, both can be serious for people with weak immune systems. Although filtration removes Cryptosporidium, even the most commonly used filtration methods cannot guarantee 100 percent removal. Giardia is removed by a combination of filtration and disinfection.

In 2017, the ECWA analyzed a total of 6 source water samples for *Cryptosporidium* and *Giardia* taken from Lake Erie and the Niagara River as part of EPA's Long Term 2 Enhanced Surface Water Treatment Rule. No *Cryptosporidium* were detected in any samples. *Giardia* were detected in each of the source water samples in January. In our treatment process *Giardia* is removed by a combination of filtration and disinfection.

The ECWA encourages immune compromised individuals to consult their physicians regarding appropriate precautions to avoid infection. Both protozoa must be ingested to cause disease, and they may spread through means others than drinking water. For additional information on Cryptosporidiosis or Giardiasis, please contact the Erie County Health Department at (716) 961-6800.

EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium*, *Giardia* and other microbial pathogens are available from the Safe Drinking Water Hotline at (800) 426-4791.

2018

Water Quality Report



PUBLIC WATER SYSTEM IDENTIFICATION NUMBERS			
PWSID	**NAME**	**PWSID**	**NAME**
NY1400399	ECWA AMHERST	NY1400488	ECWA HAMBURG (T)
NY1450033	ECWA AURORA	NY1400515	ECWA HAMBURG (V)
NY1421897	ECWA BOSTON	NY1400421	ECWA LANCASTER
NY1400443	ECWA DIRECT	NY1422651	ECWA NEWSTEAD
NY1400435	ECWA EDEN	NY1421762	ECWA ORCHARD PARK
NY1400445	ECWA EVANS	NY1404543	ECWA WEST SENECA

If you would like additional copies of this report, please contact Customer Service at (716) 849-8444 or e-mail questionscomments@ecwa.org.

Erie County Water Authority
Administrative Offices
295 Main Street, Room 350
Buffalo, New York 14203

FREQUENTLY ASKED QUESTIONS

Who sets and enforces drinking water standards?

The Safe Drinking Water Act (SDWA) is the main federal law that ensures the quality of your drinking water. Under the SDWA, the United States Environmental Protection Agency (EPA) sets standards for drinking water quality and oversees the states, localities, and water suppliers who implement those standards. In New York, the State Health Department enforces the EPA's regulations and often makes them even more stringent.

The EPA sets standards for approximately 150 regulated contaminants in drinking water. For each of these contaminants, EPA sets a legal limit, called a maximum contaminant level (MCL). EPA regulations specify strict testing and reporting requirements for each contaminant. Water suppliers may not provide water that doesn't meet these standards. Water that does meet these standards is safe to drink. In Erie County, the Erie County Health Department is the agency that administers and enforces these standards. Their phone number is (716) 961-6800.

Where does my water come from?

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activities. Contaminants that may be present in source water include: microbial contaminants; inorganic contaminants; pesticides and herbicides; organic chemical contaminants; and radioactive contaminants. In order to ensure that tap water is safe to drink, the New York State Department of Health (NYSDOH) and the EPA prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The NYSDOH and the Food and Drug Administration (FDA) set regulations that limit contaminants in bottled water, which must provide the same protection for public health.

Your water comes from two sources. The ECWA's Sturgeon Point Treatment Plant in the Town of Evans draws water from Lake Erie to supply the southern part of Erie County and some communities in Chautauqua and Cattaraugus Counties. The Van de Water Treatment Plant in Tonawanda draws water from the Niagara River and services municipalities in northern Erie County as well as some in Genesee and Wyoming Counties. These two plants serve more than 500,000 consumers in Western New York.

How is my water treated?

Both ECWA treatment facilities use the conventional filtration method. First, raw water flows by gravity through a large intake tunnel to the raw water building. Pumps draw the water through traveling screens to prevent large objects such as driftwood and fish from entering the system. A chemical, polyaluminum chloride, is added to the water, which causes suspended particles in the water to clump together to form floc. Floc particles then settle to the bottom of large sedimentation basins. The water is filtered through layers of anthracite, sand, and gravel, to remove any remaining particles. Chlorine is added for disinfection to kill pathogens. Small amounts of fluoride are added to help prevent tooth decay. Caustic soda is added to stabilize the alkalinity of the water and prevent corrosion in home plumbing. Powdered activated carbon may be added in summer months to help remove unpleasant tastes and odors. Water is temporarily stored in clearwells or storage tanks before it is pumped to the public. High service pumps deliver the clean water through more than 3,653 miles of water mains to homes and businesses. The ECWA closely monitors its 38 pump stations and 38 water storage tanks to assist in the distribution process. On average, the ECWA delivered 72.8 million gallons a day in 2018 to serve more than 500,000 consumers in Western New York.

Are there contaminants in our water? Do I need to take special precautions?

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Safe Drinking Water Hotline at (800) 426-4791 or the Erie County Health Department at (716) 961-6800.

Although our drinking water met or exceeded all state and federal regulations, some people may be more vulnerable to disease causing microorganisms or pathogens in drinking water than the general population. Immunocompromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice from their health care provider about their drinking water.

EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium*, *Giardia* and other microbial pathogens are available from the Safe Drinking Water Hotline at (800) 426-4791.

How will I know if my water is not safe to drink?

In the unlikely event that water becomes unsafe to drink, the EPA mandates the ECWA notify its customers. Water is not safe to drink when testing reveals that contaminants in the water exceed federal or state limits for contaminant levels. If the water is not safe to drink, ECWA will alert the public through proper media channels and electronic communications that a "boil water order" has been issued, along with advice regarding measures that should be taken to protect your health.

Does ECWA add fluoride to drinking water?

Our system is one of the many drinking water systems in New York State that provides drinking water with a controlled, low level of fluoride for consumer dental health protection. According to the United States Centers for Disease Control, fluoride is very effective in preventing cavities when present in drinking water. ECWA's target fluoride level is 0.7 mg/L. To ensure that the fluoride supplement in your water provides optimal dental protection, the NYSDOH requires that the ECWA monitor fluoride levels on a daily basis. In 2018, fluoride was added to the drinking water January to mid-February & August to December at the Sturgeon Point facility, and January to Mid-March & August to December at the Van de Water facility, due to construction of new storage tanks. During those periods, monitoring showed fluoride levels in your water were in the optimal range 95% of the time. None of the monitoring results during fluoride addition showed fluoride at levels that approached the 2.2 mg/l maximum contaminant level (MCL).

Why does my water smell like a swimming pool?

The smell of bleach or a pool is caused by chlorine. This odor is more noticeable in the cold winter months when the water temperatures are low. As required by the EPA, chlorine is added to the water as a disninfectant to protect against microbial growth. Levels of free chlorine in the distribution system average 1.0 ppm. Odors resulting from chlorine addition usually go away when the water is exposed to air for several minutes.

How can I participate in decisions that affect drinking water quality?

Any member of the public may participate in decisions affecting their water quality. The ECWA's Board of Commissioners ultimately makes those decisions on behalf of our customers. Board meetings take place in the board meeting room, Erie County Water Authority, 295 Main Street, Room 350, Buffalo, New York 14203. Call (716) 849-8444 or visit *www.ecwa.org* for updated board meeting information.

In 2018, your tap water met all federal and state drinking water standards for quality and safety.

ABOUT THE ERIE COUNTY WATER AUTHORITY

The ECWA was created in 1949 by a special act of the New York State Legislature to ensure that the people and industry of Erie County would have a safe, plentiful supply of water for the future. Since 1953, the ECWA has produced and reliably delivered water of the highest quality to its customers at an affordable rate.

As an independent public-benefit corporation, ECWA is not an agency of New York State and is totally independent of Erie County government. ECWA operates as a financially self-sustaining public utility and pays all operating expenses from revenues generated by the sale of water to its 170,648 customers.

In 2018, the ECWA produced approximately 26.6 billion gallons of high-quality water for residential, commercial, and industrial use in 35 municipalities throughout Western New York. Some of this was unmetered water (35.9%) used for flushing water mains, fighting fires, training firefighters, filter backwashing, plant processes, equipment and hydrant testing and lost to leaks. Approximately 17.0 billion gallons were sold to our customers.

The ECWA owns and operates two water treatment plants, a nationally recognized Department of Water Quality, 38 pump stations, 38 water storage tanks and maintains 3,653 miles of water mains, 19,265 fire hydrants, 36,720 valves and numerous appurtenances.

The cost per thousand gallons of water for residential customers was $3.23 in 2018. The average residential customer who used 18,750 gallons of water per quarter paid a total of $320.85 in 2018, or about 88 cents per day, to be provided with a plentiful supply of safe, high quality drinking water.

IMPROVEMENTS TO YOUR WATER SYSTEM

In 2018 the Authority invested more than $26.0 million in system-wide infrastructure upgrades, including;

- $11 million on water mains, hydrants, and service connection replacements in Cheektowaga, Lackawanna, Blasdell, Hamburg, West Seneca, Amherst, Tonawanda, and Clarence.
- $1.1 million on system-wide water meter replacements.
- Continued ongoing inspections of water storage tanks.
- Refurbishing and painting of the Ward Road Tank and Benning Road Tank. Foundation repairs and overflow weir box improvements were perfromed at Pine Hill Tank.
- $2.5 million was spent on construction of a new electrical substation for Ball Tank Station. Ball Pump Station provides finished water for the northern section of ECWA's service area.
- The $4 million rehabilitation of the Raw Water Pumping Station at Sturgeon Point was completed in 2018.

The seal of the Partnership for Safewater as seen on this document indicates that we are part of a select group of water systems nationwide who have voluntarily committed themselves toward a proactive approach to strengthen the safety of drinking water for our customers above and beyond the current regulatory requirements. For additional information on the Partnership for Safewater visit www.awwa.org/science/partnership.

Dear Customer,

We are pleased to provide you with the ECWA's 2018 Annual Water Quality Report (AWQR). Included are details about where your water comes from, how your water is treated and tested, and how it compares to the various standards set by our regulatory agencies. This report fulfills the United States Environmental Protection Agency's (EPA) requirement to prepare and deliver a Consumer Confidence Report (CCR), as well as the New York State Department of Health's (NYSDOH) requirement to prepare and deliver an Annual Water Quality Report.

ECWA remains focused on our promise to deliver safe, high quality drinking water and professional service that our customers deserve. To ensure that we meet our commitments, we maintain a rigorous quality control program, constant monitoring and testing, and continue to invest substantial financial resources to improve our two treatment plants, distribution system infrastructure, our nationally recognized department of water quality and laboratory facilities.

ECWA continues to position itself to achieve our mission of providing a plentiful supply of safe, high quality, affordable drinking water through a reliable infrastructure to the more than 500,000 consumers that rely on us 24 hours a day, 365 days a year.

Thank you for allowing the Erie County Water Authority (ECWA) to supply you with the high quality drinking water that you deserve. We are committed to providing you with an excellent product, reliable service, and detailed information about the drinking water you consume and use every time you turn on your tap.

We appreciate you taking the time to learn about your water supply. We believe that well-informed customers are our best allies in supporting the improvements necessary to maintain high quality drinking water. You can learn more about the quality of your water and ECWA's mission at www.ecwa.org.

If you have comments or questions about your 2018 Annual Water Quality Report, please submit them by e-mail to questionscomments@ecwa.org.

Sincerely,

BOARD OF COMMISSIONERS
Jerome D. Schad, Chairman
Mark S. Carney, Vice-Chairman
E. Thomas Jones, Treasurer

ECWA'S TEST RESULTS FOR 2018

The ECWA's water system operated under "NO VARIANCE OR EXEMPTION" from any federal or state regulatory requirements. To comply with EPA mandated requirements, water quality data tables of detected regulated and unregulated contaminants are detailed in this report. The tables summarize test results for the past year or from the most recent year that tests were conducted in accordance with regulatory requirements. They also list the maximum contaminant levels (MCL). The EPA is responsible for establishing the MCL standards. Some tests are not required to be performed on an annual basis. For your convenience, important terms and abbreviations are defined throughout this document More information regarding all substances tested for, but not detected, can be obtained upon request from the ECWA Department of Water Quality by calling (716) 685-8580 or at *www.ecwa.org*.

ERIE COUNTY WATER AUTHORITY
2018 Annual Water Quality Report

DETECTED CONTAMINANTS

Metals, Inorganics, Physical Tests	Violation Yes/No	Sample Date (or date of highest detection)	MCL	MCLG	Level Detected	Sources in Drinking Water
Barium	No	8/18	2 mg/liter	2 mg/liter	0.0174 - 0.0200 mg/liter; Average = 0.0374	Erosion of natural deposits; drilling and metal wastes
Chloride	No	1/18	250 mg/liter	NE	16 - 33 mg/liter; Average = 21	Naturally occurring in source water
Chlorine	No	2/18	MRDL = 4.0 mg/liter	NE	0.0 - 2.13 mg/liter; Average = 1.0	Added for disinfection
Copper	No	8/16	1300 ug/liter (AL)	1300 ug/liter (AL)	ND - 88 ug/liter, 90th percentile = 40 ug/liter, 0 of 52 above AL	Home plumbing corrosion; natural erosion
Fluoride[1]	No	10/18	2.2 mg/liter	NE	0.61 - 0.78 mg/liter; Average = 0.70	Added to water to prevent tooth decay
Lead[2]	No	8/16	15 ug/liter (AL)	0 ug/liter (AL)	ND - 29 ug/liter; 90th percentile =7.8 ug/liter, 2 of 52 above AL	Home plumbing corrosion; natural erosion
Nitrate	No	3/18	10 mg/liter	10 mg/liter	0.17 - 0.24 mg/liter; Average = 0.21	Runoff from fertilizer use
Manganese	No	8/18	NR	NE	0.89 - 6.2 ug/L; Average = 2.1	Naturally occurring, indicative of landfill contamination
pH	No	11/18	NR	NE	6.75 - 8.49; Average = 8.18 SU	Naturally occurring; adjusted for corrosion control
Distribution Turbidity[3]	No	5/18	TT - 5 NTU	NE	0.02 - 0.92; Average = 0.25 NTU	Soil runoff
Entry Point Turbidity[3]	No	2/18	TT - 0.3 NTU	NE	0.184 NTU highest detected; Lowest monthly % < 0.30 NTU = 100%	Soil runoff

[1] Our system is one of the many water systems in New York State that provides drinking water with a controlled, low level of fluoride for consumer dental health protection. According to the United States Centers for Disease Control, the addition of fluoride is a very effective means of preventing cavities when present in drinking water at a properly controlled level. To ensure that the fluoride supplement in your water provides optimal dental protection we monitor fluoride levels on a daily basis to make sure fluoride is maintained at a target value of 0.7 mg/L. During 2018, fluoride was only added to the drinking water in January to mid-February & in August to December at the Sturgeon Point WTP and in January to Mid-March and August to December at the Van de Water WTP due to the addition of new storage tanks at each of the treatment facilities. During those periods monitoring showed fluoride levels in your water were within 0.2 mg/L of the target level 95% of the time.

[2] Lead is not present in the drinking water that is treated and delivered to your home. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. The Erie County Water Authority is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. If your home contains lead pipes and your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline (800-426-4791) or at www.epa.gov/safewater/lead. The level presented represents the 90th percentile of the 52 sites tested. A percentile is a value on a scale of 100 that indicates a percent of a distribution that is equal to or below it. The 90th percentile is equal to or greater than 90% of the lead or copper values detected in the water system. In this case, 52 samples were collected in the water system and the 90th percentile value for lead was the eighth highest value (7.8 ug/L).

[3] Turbidity is a measure of the cloudiness of water. ECWA monitors turbidity because it is a good indicator of the effectiveness of our filtration system. Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for bacterial growth. State regulations require that the delivered water turbidity must always be below 1 NTU in the combined filter effluent. The regulations also require that 95% of the turbidity samples collected from that point have measurements below 0.3 NTU. The maximum turbidity allowed in the distribution system is 5 NTU.

Organic Compounds	Violation Yes/No	Sample Date (or date of highest detection)	MCL (ug/liter)	MCLG (ug/liter)	Level Detected (ug/liter)	Sources in Drinking Water
Total Trihalomethanes[4,6]	No	8/18	LRAA = 80	NE	16 - 103 ug/liter; LRAA = 64	By-product of water disinfection (chlorination)
Total Haloacetic Acids[5,6]	No	8/18	LRAA = 60	NE	7 - 45 ug/liter; LRAA = 36	By-product of water disinfection (chlorination)

[4] Trihalomethanes are byproducts of the water disinfection process that occur when natural organic compounds react with the chlorine required to kill harmful organisms in the water. Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous system, and may have an increased risk of getting cancer. The level detected is the highest single location's running annual average (64 ug/L).

[5] Haloacetic acids are byproducts of the water disinfection process required to kill harmful organisms. Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer. The level detected represents the system's highest single location's running annual average (36 ug/L).

Radiological Parameters	Violation Yes/No	Sample Date (or date of highest detection)	MCL (pCi/liter)	MCLG (pCi/liter)	Level Detected (pCi/liter)	Sources in Drinking Water
Radium 228	No	4/13	NE	NE	0.99 - 1.10 pCi/liter; Average = 1.05	Erosion of Natural Deposits
Combined Radium 226/228	No	4/13	5.0	0	1.15 - 1.25 pCi/liter; Average = 1.2	Erosion of Natural Deposits

Microbiological Parameters	Violation Yes/No	Sample Date (or date of highest detection)	MCL	MCLG	Level Detected	Sources in Drinking Water
Total Coliform Bacteria	No[7]	None	5% of samples positive	0	0% = highest percentage of monthly positives (None Detected)	Naturally present in the environment

[7] A violation occurs when more than 5% of the total coliform samples collected per month are positive. No MCL violation occurred.

Cryptosporidium and Giardia	Violation Yes/No	Sample Date (or date of highest detection)	Number of Samples Testing Positive		Number of Samples Tested
			Giardia	*Cryptosporidium*	
Source Water	No	1/17	2	0	6

Cryptosporidium is a microscopic pathogen found in surface waters throughout the United States, as a result of animal waste runoff. It can cause abdominal infection, diarrhea, nausea, and abdominal cramps if ingested. Our filtration process effectively removes *Cryptosporidium*. No *Cryptosporidium* was detected in any samples taken in 2017.

Giardia is a microbial pathogen present in varying concentrations in many surface waters. *Giardia* was detected in 2 source water samples taken in 2017. In our treatment process *Giardia* is removed/inactivated through a combination of filtration and disinfection or by disinfection alone.

DETECTED UNREGULATED CONTAMINANTS				
Parameter	MCL	MCLG	Average Level Detected (mg/liter or as noted)	Range
Calcium Hardness (as mg/l $CaCO_3$)	NR	NE	90	74 - 109
Conductivity (uS/cm)	NR	NE	290	236 - 392
Alkalinity (as mg/l $CaCO_3$)	NR	NE	94	79 - 100

We have learned through our testing that some contaminants have been detected; however, these contaminants were detected below the levels allowed by the state.

New York State Department of Health Source Water Assessment

The New York State Department of Health completed a draft Source Water Assessment of the supply's raw water sources under the state's Source Water Assessment Program (SWAP). The purpose of this program is to compile, organize, and evaluate information regarding possible and actual threats to the quality of public water supply (PWS) sources. It is important to note that source water assessment reports estimate the potential for untreated drinking water sources to be impacted by contamination. These reports do not address the safety or quality of treated finished potable tap water. The Great Lakes' watershed is exceptionally large and too big for a detailed evaluation in the SWAP. General drinking water concerns for public water supplies, which use these sources include: storm generated turbidity, wastewater, toxic sediments, shipping related spills, and problems associated with exotic species (e.g. zebra mussels – intake clogging and taste and odor problems). The SWAP is based on the analysis of the contaminant inventory compiled for the drainage areas deemed most likely to impact drinking water quality at this public water supply's raw water intakes. Separate assessments were completed for the Lake Erie source and the Niagara River source. The assessment found a moderate susceptibility to contamination for the Lake Erie source. The amount of agricultural land in the assessment area results in elevated potential of disinfection byproduct precursors and pesticides contamination. While there are some facilities present, permitted discharges do not likely represent an important threat to source water quality based on their density in the assessment area. There is also noteworthy contamination susceptibility associated with other discrete contaminant sources, and these facility types include: landfills. The assessment found an elevated susceptibility to contamination for the Niagara River source. The amount of agricultural (and to a lesser extent residential) lands in the assessment area results in elevated potential for microbials, disinfection byproduct precursors, and pesticides contamination. There is also a high density of sanitary wastewater discharges, which results in elevated susceptibility for all contaminant categories. Non-sanitary wastewater discharges may also contribute to contamination. There is also considerable contamination susceptibility associated with other discrete contaminant sources, and these facility types include: chemical bulk storage, inactive hazardous waste sites, landfills, Resource Conservation and Recovery Act facilities and Toxics Release Inventory facilities.
If you have any questions about New York State's Source Water Assessment Program, please contact the Director of Environmental Health, Erie County Health Department at (716) 961-6800.

Results presented here are from 2018 analyses or from the most recent year that tests were conducted in accordance with regulatory requirements. Some tests are not required to be performed on an annual basis. Further nformation can be obtained upon request from the ECWA Water Quality Laboratory at (716) 685-8580 or on the Internet at www.ecwa.org.

ABBREVIATIONS AND TERMS

AL = Action Level: the concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow.
LRAA = Locational Running Annual Average
MCL= Maximum Contaminant Level: The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible.
MCLG = Maximum Contaminant Level Goal: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety
MFL= Million Fibers per Liter (Asbestos)
mg/liter = milligrams per liter (parts per million)
MRDL = Maximum Residual Disinfectant Level : The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
MRDLG = Maximum Residual Disinfectant Level Goal: The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contamination.
ND = Not Detected: absent or present at less than testing method detection limit.
NE = Not Established
NR = Not Regulated
NTU = Nephelometric Turbidity Units
pCi/liter = Picocuries per liter
SU = Standard Units (pH measurement)
TT = Treatment Technique: a required process intended to reduce the level of a contaminant in drinking water.
ug/liter (ug/L) = micrograms per liter = parts per billion
uS/cm = Microsiemens per centimeter (a measure of conductivity)
Variances and Exemptions = State or EPA permission not to meet an MCL or a treatment technique under certain conditions.
< = Denotes Less Than
≤ = Denotes Less Than or Equal To

TYPES OF CONTAMINANTS

Contaminants that may be present in source water before we treat it include:

Microbial Contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.

Inorganic Contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm water runoff, industrial domestic wastewater discharges, oil and gas production, mining or farming.

Pesticides and Herbicides, which may come from a variety of sources such as urban storm water runoff, agricultural and residential uses.

Organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.

Radioactive Contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

Water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk.

COMPOUNDS TESTED FOR BUT NOT DETECTED

4-Androstene-3,17-dione	Aldrin	Dicamba	PCB 1242
2-Chlorotoluene	alpha-BHC	Dichlorodifluoromethane	PCB 1248
4-Chlorotoluene	Anatoxin-a	Dieldrin	PCB 1254
17-beta-Estradiol	Antimony	Dimethipin	PCB 1260
17-alpha-Ethynyl estradiol	Arsenic	Dinoseb	Pentachlorophenol
2,4-D	Asbestos	Diquat	Perfluorobutanesulfonic acid
1,3 Butadiene	Atrazine	Endothall	Perfluoroheptanoic acid
1,2-Dichlorobenzene	Benzene	Endrin	Perfluorohexanesulfonic acid
1,3-Dichlorobenzene	Benzo(a)pyrene	Equillin	Perfluorononanoic acid
1,4-Dichlorobenzene	Beryllium	Estriol	Perfluorooctane sulfonate
1,1-Dichloroethane	Bromide	Estrone	Perfluorooctanoic acid
1,2-Dichloroethane	Bromobenzene	Ethoprop	Permethrin
1,1-Dichloroethylene	Bromochloromethane	Ethylbenzene	Pichloram
cis-1,2-Dichloroethylene	Bromomethane	Ethylene Dibromide (EDB)	Profenofos
trans-1,2-Dichloroethylene	Butachlor	Glyphosate	Propachlor
1,2-Dichloropropane	Butylated hydroxyanisole	Gross Alpha Particles	n-Propylbenzene
1,3-Dichloropropane	n-Butylbenzene	Gross Beta Particles	Quinoline
2,2-Dichloropropane	sec-Butylbenzene	Heptachlor	Radium 226
1,1-Dichloropropene	t-Butylbenzene	Heptachlor Epoxide	Selenium
cis-1,3-Dichloropropene	Cadmium	Hexachlorobenzene	Simazine
trans-1,3-Dichloropropene	Carbaryl	Hexachlorobutadiene	Styrene
1,4-Dioxane	Carbofuran	Hexachlorocyclopentadiene	Tebuconazole
3-Hydroxycarbofuran	Carbon Tetrachloride	Isopropylbenzene	Tetrachloroethylene
2,3,7,8-TCDD (Dioxin)	Chlordane	p-Isopropyltoluene	Thallium
2,4,5-TP (Silvex)	Chlorobenzene	Lindane	Toluene
1,1,1,2-Tetrachloroethane	Chlorodifluoromethane	Mercury	o-Toluidine
1,1,2,2-Tetrachloroethane	Chloroethane	Methomyl	Total Microcystin
1,2,3-Trichlorobenzene	Chloromethane	Methoxychlor	Toxaphene
1,2,4-Trichlorobenzene	Chloropyrifos	Methyl t-butyl ether (MTBE)	Tribufos
1,1,1-Trichloroethane	Chromium,Total	Methylene Chloride	Trichloroethylene
1,1,2-Trichloroethane	Cobalt	Metolachlor	Trichlorofluoromethane
1,2,3-Trichloropropane	Cyanide	Metribuzin	Vinyl Chloride
1,2,4-Trimethylbenzene	Cylindrospermopsin	Nickel	Xylenes (o,m and p)
1,3,5-Trimethylbenzene	Dalapon	Oxamyl (Vydate)	
Alachlor	Di(2-ethylhexyl) adipate	Oxyfluorfin	
Aldicarb	Di(2-ethylhexyl) phthalate	PCB 1016	
Aldicarb Sulfone	Dibromochloropropane	PCB 1221	
Aldicarb Sulfoxide	Dibromoethane	PCP1232	

For a large-print copy of ECWA's 2018 Water Quality Report , please visit www.ecwa.org or email your request to questionscomments@ecwa.org

Appendix E

Buffalo Water Authority 2018 Drinking Water Report



2018 Annual Drinking Water Quality Report

BUFFALO WATER
managed by VEOLIA

Consumer Confidence Report
Buffalo, New York

Introduction

To comply with State regulations, Buffalo Water (managed by Veolia NA) will be annually issuing a report describing the quality of your drinking water. The purpose of this report is to raise your understanding of drinking water and awareness of the need to protect our drinking water sources.

Last year, your tap water met all State drinking water health standards.

This report is an overview of last year's water quality. Included are details about where your water comes from, what it contains, and how it compares to State standards. We are pleased to provide you with this information because informed customers are our best customers.

If you have any questions about this report or concerning your drinking water, please contact Jan Robin Ford, Water Treatment Supervisor at (716) 847-1065 ext. 130. We want you to be informed about your drinking water. If you would like to learn more, please attend any of the regularly scheduled Water Board meetings, typically held the second Wednesday of each month at 8:00 AM, Room 502 – City Hall.

Buffalo Water
Managed by Veolia NA, LLC
2 Porter Avenue
Buffalo, NY 14201
PWS ID# NY1400422

MAYOR BYRON W. BROWN

Buffalo Water Board:

Chairperson: Oluwole McFoy, P.E.

Commissioner of Public Works:
Steven J. Stepniak

Members:
Michael Finn, P.E.
Gerald E Kelly
William Sunderlin

Veolia Water Managers:

Project Manager: David Hill

Operations Manager:
Douglas Fultz, P.E.

Billing & Customer Service
281 Exchange Street
Buffalo, NY 14204

Water Treatment Plant
2 Porter Avenue
Buffalo, NY 14201

Useful Phone Numbers
Customer Service & Emergency:
(716) 847-1065
Water Quality Inquiries:
(716) 847-1065, ext. 133

Website:
www.buffalowater.org

Where does our water come from?



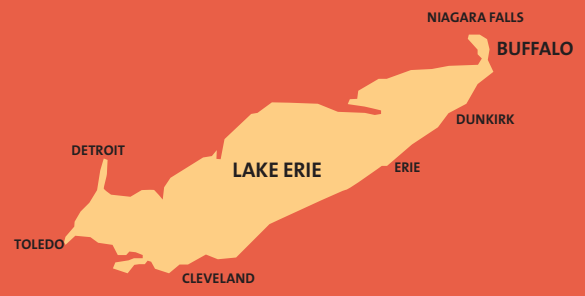
LAKE ERIE FACTS

- **Lake Erie is the 11th largest world lake (4th largest Great Lake by surface area)**
- **Length: 241 miles; Width 57 miles**
- **Average Depth: 62 feet**
- **Max Depth: 210 feet; Vol: 116 miles^3**
- **Elevation: 569 feet; Shoreline: 871 miles**
- **Surface Area: 9,910 miles^2**
- **Drainage Basin Area: 30,140 miles^2**
- **Outlet: Niagara River & Welland Canal**

For health issues, contact:
Erie County Health Dept:
(716) 961-6800

Senior Citizen's Discount, contact: Dept of Assessments at
(716) 851-5733

Este informe contiene información muy importante sobre su agua beber. Tradúzcalo ó hable con alguien que lo entienda bien.



In general, the sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activities. Contaminants that may be present in source water include: microbial contaminants; inorganic contaminants; pesticides and herbicides; organic chemical contaminants; and radioactive contaminants. In order to ensure that tap water is safe to drink, the State and the Federal Environmental Protection Agency (EPA) prescribe regulations which limit the amount of certain contaminants in water provided by public water systems. The State Health Department and the Federal Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Our water source is Lake Erie

(a surface water source) which is the southernmost of the Great Lakes, bounded on the north by the Canadian province of Ontario, on the south by the U.S. states of Ohio, Pennsylvania, and New York, and on the west by the state of Michigan. Lake Erie is the shallowest of the Great Lakes, with an average depth of only 62-ft. It also has the shortest detention time of the Great Lakes. Water remains in the lake for only 2.6 years before it is replaced by fresh water (as compared with 191 years in Lake Superior or 22.6 years in Lake Huron). It is also the siltiest of the Great Lakes. Its bottom consists of fine sand, easily upset during turbulent storms. The combination of its shallowness, short detention time and sandy unstable bottom is especially beneficial to our water quality. The lake is able to flush itself of harmful contaminants such as pesticides and other organic wastes. When Lake Erie becomes turbulent, fine particles of sand and silt become agitated and suspended throughout the lake. Organic contaminants have the propensity to cling to these particles and be flushed from the lake. Therefore, water treatment begins as a natural process due to the structure and makeup of Lake Erie. During 2018, our system did not experience any restriction of our water source.

Customer cost

The average 2018 annual water charge was approximately $700.00 per year. The total quarterly bill includes the cost of water used and the service charge. Eligible senior citizens receive a discount.

Water Usage (gallons)		Price per 1000 gallons		Quarterly Service Charge as of July 1, 2012				
Monthly	Quarterly	Regular	Seniors	Meter Size	Regular	Seniors	Meter Size	Regular
Up to 29,913	Up to 74,793	$3.05	$1.84	5/8"	$34.90	$17.17	3"	$523.47
29,920 - 97,240	74,800 - 269,280	$2.86	$1.71	3/4"	$49.22	$25.86	4"	$872.42
				1"	$87.30	$42.96	5"	$1,744.88
over 97,240	over 269,280	$2.18	$0.64	1 1/2"	$174.61	$86.02	8"	$2,829.61
				2"	$279.19	$137.42	10"	$4,013.26

Abbreviations and Definitions of Terms used in this report:

MCLG (Maximum Contaminant Level Goal): The level of contaminant in drinking water below which there is no known or expected risk to health, MCLGs allows for a margin of safety.

MCL (Maximum Contaminant Level): The highest level of contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as possible.

MRDL (Maximum Residual Disinfectant Level): The highest level of a disinfectant (chlorine) allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

MRDLG (Maximum Residual Disinfectant Level Goal): The level of a drinking water disinfectant (chlorine) below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

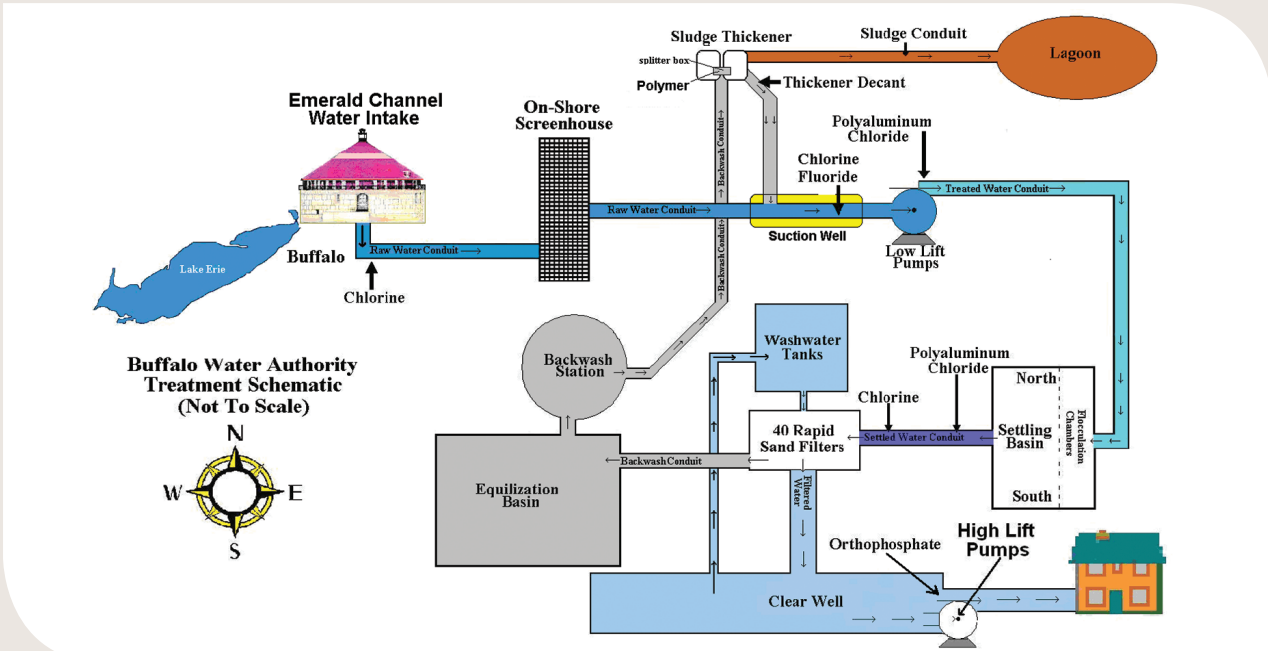
TT (Treatment Technique): A required process intended to reduce the level of contamination in drinking water.

AL (Action Level): The concentration of a contaminant, which, if exceeded, triggers a treatment, or other requirement, which a water system must follow.

NTU (Nephelometric Turbidity Units): A measure of clarity (turbidity) of water, turbidity in excess of 5 NTU is just noticeable to the average person.

Poly/Ortho – phosphate: A chemical blend used as a treatment technique (TT) intended to minimize the potential for lead and copper contamination in drinking water. EPA's Action Level (AL) for lead in water delivered to users of public drinking water systems is 15 µg/L. (parts per billion) Its goal for lead is zero.

Floc: Clumps or tufts formed when suspended particles combine with chemical substance or compound that promotes the combination, agglomeration, aggregation or coagulation of suspended particles in the water.



Sedimentation: The process of suspended solid particles settling out (going to the bottom of the vessel) in water.

Coagulation: Agglomeration of finely divided particles into larger particles, which can then be removed by settling and/or filtration.

ppm: Parts per million, or milligrams per liter (mg/L). Corresponds to one part of liquid in one million parts of liquid.

ppb: Parts per billion, or micrograms per liter (µg/L). Corresponds to one part of liquid in one billion parts of liquid.

ND: Not detected.

N/A: Not applicable.

TTHM (Total Trihalomethane): Organic compounds, which are disinfection by-products of the chlorination of drinking water. Some people who drink water with TTHMs in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous system, and may have an increased risk of getting cancer.

HAA (Halogenated Acetic Acids): Organic compounds, which are disinfection by-products of the chlorination of drinking water, currently the EPA lists HAAs as a health advisory.

TOC (Total Organic Carbon); SUVA (Specific Ultraviolet Absorption): A measure of the organic content of the water. This is a precursor to disinfection by-product when combined with the chlorination of drinking water.

90th % Value: The values reported for lead & copper represent the 90th percentile for each of these contaminants. A percentile is a value on a scale of 100 that indicates a percent of a distribution that is equal to or below it. The 90th percentile is equal to or greater than 90% of the lead (or copper) values detected at your water system.

RAA: The value in the Running Annual Average (RAA) field is the average of the Monitoring Period Average (MPA) for a year. It is calculated by determining the monitoring periods that began within 365 for the current monitoring period and averaging them.

Stage 2 Disinfection Byproducts (2018)

Sample Site	THM Avg. (range), ppb	HAA Avg. (range), ppb
3396 Bailey	14.3-44.9(25.55)	6.7-23.8 (14.43)
396 Kenmore	16-40.8(25.55)	7.5-17.1(13.15)
2 Templeton Terrace	15.8-23.5 (29.63)	7.7-21.2(16.97)
3043 Main	16.4-44.1 (26.5)	8.9-19.4 (13.9)
262 Grider	15.1-38.8(23.18)	7.9-21.4 (14.53)
150 Reading	24.4-51.9 (35.65)	2.6-9.2(6.83)
24 Westminster	17.4-45.3(26.98)	7.7-21.6 (16.35)
1110 Abbott	19.1-54.7 (31.4)	9.5-17.2 (13.58)
300 Dorrance	19.1-50.6(31.5)	9.4-19.7(13.58)
398 Dingens	15.3-47.3(26.48)	7.3-14.4 (11.85)
1625 Bailey	16.4-38.9 (25.6)	7.5-19(14.5)
939 Abbott	21.3-46.4(30.05)	9.4-25 (18.03)

Source water assessment (SUMMARY)

A source water assessment was completed under the New York State Department of Health (NYSDOH) Source Water Assessment Program (SWAP). The following is the Executive Summary of this report:

"The New York State Department of Health recently completed a draft Source Water Assessment of the raw water supply's source under the state's Source Water Assessment Program (SWAP). The purpose of this program is to compile, organize, and evaluate information regarding possible and actual threats to the quality of public water supply (PWS) sources. It is important to note that source water assessment reports estimate the potential for untreated drinking water sources to be impacted by contamination. These reports do not address the safety or quality of treated finished potable tap water.

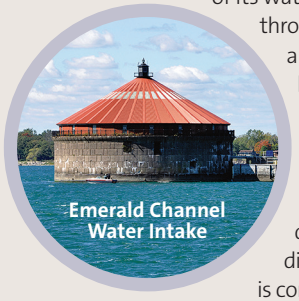
The Great Lakes' watershed is exceptionally large and too big for a detailed evaluation in the SWAP. General drinking water concerns for public water supplies which use these sources include: storm generated turbidity, wastewater, toxic sediments, shipping related spills, and problems associated with exotic species (e.g. zebra mussels – intake clogging and taste and odor problems). The SWAP is based on the analysis of the contaminant inventory compiled for the drainage area deemed most likely to impact drinking water quality at this public water supply raw water intake. This assessment found a moderate susceptibility to contamination for this source of drinking water. The amount of agricultural lands in the assessment area results in elevated potential for protozoa and disinfection byproduct precursor contamination. There is also a high density of sanitary wastewater discharges, which results in elevated susceptibility for nearly all contaminant categories.

There is also noteworthy contamination susceptibility associated with other discrete contaminant sources, and these facility types include: Toxics Release Inventory facilities, Chemical Bulk Storage facilities, inactive hazardous waste sites, landfills and Resource Conservation and Recovery Act facilities."

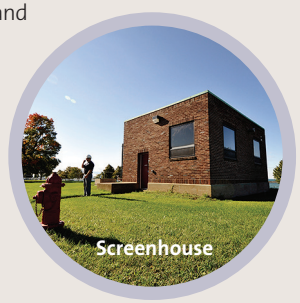
If you have any questions about the state's Source Water Assessment Program, please contact the Erie County Health Department at (716) 961-6800.

Water treatment process

Buffalo's water intake is located in the northeastern region of Lake Erie, just upstream of the Niagara River. This region is known as the Emerald Channel, due to the sparkling clarity of its water. Water enters into the intake through 12 sluice gates and collects in a circular conduit and is conveyed by gravity down 60 feet into to a 12-foot diameter, mile-long tunnel burrowed under the lakebed. Chlorine may initially be applied in this conduit to control zebra and quagga mussels, and provide some disinfection of the water. The water is conveyed by gravity to an onshore screen house at the Colonel Francis G. Ward Pumping Station where traveling screens remove large objects such as fish and other debris that could potentially damage equipment.


Emerald Channel Water Intake

Water continues to flow by gravity through the raw water conduit where fluoride and chlorine may be fed. Fluoride is added to guard against tooth decay, and chlorine is added at this location if the feed to the intake is suspended. Six low lift pumps control the amount of water withdrawn from Lake Erie depending on system demands. A poly-aluminum chloride (PACl) coagulant is fed and mixed immediately downstream of the low lift pumps. PACl is a coagulant designed to cause debris in the water to bind together forming floc. The treated water is conveyed into underground basins where flocculation and sedimentation processes occur. During flocculation, the water is slowly mixed by mechanical equipment to enhance floc formation. Following the flocculation process, water enters into the settling portion of the underground basins where the heavy floc is allowed to settle out by gravity. The treated water, still containing light floc, is conveyed to 40 rapid sand/anthracite filter beds where the filtration process occurs, removing the light floc. A filter aid (PACl) can be added when necessary to enhance filtration and additional chlorine can also be added if needed. Filtered water then enters a 28 million gallon clearwell, where it is stored until needed in the distribution system.


Screenhouse


High Lift Pumps


Flocculation Chambers

The 40 filters need to be cleaned on a regular basis, which is accomplished by backwashing the filters with potable water. The backwash wastewater generated during the backwash process contains concentrated amounts of light floc removed by the filters. This wastewater is collected and pumped to gravity thickening clarifiers. Clarified backwash water is recycled to the raw water conduit, and the concentrated residuals generated during the thickening process are pumped to a storage lagoon and subsequently to a centrifuge for further processing.

Prior to potable water being pumped into the distribution system, a phosphate based corrosion inhibitor is added, which provides a protective layer inside service connections and plumbing systems, minimizing the potential for contaminants such as lead to leach into drinking water. High lift pumps located at the Colonel Ward and Massachusetts Pumping Stations deliver the treated water to the community. Our in-house laboratory tests the quality and safety of the water at every stage of the treatment process. Additional tests are conducted from samples taken throughout the City, including private homes, businesses and public facilities to ensure our water remains safe.

Facts and figures

Water is essential for all life. Besides drinking, bathing and recreation, water is used to fight fires, and has countless industrial applications. The City of Buffalo treated over 25.7 billion gallons last year averaging over 70.4 million gallons each day for a population of approximately 260,000 people, covering 46 square miles of piping network. On our highest single day, January 12, 2018, we treated over 82.1million gallons of water for distribution.

The distribution system consists of approximately 891 miles of water main pipe (not including hydrant laterals and service connections), 22,936 valves, 74,715 service connections and 7,970 fire hydrants. The distribution system is maintained, day and night, throughout all seasons. In the past year Buffalo Water has replaced or renovated approximately 3.71miles of water mains and replaced 174 hydrants.

2018 TABLE OF DETECTED CONTAMINANTS

Are there contaminants in our drinking water?

As the State regulations require, we routinely test your drinking water for numerous contaminants. These contaminants include: total coliform, turbidity, inorganic compounds, nitrate, nitrite, lead and copper, volatile organic compounds, total trihalomethanes, haloacetic acids, radiological and synthetic organic compounds. The following tables present which compounds were detected in your drinking water. The State allows us to test for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, is more than one year old.

It should be noted that all drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk.

More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (800) 426-4791 or the Erie County Health Department at (716) 961-6800.

Footnotes for table of detected contaminants:
** Water containing more than 20 mg/l of sodium should not be used for drinking by anyone on severely restricted sodium diets. Water containing more than 270 mg/l of sodium should not be used for drinking by people on moderately restricted sodium diets.

(1) In 2018, 66 homes were tested during the surveillance period of June 1, 2018 through September 30, 2018. No sample results were above the action level (AL) of 15 ppb for lead or 1.3 ppm for copper. The treatment technique (TT) employed by Buffalo Water, intended to reduce lead and copper contamination of drinking water is the addition of a poly/orthophosphate blend as a part of water treatment. This chemical serves to coat water lines, to prevent lead and copper from leaching into the drinking water. Ingesting copper in excess of the 1.3 ppm AL may result in gastrointestinal distress. Long term exposure to copper above the 1.3 ppm AL may result in liver or kidney damage. Infants and children who drink water containing lead in excess of the AL could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning disabilities. Adults who drink this water over many years could develop kidney problems or high blood pressure. Infants and young children are more vulnerable to lead in drinking water than the general population. Lead levels in your home might be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested, and you should flush your tap for thirty seconds to two minutes (or until you feel a change in water temperature) before using your tap water. Additional information is available from the Safe Drinking Water Hotline (800) 426-4791, and on Buffalo Water's website. **Compliance testing for lead and copper will occur during the summer of 2020**.

(2) Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system. Our highest single distribution measurement for 2018 occurred on February 6, 2018 (0.59 NTU). State regulations require that the distribution average monthly turbidity must be below 5.0 NTU.

(3) The regulations also require that 95% of the effluent turbidity samples collected have measurements below 0.3 NTU and that no single turbidity measurement be above 1.0 NTU. 100% of all measurements for all of the months met the TT for turbidity (0.3 NTU), and were in the acceptable range allowed and did not constitute a violation.

(4) Representative testing for TTHM included samples collected through 2018. Our highest detected reading occurred on August 24, 2018, 54.7 ppb, which was below the MCL of 80 ppb. Some people who drink water, containing TTHM in excess of the MCL over many years, experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

What does this information mean?

As presented in the Table of Detected Contaminants, our system had no violations for the parameters referenced. We have learned through our testing that some contaminants have been detected; however, these contaminants were detected below the level allowed by the State.

UNDETECTED CONTAMINANTS: According to State regulations, Buffalo Water routinely monitors your drinking water for various contaminants. Your water is tested for inorganic contaminants, nitrate, lead and copper, volatile organic contaminants, synthetic organic contaminants and total trihalomethanes. Additionally, your water is tested for coliform bacteria a minimum of 150 times a month. The contaminants detected in your drinking water are included in the Table of Detected Contaminants. Below is a list of contaminants that were tested for in 2018, but **were not detected** in our drinking water:
1,1,1,2-Tetrachloroethane, 1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,1-Dichloropropene, 1,2,3-Trichlorobenzene, 1,2,3-Trichloropropane, 1,2,4-Trichlorobenzene, 1,2,4-Trimethylbenzene, 1,2-Dichlorobenzene, 1,2-Dichloroethane, 1,2-Dichloropropane, 1,3,5-Trimethylbenzene, 1,3-Dichlorobenzene, 1,3-Dichloropropane, 1,4-Dichlorobenzene, 2,2-Dichloropropane, 2-Chlorotoluene, 4-Chlorotoluene, 2,4-D, 3-Hydroxycarbofuron, Alachlor, Aldicarb, Aldicarb Sulfoxide, Aldicarb Sulfone, Aldrin, Antimony, Arsenic, Atrazine, Benzene, Benzopyrene, Beryllium, Bromobenzene, Bromochloromethane, Bromomethane, Butachlor, Cadmium, Carbaryl, Carbon Tetrachloride, Carbofuran, Chlordane, Chlorobenzene, Chloroethane, Chloromethane, , cis-1,2-Dichloroethene, cis-1,3-Dichloropropene, Cyanide, Dalapan, Di(2-ethylhexyl)adipate, Di(2-ethylhexyl)phthalate, Dibromomethane, Dicamba, Dichlorodifluoromethane, Dieldrin, Dinoseb Endrin, Ethylbenzene, Heptachlor, Heptachlor Epoxide, Hexachlorobenzene, Hexachlorobutadiene, Hexachlorocyclopentadiene, Isopropylbenzene, Lindane, Mercury, Methomyl, Methoxychlor, , Metolachlor, Metribuzin, MTBE, m-Xylene, , N-Butylbenzeyene, Nitrite as Nitrogen, n-Propylbenzene, Oxamyl o-Xylene, p-Isopropyltoluene, Pentachlorophenol, Pichloram, Polychlorinated biphenyls, Propachlor, p-Xylene, sec-Butylbenzene, Selenium, Silvex, Simazine, Styrene, tert-Butylbenzene, Tetrachloroethene, Thallium, Toluene, , trans-1,2-Dichloroethene, trans-1,3-Dichloropropene, Trichloroethene, Trichlorofloromethane, Vinyl Chloride, 2,3,7,8-TCDD(Tetra- Chlorinated dioxin)

LOCATION	Contaminant	Violation Yes/No	Date of Sample	Level Detected (Min/Max) (Range)	Unit Measurement	MCLG	Regulatory Limit (MCL, TT or AL)	Likely Source of Contamination
INORGANICS								
ENTRY POINT	Barium	No	4/10/18, 10/10/18	18.3 - 19.3 Avg: 18.8	ppb	2000	2000	Discharge of drilling wastes; discharge from metal refineries; and erosion of natural deposits
ENTRY POINT	Fluoride	No	4/10/18, 10/10/18	70 - 80 Avg: 74	ppb	N/A	2200	Water additive which promotes strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum factories
ENTRY POINT	**Sodium	No	5/23/07	11	ppm	N/A	**	Naturally-occurring; road salt; water softeners; animal waste
ENTRY POINT	Total Chromium	No	4/10/18, 10/10/18	ND - 3.2 Avg: 1.6	ppm	N/A	100	Naturally found in rocks, soil, lava dust and animals.
ENTRY POINT	Nitrate	No	4/10/18, 10/10/18	70 - 170 Avg: 120	ppb	10	10000	Runoff from fertilizer use; Leaching from septic tanks, sewage, erosion of natural deposits
ENTRY POINT	Nickel	No	4/10/18, 10/10/18	1.6 - 2.1 Avg: 1.05	ppb	100	100	Nickel can be released into the environment by power plants, metal factories and incinerators. It is also found in runoff from fertilizer use.
DISTRIBUTION	Copper[1]	No	6/1/18-9/30/18	ND - 192 90%= 26	ppb	0	AL = 1300	Corrosion of household plumbing; erosion of natural deposits; leaching from wood preservatives
DISTRIBUTION	Lead[1]	No	6/1/18-9/30/18	ND - 4.8 90%= 2.4	ppb	0	AL = 15	Corrosion of household plumbing; erosion of natural deposits
MICROBIOLOGICAL								
ENTRY POINT	Heterotrophic Bacteria	No	1/2/18-12/26/18	0 - 500 Avg: 10	count / ml	N/A	N/A	Naturally occurring
ENTRY POINT	Turbidity[2]	No	1/2/18-12/31/18	0.08 - 0.48 Avg: 0.17	NTU	N/A	≤ 5.0	Soil runoff
ENTRY POINT	Turbidity[3]	No	1/2/18-12/31/18	0.07 - 0.38 Avg: 0.12	NTU	N/A	≤ 1.0	Soil runoff
ENTRY POINT		No		99.86% < 0.3	NTU	N/A	TT: 95% ≤0.3	Soil runoff
ENTRY POINT	Heterotrophic Bacteria	No	1/2/18-12/26/18	ND - 200 Avg: 5	count / ml	N/A	N/A	Naturally occurring
TOTAL AND FREE CHLORINE RESIDUALS - DISINFECTANTS								
ENTRY POINT	Total Chlorine	No	1/1/18-12/31/18	0.97 - 1.80 Avg: 1.42	ppm	N/A	N/A	Water additive used to control microbes
ENTRY POINT	Free Chlorine	No	1/1/18-12/31/18	0.79 - 1.60 Avg: 1.13	ppm	(MRDLG) 4.0	(MRDLG) 4.0	Water additive used to control microbes
DISTRIBUTION	Free Chlorine	No	1/2/18-12/26/18	0.04 - 1.60 Avg: 0.90	ppm	(MRDLG) 4.0	(MRDLG) 4.0	Water additive used to control microbes
DISINFECTION BYPRODUCTS								
DISTRIBUTION	TTHM[4]	No	2/13/18-11/21/18	14.3 - 54.7 RAA = 27.9	ppb	N/A	80	By-product of drinking water chlorination needed to kill harmful microorganisms. TTHMs are formed when source water contains large amounts of organic matter.
DISTRIBUTION	HAA	No	2/13/18-11/21/18	2.9 - 25 RAA = 13.8	ppb	N/A	60	By-product of drinking water disinfection needed to kill harmful microorganisms
ENTRY POINT	TOC	No	1/9/18-12/11/18	1.0 - 2.3 Avg: 1.77	ppm	N/A	TT < 2.0	Precursors to by-products of drinking water chlorination
ENTRY POINT	SUVA	No	1/9/18-12/11/18	0.00 - 8.9 Avg: 1.9	L/mg-m	N/A	TT < 2.0	Precursors to by-products of drinking water chlorination
OTHER PROPERTIES OF WATER								
ENTRY POINT	Total Solids	No	1/24/18-12/21/18	141 - 209 (Average 169)	ppm	N/A	N/A	Naturally occurring
ENTRY POINT	Total Dissolved Solids	No	1/24/18-12/21/18	58 - 185 (Average 165.9)	ppm	N/A	N/A	Naturally occurring
ENTRY POINT	Alkalinity (as $CaCO_3$)	No	1/9/18-11/27/18	86 - 98 (Average 93)	ppm	N/A	N/A	Naturally occurring
ENTRY POINT	Calcium Hardness (as $CaCO_3$)	No	1/9/18-11/27/18	114 - 128 (Average 118)	ppm	N/A	N/A	Naturally occurring
ENTRY POINT	pH	No	1/1/18-12/31/18	7.1 - 7.9 (Average 7.65)	SU	N/A	N/A	Naturally occurring
DISTRIBUTION	pH	No	1/2/18-12/31/18	7.0 - 8.3 (Average 7.74)	SU	N/A	N/A	Naturally occurring
DISTRIBUTION	Alkalinity (as $CaCO_3$)	No	7/9/18-9/26/18	90 - 94 (average 92)	ppm	N/A	N/A	Naturally occurring
DISTRIBUTION	Calcium Hardness (as $CaCO_3$)	No	7/9/18-9/26/18	114 - 124 (Average 118)	ppm	N/A	N/A	Naturally occurring
UNREGULATED CONTAMINANT MONITORING RULE (UCMR3)								
ENTRY POINT	Molybdenum	No	3/10/15-6/10/15	1-1.2 (Average 1.1)	ppb	N/A	N/A	Naturally occurring and industrial processes
ENTRY POINT	Strontium	No	3/10/15-6/10/15	160-160 (Average 160)	ppb	N/A	N/A	Naturally occurring
ENTRY POINT	Chromium, Hexavalent	No	3/10/15-6/10/15	50-90 (Average 70)	ppt	N/A	N/A	Naturally occurring and industrial processes
ENTRY POINT	4-Androstene-3,17dione	No	3/10/15-6/10/15	.7	ppt	N/A	N/A	Steroid Hormone
DISTRIBUTION	Molybdenum	No	3/10/15-6/10/15	1.0-1.1 (Average 1.05)	ppb	N/A	N/A	Naturally occurring and industrial processes
DISTRIBUTION	Strontium	No	3/10/15-6/10/15	150-160 (Average 155	ppb	N/A	N/A	Naturally occurring
DISTRIBUTION	Chromium, Hexavalent	No	3/10/15-6/10/15	100	ppt	N/A	N/A	Naturally occurring and industrial processes

Is our water system meeting other rules that govern operations?

Monitoring Violations
We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not your drinking water meets health standards. During 2018, our system was in compliance with applicable state drinking water operations, monitoring, and reporting requirements.

Do I need to take special precautions?

Some people may be more vulnerable to disease causing microorganisms or pathogens in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice from their health care provider about their drinking water.

EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium, Giardia and other microbial pathogens are available from the Safe Drinking Water Hotline (800) 426-4791.

Information on fluoride addition

Our system is one of the many drinking water systems in New York State that provides drinking water with a controlled, low level of fluoride for consumer dental health protection. According to the United States Centers for Disease Control (CDC), fluoride is very effective in preventing cavities when present in drinking water at a properly controlled level. To ensure that the fluoride supplement in your water provides optimal dental protection, we monitor fluoride levels on a daily basis to make sure fluoride is maintained at a target level of 0.7 mg/l.

Currently there is an interruption to fluoride addition due to capital improvements associated with upgrades to our fluoride system. Since June 22, 2015 fluoride has not been added to your drinking water, and we do not expect fluoride addition to be restored until December, 2018. You may want to discuss this with your family dentist to see if some other form of fluoride supplement should be considered for your dental protection.

Why save water and how to avoid wasting it?

Although our system has an adequate amount of water to meet present and future demands, there are a number of reasons why it is important to conserve water:

- Saving water saves energy and some of the costs associated with both of these necessities of life
- Saving water reduces the cost of energy required to pump water and the need to construct costly new wells, pumping systems and water towers; and
- Saving water lessens the strain on the water system during a dry spell or drought, helping to avoid severe water use restrictions so that essential firefighting needs are met.

You can play a role in conserving water by becoming conscious of the amount of water your household is using, and by looking for ways to use less whenever you can. It is not hard to conserve water. Conservation tips include:

- Run only full loads in the washing machine and dishwasher. This saves 300 to 800 gallons per month.
- Turn off the tap when brushing your teeth and shaving. This saves three gallons each day.
- Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it and you can save almost 6,000 gallons per year.
- Check your toilets for leaks by putting a few drops of food coloring in the tank, watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from an otherwise invisible toilet leak. Fix it and you save more than 30,000 gallons a year.
- Put a plastic bottle or a plastic bag weighted with pebbles and filled with water in your toilet tank. Displacing water in this manner allows you to use less water with each flush. Saves 5 to 10 gallons a day. That's up to 300 gallons a month, even more for large families. Better yet, for even greater savings, replace your water-guzzling 5-7 gallon a flush toilet with a 1.6 gallon, low flush, or 1.28 gallon, ultra-low flush model.
- Avoid flushing the toilet unnecessarily. Dispose of tissues, insects and other similar waste in the trash rather than the toilet.
- Retrofit all household faucets by installing aerators with flow restrictors to slow the flow of water.
- Don't run the hose while washing your car. Use a bucket of water and a quick hose rinse at the end which may save 150 gallons each time. For a two-car family that's up to 1,200 gallons a month.
- Place a bucket in the shower to catch excess water and use this to water plants. The same technique can be used when washing dishes or vegetables in the sink.
- Use your water meter to detect hidden leaks. Simply turn off all taps and water using appliances, then check the meter after 15 minutes, if it moved, you have a leak.

System Improvements

To insure continuing quality and safety in our communities' water supply, Buffalo Water has made the following improvements to our treatment facility in 2018:

- Security improvements were further implemented at the Colonel Ward and Massachusetts Avenue Pumping Stations.
- Electrical upgrades continued at the Colonel Ward Pump Station and Filtration Plant to improve electrical service and reliability.
- In the distribution system, 174 fire hydrants were replaced and hydrant marker installation continued throughout the City.
- Mechanical and electrical improvements were completed at the Manhattan Tank Pumping Station.
- Distribution system improvements continued including a large valve replacement project, water cut restoration, and rehabilitation/replacement of water mains.
- Continued the City's pilot program for annual lead and copper monitoring with increased customer awareness.
- Corrosion control evaluations continued by SUNY Buffalo, utilizing an on-site pipe loop pilot system.
- An optimal corrosion control study continued, evaluating the overall water treatment process and effects on the distribution system.
- Construction activities involving installation of a new water main under the City Ship Canal at Michigan Avenue were completed.
- Renovation of the Colonel Ward Pumping Station administrative offices as well as the Filtration Plant control room and supervisor offices were completed.
- Roofing improvements to portions of the Colonel Ward Pumping Station and Hydrant Garage were completed.
- Brick repairs to the exterior wall of the stone storage area were completed.
- Design of new primary coagulant and corrosion control facilities commenced, including bulk storage and chemical feed facilities.
- Design of new raw water screening facilities including facility improvements to Screen House commenced.

An absolute commitment to produce the best quality of drinking water available will remain highest priority for Buffalo Water. The planned improvements for 2018 demonstrate this commitment:

- Construction of the primary coagulant and corrosion control systems improvements project.
- Construction of the raw water screening improvements project.
- Evaluation of all below grade water conveyance structures (excluding distribution piping) utilizing remotely operated vehicles (ROV) outfitted with profiling sonar to perform a general conditions assessment of buried infrastructure.
- Control system upgrades will continue. The improved monitoring systems will optimize control over water treatment and plant pumping systems.
- Over 125 hydrants are scheduled to be replaced.
- Building envelope improvements at the Colonel Ward and Massachusetts Avenue Pumping Stations.
- Improve accuracy of metering program by replacing specific groups of meters.
- An optimal corrosion control study will be completed.
- Engineering design of filter wash water supply piping and media replacement will commence.
- Various distribution system improvements (piping, valves) will be designed and constructed.

Metering program

The New York State's Department of Environmental Conservation has mandated that all households and businesses served by Buffalo Water have a water meter installed to insure equitable billing and to foster water conservation. The water meters installed under this program, are read from outside your residence, and accurately bill for the water that has been used, the same way you are currently billed by other utilities. Buffalo Water currently reads and bills metered accounts quarterly. Bills are processed and mailed within approximately 30 days following the previous quarter. If your meter is stopped, or we cannot read your meter, you may receive an estimated bill, which could result in an inaccurate bill. If you receive a notice regarding a problem with your meter, or an estimated bill, you should contact customer service at (716) 847-1065.

Closing

Thank you for allowing us to continue to provide your family with quality drinking water this year. We ask that all our customers help us protect our water sources, which are the heart of our community. A copy of the Annual Water Quality Report can be found on Buffalo Water's website (www.buffalowater.org). **Please call our treatment plant supervisor at (716) 847-1065 ext. 130 or the laboratory at (716) 847-1065 ext. 133 if you have questions about water quality. As always, if you are concerned about elevated levels of lead in your home's plumbing, please contact Mayor Byron W. Brown's 3-1-1 Call and Resolution Center to have your water tested for lead by Buffalo Water.**

281 Exchange Street
Buffalo, NY 14204

Appendix F

Site Plan Review (Zoning Ordinance) Models

Site Plan Review and Approval Procedures (Town of Ithaca, NY)

Model Site Plan Review Local Law for Cattaraugus County, NY

Town of Ithaca, NY
Tuesday, January 13, 2015

Chapter 270. ZONING

Article XXIII. Site Plan Review and Approval Procedures

§ 270-182. Purpose.

The purpose of site plan review is to provide for the review and approval of development plans to ensure that land development occurs in harmony with surrounding uses, without adversely impacting neighboring parcels, property values, public facilities, infrastructure or the natural environment.

§ 270-183. Site plan required prior to building permit or certificate of occupancy or certificate of compliance.

[Amended 5-12-2014 by L.L. No. 9-2014]
Before a building permit or certificate of occupancy or certificate of compliance can be issued for any of the activities for which site plan approval is required, a site plan must be approved by the Planning Board in accordance with these and other applicable provisions.

§ 270-184. Applicability.

The requirements set forth in this article shall apply to all activities or developments that are referred to elsewhere in this chapter as requiring a site plan approval. In addition, and supplementing such provisions, the requirements of this article shall also apply to the following actions except as to those actions specifically exempted, or for which alternative specific site plan review and approval requirements are established, elsewhere in this chapter:

A. All new commercial, industrial or institutional development.

B. All new multifamily housing.

C. Any modification of existing commercial, industrial, institutional or multifamily buildings, for which no previous site plan exists.

D. Any expansion of existing commercial, industrial, institutional or multifamily buildings which involve an increase in the gross floor area of an existing building by more than 10% in the aggregate since any previous site plan approval.

E. Any conversion of an existing residential structure to a nonresidential use (except as may have occurred in connection with a home occupation established in conformity with the provisions of this chapter).

F. Any conversion of an existing nonresidential structure into a residential structure containing three or more dwelling units.

G. Any modification to an existing residential structure which increases the number of dwelling units in the building to three or more dwelling units.

H. Any change of an existing nonresidential building from one type of use specified in this chapter to another (e.g., conversion of a commercial structure to an industrial facility or conversion from a warehouse to a restaurant).

I. Any other modification to any facility or structure not set forth in the preceding subsections, for which final site plan approval was or is presently required by the terms of this chapter or any modification to any previously approved site plan, except as otherwise authorized below.

§ 270-185. Procedure.

A. The site plan process incorporates three successive stages: a) sketch plan review, b) preliminary site plan approval, and c) final site plan approval. Final site plan approval is required in all cases prior to the issuance of a building permit or certificate of occupancy or certificate of compliance. The sketch plan review is at the option of the applicant except as may be required by the Director of Planning if the proposed project is complex, has significant potential effects on the environment, or if other conditions exist such that a sketch review would be beneficial to the applicant or the Town.
[Amended 5-12-2014 by L.L. No. 9-2014]

B. Sketch plan review. The sole purpose of sketch plan review is to review generally and informally the proposed project, advise the applicant as to whether it is reasonable to anticipate a positive response to a formal application, and to highlight any concerns that may be readily apparent to the Planning Board. No vote of approval or disapproval shall be taken with respect to a sketch plan.

C. Preliminary site plan review. An applicant may, at his or her discretion, apply for preliminary site plan approval. Further, if the Planning Board determines that an application for final site plan approval is insufficient for an affirmative decision, the Board may grant preliminary site plan approval with such conditions and restrictions as are permitted by § 274-a of the Town Law or any similar or successor statute.

D. Formal application.

(1) Unless other requirements of this chapter govern (e.g., the procedures for creation of Planned Development Zone) the applicant shall make formal application for site plan approval by submitting, at a minimum:

(a) One completed and signed development review application.

(b) Applicable application fees.

(c) Deposit of review fees.

(d) One fully completed and signed short environmental assessment form, Part I (SEAF), or long environmental assessment form, Part I (LEAF), whichever is required.

(e) Estimate of costs of site improvements (excluding cost of land acquisition and professional fees) to be prepared (preferably) by a licensed professional engineer.

(f) Four full-size dark-line prints of the site plan and 25 reduced copies of all sheets of the plan (the reduced copies to be no larger than 11 inches by 17 inches) with all required information.

(g) All other information required by this chapter or other laws, rules or regulations for site plan approval.

(2) The application for site plan approval shall not be deemed complete until all of the above items are received by the Town Planner and the requirements of SEQR have been met.

E. Upon receipt of a complete application, the Planning Board shall hold a public hearing in accordance with the provisions of Town Law § 274-a or any similar or successor applicable statutes and shall render a decision approving, approving with conditions, or disapproving the site plan.

F. In making its decision, the Planning Board shall have the power to impose conditions and restrictions as authorized by§ 274-a of the Town Law or any similar or successor statute.

G. If preliminary site plan approval is granted, when the developer applies for final site plan approval the same procedures shall again be utilized, except that if the final site plan is in substantial agreement with the site plan that received preliminary site plan approval, no further action under SEQR shall be required. If the final site plan differs significantly from the preliminary site plan, it shall be treated as a new application, including compliance with applicable SEQR requirements.

H. In reviewing the final site plan application following preliminary site plan approval, the Planning Board shall, in the absence of significant new information, confine its review to determining whether the final plan a) conforms to the preliminary plan, b) complies with any conditions imposed by the Board in granting preliminary approval, and c) complies in all other respects with the provisions of the Town Law and this chapter.

I. The owner and applicant shall be bound by the final site plan as approved by the Planning Board, and all construction and development shall occur only in accordance with the finally approved site plan, unless specifically otherwise authorized by the provisions of this chapter.

§ 270-186. Site plan requirements.

The site plan shall include the following items, and such additional items as may be reasonably requested by the Planning Board in order to fully and adequately review the application for approval of the site plan or other permit or authorization being sought, which requirements may be articulated on one or more checklists supplied to applicants for site plan approval or modification. Without limiting the authority of the Planning Board or other reviewing board of the Town with respect to additional items, the minimum items to be included are set forth below with respect to each type of site plan being reviewed.

A. Sketch plan requirements. The sketch plan shall include:

(1) General location in the Town of the proposed development.

(2) Approximate boundaries of parcel(s) involved.

(3) Existing land use and proposed land use.

(4) Approximate location of existing and proposed buildings or other significant structures.

(5) Approximate location of adjacent or nearby highways.

(6) General topography of project area.

(7) General indication of potentially significant natural or cultural features on or adjacent to the site (e.g., wetlands, creeks, steep slopes or historic structures).

(8) Existing land uses of immediately adjacent properties.

(9) Written explanation of the character and purpose of the proposed development including the type and density of development, water and sewer systems proposed, and general timetable for the development.

B. Preliminary site plan requirements. The preliminary site plan shall include:

(1) Name and address of all owners of the property and name and address of all persons who have an interest in the property, such as easements or rights-of-way.

(2) Key map, when more than one sheet is required to present site plan.

(3) Vicinity map showing the general location of the property, one inch = 1,000 feet or one inch = 2,000 feet.

(4) Name of project, which shall not duplicate the name of any other project or subdivision in the county.

(5) Name and seal of each registered land surveyor(s), engineer(s), architect(s) or landscape architect(s) who prepared any of the site plan materials, including the topographic and boundary survey, drainage plans, etc.

(6) Date of site plan and any related documentation, and dates of any applicable revisions.

(7) Map scale (one inch = 50 feet or one inch = 100 feet) in bar form and North point.

(8) Name of Town, county and state.

(9) Exact boundary lines of the tract, indicated by a heavy line, showing location and description of all monuments, giving property metes and bounds to the nearest 1/10 foot, angles to the nearest minute, and at least one bearing.

(10) Location of any natural and cultural features within and immediately adjacent to the site including but not limited to streams, lakes, floodplains, ponds, wetlands, structures or sites listed, or eligible for listing, on the state or national registers of historic places, woodlands, brushlands, significant natural habitats, rare plants, viewsheds and unique natural areas, or other features pertinent to review of the proposed project.

(11) Location, size, and use of all existing structures, parking areas, access drives, off-street loading areas, signs, lighting, pedestrian or bicycle facilities, landscaping, and other existing features pertinent to plan review.

(12) Location, size, proposed use, design, and construction materials of all proposed structures, including floor plans, elevations from all four sides of all significant structures showing exterior configuration, dimensions, finishes, fenestrations, colors and other usual building details.

(13) Location, design, dimensions and construction materials of all proposed roads, sidewalks, bike paths, parking areas, fences, retaining walls, and screening.

(14) Size, location, height, design, and construction materials of all proposed signs and exterior lighting, including type of lighting fixtures and amount and area of illumination of any proposed lighting.

(15) Location, design, and construction materials of all proposed pedestrian and bicycle facilities.

(16) Landscaping plan and planting schedule showing locations, species, and size of proposed plantings, and existing landscaping to be retained, including also location and proposed design of any buffers.

(17) Location, design, and construction materials of all proposed water and sewage facilities.

(18) Locations of any existing or proposed fire and other emergency zones, including the location of fire hydrants.

(19) Location, name, and dimensions of each existing highway and alley and each utility, drainage, or similar easement within, abutting, or in the immediate vicinity of the proposed project site.

(20) Existing and proposed site topography represented by contour lines with intervals as required by the Planning Board, but not to exceed five feet, including a grading plan describing the volumes of cut and fill materials and their composition, and including elevations of proposed buildings, signage, lighting, and other features.

(21) Drainage plan, showing of existing and proposed drainage patterns, including a description of method used for analysis, the calculation of drainage area above point of entry for each watercourse entering or abutting the site, and proposed method of on-site retention if required, and details of any drainage improvements to be made. Generally the method of analysis shall be approved by the Director of Engineering and shall assume that, unless the Planning Board determines otherwise for good cause shown, that the rate of surface and subsurface run-off from the project site will not increase during or after construction of the project.

(22) Border lines bounding the sheet, one inch from the left edge and 1/2 inch from each of the other edges. All required information, including signatures, seals, dates and other information shall be within the border lines.

(23) Accurate outlines and descriptions of any areas to be dedicated or reserved for public use or acquisition, with the purposes indicated thereon, and of any areas to be reserved by deed covenant for common uses of all property owners, tenants, or other users of the property in the project.

(24) The plan and profile of each proposed highway in the development, with grade indicated, drawn to a scale of one inch = 50 feet horizontal, and one inch = five feet vertical, on standard plan and profile sheets. Profiles shall show accurately the profile of the highway or alley along the highway center line and location of the sidewalks, if any.

(25) Reference on the site plan to any separate instruments, including restrictive covenants, which directly affect the land in the project.

(26) Names and addresses of all property owners of all parcels abutting the site, or within 500 feet of the perimeter boundary of the site, including owners of easements or rights-of-way, together with tax parcel numbers for all such owners.

(27) Estimate of the cost of improvements (excluding the purchase cost of land) to be prepared by a licensed professional engineer or other qualified professional satisfactory to the Planning Board.

(28) Three dark-line prints of the proposed site plan and 25 copies of all sheets of the proposed site plan in reduced format (no larger than 11 inches by 17 inches) and copy of all other items required above (except development review application).

(29) A certificate signed by the owner and, if applicable, any contract vendee to the effect that i) the owner owns the land, ii) the owner or contract vendee caused the land to be surveyed and the site plan to be prepared, iii) the owner (or, if applicable, the contract vendee) agrees to construct the project in the manner represented by the finally approved site plan and all related approved application documents, and iv) the owner (or, if applicable, the contract vendee) makes any dedications indicated in any of the site plan documentation and agrees and guarantees to construct any required infrastructure elements set forth on the finally approved site plan.

(30) Where required by Town Code Chapter **228**, a stormwater pollution prevention plan or erosion and sedimentation control plan meeting the requirements of Chapter **228**.
[Added 2-11-2008 by L.L. No. 4-2008]

C. Final site plan requirements. The final site plan shall include:

(1) All of the items set forth above for preliminary site plan approval, modified if necessary to comply with any conditions imposed as part of the preliminary site plan approval process.

(2) One original set of the final site plan drawings on Mylar, vellum or paper, signed and sealed by the registered land surveyor(s), engineer(s), architect(s) or landscape architect(s) who prepared the site plan materials, to be retained by the Town, and two sets of paper copies of the final site plan drawings.

(3) Record of application for and approval status of all necessary permits from county, state, and/or federal agencies with copies of all necessary permits or approvals to be provided prior to issuance of any certificate of occupancy or certificate of compliance.
[Amended 5-12-2014 by L.L. No. 9-2014]

(4) Design development drawings for all buildings and construction details of all other proposed structures, roads, water/sewer facilities, and other improvements, including, but not limited to, specifications for water lines, including locations and descriptions of mains, valves, hydrants, appurtenances, etc., and profiles and specifications for sanitary sewers and storm drainage facilities, including locations and descriptions of pipes, manholes, lift stations, and other facilities.

(5) A certificate signed and sealed by the mortgagee(s), if any, to the effect that the mortgagee consents

to the site plan, the construction of the project as shown, and the dedications and restrictions, if any, shown on or referred to on the site plan.

§ 270-187. Waiver of requirements.

The Town Board in those circumstances where a site plan is required for Town Board review, and the Planning Board in those circumstances where a site plan is provided for Planning Board review, may waive one or more items (e.g., topography) otherwise normally required to be shown on the site plan when the applicable board determines that the circumstances of the application do not require a full site plan for adequate consideration of the applicant's proposal.

§ 270-188. Considerations for approval.

The Planning Board's review of a site plan shall include as appropriate, but shall not be limited to, the following considerations:

A. Adequacy, arrangement, and location of vehicular access and circulation, including intersections, road widths, pavement surfaces, off-street parking and loading areas, and traffic controls.

B. Adequacy, arrangement, and location of pedestrian and bicycle traffic access and circulation, control of intersections with vehicular traffic, and appropriate provisions for handicapped persons.

C. Adequacy, location, arrangement, size, design, and general site compatibility of buildings, lighting, signs, open spaces, paved areas, outdoor waste disposal facilities, and contiguity of open spaces.

D. Adequacy, type, and arrangement of trees, shrubs, and other landscaping, including those on site and those constituting a visual and/or noise-deterring buffer between the applicant's and adjoining lands, including the retention of existing vegetation of value to the maximum extent possible.

E. In the case of a residential property, and in the case of other properties where appropriate, the adequacy and utility of open space for playgrounds and for informal recreation.

F. Compatibility of the project with the surrounding neighborhood, including protection of adjacent properties and the general public against noise, glare, unsightliness, or other objectionable features.

G. Adequacy of stormwater drainage, water supply, sewage disposal facilities and other community infrastructures and services.

H. Adequacy of fire lanes and other emergency provisions.

I. The effect of the proposed development on environmentally sensitive areas including but not limited to wetlands, floodplains, woodlands, steep slopes, watercourses or bodies, viewsheds, unique natural habitats, and on other open space areas of importance to the neighborhood or community.

J. The effect of the proposed development on any historic structures listed or eligible for listing on the National Register of Historic Places.

K. The need for, and the adequacy of, any natural or man-made buffers.

L. Whether the design of the project minimizes the increase of impervious surfaces on the site.

M. Compliance with the Town's Comprehensive Plan, Zoning Ordinance, Subdivision Regulations, Water Resources Ordinances, if applicable, Outdoor Lighting Law,[1] and any other applicable laws, rules, requirements, or policies.
[Amended 10-16-2006 by L.L. No. 12-2006]

[1]: *Editor's Note: See Ch. 173, Outdoor Lighting.*

§ 270-189. Limitations on construction.

No site plan shall be approved which provides for construction or other disturbance of land in environmentally sensitive areas, including but not limited to, wetlands, watercourses, steep slopes, unique natural areas, or rare plant or animal habitats, unless the applicant demonstrates with professional evidence reasonably satisfactory to the Planning Board that such construction may occur without adverse environmental effects upon such areas. Nothing in this subsection is intended to permit construction or other activities in areas where the same are prohibited or regulated by other laws or regulations of the federal, state, county, or local government.

§ 270-190. Reservation of parkland on site plans containing residential units.

If the proposed project includes dwelling units, the Planning Board may, in accordance with the provisions and requirements of Town Law § 274-a or any similar or successor law, require a park or parks to be shown on the site plan, or, to the extent permitted by § 274-a, monies in lieu of parkland.

§ 270-191. Modifications of site plans.

A site plan that has received final site plan approval may be modified upon the application of the owner for such modification. Such application shall be in accordance with the provisions of this article and the procedures applicable to such application shall be the same as are applicable to an initial application for site plan approval. Notwithstanding the foregoing, Planning Board approval of a modification shall not be required:

A. If the modification does not involve:

(1) Construction of an addition of more than 1,000 square feet of enclosed space whether on one or more stories; nor

(2) Construction or relocation of more than three parking spaces nor construction or relocation of any parking spaces to an area that is not adjacent to the original planned parking area; nor

(3) Construction, alterations, or renovations affecting the exterior of a building or the site anticipated to cost more than $20,000; nor

(4) Construction, alteration, or renovation of the interior of a building involving a change in occupancy or use; nor

(5) Enlargement of an existing or previously approved building that involves an increase of square footage of more than 15% of the existing square footage of the existing or previously approved building; nor

(6) Reduction of an existing or previously approved building that involves a decrease of square footage of more than 15% of the exiting or previously approved building; nor

(7) Alteration of traffic flows and access nor a significant increase in the volume of traffic; nor

(8) A significant (in the judgment of the Director of Planning) change in the aesthetic appearance of any structure or site plan element including landscape and lighting details from that presented at the time of the prior approval; nor

(9) A change in the impacts of the project on surrounding properties, such as an increase in noise, water run-off, light illumination, or obstructions to views; nor

(10) Violation of any express conditions (including, without limitation, buffer zones, setbacks, and similar restrictions) imposed by the Planning Board in granting prior site plan approval, or

B. If the modification does not involve a movement or shift of a location of one or more buildings more than

two feet laterally or six inches vertically from the location or elevation shown on the final site plan where:

(1) Such shift does not alter proposed traffic flows or access; and

(2) Such shift does not directly violate any express conditions (including, without limitation, buffer zones, setbacks, etc.) imposed by the Planning Board in granting prior site plan approval.

C. The numerical criteria for the exceptions from the requirement of obtaining Planning Board approval are an aggregate maximum [i.e., if a seven-hundred-square-foot addition is constructed without obtaining Planning Board approval pursuant to Subsection **A(1)** above, construction of a second addition larger than 300 square feet would require Planning Board approval of a modified site plan].

D. This waiver of the requirement of Planning Board approval is not intended to permit construction in violation of any other provision of this chapter including setback, side yard, and similar regulations, nor the requirement to obtain a building permit in those circumstances when otherwise required by the terms of this chapter or by the Building Code.

E. A demolition, or a proposed demolition, of an existing building, or of a previously approved building on a previously approved site plan, is a modification of a site plan subject to the terms of this section.

§ 270-192. Letter of credit.

If the Planning Board determines it is necessary to ensure that all items on the site plan that are needed to provide for adequate traffic flow, utilities, and other similar infrastructure items, are constructed in accordance with the approved final site plan and any other pertinent specifications and requirements, no building permit shall be issued for a project with an approved final site plan until the applicant has furnished to the Town Engineer an irrevocable letter of credit in an amount to be recommended by the Town Engineer and approved by the Planning Board to ensure such construction. In determining whether to require such a letter, the Planning Board shall find that such infrastructure is so integral to the project that its construction must occur in order to provide for a safe and useful environment for the community and the occupants and users of the project. The Planning Board may, in its discretion, accept in lieu of a letter of credit other evidence or promise of completion of required facilities for the site if it determines that such other evidence adequately ensures such completion. Nothing in this section shall alter any other requirement for letters of credit related to construction of facilities intended to be dedicated to the Town.

§ 270-193. Completion of improvements.

[Amended 5-12-2014 by L.L. No. 9-2014]
No final certificate of occupancy or certificate of compliance shall be issued until all improvements shown on the final site plan as approved by the Planning Board, reasonably necessary to the proper and safe operation and occupancy of any completed facilities, are installed or until a sufficient performance guarantee, such as a letter of credit, has been provided to the Town for improvements not yet completed. The need for, and sufficiency of, such performance guarantee shall be determined by the Town Engineer after consultation with the Building Inspector or other persons designated by the Planning Board. The Planning Board may waive the requirement for such performance guarantee if, in its discretion, it determines that the guarantee is not needed.

§ 270-194. Expiration of site plan approval.

A. Except when a rezoning has occurred based upon a preliminary or general site plan any approval of a preliminary site plan may be revoked by the Planning Board, after a public hearing and upon written notice in person or by mail to the applicant:

(1) If a fully complete application for final site plan approval has not been submitted to the Planning Board within 18 months of the date preliminary approval was granted, or

(2) If an application is submitted within such eighteen-month period, such application is not diligently prosecuted by the owner to enable the Planning Board to grant final site plan approval within 24 months of the date preliminary approval was granted.

B. The Planning Board may, when compliance with the foregoing time periods would create a significant hardship for the owner, extend the time periods for such periods and upon such conditions as the Planning Board may reasonably determine.

C. Unless work has materially commenced in accordance with the final site plan within one year from the issuance of the building permit authorizing such work, or within 36 months of the date the Planning Board gave final site plan approval, whichever is earlier, not only the building permit but the site plan approval (both final and preliminary) shall expire and the permissible uses and construction on the property shall revert to those in effect prior to the granting of any site plan approval. The Planning Board, upon request of the applicant, after a public hearing, and upon a finding that the imposition of the time limits set forth above would create an undue hardship on the applicant, may extend the time limits for such additional periods as the Planning Board may reasonably determine. An application for such extension may be made at the time of filing of the original application or at any time thereafter up to, but no later than, six months after the expiration of the time limits set forth above.

(1) For the purposes of this section, work will not have "materially commenced" unless, at a minimum:

(a) A building permit, if required, has been obtained;

(b) Construction equipment and tools consistent with the size of the proposed work have been brought to and been used on the site; and

(c) Substantial excavation (where excavation is required) or significant framing, erection, or construction (where excavation is not required) has been started and is being diligently pursued.

Model Site Plan Review Local Law for Cattaraugus County, New York

Revised 4/10/04, Randall Arendt

SECTION I. AUTHORITY

In accordance with the provisions of Section 274-a of the Town Law [or Section 7-725-a of the Village Law] of the State of New York and Article 2, Section 10, et seq. of the Municipal Home Rule Law of the State of New York, the _____ Town/Village Board hereby authorizes the Planning Board to review and approve, approve with modifications, or disapprove site plans, and hereby adopts the following local law governing the approval or disapproval of site plans. To the extent that any provisions of this local law conflict with Section 274-a of the Town Law [or Section 7-725-a of the Village Law], it is the intent of this local law to supersede such section pursuant to the Municipal Home Rule Law.

SECTION II. PURPOSES

A. General Purposes

The general purposes of this local law are to provide performance standards by which applications for development will be evaluated by the Town (Village), and by which the actual performance of those operations and uses will be monitored by those officials for compliance. The purposes of these performance standards are to protect the Town (Village) in general, and abutting and neighboring landowners in particular, from any potential negative impacts that new nonresidential and multi-family uses may have on the physical environment and on the quality of life currently enjoyed by residents.

B. Specific Purposes

The specific purposes of the Site Plan Review process are to:

1. Provide for the safe and attractive development or change or expansion of use of the site and to guard against such conditions as would involve danger or injury to health, safety, or prosperity by reason of :
a. Inadequate drainage or conditions conducive to flooding of the property of that of another;
b. Inadequate protection for the quality of groundwater; and
c. Undesirable and preventable elements of pollution such as noise, smoke, soot, particulates, or any other discharge into the environment which might prove harmful to persons, structures, or adjacent properties.

2. Provide for the harmonious and aesthetically pleasing development of the municipality and its environs;

3. Provide for open spaces and green spaces of adequate proportions;

4. Require the proper arrangement and coordination of streets within the site in relation to other existing or planned streets or with features of the official map of the municipality;

5. Require suitably located streets of sufficient width to accommodate existing and prospective traffic and to afford adequate light, air, and access for firefighting apparatus and equipment to buildings, and be coordinated so as to compose a convenient system;

6. Require, in proper cases, that site plans showing new streets or narrowing or widening of such streets be submitted to the Planning Board for approval;

7. Require that the land indicated on site plans submitted to the planning board shall be of such character that it can be used for building proposes without danger to health; and

8. Require provisions, which will tend to create conditions favorable for health, safety, convenience, and prosperity.

SECTION III. SCOPE OF REVIEW

A. Commencement of Site Work

Whenever any development or change or expansion of use of a site governed by this local law is proposed or whenever any changes to such sites are proposed which differ from an existing site plan as previously approved by the Planning Board, the owner of the property or his authorized agent shall apply for and secure from the Planning Board approval of such proposed site development in accordance with procedures outlined in this local law, before any construction, land clearing, building development or change is commenced, and before any permit for the erection of any building or authorization for development on such site is granted.

B. Applicability

1. This local law shall apply to all new non-residential and multi-family uses as defined herein, except as specifically exempted by this local law. In addition, this local law shall apply to the following other kinds of development:

a. A change of use category in existing structures from residential to non-residential or from single-family to multi-family

b. Modifications to building exteriors of non-residential or multi-family uses (including changes in roof shape or pitch), or any construction involving at least 500 sq.. ft. of floor area within any three year period;

c. New parking lots related to a non-residential or multi-family use, or any expansion of existing parking lots by two or more parking spaces;

d. The introduction of new processes or different materials used on the premises governed by these regulations, where such processes or materials would be likely to increase environmental impacts in terms of the “good neighbor” performance standards contained in Section VIII below.

C. Exemptions

1. The following uses or activities are specifically exempted from the requirements of this local law:

- single family dwellings (and accessory uses)
- farming operations (and accessory uses)
- all retail, service, and manufacturing businesses as existing on the date of adoption of this local law, at their current size, and with their current materials and processes.

2. Home occupations shall be exempt from the procedural requirements of this local law and shall not require site plan approval, provided that they comply with the Good Neighbor Standards in Section VIII.

D. Initial Determination of Applicability

1. The Code Enforcement Officer shall make the initial determination whether this local law applies to a proposed development. If the proposed development is determined to fall within the purview of this local law, the CEO shall then classify it as either a Minor Project or as a Major Project as provided in subsections 2 and 3 below.

2. A minor project is a use or combination of uses on a lot or a series of adjoining lots that requires Site Plan review and that, over a three-year period, falls within the following thresholds:

a. Construction of four or fewer multi-family dwelling units or a lodging facility with six or fewer bedrooms.
b. Construction of facilities or structures for a non-residential use covering less than 3,000 square feet of building footprint.
c. Alteration of existing structures or expansion of such structures by less than 1,000 square feet.
d. Conversion of existing structures totalling less than 5,000 square feet to another use.
e. Alteration and active use of less than 10,000 square feet of land, with or without structures (excluding soil mining).
f. Soil mining that does not require a DEC permit.
g. Construction of a structure that is 80 feet or less above average grade level.

3. A major project is any use or combination of uses on a lot or a series of adjoining lots that requires Site Plan review and that, over a three-year period, exceeds the thresholds in subsection 2 above.

4. If an applicant or other interested party disagrees with the Code Enforcement Officer's determination as to the applicability of this local law or the classification of a project as major or minor, such party may request a determination from the Planning Board. The Board shall make the final decision as to the necessity of Site Plan Review and the classification of the project as major or minor. (Note: If this ordinance is enacted as part of a local zoning law, appeals shall be only to the Town ZBA.)

E. Applicants' Compliance Responsibilities

1. This Site Plan Review Procedure in no way relieves the developer or his/her agent from compliance with the Town's Zoning Ordinance (if applicable), Subdivision Regulations (if applicable) or any other local law or ordinance pertaining to the proposed development. No site plan will be approved until it complies in all respects with any and all pertinent ordinances and regulations.

SECTION IV. DEFINITIONS OF SPECIAL TERMS USED IN THIS LOCAL LAW

The definitions contained in standard dictionaries shall apply to these Site Plan Review regulations, with the following exceptions:

Accessory Use: A use that is both subordinate and customary to the principal use.

Home-based Business: See Home Occupation.

Home Occupation: An occupation or profession that is: customarily carried on in a dwelling unit or structure accessory to a dwelling; carried on by a member of the family residing in the dwelling unit and not more than one full-time nonresident employee; and clearly incidental and secondary to the use of the dwelling for residential purposes. Home occupations shall not include Home-based Businesses, which are characterized by more than one full time employee (or equivalent) not residing in the premises.
Code Enforcement Officer: A person appointed by the Town (Village) Board to administer and enforce local laws and ordinances governing land use and development.

Dwelling Unit: A residential space including a kitchen or other area for food preparation, and one or more bathrooms, in addition to other living areas.

Multi-family Dwelling: A structure containing more than two dwelling units, or a lot containing more than two dwellings or manufacturing housing units.

Non-Residential Use: Any use other than a single-family, two-family, or multi-family dwelling, including a home-based business, but excluding home occupations as defined herein.

SECTION V. APPLICATION PROCEDURES

A. Procedures for Major Project Site Plan Approval

1. Applicability

This Section applies to Major Project Site Plan approval applications.
See Section B for Minor Project Site Plan application procedures.

2. Pre-Application Meetings

Before filing an application, a preliminary conference with the Code Enforcement Officer and one person designated by the Planning Board Chair is VERY strongly encouraged to discuss the nature of the proposed use and to classify it as a Major or Minor Project. If the Code Enforcement Officer classifies the project as a Major Project, a preliminary conference with the Planning Board is required to discuss the nature of the proposed use and to determine the information that will need to be submitted in the Site Plan.

3. Submission

All Major Project Site Plans shall be submitted, with _____ copies (state number) as required by the Planning Board, to the Planning Board Secretary, who shall distribute them to the Planning Board, and such other municipal boards, officials, and consultants as the Planning Board deems appropriate. In addition to the Site Plan drawings, the applicant shall submit the Site Plan application fee, as established by the Town (Village) Board.

4. SEQRA Compliance

Upon receipt of application materials it deems complete, the l;ead agancy (Note: this is often but not always the Planning Board) shall initiate the New York State Environmental Quality Review process (where applicable) by either circulating the application and Environmental Assessment Form to all involved agencies (if coordinated review is undertaken) or by issuing its determination of significance within 20 days. Where the proposed action may have a significant effect on the environment, the Planning Board shall issue a positive declaration and require the submission of a Draft Environmental Impact Statement (DEIS). No time periods for decision making in this local law shall begin to run until either acceptance of a DEIS as satisfactory pursuant to New York State Department of Environmental Conservation Regulations or the issuance of a negative declaration.

5.Public Hearing and Decision

a.The Planning Board shall hold a public hearing on the Site Plan and shall follow the provisions on county referral, notice, hearings, and time limits, as detailed below:

1) Referral to County Planning Board

a) Upon receipt of application materials it deems to be complete, the

Planning Board shall refer to the County Planning Board any application affecting real property within 500 feet of the boundary of the Town (Village) of _____, the boundary of any existing or proposed County or State 5ark or other recreational area, the boundary of any existing or proposed County or State roadway, the boundary of any existing or proposed right-of-way for a stream or drainage channel owned by the County for which the County has established channel lines, the boundary of any existing or proposed County or State-owned land on which a public building or institution is situated, or the boundary of a farm operation within an agricultural district as defined in Article 25AA of the Agriculture and Markets Law, pursuant to General Municipal Law, Article 12-B, Sections 239-l and 239-m, as amended.

b) No action shall be taken on applications referred to the County Planning Board until its recommendation has been received, or 30 days have elapsed after its receipt of the fuull statement, unless the County and Town agree to an extension beyond the 30-day requirement for the County Planning Board's review.

c) County Disapproval: A majority-plus-one vote of the Planning Board shall be required to approve any site plan which receives a recommendation of disapproval or modiufication of the site plan from the County Planning Board before the Planning Board takes action. The Planning Board shall by resolution set forth its reasons for such contrary action.

2) Notice and Hearing

a) The Planning Board shall hold a public hearing on a complete site plan review application within 62 days of its submission. The Board shall mail notice of the hearing to applicant at least ten days before the hearing and shall give public notice of such hearing by causing publication of a notice of such hearing in the official newspaper at least five days prior to the date thereof.

b) For all major projects, the applicant shall also be required to post a notice on a sign purchased from the Town Clerk stating that there is a pending application on the property, and providing the date, time, and place of the hearing, the place and times the application may be reviewed by the public, and a telephone number to call for further information. This sign shall be posted in public view in a conspicuous location within three days after the Planning Board establishes a public hearing date, shall be updated if more hearing dates are scheduled, and shall remain in place until the day after the hearing is closed.

3) Action

a) The Board shall grant, deny, or grant subject to conditions the application for Site Plan approval within 62 days after the hearing for a Major Project. Any decision on a Major Project shall contain written findings explaining the rationale for the decision in light of the standards contained in this local law.

b) In approving a Site Plan, the Planning Board may impose any conditions which it considers necessary to fulfill the requirements of this local law. These conditions may include specifying the location, character and number of vehicle access points; requiring landscaping, planting and screening; requiring clustering of structures and uses in order to preserve environmental resources and minimize the burden on public services and facilities; and requiring action by the applicant, including the posting of performance bonds and furnishing of guarantees to ensure the completion of the project in accordance with the conditions imposed.

c) The Site Plan shall be implemented as provided in Subsection C.

d) A copy of the decision shall be immediately filed in the Town

(Village) Clerk's office and mailed to the applicant. A resolution of either approval or approval with modifications and/or conditions shall include authorization to the Planning Board Chairman to stamp and sign the Site Plan upon the applicant's compliance with applicable conditions and the submission requirements stated herein.

e) If the Planning Board's resolution includes a requirement that modifications be incorporated in the Site Plan, conformance with these modifications shall be considered a condition of approval. If the Site Plan is disapproved, the Planning Board may recommend further study of the Site Plan and resubmission to the Planning Board after it has been revised or redesigned.

B. Procedure for Minor Project Site Plan Approval

The procedure for Minor Project Site Plan approval by the Planning Board shall be the same as prescribed or Major Projects, except for the following:

1. A Minor Project application fee established by the Town Board shall be paid.

2. No public hearing shall be required for a Minor Project Site Plan. The Planning Board may, in its sole discretion, hold a public hearing. If no public hearing is held, the Planning Board shall give notice to the County Planning Board as required, and render a decision within 62 days of its receipt of a complete Site Plan application.

3. Minor projects shall not be required to comply with the requirement of posting of signs contained in subsection A 2 (b).

C. Implementation of Approved Site Plans

Within six months after receiving approval of a Site Plan, with or without modifications, the applicant shall submit ____ copies (state number) of the Site Plan to the Planning Board for stamping and signing. The Site Plan submitted for stamping shall conform strictly to the Site Plan Approved by the Planning Board, except that it shall further incorporate any required revisions or other modifications and shall be accompanied by the following additional information:

1. Record of application for and approval status of all necessary permits from federal, state, and county officials.

2. Detailed sizing and final material specification of all required improvements.

3. An estimated project construction schedule. If a performance guarantee is to be provided by the applicant for all or some portion of the work, a detailed site improvements cost estimate shall be included.

4. Upon stamping and signing the Site Plan, the Planning Board shall forward a copy of the approved Site Plan to the Code Enforcement Officer, and the applicant. The Code Enforcement Officer may then issue a Building Permit or Certificate of Occupancy if the project conforms to all other applicable requirements.

D. Performance Guarantee

No Certificate of Occupancy shall be issued until all improvements shown on the Site Plan are installed, or a sufficient performance guarantee has been posted for improvements not yet completed. The performance guarantee shall be posted in accordance with Section VII herein.

SECTION VI. SUBMISSION REQUIREMENTS

A. General Requirements

Every application shall be accompanied by a plan showing information relevant to the proposal, including those matters addressed in this Section. All Major Project Site Plans shall show the items listed below, unless a waiver from any of these is granted by the Board. All existing conditions shall be drawn in solid lines, proposed conditions shall be drawn in dotted lines.

B. Required Information for Site Plan

1. An application for Site Plan approval shall be accompanied by plans and descriptive information sufficient to clearly portray the intentions of the applicant. Minor Project Site Plans shall contain only such information as the Planning Board deems necessary to conduct an informed review. Major Project Site Plans shall be prepared by a licensed professional engineer, architect, or landscape architect, in good standing in the State of New York, and shall include the following (unless waived):

a. Name of the project or identifying title; names and addresses of owners of record; and tax map and lot number. If the applicant is not the record owner, a letter of authorization shall be required from the owner.

b. North arrow, boundaries, date, scale of the plan, name and address of person preparing the plan; signature block for Planning Board approval. The plan shall be prepared, stamped and signed by a registered Professional Engineer or registered Land Surveyor, architect, or landscape architect in good standing in the State of New York.

c. Context information shown on an vertical aerial photograph enlarged to a scale not less detailed than 1 inch = 200 feet, with the site boundaries clearly marked showing the location of the site in relation to physical features and existing land-uses within 500 feet in all directions, including existing public streets, together with the zoning district boundaries (where applicable). This information may be derived from existing published data available from governmental agencies, and from aerial photographs.

d. An Existing Conditions Map, showing the location and use of all existing structures within the property (including all dimensions of height and floor area, all exterior entrances, and all anticipated future additions and alterations), plus existing roads, utilities, and other man-made features, as well as topography and all existing natural land features that may influence the design of the proposed use such as rock outcrops, single trees eight or more inches in diameter located within any area where clearing will occur, forest cover, soils (including prime and statewide important agricultural soils), and ponds, lakes, wetlands, watercourses, aquifers, floodplains, vernal pools, natural and manmade drainage-ways, and retention areas. In addition, the Existing Conditions Map shall show all other existing man-made features including but not limited to foundations, landscaping, fences, stone walls, cellarholes, earthworks, graves, wells, drainage fields, dumps, utilities, fire hydrants, and storm and sanitary sewers.

e. The location of all present and proposed public and private ways, off-street parking areas, driveways, outdoor storage areas, sidewalks, ramps, curbs,and paths. The location, type, and screening details for

all waste disposal containers shall also be shown.

f. The location, height, intensity, and bulb type (sodium, incandescent, etc.) of all external lighting fixtures, both proposed and existing (if not proposed to be removed). The direction of illumination and methods to eliminate glare onto the public roadway and adjoining properties must also be shown.

g. The location, height, size, materials, and design of all proposed signs.

h. The location of all present and proposed utility systems including:

1) Sewage or septic system;
2) Water supply system;
3) Telephone, cable, and electrical systems; and
4) Storm drainage system including existing and proposed drain lines, culverts, catch basins, headwalls, endwalls, hydrants, manholes, and drainage swales.

i. Soil series, types and phases, as mapped by the U.S. Department of Agriculture, Natural Resources Conservation Service, in the published soil survey for the county, and accompanying data published for each soil relating to its suitability for construction (and, in unsewered areas, for septic suitability). The location and type of proposed waste disposal system shall be shown, with an outline of the areas reserved for leach fields for any new or replacement system. The Planning Board may require that the location of test pits and the record of percolation tests shall be submitted. If applicable, copy of certification by a New York licensed septic designer that an existing system is adequate to meet the needs of the proposed use.

j. Location of existing and proposed on-site well (showing the appropriate protective radius) as defined by applicable laws or regulations of governmental authority having jurisdiction thereof.

k. Erosion and sedimentation control plan to prevent the pollution of surface or groundwater, erosion of soil both during and after construction, excessive run-off, excessive raising or lowering of the water table, and flooding of other properties, as applicable. The Planning Board may require that storm run-off calculations be submitted.

l. Existing and proposed grades and topographic contours at two-foot contour intervals, or such other contour interval as the Board shall specify, with spot elevations and base flood elevations where appropriate. All elevations shall refer to the nearest United States Coastal and Geodetic Bench Mark. If any portion of the parcel is within the 100-year floodplain, the area(s) shall be shown, and base flood elevations given. Areas shall be indicated within the proposed site and within 50 feet of the proposed site where soil removal or filling is required, showing the approximate volume in cubic yards. The determination of appropriate contour intervals shall be made by the Planning Board, which may specify greater or lesser intervals on exceptionally steep or flat sites. Slopes between 15 and 25 percent and exceeding 25 percent shall be clearly indicated. Topography shall be prepared by a professional land surveyor or professional engineer from an actual field survey of the site or from stereoscopic aerial photography and shall be coordinated with official U.S.G.S. benchmarks.

m. A landscape, planting, and grading plan showing proposed changes to existing features.

n. Where applicable, zoning district boundaries within 200 feet of the

site's perimeter shall be drawn and identified on the Site Plan, as well as any Overlay District boundaries applying to the property.

o. Identification of access to the site, sight distance at the access point(s), curb cuts and proposed changes (if any) to existing streets; and copy of any driveway permit(s).

p. Traffic flow patterns within the site, entrances and exits, and loading and unloading areas, as well as curb cuts on the site and within 100 feet of the site. Location of existing and proposed sidewalks and driveways, with indication of direction of travel for any which are one-way. Both vehicular and pedestrian circulation shall be shown. The Planning Board may, at its discretion, require a detailed traffic study for large developments or for those in heavy traffic areas.

q. The location and total number of parking spaces, loading spaces and other similar facilities associated with the use.

r. For new construction or alterations to any structure, a table containing the following information shall be included:

1) Estimated area of structure intended to be used for particular uses such as retail operation, office, storage, etc.;
2) Estimated maximum number of employees;
3) Maximum seating capacity, where applicable; and
4) Number of parking spaces existing and required for the intended use.

s. Plans for disposal of construction and demolition waste, either on-site or at an approved disposal facility.

t. Where appropriate, a cultural resource survey of resources with historic or archaeological significance.

u. Other information that may be deemed necessary by the Planning Board.

C. Other Documentation

1. It is the responsibility of the applicant to seek and obtain all appropriate permits from any or all agencies, whichever may apply, including but not limited to the County Health Department, the Town (Village) Water and Sewer Commission, the Zoning Board of Appeals (if applicable), New York State Department of Transportation, the New York State Department of Environmental Conservation, and other agencies with jurisdiction over the project. These approvals and permits need not be obtained prior to submission of an application under this local law, but any approval granted under this local law shall be conditioned upon such permits and approvals being obtained by the applicant within one year of Site Plan approval under this local law.

2. An Erosion Control Plan which meets the design standards and specifications set forth in the “Erosion and Sedimentation Control Design Handbook for Developing Areas in New York” (USDA Natural Resources Conservation Service) shall be submitted where one or more of the following conditions are present:

a. A cumulative disturbed area exceeding 20,000 square feet;

b. Construction of a road or a street

3. An adequate stormwater drainage system developed by a registered

professional Engineer, licensed in New York, in accordance with the Model Local lLaw for Stormwater Management and Erosion & Sediment Control, and its accompanying Guidelines.

4. An adequate plan for snow removal. This plan should be developed with, and approved by, the Town (Village) Public Works Director.

5. Copies of recordable instruments conveying any proposed or existing easements, covenants, deed restrictions, conservation easements, etc.

6."As-Built" Plans and Inspection of Improvements

No Certificate of Occupancy shall be granted until the applicant has filed a set of as-built plans with the Code Enforcement Officer, indicating any deviations from the approved Site Plan. The Code Enforcement Officer shall be responsible for the inspection of site improvements, including coordination with the Town's consultants and other local officials and agencies, as may be appropriate, and shall grant a Certificate of Occupancy upon a finding that the project as built complies in all material respects with the Site Plan.

SECTION VII. PERFORMANCE GUARANTEES

A. As a condition of approval, the Planning Board shall require the posting of a performance guarantee following the provisions contained in Section 277-a of the Town Law (Section 7-725-a) of the Village Law) relating to site plans. Such performance guarantee shall be in an amount sufficient to defray the cost of construction of all on-site improvements as required by the Planning Board as part of its approval of the site plan. The amount and sufficiency of such performance guarantee shall be determined by the Town (Village) Board after consultation with the Planning Board, Town (Village) Attorney, Code Enforcement Officer, other local officials, and the Town's (Village's) consultants. The amount of the security shall be based on an estimate of such costs provided by the applicant's engineer or surveyor, plus an additional 15 percent for inflation and contingencies. The amount of security shall also include fees to cover the cost of periodic inspections by the relevant Town (Village) Department and/or the registered professional Engineer retained by the Planning Board. At the discretion of the Planning Board, the calculation of the proposed security shall be reviewed by an independent engineer. All costs of such review shall be paid by the applicant. The security shall be approved as to amount, form and sureties by the Planning Board and the Town's (Village's) legal counsel.

B. Where electric lines or other utilities are to be installed by a corporation, municipal department, or public utility, a letter of intent shall be required stating that the work will be done in reasonable time and without expense to the Town (Village). Each approved site plan shall contain a time limit for the completion of streets and public improvements. The performance guarantee shall be released in phases as portions of the secured improvements or installations are completed, in accordance with the plan approved by the Board.

C. It shall be a condition of site plan approval that all relevant and applicable permits of other governmental jurisdictions shall be obtained, be at all times in force and that the property to which they apply shall be at all times in compliance therewith. Site plan revocation proceedings pursuant to Section XII.C may commence at the discretion of the Planning Board for any violation of the foregoing condition. Allsuch proceedings shall accord notice and hearing to the permittee.

SECTION VIII. "GOOD NEIGHBOR" PERFORMANCE STANDARDS

A. Design of Development

The site shall be designed to respect and to fit the existing natural and man-made environments which it affects, with the minimum stress or impact, as follows:

1. Site preparation shall be conducted with minimal disturbance to existing vegetation. Stripped topsoil shall be piled and reused on the site where needed. A minimum of four inches of topsoil shall be placed on unpaved, disturbed areas. Landscaped areas shall be thickly planted with an emphasis on native specie trees, shrubs, and perennial flowers, as delineated in the landscape plan.

2. Landscape treatment shall consist of natural, undisturbed vegetation or features, or newly installed ground cover, shrubs, or trees where appropriate. Where a buffer or natural screen is required by the Planning Board, such buffer or screen shall be permanent and sufficient, in the opinion of the Planning Board, to protect the abutting property from unreasonable environmental impacts such as noise, lighting or intrusion of traffic to or from the proposed development, during all seasons of the year.

3. Grading and filling shall be conducted to minimize alterations to the existing natural terrain and surface and subsurface drainage to, toward or across abutting properties.

B. Access, Traffic Control, and Pedestrian Safety

1. New non-residential land developments having frontage on state or county highways, shall be designed with shared access points to and from the highway, wherever practicable. For each use with less than one hundred (100) feet of street frontage a maximum of one access lane to such street shall be allowed. In all other instances, normally, a maximum of two accesses shall be allowed per parcel or development (one ingress, one egress, for example), regardless of the number of businesses served.

2. All vehicular movements to and from state or county highways ways into residential lots that are subdivided after the effective date of this local law shall be via a single common driveway or entranceway serving all lots or dwellings. All lots of record existing at the effective date of this local law shall be allowed one direct access to such thoroughfares, provided that minimum sight-distance standards can be met. Exceptions for a second entrance/exit may be granted by the Planning Board provided that the two access points are not closer than 500 feet and that they both meet applicable minimum sight-distance standards.

3. Access to public streets shall also meet the requirements of the NYS Department of Transportation, the Town (Village) Zoning and Subdivision Regulations (if applicable), and the Town (Village) Highway Department. The internal traffic pattern must accommodate the proposed use, as well as providing unimpeded access for emergency vehicles.

4. Sidewalks, of a kind, size and type specified by the Planning Board as part of its approval, shall be provided for pedestrian traffic to provide connection between the main entrances of businesses, housing or industrial establishments and parking areas. In the event that pedestrian shoppers or employees are reasonably anticipated, provision shall be made for sidewalks running from the street line to the establishments. All such sidewalks shall be at least six (6) inches above grade and protected by curbing.

C. Dust, Fumes, Vapors, Gases and Odors

1. Emission of smoke, dust, dirt, fly ash or other particulate matter, or of noxious, toxic or corrosive fumes, vapors or gases in such quantities as to be evident or perceptible at the property line of any lot on which a use is conducted, or which could be injurious to human health, animals, or vegetation; detrimental to the enjoyment of adjoining or nearby properties; or which could soil or stain persons or property, at any point beyond the lot line of the commercial or industrial establishment creating that emission shall be prohibited.

2. In addition, no land use or establishment shall be permitted to produce harmful, offensive, or bothersome odors, scents, or aromas, (such as, but not limited to, those produced by manufacturing processes, food preparation, food processing, fish sales, rendering, fermentation processes, decaying organic matter, and incinerators) perceptible beyond their lot lines, either at ground or habitable elevation. The location and vertical height of all exhaust fans, vents, chimneys, or any other sources discharging or emitting smoke, fumes, gases, vapors, odors, scents or aromas shall be shown on the plan, with a description of the source materials.

D. Solid Waste Management

1. No storage of solid or liquid waste shall be permitted in excess of 30 days, and solid waste consisting of perishable food items shall be removed from the premises after no more than seven days. All refuse containers shall have tight-fitting lids and shall be enclosed or screened so as to not be visible at property lines.

2. The applicant shall provide for the disposal of all solid and liquid wastes in an environmentally safe manner. The Board shall consider the impact of particular industrial or chemical wastes or by-products upon the town's disposal method and/or disposal area (in terms of volume, flammability or toxicity) and may require the applicant to dispose of such wastes elsewhere, in conformance with all applicable State and Federal regulations. The Board may require the applicant to specify the amount and exact nature of all industrial or chemical wastes to be generated by the proposed operation.

E. Glare and Outdoor Illumination

1. Outdoor lighting shall be controlled in both height and intensity to maintain the Town’s (Village’s) rural character. Therefore, no lighting from any land-use or establishment shall project beyond its lot lines onto neighboring properties, or onto any public road or state highway so as to impair the vision of the driver of any vehicle upon that public way. To achieve this, light standards are restricted to a maximum of eighteen (18) feet in height, and luminaires shall be shielded to prevent light shining beyond the lot lines into neighboring properties or public ways.

2. Indirect lighting shall be used on signs advertising goods or services offered on the premises. Blinking or flashing lights or signs are not permitted.

3. Outdoor lighting is restricted to that which is necessary in the opinion of the Planning Board for advertising and security of the property.

4. Where there is a mix of residential and commercial or industrial uses, and where light rays from on-residential lighting sources would otherwise fall onto residential property, all outdoor lighting (except for security purposes) shall be hooded and/or screened fto prevent such light trespass, or shall be turned off between 11 p.m. and 6 a.m. Exceptions will be granted for those businesses which are operating during these hours.

5. Under no circumstances may the light level at the lot line exceed 0.2 foot-candles, measured at ground level.

F. Ground Water Supply and Pollution Control

1. To avoid undesirable and preventable elements of pollution such as noise, smoke, particulate, or any other discharges into the environment which might prove harmful or a nuisance to persons, structures, groundwater, or adjacent properties it is the responsibility of the applicant to employ the best standards and technology economically available at the time. No plan shall be approved which does not appropriately protect groundwater and other natural resources from adverse conditions caused by the development.

2. All outdoor storage facilities for fuel, chemicals, or industrial wastes, and potentially harmful raw materials, must be located on impervious pavement, and shall be completely enclosed by an impervious dike high enough to contain the total volume of liquid kept in the storage area, plus the accumulated rainfall of a fifty (50) year storm. This requirement is intended to prevent harmful materials from spilling and seeping into the ground, contaminating the groundwater.

3. Storage tanks for heating oil and diesel fuel, not exceeding two hundred seventy five (275) gallons in size, may be exempted from this requirement provided that there is no seasonal high water table within four (4) feet of the surface, and that rapidly permeable sandy soils are not involved.

G. Stormwater Management and Aquifer Recharge

1. No increase in the peak flow of surface runoff shall be permitted if such increased runoff passes beyond the property lines of the parcel upon which the development occurs, unless it is within tan approved public storm drainage system. Notwithstanding the foregoing, the Planning Board may consider the adverse impact caused by drainage, whether or not it is within an approved public storm drainage system upon downstream properties or conditions.

2. All stormwater management systems for sites involving more than 5,000 sq.. ft. of impervious coverage shall be designed as bio-retention areas promoting aquifer recharge. “Best Management Practices” shall be followed (such as those recommended by the UDSA Natural Resources Conservation Service, or by the Center for Watershed Protection in Ellicott City, MD). In addition, all such facilities shallbe dewsigned and constructed in accrodance with the Model Local lLaw for Stormwater Management and Erosion & Sediment Control, and its accompanying Guidelines.

H. Heat, Radiation, Electrical or Magnetic Interference, and Explosive Hazards

1. No use shall permit perceptible heat or radiation beyond the property line, nor shall it endanger surrounding areas by reason of an unusual fire, explosion, or other safety hazard. In addition, no use shall result in electrical, magnetic, or other interference with any use, process, equipment, appliance, or device located beyond the property line of the property on which the use is located.

I. Off-street Parking and Loading

1. Adequate off-street parking and loading space shall be provided, including off-street areas for maneuvering of anticipated trucks or other vehicles. This shall not result in the creation of excessive numbers of parking spaces that would be used only at peak times.

2. Parking lots shall be provided only at the side or to the rear of non-residential buildings that are visible from Town (Village) roads. When rear parking areas would abut existing residential development, the parking lots and outdoor lighting shall be effectively screened from view by a solid wooden fence six feet high, lights directed toward the proposed development and away from neighboring residences, or similar protective measures.

3. When rear or side parking is not practicable due to physical conditions of the site, thickly vegetated buffers shall be provided, whose width, length, and planting materials shall be sufficient to visually screen parked vehicles from the public way. Invillage situations, this screening shall consist of deciduous shade trees spaced at 30-foot intervals, under-planted with a hedge between 36 and 42 inches in height. In rural situations, a less formal planting scheme including taller hedges and/or denser plantings shall be utilized.

4. Access, parking, and loading areas shall be constructed so as to minimize dust, erosion, and runoff conditions that would have a detrimental effect on abutting or neighboring properties.

5. Permeable surfaces may be used which reduce the need for installation of drainage facilities to accommodate runoff. However, the Planning Board may require that access, parking and loading areas be conventionally paved, if deemed appropriate.

J. Landscaping and Screening

1. Parking lots shall be provided with at least one tree (of 2.5" caliper) for every 15 car spaces (10 trees per acre), evenly distributed throughout such lots.

2. Where new fencing is greater than four feet in height, or more than 20 feet in length, it shall be softened visually with tree and shrub plantings.

3. In instances where healthy plant material exists on a site prior to its development, the Planning Board may adjust the application of the above mentioned standards to allow credit for such plant material if, in its opinion, such an adjustment is in keeping with and will preserve the intent of these standards.

4. Appropriate screening/buffers are to be maintained or installed to provide privacy and noise reduction to residential areas abutting nonresidential sites:

a) Where all of the required off-street parking cannot be located behind the building, buffer areas shall be planted along the public edge of front or side parking lots. Such areas shall be at least ten feet wide with dense evergreen plantings thirty inches high and canopy shade trees planted not less than 30 feet apart and parallel to the public way. All trees shall be a minimum of 2.5-inch caliper (trunk diameter) when planted. Native trees and shrubs shall be planted wherever possible, in order to capture the "spirit of the locale" through indigenous species (such as lilac, viburnum, day lilies, ferns, red-twig dogwood, oak, maple, sycamore, linden, hawthorne, birch, shadbush, etc.). Where evergreen hedges are proposed, a temporary fence should be built to provide screening until the evergreens are of sufficient height. In all residential districts and in village and hamlet overlay districts, screening shall consist of deciduous shade trees and low shrubbery

b) Buffer strips between single-family residential and multi-family residential uses, and between non-residential and residential uses, shall consist of either solid wooden fencing at least six feet high, or dense vegetation that will effectively screen nonresidential an multi-family uses from the sight of single-family residential uses during both summer and winter months.

3) Storage areas and garbage collection areas must be fenced or screened.

K. Water Supply and Sewage Disposal Systems

1. These utility systems must be sized to adequately meet the needs of the proposed use under the regulations of the NYS Department of Environmental Conservation, County Health Department, and/or the Town (Village) Water and Sewer Department regulations. It shall be the responsibility of the applicant to provide adequate information to demonstrate that the area if the lot is adequate to permit the installation and operation of an individual sewage disposal system or that existing systems are adequate to serve the needs of the proposed development.

L. Flood Damage Prevention

Applications for site plan approval shall comply with the provisions of the Town's Flood Damage Prevention Law (Local Law # ---- o

SECTION XI. ADMINISTRATION AND ENFORCEMENT

A. This local law shall be administered by the Planning Board and the Code Enforcement Officer. The enforcement of this local law is vested with the Code Enforcement Officer and the Town (Village) Board. The CEO shall not issue any building permits for construction which requires site plan approval until or unless such planned construction has received site plan approval by the Planning Board.

B. Burden of Proof

1. The applicant for a permit to construct or operate a proposed business or processing use has the burden of proof of demonstrating, as a condition of approval:

a. that the proposed use will comply with the standards contained or referred to above; and

b. that adequate provisions will be made to reduce and minimize any objectionable elements to the degree necessary to insure that the proposed use will not be noxious, hazardous, or offensive as defined above.

2. In order to determine that adequate safeguards are provided, the Planning Board may:

a. require that the applicant submit necessary information, plans, impartial expert judgments, and written assurances;

b. obtain the expert advise of official agencies, or of private consultants; and

c. make such reasonable tests as are deemed necessary.

C. Waivers

Any portion of these regulations may be waived or modified if the Planning Board reasonably finds such requirements not to be requisite in the interest of public health, safety, or general welfare or inappropriate to a particular site plan, in accordance

with theprovisions of Town Law Section 274-a(5) and Village Law Section 7-725-a(5).

D. Abatement of Violations

The Code Enforcement Officer or the Town (Village) Board may issue a stop-work or cease-and-desist order and/or institute an appropriate legal action or proceeding to prevent, restrain, correct, or abate any violation of this local law to prevent the occupancy of premises, or to prevent any activity, business, or use that violates this local law.

E. Penalties

Any person who violates any provision of this local law or who fails to do any act required thereby shall, for each and every such violation, pay a civil penalty of not more than $100.00. When a violation of any of the provisions is continuous, each day thereof shall constitute a separate and distinct violation subjecting the offender to an additional penalty.

F. Application for Area Variance

Where a proposed Site Plan contains one or more features which do not comply with the dimensional regulations of the zoning law (if applicable), application may be made to the Zoning Board of Appeals for an area variance without a decision or determination by the Code Enforcement Officer.

G. Judicial Review

Any person aggrieved by a decision of the Planning Board may apply to the Supreme Court for review by a proceeding under Article Seventy-eight of the Civil Practice Law and Rules as provided in Town Law Section 274-a(11) (or Village Law Section 7-725-a(11).

SECTION XII. SITE PLAN AMENDMENTS, EXPIRATION, REVOCATION, AND ENFORCEMENT

A. Site Plan Amendments

An approved Site Plan may be amended by filing an application with the Planning Board for a Site Plan amendment.

1. If the Planning Board finds that such proposed amendment does not represent a substantial change from the approved Site Plan, it shall grant the amendment without a hearing.

2. If the Planning Board determines that the proposed amendment is not consistent with the terms of an approved Site Plan approval, it shall follow the procedures for Site Plan approval contained in this local law and hold a public hearing if the amendment would be considered to be a Major Project.

B. Expiration

A Site Plan approval shall expire if the applicant fails to obtain the necessary Building Permits or fails to comply with the conditions of the Site Plan approval within 18 months of its issuance. The Planning Board may grant a one-time six-month extension.

C. Revocation

A Site Plan approval may be revoked by the Planning Board with notice to the permittee and an opportunity to be heard, if the permittee violates the conditions of the Site Plan approval or engages in any construction or alteration not authorized by the Site Plan approval.

D. Violation of Conditions

Any violation of the conditions of a Site Plan approval shall be deemed

a violation of this local law, and shall be subject to enforcement action as provided herein.

SECTION XIII. VALIDITY AND SEVERABILITY

If any provision of these regulations shall be held invalid for any reason by a court, such holding shall not invalidate in any manner any other provision contained herein.

SECTION XIV. AMENDMENTS

These regulations may be amended by the Town (Village) Board by local law.

SECTION XV. CONFLICTS

In the event of a conflict between provisions of this local law or of a provision of this local law with any other regulation or law, the provision which adopts the stricter standard or imposes the greater burden shall control.

SECTION XVI. EFFECTIVE DATE

This local law, and any amendments thereto, shall take effect ten days after filing with the office of the Secretary of State of the State of New York.

Appendix G

Model Subdivision Ordinances

Subdivision Regulations (Town of Middlesex, NY)

Model Subdivision Regulations, Dutchess County Planning Department, NY

Conservation Subdivision Regulations (City of Saratoga Springs, NY)

TOWN OF MIDDLESEX
Land Subdivision Regulations

TABLE OF CONTENTS

ARTICLE 1 – Declaration of Policy

1.1	Purpose	2
1.2	Authority	2
1.3	Lot layout, street system and open spaces	3
1.4	Title; adoption and approval	3

ARTICLE 2 – Definitions

2.1	Terms Defined	3

ARTICLE 3 – Application Procedures

3.1	Application in writing required	6
3.2	Sketch plan	6
3.3	Minor subdivision	6
3.4	Preliminary plat for major subdivision	7
3.5	Final plat for major subdivision	8
3.6	Project execution requirements	8
3.7	Deposit and Payment of Fees	10
3.8	Filing of approved subdivision plat	11
3.9	Acceptance of public streets and recreation area	12

ARTICLE 4 – General Requirements and Design Standards

4.1	Minimum standards; waiver	12
4.2	General requirements	12
4.3	Street layout	13
4.4	Street design	14
4.5	Street names	16
4.6	Lots	16
4.7	Drainage improvements	17
4.8	Parks, open spaces and natural features	18

ARTICLE 5 – Documents to be Submitted

5.1	Minor subdivision plat	19
5.2	Major subdivision preliminary plat and accompanying data	20
5.3	Major subdivision final plat and accompanying data	22

ARTICLE 6 – Variances and Waivers

6.1	Variances due to extraordinary hardship	23
6.2	Variances due to special circumstances	23
6.3	Conditions of variances to secure objectives of regulations	23

ARTICLE 7 – Enforcement

7.1	Penalties for offenses	23
7.2	Enforcement	24

General References: Building Construction , Flood Damage Prevention and/or Zoning – see Article #4

ARTICLE 1 – Declaration of Policy

1.1 Purpose

The Town Board of the Town of Middlesex finds that in order to provide for the orderly, efficient and economical development of the Town in keeping with the Town's environmental and rural character as noted in the Town's *Master Plan of 1992*, the Planning Board shall have the power and authority to consider, review, and approve land subdivision plats within the boundaries of the Town of Middlesex.

Further, The Town Board of the Town of Middlesex finds that in order to protect the Town of Middlesex, its residents and their property, with respect to land development within the Town, it is essential for the Town to have:

A. Competent engineers and planners retained by the Town to review and approve plans and designs, and make recommendations to the Town Board and Planning Board.

B. Competent engineers and planners retained by the Town to inspect the construction of highways, drainage, sewer, other facilities, and parks to be dedicated to the Town and to recommend their acceptance by the Town.

C. Competent attorneys retained by the Town to negotiate and draft appropriate agreements with developers, obtain, review and approve necessary securities, insurance and other legal documents, review proposed deeds and easements to assure the Town is obtaining good and proper title and to generally represent the Town with respect to legal disputes and/or issues with respect to developments.

The cost of retaining such competent engineers, planners, and attorneys should ultimately be paid by those who seek to profit from such development, rather than from general Town funds.

1.2 Authority

By the authority of the resolution of the Town Board of the Town of Middlesex adopted on June 14, 2007, pursuant to the provisions of Article 16 of *New York State Town Law*, the Planning Board of the Town of Middlesex is authorized and empowered to approve plats showing lots, blocks, or sites, with or without streets or highways, to approve the development of entirely or partially undeveloped plats already filed in the office of the Clerk of Yates County and to approve preliminary plats within the Town.

Further authority for this local law is contained in sub paragraphs (a)(12) and (d)(3) of the *New York State Municipal Home Rule Law* Section 10(1) (ii) and *New York State Municipal Home Rule Law* Section 22. To the extent that *New York State Town Law* Sections 274-a, 276, and 277 do not authorize the Town Board or Town Planning Board to require the reimbursement to the Town of legal, planning, and engineering expenses incurred by the Town in connection with the review and consideration of application for subdivision approval, it is the expressed intent of the Town Board to change and supersede such statutes. More particularly, such statutes do not authorize the deferral or withholding of such approvals in the event such expenses are not paid to the Town. It is the expressed intent of the Town Board to change and supersede *New York State*

Town Law, Sections 274-a, 276, and 277 to empower the Town to require such payment as condition to such approvals.

1.3 Lot layout, street system and open spaces.

All proposed lots shall be so laid out and of such a size as to conform to the intent of the Town's *Master Plan*, and *Yates County, Looking Ahead: A Planning and Design Guide*, prepared by Roger Trancik, FASLA, 1990. The proposed streets shall compose a convenient system conforming to the *Official Map*, and *Standards of New Roads – Town of Middlesex* and shall be properly related to the proposals shown on the *Master Plan*. These roads shall be of such width, grade and location as to accommodate the prospective automobile, bicycle, and pedestrian traffic, to facilitate fire protection and to provide access of fire-fighting equipment to buildings (as detailed in documents such as, but not limited to, the *Town of Middlesex Zoning Law* Section 703). Proper provision shall be made for open spaces for parks and playgrounds where appropriate. Where possible, existing features of the landscape such as large trees, water courses, rock outcrops, historic spots and other irreplaceable physical assets should be preserved.

1.4 Title, adoption and approval.

In order that land subdivisions may be made in accordance with this policy, this local law shall be known as the *Town of Middlesex Land Subdivision Regulations* having been approved and adopted by the Town Board on June 14, 2007.

ARTICLE 2 – Definitions

2.1 Terms Defined

ACCESS LANE WAY - A public or private right-of-way of limited use intended only to provide access to the rear or side of lots or buildings in hamlet, village, or similar densely built areas.

APPLICANT – Any person, firm, partnership, association, corporation, company or organization of any kind who or which requests the Town Planning Board or Town Board to approve a development or subdivision.

BLOCK - A piece or parcel of land entirely surrounded by public highways, streets, streams, railroad rights-of-way or parks, etc., or a combination thereof.

COLLECTOR STREET - A street which serves or is designed to serve as a traffic way for a neighborhood or as a feeder to a major street.

COMPREHENSIVE PLAN (MASTER PLAN) A comprehensive plan, (also called a master plan) prepared by the Planning Board pursuant to Section 272-a of the New York State Town Law which indicates the general locations recommended for various functional classes of public works, places and structures and for general physical development of the Town and includes any unit or part of such plan separately prepared and any amendment to such plan or parts therein.

DEAD-END STREET or CUL-DE-SAC - A street or a portion of a street with only one vehicular traffic outlet.

DEVELOPER – see SUB-DIVIDER

DRAINAGE FACILITY – All surface water drainage facilities, including, but not limited to, detention and retention basins, storm sewers and their appurtenances, drainage swales and ditches, and any easements through or over which said facilities may be constructed or installed in or in connection with a development.

EASEMENT - The authorization by a property owner for the use by another, and for a specified purpose, of any designated part of his property.

ENGINEER or LICENSED PROFESSIONAL ENGINEER- A person licensed as a professional engineer by the State of New York.

HIGHWAY – The term 'highway' includes a street, avenue, road, square, place, alley, lane, boulevard, concourse, parkway, driveway, overpass and underpass, and also includes all items appurtenant thereto, including but not limited to bridges, culverts, ditches, shoulders, and sidewalks in or in connection with a development.

LOCAL STREET - see 'Minor Street'

MAJOR STREET - A street which serves or is designed to serve heavy flows of traffic and which is used primarily as a route for traffic between communities and/or other heavy traffic generating areas.

MAJOR SUBDIVISION - Any subdivision of a parent parcel of land into four (4) or more lots including the parent parcel**,** or any subdivision requiring any new public street, road, or extension of municipal facilities.

MINOR STREET - A street that provides for direct access to residential, commercial, industrial, or other abutting land for local traffic movements and connects to collector and/or major streets.

MINOR SUBDIVISION - Any subdivision of a parent parcel of land into no more than (3)three lots, including the parent parcel and not previously classified as a major subdivision.

OFFICIAL MAP - The map established by the Town Board pursuant to § 270 of New York State Town Law, showing streets, highways, and parks and drainage, both existing and proposed.

PARENT PARCEL – A parcel of land as it existed on the rolls of the Yates County Office of Real Property Services as of the effective date of these regulations.

PLANNER - The duly designated professional planner of the Town, either as a member of the Town staff or as a consultant to the Town, or position assigned with similar duties.

PLANNING BOARD - The Planning Board of the Town.

PRELIMINARY PLAT - A drawing or drawings clearly marked "preliminary plat" showing the salient features of a proposed subdivision, as specified in Article 5 of these regulations, submitted to the Planning Board for the purposes of consideration prior to submission of the plat in final form and of sufficient detail to apprise the Planning Board of the layout of the proposed subdivision.

STEEP SLOPE – Any geographical area having a gradient of 15% or greater (ratio of vertical distance to horizontal distance), using a minimum horizontal distance of ten (10)

feet, and whether man-made or natural, and whether created by a retaining structure or not. Further, the minimum area being categorized as steep slope shall be 1/10 of an acre (4356 sq. ft. or approx. 65 ft x 65 ft).

STREET - Includes streets, roads, avenues, lanes, or other traffic ways, between right-of-way lines whether public or private.

STREET PAVEMENT - The wearing or exposed surface of the roadway used by vehicular (including bicycle) traffic.

STREET WIDTH - The width of the right-of-way, measured at right angles to the center line of the street.

STRUCTURAL FILL – Native or imported soil or granular material suitable to achieve minimum compaction requirements for the project.

SUBDIVIDER - Any person, firm, corporation, partnership or association, who shall lay out any subdivision or part thereof as defined herein, either for themselves or others.

SUBDIVISION - The division of any parent parcel of land into any number of lots, blocks or sites, with or without streets, for the purpose of sale, transfer of ownership, or development. The term 'subdivision' shall include any alteration of lot lines or dimensions of any lots or sites shown on a plat on file in the Yates County office of Real Property Services. The term 'subdivision' is further defined as either a 'minor' or 'major' subdivision (Please see ‘Minor Subdivision’ and ‘Major Subdivision’ for these definitions).

SUBBASE MATERIAL – The lowest layer of imported or approved native material used in the construction of a roadbed or as bearing material under structures, consisting of a material with approved compaction characteristics. A material applied on top of a finished subgrade.

SUBDIVISION PLAT or FINAL PLAT - A drawing, in final form, showing a proposed subdivision containing all information or detail required by law and by these regulations to be presented to the Planning Board for approval, and which if approved, may be duly filed or recorded by the applicant in the office of the County Clerk or Register.

SUBGRADE – The finished surface elevation achieved after removing organic surface material, and after subsequent cut or fill activity using approved native or import soil.

SURFACE TREATMENT – The finish material applied to the surface of a road, such as asphalt concrete, compacted granular material, etc.

SURVEYOR - A person licensed as a land surveyor by the State of New York.

TEMPORARY DEAD END STREET / TURNAROUND / CUL-DE-SAC – A subdivision street / road that has not been completely constructed per approved plans. (refer to Section 4.4 I)

TOWN BOARD - The legislative body of the Town.

TOWN ENGINEER - The duly designated engineer of the Town, either as a member of the Town staff or as a consultant to the Town, or position assigned with similar duties.

UNDEVELOPED PLAT - Those plats existing at the time of the enactment of this chapter that have been filed in the office of the County Clerk, where 20% or more of the lots within the plat are unimproved.

ARTICLE 3 - Application Procedures

3.1 Application in writing required.

Whenever any subdivision of land is proposed, and before any contract for the sale of, or any offer to sell any lots in such subdivision or any part thereof is made, and before any permit for the erection of a structure in such proposed subdivision shall be granted, the subdivider or his duly authorized agent shall apply in writing for approval of such proposed subdivision in accordance with the following procedures. The process begins by meeting with the Town Code Enforcement Officer (CEO) at the Middlesex Town Hall for initial review of the proposed subdivision. The applicant shall receive general instructions, along with an *Application For Planning Board Review / Approval* (subdivision application). In addition, the need for a Zoning Board of Appeals review may be identified if a special use permit and/or variance is necessary.

3.2 Pre-Application Meeting

A. Prior to submitting a subdivision application it is advisable that the subdivider meet with the Planning Board to informally discuss the proposed subdivision, zoning requirements, expected timetables for approval, etc. The subdivider shall notify the Planning Board at least (10) days prior to a regularly scheduled monthly Planning Board meeting to be included in the meeting agenda.

B. However**,** prior to submitting a final plat application for a minor subdivision or a preliminary plat application for a major subdivision, the subdivider shall meet with the Planning Board to submit a sketch and participate in an informal review. The sketch plan should show the location of the subdivision, all existing structures, wooded areas, streams, ponds, lakes, or poorly drained areas, significant physical features, available utilities and the proposed pattern of lots, roads, drainage and sewer and water facilities. In addition, the applicant shall submit a statement attesting to ownership of other interests or surrounding contiguous parcels of land.

C. The Planning Board shall determine whether the proposed subdivision and sketch plan meets the purposes of this chapter and shall inform the subdivider of the necessary action he should take in meeting the requirements of these regulations.

3.3 Minor Subdivision.

A. Application and fee.
   1. Any owner of land shall, prior to subdividing or re-subdividing a minor subdivision, submit an application for approval of a subdivision plat to the Planning Board Chairperson at least 20 calendar days prior to the next regularly scheduled meeting of

the Planning Board. The plat shall conform to the requirements listed in Article 5, Section 5.1.

2. All applications for plat approval for minor subdivisions shall be accompanied by a fee as set forth in the *Schedule of Fees*.

B. Number of copies. The subdivider shall submit seven (7) copies of the plat.

C. Subdivider to attend Planning Board meeting. The subdivider, or his duly authorized representatives, shall attend the meeting of the Planning Board to discuss the subdivision plat.

D. Plat Approval. The procedure for approval of the plat shall be in accordance with Subdivision 6 of § 276 of the *New York State Town Law*.

3.4 Preliminary plat for Major Subdivision.

A. Application and fee.

1. Prior to the filing of an application for the approval of a major subdivision plat, the subdivider shall file an application for the consideration of a preliminary plat of the proposed subdivision, in the form described in Article 5, Section 5.2. The preliminary plat shall, in all respects, comply with the requirements set forth in the of Sections 276 and 277 of the *New York State Town Law*, and Article 5, Section 5.2 of these Subdivision regulations, except where a waiver may be specifically authorized by the Planning Board.

2. The application for review of the preliminary plat shall be accompanied by a fee as set forth in the *Schedule of Fees.*

B. Number of copies. Seven (7) copies of the preliminary plat shall be presented to the Planning Board Chairperson at least 20 calendar days prior to a regularly scheduled meeting of the Planning Board.

C. Subdivider to attend Planning Board meeting. The subdivider, or his duly authorized representatives, shall attend the meeting of the Planning Board to discuss the preliminary plat.

D. Study of preliminary plat. The Planning Board shall study the practicability of the preliminary plat taking into consideration the requirements of the community and the best use of the land being subdivided. Particular attention shall be given to the arrangement, location, and width of streets, their relation to the topography of the land, water supply, sewage disposal, drainage and watercourses, lot sizes and arrangements, the future development of the adjoining lands as yet not subdivided, and the requirements of the *Master Plan*, the *Official Map*, and zoning regulations, paying particular regard to *Town of Middlesex Zoning Law* Sections 402 and 403. The Planning Board shall make an initial determination of environmental significance of the proposed plat pursuant to SEQRA regulations. The Planning Board may schedule and conduct a public hearing on any subdivision plat application at any point during the review process.

E. Plat Approval. The procedure for approval of the plat shall be in accordance with Subdivision 5 of § 276 of the *New York State Town Law*.

3.5 Final plat for major subdivision.

A. Application and fee. Within six months of the approval of the preliminary plat the owner shall file with the Planning Board an application for approval of the subdivision plat in final form. A fee as sufficient to pay costs incurred shall accompany all applications. If the final plat is not submitted within six months of the approval of the preliminary plat, the Planning Board may revoke the approval of the preliminary plat. The Town CEO and the Planning Board shall jointly agree upon said amount.

B. Number of copies. The subdivider shall provide the Planning Board Chairperson with a copy of the application and seven (7) copies of the plat (in a format that satisfies the requirements of the Yates County Clerk's Office), plus the original and one (1) true copy of all offers of cession, covenants, and agreements and two (2) prints of all construction drawings. These documents shall be submitted at least 20 calendar days prior of the regularly scheduled meeting of the Planning Board.

C. Endorsement of state and county agencies. Applications for approval of plans for sewer and water facilities will be filed by the subdivider with all necessary town, county and state agencies. Before official submission of the subdivision plat, the subdivider shall secure endorsement and approval by the *New York State Department of Health*.

D. Approval Procedure. The procedure for approval of the plat shall be in accordance with Subdivision 6 of § 276 of the *New York State Town Law*. The Planning Board shall schedule and conduct a public hearing on any subdivision plat application at any point during the review process.

E. Building permits. These shall be issued only after approval of the final plat is granted.

3.6 Project Execution Requirements.

The Subdivider shall be required to provide for, or comply with, the following:

A. Performance Bonding for major subdivisions. Prior to any building permit being issued, the subdivider shall provide bonding for the benefit of the Town of Middlesex to both assure completion of all Town required improvements and to cover the cost of restoring the site should the subdivider abandon the project before completion. If the latter occurs, the bond will be used to fund all necessary work required to return the parcel to near its original state or to a condition satisfactory to the Town Planning Board and Town Code Enforcement Officer. The value of the bond shall be an agreed upon percentage of the overall project estimate that will be sufficient to cover the conditions stated above. Any such bond shall comply with the requirements of § 277 of the *New York State Town Law* and shall be satisfactory to the Town Board or it's designee as to form, sufficiency, manner of execution and surety. A period of one year (or other period as the Town Board may determine appropriate, not to exceed three years), **commencing from the start of any site activity,** shall be set forth in the bond within which required improvements must be completed.

B. Inspection of Required Improvements. The Town Board shall appoint as Town Representative either the Town Code Enforcement Officer (CEO) or the Town's

Consulting Engineer (CE) as the point contact for the subdivider on all matters of construction inspection, construction modifications and project acceptance. After receipt of a building permit, and at least ten (10) calendar days prior to commencing construction of required improvements, the subdivider shall notify the Town Representative in writing what the construction start date will be. The Town Representative shall subsequently begin periodic site inspections to assure that required improvements per the final plat are being performed satisfactorily. If any of the required improvements are found to be out of compliance with the approved plans and specifications, the Town Representative shall give the subdivider written notice. If the subdivider fails to respond to the written notice in a reasonable period of time, the Town Board may revoke the building permit and shall take all necessary steps to preserve the Town's rights under Article 7 (Enforcement) of this Law.

NOTE: Primary inspection responsibilities for the project are anticipated to fall under the scope of the engineering and design firm secured by the subdivider. The Town Representative shall monitor and coordinate with these primary inspection efforts.

C. Reimbursement of Fees and Expenses. The applicant, for approval of a subdivision in the Town, shall reimburse the Town of all reasonable and necessary planning and engineering expenses incurred by the Town in connection with the review and consideration of such subdivision. A developer who constructs, or proposes to construct, one or more highways, drainage facilities, utilities or parks within, or in conjunction with, an approved subdivision in the Town shall reimburse the Town for all reasonable and necessary legal, planning, and engineering expenses incurred by the Town in connection with the inspection and acceptance by the Town of such highways, drainage facilities, utilities and parks and the dedication of same to the Town.

1. Exemptions. **If the parcel being subdivided is not in the Lake Residential District NOR classified as steep slope AND** is subdivided into no more than two (2) lots abutting an existing public highway, this subdivision is hereby exempt from reimbursement of fees and expenses.

2. Exemptions. Notwithstanding anything to the contrary contained in this local law, an applicant or developer shall not be required to reimburse the Town for any part of a legal, planning, or engineering fee incurred by the Town for services performed in connection with matters, including but not limited to, those resulting from complaints by third parties, as to which the Town Board determines the applicant or developer had no responsibility or was beyond the reasonable control of the applicant or developer.

D. Modification of design improvements. If at any time before or during the construction of the required improvements it is demonstrated to the satisfaction of the Town Representative that unforeseen conditions make it necessary or preferable to modify the location or design of such required improvements, the Town Representative, upon approval by the Town Planning Board, may authorize such modifications provided that these modifications are within the spirit and intent of the Town *Master Plan* and do not violate any governing specifications. Authorization for the change(s) shall be granted via signatures by both the Town Representative and the Planning Board on a change authorization form prepared and submitted by the subdivider in advance of any modification work taking place. The subdivider shall take note that modification review by the Planning Board may not take place until the next regularly scheduled meeting.

E. Completion of Required Improvements. The subdivider shall alert the Town Representative in writing when a final inspection of Town required improvements is requested. One required item of completion will always be a set of as-built drawings, properly drafted, locating all underground utilities, roadway centerlines, rights-of-way, and lot boundaries, all referenced off any new permanent survey monuments or established existing control points. Once all required improvements have been performed

F. satisfactorily, the Town Representative shall prepare and present a *Letter of Completion* to the Chair of the Town Planning Board for joint signatures. Upon receipt of a properly signed *Letter of Completion* from the Town Representative, the subdivider will be allowed to release any performance bond in force.

NOTE: No *Letter of Completion*, or release of bonding, shall be issued or granted if subdivider is in default on any previously approved plat.

3.7 Deposit and Payment of Fees

A. Simultaneously with the filing of an application for approval of a development and prior to the commencement of any construction of buildings, highways, drainage facilities, utilities or parks therein, the applicant or developer, as the case may be, shall deposit with the Town Clerk a sum of money sufficient to pay the costs incurred by the Town for engineering, planning and legal services as described in Section 3.6C of this local law. Said amount shall be determined by the Town Board.

B. Upon receipt of such sums, the Town Clerk shall cause such monies to be placed in a separate non-interest bearing account in the name of the Town and shall keep a separate record of all such monies so deposited and the name of the applicant or developer and project for which such sums were deposited.

C. Upon receipt and approval by the Town Board of itemized vouchers from an engineer, planner, and/or attorney for services rendered on behalf of the Town pertaining to the development, the Town Clerk shall cause such vouchers to be paid out of the monies so deposited, and shall furnish copies of such vouchers to the applicant or developer at the same time such vouchers are submitted to the Town.

D. The Town Board shall review and audit all such vouchers and shall approve payment of only such engineering, planning, and legal fees as are reasonable in amount and necessarily incurred by the Town in connection with the review, consideration and approval of developments and the inspection and acceptance of highways, drainage facilities, utilities and parks within or in conjunction with such developments. For purpose of the foregoing, a fee or part thereof is reasonable in amount if it bears a reasonable relationship to the average charge by engineers, planners, or attorneys to the Town for services performed in connection with the approval or construction of a similar development and in this regard the Town Board may take into consideration the size, type and number of buildings to be constructed, the amount of time to complete the development, the topography of the land on which such development is located, soil conditions, surface water, drainage conditions, the nature and extent of highways, drainage facilities, utilities and parks to be constructed and any special conditions or considerations as the Town Board may deem relevant; and a fee or part thereof is necessarily incurred if it was charged by the engineer, planner, or attorney for a service

which was rendered in order to protect or promote the health, safety or other vital interests of the residents of the Town, protect public or private property from damage from uncontrolled, surface water run-off and other factors, assure the proper and timely construction of highways, drainage facilities, utilities arid parks, protect the legal interests of the Town including receipt by the Town of good and proper title to dedicated highways and other facilities and the avoidance of claims and liability, and such other interests as the Town Board may deem relevant.

E. If at any time during or after the processing of such application or in the construction, inspection or acceptance of buildings, highways, drainage facilities, utilities or parks there shall be insufficient monies on hand to the credit of such applicant or developer to pay the approved vouchers in full, or if it shall reasonably appear to the Town Board that such monies will be insufficient to meet vouchers yet to be submitted, the Town Board shall cause the applicant or developer to deposit additional sums as the Town Board deems necessary or advisable in order to meet such expenses or anticipated expenses

F. In the event that the applicant or developer fails to deposit such funds or such additional Funds, the Town Board shall notify as applicable, the Chairperson of the Planning Board, Planning Board, and the Town's Code Enforcement Officer of such failure, and any review, approval, building permit or certificates of occupancy may be withheld by the appropriate board, officer or employee of the Town until such monies are deposited.

G. After final approval, acceptance and/or the issuance of a *Certificate of Occupancy* relating to any specific development, and after payment of all approved vouchers submitted regarding such development, any sums remaining on account to the credit of such applicant or developer shall be returned to such applicant or developer, along with a statement of the vouchers so paid.

H. Application Fees. The deposits required by Section 3.7 of this law shall be in addition to any regular application fees as may be required by Section 3.3A and 3.4A, and shall not be used to offset the Town's general expenses of legal and engineering services for the several boards of the Town, nor its general administration expenses.

3.8 Filing of approved subdivision plat.

A. Final approval and filing. Upon completion of the requirements in Sections 3.6 and 3.7 above and notation to that effect upon the subdivision plat, it shall be deemed to have final approval and shall be properly signed by the appropriate officer of the Planning Board (Chair or Acting Chair) and shall be filed by the applicant in the office of the County Clerk. The plat shall be signed and filed before any building permit is issued and before any work commences. Any subdivision plat not so filed or recorded within 62 calendar days of the date upon which such plat is approved or considered approved by reasons of the failure of the Planning Board to act shall become null and void.

B. Plat void if revised after approval. No changes, erasures, modifications, or revisions shall be made in any subdivision plat after approval has been given by the Planning Board and endorsed in writing on the plat, unless the plat is first resubmitted to the Planning Board and such Board approves any modifications. In the event that any such subdivision plat is recorded without complying with this requirement, the same shall be considered null and void, and the Board shall institute proceedings to have the plat stricken from the records of the County Clerk.

3.9 Acceptance of public streets and recreation areas.

A. Ownership and maintenance of streets. The approval by the Planning Board of a subdivision plat shall not be deemed to constitute or be evidence of any acceptance by the Town of any street, easement, or other open space shown on such subdivision plat. Please refer to the document entitled *Standards for New Roads - Town of Middlesex*, which can be obtained from the Town of Middlesex Highway Superintendent.

B. Ownership and maintenance of recreation areas. When a park, playground, or other recreation area shall have been shown on a plat, the approval of said plat shall not constitute an acceptance by the Town of such area. The Planning Board shall require the plat to be endorsed with appropriate notes to this effect.

Note: In the instance of park or recreational land provision, either at the time of application or at a future date, the Town Board, in consultation with the Planning Board and Town staff, reserves the right to accept dedication of such park or recreational land to the Town as public property. The Town Board may also require the filing of a written agreement between the applicant and the Town covering future deed and title, dedication, and provision for the cost of grading, development, equipment, and maintenance of any such park or recreation area.

ARTICLE 4 - General Requirements and Design Standards

4.1 Minimum standards; waiver.

In considering applications for subdivision of land, the Planning Board shall be guided by the standards set forth below. These standards shall be considered to be minimum requirements and shall be waived by the Planning Board only under circumstances set forth in Article 6 herein.

4.2 General requirements.

A. Character of land. Land to be subdivided shall be of such character that it can be used safely for building purposes without danger to health or peril from fire, flood or other menace.

B. Conformity to Official Map and *Master Plan*. Subdivisions shall conform to the *Official Map* of the Town and shall be in harmony with the *Master Plan*.

C. Specifications for required improvements. All required improvements shall be constructed or installed to conform to the Town specifications, which may be obtained from the Code Enforcement Officer. This shall include design and construction per *Standards for New Roads - Town of Middlesex* and *Town of Middlesex Zoning Laws,* Sect. 700.12, Driveways.

D. Other applicable standards. Applicant must be in compliance with all other existing documents to be inclusive of but not limited to the following:

Local Municipal Laws/ Standards/Guides:
a. *Zoning Law of 1999*
b. *Master Plan of 1992*
c. *Standards for New Roads*

d. *Storm Water Management and Erosion Control Local Law #3 of 1999*
e. *The Canandaigua Lake Uniform Docking and Mooring Law #4 of 1992.*

New York State Laws/Regulations/Acts:

a. *NYS Environmental Quality Review Act (SEQRA)*- to include coordination and approval through NYS Dept. of Transportation & NYS Dept. of Health
b. *NYS DOH Water & Septic Regulations*
c. *NYS DOT Driveway Policy and Standards*
d. *NYS DOH Realty Subdivision*
e. *NYS Environmental Law*
f. *NYS Town Law, particularly Sections 274-a, 276, 277*
g. *NYS Standards and Specifications for Erosion and Sediment Control*
h. *NYS Phase II Storm Water Regulations*
i. *NYS Historic Preservation Office- Prehistoric & Historic Structures and Site Protection Law*

Federal Laws/Acts/Statutes:

a. *US Code of Federal Regulations*
b. *Federal Clean Water Act*
c. *Federal Emergency Management Agency – National Flood Insurance Program*

4.3 Street layout.

A. Width, location and construction. Streets shall be of sufficient width, suitably located, and adequately constructed to conform with the *Master Plan* and to accommodate the prospective traffic of all modes (motor vehicle, bicycle, pedestrian) and afford access for fire fighting, snow removal and other road maintenance equipment. The arrangement of streets shall be such as to cause no undue hardship to adjoining properties and shall be coordinated so as to compose a convenient network of streets.

B. Arrangement. The arrangement of streets in the subdivision shall provide for the continuation of principal streets of adjoining subdivisions, and for proper projection of streets into adjoining properties which are not yet subdivided, in order to make possible necessary fire protection, movement of traffic and the construction or extension, presently or when later required, of needed utilities and public services such as sewers, water and drainage facilities. Where, in the opinion of the Planning Board, topographic or other conditions make such continuance undesirable or impracticable, the above conditions may be modified.

C. Special treatment along major arterial streets. When a subdivision abuts or contains an existing or proposed major arterial street, the Board may require marginal access streets, deep lots with rear service lane ways, or such other treatment as may be necessary for adequate protection of residential properties and to afford separation of through and local traffic and limit the access points to the arterial.

D. Provision for future re-subdivision. Where a tract is subdivided into lots substantially larger than the minimum size required in the zoning district in which a subdivision is located, the Board may require that streets and lots be laid out so as to permit future re-subdivision in accordance with the requirements contained in these regulations.

E. Dead-end streets. The creation of dead-end or loop residential streets should not interfere with normal traffic (including bicycle and pedestrian) circulation in the area. Where dead-end streets are needed, the Board may require the reservation of a fifty (50) foot wide easement to provide for continuation of pedestrian traffic and utilities to the next street, and/or to provide for the potential future continuation of the dead-end street pavement.

F. Block size. In order to encourage walking and neighborhood connections, blocks generally shall not be less than 400 feet nor more than 800 feet in length. If a block does exceed 800 feet in length, the Board may require the reservation of a twenty-foot-wide easement through the block to provide for the crossing of underground utilities and pedestrian traffic where needed or desirable and may further specify, at its discretion, that an eight-foot-wide paved footpath be included.

G. Intersections with collector or major arterial streets. Subdivisions containing 20 lots or more shall have at least two (2) street connections with existing public streets, or streets shown on the *Official Map,* or streets on an approved subdivision plat for which a bond has been filed. Minor or secondary street openings into such roads shall, in general, be at least 500 feet apart.

H. Angle of intersection. In general, all streets shall join each other so that for a distance of at least 100 feet the street is approximately at right angles to the street it joins.

I. Relation to topography. The street plan of a proposed subdivision shall bear a logical relationship to the topography of the property, and all streets shall be arranged so as to obtain as many of the building sites as possible at or above the grade of the streets. Grades of streets shall conform as closely as possible to the original topography.

J. Other required streets. Where a subdivision borders on or contains a railroad right-of-way or limited access highway right-of-way, the Planning Board may require a street approximately parallel to and on each side of such right-of-way, at a distance suitable for the appropriate use of the intervening land (as for park purposes in residential districts, or for commercial or industrial purposes in appropriate districts). Such distances shall also be determined with due regard for the requirements of approach grades and future grade separations.

4.4 Street design.

A. Widths of rights-of-way. Streets shall have the following widths: (When not indicated on the *Master Plan* or *Official Map*, the classification of streets shall be determined by the Board.)

Type of Street	Min. Right-of-Way	Min. Pavement	Max. Pavement
Major	66 feet	24 feet	N/A
Collector	60 feet	24 feet	N/A
Local	50 feet	15 feet	24 feet
Access Lane ways	24 feet	15 feet	20 feet

B. Improvements. Streets shall be graded and improved with pavements, concrete or granite curbs, gutters, sidewalks, storm drainage facilities, water mains, sewers, streetlights

and signs, street trees, and fire hydrants, except where waivers may be requested, and the Board may waive, subject to appropriate conditions, such improvements as it considers may be omitted without jeopardy to the public health, safety and general welfare. Pedestrian easements shall be improved as required by the Town Engineer. The Town Engineer shall approve such grading and improvements as to design and specifications.

1. Fire hydrants. Installation of fire hydrants shall be in conformity with all requirements of standard thread and nut as specified by the *New York Fire Insurance Rating Organization and the Division of Fire Safety of the State of New York.*

2. Street lighting facilities. All new street lighting facilities must be "dark sky" compliant. Such lighting standards and fixtures shall be installed after approval by the appropriate power company and the authorized Town electrical inspector.

C. Utilities in streets. The Planning Board shall, wherever possible, require that underground utilities be placed in the public right-of-way between the paved roadway and right-of-way line. The subdivider shall install underground service connections to the property line of each lot within the subdivision for such required utilities before the street is paved.

D. Utility easements. Where topography is such as to make impractical the inclusion of utilities within the street rights-of-way, perpetual unobstructed easements of at least 20 feet in width shall be otherwise provided with satisfactory access to the street. Wherever possible, easements shall be continuous from block to block and shall present as few irregularities as possible. Such easements shall be cleared and graded where required.

E. Grades. Grades of all streets shall conform in general to the terrain, and shall not be less than 1/2 nor more than 6% for major collector streets, or 10% for minor streets in residential zones, but in no case more than 3% within 50 feet of any intersection.

F. Changes in grade. All changes in grade shall be connected by vertical curves of such length and radius as meet with the approval of the Town Engineer so that clear visibility shall be provided for a safe distance.

G. Curve radii at street intersections. All street right-of-way lines at intersections shall be rounded by curves of at least 20 feet radius. Curve radii at intersections of two local streets or a local and a collector street shall be rounded by curves of no more than 25 feet. In all instances, curbs shall be adjusted accordingly.

H. Steep grades and curves; visibility of intersections. A combination of steep grades and curves shall be avoided. In order to provide visibility for traffic safety, that portion of any corner lot (whether at an intersection entirely within the subdivision or of a new street with an existing street) which is area defined as a triangular area formed by two intersecting street lines and a line connecting points on such street lines 30 feet distance from their point of intersection shall be cleared of all growth (except isolated trees) and obstructions above the level of three feet higher than the center line of the street. If directed, ground shall be excavated to achieve visibility.

I. **Dead-end streets or cul-de-sacs. Where dead-end streets are included in the design, total street length shall not exceed 400 feet in length, and shall terminate per Section 3 in the Standards for New Roads- Town of Middlesex. Alternates to these designs may be considered if plantings or landscaped centers are included so as to reduce the**

amount of impervious surface.

Note: If a temporary dead-end street or cul-de-sac is established, such as to provide for vehicle turnaround at the street termination of phase I, the temporary dead-end street or cul-de-sac shall be constructed with the same geometry as per Section 3 of the Standards for New Roads indicated above. Surface treatment for the temporary turnaround portion must be compacted subbase material at minimum, and must be maintained. The intent is to have all streets stabilized and functional within any phase of a subdivision, prior to allowing any residency, so that emergency vehicles can always maneuver without delay.

J. Watercourses. Where a watercourse separates a proposed street from abutting property, provisions shall be made for access to all lots by means of culverts or other structures of design approved by the Town Engineer. Where a subdivision is traversed by a watercourse, drainage way, channel or stream, there shall be provided a storm water easement or drainage right-of-way as required by the Town Engineer, and in no case less than 20 feet.

K. Curve radii. In general, street lines within a block, deflecting from each other at anyone point by more than 10°, shall be connected with a curve, the radius of which for the center line of street shall not be less than 400 feet on major streets, 200 feet on collector streets and 100 feet on minor streets.

L. Service streets or loading space in commercial development. Paved rear service streets of not less than 18 feet in width, or in lieu thereof, adequate off-street loading space, suitably surfaced, shall be provided in connection with lots designed for commercial use.

4.5 Street names.

A. Type of name. The Planning Board**, coordinating with County 911 authorities,** shall approve all street names shown on a preliminary plat or subdivision plat. In general, streets shall have names and not numbers or letters. Street names should also reflect the established pattern in the town and should refrain from multiple word names (i.e. naming a street after a person and using first and last name). Street names should also reflect the history and character of the community and region and use appellations such as “street”, “avenue”, “road”, “terrace” and “parkway.” Appellations such as “drive”, “court”, “trail” and “run” should be discouraged.

B. Names to be substantially different. Proposed street names shall be substantially different so as not to be confused in sound or spelling with present names, except that streets that join or are in alignment with streets of an abutting or neighboring property shall bear the same name. Generally, a street that is continuous shall retain the same name (such as a loop street).

4.6 Lots.

A. Buildable Lots. **The Planning Board shall approve the site plan only after consideration is given to all existing regulations and constraints. Criteria used during review shall include, but not be limited to, proximity to existing gullies and waterways, septic system constraints, driveway and parking design, setback requirements, easements, permanent site drainage and erosion control design, impact**

to any existing old grow vegetation, geotechnical data provided, location of well site, impact of project on neighboring lots, location of steep slopes, and any retaining wall requirements.

B. Side lines. All side lines of lots shall be at right angles to straight street lines and radial to curved street lines, unless a variance from this rule will give a better street or lot plan.

C. Corner lots. In general, corner lots should be larger than interior lots to provide for proper building setback from each street and provide a desirable building site.

D. Driveway access. Driveway access and grades shall conform to specifications of the *Standards for New Roads – Town of Middlesex*. Driveway grades between the street and the setback line shall not exceed 10%.

E. Access from private streets. Access from private streets shall be deemed acceptable only if such streets are designed and improved in accordance with these regulations.

F. Monuments and lot corner markers. Permanent monuments meeting specifications approved by the Town Engineer as to size, type and installation shall be set at such block corners, angle points, points of curves in streets and other points as the Town Engineer may require, and their location shall be shown on the subdivision plat.

4.7 Drainage improvements

A. Goals of drainage improvements. In keeping with the stated goals and requirements of the *Federal Clean Water Act /Phase II Storm Water Regulations*, as administered by the New York State Department of Environmental Conservation, every effort should be made to retain water on site or within the immediate area. Storm water and runoff from buildings, roads, and parking areas should be captured to the greatest extent practicable and allowed to infiltrate back into the ground so as to re-charge groundwater resources and prevent large volumes of water flowing off-site. Regional storm water facilities that can accommodate run-off from an entire development are encouraged, especially in concert with cluster subdivision design. The subdivider shall be required by the Planning Board to address any spring or surface water that may exist either previous to, or as anticipated as a result of, the full development of the subdivision.

B. Design of drainage improvements. The design of culverts, bridges, and other drainage facilities shall be approved by the Town's consulting engineer based on the criteria and specifications contained in the following technical documents **and a hydrology evaluation for all phases of the development to be performed and submitted by the subdivider's engineer:**

1. The *NYS Storm Water Management Design Manual* (New York State Department of Environmental Conservation, most current version or its successors)

2. The *NY Standards and Specifications for Erosion and Sediment Control* (Empire State Chapter of the Soil & Water Conservation Society, 2004, most current version or its successors).

Drainage facilities shall be located in the street right-of-way where feasible, or in

perpetual unobstructed easements of appropriate width.

C. Responsibility from drainage downstream. The subdivider's engineer shall also study the effect of each subdivision on the existing downstream drainage facilities outside the area of the subdivision; this study shall be reviewed by the Town's consulting engineer. Where it is anticipated that the additional runoff incident to the development of the subdivision will overload an existing downstream drainage facility during a five-year storm, the Planning Board shall notify the Town Board of such potential condition. In such case, the Planning Board shall not approve the subdivision until provision has been made for the improvement of said condition.

D. Land subject to flooding. Land subject to flooding or land deemed by the Board to be uninhabitable shall not be platted for residential occupancy, nor for such other uses as may increase the danger to health, life or property, or aggravate the flood hazard, but such land within the plat shall be set aside for such uses as shall not be endangered by periodic or occasional inundation or improved in a manner satisfactory to the Board to remedy said hazardous conditions.

4.8 Parks, open spaces and natural features.

A. Recreation areas shown on Town's *Master Plan of 1992*. Where a proposed park, playground or open space shown on the Town's *Master Plan of 1992* is located in whole or in part in a subdivision, the subdivider shall show such areas on the plat in accordance with the requirements specified in Subsection B below and notify the Planning Board. Such area or areas may be dedicated to the Town or **C**ounty by the subdivider if the Planning Board **and Town Board** approve such dedication.

B. Parks and playgrounds not shown on Town's *Master Plan of 1992*. The Planning Board shall require that the subdivider reserve sites of a character, extent, and location suitable for the development of a park, playground or other recreational purpose. For a major subdivision, each reservation shall be of an area equal to **20**% of the total land within the subdivision, but in no case shall a reservation be less than two total acres. The area to be preserved shall possess the suitable topography, general character, and adequate road access necessary for its recreational purposes. Small parks, squares, commons, and medians integrated into the subdivision and used for informal community gathering spaces or focal points and passive recreation are encouraged. Where the Planning Board requires land to be set aside for parks, playgrounds, or other recreational purposes, the Board shall require that the site be graded, loamed and seeded and may require it to be fenced.

C. Preservation of natural features. The Planning Board **encourages the preservation** of all natural features which add value to residential developments and to the community, such as large trees or groves, watercourses, beaches, historic places and structures, vistas and similar irreplaceable assets. **As such, a Natural Resource Inventory and Plan (also called an Existing Resources and Site Analysis Plan) shall be required as part of phase I submittals. The plan shall not only contain aerial photography of the site, but shall call out existing vegetative cover, soil types, tree canopy lines, etc..** No tree with a diameter of eight inches or more as measured three feet above the base of the trunk shall be removed unless such tree is within the right-of-way of a street shown on the final

subdivision plat. **Smaller diameter trees may be designated as old growth after Site Review, and shall be protected as well. The overall plan for tree removal shall be subject to the approval of the Planning Board.** Design expectations shall include the planting of additional trees throughout the subdivision as an enhancement feature of the subdivision application.

ARTICLE 5 - Documents to be Submitted

5.1 Minor subdivision plat.

The following documents (A, 1-10, B and C) and a *short EAF* from *the SEQR* process shall be submitted with this document package.

A. Seven (7) copies of the minor subdivision plat prepared at a scale of not more than 100 feet, but not less than 50 feet to the inch showing:

1. The location of that portion which is to be subdivided in relation to the entire tract, and the distance to the nearest existing street intersection.

2. The name of the owner and of all adjoining property owners as disclosed by the most recent municipal tax records.

3. The Tax Map sheet, block and lot numbers, if available.

4. All the utilities available, and all streets which are either proposed, mapped or built.

5. The proposed pattern of lots (including lot width and depth) within the subdivided area.

6. All existing restrictions on the use of the land including easements, covenants, or zoning lines.

7. An actual field survey of the boundary lines of the tract, giving complete descriptive data by bearings and distances, made and certified by a licensed land surveyor. The corners of tract shall also be located on the ground and marked by monuments as approved by the Town Engineer, and shall be referenced and shown on the plat.

8. All on-site sanitation and water supply facilities shall be designed to meet the minimum specifications of the *New York State Department of Health*, and a note to this effect shall be stated on the plat and signed by a licensed engineer.

9. Proposed subdivision name, name of the town and county in which it is located.

10. The date, North point, map scale, name and address of record owner and subdivider.

B. The plat to be filed with the County Clerk shall be in a format that satisfies the filing requirements of the Yates County Clerk's Office.

C. The plat to include a written description of the overall project design approach and construction being planned for the lots, style, and size range in S.F. and height of buildings, development amenities, general approach for utilities, new covenants being

considered, home owner's associations being planned, green space considerations, playgrounds, etc.

D. The development of each lot within a minor or major subdivision must comply with the Stormwater Management and Erosion Control Law.

5.2 Major subdivision preliminary plat and accompanying data.

The following documents (A, 1-15, B, C and D) and a *Full Environmental Assessment Form* from *the SEQR* process shall be submitted with this document package.

A. Seven (7) copies of the preliminary plat prepared at a scale of not more than 100 feet, but not less than 50 feet to the inch showing:

1. Proposed subdivision name, name of town and county in which it is located, date, true North point, scale, name and address of record owner, subdivider, and engineer or surveyor, including license number and seal.

2. The name of all subdivisions immediately adjacent and the name of the owners of record of all adjacent property.

3. Zoning district, including exact boundary lines of district, if more than one district, and any proposed changes in the zoning district lines and/or the text of Chapter 155, Zoning, applicable to the area to be subdivided.

4. All parcels of land proposed to be dedicated to public use and the conditions of such dedication.

5. Location of existing property lines, easements, buildings, watercourses, marshes, rock outcrops, wooded areas, single trees with a diameter of eight inches or more as measured three feet above the base of the trunk, and other significant existing features for the proposed subdivision and adjacent property.

6. The location of existing sewers, water mains, culverts and drains on the property, with pipe sizes, grades and direction flow.

7. Contours with intervals of five feet or less as required by the Planning **Board**, including elevations on existing roads; approximate grading plan if natural contours are to be changed more than two feet.

8. The width and location of any streets or public ways or places shown on the *Official Map* or the *Master Plan*, within the area to be subdivided, and the width, location, grades and street profiles of all streets or public ways proposed by the developer. Rights-of-way that are proposed to be dedicated to the Town or other public entity shall be so identified (see Article 5, Section 5.2, Subsection A4).

9. The approximate location and size of all proposed waterlines, valves, hydrants, and sewer lines, and fire alarm boxes; connection to existing lines or alternate means of water supply or sewage disposal and treatment as provided in the *Public Health Law*; profiles of all proposed water and sewer lines.

10. Storm Water Pollution Prevention Plan: A Storm Water Pollution Prevention Plan (SWPPP), consistent with the requirements of Section Eight of the *Storm Water Management and Erosion Control Law (Local Law #3 of 1999)* and Phase II, *Storm Water Regulations of the Federal Clean Water Act* as administered by the New York State Department of Conservation, shall be required for Preliminary Subdivision Plat approval. The SWPPP, and practices listed within, shall follow the design criteria and standards contained in the following technical documents:

    a. The *New York State Storm Water Management Design* Manual (New York State Department of Environmental Conservation, most current version or its successor)

    b. *New York Standards and Specifications for Erosion and Sediment Control* (Empire State Chapter of the Soil and Water Conservation Society, 2004, most current version or its successors).

11. Plans and cross sections showing the proposed location and type of sidewalks, street lighting standards, street trees, curbs, water mains, sanitary sewers and storm drains, and the size and type thereof; the character, width and depth of pavements and sub base; the location of manholes, basins and underground conduits.

12. Preliminary designs of any bridges or culverts, which may be required.

13. The proposed lot lines with approximate dimensions and area of each lot.

14. Where the topography is such as to make difficult the inclusion of any of the required facilities within the public areas as laid out, the preliminary plat shall show the boundaries of proposed permanent easements over or under private property, which permanent easements shall not be less than 20 feet in width and shall provide satisfactory access to an existing public highway or public open space shown on the subdivision or the *Official Map.*

15. An actual field survey of the boundary lines of the tract, giving complete descriptive data by bearings and distances, made and certified by a licensed land surveyor. The corners of the tract shall also be located on the ground and marked by substantial monuments of such size and type as approved by the Town Engineer, and shall be referenced and shown on the plat.

B. If the application covers only a part of the subdivider's entire holding, a map of the entire tract, drawn at a scale of not less than 400 feet to the inch showing an outline of the platted area with its proposed streets and indication of the probable future street system with its grades and drainage in the remaining portion of the tract. The part of the sub-divider's entire holding submitted shall be considered in light of the entire holdings.

C. A copy of such covenants or deed restrictions as are intended to cover all or part of the tract.

D. Include a written description of the overall project design approach and construction being planned for the lots, to include style, size range in S.F. and height of buildings, development amenities, general approach for utilities, new covenants being considered, home owner's associations being planned, green space considerations, playgrounds, etc.

5.3 Major subdivision final plat and accompanying data.

The following documents (A, 1-10, B, and C) and a *Full Environmental Assessment Form* from *the SEQR* process shall be submitted with this document package:

A. The plat to be filed with the County Clerk shall be in a format that satisfies the filing requirements of the Yates County Clerk's Office. The plat shall be drawn at the same scale required for the preliminary plat and oriented with the North point at the top of the map. When more than one sheet is required, an additional index sheet of the same size shall be filed showing to scale the entire subdivision with lot and block numbers clearly legible. The plat will show all data required for the preliminary plat (as detailed in Article 5, Section 5.2) as well as:

1. Sufficient data acceptable to the Town CEO or the Town's consulting engineer to determine readily the location, bearing and length of every street line, lot line, boundary line, and to reproduce such lines upon the ground. Where applicable, these should be referenced to monuments included in the state system of plane coordinates, and in any event should be tied to reference points previously established by a public authority.

2. The length and bearing of all straight lines, radii, length of curves and central angles of all curves; tangent bearings shall be given for each street. All dimensions and angles of the lines of each lot shall also be given. All dimensions shall be shown in feet and decimals of a foot. The plat shall show the boundaries of the property, location, scale and true North point.

3. The plat shall also show by proper designation thereon all public open spaces for which deeds are included and those spaces title to which is reserved by the developer. For any of the latter, there shall be submitted with the subdivision plat copies of agreements or other documents showing the manner in which such areas are to be maintained and the provisions made thereof.

4. All offers of cession and covenants governing the maintenance of unceded open space shall bear the certificate of approval of the Town Attorney as to their legal sufficiency.

5. Lots and blocks within a subdivision shall be numbered and lettered in alphabetical order in accordance with the prevailing Town practice.

6. Permanent reference monuments shall be shown and shall be constructed in accordance with specification of the Town's consulting engineer or Code Enforcement Officer. When referenced to the state system of plane coordinates, they shall also conform to the requirements of the *New York State Department of Public Works*. They shall be placed as required by the Town's consulting engineer or Code Enforcement Officer and their location noted and referenced upon the plat.

7. All lot corner markers shall be permanently located satisfactorily to the Code Enforcement Officer or the Town's consulting engineer at least 3/4 inches (if metal) in diameter and at least 24 inches in length, and located in the ground to existing grade.

8. Monuments of a type approved by the Town Engineer shall be set at all corners and angle points of the boundaries of the original tract to be subdivided; and at all street

intersections, angle points in street lines, points of curve and such intermediate points as shall be required by the Town Engineer.

B. Construction drawings including plans, profiles and typical cross sections, as required, showing the proposed location, size and type of streets, sidewalks, street lighting standards, street trees, curbs, water mains, sanitary sewers and storm drains, pavements and sub base, manholes, catch basins and other facilities.

C. Storm Water Pollution Prevention Plan: Any revisions to the Storm Water Pollution Prevention Plan (SWPPP) submitted as part of the preliminary plat shall be required for Final Subdivision Plat approval.

D. Final written narrative of project. (refer to Section 5.2.D)

ARTICLE 6 - Variances and Waivers

6.1 Variances due to extraordinary hardship.

Where the Planning Board finds that extraordinary and unnecessary hardships may result from strict compliance with these regulations, it may vary the regulations so that substantial justice may be done and the public interest secured, provided that such variations will not have the effect of nullifying the intent and purpose of the *Official Map*, *Master Plan*, or the *Zoning Law.*

6.2 Variances due to special circumstances.

Where the Planning Board finds that, due to the special circumstances of a particular plat, the provision of certain required improvements is not requisite in the interest of the public health, safety and general welfare or is inappropriate because of inadequacy or lack of connecting facilities adjacent or in proximity to the proposed subdivision, it may waive such requirements subject to appropriate conditions.

6.3 Conditions of variances to secure objectives of regulations.

In granting variances and modifications, the Planning Board shall require such conditions as will, in its judgment, secure substantially the objectives of the standards or requirements so varied or modified.

ARTICLE 7 - Enforcement

7.1 Penalties for offenses.

A violation of any part of this local law or order issued in connection with this local law shall constitute a "violation" as defined in the Penal Law of the State of New York, and shall be punishable by a fine of not less than $100, nor more than $1000, or by imprisonment for a period not to exceed (60) days, or both. For each day that a violation continues, this shall constitute a separate violation.

7.2 Enforcement.

The Code Enforcement Officer or designee shall enforce these regulations.

Adopted by Town Board 6/14/2007

Model Subdivision Regulations

By: Lindsay Carille, Senior Planner and Roger Akeley, Commissioner

A New Approach – The Preliminary Meeting

Before an applicant brings in a sketch plan, your subdivision regulations state that a preliminary meeting must take place. At this first meeting the applicant and board members identify and discuss the assets and constraints of the site, go through a checklist of possible issues, and discuss location of suitable building envelopes. The applicant now has the necessary information to develop an informal sketch plan.

This preliminary meeting is described in §85-9, Preapplication Procedure, and the process is outlined in §85-25, Resource Analysis and Conceptual Discussion Phase of the following model Subdivision Regulations.

This approach will curtail the mistakes commonly made in subdivisions where the land is carved into individual lots with no regard for protecting its natural assets. It will guide development where it should go and limit development where it should not go.

Everyone Wins

The preliminary meeting is the start of a conversation where everyone knows what is important to the municipality, what features are important to save, and what the reviewing body would like to see on the site. With minimal expense, the applicant learns up front where the "buildable" areas are on the site. The applicant will also know what to expect in the SEQR process, as possible environmental impacts will already have been discussed. This can be done with an 11x17 map of soils, slopes, water bodies and parcel data, a checklist, a site walk, and a discussion. The potential for months of "back and forth" between the applicant and the Board has now been avoided. The consultants can use their talents to satisfy both the needs of the applicant and the municipality.

What Needs to Change in your Subdivision Regulations?

1. Inclusion and full description of a new "preliminary meeting" requirement.
2. Explanation of data requirements for presentation and discussion at the preliminary meeting (soils, slopes, water bodies, viewsheds, parcel data, etc.).
3. Two additions to your subdivision regulations:
    a. Checklist of site characteristics.
    b. Portrayal of map data requirements.

The following model Subdivision Regulations also include an expanded Policy section (§84-3), a detailed Terms definition section (§84-7), the addition of Rural Road Standards (§84-18), the inclusion of a Maximum Density Calculation (§84-21), and the inclusion of Design Guidelines (Appendix A) and House Siting Guidelines (Appendix B).

Want More Information?

If your community would like a presentation on this process, please contact:
Lindsay Carille, Senior Planner
Dutchess County Department of Planning and Development
845-486-3600 or lcarille@co.dutchess.ny.us

Chapter 84

SUBDIVISION OF LAND

ARTICLE I
General Provisions

§84-1. Legislative authority.

§84-2. Purpose and title.

§84-3. Policy Please note the expanded policy section

§84-4. Inconsistencies with Town Law.

§84-5. Self-imposed restrictions.

ARTICLE II
Definitions

§84-6. Word interpretation.

§84-7. Terms defined. Please note the expanded definitions section

ARTICLE III
Application and Approval Procedure

§84-8. Compliance required.

§84-9. Pre-application procedure. Please note the addition of the pre-application

§84-10. Minor subdivisions.

§84-11. Preliminary plat.

§84-12. Final plat.

§84-13. Waiver of requirements.

§84-14. Issuance of building permits.

§84-15. Improvements in streets.

ARTICLE IV
General Requirements and Design Standards

§84-16. Compliance required.

§84-17. Preservation of existing features.

§84-18. Streets. Please note the addition of rural road standards

§84-19. Blocks.

§84-20. Driveways.

§84-21. Lots. Please note the maximum density calculation

§84-22. Reservations and dedications.

ARTICLE V
Required Data and Documents

§84-23. Compliance required.

§84-24. General requirements.

§84-25. Resource analysis and conceptual discussion phase.
Please note the resource analysis, checklist, map samples

§84-26. Sketch plan.

§84-27. Preliminary plat.

§84-28. Final plat.

ARTICLE VI
Required Improvements and Agreements

§84-29. Completion of improvements or filing of bond required.

§84-30. Performance bonds.

§84-31. Required improvements.

§84-32. Inspection.

§84-33. Public utilities.

APPENDIX A: Design guidelines. Please note addition of design guides

APPENDIX B: House siting guidelines. Please note addition of siting guides

SUBDIVISION OF LAND

ARTICLE I
General Provisions

§ 84-1. Legislative authority.

By authority of the resolution adopted by the Town Board on the _____ day of _____, 200__, pursuant to the provisions of Article 16 of the Town Law, the Town of _____ Planning Board has the power and authority to approve or disapprove plats for subdivision within the unincorporated area of the Town of _____.

§ 84-2. Purpose and title.

In order that land in the Town of _____ may be subdivided in accordance with the policy set forth herein, these regulations are hereby adopted and shall be known and may be cited as the "Town of _____ Subdivision Regulations."

§ 84-3. Policy.

It is declared to be the policy of the Town of _____ Planning Board to consider land subdivision plats as part of a plan for the orderly, efficient, economic, environmentally sound development of the town and to that goal require that all land subdivision follow the guidelines under Article IV: General Requirements and Design Standards, Appendix A: Design Guidelines and Appendix B: House Siting Guidelines.

In cases where the Planning Board finds that a proposed subdivision may adversely affect the preservation of natural areas, and/or prime farmland or farmland of statewide importance, according to the soil survey prepared for Dutchess County by the U.S. Department of Agriculture, the Planning Board may require an applicant to submit a plan for a conservation subdivision as provided for in §278 of Town Law.

These subdivision regulations shall supplement and facilitate the provisions of the Town's Comprehensive Plan, Greenway Connections: Greenway Compact Program and Guide for Dutchess County Communities, Zoning Law, and Zoning District Map. The following objectives shall guide the Planning Board's decisions:

A. Land is to be subdivided in a way that enhances the natural and scenic resources of the area in which it is located and preserves important scenic viewsheds, environmental resources, tracts of contiguous wildlife habitat, and viable farmland.
B. Subdivided lots shall be of such character that they can be used safely for building purposes without danger to health or peril from fire, flood or other menace.
C. Proper provision shall be made for water supply, drainage, sewage, utilities and other needed improvements.
D. Proposed development shall be planned such that it is compatible with sound development patterns of adjacent and neighboring properties within the Town of _____.

E. Proposed public roads shall compose a convenient system and shall be of such width, grade and location as to accommodate present and prospective traffic, and shall meet town highway specifications and other local laws of the Town of _____. Rural road standards will be promoted for development within rural areas, with requirements matching the low intensity rural purpose.
F. All development shall be designed to afford adequate light and air, to facilitate adequate fire and emergency protection, and to provide access for fire fighting and other emergency equipment.
G. Provision shall be made for permanent reservations of open spaces and when appropriate, provisions for pedestrian trails, viewing areas, and passive parks as well as for the long term protection of water resources and wildlife habitat. These areas shall be shown on the plat.
H. All reviews of applications specified in these regulations shall be coordinated with involved agencies and boards at the local, County and State levels to ensure consistent, well-designed subdivisions and decision-making that will benefit the Town of _____.
I. Proper provision shall be made for leaving undeveloped natural areas and corridors to mitigate adverse environmental impacts of the proposed subdivision and to sustain a diversity of native vegetation and wildlife, to protect water resources, agricultural land, viewsheds, and to implement the Town's policies of protecting its environmental and cultural resources pursuant to the Comprehensive Plan, Zoning Law, and other applicable local laws.
J. In their interpretation and application, provisions of these regulations shall be held to be minimum requirements. More stringent provisions may be required if it is demonstrated that different or higher standards are necessary to promote the town's public health, safety, and welfare.
K. In order to avoid a segmented review and to promote optimum use of the parcel in the future, applicants may be required to prepare a conceptual plan for their entire parcel whenever an application to subdivide a portion of a larger lot is submitted.

§ 84-4. Inconsistencies with town law.

Should any of these regulations conflict or be inconsistent with any provision of the Town Law, such provision of the Town Law shall apply.

§ 84-5. Self-imposed restrictions.

Nothing in these regulations shall prohibit the subdivider from placing self-imposed restrictions, not in violation of these regulations, on the development. Such restrictions, however, shall be indicated on the plat.

ARTICLE II
Definitions

§ 84-6. Word interpretation.

Words in the singular include the plural, and words in the plural include the singular. The word “persons” includes a corporation and unincorporated association, and “building” includes “structure” and shall be construed as if followed by the words “or part thereof.” The word “street” includes “road,” “highway” and “lane”; and “watercourse” includes “drain,” “ditch” and “stream.” The word “shall” is mandatory unless otherwise indicated.

§ 84-7. Terms defined.

Unless otherwise expressly stated, the following terms shall, for the purpose of these regulations, have the meanings indicated:

100-YEAR FLOODPLAIN – The channel of a stream plus any adjacent flood plain areas that must be kept free of encroachment in order that the 100-year flood can be carried without substantial increases in flood heights.

BOND - A performance bond duly issued by a bonding or surety company approved by the Town Board with security acceptable to the Town Board, or a performance bond duly issued by the developer-obligor accompanied by security in the form of cash, certified check or United States Government bearer bonds deposited with the Town Board in the full amount of the obligation.

BUILDING ENVELOPES – The preferred area(s) for development which are identified once the resource analysis and concept discussion on a property has been completed.

BUFFER – An area within a property or site, generally adjacent to and parallel with the property line, either consisting of natural existing vegetation or created by the use of trees, shrubs, fences and/or berms and designed to limit continuously the view of and/or sound from the site to adjacent sites or properties.

CONCEPTUAL DISCUSSION – Initial concepts for a site or building based on the Resource Analysis and input from the reviewing board(s) and the applicant(s).

CONSERVATION EASEMENT – A perpetual restriction on the use of land as may be acquired in accordance with the provisions of Section 49, Title 3 of the Environmental Conservation Law or Section 247 of the General Municipal Law, for the purposes of conservation of open space, agricultural land, as well as natural, cultural and scenic resources.

CONSERVATION SUBDIVISION – A conservation subdivision, sometimes known as cluster development, is a subdivision where the applicable zoning ordinance or local law is modified to provide an alternative permitted method for the layout, configuration and design of lots, buildings and structures, roads, utility lines and other infrastructure, parks and landscaping in order to preserve the natural and scenic qualities of the remainder of the land.

CROSSWALK - A right-of-way, publicly or privately owned, which cuts across a block to furnish access for pedestrians to adjacent street or properties.

DEED RESTRICTION - A covenant or restriction placed in a deed that restricts the use of the land in some way. These are often used to insure that the owner complies with a condition imposed by the developer or a land use body.

EASEMENT - A right granted to use certain land for a special purpose not inconsistent with the general property rights of the owner.

FAMILY DWELLING UNIT - Housekeeping accommodations for one (1) or more persons living as a family.

FLAG LOT –A large lot not meeting minimum road frontage requirements and where access to the public road is by a narrow, private right-of-way or driveway.

HOA – Homeowners Association. A group that governs a subdivision, condominium or planned community. The association collects monthly fees from all owners to pay for common area maintenance, handle legal and safety issues and enforce the covenants, conditions, and restrictions set by the developer.

IMPROVEMENT - A physical change to the land necessary to produce usable and desirable lots from raw acreage, including grading, pavement, curb, gutter and utilities, including water supply, together with sanitary and storm sewers and drains and betterments to existing watercourses, sidewalks, street signs, crosswalks, shade trees, sodding or seeding, street name signs and monuments.

LOT - A parcel of land intended for transfer of ownership or building development.

LOT DEPTH - The mean horizontal distance between the front and rear lines of a lot.

LOT, DOUBLE-FRONTAGE - A lot, the generally opposite ends of which both abut on streets.

LOT, FLAG OR REAR– See Flag Lot

LOT WIDTH - The width of a lot at the building line.

MASTER PLAN or TOWN PLAN - The comprehensive plan, or part thereof, which may consist of several maps, data, etc., prepared by the Planning Board and filed in the office of the Planning Board, the office of the Town Engineer or the Town Highway Superintendent and the office of the Town Clerk, indicating the general locations recommended for major motorways, parks and other public open spaces, public building sites and routes for public utilities.

OFFICIAL MAP, COUNTY - A map established by the County Board of Representatives under the General Municipal Law, Article 12-B, § 239-h, and of changes and additions thereto, made under the provisions of the General Municipal Law, Article 12-B, § 239-i.

OFFICIAL MAP TOWN - A map established by the Town Board under § 270 of the Town Law, showing the streets, highways and parks theretofore laid out, adopted and established by law and all changes or additions thereto made under the provisions of § 213 of the Town Law.

OFFICIAL SUBMITTAL DATE - The date when a sketch plan, a preliminary layout or a subdivision plat shall be considered submitted to the Planning Board, hereby defined to be the date of the meeting of the Planning Board at which all required surveys, plans and data described in Article V are submitted.

OWNER - The owner of the land proposed to be subdivided, or his agent.

PLANNING BOARD - The agency empowered by the municipal legislative body under applicable New York State enabling legislation to act as the Planning Board of the Town of North East with respect to subdivision administration.

PLAT - The final map or drawing prepared, on a base map prepared by a licensed land surveyor for recording, by a licensed professional engineer, registered architect, licensed land surveyor or licensed landscape architect, which shall have his New York State seal affixed thereon and on which the subdivider's plan of subdivision is presented to the Planning Board for approval and which, if approved, will be submitted to the County Clerk for recording.

PRELIMINARY PLAT - A plan prepared by a licensed professional engineer, licensed land surveyor, registered architect or a licensed landscape architect, on a base map prepared by a licensed land surveyor, showing existing features of the land and proposed street utility and lot
layout within and adjacent to a subdivision.

PRELIMINARY REVIEW - Preliminary project plans submitted to the Planning Board for review and comment prior to the submission of a formal application.

PRIME FARMLAND SOILS – Prime farmland soils, as defined by the U.S. Department of Agriculture, are soils that are best suited for producing food, feed, forage, fiber, and oilseed crops. These soils are listed with an “I” on the Dutchess County Soil Survey Information Chart within the Dutchess County Soil Survey.

REAR LANE - A strip of land over which there is a right-of-way, publicly or privately owned, on which no building fronts, serving as a secondary means of access to two (2) or more properties.

RESOURCE ANALYSIS – The review and evaluation of the natural, historical and cultural resources on a site, resulting in the identification of resources to be protected and establishing building envelopes.

RESUBDIVISION - A change in a subdivision plat or resubdivision plat filed in the office of the Dutchess County Clerk, which change affects any street layout shown on such plat, affects any area reserved thereon for public use or diminishes the size of any lot shown thereon.

RIDGE - A ridge is a geological feature that includes a continuous elevational crest for some distance. Ridges can be termed hills or mountains as well, depending on size and shape.

RIGHT-OF-WAY - A strip of land between property lines open for use as a street, alley or crosswalk.

SETBACK OR BUILDING LINE - A line, generally parallel to the street line, beyond which the front portion of a building may not project into the front yard.

SHARED DRIVEWAY – This privately owned and maintained driveway branches out to serve up to three residences and does not need a turnaround area at the end of the driveway. Driveway access is typically controlled by sight-line, grades, and ecological factors, such as wetlands and stream crossings. Usually a maintenance agreement is drawn up by property owners for a shared driveway.

SIGHT DISTANCE - The distance an object eighteen (18) inches off the pavement (a taillight) is visible from an eye level four and one-half (41/2) feet above the pavement (average-height driver's eyes).

SIGNIFICANT WILDLIFE HABITATS – Lands that contain significant food, water, or cover for native terrestrial and aquatic species of animals and plants.

SKETCH PLAN - A freehand sketch made on a topographic survey map showing the proposed subdivision in relation to existing conditions.

STATEWIDE IMPORTANT SOILS – Statewide important soils is land that is of statewide importance for the production of crops. These soils are listed with an “S” on the Dutchess County Soil Survey Information Chart within the Dutchess County Soil Survey.

STEEP SLOPES - Surface formation with a vertical incline greater than 22.5 degrees or 25 percent, a sufficient steepness to cause problems such as erosion or increased flooding when disturbed for land development or other purposes.

STREET - A general term used to describe a right-of-way, publicly or privately owned, serving as a means of vehicular and pedestrian travel and furnishing space for utilities. The following functional classification is used in these regulations.

A. RESIDENTIAL COLLECTOR ROAD – A residential collector road collects traffic from residential areas and channels it to larger roads, such as county highways, state highways, arterials, and interstates. It is well-traveled and accommodates a variety of vehicles, including large delivery trucks, school buses, pick-up trucks, vans, and cars.

B. RESIDENTIAL AND FARM ACCESS ROAD – This road, used mostly by cars, small trucks and farm vehicles, provides access solely to residences or to residences and farm areas. Traffic on this road is light, but it may include occasional large trucks, school buses and farm equipment.

C. PRIVATE ROAD – This is a paved or unpaved road that serves a limited number of single-family residences or a recreational area. Private roads can be maintained by local highway departments or by a private homeowner association.

D. CUL-DE-SAC or DEAD-END STREET - A minor street with one (1) end open for public vehicle and pedestrian access and the other end terminating in a vehicular turnaround.

STREET PAVEMENT - The wearing or exposed surface of the roadway used by vehicular traffic.

STREET WIDTH - The distance between property lines.

SUBDIVIDER - Any person, firm, corporation, partnership or association who or which shall lay out, for the purpose of sale or development, any subdivision or part thereof, as defined herein, either for himself or others.

SUBDIVISION - The division of any parcel of land into two (2) or more lots, plots, sites or other division of land, with or without streets, for the purpose of immediate or future sale or building development.

SUPERINTENDENT - The duly elected Town Superintendent of Highways or other such authorized official.

TOWN BOARD - The Town Board of the Town of _____.

TOWN ENGINEER - The duly licensed professional engineer or registered architect of the Town of North East or, if there is no such official, a licensed professional engineer or registered architect employed by the Town Board for this purpose.

VIEWSHED – A viewshed is an area that is visible from a public roadway or public trail which encompasses natural landforms such as valleys, ridges, farm lands and open spaces which may have inherent rural qualities and/or aesthetic values as determined by those who view it.

WATERBODY - A waterbody is any area that in a normal year has water flowing or standing above ground to the extent that evidence of an ordinary high water mark is established. Wetlands contiguous to the waterbody are considered part of the waterbody.

WATERCOURSE – Any natural or artificial stream, river, creek, ditch, channel, canal, conduit, culvert, drain, waterway, gully, ravine or wash in which water flows in a definite direction or course, either continuously or intermittently, and has a definite channel, bed and banks, and includes any area adjacent thereto subject to inundation by reason of overflow or flood water.

WETLAND – An area of land that is inundated or saturated by surface water or groundwater as defined by the rules, regulations, and policies of the New York State Department of Environmental Conservation and/or the United States Army Corps of Engineers, and/or the Town of _____.

ARTICLE III
Application and Approval Procedure

§ 84-8. Compliance required.

Whenever any subdivision or resubdivision of land in the Town of _____ is proposed, the subdividing owner, or his authorized agent, shall apply for and secure approval of such proposed subdivision before any contract for the sale of any part thereof is made and before any permit for the erection of a structure in such proposed subdivision shall be granted. Approval of a proposed subdivision shall be obtained in accordance with the procedure specified in this Article.

§ 84-9 Preapplication procedure.

Prior to filing a formal application for approval of a subdivision plat pursuant to §84-11, the applicant shall participate in the preapplication procedure. The Planning Board, in its discretion, may also require a resource analysis for a minor subdivision.

The preapplication procedure is a two-part process. The first step is to submit a Resource Analysis and participate in the Conceptual Discussion with the Town of _____ Planning Board. The second step is to submit a Sketch Plan. The applicant may choose to submit the Sketch Plan simultaneously with the Resource Analysis, or may elect to submit the Sketch Plan at a subsequent meeting. The Sketch Plan must be on a separate map from the Resource Analysis map.

A. Resource Analysis and Conceptual Discussion Phase.

(1) Prior to the submission of a sketch plan, an applicant must prepare a resource analysis and participate in a discussion with the Planning Board to determine a conceptual plan for the proposed subdivision, as specified in § 84-25 of these regulations.

(a) The applicant should become familiar with the Town's Subdivision Regulations, Comprehensive Plan, Zoning Law, Greenway Connections, and SEQR requirements in order to have a general understanding of the process.

(b) Applications for resource analysis review shall be submitted to the Planning Board in ten (10) copies. A filing fee as specified by town subdivision fee schedule shall accompany the submission. There shall be no statutory time limit for the review of the resource analysis, nor the need to make a determination of whether the subdivision application is complete.

B. Study of resource analysis and conceptual discussion.

The Planning Board shall review the applicant's resource analysis submittal. The applicant should be prepared to discuss possible subdivision concepts, based on the site's resource analysis and the conceptual design discussion. The reviewing board, in conjunction with the applicant, will fill out Form A of the resource analysis question and answer survey. The resource analysis, conceptual design discussion, and survey will form the basis for the design of the subdivision and should be reflected in the sketch plan and preliminary plan.

C. Sketch Plan

(1) Prior to filing a formal application for approval of a subdivision plat pursuant to § 84-10 or 84-11, the applicant shall:

(a) Determine the requirements of the Town of _____ Planning Board, the Zoning Regulations, the Dutchess County Planning Department, the Dutchess County Health Department and the New York State Department of Public Works, whose approval is required by these regulations, the Sanitary Code of Dutchess County and the General Municipal Law of the State of new York.

(b) Submit to the Town Planning Board ten (10) copies each of a sketch plan submission form, sketch plan and general information, as specified in §84-26 of these regulations and a subdivision plat pursuant to §84-10 or §84-11. A filing fee as specified by the town subdivision fee schedule shall accompany the submission.

(2) If the subdivision consists of three (3) lots or less and does not propose the creation of any new streets, it may be processed as a minor subdivision. In order to determine whether the subdivision is to be processed as a minor subdivision, the subdivider shall submit to the Planning Board sufficient information so that a determination may be made as to whether the proposed subdivision meets the requirements of Article IV, General Requirements and Design Standards. If these requirements are met, the subdivider shall then make application for subdivision approval according to §84-10. All subdivisions of more than three (3) lots and/or those which propose one (1) or more new streets shall be processed according to §§84-9, 84-11 and 84-12.

D. Review of sketch plan.

The Planning Board shall review the applicant's sketch plan and within thirty (30) days of the submission date shall inform the applicant, in writing, that the proposed subdivision as submitted, or as modified, will meet the objectives of these regulations. However, in the event the sketch plan is found totally unacceptable, the applicant will be asked to submit a new plan before proceeding with a preliminary plat. Reasons for recommended modifications of the sketch plan or total rejection shall be stated on the records of the Planning Board.

§ 84-10. Minor subdivisions.

A. *Application*. Within six (6) months after classification of a proposal as a minor subdivision by the Planning Board, the subdivider shall submit an application for approval of a minor subdivision plat. Said application shall contain the requirements listed in §84-28 of these regulations and shall conform to the general requirements and design standards specified in Article IV of these regulations. Fees as specified by the town subdivision fee schedule for each minor subdivision shall accompany the application.

B. *Number of copies*. The original and ten (10) copies of the subdivision plat shall be presented to the Planning Board at least two (2) weeks prior to a scheduled monthly meeting of the Planning Board.

C. *Public hearing.* A public hearing shall be held by the Planning Board within sixty-two (62) days from the time of submission of the subdivision plat for approval. Said hearing shall be advertised in a newspaper of general circulation in the town at least five (5) days before such hearing.

D. *Action on subdivision plat.*

(1) The Planning Board shall, within sixty-two (62) days from the date of the public hearing, act to conditionally approve, conditionally approve with modification, disapprove or grant final approval and authorize the signing of the subdivision plat. This time may be extended by mutual consent of the subdivider and the Planning Board. Failure of the Planning Board to act within such time shall constitute approval of the plat.

(2) Upon granting conditional approval, with or without modification to the plat, the Planning Board shall empower a duly-authorized officer to sign the plat upon compliance with such conditions and requirements as may be stated in its resolution of conditional approval. Within five (5) days of the resolution granting conditional approval, the plat shall be certified by the Chairman or Secretary of the Planning Board as conditionally approved, a copy filed in its office and a certified copy mailed to the subdivider. The copy mailed to the subdivider shall include a certified statement of such requirements which, when completed, will authorize the signing of the conditionally-approved plat. Upon completion of such requirements, the plat shall be signed by the duly-designated officer of the Planning Board. Conditional approval of a plat shall expire one hundred eighty (180) days after the date of the resolution granting such approval unless the requirements have been certified as completed within that time. The Planning Board may, however, extend the time within which a conditionally-approved plat may be submitted for signature, if in its opinion such extension is warranted in the circumstances, for not to exceed two (2) additional periods of ninety (90) days each.

E. *Plat void if revised after approval.*

No changes, erasures, modifications or revisions shall be made on any plat after approval has been given by the Board. In the event that any plat, when recorded, contains any such changes, the plat shall be considered null and void; and the Board shall institute proceedings to have said plat stricken form the records of the County Clerk.

F. *Filing of approved plat.*

Approval of the plat shall expire within sixty (60) days from the date of such approval unless within such sixty-day period such plat shall have been duly recorded by the owner in the office of the Dutchess County Clerk. If the plat is not filed within this period, the approval shall expire as provided in §276 of the Town Law.

§ 84-11. Preliminary plat – Major Subdivision.

A. *Application procedure.*

Prior to filing an application for the approval of a plat, the applicant shall file an application for the approval of a preliminary plat. The application shall:

(1) Be made on forms available at the office of the Town Clerk.

(2) Include all land which the applicant proposes to subdivide.

(3) Be accompanied by ten (10) copies of the preliminary plat and supplementary material described in Article V, §84-27, of these regulations.

(4) Comply in all respects with the requirements specified in Article IV of these regulations and with the provisions of §§276 and 277 of the Town Law.

(5) Be submitted to the Chair of the Planning Board.

(6) Be accompanied by fees as specified by the town subdivision fee schedule.

B. *Study of preliminary plat.*

The Planning Board will carefully study the practicability of the preliminary plat, taking into consideration the results of the resource analysis and sketch plan discussions, the requirements of the community, the best use of the land being subdivided and the policy set forth in §84-3. Particular attention will be given to the proposed arrangement, location and width of streets; the relation of proposed streets to the topography of the land; sewage disposal; drainage; proposed lot sizes, shape and layout; future development of adjoining lands

as yet unsubdivided; the requirements of the Town Plan and the Official Map; and matters enumerated in §277 of the Town Law.

C. *Applicant to attend Planning Board meeting.*

The applicant should be prepared to attend a regular meeting of the Planning Board to discuss the preliminary plat and the Board's tentative conclusions.

D. *Approval of the preliminary plat.*

(1) Within sixty-two (62) days after the receipt of such preliminary plat by the Secretary of the Planning Board, the Planning Board shall hold a public hearing, which hearing shall be advertised at least once in a newspaper of general circulation in the town at least five (5) days before such hearing. The Planning Board may provide that the hearing be further advertised in such manner as it deems most appropriate for full public consideration of such preliminary plat.

(2) Within sixty-two (62) days after the date of such hearing, the Planning Board shall approve, with or without modification, or disapprove such preliminary plat; and the ground of a modification, if any, or the ground for disapproval shall be stated upon the records of the Planning Board. The time in which the Planning Board must take action on such plat may be extended by mutual consent of the subdivider and the Planning Board. When so approving a preliminary plat, the Planning Board shall state in writing modifications, if any, as it deems necessary for submission of the plant in final form.

(3) Within five (5) days of the approval of such preliminary plat it shall be certified by the Chair or Secretary of the Planning Board as granted preliminary approval, a copy filed in its office, a certified copy mailed to the owner and a copy forwarded to the Town Board. Failure of the Planning board to act within the time periods prescribed herein shall constitute approval of the preliminary plat.

(4) When granting approval to a preliminary plat, the Planning Board shall state the terms of such approval, if any, with respect to the preliminary plat; the character and extent of the required improvements for which waivers may have been requested and which in its opinion may be waived without jeopardy to the public health, safety, morals and general welfare; and the amount of improvement or the amount of all bonds therefore which it will require as prerequisite to the approval of the subdivision plat. Approval of a preliminary plat shall not constitute approval of the subdivision plat, but rather it shall be deemed an expression of approval of the design submitted on the preliminary plat as a guide to the preparation of the plat, which will be submitted for approval of the Planning Board and for recording upon fulfillment of the requirements of these regulations. Prior to approval of the subdivision plat, the Planning Board may require additional changes as a result of further study of the subdivision in final form or as a result of new information obtained at the public hearing.

(5) Approval of the preliminary plat may not be revoked by the Planning Board unless a substantial change in the character of the area or the availability of new information about the site and its surroundings indicate the unsuitability of the development, as shown on the preliminary plat. Before revocation the applicant shall be informed, in writing, of the reasons therefore and shall be given an opportunity to be heard before the Planning Board.

(6) Approval of a preliminary plat shall expire six (6) months from the date of approval. Extensions for periods of six (6) months may be granted by the Planning Board upon application. Such applications for extensions may be granted unless changed conditions or new information indicate the unsuitability of the development as shown on the preliminary plat.

§ 84-12. Final plat.

A. *Application procedure.*

Within six (6) months after tentative approval of the preliminary plat is granted, the applicant shall file with the Planning Board an application for approval of a plat. The application shall:

(1) Be made on forms provided by the Planning Board at the time tentative approval of the preliminary plat was granted.

(2) Include the entire subdivision or a section thereof which derives access from a street improved to town standards or for which street a bond veering such improvement is held by the town.

(3) Be accompanied by ten (10) copies of the plat, as described in Article V, §84-28, of these regulations.

(4) Comply in all respects with the preliminary layout as tentatively approved.

(5) Comply with the improvement requirements of Article VI of these regulations.

(6) Be presented to the Secretary of the Planning Board at least two (2) weeks prior to a regular meeting of the Board.

B. *Public hearing.*

Within sixty-two (62) days of the submission of a plat in final form for approval, a hearing shall be advertised at least once in a newspaper of general circulation in the town at least five (5) days before such hearing; provided, however, that when the Planning Board deems the final plat to be in substantial agreement with a preliminary plat approved under §84-11 of this Article, and modified in accordance with the requirements of such approval if

such preliminary plat has been approved with modification, the Planning Board may waive the requirement for such public hearing.

C. *Action on proposed subdivision plat.*

(1) The Planning Board shall, by resolution, conditionally approve, conditionally approve with or without modification, disapprove or grant final approval and authorize the signing of such plat within sixty-two (62) days of its receipt by the Secretary of the Planning board, if no hearing is held, or in the event a hearing is held, within sixty-two (62) days after the date of such hearing. This time may be extended by mutual consent of the subdivider and the Planning Board. Failure to take action on a final plat within the time prescribed therefore shall be deemed approval of the plat.

(2) Upon resolution of conditional approval of such final plat, the Planning Board shall empower a duly-authorized officer to sign the plat upon completion of such requirements as may be stated in the resolution. Within five (5) days of such resolution, the plat shall be certified by the Chairman or Secretary of the Planning Board as conditionally approved, a copy filed in his office and a certified copy mailed to the subdivider. The copy mailed to the subdivider shall include a certified statement of such requirements which, when completed, will authorize the signing of the conditionally-approved final plat. Upon completion of such requirements, the plat shall be signed by said duly-authorized officer of the Planning board. Conditional approval of a final plat shall expire one hundred eighty (180) days after the date of the resolution granting such approval unless the requirements have been certified as completed within that time. The Planning Board may, however, extend the time within which a conditionally-approved plat may be submitted for signature, if in its opinion, such extension is warranted in the circumstances, for not to exceed two (2) additional periods of ninety (90) days each.

D. *Plat void if revised after approval.*

No changes, erasures, modifications or revisions shall be made on any plat after approval has been given by the Board. In the event that any plat, when recorded, contains any such changes, the plat shall be considered null and void and the Board shall institute proceedings to have said plat stricken form the records of the County Clerk.

E. *Filing of approved plat.*

Approval of the plat shall expire within sixty (60) days from the date of such approval unless within such sixty-day period such plat shall have been duly recorded by the owner in the office of the Dutchess County Clerk. If the plat is not filed within this period, the approval shall expire as provided in §276 of the Town Law.

F. *Division of plat into two (2) or more sections.*

The Planning Board may permit the plat to be divided into two (2) or more sections, subject to such conditions as it deems necessary to assure orderly development of the subdivision. Approval of the sections shall be granted concurrently with the approval of the plat. The approved plat, or any approved section thereof, shall be recorded within sixty (60) days of approval, subject to any conditions imposed, and shall encompass at least ten percent (10%) of the total number of lots shown on the plat. Approval of any other sections not recorded shall expire unless recorded before the expiration of the period to which such plat is entitled under the provisions of §265-a of the Town Law. In the event the applicant does not record all approved sections, the entire plat shall be filed with the Town Clerk within thirty (30) days from the recording of the plat or any approved section thereof, and the applicant shall file with the Planning Board a photostatic copy of the plat certified by the County Clerk to be a true copy of the recorded plat.

G. *Public acceptance of proposed streets and park areas.*

The approval by the Planning Board of a plat shall not be deemed to constitute or imply the acceptance by the town of any street, park, playground or other open space shown on said plat. The Planning Board may require said plat to be endorsed with appropriate notes to this effect. The Planning Board may also require the filing of a written agreement between the applicant and the Town Board covering future title, dedication and provision for the cost of grading, development, equipment and maintenance of any park or playground area.

H. *As-built drawings of required improvements.*

Drawings showing the location of all required improvements as built shall be certified by a licensed land surveyor and filed with the Planning Board at least thirty (30) days prior to the acceptance of the improvements by the town.

§ 84-13. Waiver of requirements.

Where compliance with these regulations would cause unusual hardship, extraordinary difficulties or be inappropriate because of exceptional and unique conditions, the minimum requirement of these regulations may be waived or modified to mitigate the hardship, provided that the public interest is protected and the development is in keeping with the general spirit and intent of these regulations, the Official Map, the Zoning Ordinance and the Town Plan.

§ 84-14. Issuance of building permits.

A building permit for erection of a structure in a development laid out subsequent to the adoption of these regulations shall not be issued unless the street giving access to the proposed building appears on a recorded plat approved by the Planning Board and unless such street has been suitably improved or bonded to cover the full cost of improvement.

§ 84-15. Improvements in streets.

No public municipal street utility or improvement shall be constructed by the town in any street or highway until it has become a public street or highway and is duly placed on the Official Map. However, subject to the discretion of the Town Board, a subsurface utility or improvement operated from revenue by the town or by a special district may be constructed by the town in a private street, provided that a public easement satisfactory to the Town Board is obtained for such utility or improvement.

ARTICLE IV
General Requirements and Design Standards

§ 84-16. Compliance required.

The Planning Board, in considering an application for the subdivision of land, shall be guided by the policy considerations specified in §84-3 of these regulations and the following standards.

§ 84-17. Preservation of existing features.

Existing features which would add value to residential development, such as scenic views from roadways, scenic views from public trail, ridgelines, water resources, steep slopes, active farmland, rock outcrops, forested areas, stonewalls, hedgerows, wildlife nesting or migration areas and similar irreplaceable assets, shall be preserved, insofar as possible, through harmonious design of the subdivision.

§ 84-18. Streets.

A. *General planning standards.*

The arrangement, character, extent, width, grade and location of all streets shall be considered in relation to the proposed uses of the land to be served by such streets.

B. *Relation to topography.*

Streets shall be logically related and conform insofar as possible to the original topography. They shall be arranged so as to obtain as many as possible of the building sites at or above the grades of the streets. A combination of steep grades and sharp curves shall be avoided.

C. *Intersections.*

Intersections of major streets by other streets shall be at least one thousand (1,000) feet apart, if possible. Cross (four-cornered) street intersections shall be avoided, except at important traffic intersections.

D. *Visibility at intersections.*

Within the triangular area formed at corners by the intersecting street lines, for a distance of seventy-five (75) feet from their intersection and the diagonal connecting the end points of these lines, visibility for traffic safety shall be provided by excavating, if necessary. Nothing in the way of fences, walls, hedges or other landscaping shall be permitted to obstruct such visibility.

E. *Layout of minor streets*.

Layout of minor streets. Minor streets shall be so laid out that their use by through traffic will be discouraged.

F. *Treatment of arterial streets.*

Where a subdivision abuts or contains an existing or proposed arterial street, the Planning Board may require marginal access streets, reverse frontage with screen planting contained in a non-access reservation along the rear property line or such other treatment as may be necessary for adequate protection of residential properties and to afford separation of through and local traffic.

G. *Treatment of railroad or limited access highway rights-of-way.*

Where a subdivision borders on or contains a railroad right-of-way or limited access highway right-of-way, the Planning Board may require a street approximately parallel to and on each side of such right-of-way, at a distance suitable for the appropriate use of the intervening land, such as for park purposes in appropriate districts. Such distances shall also be determined with due regard for the requirements of approach grades and future grade separations.

H. *Minimum curvature.*

When continuing street lines (projected right-of-way tangents) deflect from each other at any one (1) point by more than ten (10°) degrees, they shall be connected by a curve with a radius at the inner street right-of-way line determined from the alignment standards specified in Subsection I below.

I. *Alignment standards in relation to design speeds.*

Alignment standards in relation to design speeds are provided in the following table:

Design Speed (miles per hour)	Minimum Radius Of Horizontal Curves (feet)	Maximum Percent of Grade	Minimum Forward Sight Distance (feet)	Minimum Length of Vertical Curve for Each 1% of Change in Grade (feet)
20	100	10	150	10
25	200	10	175	15
30	250	10	200	20
35	350	10	250	30
40	450	8	275	35
45	600	8	325	55
50	750	8	350	70

J. *Pavement of gutters.*

Where street grades exceed five percent (5%), gutters shall be paved.

K. *Rear Lanes.*

(1) Rear lanes may be provided in residential, commercial and industrial districts as private accessways.

(2) Intersections of rear lanes and sharp changes in alignment shall be avoided, but, where necessary, corners shall be cut off sufficiently to permit safe vehicular movements.

(3) Dead-end rear lanes shall be avoided when possible, but, if unavoidable, shall be provided with adequate turn-around facilities at the dead end, as determined by the Planning Board.

L. *Design Standards.*

Subdivision streets shall be designed to reflect the rural character of the Town of _____. The following design guides and standards should be referenced in the design of subdivision roads.

RURAL ROAD STANDARDS

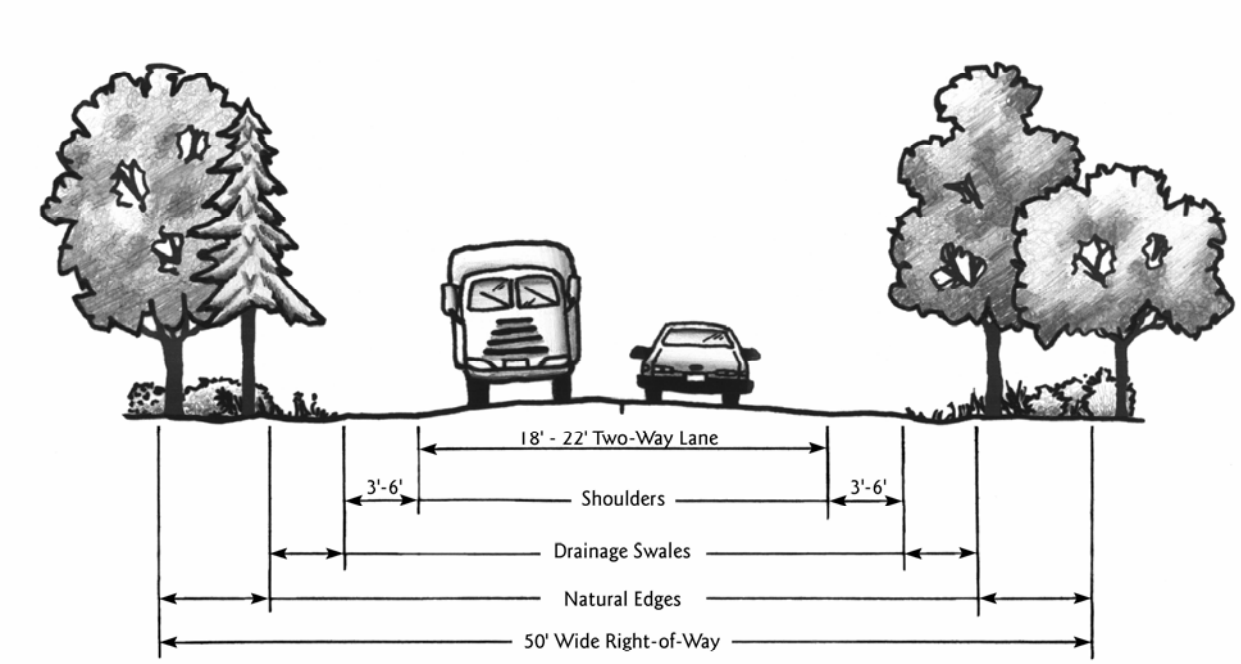
	Residential Collector	Residential Access	Private Road	Cul-de-sac
Right- of-way width (feet)	50*	50*	50*	50* (Turn around Radius: 30 ft.)
Pavement width (feet) (minimum-maximum)	18-22	16-18	12-16	12-16
Shoulder width (feet) (minimum-maximum)	3 – 6 on 2 sides	1 – 2 on 2 sides	1 – 2 on 2 sides	1 - 2 on 2 sides
Grade (percent) (minimum-maximum)	1-10	1-10	1-10	1-10
Curb Radii (feet) (minimum-maximum)	5-10	5-10	5-10	5-10
Minimum tangent length between reverse curves (feet)	100	100	50	50
Maximum grades within 150 feet of center-line intersections (percent)	1.5	1.5	1.5	1.5
Minimum distance between center-line offsets at street jogs (feet)	300	125	125	125
Maximum length of Cul-de-sac (feet)				800*
Minimum outside radius of cul-de-sac pavement (feet)				40
Angle at intersections of street center lines (degrees)	90	90	90	90

* 50’ right-of-way is required by State Highway Law, but grading and clearing should be reduced to the minimum necessary.
**Except where, in the judgment of the Planning Board, the cul-de-sac does not impose any problem and constitutes a positive design feature.
Note: Rear lanes, 12-16 pavement width, are allowed in hamlet areas and where the size and configuration of the subdivision is conducive to rear lanes.
Note: Standards are not given for arterial streets, as they would in all probability be built by the state or county.

Residential Collector Road

A residential collector road collects traffic from residential areas and channels it to larger roads, such as county highways, state highways, arterials, and interstates. It is well-traveled and accommodates a variety of vehicles, including large delivery trucks, school buses, pick-up trucks, vans, and cars.

- Right-of-way:
  50’
- Pavement width:
  18 – 22’, 2 lanes
- Shoulder width:
  3 – 6’, on 2 sides; gravel/grass
- ADT:
  50 – 400 vehicle trips per day
- Speed limit:
  40-50 mph, depending upon the road’s vertical and horizontal alignment
- Bike lane:
  6’ wide, separated from road by 6’ grassy aisle



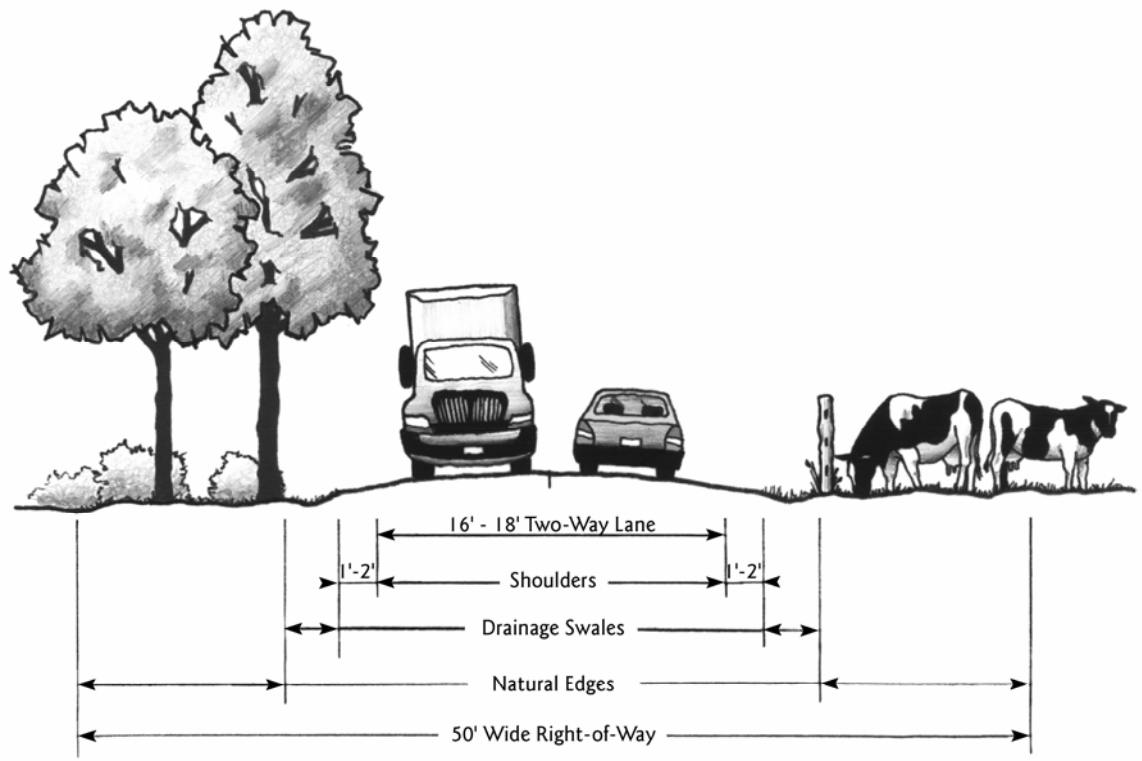
Adjacent land uses include:
- Agricultural, rural land uses
- Open spaces, environmentally sensitive land
- Small single-family lots (1 - 5 acres)
- Large single-family lots (5+ acres)

Drainage swales:
- The use of open drainage systems within the right-of-way should be encouraged for rural road systems

Residential Access Road

A residential access road provides access to farms and residential areas and is primarily traveled by cars, small trucks, and farm vehicles. Traffic on this road is fairly light, but it may include occasional large trucks, such as milk trucks and farm equipment.

- Right-of-way:
  50’
- Pavement width:
  16 – 18’, 2 lanes
- Shoulder width:
  1 – 2’, on 2 sides; gravel/grass
- ADT:
  50 – 400 vehicle trips per day
- Speed limit:
  35-45 mph, depending upon the road’s vertical and horizontal alignment
- Bike lane:
  Generally not needed
- Pull outs:
  Provided on one side at appropriate intervals



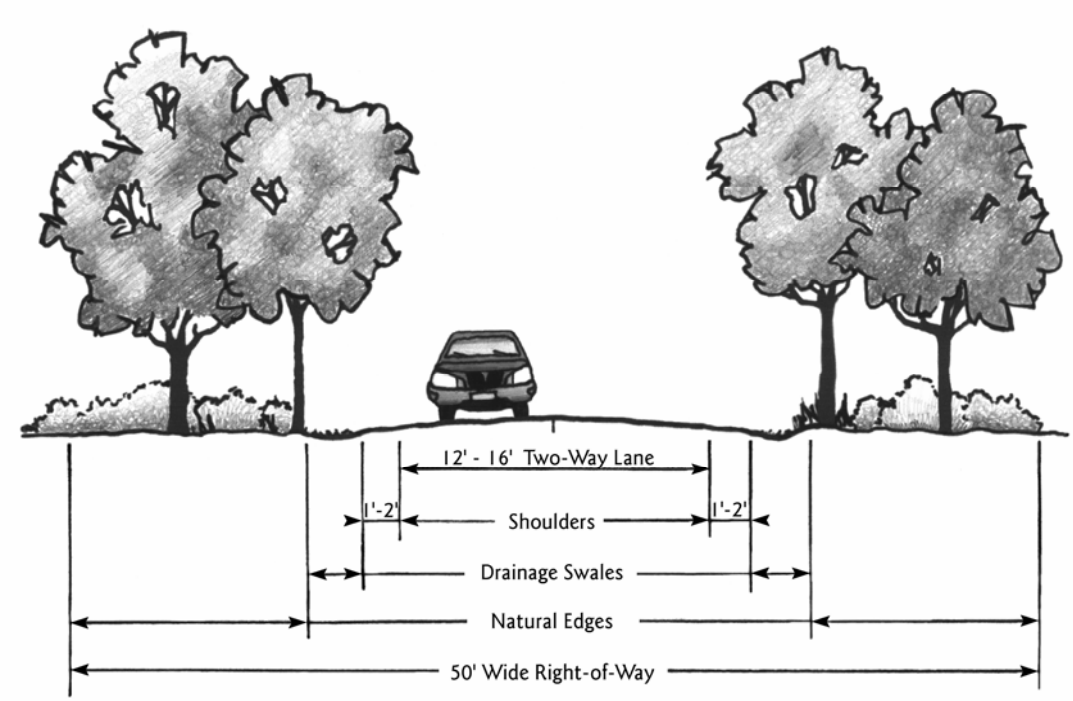
Adjacent land uses include:
- Agricultural, rural land uses
- Open spaces, environmentally sensitive land
- Small single-family lots (1 - 5 acres)
- Large single-family lots (5+ acres)

Drainage swales:
- The use of open drainage systems within the right-of-way should be encouraged for rural road systems

Private Road

A private road, which may be unpaved, serves a limited number of single-family residences or a recreational area. Gravel roads can be maintained by local highway departments or by private homeowner's associations.

- Right-of-way:
  50'
- Pavement width:
  12 – 16', 2 lanes
- Shoulder width:
  1 – 2', on 2 sides; gravel/grass
- ADT:
  Less than 100 vehicle trips per day
- Speed limit:
  25-35 mph, depending upon the road's vertical and horizontal alignment
- Bike lane:
  Generally not needed
- Pull outs:
  May be provided on one side at appropriate intervals



Adjacent land uses include:
- Agricultural, rural land uses
- Open spaces, environmentally sensitive land
- Small single-family lots (1 - 5 acres)
- Large single-family lots (5+ acres)

Drainage swales:
- The use of open drainage systems within the right-of-way should be encouraged for rural road systems

M. *Continuation of streets into adjacent property.*

Streets shall be arranged to provide for the continuation of principal streets between adjacent properties where such continuation is necessary for convenient movement of traffic, effective fire protection, efficient provision of utilities and particularly, where such continuation is in accordance with the Town Plan. If the adjacent property is undeveloped and the street must be a dead-end street temporarily, the right-of-way and improvements shall be extended to the property line. A temporary circular turn-around, a minimum of fifty (50) feet in radius, shall be provided on all temporary dead-end streets, with the notation on the plat that land outside the street right-of-way shall revert to abutters whenever the street is continued.

N. *Permanent dead-end streets (culs-de-sac).*

Where a street does not extend to the boundary of the subdivision and its not needed for access to adjoining property, it shall be separated from such boundary by a distance of not less than one hundred (100) feet.

O. *Street names.*

All streets shall be named, and such names shall be subject to the approval of the Town Planning Board. Names shall be sufficiently different in sound and in spelling from the other street names in the town so as not to cause confusion. A street which is a continuation of an existing street shall bear the same name.

P. *Improvements.*

Improvements shall be as indicated in Article VI.

Q. *Private roads.*

The Planning Board may approve paved or unpaved private roads to provide access to lots in subdivisions, provided that the Planning Board finds that the proposed subdivision will protect the rural, scenic and natural character of the town. The private road requirements are as follows:

i. The maximum number of lots gaining access through any portion of a private road shall be 10.
Ii. Written approval from the Town Superintendent of Highways and the Town's engineer shall be secured before approval of any private roads.
iii. A Homeowners Association (HOA) must be created to own and provide for the perpetual care and maintenance of the private road. The Planning Board shall have discretion to determine whether a performance bond must be posted by the applicant to ensure the

proper completion of the private road and, if so, how much the performance bond shall be and what form it shall take.

iv. Such HOA must have the power to assess the subdivision lot owners for their share of the maintenance costs of the private road. The HOA shall ensure that the road will always be maintained and kept open to permit emergency vehicle access.

v. In the event that HOA does not ensure that the road is properly maintained, the Town of _____ may assume maintenance responsibilities and charge the HOA for all reasonable costs thereof. Such costs, if unpaid for more than 60 days, shall, along with attorneys' fees for their collection, become a lien on the property and enforceable in the same manner as a property tax lien.

vi. The private road can only be offered for dedication to the Town of _____ if it conforms to Town Highway specifications for private roads in effect on the date of the offer of dedication. However, the Town Board shall be under no obligation to accept such an offer of dedication, even if the road conforms to Town Highway specifications. In the event such dedication becomes necessary to ensure public safety, the cost of bringing the road up to Town Highway specifications shall be borne by the HOA.

vii. The subdivision plat shall show the road clearly labeled "private road."

viii. Road design shall comply with the standards for private roads in this Code.

ix. The Planning Board may waive the requirement of a private road maintained by a HOA if it finds, after consulting with the attorney for the Planning Board or the Town Attorney, that a common drive maintained pursuant to a recorded maintenance agreement, executed by the applicant as a condition of subdivision approval, will provide the same protections to lot owners and the Town as would a private road owned by a HOA.

§ 84-19. Blocks.

A. General planning standards.

(1) The length, width and shape of blocks shall be determined with due regard to:

(a) Provision of adequate building sites suitable to the special needs of the type of use contemplated.

(b) Zoning requirements as to lot sizes and dimensions.

(c) Need for convenient access, circulation and control safety of street traffic.

(d) Limitations and opportunities of topography.

(2) Irregular-shaped blocks or oversize blocks indented by culs-de-sac, parking courts or loop streets and containing interior block parks or playgrounds will be acceptable when properly designed, as determined by the Planning Board. Such blocks shall include adequate off-street parking, facilities for pedestrian access from streets to all lots, proper easements for utility lines and satisfactory provision for maintenance of park and open space, where included.

(3) Non-residential blocks intended for commercial or industrial use shall be of such length and width as is suitable for their prospective use. Such blocks shall include adequate provisions for off-street parking and servicing.

B. *Design standards.*

(1) Block lengths shall not exceed one thousand two hundred (1,200) feet or be less than four hundred (400) feet; except, however, that blocks abutting on designated arterial streets shall be not less than one thousand (1,000) feet and may exceed one thousand two hundred (1,200) feet.

(2) Blocks over eight hundred (800) feet in length may be required to have a crosswalk, if necessary, to facilitate pedestrian circulation to a school, park, recreation area, shopping center or other similar neighborhood facility.

§ 84-20.Driveways.

A. The maximum grade for any new driveway accessory to a single-family dwelling and connecting its off-street parking area to a street shall be ten percent (10%), except where it can be demonstrated to the satisfaction of the approving authority that, because of unreasonable hardship affecting a particular property, the construction of a driveway shall be permitted, provided that the increase in driveway grade is the minimum increase required, and further provided that in no case shall such driveway grade be permitted to exceed fifteen percent (15%).

B. Clear visibility shall be provided in both directions at all exit points so that the driver of an automobile stopped on the platform portion of any new driveway will have an unobstructed view of the highway for a reasonable distance (commensurate with the speed and volume of traffic on such highway) and so that there is a similar view of the automobile in the driveway.

§ 84-21. Lots.

A. Number of Lots.

The maximum density allowed for residential units is calculated by a formula based upon the acreage of "unconstrained land" on the property.

(1) To determine unconstrained acreage, subtract from the total (gross) acreage of the proposed development parcel the acreage of "constrained land." Constrained land includes all wetlands one-fourth (1/4) acre and over, waterbodies, 100-year floodplains, slopes over 25% which are 2,000 square feet or more of contiguous sloped area, and lands currently under conservation easement.

(2) To determine the "base" number of allowable residential units on the site, divide the unconstrained acreage by the allowable number of units per acre within the zoning district. Round down fractional units of 0.5 or less. The resulting number is the maximum allowable residential units allowed on the site.

(3) The density permitted by this section shall not be reduced as a result of the resource analysis required in §84-25 below or as a result of the reservation of parkland during the subdivision process.

(4) Side lot lines shall be substantially at right angles or radial to street lines.

(5) Double-frontage and reverse-frontage lots shall be avoided except where essential to provide separation of residential development from traffic arteries or to overcome specific disadvantages of topography and orientation. An easement of suitable width, across which there shall be no right of access, may be required along the line of lots abutting such traffic artery or other disadvantageous use. As an alternate, where driveway access from a major street may be necessary for several adjoining lots, the Planning Board may require that such lots be served by a combined access driveway in order to limit possible traffic hazard on such street.

(6) The plat shall provide each lot with satisfactory access to an existing public street or to a subdivision street that will be ceded to public use at the time of final plan approval. Private streets may be permitted only by resolution of the _____Board.

(7) Corner lots and lots adjacent to pedestrian crosswalks shall have extra width of at least ten (10) feet or as required by the Zoning Ordinance, to permit appropriate building setback from the orientation to side streets or crosswalks.

(8) Radius corners shall be provided on the property line substantially concentric with the curb radius corners.

B. Flag (rear) lots.

It is the policy of the Town of _____ to encourage flexibility for development which is screened from public view. Accordingly, it is sometimes desirable to locate development on rear lots without requiring compliance with otherwise applicable road frontage requirements in the Dimensional Table. Building permits may be issued for structures on lots that have no public or private road frontage and gain access by right-of-way easement over other lands, under the conditions contained in this section. Rear lots with or without access strips running to public or private roads may be created where there is no other option for providing access to a parcel and they will not endanger public health and safety and will help preserve natural, historic, and scenic resources.

C. Design Standards

(1) There shall be no minimum lot size in a major subdivision, provided that the Dutchess County Department of Health shall assure that where on-site wells and on-site sewage treatment and disposal systems are planned, adequate minimum lot sizes are provided to assure the health and safety of the residents of the subdivision and the subdivision meets the policies outlined in §84-3 above.

(2) The minimum individual lot frontage shall be 50 feet and the minimum average road frontage per lot for the subdivision shall be 70 feet.

(3) Lots gaining access from an existing state or county highway shall comply with minimum road frontage requirements for the district.

(4) There shall be no required area, bulk, or dimensional standards for house siting on lots in a subdivision that meets the policies outlined above in §84-3 above, except where such subdivision abuts an existing residential lot, a public trail, and/or an agricultural use as per the Buffering Provisions of §98-41 (this is a separate section of zoning code).

(5) Arrangement of lots. Lots shall be arranged in a manner that protects land of conservation value and protects the scenic resources of the Town. Compact development is encouraged if it advances the protection of significant resources.

(6) Shared driveways are encouraged where appropriate to maintain rural character and provide an economical and attractive method of serving up to three homes.

(7) If the arrangement of lots results in large expanses of preserved open space, the preserved open space may be may be included as a portion of one or more large lots, or may be contained in a separate open space lot. Such open space may be owned by a homeowner's association, private landowner(s), utility company, a non-profit organization, or the Town or other governmental entity, as long as it is protected from development by a conservation easement or, in some cases, a deed restriction and noted

on the final plat. Open space set aside in a subdivision shall be permanently preserved as required by this Section.

a. *Permanent Preservation by Conservation Easement.*

A perpetual conservation easement restricting development of the open space land and allowing use only for agriculture, forestry, passive recreation, protection of natural resources, or similar conservation purposes, pursuant to Section 247 of the General Municipal Law and/or Sections 49-0301 through 49-0311 of the Environmental Conservation Law, may be granted to the Town, with the approval of the Town Board, or to a qualified not-for-profit conservation organization acceptable to the Planning Board. Such conservation easement shall be approved by the Planning Board and shall be required as a condition of Final Plat approval. The conservation easement shall be recorded in the Dutchess County Clerk's Office prior to or simultaneously with the filing of the final subdivision plat in the County Clerk's Office. In the alternative, a restrictive covenant in the deed, and a map not on the final plat, enforceable by the Town, may be substituted for a conservation easement held in common by a HOA. The Town shall maintain a current map which displays all lands under easement or deed restricted.

The conservation easement or restrictive covenant shall prohibit residential, industrial, or commercial use of open space land (except in connection with agriculture, forestry, and passive recreation). Access roads, driveways, wells, local utility distribution lines, underground sewage disposal facilities, stormwater management facilities, trails, temporary structures for passive outdoor recreation, and agricultural structures may be permitted on preserved open space land with Planning Board approval, provided that they do not impair the conservation value of the land. Forestry shall be conducted in conformity with applicable best management practices.

b. *Ownership of Open Space Land*

Open space land shall under all circumstances be protected by a perpetual conservation easement, but may be owned in common by a homeowner's association (HOA), offered for dedication to Town, County, or State governments, transferred to a non-profit organization acceptable to the Planning Board, held in private ownership, or held in such other form of ownership as the Planning Board finds appropriate to properly manage the open space land and to protect its conservation value.

If the land is owned in common by an HOA, such HOA shall be established in accordance with the following:

(i) The HOA must be established before the approved subdivision Final Plat is signed, and must comply with all applicable provisions of the General Business Law.
(ii) Membership must be mandatory for each lot owner, who must be required by recorded covenants and restrictions to pay fees to the HOA for taxes, insurance, and maintenance of common open space, private roads, and other common facilities.
(iii) The open space restrictions must be in perpetuity.
(iv) The HOA must be responsible for liability insurance, property taxes, and the maintenance of recreational and other facilities and private roads.
(v) Property owners must pay their pro rate share of the costs in subsection b(iv) above and the assessment levied by the HOA must be able to become a lien on the property.
(vi) The HOA must be able to adjust the assessment to meet changed needs.
(vii) The applicant shall make a conditional offer of dedication to the Town, binding upon the HOA, for all open space to be conveyed to the HOA. Such offer may be accepted by the Town, at the discretion of the Town Board, upon the failure of the HOA to take title to the open space from the applicant or other current owner, upon dissolution of the association at any future time, or upon failure of the HOA to fulfill its maintenance obligations hereunder, or to pay its real property taxes.
(viii) Ownership shall be structured in such a manner that real property taxing authorities can satisfy property tax claims against the open space lands by proceeding against individual owners in the HOA and the dwelling units they each own.
(ix) The attorney for the reviewing board shall find that the HOA documents presented satisfy the conditions in Subsections (i) through (viii) above, and such other conditions as the Planning Board shall deem necessary.

(8) If the arrangement of lots results in large expanses of preserved farm use, as defined by Agricultural and Markets Law §305-a, subd.1, the land shall be contained in a separate agricultural use lot. Such agricultural use will be encouraged by conservation easement or deed restriction and noted on the final plat.

§ 84-22. Reservations and dedications.

A. *Public sites, parks, playgrounds and recreational areas.*

The Planning Board may require adequate, convenient and suitable areas for parks and playgrounds, or other recreational purposes, to be reserved on the plat, but in no case more than ten percent (10%) of the gross area of any subdivision. The area shall be shown and marked on the plat “reserved for park, playground or recreational purposes.”

B. *Dedications.*

(1) Where a dedication is required, it shall be accomplished as follows. The subdivider shall provide not less than ten percent (10) of the gross area of the subdivision as shown on the preliminary layout. Where such dedication would amount to less than two (2) acres, the subdivider shall, in lieu thereof, pay a fee to the town for each lot in his subdivision, to be computed as follows: average value of one (1) acre of undeveloped land adjacent to a public road within one-fourth (1/4) mile of any point within that subdivision, divided by fifty (50) dwelling units, equals the fees per lot.

(2) Moneys received by the municipality from such payments shall be placed in a parkland acquisition and development fund, such moneys to be expended for acquiring parklands.

C. *Unusable areas or areas bordering watercourses.*

Unusable areas or areas bordering streams, lakes or other watercourses may be given special consideration by the Planning Board in excess of the minimum established by Subsection B above. The town may accept these areas as a gift or may purchase them should they be desirable for public open spaces.

D. *Reservation of areas in excess of minimum dedications.*

Where such sites and open spaces are not shown on the Town Plan, and where deemed essential by the Planning Board upon consideration of the particular type of development proposed in the subdivision, and especially in large-scale developments, the Planning Board may require the dedication or reservation of areas in excess of the minimum dedication.

E. *Realignment or widening of existing streets.*

Where the subdivision borders an existing street and the Official Map or Town Plan indicates plans for realignment or widening of the street that would require reservation of some land of the subdivision, the Planning Board may require that such areas be shown and marked on the plat “reserved for street alignment (or widening) purposes.”

F. *Utility and drainage easements.*

(1) Where topography or other conditions are such as to make impractical the inclusion of utilities or drainage facilities within street rights-of-way, perpetual unobstructed easements at least twenty (20) feet in width for such utilities shall be provided across property outside the street lines and with satisfactory access to the street. Such easements shall be centered on rear or side lot lines.

(2) All subdivisions shall be related to the drainage pattern affecting the areas involved, with proper provision to be made for adequate storm drainage facilities. Storm drainage plans shall reflect potential surface runoff within

the drainage area after development and shall comply with the requirements of the Town Engineer.

(3) Where a subdivision is traversed by a watercourse, drainageway, channel or stream, there shall be provided a storm easement or drainage right-of-way conforming substantially with the lines of such watercourse, and of such width as to encompass the twenty-five-year flood area of such watercourse.

(4) Right-of-way for storm drainage must be sufficient for facilities to handle not only the anticipated discharge from the property being subdivided, but also the anticipated runoff that will occur when property at a high elevation in the drainage basin is developed.

G. *Easements for pedestrian access.*

The Planning Board may require, in order to facilitate pedestrian access from streets to schools, parks, playgrounds or other nearby streets, perpetual unobstructed easements at least twenty (20) feet in width.

H. *Responsibility for ownership of reservations.*

Ownership shall be clearly indicated on all reservations.

§ 84-23. Compliance required.

Any subdivider who proposes to develop a subdivision in the Town of _____ shall submit plats and documents as provided in this Article.

§ 84-24. General requirements.

The following general requirements are applicable to both the preliminary layout and the subdivision plat submittal.

A. Layouts and plats shall be clearly and legibly drawn on transparent linen tracing cloth with black waterproof ink at a convenient scale of not more than one hundred (100) feet to the inch.

B. Drawings shall be submitted on uniform size sheets not larger than thirty-six by forty-eight (36 x 48) inches. When more than one (1) sheet is required to show the plat, an index map of the same size shall be submitted.

C. All submissions shall indicate the proposed subdivision name or identifying title; the words “Town of _____, Dutchess County, New York”; the name and address and seal of the licensed engineer or land surveyor responsible for the plat; and the date, approximate true North point and graphic scale.

ARTICLE V

§ 84-25. Resource analysis and conceptual discussion phase.

All parties concerned with a proposed subdivision of land will benefit from a pre-application discussion at which the applicant must present the following information:

A. Submission of Resource Analysis and Conceptual Discussion Phase.

Prior to, or in conjunction with, a submission of a sketch plan, an applicant must submit a resource analysis and participate in a discussion with the Planning Board to determine a conceptual plan for the proposed subdivision. The submission shall include an identification of the site's assets and liabilities. This will provide an opportunity for the owner and public review bodies to discuss the appropriate range of and intensity of development; the general locations intended for development; areas planned to remain undeveloped; and general access alignment. Prior to submission the applicant should become familiar with the Town's Comprehensive Plan, Subdivision Regulations, Zoning Law, *Greenway Connections,* the Dutchess Land Conservancy's, *Planning and Siting Your House: A Guidebook*, and SEQR requirements in order to have a general understanding of the process. The applicant should have also performed an on-site assessment of the parcel(s).

Pre-applications for subdivision review shall be submitted to the Planning Board in ten (10) copies. A filing fee as specified by town subdivision fee schedule shall accompany the application. There shall be no statutory time limit for the review of the resource analysis, nor the need to make a determination of whether the application is complete.

At this stage, the applicant should present an analysis of the site, its limitations and its opportunities. The applicant should therefore be prepared to discuss possible subdivision concepts, based on what is learned from the sites resource analysis. No statement, comment or other communication made during this informal review shall be binding upon any party.

The pre-application process is required solely to assure that town development goals are recognized as they may apply to the site in question. This should help expedite the process by getting the review off to a cooperative start, before the applicant has made a substantial investment in the application process.

The resource analysis should contain the following information:

1. The proposed subdivision name or identifying title, and the words "Town of _____, Dutchess County, New York"
2. The name of the property owner(s) and the authorized applicant, if different from the property owner(s).
3. Aerial map at a scale of one inch equals four hundred feet (1" = 400'), showing the location of the proposed subdivision parcel with respect to all streets and property within one thousand (1,000) feet of the applicant's parcel

and superimposed with 10' contours, DEC wetlands, NWI wetlands, floodplains, streams, water bodies, and public trails.*

4. List of natural features known to exist on the parcel including but not limited to, historic buildings, stone walls, rock outcrops, significant trees and stands of trees, potential wildlife habitats and viewsheds. This list is a preliminary step in identifying natural features and is subject to modification and interpretation of the reviewing bodies.
5. Provide an 8½ x 11 soils map indicating if Prime and/or Statewide important soils, as defined by the Soil Survey of Dutchess County New York, exist on the property.
6. General subdivision information necessary to explain and/or supplement the Aerial Map.

*This information is available at the Town Hall, however the applicant may also acquire this information through various sources, including the Dutchess County Department of Planning and Development, at a nominal cost.

B. Study of Resource Analysis and Conceptual Plan. The Planning Board shall discuss the proposed subdivision with the applicant. Together they will determine how the subdivision can meet the objectives of town regulations. The Planning Board shall consider the proposed building envelopes on the site and their relation to: one another, the natural constraints of the land and to the provision of buffer areas and other open spaces on the site, and the effects on the viewshed. To verify that all necessary information is discussed and reviewed in this process, the applicant and the Planning Board shall fill out Form A: Resource Analysis Assessment and provide a copy to the applicant upon completion. In its review, the Planning Board members may schedule a field visit to the site, and this site walk may be necessary before the assessment can be completed.

   The Planning Board will make recommendations for modification or redesign to be incorporated by the applicant in the next submission to the Planning Board and indicate to the applicant the priority resources to be preserved. Any requirements of these Regulations which the applicant requests to be waived should be discussed at this time.

   The Resource Analysis and Conceptual Plan discussion does not allow filing of a plat with the County Clerk or authorize the sale or lease of, or any offer to sell or lease, any lots in such subdivision or any part thereof. Resource Analysis and Conceptual Discussion allows the applicant to proceed with Sketch Plan application.

C. SEQR Classification. New York State Environmental Quality Review (SEQR) classification should be determined by the Planning Board and discussed with the applicant at completion of the Resource Analysis and Conceptual Plan Review and Sketch Plan pre-application discussion.

D. SEQR. The Planning Board shall initiate the New York State Environmental Quality Review Act (SEQR) process, as defined in Article 8 of the Environmental Conservation Law and Part 617 of the New York Code of Rules and Regulations, upon completion of the Resource Analysis and Conceptual Discussion stage and

Sketch Plan phase of the application process, and when a Preliminary Plat application is determined to be complete. The Planning Board shall review the short or full Environmental Assessment Form, and if applicable, the Draft Environmental Impact Statement submitted by the applicant with the Preliminary Plat application materials. The applicant shall be informed by the Board as to whether the application will be subject to additional environmental review as specified in the SEQR regulations. All requirements of SEQR shall be completed prior to any approval of the Preliminary Plat by the Planning Board.

Form A: Resource Analysis Assessment

Name of subdivision:_____
Address:_____

	Yes	No	Not Sure
Are there streams, wetlands, waterbodies or watercourses that require protective buffer areas?	___	___	___
Is there active farmland on the parcel(s)?	___	___	___
Will the active farmland be preserved?	___	___	___
Is there active farmland contiguous to the subject parcel(s)?	___	___	___
Is this an Agricultural Exempt parcel(s)?	___	___	___
Are there ridgelines that the Town desires to be kept clear of development?	___	___	___
Could development alter the visual character from off site dramatically?	___	___	___
Could development alter viewshed vantage points within the property?	___	___	___
Have visual mitigation measures been discussed?	___	___	___
Are there high-quality trees and significant groups of trees that should be preserved?	___	___	___
Is there the potential for significant wildlife habitats or wildlife migration areas?	___	___	___
Do any of these significant natural areas extend into abutting properties?	___	___	___
Have mitigation measures been discussed?	___	___	___
Are there stone walls and rock outcrops on the site?	___	___	___
Is the parcel adjacent to a public recreational area?	___	___	___
Are there possibilities for walkway, bikeway and/or trail connections?	___	___	___
Are there special cultural and historic features that should be preserved?	___	___	___
Is the parcel adjacent or within an officially designated historic site or district?	___	___	___
Can the development be connected to a public water supply?	___	___	___

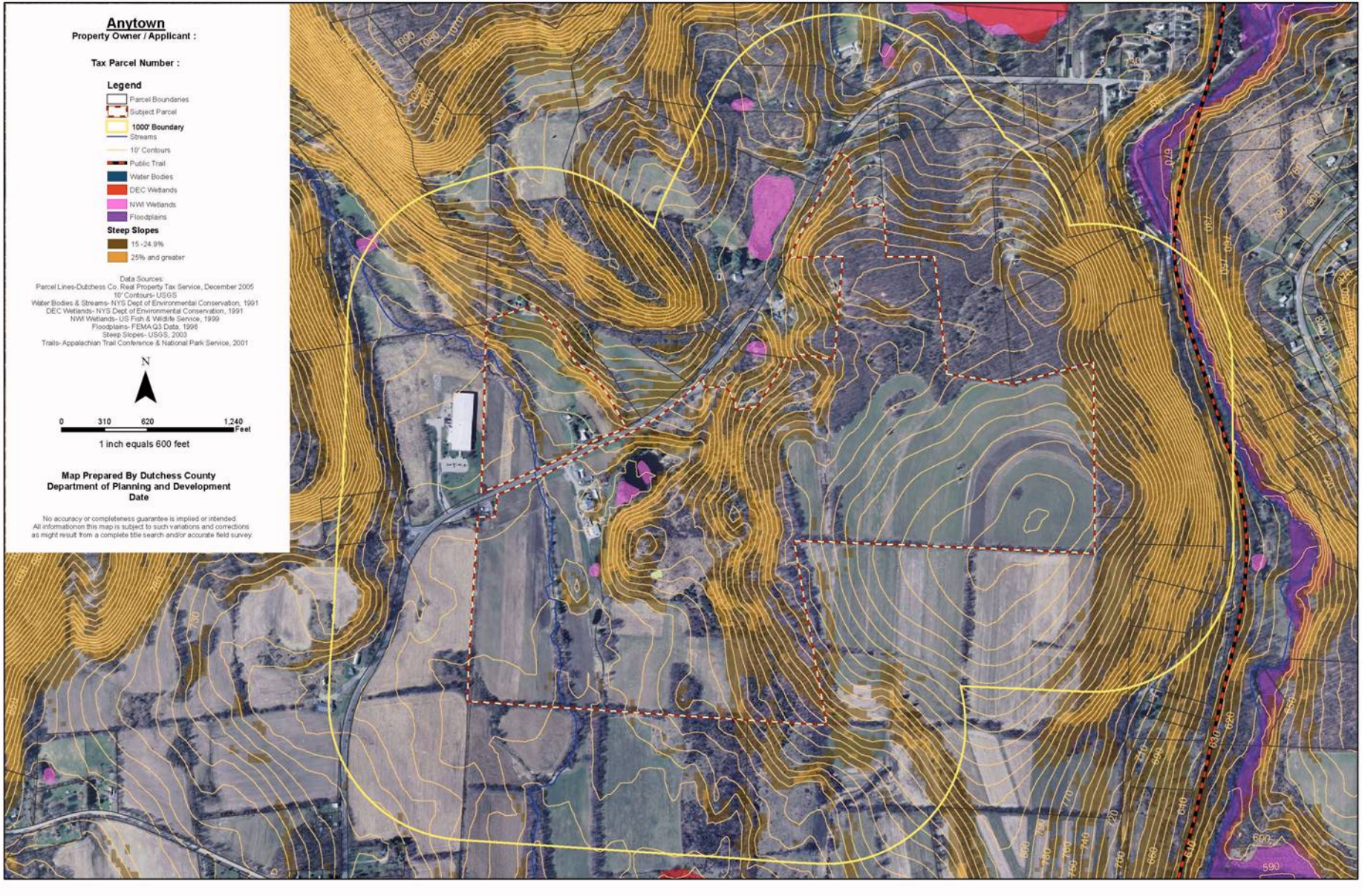
Priority resources that must be preserved on the site:

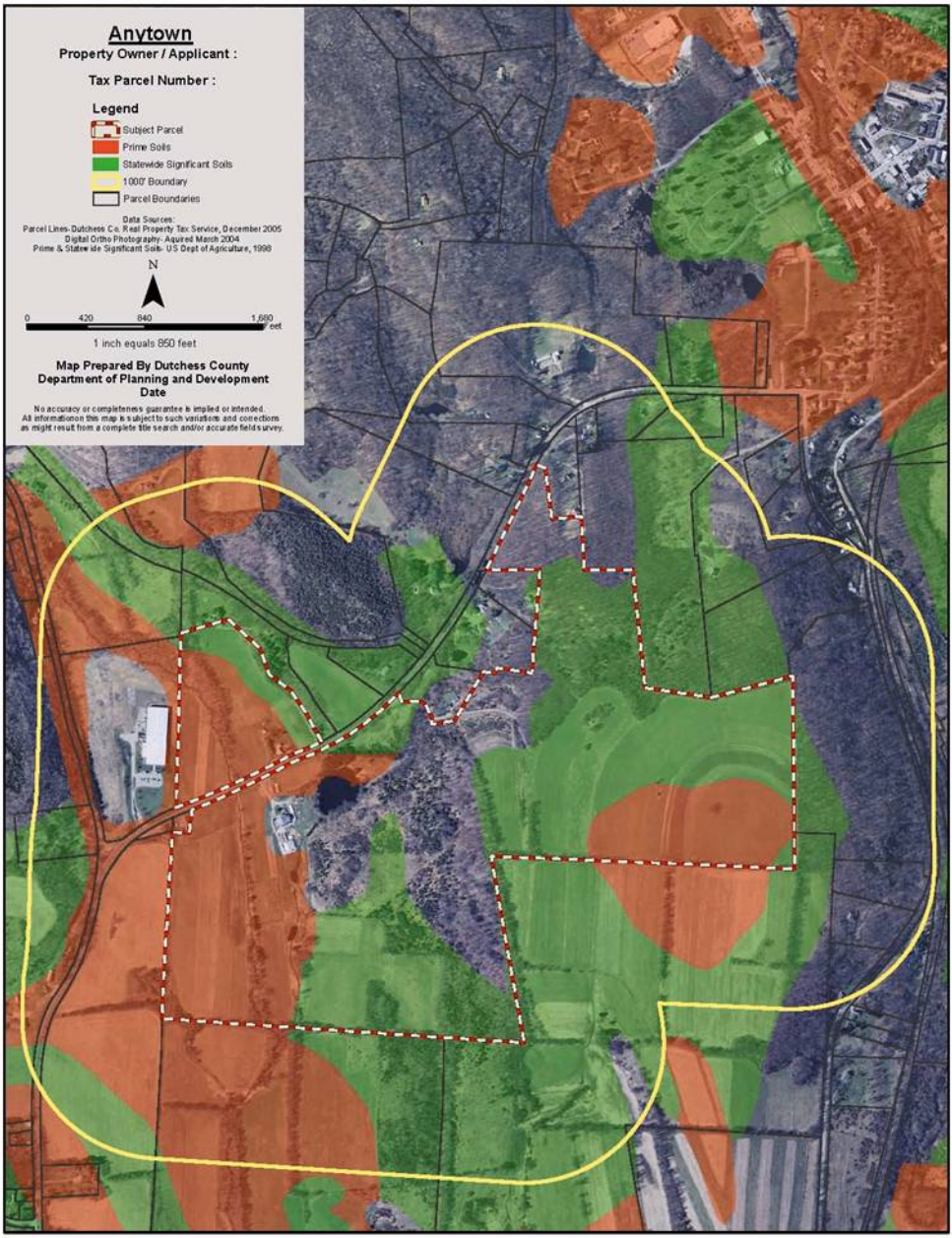
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

Recommendations:

_____
_____
_____
_____
_____
_____

Date of Planning Board site visit:_____


Anytown
Property Owner / Applicant :
Tax Parcel Number :
Legend
Parcel Boundaries
Subject Parcel
1000' Boundary
Streams
10' Contours
Public Trail
Water Bodies
DEC Wetlands
NWI Wetlands
Floodplains
Steep Slopes
15 -24.9%
25% and greater
Data Sources:
Parcel Lines-Dutchess Co. Real Property Tax Service, December 2005
10' Contours- USGS
Water Bodies & Streams- NYS Dept of Environmental Conservation, 1991
DEC Wetlands- NYS Dept of Environmental Conservation, 1991
NWI Wetlands- US Fish & Wildlife Service, 1999
Floodplains- FEMA Q3 Data, 1996
Steep Slopes- USGS, 2003
Trails- Appalachian Trail Conference & National Park Service, 2001
N
0 310 620 1,240
Feet
1 inch equals 600 feet
Map Prepared By Dutchess County
Department of Planning and Development
Date
No accuracy or completeness guarantee is implied or intended.
All informationon this map is subject to such variations and corrections
as might result from a complete title search and/or accurate field survey.


Anytown
Property Owner / Applicant :
Tax Parcel Number :
Legend
Subject Parcel
Prime Soils
Statewide Significant Soils
1000' Boundary
Parcel Boundaries
Data Sources:
Parcel Lines-Dutchess Co. Real Property Tax Service, December 2005
Digital Ortho Photography- Aquired March 2004
Prime & Statewide Significant Soils- US Dept of Agriculture, 1998
N
0
420
840
1,680
Feet
1 inch equals 850 feet
Map Prepared By Dutchess County
Department of Planning and Development
Date
No accuracy or completeness guarantee is implied or intended.
All informationon this map is subject to such variations and corrections
as might result from a complete title search and/or accurate fields survey.

§ 84-26. Sketch Plan

All parties concerned with a proposed subdivision of land will benefit from a pre-application discussion at which the applicant should present, in simple sketch, the proposed layout of streets, lots and other features. The sketch plan can be presented following the resource analysis and conceptual discussion. The sketch plan should reflect what was learned form the sites resource analysis. The applicant should present the following for the sketch plan discussion:

A. A vicinity map sketched at a scale of two thousand (2,000) feet to the inch, indicating the relationship of the proposed subdivision to existing community facilities which serve it, such as roads, shopping, schools, etc. Such a sketch may be superimposed upon a United States Geological Survey Map of the area.

B. A density calculation as outlined in §84-21. Lots.

C. Sketch plan on a topographic survey of the proposed area to be subdivided showing, in simple sketch form, the proposed layout of streets, lots and other features.

D. General subdivision information necessary to explain and/or supplement the vicinity map and sketch plan.

§ 84-27. Preliminary plat.

The preliminary plat submitted to the Planning Board shall show or be accompanied by the following information, except where requirements have been waived:

A. Data required by §84-24.

B. The name of the property owner(s) and the authorized applicant, if different from the property owner(s).

C. Tax number of all parcels to be subdivided.

D. Location, bearings and distances of trace boundary.

E. A vicinity map sketched at a scale of one inch equals two thousand feet (1”=2,000’), indicating the relationship of the proposed subdivision to existing community facilities which serve it, such as roads, schools, shopping, and public trails. Such a map may be superimposed upon a United States Geological Survey Map of the area.

F. Topography at a contour interval of not more than five (5) feet, unless waived by the Planning Board and referred to a datum satisfactory to the Board.

G. The name of the owner of all adjoining property owners and others within two hundred (200) feet, including property owners across the road from the proposed development. If the proposed development would occur on property within an agricultural district containing a farm operation or on property with boundaries within five hundred (500) feet of a farm operation located in an agricultural district, the applicant shall complete an agricultural Data statement, in accordance with NYS Agriculture District Law, which shall contain the name and address of the applicant, a description of the proposed project and its location and the name and address of all property owners within five hundred (500) feet of the boundary of the property upon which the project is proposed.

H. Location, name and dimensions of existing streets, easements, deed restrictions, zoning district boundaries, property lines, buildings, parks and public properties.

I. Location of existing sewers, water mains, culverts and storm drains, if any, including pipe sizes, grades and direction of flow.

J. Location of pertinent natural features such as watercourses, wetlands, floodplains, rock outcrops, stone walls, agricultural district lands, contiguous forest, and single trees eight (8) or more inches in diameter (dbh).

K. Location, width and approximate grade of all proposed streets with approximate elevations shown at the beginning and end of each street, at street intersections and at all points where there is a decided change in the slope or direction.

L. Proposed provision of water supply, fire protection, sanitary waste disposal, stormwater drainage, street trees, streetlight fixtures, street signs and sidewalks.

M. Approximate shape, dimensions and area of all proposed or existing lots, and suggested locations of buildings.

N. Conceptual future plans for the parcel, if any.

O. Approximate location and dimensions of all property proposed to be reserved for park or public uses.

P. Information on all County and State permits required for subdivision plat approval.

Q. Other approvals or permits required (Town, County, NYS, and Federal).

R. A written statement of any requests for specific waivers of requirements by the Planning Board.

S. Other data which must be available for consideration of the subdivision at this stage.

§ 84-28. Final plat.

The plat submitted to the Board shall show or be accompanied by the following information:

A. Data required by §§ 84-24 and 84-27B through S.

B. Location, width and name of each proposed street and typical cross sections showing street pavement and, where required, curbs, gutters and sidewalks.

C. Lengths and deflection angles of all straight lines and radii: length, central angles, chords and tangent distances of all curves for each street proposed.

D. Profiles showing existing and proposed elevations along the center line of all proposed streets and the elevations of existing streets for a distance of one hundred (100) feet either side of their intersection with a proposed street.

E. Present elevations of all proposed streets shown every one hundred (100) feet at five (5) points on a line at right angles to the center line of the street, said elevation points being indicated at the center line of the street, each property line and points thirty (30) feet inside each property line (only when required by the Board because of the existence of steep slopes).

F. Setback lines.

G. Location, size and invert elevations of existing and proposed stormwater drains and sanitary sewers; the exact location of utilities and fire hydrants.

H. Location of street trees, street lighting standards and street signs.

I. Areas of all lots in hundredths of an acre; lots numbers as directed by the Town Assessor. Location, material and size of all permanent monuments.

J. Accurate location of all property to be offered for dedication for public use, with the purpose indicated thereon, and of all property to be reserved by deed covenant for the common use of the property owners of the subdivision.

K. Sufficient data, acceptable to the Superintendent, to readily determine the location, bearing and length of all street, lot and boundary lines and to reproduce such lines upon the ground.

L. Necessary agreements in connection with required easements or releases.

M. Formal offers of cession to the town of all streets and public parks.

N. Key map showing the location of the subdivision.

ARTICLE VI
Required Improvements and Agreements

§ 84-29. Completion of improvements or filing of bond required.

Prior to an action by the Planning Board approving a plat, the applicant shall be required to complete, in accordance with the Planning Board's decision and to the satisfaction of the appropriate town departments, all the street and other improvements specified in the action approving said plat or, as an alternative, to file with the Town Board a bond in an amount estimated by the Planning Board to secure to the town the satisfactory construction and installation of the incomplete portion of the required improvements. All required improvements shall be made by the applicant at his expense without reimbursement by the town or any district therein.

§ 84-30. Performance bonds.

Performance bonds shall comply with the requirements of §277 of the Town Law and shall be satisfactory to the Town Board as to form, sufficiency and manner of execution. A period of one (1) year, or such other period as the Planning Board may determine appropriate, within which required improvements must be completed shall be specified by the Planning Board and expressed in the bond. The bond shall also provide that an amount determined adequate by the Planning Board shall be retained for a period of one (1) year after the date of completion of the required improvements to assure their satisfactory condition.

§ 84-31. Required improvements.

A. *Monuments.*

Monuments shall be placed at all block corners, angle points, points of curvature in streets and points of tangency or horizontal curves, and at intermediate points as required by the Town Engineer. However, in no case shall there be less than four (4) permanent monuments per block. At least one (1) monument in each subdivision shall be related to the United States Geological Survey system and shall bear the true elevation above sea level. In addition, markers shall be placed at all points when street lines intersect the plat boundary and at all lot corners. The monuments and markers shall be of such material, size and length as may be approved by the Town Engineer.

B. *Water and sewerage facilities.*

Facilities for water and sewerage shall be provided in each new subdivision in accordance with the requirements of the appropriate agency having jurisdiction over the planning and installation of these in the area of the subdivision; however, the following minimum requirements of the town shall be met:

(1) Central water supply systems shall be designed with adequate pressures, mains and fire hydrants to meet Association of Fire Underwriters' specifications for a Class C protected area.

(2) All water mains shall be at least six (6) inches in diameter.

(3) Sanitary sewers shall not be used for stormwater drainage.

(4) Central sewerage system shall provide a four-inch (4") minimum size connection to each lot.

C. *Storm drainage facilities.*

(1) Regulation. The New York State Department of Environmental Conservation (NYSDEC) regulates stormwater management practice installation under SPDES General Permit GP-02-01. The technical standards for stormwater practice design are in the New York Stormwater Management Design Manual.

(2) Drainage. The NYSDEC's, Reducing the Impacts of Stormwater Runoff from New Development, should be consulted. A primary goal is to ensure that the peak rate of surface water flowing off site shall not increase above predevelopment conditions, and shall not adversely affect drainage on adjacent properties or public roads.

(3) General design.

(a) Preferred runoff pattern. Preferred design of streets and grading in relation to storm drainage shall be such that runoff from roofs, driveways and other impervious surfaces will be collected in the ditches and/or gutters along the street in short runs [three hundred (300) or four hundred (400) feet] and will then be diverted from the surface into storm sewers or natural watercourses unless storm sewers are to be installed.

(b) Downstream disposal. Subdivision and development of an area increases and concentrates the runoff of stormwater from the area. Applicants are warned that such increase may cause flood or erosion damage to undeveloped properties lying downstream. Storm drainage channels opening on unimproved land shall empty into natural watercourses unless suitable agreement is reached with the owner of the downstream property for another method of handling. In any instance, the disposal of storm drainage downstream shall be satisfactory to the Planning Board as advised by the Town Engineer.

(4) Open Water courses. The use of open watercourses for drainage may involve problems relating to safety, erosion control, stagnant water, protection of capacity and appearance, all of which shall be given adequate attention by the developer as follows:

(a) Safety. Broad, shallow courses shall be created wherever necessary to increase capacity or eliminate steep banks, except in those areas where natural conditions are such that erosion of banks will not occur. Ditches shall, wherever

feasible, be in the shape of a wide-top “V” with rounded or squared invert.

(b) Erosion control. Adequate measure shall be taken to prevent erosion. The Planning Board shall require seeding, sodding, planting, riprap or such other measures as may be necessary to prevent scouring.

(c) Drainage. The developer shall avoid the creation or continuation of swampy areas or stagnant pools. The Planning Board shall require fill and/or channel improvements in order to forestall such problems.

(d) Protection of capacity. The developer shall provide adequate measures for the protection of open drainage channels by establishing drainage easements sufficiently wide [generally twenty (20) feet] to enable the working of the channel by motorized equipment, or, alternately, where authorized by the Planning Board, a center block park of a minimum width of fifty (50) feet. All easements shall prohibit the erection of structures, the dumping of fill or the alteration of obstruction of the watercourses without the written permission of the Town Board. Property lines shall be so drawn as to allow drainage easements along side and rear lot lines, except that drainage easements may be allowed to cross lots larger than one (1) acre.

(e) Appearance. As natural watercourses can be an attractive asset to the subdivision as well as to the community, the developer shall, where possible, improve and beautify the watercourses to this end.

(4) Design of storm sewers.

(a) Size and grade. Storm sewers shall have a minimum diameter of twelve (12) inches and a minimum grade of five-tenths percent (0.5%).

(b) Manholes. Manholes shall not be more than three hundred (300) feet apart where pipe sizes of twenty-four (24) inches or less are used, and not more than five hundred forty (540) feet apart where larger sizes are installed.

(c) Change in direction. Special sections with radii of ten (10) to fifteen (15) feet shall be installed where abrupt changes are made in alignment.

(5) Design of ditches and gutters.

(a) Length of flow. Subdivisions shall be so designed that the length of flow of water in a gutter or roadside ditch does not exceed three hundred (300) feet, except as permitted by the Planning Board. Runs exceeding the maximum shall be put in storm sewers or diverted to natural drainageways.

(b) Minimum grade. All enclosed drainage courses shall be designed with sufficient grade to create a water flow velocity of three (3) feet per second. A lesser grade may be permitted by the Planning Board where such a grade cannot be achieved.

(c) Street crossing. Water in gutters and ditches shall not be allowed to flow over intersecting streets but shall be placed in adequate culverts.

(d) Depth and shape of ditches. Where roadside ditches are permitted for runs of more than three hundred (300) feet, or where subgrade drainage is necessary, the bottom of such ditch should be below the subgrade and/at a minimum, should be approximately eighteen (18) inches below the crown of the road. Ditches shall be V-shaped or parabolic with sides sloping at approximately one (1) inch to three (3) inches horizontal, except where another cross-section plan is authorized.

(6) Erosion control.

Suitable headwalls, endwalls, ditch seeding or sodding and other procedures or devices to prevent erosion shall be used. Town soil and erosion control regulations should be referenced.

D. *Street and other improvements*.

(1) Streets shall be graded and improved with pavement, street signs, sidewalks, street lighting standards, curbs, gutters, trees, water mains, sanitary sewers, storm drains and fire hydrants, except where the Planning Board may waive, subject to appropriate conditions, such improvements as it considers are not requisite in the interest of public health, safety and general welfare.

(2) Underground utilities required by the Planning Board shall be placed between the paved roadway and street line to simplify location and repair of the lines, and the subdivider shall install underground service connections to the property line of each lot before the street is paved.

(3) Grading and improvements shall conform to the town minimum road specifications and shall be approved as to design and specifications by the Town Superintendent.

§ 84-32. Inspection.

The town may employ an inspector to act as agent of the Planning Board for the purposes of assuring the satisfactory completion of improvements required by the Planning Board, and shall determine an amount sufficient to defray costs of inspection. The applicant shall pay the town costs of inspection before the subdivision plat is signed for filing. If the Planning Board or its agent finds, upon inspection, that any of the required improvements have not been constructed in accordance with the approved drawings, the applicant and the bonding company will be severally and jointly liable for the costs of completing said improvements according to specifications.

§ 84-33. Public utilities.

The Board may accept assurance from each public utility company whose facilities are proposed to be installed. Such assurance shall be in writing, addressed to the Board, stating that such public utility company will make the installations necessary for the furnishing of its services within a specified time, in accordance with the approved plat.

APPENDIX A: DESIGN GUIDELINES

The following guidelines, the Town of _____ Comprehensive Plan, Greenway Connections Greenway Guides, the Dutchess Land Conservancy's *Planning and Siting Your House*, and the Rural Development Guidelines shall be consulted for the design and siting of all uses in all districts.

Design principles:

Identify important natural features and locate the building envelope that will minimize the clearing of vegetation and preserve important natural features.

The building envelope should not include the tops of ridge lines, wetlands, floodplains, or areas with slopes in excess of 25%.

Look at the property from off site. Try not to alter the area's visual character from off site dramatically.

Site the house to effect the least amount of change to the landscape will protect the property's most valuable assets.

Limit the areas of disturbance to prevent fragmentation of wildlife habitats.

Retain stone walls, hedgerows and other rural landscape elements.

Place homes and access roads in treelines, on mildly sloping ground, or along the edges of fields: avoid construction in open fields to preserve the field's future agricultural potential, views, and to shelter the housesite.

Locate structures and septic systems more than 100 feet from streams or ponds to protect water quality.

Re-use farm roads or country lanes whenever possible, rather than constructing new wide roads.

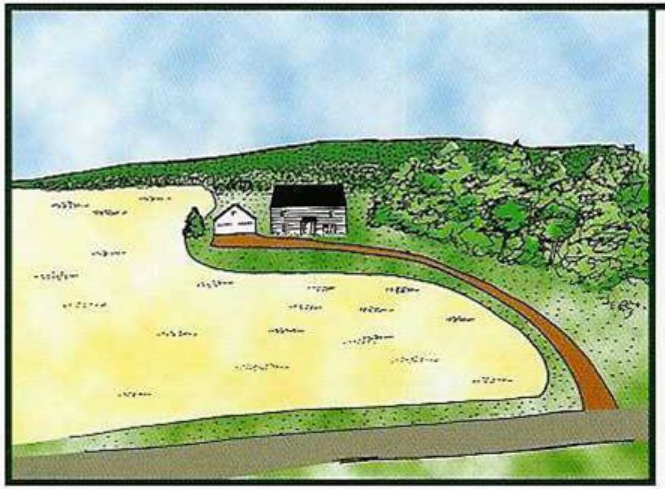
Limit access drives to at most one per parcel unless a traffic analysis or unique conditions fully justify another curb cut. Share access with neighbors whenever possible.

Driveways should follow the natural contour of the land.

Do not over-clear a site. Start small and clear only what you must.

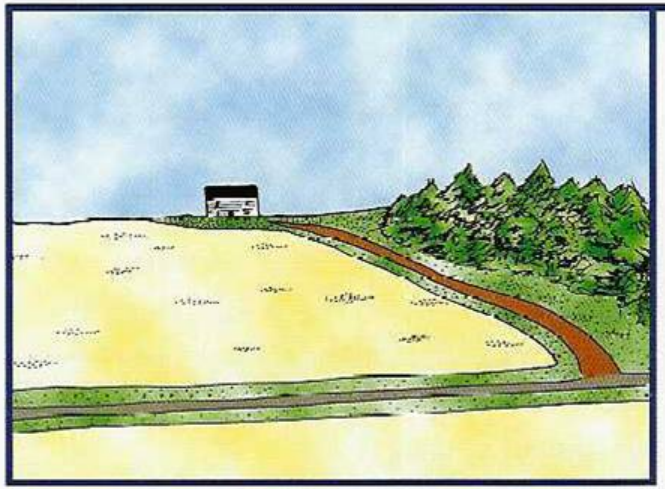
APPENDIX B: HOUSE SITING GUIDELINES

Source: Planning and Siting Your House, A Guidebook
Dutchess Land Conservancy



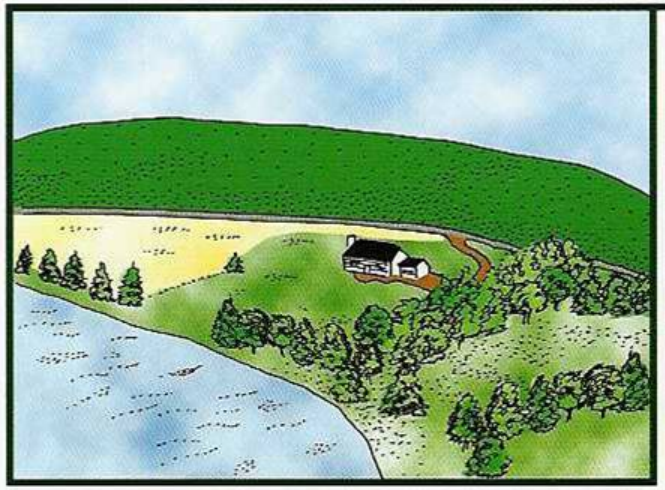
Preferred – Hillside Siting

Consider reducing the prominence of a crestline siting by building lower on the landscape. Locating your house in the middle of the slope will still afford superior views while providing good natural drainage and easier access. A southeast facing slope will provide good solar orientation, enhancing winter warmth and protection from winter winds. If you take into consideration the natural contours of the hill, you will minimize grading and soil erosion and lessen the danger to the stability of the site. Choose a house site that is located on one side of a property rather than in the middle. Lower the building profile by choosing traditional rooflines.



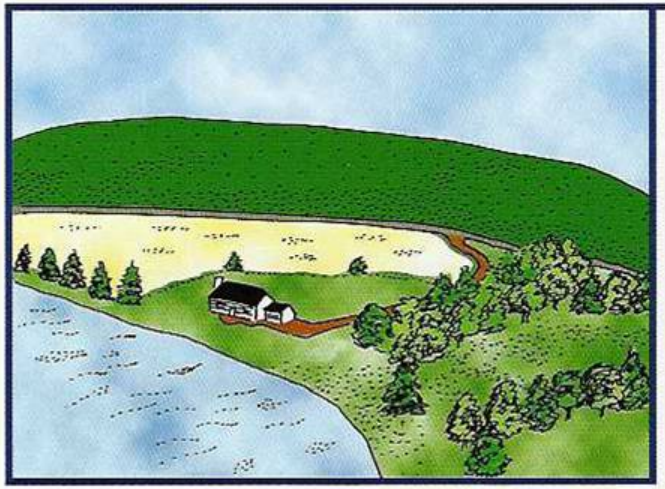
Avoid – Crestline Siting

Locating your house on the crest of a hill increases its exposure to winter winds, the strong summer sun, and disrupts the crestline and the neighbors' views. Soils are typically more shallow on ridgelines and construction of a basement may be costly, if not impossible. If you cannot locate a well at the crest, water will have to be pumped from a site lower than the house. A hilltop siting will increase the driveway length often requiring more extensive grading and utility work, thereby adding expense to the construction. During the winter, slippery conditions may force you to park your car at the end of the driveway. If you must locate your house on a hillcrest retain as many existing trees as possible. Paint or stain your house in a natural color and choose a design that fits into rather than on top of the landscape.



Preferred – Siting away from a Lake or Waterbody

By building your house at a distance from the water you will leave room for intervening planting to absorb pollutants and provide privacy from passersby on the lake. Locating the driveway, parking area and septic system on the house side opposite the lake keeps runoff and other pollutants from entering the water. During severe storms, the vegetation can also absorb significant amounts of water, reducing the danger of flooding. Finally, the planting softens the appearance of the house and shields it from those who use the lake.



Avoid – Siting at the Edge of a Lake or Waterbody

Locating your house, driveway, parking area, and septic system at the very edge of a lake allows no room for intervening vegetation to filter pollutants from septic systems, car oil and gas residue, and salt and sand used on driveways that might contaminate the lake. Eventually, pollutants could cause eutrophication, rendering the lake useless for habitat and recreation because of overgrowth of aquatic plants. In addition, you will damage shoreline habitat that is essential for a number of species.

ARTICLE IV – CONSERVATION SUBDIVISION REGULATIONS

(added 5/20/03)

240-4.1 PURPOSE AND APPLICABILITY

The purpose of these regulations is to achieve a balance between well-designed residential development, meaningful open space conservation, and natural resource protection in the countryside by requiring conservation subdivisions instead of conventional subdivisions. These regulations apply to all properties within the RR-1 and SR-1 Districts, which encompass most of the area described in the Saratoga Springs Comprehensive Plan as the "Country Overlay Area." The use of conservation subdivisions is intended to preserve tracts of environmentally and scenically significant undeveloped land in the "Country" part of Saratoga Springs, including road corridors and buffer areas, in order to maintain the historic settlement pattern and implement the Comprehensive Plan's vision of a "City in the Country." Conservation subdivisions result in the preservation of contiguous open space and important scenic and environmental resources, while allowing compact development, more walkable neighborhoods, and more design flexibility than conventional subdivisions. Conservation subdivisions must satisfy the standards in Sections 240-4.2, 240-4.3, and 240-4.4. The procedure for approving conservation subdivisions is described in Section 240-4.5. Graphics in these regulations are included for illustrative purposes.

240-4.2 STANDARDS FOR CONSERVATION SUBDIVISIONS

A. DENSITY CALCULATION: The maximum density allowed for residential units is calculated by a formula based upon the acreage of "unconstrained land" on the property.

(1) To determine unconstrained acreage, subtract from the total (gross) acreage of the proposed development parcel the acreage of "constrained land." Constrained land includes wetlands, watercourses, 100-year floodplains, and slopes over 25% which are 2,000 square feet or more of contiguous sloped area.

(2) To determine the "base" number of allowable residential units on the site, divide the unconstrained acreage by the allowable number of acres per unit required within the zoning district. Round down fractional units of 0.5 or less and round up fractional units greater than 0.5. The resulting number is the "base density" allowed on the site.

(Figure 4.1.a through Figure 4.1.c illustrates density calculation on a hypothetical site in a Conservation Subdivision RR-1 District)

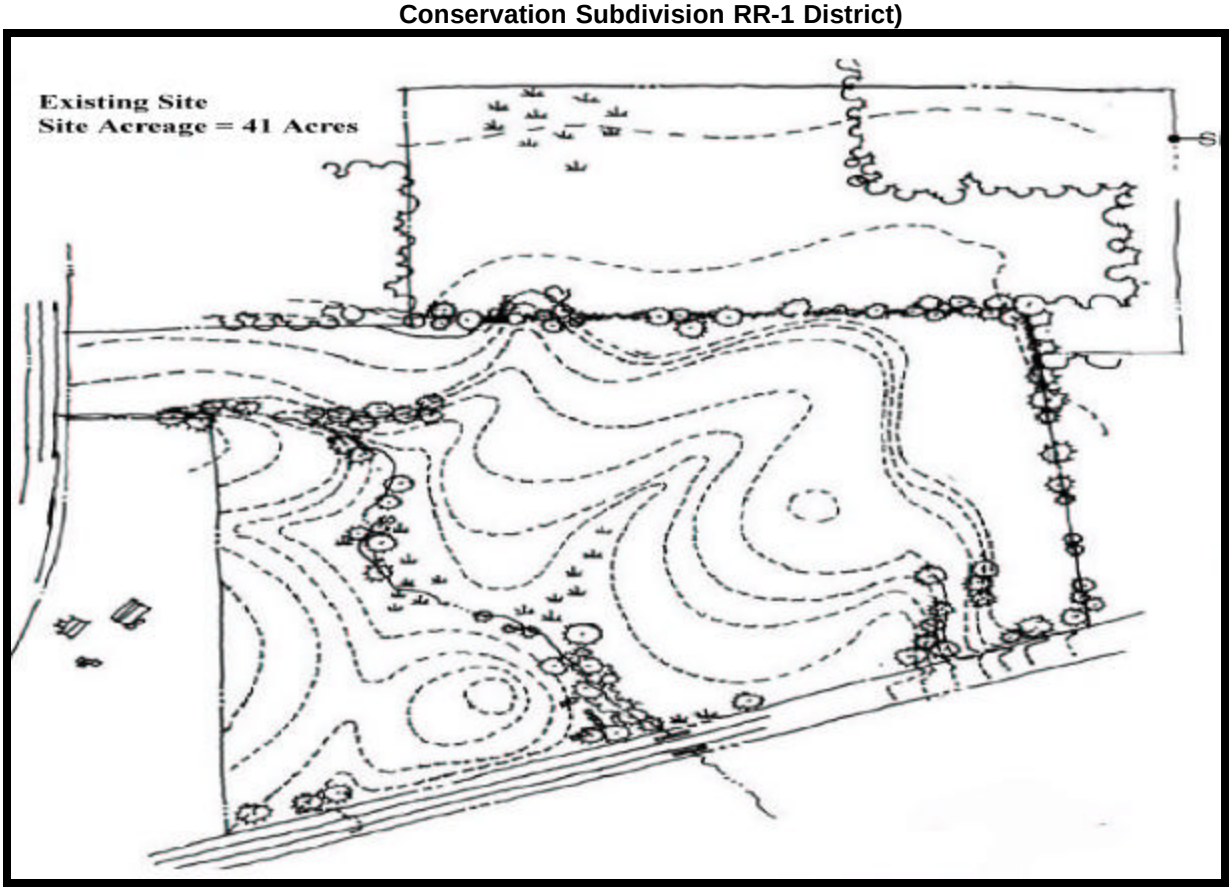


Figure 4.1.a. Existing Conditions Site Boundary

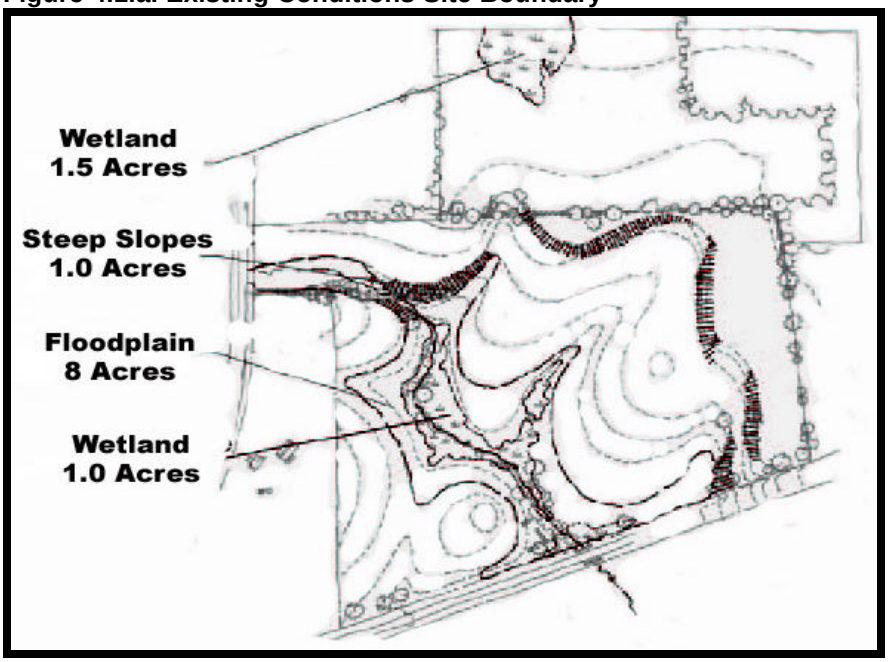


Figure 4.1.b. Constrained Land

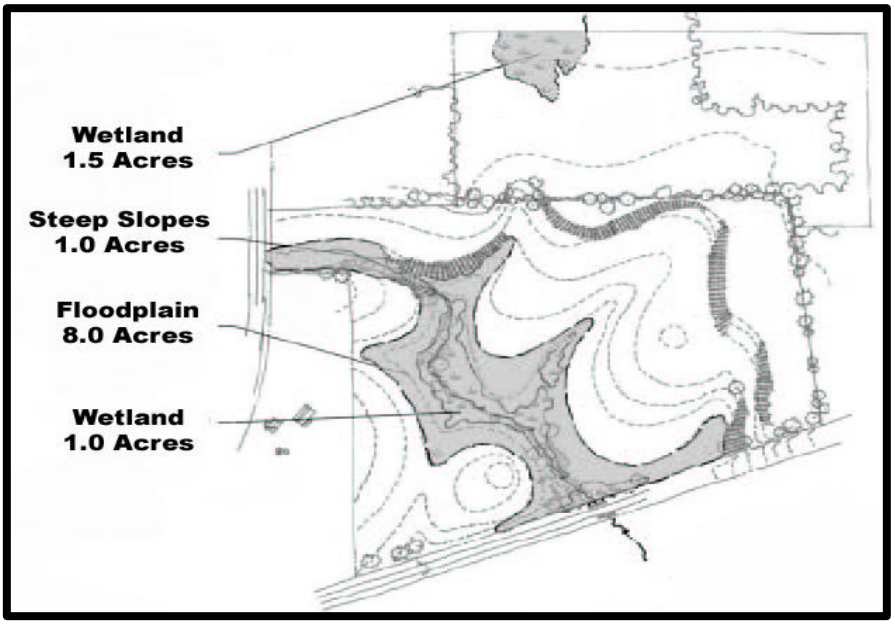


Figure 4.1.c. Density Calculation for RR-2 District

Total Site Acreage: 41.0 Acres

Constrained Acreage

Floodplain: 8.0 Acres
Wetlands: 2.5 Acres
(1.0 acre overlaps with Floodplain)
Steep Slopes: 1.0Acre
10.5 Acres

Unconstrained Acreage
30.5 Acres

(3) The base density in (2) may be increased by up to 20% at the sole discretion of the Planning Board if permanent public access will be granted to the protected open space land and any associated improvements as delineated in section 240-4.3.

(4) The density permitted by this section shall not be reduced as a result of the conservation analysis required in subsection 240-4.2B or as a result of the reservation of parkland during the subdivision process.

B. Conservation Analysis

(1) As part of its Preliminary Plat submission (see Section 240-4.5), an applicant shall prepare a conservation analysis, consisting of inventory maps, description of the land, and an analysis of the conservation value of various site features. (See Conservation Analysis Checklist available from the Planning Department.) The conservation analysis shall show lands with conservation value, including but not limited to the following:

- "Constrained land" as defined in Section 240-4.2A(1)
- "Open space and recreational resources" described in the City's Open Space Plan
- Buffer areas necessary for screening new development from adjoining parcels
- Land exhibiting present or potential recreational, historic, ecological, agricultural, water resource, scenic or other natural resource value.

(2) The conservation analysis shall describe the importance and the current and potential conservation value of all land on the site. In the course of its initial Preliminary Plat review, the Planning Board shall indicate to the applicant which of the lands identified as being of conservation value are most important to preserve.

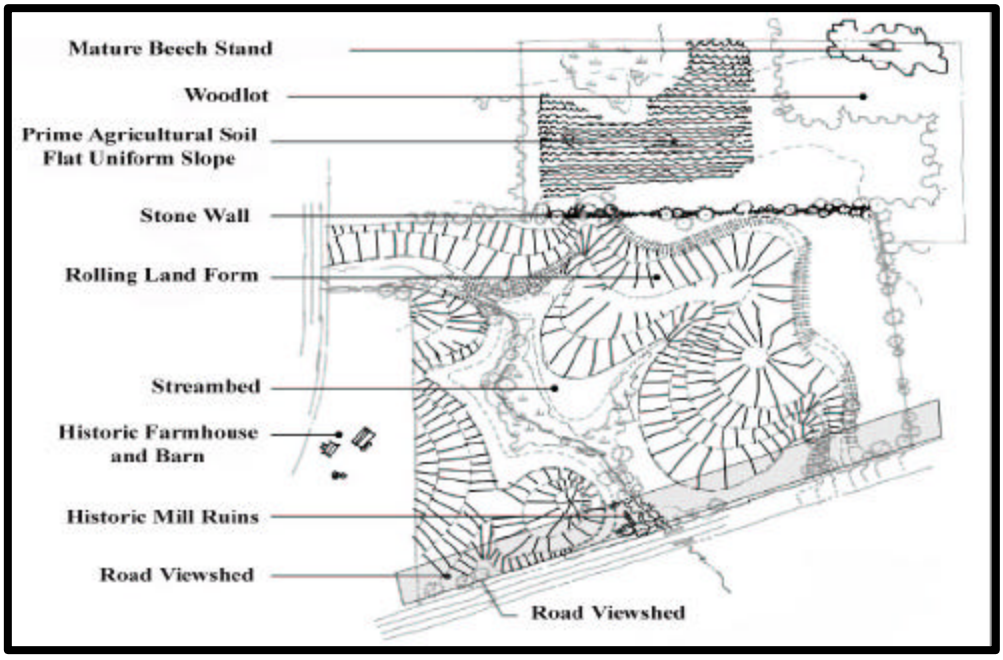


Figure 4.2.a Conservation Analysis: Inventory Map (see also Figure 4.1b for constrained land)

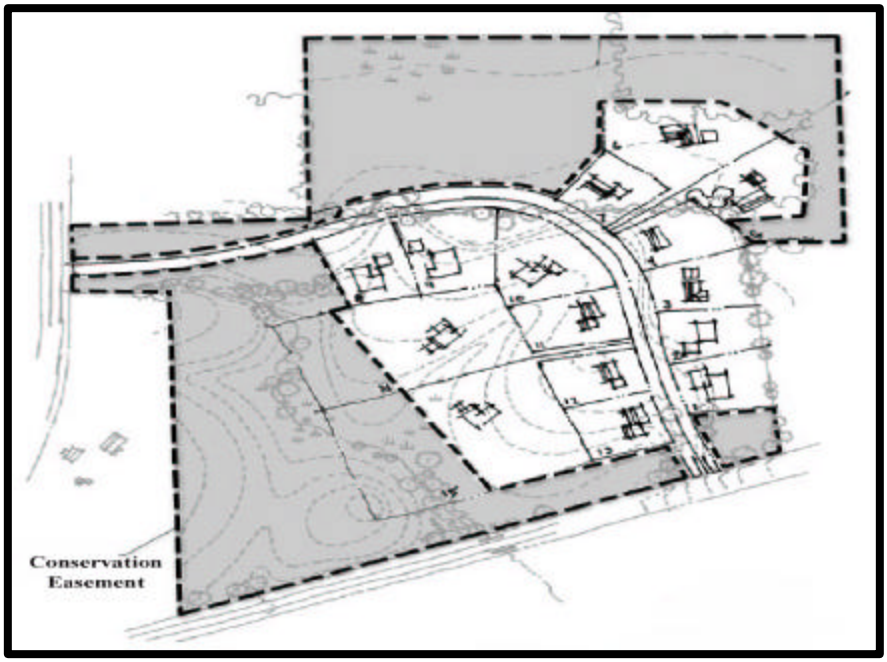


Figure 4.2.b. Conservation Analysis: Sample Preliminary Plan

(3) The outcome of the conservation analysis and the Planning Board's determination shall be incorporated into the approved Preliminary Plat (see Section 240-4.5) showing land to be permanently preserved by a conservation easement. The Preliminary Plat shall also show preferred locations for intensive development as well as acceptable locations for less dense development.

(4) The final determination as to which land has the most conservation value and should be protected from development by conservation easement shall be made by the Planning Board. Whenever the Planning Board approves a plan with protected open space, it shall make written findings identifying the specific conservation values protected and the reasons for protecting such land (the "conservation findings"). The Planning Board shall deny an application that does not include a complete conservation analysis sufficient for the Board to make its conservation findings.

(5) The Preliminary Plan shall show the following as land to be preserved by conservation easement:

(a) An amount of land no smaller than the total amount of constrained land identified in the analysis in 240-4.2A(1).

(b) In the Rural Residential-1 District, at least 50% of the land not preserved in 240-4.2B(5)(a). In the Suburban Residential-1 District at least 35% of the land not preserved in 240-2B(5)(a).

(6) If, based upon the conservation analysis, the Planning Board determines in its conservation findings that there is no reasonable basis for requiring a conservation subdivision; the Board may approve a conventional development of the site. In order for the Planning Board to make such a determination, the applicant must demonstrate at least one of the following:

(a) The land contains no substantial resources with conservation value;

(b) The acreage is too small to preserve a substantial amount of land with conservation value (this criterion shall not be evaded by piecemeal subdivision of larger tracts); or

(c) The lot configuration is unique and precludes preservation of a substantial amount of land with conservation value.

(d) That there are extraordinary circumstances unique to the parcel that demonstrates that conventional subdivision is in the best interest of the adjacent neighborhoods.

In order to make the required showing under (6)(b) or (6)(c) above, the applicant must also demonstrate that the parcel does not adjoin other land that, when combined with open space on the parcel, would result in the preservation of a substantial amount of land with conservation value

(including any portion of a designated trail corridor), regardless of whether or not the adjoining parcels have been protected as open space.

(7) An approval of a conventional subdivision shall refer to the conservation findings and may be conditioned upon the protection by conservation easement of portions of the site identified in the conservation analysis and findings as having conservation value.

C. TYPES OF DEVELOPMENT IN A CONSERVATION SUBDIVISION

The allowable residential units may be developed as single-family or two-family residences. Within a conservation subdivision, a maximum of 25% of the units may be placed in structures containing two units.

D. LOT SIZES IN CONSERVATION SUBDIVISIONS

There shall be no minimum lot size in a conservation subdivision. The Planning Board shall determine appropriate lot sizes in the course of its review of a conservation subdivision based upon the purposes and design criteria established in this Article IV. In order to permit a clustered lot configuration, wells and septic systems may be located in areas of protected open space, provided that necessary easements are provided for maintenance of these facilities.

E. OTHER AREA AND DIMENSIONAL REQUIREMENTS

(1) There shall be no required area, bulk, or dimensional standards in a conservation subdivision, except that where such subdivision abuts an existing residence in a residentially zoned area, a suitable buffer area shall be required by the Planning Board. This buffer shall be at least the same distance as the minimum rear or side yard setback in the district in which the abutting land is located.

(2) The applicant shall specify dimensional requirements for a proposed conservation subdivision by identifying setbacks and other lot dimensions to be incorporated into the Final Plat.

F. CONSERVATION SUBDIVISION OF A PORTION OF LARGER TRACT

The Planning Board may entertain an application to develop a portion of a parcel if a conservation analysis is provided for the entire parcel and the approval to develop a portion of the parcel is not a basis for the applicant or successor in interest to subsequently request an exception under Section 240-4.2(B)(6) for the remainder of the parcel.

G. CONSERVATION SUBDIVISION DESIGN GUIDELINES

Lots shall be arranged in a manner that protects land of conservation value and facilitates pedestrian and bicycle circulation. The lot layout shall to the extent feasible comply with the design guidelines in Section 240-4.4. Permitted building locations or areas ("building envelopes") shall be shown on the Final Plat.

240-4.3 PERMANENT OPEN SPACE

Open space set aside in a conservation subdivision shall be permanently preserved as required by this Section. Any development permitted on land located in a conservation subdivision that is not protected as open space shall not compromise the conservation value of such open space land.

A. CONSERVATION VALUE OF OPEN SPACE

The open space protected pursuant to this Section must have "conservation value," which shall be determined in the course of the conservation analysis in Section 240-4.2B.

B. Permanent Preservation by Conservation Easement

(1) A perpetual conservation easement restricting development of the open space land and allowing use only for agriculture, forestry, passive recreation, protection of natural resources, or similar conservation purposes, pursuant to Section 247 of the General Municipal Law and/or Sections 49-0301 through 49-0311 of the Environmental Conservation Law, shall be granted to the City, with the approval of the City Council, and/or to a qualified not-for-profit conservation organization acceptable to the Planning Board. Such conservation easement shall be approved by the Planning Board and shall be required as a condition of Final Plat approval. The Planning Board shall require that the conservation easement be enforceable by the City if the City is not the holder of the conservation easement. The conservation easement shall be recorded in the County Clerk's Office prior to or simultaneously with the ling of the Final Plat in the County Clerk's Office.

(2) The conservation easement shall prohibit residential, industrial, or commercial use of open space land (except in connection with agriculture, forestry, and passive recreation), and shall not be amendable to permit such use. Access roads, driveways, wells, underground sewage disposal facilities, local utility distribution lines, stormwater management facilities, trails, temporary structures for passive outdoor recreation, and agricultural structures shall be permitted on preserved open space land with Planning Board approval, provided that they do not impair the conservation value of the land. Forestry shall be conducted in conformity with applicable best management practices.

(3) A land management plan, approved by the Planning Board, shall be included in the conservation easement. The conservation easement shall provide that if the City Council finds that the management plan has been violated in a manner that renders the condition of the land a public nuisance, the City may, upon 30 days written notice to the owner, enter the premises for necessary maintenance, and that the cost of such maintenance by the City shall be assessed against the landowner or, in

the case of an HOA, the owners of properties within the development, and shall, if unpaid, become a tax lien on such property or properties.

(4) Preserved open space may be included as a portion of one or more large lots, or may be contained in a separate open space lot. The conservation easement may allow dwellings to be constructed on portions of lots that include preserved open space land, provided that the total number of dwellings permitted by the conservation easement in the entire subdivision is consistent with applicable density limitations of this Article IV.

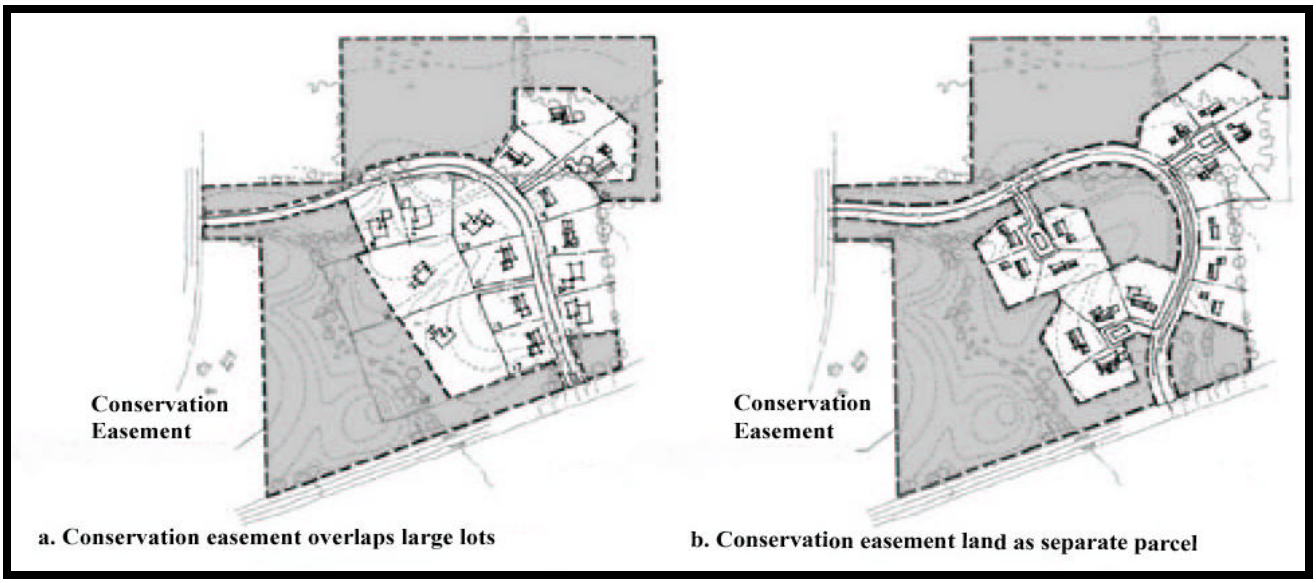


Figure 4.3 Conservation Easement Alternative Configurations

C. NOTATIONS ON FINAL PLAT

Preserved open space land shall be clearly delineated and labeled on the subdivision Final Plat as to its use, ownership, management, method of preservation, and the rights, if any, of the owners of lots in the subdivision and the public to the open space land. The Final Plat shall clearly show that the open space land is permanently preserved for conservation purposes by a conservation easement required by this Section, and shall include deed recording information in the County Clerk's office for the conservation easement.

D. OWNERSHIP OF OPEN SPACE LAND

(1) Open space land shall under all circumstances be protected by a perpetual conservation easement, but may be owned in common by a homeowner's association (HOA), offered for dedication to City, County, or State governments, transferred to a non-profit organization acceptable to the Planning Board, held in private ownership, or held in such other form of ownership as the Planning Board finds appropriate to properly manage the open space land and to protect its conservation value.

(2) If the land is owned in common by an HOA, such HOA shall be established in accordance with the following:

(a) The HOA must be established before the approved subdivision Final Plat is signed, and must comply with all applicable provisions of the General Business Law.

(b) Membership must be mandatory for each lot owner, who must be required by recorded covenants and restrictions to pay fees to the HOA for taxes, insurance, and maintenance of common open space, private roads, and other common facilities.

(c) The HOA must be responsible for liability insurance, property taxes, and the maintenance of recreational and other facilities and private roads.

(d) Property owners must pay their pro rate share of the costs in Subsection 240-4.3(B)(1)(c) above, and the assessment levied by the HOA must be able to become a lien on the property.

(e) The HOA must be able to adjust the assessment to meet changed needs.

(f) The applicant shall make a conditional offer of dedication to the City, binding upon the HOA, for all open space to be conveyed to the HOA. Such offer may be accepted by the City, at the discretion of the City Council, upon the failure of the HOA to take title to the open space from the applicant or other current owner, upon dissolution of the association at any future time, or upon failure of the HOA to fulfill its maintenance obligations hereunder or to pay its real property taxes.

(g) Ownership shall be structured in such a manner that real property taxing authorities can satisfy property tax claims against the open space lands by proceeding against individual owners in the HOA and the dwelling units they each own.

(h) The City Attorney's Office shall find that the HOA documents presented satisfy the conditions in Subsections (a) through (g) above, and such other conditions as the Planning Board shall deem necessary.

240-4.4 RURAL DESIGN AND SITING STANDARDS

The following guidelines should be considered in the process of designing and siting uses in the Rural Residential-1 and Suburban Residential-1 Districts. When locating new uses on the land there are many options in the siting, configuration, size and arrangement of elements in the landscape. These choices define the character of the

developed landscape environment. These guidelines are examples of the preferred way to design and site uses but they should not be considered the only acceptable solution.

Four basic elements establish the character of a development. These basic elements are:

LANDFORM
- Gradient
- Slopes Form
- Aspect/Orientation

VEGETATION
- Species
- Massing

STRUCTURES
- Setback/Location
- Height/Mass
- Roof Form

CIRCULATION SYSTEMS (VEHICULAR AND PEDESTRIAN)
- Alignment (vertical and horizontal)
- Width
- Edge Treatment

A. LANDFORM: Landform is the signature element that is essential for achieving an environment that has its own identity or "sense of place".

(1) In the Rural Residential -1 and Suburban Residential -1 Districts, locally distinct natural landform features should generally be left in a natural state.

(2) Natural rural landforms are typically soft and roll due to the rounding effect of wind and water over time. Geometric landforms may also be present in areas of shallow bedrock or seasonal flooding. The character and diversity of the natural landform should be reflected in grading to accommodate development.

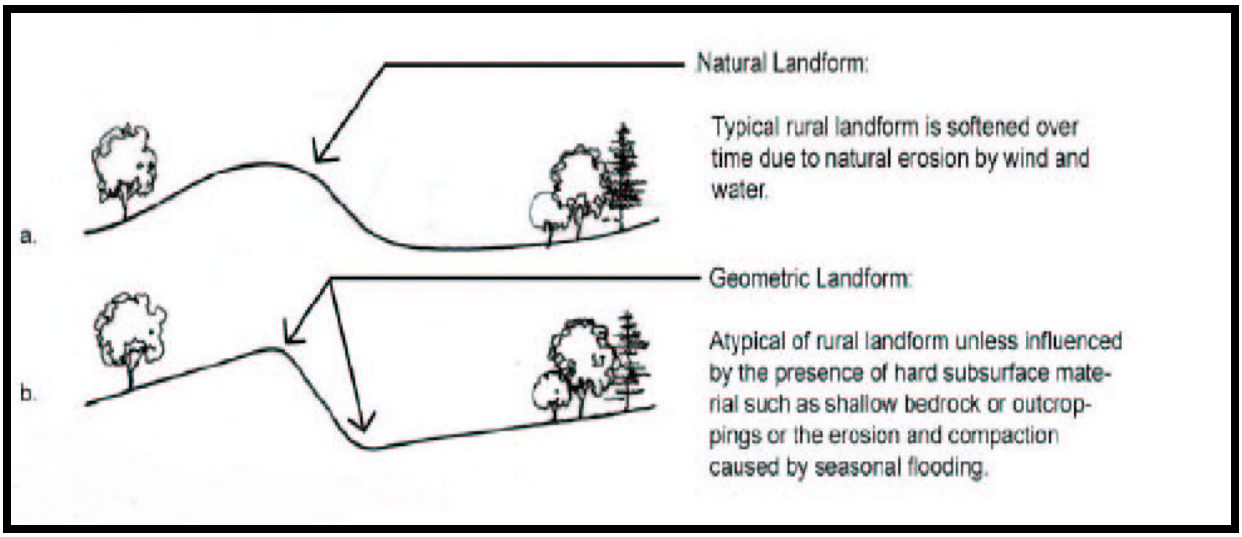


Figure 4.4 Landform Character

(3) Minimize cuts and fills. When grading is necessary, slopes should be graded to mimic existing slopes and blend smoothly into the surrounding landform. Graded slopes should be a maximum of 1:5 and gradually blend into surrounding slopes.

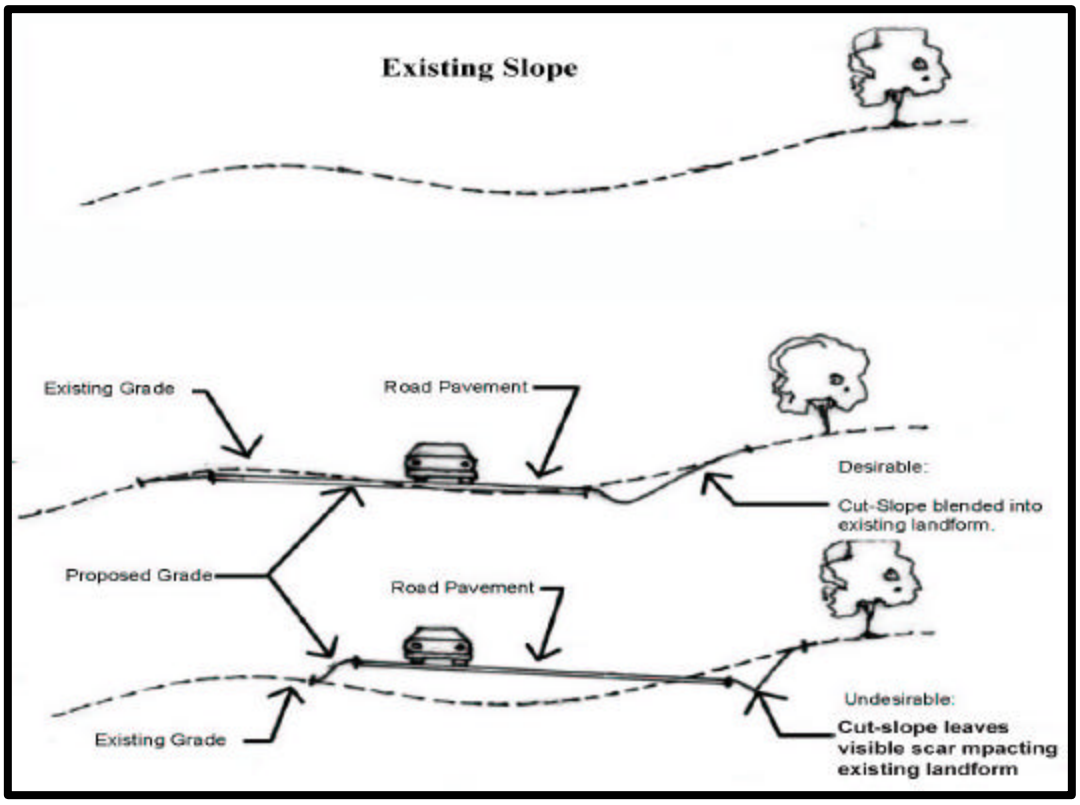


Figure 4.5 Blending Grading Into Existing Landform

(4) New development should not erase landforms that are indigenous to the area. Instead solutions should reflect and reinforce the area's own topographic features.

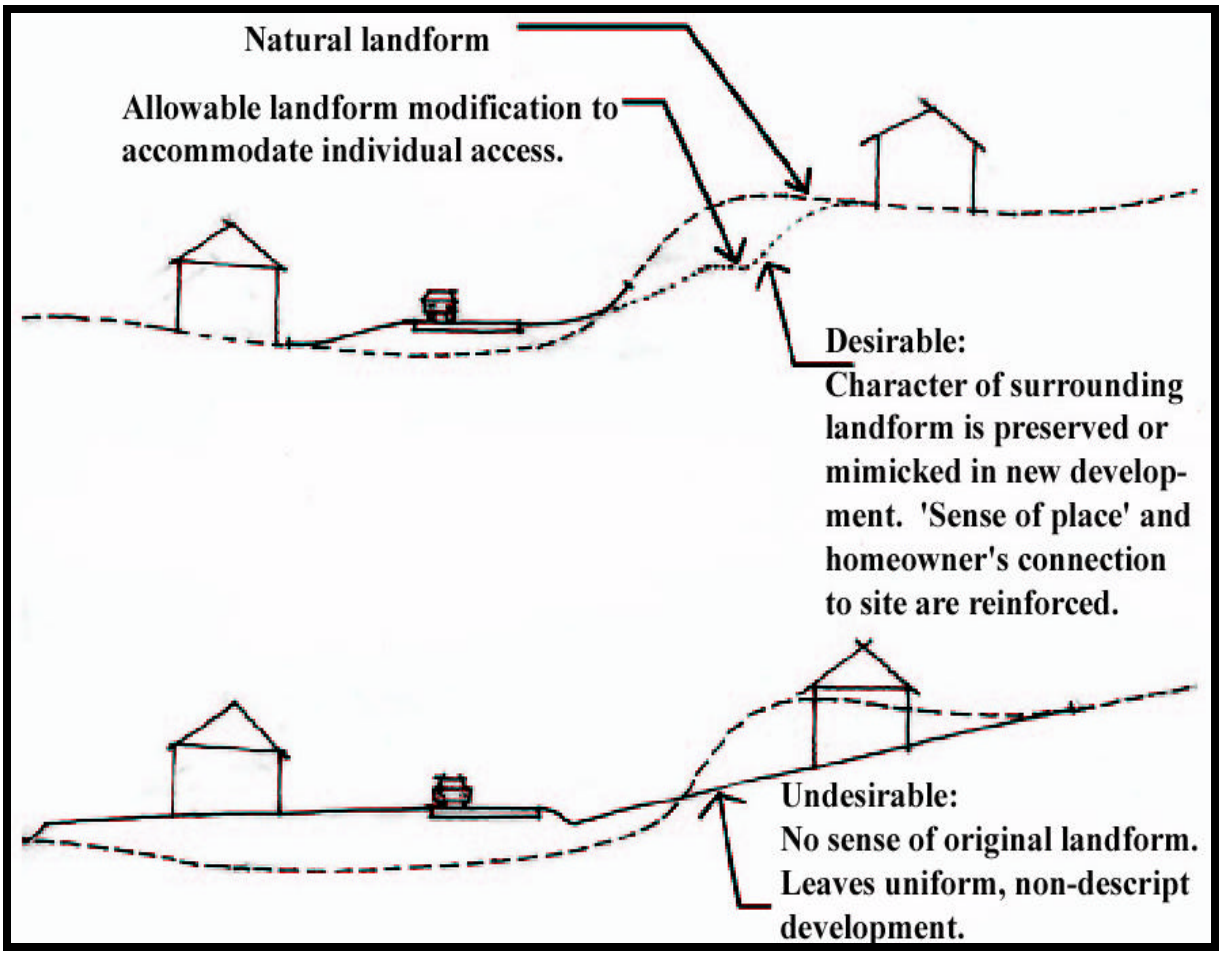


Figure 4.6 Landform Preservation

B. VEGETATION

In addition to the benefits plants offer the ecological system (soil stabilization, clean air, wildlife habitat) their presence or absence, how they are configured or arranged, and their species has a significant influence on development character. Every effort should be made to:

(1) Preserve existing vegetation patterns and species mix and density.

(2) Select and place new vegetation in ways that enhance the rural indigenous vegetation characteristics.

(3) Vegetation in undeveloped rural areas is typically clustered. Rural vegetation should not be in geometric patterns that are associated with the urban environment.

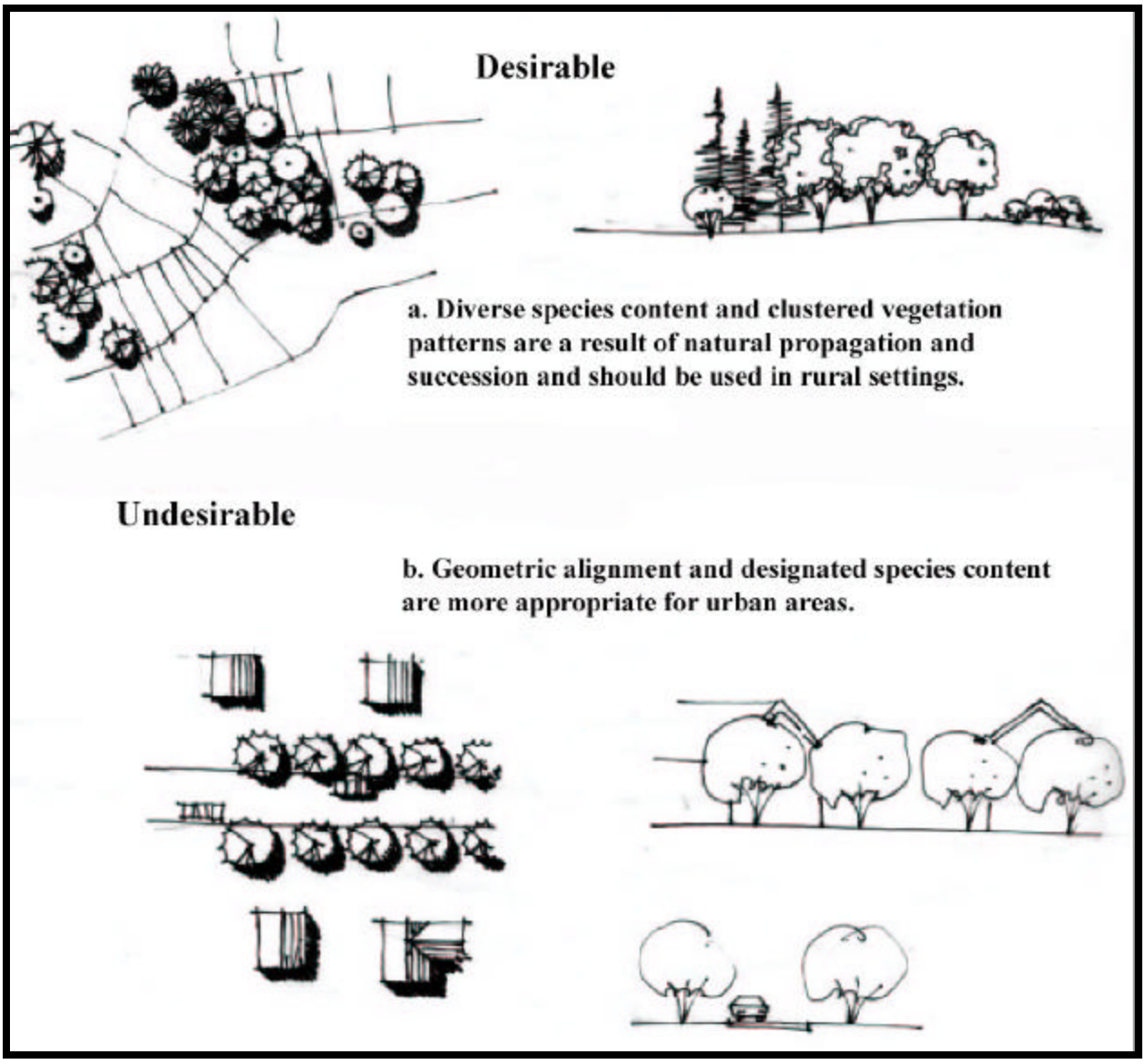


Figure 4.7 Vegetation Types and Patterns

(4) In the rural environment vegetation, not structures, is the primary determinant of how far we can see and where we look.

(5) Use existing vegetation and topography to buffer and screen new buildings if possible.

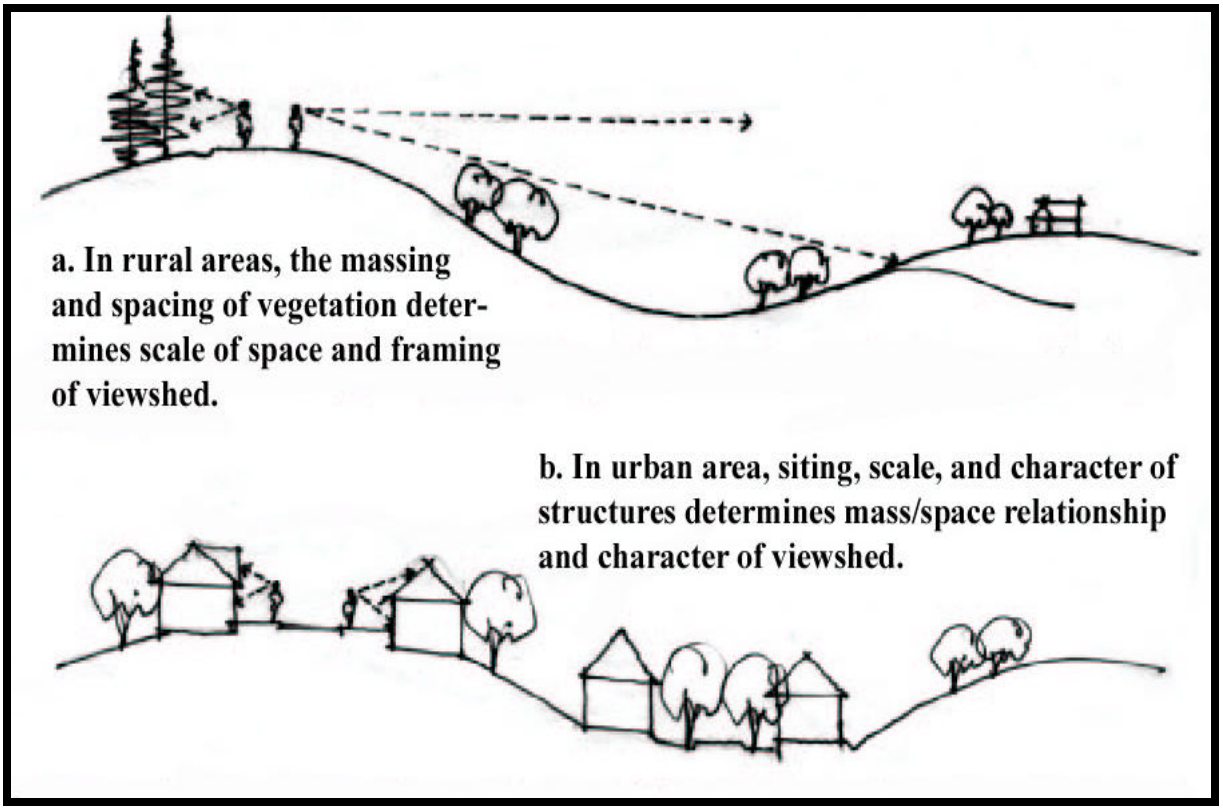


Figure 4.8 Framing Views

C. STRUCTURES

The height, placement, forms and patterns of building envelopes can establish an urban or rural character to any development. The intent of this section is to identify building envelopes, forms and patterns that are complementary to and reflective of rural characteristics.

(1) Building envelopes in rural areas should be designed to maximize the preservation of the site's natural features (e.g. landform, vegetation). Whereas, in more urban environments, sites are more often modified to accommodate the building.

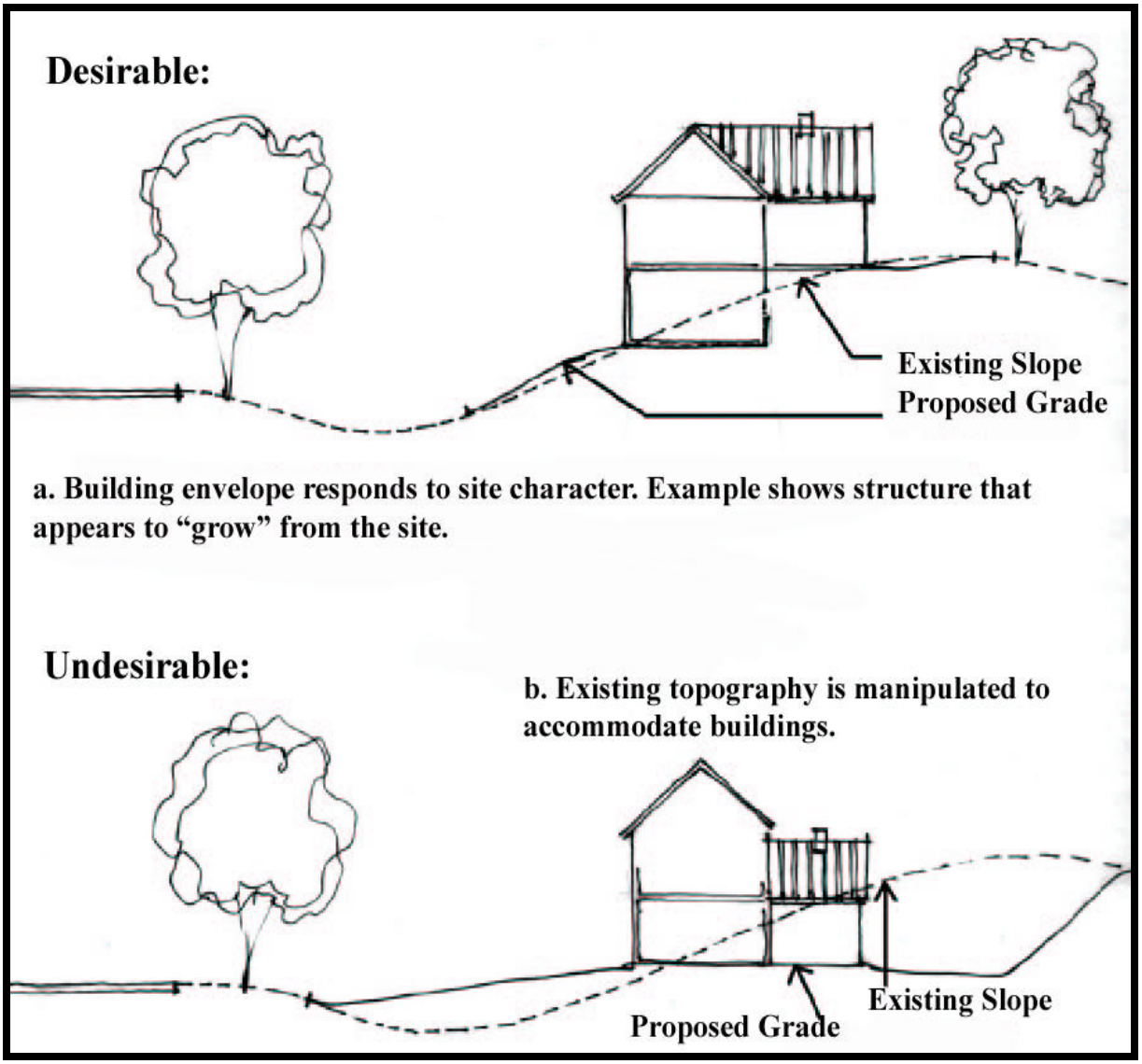


Figure 4.9 Siting of Structures

(2) The placement of building envelopes in relationship to streets and highways critically affects the character of a community. Varied setbacks provide a different experience than a street where buildings are placed uniformly along a street. Rural placement is historically deeper and more varied than in urban environments and therefore recommended.

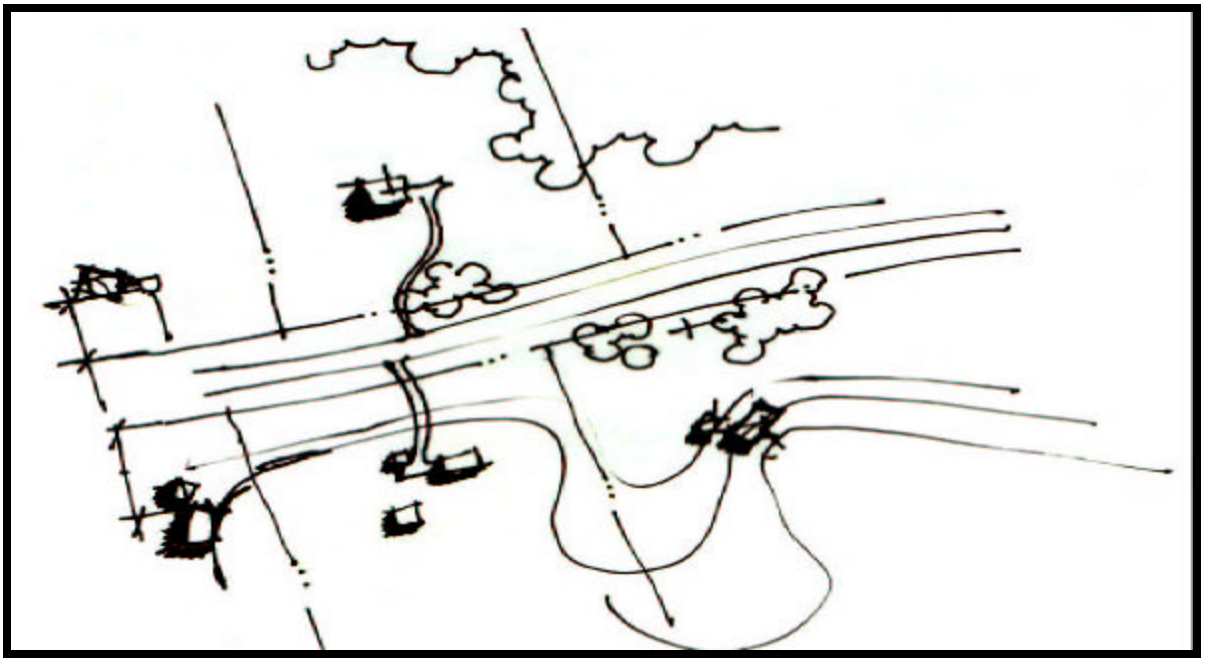


Figure 4.10 Rural Road with Varied Setbacks

(3) When building envelopes must be placed in open fields they should be oriented to and reflect the alignment and orientation of the site's natural features.

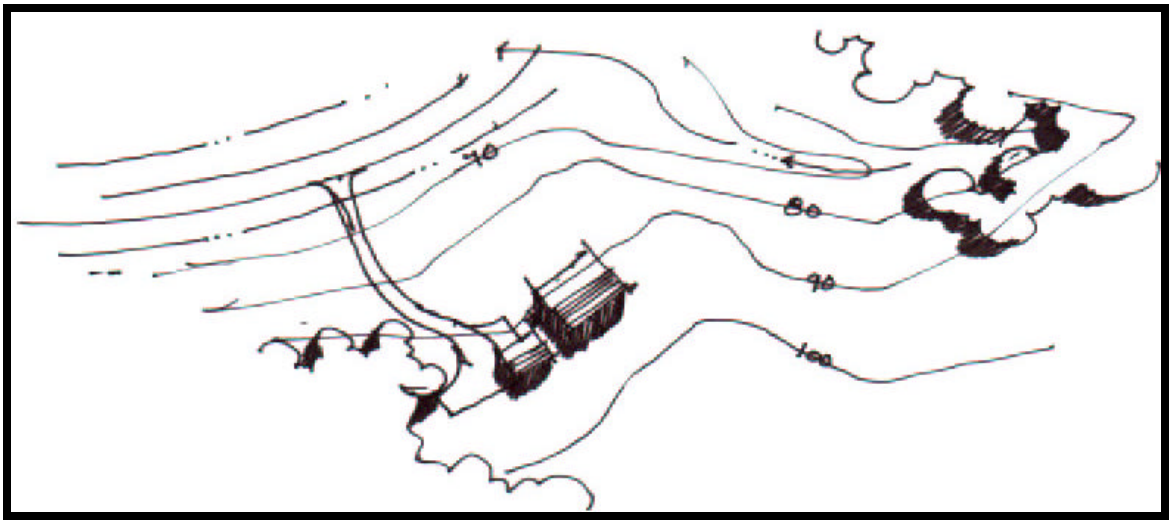


Figure 4.11 Orient Structures to Align with Topographic Character of Land

(4) Site building envelopes so that future buildings will be screened by treetops and crest lines of hills as seen from public places and roads. Use vegetation as a backdrop to reduce the prominence of the structure. Wherever possible, open up views by selective cutting of small trees and pruning lower branches of large trees, rather than by clearing large areas or removing mature trees.

(5) Group building envelopes in clusters or tuck them behind tree lines or knolls rather than spreading them out across the landscape in a "sprawl" pattern.

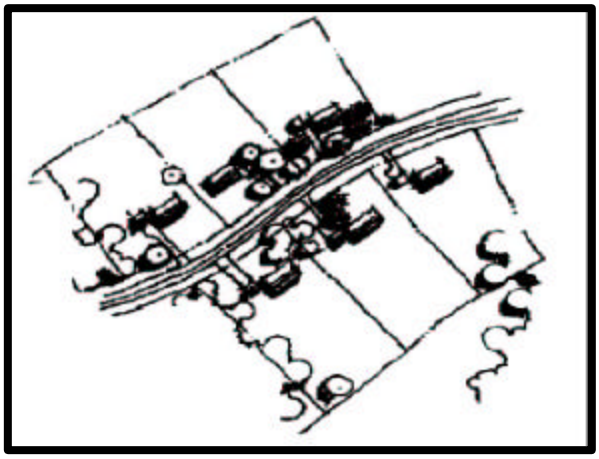


Figure 4.12.a Neighborhood Cluster

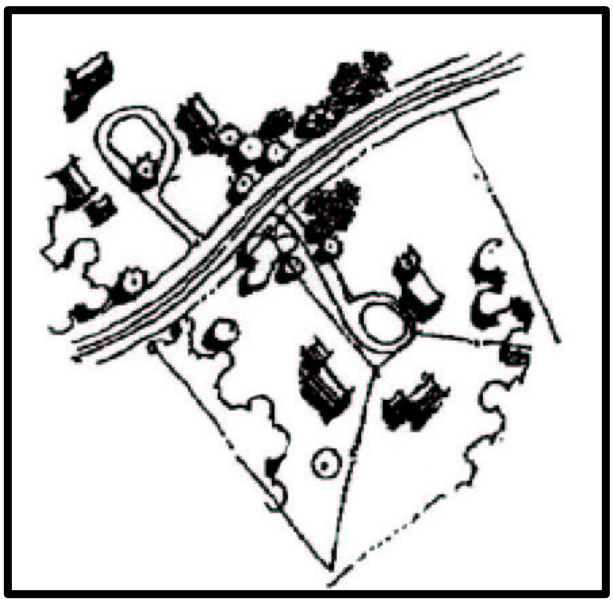


Figure 4.12.b Hamlet Cluster

(6) The dominant visual context from the rural roads should be of natural and agricultural features, with structures visually subservient. Typically development should be interior lot development with 70 percent of the immediate highway view shed preserved.

(7) The following structural guidelines apply only to structures in conservation subdivisions, which are also located in architectural review districts. The intent in these areas is to have the mass and roof forms of structures contribute to the rural character of the development. These guidelines are examples of the preferred way to design and site uses but they should not considered the only acceptable solution.

(a) Massing of structures or structural elements influences rural character. Historically, rural buildings were often an assemblage of additions. These additions over time created a complexity of roof forms that have become icons associated with our rural agrarian environments.

(b) Rural roof form options include, but are not limited to, symmetrically pitched or hip roofs with or without gables and horse barn type roof ends.



Figure 4.13 Roof Forms

D. CIRCULATION SYSTEMS

Circulation systems are comprised of both vehicular and pedestrian systems. In general rural vehicular and pedestrian systems are curvilinear in alignment, a pattern that evolved out of historic systems following the lines of least resistance (e.g. stream corridors) following natural landforms. It is only in more urbanized conditions that roads and streets should take on geometric forms reflecting the built environments they move through.

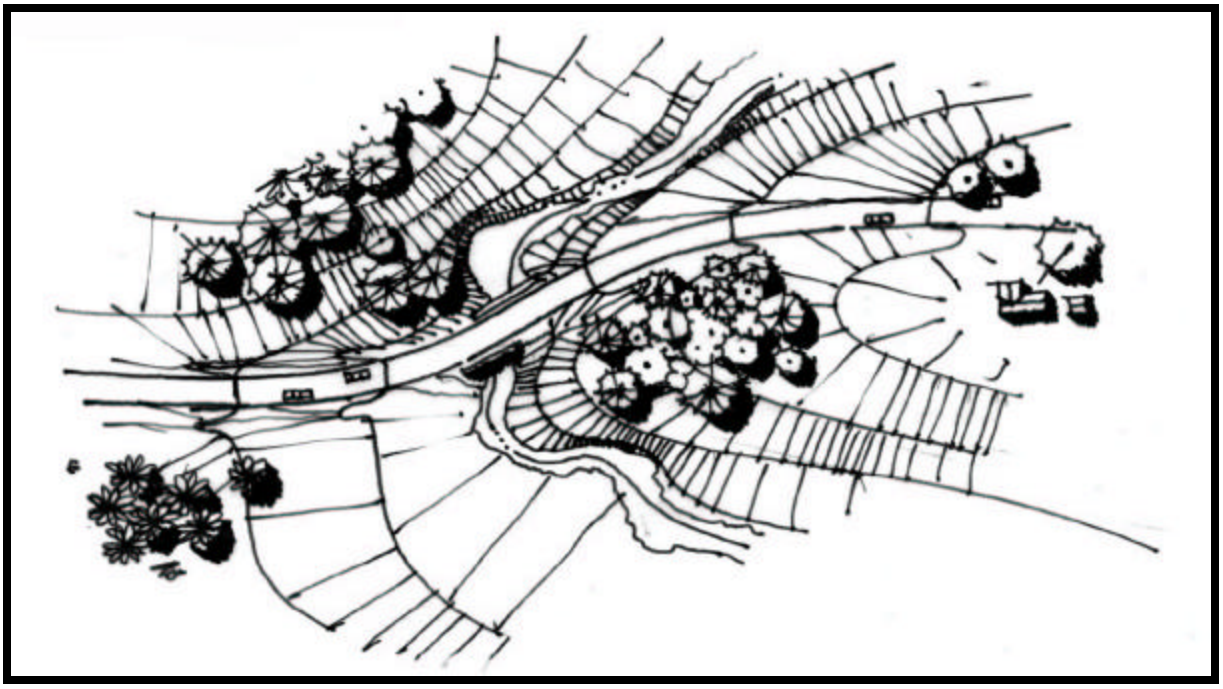


Figure 4.14 Curvilinear road alignments are created by following the line of least topographic resistance

(1) Whenever possible roads (and the resultant lot layout) should be planned and designed so the site's cultural and environmental features are preserved and enhanced.

(2) Vehicular and pedestrian circulation systems should retain and reuse historic farm roads and lanes. This guideline allows a development to build upon the site's historic context while minimizing clearing and disruption of the landscape. Care should be taken to apply this guideline only where its implementation would not destroy the historic lanes, hedgerows and stonewalls it was meant to preserve.

(3) Otherwise, vehicular and pedestrian circulation systems should be arranged to reflect the patterns of the site landform, vegetation, water bodies and vegetation massing.

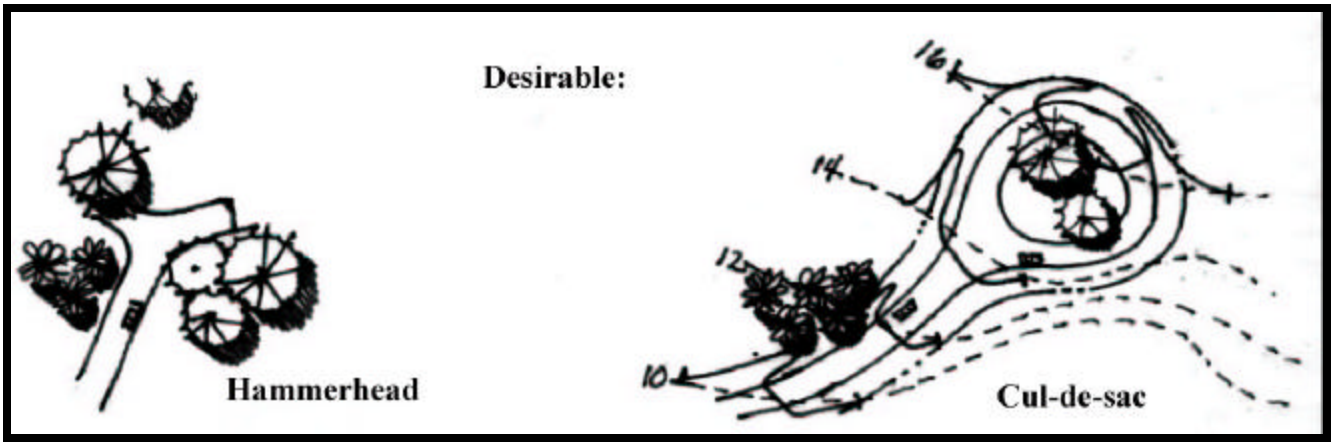


Figure 4.15.a Subdivision Roads: Form responds to and enhances natural rural character. Features such as streams, vegetation and landform are incorporated into the design.

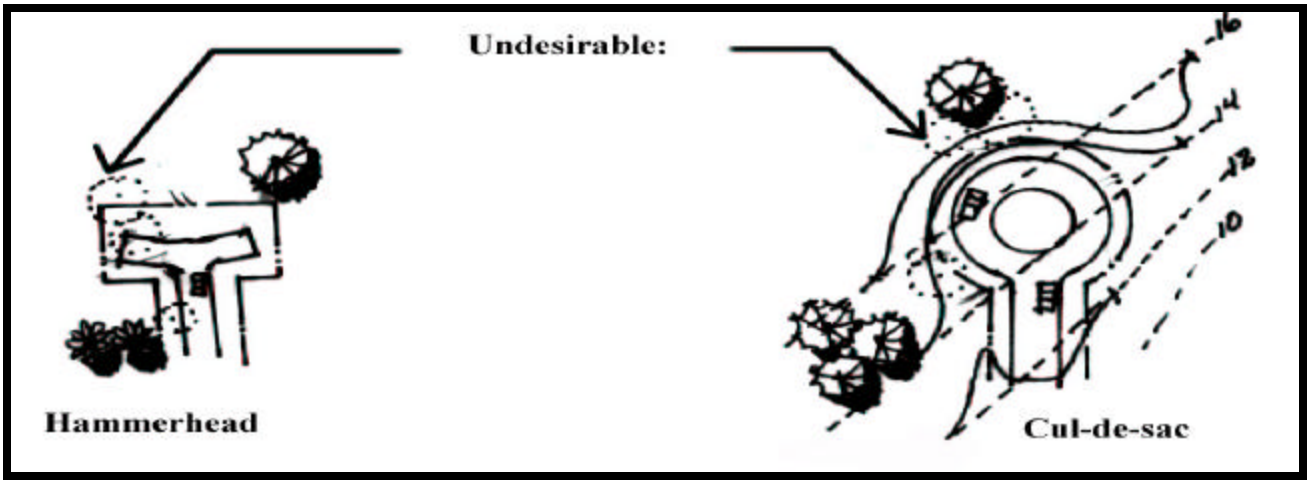


Figure 4.15.b Subdivision Roads: Design using arbitrary geometric forms that require the removal of existing vegetation and dramatic alteration of site character and/or topography.

(4) Minimize clearing of vegetation at the edge of the road, clearing only as much as is necessary to create a driveway entrance with adequate sight distance. Use curves in the driveway to increase the screening of buildings.

(5) Rural road edges are historically unprotected (e.g. no curbs or gutters, with only a shoulder for user safety.)

(6) Trail systems connecting destination areas should be comprised of flexible materials (e.g. asphalt, stone dust, and bark) and connect areas of concentrated development.

(7) Trails should be informal in nature and occur in rear yards.

(8) Sidewalks should only be used to connect facilities within areas of concentrated development.

240-4.5 CONSERVATION SUBDIVISION PROCEDURES

A. Review Process

The conservation subdivision process involves the following two steps:

- Preliminary Plat Review
- Final Plat Review

An applicant may request a sketch plan discussion with the Planning Board prior to the applicant making any formal subdivision submission.

(1) The submission of a sketch plan is an option available to the applicant. It is pre-application procedure. The applicant may exercise this option for a pre-application discussion for the purpose of seeking advice and direction.

(2) The sketch plan submitted need not be based upon surveyed data, but it should contain the following information:

(a) A vicinity map showing the location of the land to be subdivided and the boundaries of all tax parcels within 300 feet of the property.

(b) The tax map sheet, block and lot numbers, as available from the City Assessor's Office.

(c) Information regarding all known restrictions on the use of land including easements, covenants or zoning district classification.

(d) A sketch showing the approximate area of the project that might constitute constrained lands (wetlands, floodplains, steep slopes, etc) and the area that might be classified as developable lands.

(e) A concept plan to indicate what utilities would be available to service this subdivision.

(f) An estimate of the number of lots and/or units that might be accommodated within the projects.

(3) During the sketch plan discussion the applicant and the Planning Board may discuss the possible requirements of the project in relation to standards for street improvements, grading, drainage, sewerage, water supply, fire protection and similar aspects, as well as the availability of existing services and other pertinent information.

B. PRELIMINARY PLAT REVIEW

Review of a Preliminary Plat is mandatory for conservation subdivisions containing four or more lots.

(1) The Preliminary Plat application shall contain the following:

(a) A density calculation, as described in Section 240-4.2A.

(b) A conservation analysis as described in Section 240-4.2B including a proposed conservation analysis map.

(c) A schematic ("bubble") diagram showing which areas on the parcel would be developed and where land would be protected as permanent open space by a conservation easement. Such a diagram may, but need not, locate specific house sites, lot lines, or road alignments.

(d) Additional submission requirements available from the Planning Department.

(2) The Preliminary Plat shall be reviewed by the Planning Board, which shall hold a public hearing and make its conservation findings as required by Section 240-4.3A. The notice and hearing procedures shall be the same as those for a subdivision contained in Article II Section 1C(6) of the Subdivision Regulations. In order to approve a Preliminary Plat, the Planning Board must find that it complies with all relevant provisions of the Zoning Ordinance.

(3) SEQR compliance for the Preliminary Plat shall be the same as required by the General City Law, Section 32, for a Preliminary Plat application.

(4) Preliminary Plat approval shall expire after one year if Final Plat approval has not been granted. Upon an application, the Board may grant one six-month extension of this time requirement. The Planning Board may grant a time extension once and may grant it only upon the determination of what the Board, in its sole discretion, finds to be extraordinary conditions.

C. FINAL PLAT REVIEW

The procedure for Final Plat Review, including notice and hearing procedures, shall be the same as those for a subdivision plan contained in Article II Section 1C(6) of the Subdivision Regulations. In order to approve a Final Plat, the Planning Board must find that it is consistent with the Preliminary Plat and complies with all relevant provisions of the Zoning Ordinance.

(1) The Final Plat Review application shall contain the following:

(a) All the materials required for approval as provided in Article II, Section 1C of the Subdivision Regulations, unless waived by the Planning Board.

(b) Proposed conservation easement(s) for the protection of permanent open space land.

(c) A final land management plan for the permanent open space areas, to be incorporated into the conservation easement and made enforceable by the City.

(d) Evidence of compliance with all Planning Board requirements for any of the rural design and siting guidelines in Subsection 240-4.4 above.

(e) Other submission requirements as specified by the Planning Board.

(2) SEQR compliance for the Final Plat shall be the same as required by the General City Law, Section 32, for Final Plat approval.

(3) Final Plat approval shall expire after one year if the applicant has not complied with all conditions of the approval. Upon an application, the Board may grant one six-month extension of this time requirement. The Planning Board may grant a time extension once and may grant it only upon the determination of what the Board, in its sole discretion, finds to be extraordinary conditions.

240-4.6 RESERVED FOR FUTURE USE

CLUSTER DEVELOPMENT
FOR THE UR-1 AND SR-2 ZONING DISTRICTS

(Sections 4.7 through 4.12 apply only to the UR-1 and SR-2 Zoning Districts)

240-4.7 INTENT

A. The intent of this Article is to permit variation in conjunction with a proposed subdivision plat in lot size and housing type in suitable areas in order to encourage flexibility of design, to enable land to be developed in such a manner as to promote its most appropriate use, to facilitate the adequate and economical provision of streets and utilities and to preserve the natural and scenic qualities of open space, in accordance with Section 37 of the General City Law. This purpose is achieved by permitting a reduction in lot sizes required for the zoning district within which such development occurs while maintaining the imposed density limitations through the provision of open space.

B. It is the intent of this Article to promote energy conservation, harmonious architectural design, better use of existing topography and natural features, conservation of open spaces, recreational development, solar access and design, and to provide for economies inherent with cluster type development.

240-4.8 DELEGATION TO PLANNING BOARD

The power to approve, approve with modifications or disapprove cluster zoning in accordance with the intent established in Article 4.7 above, is granted to the Planning Board in accordance with Article 3, Section 37 of the General City Law.

240-4.9 PURPOSES

A. RESIDENTIAL AMENITY
   (1) High quality site design resulting from flexible site and lot standards.
   (2) Creation of open space usable for recreation, either active or passive.

B. CONSERVATION
   (1) Preservation of significant natural and manmade characteristics of the site.
   (2) Preservation of flood plains, slopes subject to erosion, and other environmentally sensitive areas.

C. EFFICIENT AND ECONOMIC USE OF LAND RESOURCES

D. COMPREHENSIVE LAND USE PLANNING
   (1) Coordination with City of Saratoga Springs Comprehensive Plan and other applicable County, State, Federal and Regional plans and programs.
   (2) Maintenance of the residential character of Saratoga Springs, while increasing the variety of housing opportunities available.
   (3) Development or redevelopment of land in a manner appropriate to the special characteristics of each site and present and future needs of the City.

240-4.10 GENERAL CONDITIONS (amended 8/3/99)

A. Clustering shall apply only to single family detached residential developments within the UR-1 or SR-1 residential zoning district where single family detached units are permitted. In no case will other housing types be permitted.

B. In determining the allowed density of a clustered subdivision, the Planning Board shall require the submission of a conventional subdivision plan showing the maximum number of lots that could reasonably be approved in conformance with the zoning and subdivision regulations for the district the project is proposed, and taking into account natural resource constraints such as slopes and wetlands. The number of lots that can be developed in accordance with such a plan shall be known as and constitute the base density for the subdivision.

C. Density of residential units shall not exceed the base density as calculated in Section 240-4.10B above, except that the Planning Board may allow up to 20%

greater density where it finds that:

(1) The project provides exceptional open space or public recreation benefits. Examples of such benefits include the provision of a new recreational opportunity available to the public in an area where there has not been such an opportunity; the provision of public access to an important natural or park area; and the permanent protection of an important environmental resource.

(2) The project provides a desirable mix of affordable housing. Examples of such a mix include the provision of at least 20% of the housing mix below the median housing price. Such houses or lots shall be set aside for purchase by low and moderate income households, as those terms are currently defined by the City's Community Development Office. The Planning Board may establish such other conditions with respect to the purchase and occupancy of affordable housing as it deems appropriate.

The decision to allow such bonus shall be at the sole discretion of the Planning Board.

D. Clustering may be applied to subdivisions of any size.

240-4.11 Application Procedures (amended 8/3/99)

A subdivider may request the use of this section at any time during the subdivision review process. The process and procedures shall be identical to those found in the current edition of the Subdivision Regulations of the City of Saratoga Springs. The Planning Board shall review modifications in dimensional requirements of the City zoning requirements according to the provisions of Section 37 of the General City Law.

240-4.12 STANDARDS GOVERNING CLUSTERING (amended 8/3/99)

Any average density development considered shall conform to the following standards which are to be regarded as minimum requirements:

A. The Planning Board shall determine that a cluster development will not be detrimental to the health, safety or general welfare of persons residing in the vicinity, or injurious to property or improvements in close proximity, and that the proposed development is in conformity with the objectives of the City's Comprehensive Plan, and that the gross density will be no greater than if the tract were developed in accordance with the existing zoning requirements.

B. When such development is proposed adjacent to any existing residence or residential area, a suitable buffer area, as the Planning Board determines, but at least the same distance as the minimum rear or side yard setback in the district in which the project is located, shall be left between the closest lot line of any lot in an existing residential development area or a conventionally platted residential map that has been filed with the Saratoga County Clerk, and the closest structure

in the residential cluster development contained on a clustered lot.

C. There shall be no other setback requirements except as specified in 240-4.12B. above. Zero lot lines are allowed.

D. The development shall have dedicated, as a minimum, for open space purposes the same percentage of the entire tract as that by which the lots have on the average been reduced. The area dedicated for open space purposes, including playgrounds and parks, shall be in a location and shape approved by the Planning Board during subdivision review and in addition, the Planning Board, as a condition of approval, may establish such conditions on the ownership, use and maintenance of such open space lands as it deems necessary to assure the preservation of such lands for their intended purpose.

E. Lots in a cluster development may be of any size.

F. All the land not contained in the lots or the road right-of-way, if provided, shall be contiguous and of such size and shape as to be usable for recreation, either passive or active.

(1) Such land may:

(a) Be dedicated to the City, provided the City is willing to accept such dedication;

(b) Be transferred to a not-for-profit corporation approved by the Attorney General's Office, pursuant to Section 352(e) of the General Business Law, comprised of owners of lots within the development;

(c) Be transferred to a bona fide charitable not-for-profit corporation whose purposes include the acceptance of land for open space, conservation, protection of environmentally sensitive areas, or the like.

The applicant shall notify the Planning Board of its intention prior to the grant of final subdivision approval, and shall supply the Planning Board with such reasonable documentation that it may request evidencing its intentions and indicating the ability and/or willingness on the part of the proposed recipient to receive such lands for such purpose. In addition, as appropriate, the applicant may be required by the Planning Board to incorporate into the deeds of all property within the development a clause giving to the owners an easement or other interest in such open land which shall be used for recreation or other like purposes and, further, provide the City of Saratoga Springs with an easement providing for the same, which may be enforced by the City to insure the continued use of the property as common area. No structure save those incidental to the recreational functions shall be permitted thereon.

(2) Common open space shall, unless otherwise waived by the Planning

Board, be directly accessible to each residential unit.

(3) The open space lands shall be subject to taxation, unless deeded to the City or to a qualified charitable corporation.

G. In the event that the organization established to own and maintain common property, or any successor organization, shall fail to maintain the common property in reasonable order and condition in accordance with the plan, the City of Saratoga Springs may assume responsibility for such maintenance and assess the cost equally against the properties within the development.

H. The developer shall be responsible for maintaining open space until such time as it is legally accepted by the City, Homeowner's Association or other designated entity.

Appendix H

Openspace/Conservation Model Ordinances

Conservation Zones (Town of Ithaca, NY)*

Land Conservation Regulations (Town of Livonia, NY)

**includes provisions for steep slopes, cluster subdivision, vegetative riparian buffers, sensitive habitats, wildlife corridors, timber harvesting and scenic views.*

Town of Ithaca, NY
Tuesday, January 13, 2015

Chapter 270. ZONING

Article V. Conservation Zones

§ 270-10. Purpose.

A. It is the purpose of the Conservation Zone to preserve the outstanding natural features in certain areas of the Town, as described in the Town of Ithaca Comprehensive Plan, as amended from time to time, and to provide a regulatory framework through which development can occur with minimal negative environmental impact in these areas. Among the natural values and ecological importance of these areas are their diversity as a plant and wildlife habitat, their existence as biological corridors, their importance for natural drainage features, their scenic views and rural character, and their importance as an educational and recreational resource. In addition, certain lands in the Conservation Zones contain large areas of steep slopes, wetlands, highly erodible or poorly drained soils and, in one instance, the City of Ithaca water supply, which must be taken into consideration in planning for future development.
[Amended 1-11-2010 by L.L. No. 1-2010; 3-12-2012 by L.L. No. 3-2012]

B. It is a further purpose of the Conservation Zone to preserve existing areas of contiguous open space, prevent unnecessary destruction of woodland areas, preserve natural stormwater retention and water quality functions, preserve existing and potential agricultural land and promote appropriate development densities and flexibility of design and development of land. Developers should be encouraged to use mechanisms to accomplish these objectives. Such mechanisms could include enlarged buffer areas, conservation easements, deed restrictions, and public or semipublic land dedications.
[Amended 1-11-2010 by L.L. No. 1-2010]

C. Certain of the areas included in Conservation Zones, in recognition of their natural and ecological significance, have been designated by the Tompkins County Environmental Management Council as Unique Natural Areas. It is a further purpose of this Conservation Zone to preserve the natural resources and scenic beauty of the areas to promote tourism as an important economic benefit to the Town of Ithaca.

§ 270-11. Permitted principal uses.

In a Conservation Zone, no building shall be erected or extended and no land or building or part thereof shall be used for other than any of the following purposes:

A. A one-family dwelling, except a mobile home, to be occupied by no more than:

   (1) One family, or

   (2) One family plus no more than one boarder, roomer, lodger or other occupant.

B. A two-family dwelling provided that:

   (1) Each dwelling unit is occupied by no more than one family; and

   (2) The floor area of the second dwelling unit is not more than 50% of the floor area excluding the basement of the primary dwelling unit except where the second dwelling unit is constructed entirely

within the basement area, it may exceed 50%.

C. Garden, nursery or farm.

D. Roadside stand or other structure, not exceeding 500 square feet of enclosed space, for the display and sale of farm or nursery products related to farming and as a seasonal convenience to the owner or owners of the land. Any such stand shall be located a minimum of 30 feet from the street line, in such a manner as to permit safe access and egress for automobiles, and parking off the highway right-of-way.

E. Forest management and other forest resource uses. Timber harvesting shall be subject to the requirements in § **270-22L**.
[Amended 3-12-2012 by L.L. No. 3-2012]

F. Public water supply.

G. Small wind energy facilities, subject to the limitations on small wind energy facilities set forth in § **270-219.4**.
[Added 8-11-2008 by L.L. No. 13-2008]

§ 270-12. Principal uses authorized by special permit only.

The following uses are permitted in a Conservation Zone, but only upon receipt of a special permit for same from the Planning Board in accordance with the procedures set forth in this chapter:

A. Church or other places of worship.

B. Public, parochial and private schools, public library, public museum, day-care center, nursery school, hospital, and any institution of higher learning including dormitory accommodations.
[Amended 6-12-2006 by L.L. No. 9-2006]

C. Publicly owned park or playground, including accessory buildings and improvements.

D. Fire station or other public building necessary to the protection of or the servicing of a neighborhood.

E. Roadside stand or other structure, exceeding 500 square feet but not more than 2,500 square feet of enclosed space, for the display and sale of farm or nursery products related to farming and as a seasonal convenience to the owner or owners of the land. The majority of the products sold at such stand shall be, or be derived from, products produced on the farm on which the roadside stand is located. Any such stand shall be located a minimum of 30 feet from the street line, in such a manner as to permit safe access and egress for automobiles, and parking off the highway right-of-way.

F. Bed-and-breakfast.

G. Equestrian facility, provided that adequate provision is made to prevent nuisance to adjoining properties and provided:
[Added 8-1-2005 by L.L. No. 7-2005]

(1) The lot size is at least two acres (three acres if public sewers are not available);

(2) There is a nonoccupied and unused buffer of at least 50 feet around the perimeter of the lot;

(3) Any building in which farm animals are kept shall be at least 100 feet from any lot line or street line; and

(4) No manure shall be stored within 100 feet of any lot line or street line.

H. Deposit, removal or moving of earth, fill or related products consisting of more than 50 cubic yards of material on any parcel in any one year, as described and regulated in § **270-217** of this chapter.
[Added 3-12-2012 by L.L. No. 3-2012]

§ 270-13. Additional requirements for special permit.

The application for a special permit for any of the uses set forth in the immediately preceding section shall be made to the Planning Board. Any required site plan shall conform to the requirements of, and be subject to the procedures contained in Article **XXIII**. No building permit shall be issued unless the proposed structure is in accordance with the final site plan approved by the Planning Board. In determining whether to grant a special permit, the Planning Board shall consider the matters set forth elsewhere in this chapter and in addition shall grant a special permit for any of the above uses only if it can be demonstrated that:

A. The proposal is consistent with the goals and objectives of the Conservation Zone, as enumerated in the purpose section relating to this zone;

B. The proposal provides adequate measures to control stormwater runoff and minimize erosion and sedimentation;

C. The project includes adequate measures to protect surface and groundwaters from direct or indirect pollution; and

D. Off-street parking facilities are adequately buffered to minimize visual and noise impacts on surrounding areas, and are designed to minimize the increase in impervious surfaces on the site.

§ 270-14. Permitted accessory buildings or uses.

The following accessory buildings or uses are permitted as of right in a Conservation Zone:

A. Accessory buildings customarily incidental to the above permitted uses.

B. Home occupations, subject to the limitations on home occupations set forth in § **270-219.2**.
[Amended 2-12-2007 by L.L. No. 1-2007]

C. Wildlife rehabilitation operation as defined and regulated under six NYCRR Part 184, provided that no noise, dust, disorder, or objectionable odor is experienced (as a result of that use) beyond the boundary lines of the property where such use is conducted, and that no more than three additional persons not residing on the premises may be employed.

D. Day-care homes, family day-care homes, and group family day-care homes.

E. Adult day-care facilities serving no more than four clients at any one time.

F. The keeping of household pets in a dwelling unit or other location adjacent to or accessory to a dwelling unit (e.g., outside doghouse, etc.) provided that no more than three household pets shall be kept outside of dwelling units unless a greater number is authorized by special approval of the Zoning Board of Appeals.

G. Amateur radio facilities, subject to the limitations on amateur radio facilities set forth in § **270-219.3**.
[Added 8-13-2007 by L.L. No. 7-2007]

H. Small wind energy facilities, subject to the limitations on small wind energy facilities set forth in § **270-219.4**.
[Added 8-11-2008 by L.L. No. 13-2008]

I. Timber harvesting, subject to the requirements in § **270-22L**.
[Added 3-12-2012 by L.L. No. 3-2012]

§ 270-15. Accessory buildings and uses authorized by special approval only.

The following accessory buildings or uses are permitted in a Conservation Zone, but only upon receipt of a special approval for same from the Board of Appeals in accordance with the procedures set forth in this chapter:

A. Elder cottages.

B. A second dwelling unit in a building other than the principal building, provided that:

(1) All of the general criteria set forth elsewhere in this chapter for the issuance of a special approval have been satisfied;

(2) The location of the second dwelling, and the building in which it is located, does not adversely impact in any significant manner the adjoining neighbors;

(3) The building containing such second dwelling is located at least 50 feet from any side boundary of the lot, and is not constructed in any required front yard;

(4) There is adequate off-street parking for the proposed number of occupants, including occupants of both the principal building and the dwelling unit for which special approval is sought;

(5) The floor area of the second dwelling (inclusive of floor area on all floors dedicated to such dwelling) does not exceed 50% of the floor area of the primary dwelling on the lot;

(6) The second dwelling is located in a building that is accessory to the principal dwelling;

(7) The building containing the primary dwelling does not contain more than one dwelling; and

(8) There are no elder cottages or other buildings on the lot containing dwellings other than the building containing the primary dwelling and the building for which special approval is sought.

§ 270-16. Height limitations.

Except as may be specifically otherwise authorized in this chapter, in Conservation Zones no nonagricultural building shall exceed 38 feet in height from lowest interior grade nor 36 feet in height from lowest exterior grade, and no nonagricultural structure other than a building shall exceed 30 feet in height. Nonagricultural accessory buildings shall in no case exceed 15 feet in height.

§ 270-17. Yard regulations.

Except as may be specifically otherwise authorized in this chapter, in Conservation Zones yards of at least the following dimensions are required:

A. Front yard: Not less than the average depth of the front yards of building immediately adjacent. However, except for roadside stands authorized by § **270-11**, the front yard shall not be less than 50 feet nor need it be greater than 75 feet in depth.

B. Rear yard: Not less than 200 feet in depth.

C. Side yards: Each not less than 50 feet.

D. Greater yards: Notwithstanding the foregoing, any special yard requirements for specific uses or buildings set forth elsewhere in this chapter shall, if more restrictive, supersede the above yard provisions.

E. Buffer areas: The foregoing requirements may include any required buffer areas and shall not be in addition to any required buffer areas.

F. Accessory buildings: In Conservation Zones, accessory buildings other than garages, and other than woodsheds meeting the requirements of Subsection **H** below, may not occupy any open space other than a rear yard. The total lot area covered by nonagricultural accessory buildings (including garages and

woodsheds) may not occupy more than 1,000 square feet of any required rear yard. Accessory buildings other than garages shall be not less than 50 feet from any side or rear lot line.
[Added 8-13-2012 by L.L. No. 11-2012]

G. Garages: An attached or detached garage may occupy any yard provided that it shall be no less than 50 feet from the front property line, no less than 50 feet from a side line, and no less than 50 feet (detached garages) or 200 feet (attached garages) from a rear line. All detached garages in the aggregate shall not exceed a total of 600 square feet in size. Detached garages shall be included in the calculations of nonagricultural accessory buildings that, in the aggregate, may not occupy more than 1,000 square feet of any required rear yard. Notwithstanding the foregoing, the following shall apply:
[Added 8-13-2012 by L.L. No. 11-2012]

(1) A one-story detached garage that serves dwellings on two separate lots may be built across a common lot line with a party wall by mutual agreement between adjoining property owners, provided that there is at least one garage bay on each lot, and further provided that the garage meets the front property line setback requirement above.

(2) Where the average natural slope of a lot exceeds 8% rise or fall directly from the street line, a one-story detached garage capable of housing not in excess of two cars may be located in the front or side yard not less than five feet from said street line upon receiving a special approval from the Board of Appeals.

H. Woodsheds: A woodshed which has no more than 100 square feet in floor area and the highest point of which is no more than 10 feet above ground level may occupy a side yard, provided that the total storage space of all woodsheds in a side yard shall not be more than 1,000 cubic feet. A woodshed in a side yard shall be not less than 50 feet from any side lot line.
[Added 8-13-2012 by L.L. No. 11-2012]

§ 270-18. Lot coverage.

The maximum building area shall not exceed 10% of the lot area. Projections described in § **270-224** are not to be included in computing the percentage. For the purposes of this zone, roads, driveways, parking areas, and other paved areas shall be considered buildings in computing the percentage of lot coverage.

§ 270-19. Size and area of lot.

Lots in Conservation Zones shall meet the following minimum requirements:

A. Minimum lot area shall be at least seven acres; and

B. Minimum lot width at the street line shall be 300 feet; and

C. Minimum width at the maximum required front yard setback line (75 feet from the street line) shall be 300 feet; and

D. Minimum depth from the street line shall be 450 feet.

§ 270-20. Clustering.

The Planning Board is hereby authorized to require clustering of residential units as outlined in Chapter **234**, Subdivision of Land, of the Code of the Town of Ithaca, where clustering will further the purposes of the Conservation Zone, subject to the requirement with respect to the Conservation Zone along Six Mile Creek, that where feasible, on the southwestern side of Six Mile Creek (i.e., on the Coddington Road side of the Conservation Zone), dwelling units shall be clustered between the former railroad grade and Coddington Road, in order to preserve the natural characteristics and scenic views of the lands adjacent to Six Mile Creek and the

city watershed properties. In such cases, the same number of dwelling units that could have been built on that portion of the parcel between the former railroad grade and Six Mile Creek under the above density requirements when feasible shall be transferred to the portion of the parcel between the former railroad grade and Coddington Road. This provision shall not apply to parcels which are situated entirely between the former railroad grade and Six Mile Creek.

§ 270-21. Parking.

Parking requirements shall be as set forth in § **270-227**.

§ 270-22. Additional requirements and restrictions.

A. The following activities are specifically prohibited in Conservation Zones:

(1) The importation for dumping or disposal of snow or ice collected from roadways or parking lots into or within 200 feet linear distance of any wetland or watercourse carrying water six months out of the year.

(2) The location of buildings or structures on slopes of 25% or greater, with a minimum horizontal slope length of 25 feet.

B. No buildings, structures, paved areas, or storage of construction equipment or machinery shall be located within 50 feet of the center line of any watercourse carrying water six months out of the year, or within 200 feet of the one-hundred-year-flood boundary of any body of water or watercourse identified as "Zone A" on any Flood Insurance Rate Map for the Town of Ithaca, New York, prepared by the Federal Emergency Management Agency, (or any other generally recognized map of one-hundred-year-flood zones) within any Conservation Zones.

(1) In the case of residential subdivisions, whether conventional or cluster, the no disturbance zone as defined above shall be increased by up to 50% if the Planning Board determines that such an increase is necessary to protect water quality or to minimize the impacts of erosion and sedimentation.

(2) Unless otherwise authorized by the Planning Board, no disturbance as listed above shall be located within 100 feet linear distance of any wetland. During the subdivision or site plan approval process, where there is evidence of a wetland, the Planning Board may require a wetland delineation study to determine the potential impacts of development or disturbance on said wetland. For the purposes of this section, wetlands shall mean all wetlands, as defined in either state or federal legislation (whichever is more restrictive) governing regulation of wetlands, of an area of more than 1/10 of an acre.

C. With respect to the Conservation Zone along Six Mile Creek, no buildings, structures, or storage of construction equipment or machinery shall be located within 100 feet of the center line of the South Hill Recreation Way.

D. The storage and land application of manure for agricultural purposes shall follow reasonable agricultural practices. Minimum conditions for storage of solid manure are a pad of concrete and a leachate collecting system or other system reasonably equivalent in its protection of the surrounding environment. The manure storage system should be designed to prevent animal waste from entering any stream or water body.

E. The following apply to vegetation and landscaping:

(1) Existing native vegetation shall be maintained to the extent practicable, with conserved areas clearly defined on proposed and approved site plans and subdivision plats. Timber harvesting shall be subject to the requirements in Subsection **L** below.
[Amended 3-12-2012 by L.L. No. 3-2012]

(2) When landscaping is required by the Planning Board to enhance buffer areas, to replace existing vegetation, or otherwise, native plant materials should be used to the extent practicable.

(3) Nonnative invasive species shall not be planted and, if present on a site, they may be removed by the site owner or authorized agent.
[Added 3-12-2012 by L.L. No. 3-2012]

F. Scenic views, in particular those with viewing points from adjacent roads (and, in the case of the Conservation Zone along Six Mile Creek, from Six Mile Creek and the gorge) should be preserved using practices such as the following:

(1) Avoid the siting of buildings or structures on ridgelines or hilltops. Buildings should be sited below the crest or ridgeline of hills to preserve a natural topographic and vegetative profile.

(2) Retain existing vegetation to the extent practicable.

(3) Retain existing stone walls, fences and other features in open meadows.

(4) Regrading should blend in with the natural contours and undulations of the land.

(5) Buildings proposed to be located within significant viewing areas should be screened and landscaped to minimize their intrusion on the character of the area. Building materials and color schemes should harmonize with their setting and be compatible with neighboring land uses.

(6) Where possible, buildings and structures should be located on the edges of open fields and in wooded areas to minimize visual impacts.

(7) Visibility of proposed buildings or structures from public trails within Conservation Zones should be considered so as to minimize visual intrusion on views from the public trails.

G. Wildlife habitats and biological corridors should be preserved. Open space linkages should be encouraged to accomplish the above. Open space and conservation easement areas shall be designed with massing and linking as guiding principles. Open space and conservation areas both on and off site should be as contiguous as reasonably possible.

H. Roads and driveways should follow existing contours to the extent practicable to minimize the impact of cuts and fills. The number of driveways accessing public streets shall be kept to a minimum. The appropriate use of common driveways is encouraged.

I. The following shall apply to drainage:

(1) The Planning Board may require the preparation and submittal of a stormwater management plan, to be approved by the Town Engineer, for proposed special approval uses and for proposed subdivisions.

(2) Existing natural drainageways should be retained where possible.

(3) In cases where a retention basin will be required, a landscaping plan shall be prepared and submitted for the Planning Board's approval. Basin landscaping materials that enhance wildlife habitat shall be used to the extent practicable.

J. The following shall apply to lighting:

(1) Street lighting shall be provided only where site-specific safety conditions warrant.

(2) Where street lighting is required, its location, type, and intensity shall be subject to the Planning Board's review and recommendation to the Town Board for approval.

(3) All approved street lighting must comply with the requirements of the Outdoor Lighting Law, Chapter **173** of the Town of Ithaca Code.
[Added 10-16-2006 by L.L. No. 12-2006]

K. Whenever a subdivision of land or a site plan is proposed in a Conservation Zone, the Planning Board may

require that the nonbuildable areas listed above, including wetlands, slopes 25% or greater, and streams/watercourses and setbacks, be shown on the preliminary and final subdivision plats and site plans. [Amended 3-12-2012 by L.L. No. 3-2012]

L. Timber harvesting.
[Added 3-12-2012 by L.L. No. 3-2012]

(1) No timber harvesting shall occur without a timber harvesting permit issued by a Code Enforcement Officer, unless such timber harvesting is exempted from this permit requirement by Subsection **L(2)** below.

(2) The following shall not require a timber harvesting permit:

(a) Reasonable site clearing preparatory to construction of a building or other structure for which a building permit has been issued, provided such site clearing does not exceed one acre.

(b) Site clearing preparatory to construction of a building or other structure pursuant to a site plan approved by the Planning Board, provided such site clearing does not exceed one acre.

(c) Clearing of land for rights-of-way or utilities.

(d) Clearing and maintenance of land for agricultural purposes (including timber operations that constitute a farm operation, as defined by § 301 of the New York Agriculture and Markets Law), where the principal use of the land is as a farm and the land is located within a county agricultural district created under the provisions of Article 25-AA of the New York State Agriculture and Markets Law.

(e) The harvesting of evergreens specifically planted for Christmas trees.

(f) Maintenance of trees or property through the pruning or topping of trees.

(g) Cutting, removing or harvesting trees to prevent or treat disease, to control invasive species, or to remove trees that are dead or damaged or present safety or health hazards.

(h) Any other cutting, removal or harvesting of timber from a parcel in quantities less than 10 standard cords of wood, or 5,000 board feet, as measured by the International 1/4 Inch log rule described in the U.S. Forest Service's National Forest Log Scaling Handbook (effective October 30, 2006), in any one year.

(3) Submission requirements for timber harvesting permit. An applicant for a timber harvesting permit shall submit a forest management plan prepared by a forester who is certified by the Society of American Foresters or such successor organization as is later created, a cooperating consulting forester with the New York State Department of Environmental Conservation, or a qualified forester approved by the Town Code Enforcement Officer. Such forest management plan shall demonstrate compliance with all standards contained in Subsection **L(5)** below as well as applicable timber harvesting guidelines issued by the New York State Department of Environmental Conservation. In addition, the application shall include the following:

(a) A description of the land on which the proposed timber harvest will occur, including deed and filed map references, lot numbers, and tax parcel numbers.

(b) The full name and address of the owner and of the applicant, the names and addresses of their responsible officers if any of them are corporations, and written permission from the owner if the applicant is not the owner.

(c) The signature of the professional forester responsible for the forest management plan and the application.

(d) A description of trees to be cut, the percentage of trees to be cut, and the methods of cutting and removing trees, and a plan to preserve healthy, mature trees to maintain a sustainable stand of woodland, which plan shall identify ecologically valuable trees of native species to be

conserved throughout the harvesting operation.

(e) A description of any locally or regionally scarce plants or rare or endangered plant species as designated by the New York State Department of Environmental Conservation located within any areas proposed to be disturbed by the timber harvesting operations.

(f) The location of any access to a paved or unpaved road shown on the most recent version of the Town's Official Map, and the location and nature of all existing and proposed logging roads, all staging areas for loading equipment and logs, and all other disturbances to the site as part of the timber harvesting operation.

(g) All wetlands, watercourses, topography at five-foot intervals, slopes identified as unstable by the professional forester, and slopes exceeding 25%.

(h) A plan for cleanup of timber harvesting areas, staging areas, and landings upon completion of the harvesting operations.

(i) A plan for restoration of timber harvesting areas, staging areas, and landings to a natural state upon completion of the harvesting operations.

(j) If the professional forester determines that engineering controls are necessary to prevent erosion and sedimentation, identification of the location and type of such engineering controls.

(k) Submission of any stormwater pollution prevention plan or simple erosion and sedimentation control plan required by Chapter **228**.

(l) Such other information as may reasonably be required by the Code Enforcement Officer.

(m) Submission of the application fee, which shall be set from time to time by Town Board resolution.

(4) On-site requirements for timber harvesting permit application. In addition to the application information required in Subsection **L(3)** above, the applicant shall take the following actions on-site where a timber harvest is proposed:

(a) Mark all trees selected for harvest. Any specimen trees identified for protection shall also be appropriately marked.

(b) Flag the line designating the protected one-hundred-foot buffer for streams and wetlands [See Subsection **L(5)(b)** below] The wetland buffer shall be flagged by a qualified wetland scientist.

(5) Standards for forest management plans and their implementation.

(a) No clear-cutting shall be permitted unless specifically shown in the approved forest management plan, in which case a reforestation plan shall also be included in the forest management plan. The replanting shall not include nonnative invasive species. Replanting of trees pursuant to such reforestation plan shall be secured by a performance bond, as provided in Subsection **L(6)** below.

(b) For parcels that are 10 acres or less, clear-cutting shall not occur on more than 20% of the parcel. For parcels that exceed 10 acres, clear-cutting shall not occur on more than 20% of 10 acres on the parcel, and clear-cutting shall not occur on more than 10% of the balance of the acreage on the parcel.

(c) No timber harvesting or logging road construction shall occur within 100 feet of any wetland, or of any stream protected by the New York State Department of Environmental Conservation, except as necessary to cross a stream, where such stream crossing is permitted by the New York State Department of Environmental Conservation. In addition, timber harvesting and logging road construction must comply with all other applicable zoning requirements, including any more restrictive stream setback requirements.

(d) No timber harvesting or logging road construction shall occur on any steep slope equal to or exceeding 25%. Slopes of 25% or greater shall be determined by using one of the following

resources or methods, as appropriate:

[1] On-site measurement of slopes by registered professional engineers, surveyors, or landscape architects, using accepted engineering practices.

[2] Use of two-foot topographic data created with the use of Light Detection and Ranging (LIDAR)-derived information.

[3] United States Geological Survey 7.5 Minute Quadrangles.

[4] Other resources or methods that Town staff determine are of similar or greater accuracy than those listed above.

(e) Best management practices for stormwater management shall be required to prevent runoff of mud, debris, and silt-laden stormwater from the site to streams, public roads, or the shoulders or drainage systems of public roads.

(f) No tree cutting, harvesting or removal, other than for exempt operations, shall take place between the hours of 6:00 p.m. and 7:00 a.m. local time.

(g) All trees shall be felled so that no trees or debris falls on any adjoining property or on any roads not owned or controlled by the applicant.

(h) All stumps shall be cut off as low as possible and shall, in general, be no higher than the diameter of the tree trunk when measured on the uphill side of the stump.

(i) Landing and loading areas shall be located as close as possible to the timber harvesting operations and shall be smoothed to remove all ruts and debris at the conclusion of the timber harvesting operation.

(j) The timber harvesting operation shall comply with all applicable erosion, sediment control, and stormwater management regulations, including any stormwater pollution prevention plans and simple erosion and sedimentation control plans.

(k) Equipment used for timber harvesting shall be as small and nondisruptive to the forest as is economically feasible and safe.

(l) Logging roads and skid trails shall be designed to avoid erosion and stream sedimentation. The forest management plan shall ensure the proper location of such roads and skid trails and, where necessary, the use of appropriate engineering controls.

(m) Cutting or clearing of any locally or regionally scarce plants or rare or endangered plant species as designated by the New York State Department of Environmental Conservation is permitted only upon receipt of a special permit for same by the Planning Board in accordance with the procedures set forth in this chapter.

(n) Slash and/or logging debris shall not be burned on-site.

(6) Performance bond. All site restoration required by the forest management plan, including replanting of trees pursuant to a reforestation plan, removal of stumps and debris, restoration of landing and loading areas, and remediation of any damage to retained natural vegetation, roads, or drainage systems, shall be secured by a performance bond. The performance bond shall be furnished in accordance with the procedures specified in § 277 of the Town Law of the State of New York relating to subdivisions. The sufficiency of such performance bond shall be determined by the Director of Code Enforcement after consultation with the Department of Public Works.

(7) Procedures for approval and enforcement of a timber harvesting permit.

(a) Upon receipt of a complete timber harvesting permit application, the Code Enforcement Officer shall refer the application to the Town Conservation Board for review and a recommendation pursuant to the procedures in Town Code § **23-3**. The Conservation Board shall have 30 days

from the date of referral to complete its review and submit any written comments to the Code Enforcement Officer. If the Conservation Board fails to act within this time, the Code Enforcement Officer may proceed with his or her permit determination.

(b) The Code Enforcement Officer shall promptly review the timber harvesting permit application, inspect the site, and approve or deny the application, giving the reason for any denial. A copy of the permit or decision to disapprove shall be delivered or mailed to the applicant within 45 days of the submission of a complete application.

(c) Any permit shall be conditioned upon approval of access point(s) onto any Town roads, issued by the Town Highway Superintendent, and upon compliance, where applicable, with Chapter **230**, Streets and Sidewalks, Article **I**, Excavation and Construction in Municipal Roadways and Highway Rights-of-Way of the Town of Ithaca Code.

(d) The timber harvesting permit shall consist of the application submitted, any conditions imposed by the Code Enforcement Officer and attached to the application, and the approval of the Code Enforcement Officer endorsed on the application with the attached conditions. The timber harvesting permit shall be placed in the permanent property file for the property.

(e) A timber harvesting permit shall be valid for a period of two years from the date of its issuance, except where a multiphase forest management plan has been submitted, in which case the permit may be approved with time limits indicated within the permit for each phase. No timber harvesting permit shall be valid for a period in excess of 10 years.

(f) Before any site work begins, the Code Enforcement Officer shall inspect the site to assure that the buffer areas and staging areas are adequately marked and that any other applicable permit conditions have been implemented. The Code Enforcement Officer shall make periodic inspections to assure compliance with the forest management plan and all conditions of approval.

(g) The Code Enforcement Officer or Stormwater Management Officer shall have the authority to issue a stop-work order for all or part of the cutting and harvesting activity if in his or her opinion conditions created by a spring thaw, adverse weather conditions or any other cause may make damage to Town roads likely or may result in soil erosion or other damage beyond or outside of the boundaries of the area of the timber harvesting operation.

(h) Inspection of the site and review of the forest management plan may be delegated by the Code Enforcement Officer to a professional forester retained by the Town.

§ 270-23. Park and recreation setasides and fees in lieu thereof.

Because of the reduced density in the Conservation Zones, the requirements for maintaining open space, existing public trails, and the existing and expected additional opportunities for passive recreational activities in the areas included in the Conservation Zones, it is anticipated that in Conservation Zones normally there will be no need for mandated parkland reservations or fees in lieu thereof pursuant to applicable Town Law and Town of Ithaca Code Chapter **234**, Subdivision of Land, and this Chapter **270**, Zoning, including § **234-22** of Chapter **234**, Subdivision of Land, and any successor or related provisions.

§ 270-24. Site plan approval.

No building permit shall be issued for a building or structure within a Conservation Zone requiring a special permit unless the proposed building or structure is in accordance with a site plan approved pursuant to the provisions of Article **XXIII**.

New York
Law
Open Space Preservation, Natural Resource Protection, Scenic Resources, Historic Preservation, Floodplain Regulation, Erosion & Sedimentation Control, Steep Slope Protection, Watershed Protection
EPA Region 2
Municipality- Town of Livonia
Land Conservation

Summary

This law outlines the Town's procedure for creating Land Conservation Areas, and for protecting these areas from potentially harmful development. These areas were created on the basis of a soil and existing land use survey, and have been grouped in to seven categories, which include: natural forest/woodland, wetland, steep slope, floodplain, major scenic overlook, stream corridor, watershed and sites of historical/archaeological significance.

Law

Town of Livonia NY Land Conservation
Code of the Town Of Livonia NY
Chapter 150: Zoning
Article VII: Regulations Applicable to All Zoning Districts

General Code

§ 150-68. Land conservation.

A. Intent. The purpose of this land conservation section is to delineate and help to protect areas in Livonia where substantial development of the land, including changing the character or use of, may cause ecological harm, create a public health or safety problem or degrade significant community features, such as scenic views or sites of historic or archaeological significance. Special or unusual conditions of topography, drainage, soil permeability, floodplain or other natural conditions and the lack of proper facilities or improvements may result in the land not being suitable for development at the present time.

B. Derivation. Land conservation areas in Livonia have been derived generally on the basis of soils and existing land use studies and data and have been mapped to identify the following specific conservation areas: natural forest/woodland, wetland, steep slope, floodplain, major scenic overlook, stream corridor, watershed and sites of historical/archaeological significance. The above mapped conservation areas are official supplemental guides to the Zoning Map to be used by Livonia in ascertaining

what special conditions, if any, should be imposed or precautions taken before allowing development to proceed.

C. Procedure for processing zoning permits using conservation areas maps. Whenever an application is made for a zoning permit in Livonia, the Code Enforcement Officer shall proceed as follows:

(1) Identify the approximate location of the proposed building site and/or use and check to see if the site is situated in one or more of the mapped conservation areas.

(2) If the applicant's proposed development or use is found to be located well outside of any identified conservation area shown on the supplemental map Editor's Note: The supplemental map is on file in the Building and Zoning Department. , the Code Enforcement Officer may issue a zoning permit, provided that all other requirements and conditions of the chapter are met.

(3) If the applicant's property is found to be located completely or partially within one or more of the mapped conservation areas or bordering thereon, the Code Enforcement Officer shall accompany the applicant to the site to confirm the exact location and existing physical conditions.

(4) If the Code Enforcement Officer confirms the location of the proposed development and/or use within any of the conservation districts, the activity proposed shall be subject to review by the Joint Planning Board in accordance with the site plan review requirements of Article XIV and the standards of this section.

D. The following is a list of the mapped land conservation areas and relevant review standards.

(1) Forest/woodland.

(a) Whenever possible, the site plan shall be so designed as to minimize the number of trees 30 feet and over in height which would have to be removed or would otherwise disturb the forest floor.

(b) Activities, such as subdivisions, campgrounds, mobile home parks and most commercial or industrial uses, shall be guided in their layout by a qualified forester or landscape professional.

(2) Wetland.

(a) Development activities in wetland and wetland buffer areas shall be regulated by state and federal permit requirements.

(b) The development and/or use shall be designed so as not to disturb the natural function and process of the wetland.

(3) Steep slope.

(a) The site plans submitted to the Joint Planning Board for review shall be prepared by a licensed architect or professional engineer and engineered specifically for the steep slope where the building will be placed.

(b) Architectural design of the house or structure shall be such as to minimize the amount of cutting into the embankment, general grading and removal of vegetative cover. A rectangular-shape structure which can be placed parallel to the contour of the hill and/or designing a cantilevered structure for maximum exposure above the ground is acceptable.

(c) Location of driveway, walkway, accessory buildings and structures and general grading shall minimize disturbance of steep slope areas and potential for erosion.

(d) Terracing, sodding, planting and the construction of retaining walls shall be performed as found necessary.

(4) Floodplain. In accordance with National Flood Insurance specifications and Chapter 80 of the Code of the Town of Livonia or Chapter 93 of the Code of the Village of Livonia, the following conditions shall apply:

(a) Structures shall be designed and anchored to prevent the flotation, collapse or lateral movement of the structure or portion of the structure due to flooding.

(b) Construction materials and utility equipment that are resistant to flood damage shall be used.

(c) Construction methods and practices that will minimize flood damage shall be used.

(d) Adequate drainage shall be provided in order to reduce exposure to flood hazards.

(e) Public utilities and facilities shall be located on the site in such a manner as to be elevated and constructed to minimize or eliminate flood damage. Such utilities and facilities include sewer, gas, electrical and water systems.

(5) Major scenic overlook.

(a) No identified major scenic overlook shall be seriously threatened by any proposed new construction if the Joint Planning Board determines that a reasonable alternative exists. This may include the modification of the architectural design or relocation of the building site.

(b) If no reasonable alternative, as defined in Subsection D(5)(a) above, exists, site plan review approval may be withheld up to but no longer than 120 days, during which time a municipal agency or a philanthropic organization can be given the opportunity to preserve the site by acquisition or other means.

(6) Stream corridor. These regulations shall apply to streams shown on the Livonia base map and to any major drainageway.

(a) No new public road or private road shall be located within 25 feet of the mean high-water mark except for such portions as are necessary for

crossing the stream. Where alternative access to the other side of the stream is available, new crossings shall be discouraged.

(b) New structures, except for fences, bridges and fishing parking areas, shall not be constructed within 25 feet of the mean high-water mark.

(c) A buffer strip consistent with the following standards shall separate all new structures, except fences, bridges and fishing parking areas, from the stream.

Slope of Land	Degrees from Horizontal (feet)	Width of Buffer Strip in Critical Area from Mean High Water Mark
		50
10	6	90
20	12	130
30	17	170
40	23	210
50	26	250
60	31	290
70	35	330
80	39	370
90	42	410

Source: Hartung, R.E., and Kress, S.W,; Woodlands of Northeast, United States Department of Agriculture (USDA), Soil Conservation Service (SCS), and Forest Service, Philadelphia, Pennsylvania, 1977.

(d) New structures and roads shall be designed and constructed in accord with erosion control standards and stormwater control standards contained in the supplemental stream conservation resource document. Refer to erosion and sediment control best management practices (BMP's) and stormwater management BMP's from pages 65 to 93 in Chapter 6 of the New York State Department of Environmental Conservation (NYSDEC) Stream Corridor Management Manual.

(e) Within the buffer strip identified hereunder, woody shrubs and trees shall be retained sufficient to maintain the stability of the stream bank and to minimize stream bank erosion and direct runoff. Forest management roads or skid trails shall not be allowed inside the mean high-water mark, except at necessary stream crossings, and they shall be allowed at a distance from the mean high-water mark that is consistent with the following criteria for establishing buffer strips for logging areas.

Slope of	Degrees From	Width of Buffer Strip for

Land	Horizontal	Logging Areas (feet)
		50
10	6	50
20	12	65
30	17	85
40	23	106
50	26	125
60	31	145
70	35	165
80	39	185
90	42	205
100	45	225

Source: Hartung, R.E., and Kress, S.W,; Woodlands of Northeast, USDA, SCS, and Forest Service, Philadelphia, Pennsylvania, 1977.

(f) To protect the water quality, bed and banks of a stream from the impacts associated with logging, no more than 1/3 of the timber will be removed in a ten-year period within the buffer strip designated under Subsection D(6)(e) above. A professional timber harvesting program is required, including restoration measures for disturbed land and skid trail. A letter of credit may be required if deemed necessary by the governing board.

(g) Diseased vegetation and rotten or damaged trees or other vegetation presenting safety, environmental or health hazards may be removed. Firewood for personal use may be removed, within the limits of Subsection D(6)(f) above.

(7) Conesus and Hemlock Lake Watersheds.

(a) New structures shall be designed and constructed in such manner as to avoid undue adverse environmental impacts and in accord with erosion control standards and stormwater control standards contained in the supplemental stream conservation resource document. Refer to erosion and sediment control best management practices and stormwater management best management practices from pages 65 to 93 in Chapter 6 of the NYSDEC Stream Corridor Management Manual.

(b) Storm sewer outlets shall not be made directly to lakes, impoundments, streams or their tributary watercourses, without other treatment as specified in current engineering design criteria. Provision shall be made to discharge to the surface at least 100 feet from lakes, impoundments, streams and their tributary watercourses.

(c) The dumping of more than two cubic yards of snow removed from streets, road and parking areas directly into lakes, reservoirs, impoundments or streams is prohibited.

(d) Animal wastes.

[1] No concentration of animal wastes from an agricultural operation, including but not limited to manure piles, feedlots, barnyards and yarding areas, shall be located within a linear distance of 250 feet from any lake, reservoir, impoundment or watercourse.

[2] Barnyards, feedlots, yarding areas and manure piles shall be separated from streams and water bodies by ditches or surface grading to prevent their runoff from entering streams and water bodies.

[3] Drainage from barnyards, feedlots, yarding areas or manure piles shall not be discharged directly to a lake, reservoir, impoundment or watercourse. Such drainage shall be dispersed over the surface of the ground at a minimum distance of 250 linear feet from any lake, reservoir, impoundment or watercourse.

[4] Provision shall be made for satisfactory disposal of milk house waste either by surface or subsurface irrigation that prevents any discharge to any lake, reservoir, impoundment or watercourse. Such facilities shall be located at least 100 linear feet from the lake, reservoir, impoundment or watercourse.

(e) Industrial sludge and toxic chemicals. Toxic chemicals shall not be buried in the soil, spread upon the surface of the ground or allowed to enter surface waters.

(f) Fertilizer use.

[1] Open storage of chemical fertilizers for commercial use is prohibited.

[2] Fertilizer use for all applications shall be in accordance with best management practices.

(g) Pesticide and herbicide use.

[1] Use of lakes, reservoirs or streams for makeup water or washing of equipment is prohibited.

[2] Pesticides and herbicides shall be used in accordance with label instructions.

(h) Stockpiles.

[1] Storage of chloride salts is prohibited within a linear distance of 500 feet of a lake, reservoir, impoundment or watercourse, except in weatherproof buildings or watertight vessels.

[2] Calcium chloride shall be used instead of sodium chloride where

possible to limit sodium input to area waters.

(i) All land-disturbing activity, including general construction, highway construction, access road construction and maintenance, is prohibited except where remedial measures have been put in place to minimize erosion and sediment production as per the standards of the Livonia Design Criteria and New York State Guidelines for Stream Corridor Management and Erosion and Sediment Control.

(8) Sites of historic or archaeological significance. No sites of historic or archaeological significance shall be seriously threatened by any proposed new construction if the Joint Planning Board determines that a reasonable alternative exists. This may include the modification of the architectural design or relocation of the building site.

Appendix I

On-site Wastewater Model Ordinance

Ontario County Planning Department On-site Wastewater System Model Law*

*As included in the *Protecting Water Resources through Local Controls and Practices: An Assessment Model for New York Municipalities* Guide, prepared by the Genesee Finger Lakes Regional Planning Council.

On-site Wastewater Treatment Model Law

ARTICLE 1 - INTRODUCTORY PROVISIONS

Section 101 Title
Section 102 Applicability
Section 103 Purpose
Section 104 Authority

ARTICLE 2 - DEFINITIONS

Section 201 Words and Terms

ARTICLE 3 - GENERAL REGULATIONS AND REQUIREMENTS

Section 301 Prohibitions
Section 302 Design Standards for Wastewater Treatment Systems - New Systems
Section 303 Design Standards for Wastewater Treatment System – Existing Systems
Section 304 Exemptions
Section 305 Site Limitations
Section 306 Maintenance and Protection
Section 307 State or Other Agency Approvals
Section 308 Use of Design Professionals and theOntario County SWCD
Section 309 Access

ARTICLE 4 - REQUIREMENTS FOR NEW WASTEWATER TREATMENT SYSTEMS

Section 401 Application Material
Section 402 Administrative Review
Section 403 Inspection Certifications
Section 404 Fees

ARTICLE 5 - REQUIREMENTS FOR EXISTING WASTEWATER TREATMENT SYSTEMS

Section 501 Circumstances Requiring Inspection of Existing Systems
Section 502 Inspection Procedure
Section 503 Report of Findings

ARTICLE 6 - COMPLIANCE AND REPORTING

Section 601 Deficiencies and Corrections

ARTICLE 7 - COMPLAINTS

Section 701 Notification

ARTICLE 8 - ADMINISTRATIVE RELIEF

Section 801 Appeals

ARTICLE 9 - ENFORCEMENT

Section 901 Violation
Section 902 Alternative Remedies
Section 903 Misrepresentation
Section 904 Penalties

ARTICLE 10 - MISCELLANEOUS PROVISIONS

Section 1001 Conflict of Law
Section 1002 Severability
Section 1003 Savings Clause
Section 1004 Effective Date

ARTICLE 1 INTRODUCTORY PROVISIONS

Section 101 Title

1. This local law shall be known as the "On-Site Individual Wastewater Treatment System Law of the City, Town, Village of _____.

Section 102 Applicability

1. This local law shall govern the treatment of sewage by regulating all on-site individual wastewater treatment systems (hereinafter referred to as a wastewater treatment system).

Section 103 Purpose

1. The purpose of this local law is to promote the health, safety, and general welfare of the community, including the protection and preservation of the property of its inhabitants, by regulating wastewater treatment systems so that human sewage and other wastes are disposed of in a manner that will not create a health hazard, adversely affect the environment, create a nuisance, or impair the enjoyment or use of property.

Section 104 Authority

1. Enactment of this local law is pursuant to *Article 2 of Municipal Home Rule Law*, and *Article 3 of the Public Health Law*.

ARTICLE 2 DEFINITIONS

Section 201 Words and Terms

1. In addition to the definitions contained in the *New York State Public Health Law and Uniform Fire Prevention and Building Code*, which are incorporated herein by reference, the following words and terms shall be defined as follows:

ADEQUATELY FUNCTIONING shall mean a wastewater treatment system inspected pursuant to section 502 of this local law that is determined by the authority having jurisdiction as not posing a public health threat by virtue of above ground seepage, or contamination of surface or ground water. For the purpose of this local law an "adequately functioning" system shall always include a watertight vessel.

AUTHORITY HAVING JURISDICTION shall be the Code Enforcement Officer, Health Officer, Watershed Inspector, or other official(s) designated by a local municipality, or other regulatory agency, having the responsibility to enforce the provisions of this local law.

CHANGE OF USE shall mean a use of land with an associated building and wastewater treatment system that is modified so as to likely cause an increase in hydraulic loading (e.g. – change from an existing commercial use to residential use; change of an existing residential use to commercial use; change of a commercial use to a different type of commercial use). A change of use shall also include the removal and replacement of a manufactured or mobile home dwelling.

CONVEYANCE OF REAL PROPERTY shall mean the transfer of the title of real estate from one to another, in the form of a deed or other legal instrument, filed in the Office of the County Clerk.

DESIGN PROFESSIONAL shall mean a person licensed or registered in the State of New York and authorized by *New York State Education Law* to design the systems described in *10NYCRR Appendix 75-A*.

LOCAL GOVERNING BODY shall mean the municipal corporation charged with authority to act as the Local Board of Health as defined by *New York State Public Health Law*.

MINOR ALTERATIONS shall mean routine maintenance and repairs to the wastewater treatment system, including but not limited to the following: replacement of septic tank covers or baffles, replacement of distribution box covers, replacement of cracked pipes, pumping of the

septic tank, and replacement of mechanical pumps and devices. “Minor alterations” shall not include replacement of a septic tank, distribution box, or any addition, alteration or rearrangement of water distribution or drainage piping. Like examples of “minor alterations” not specifically listed in this definition shall be determined by the authority having jurisdiction.

NEW CONSTRUCTION shall mean any building constructed or placed on an undeveloped site requiring the installation of a wastewater treatment system and currently not utilizing the same.

ON-SITE WASTEWATERTREATMENT SYSTEM PERMIT shall mean a written permit issued by the authority having jurisdiction.

ON-SITE WASTEWATER TREATMENT SYSTEM shall mean a complete system of piping, watertight vessels or other facilities for the on-site collection, transport and treatment of sewage.

SEWAGE shall mean the combination of human and household waste with water which is discharged to the plumbing system, including the waste from a flush toilet, bath, shower, sink, lavatory, dishwashing or laundry machine, or the water-carried waste from any fixture, equipment or machine.

ARTICLE 3 GENERAL REGULATIONS AND REQUIREMENTS

Section 301 Prohibitions

1. It shall be unlawful to install, construct, alter, replace, enlarge, extend, or otherwise modify any wastewater treatment system unless a wastewater treatment permit is issued by the authority having jurisdiction, except as specifically exempted in section 304 of this local law.
2 It shall be unlawful to change the use of real property, convey real property, or expand a building or dwelling, including its use, by greater than fifty (50) percent, without an inspection of the wastewater treatment system by the authority having jurisdiction, pursuant to sections 501 and 502 of this local law.
3. It shall be unlawful to use or maintain any wastewater treatment system that is not adequately functioning.
4. It shall be unlawful to discharge anything but sewage into a wastewater treatment system. Surface and subsurface water including roof, cellar, foundation and storm drainage shall not be discharged into the wastewater treatment system and shall be disposed of so as to in no way affect the proper functioning of the system.

Section 302 Design Standards for Wastewater Treatment Systems – New Systems

1. Individual Household Systems

(a) Any wastewater treatment system for new individual household construction shall be designed and built according to the requirements of this local law and the requirements, as they may from time to time be amended, of the NYSDOH standards for sewage disposal for individual household systems. Those design requirements are found in *Appendix 75-A of Part 75*

of Title 10 of the New York Code of Rules and Regulations (10 NYCRR).

2. Intermediate-sized Sewerage Systems

(a) Any wastewater treatment system for new commercial or institutional construction, as well as cluster housing or other multi-home developments, shall be designed and built according to the requirements of this local law and the requirements, as may be from time to time be amended, of the NYSDEC standards for sewage disposal for intermediate-sized sewerage facilities. Those design requirements are found in *NYSDEC manual "Design Standards for Wastewater Treatment Works: Intermediate-sized Sewerage Facilities."*

Section 303 Design Standards for Wastewater Treatment Systems – Existing Systems

1. Individual Household Systems

(a) Any installation, construction, alteration, replacement, enlargement, extension, repair, or other modification of an existing on-site individual household wastewater treatment system shall be designed and built according to the requirements of this local law and the requirements, as they may from time to time be amended, of the NYSDOH standards for sewage disposal for individual household systems. Those design requirements are found in *Appendix 75-A of Part 75 of Title 10 of the New York Code of Rules and Regulations (10 NYCRR).*

2. Intermediate-sized Sewerage Systems

(a) Any installation, construction, alteration, replacement, enlargement, extension, repair, or other modification of an existing intermediate-sized sewerage system, shall be designed and built according to the requirements of this local law and the requirements, as may be from time to time be amended, of the NYSDEC standards for sewage disposal for intermediate-sized sewerage facilities. Those design requirements are found in *NYSDEC manual "Design Standards for Wastewater Treatment Works: Intermediate-sized Sewerage Facilities."*

Section 304 Exemptions

1. Minor alterations to wastewater treatment systems shall not require a wastewater treatment permit provided such repairs are made with like or similar materials so as to replace existing conditions in need of repair, and are done in a safe and sanitary manner.

2. The design standards found in section 303 of this local law shall not apply to existing wastewater treatment systems legally installed, repaired or approved by the authority having jurisdiction, prior to the date of adoption of this local law and after the dates identified in *Paragraphs a and b* identified below, or those systems determined by the authority having jurisdiction to be adequately functioning.

(a) Individual Household Wastewater Treatment Systems legally installed or repaired prior to December 1, 1990.

(b) Intermediate-sized Wastewater Treatment Systems legally installed or repaired prior to January 1, 1988.

Section 305 Site Limitations

1. On sites with topographic, physiographic or other limitations, the authority having jurisdiction shall utilize current technology and design methods to remedy failed or improperly functioning systems, provided that applicable state standards, to the greatest extent possible, are complied with. In considering site limitations, the authority having jurisdiction shall take the following into consideration:
(a) Distance separations to drinking water supplies and watercourses;
(b) The imminent health hazards resulting from a currently failed system;
(c) Existing lot line setbacks and area requirements as related to individual properties; and
(d) The extent to which the limitations are self-created.

Section 306 Maintenance and Protection

1. Wastewater treatment systems shall be maintained in good working order. There shall be no activities or conditions permitted which would interfere with the proper operation of wastewater treatment systems. It is specifically prohibited to construct or place buildings, to install paving, to plant trees or shrubs, to regrade or place fill, to allow crossing by vehicles, to install above ground pools, or to install driveways or parking areas over sanitary disposal fields.

Section 307 State or Other Agency Approvals

1. In addition to approvals required herein, a review and approval by the New York State Department of Health (NYSDOH) or the New York State Department of Environmental Conservation (NYSDEC), if appropriate, shall be required for the following conditions:

(a) Any realty subdivision as defined by *Article 11, Title II of the NYS Public Health Law or Article 17, Title 15 of the NYS Environmental Conservation Law*;
(b) Any alternative system as defined by *Appendix 75-A of Part 75 of Title 10 of the New York Code of Rules and Regulations (10 NYCRR);*
(c) Any facility required to be permitted by the NYSDOH; and
(d) Any on-site individual wastewater treatment system or other system with effluent in excess of 1,000 gallons per day.

2. In addition to approvals required herein, wastewater treatment systems are subject to review and approval by the Canandaigua Lake Watershed Inspector pursuant to *New York State Public Health Law, Section 132.1 of Part 132 of Title 10 of the New York Code of Rules and Regulations (10 NYCRR).*

Section 308 Use of Design Professionals and the Ontario County Soil and Water Conservation District

1. The authority having jurisdiction shall have the right to require that the property owner retain the services of a design professional to conduct site and soil appraisals (percolation tests and deep holes) and to design and certify that the wastewater treatment system meets the requirements of this local law and the standards of applicable state laws.

2. The local governing body shall have the right to contract with the County Soil and Water Conservation District through its *Uniform Inspection Procedures Program* for site and soil appraisals and inspections performed pursuant to section 501of this local law.

3. Wastewater treatment systems that are defined as an alternative system pursuant to *10 NYCRR Appendix 75-A* shall be certified by a design professional.

Section 309 Access

1. The authority having jurisdiction shall be permitted by the property owner to make a physical inspection of the lands and premises for which a wastewater treatment system permit or inspection has been requested, in order to determine that all of the requirements of this local law have been complied with.

2. The authority having jurisdiction, upon complaint or show of cause, shall be permitted by the property owner to make a physical inspection of the lands and premises for which a wastewater treatment system is believed to be a cause or potential cause of pollution, or health hazard.

ARTICLE 4 REQUIREMENTS FOR NEW WASTEWATER TREATMENT SYSTEMS

Section 401 Application Material

1. Applications for wastewater treatment system permits shall be by the property owner or a duly authorized agent, accompanied by the appropriate fee, to the authority having jurisdiction, which shall include the following information:

(a) The name, address and telephone number of the applicant;
(b) Specific location of the property on which the wastewater treatment system is located or proposed, including the tax map number for said property;
(c) A sketch plan on a tape location map or survey map of the premises on which the wastewater treatment system is located or proposed, showing the location of wells, springs and other sources of water supply, and the location of all watercourses on the premises;
(d) Evidence to demonstrate that there is no public sewer available into which the sewage can be discharged or that it is impractical to discharge sewage into a community sewerage

system;
(e) Documentation of substantiating data relating to site conditions, percolation tests, deep hole data, and topography of land; and
(f) The authority having jurisdiction may conduct such investigations, examinations, tests and site evaluations as it deems necessary to verify information contained in the application.

Section 402 Administrative Review

1. The authority having jurisdiction shall not issue a wastewater treatment system permit unless:
(a) All pertinent site data has been submitted, verified and certified as required by this local law; all permit fees have been paid and that the wastewater treatment system complies with all specifications of state and local laws.

2. The authority having jurisdiction may disapprove an application if it is determined that any of the following requirements have not been met:
(a) That the wastewater treatment system, as proposed, will not conform to the requirements of state and local laws;
(b) That the applicant has failed to supply all the data necessary to make a determination as to whether or not such wastewater treatment system conforms to state and local laws; and
(c) The applicant has failed to pay all necessary fees.

3. When the authority having jurisdiction shall deny the application for a wastewater treatment permit, within seven (7) working days after taking such action, the authority having jurisdiction shall furnish the applicant with a written notice of denial setting forth in detail the reason for such action.

4. No Certificate of Occupancy shall be issued and no persons shall occupy any building unless the wastewater treatment system has been approved in accordance with the provisions of this local law.

Section 403 Inspection Certifications

1. Installation of the wastewater treatment system shall be under the direct supervision of the authority having jurisdiction.

2. The applicant shall be prohibited from covering any component of the system without proper authorization. Any change of construction approved by the authority having jurisdiction shall be noted on the original drawings before the system is back filled. As built plans shall be provided to the authority having jurisdiction.
3. The authority having jurisdiction may, by written notice, order all work stopped on any wastewater treatment system, which is in violation of this local law.

Section 404 Fees

1. The fees for any permit or inspection performed pursuant to this local law shall be determined from time to time by the local governing body.

ARTICLE 5 REQUIREMENTS FOR EXISTING WASTEWATER TREATMENT SYSTEMS

Section 501 Circumstances Requiring Inspection of Existing Systems

1. The authority having jurisdiction shall conduct an on-site inspection of an existing wastewater treatment system as follows:
(a) Prior to a change of use - The owner of the property shall arrange for a wastewater treatment system inspection before any change of use is undertaken. The authority having jurisdiction shall determine whether the change represents an increased hydraulic loading to the system. In instances where a site plan approval, special use permit, or variance is required the authority having jurisdiction shall incorporate the wastewater treatment system inspection report into the review process of the appropriate Planning Board, Zoning Board of Appeals, or Board of Appeals;
(b) Prior to a conveyance of real property - The owner of the property shall arrange for a wastewater treatment system inspection prior to the conveyance of real property. In addition, property owners may request a wastewater treatment inspection for real estate transactions or other certifications to lending institutions, purchase offer conditions of buyers of real property, or other requests, or investigations; and
(c) Expansion greater than fifty (50) percent - The owner of the property shall arrange for a wastewater treatment system inspection as an integral part of the building permit application process. The authority having jurisdiction shall determine whether expansion of the building or dwelling, including its use, represents an increased hydraulic loading to the system. For the purpose of this local law an existing wastewater treatment system shall be defined as an accessory structure and as such subject to regulation pursuant to *Part 1230 of Subchapter E, Conversions, Alterations, Additions and Repairs to Existing Buildings of the New York State Uniform Fire Prevention and Building Code*.

Section 502 Inspection Procedure

1. All existing on-site wastewater treatment systems requiring an inspection pursuant to this local law shall be performed by the authority having jurisdiction in accordance with the specifications established as follows:
(a) The septic tank, inspection ports, distribution boxes, or other distribution devices shall be uncovered and accessible to the inspector. In the event any component of the system cannot be reasonably located, the inspector shall so note on the inspection report;
(b) Sanitary disposal fields shall be staked out or otherwise identified by general area of location;

(c) At the discretion of the authority having jurisdiction, the septic tank shall be pumped at the expense of the property owner, in order to ensure that the tank is not leaking, and that the inlet and outlet baffles are in place and properly functioning;
(d) At the discretion of the authority having jurisdiction, drop and distribution boxes shall be checked for blockages and function;
(e) The authority having jurisdiction shall visually inspect buildings on the property noting the number of bedrooms, the layout and location of all water-using fixtures and plumbing, including but not limited to faucets, sinks, toilets, drains, overflows, laundry equipment, floor drains, sump pumps, water softeners, and related systems that may impose an improper or potential adverse hydraulic loading on the disposal field;
(f) Verify connection of all drains to an appropriate disposal system;
(g) All outside areas, to include nearby lawns, slopes, hillsides, ditches and watercourses, swales, and the shoreline of ponds, lakes and wetlands shall be observed for above ground seepage and to note the quantity and general quality of surface water where it occurs;
(h) Conduct dye testing, and other methods as may be necessary to determine system function.

Section 503 Report of Findings

1. Upon completion of the inspection, the authority having jurisdiction shall document all procedures and furnish the owner with a report of findings.

2. The report of findings shall contain, at a minimum, the location, address, name of owner, representative present, dates of testing/inspection, procedures used, observations and sketches showing fixture, drain and system layout to adequately document the wastewater treatment system inspection.

ARTICLE 6 COMPLIANCE AND REPORTING

Section 601 Deficiencies and Corrections

1. Upon discovery of a wastewater treatment system which is not adequately functioning or determined to have been illegally installed, the authority having jurisdiction, shall immediately notify the property owner in writing of the failure or unacceptable condition. It shall be the responsibility of the property owner to forward notice of such report to other involved or interested parties. As part of the report, the authority having jurisdiction shall determine a course of corrective action and establish a reasonable time frame for completion of necessary remedies.

2. Upon receipt of such notice the property owner shall be given thirty (30) days to obtain a wastewater treatment permit.

3. Remedy of a wastewater treatment system, which is not adequately functioning or determined to have been illegally installed, shall require the property owner to submit an

application for a wastewater treatment permit in accordance with section 401 of this local law.

ARTICLE 7 COMPLAINTS

Section 701 Notification

1. Complaints shall be made to the authority having jurisdiction with supporting information that a wastewater treatment system may be deficient (i.e. - observed failure to ground water, surface water, or aboveground seepage, odor, or otherwise creating a public nuisance).

2. Upon receipt of a bonafide complaint or upon personal observation of said wastewater treatment system, the authority having jurisdiction shall notify the property owner and the inhabitants of said property in writing, within seven (7) business days of receipt of the complaint or personal observation, that an inspection pursuant to section 502 of this local law is required. A copy of such notice shall be sent to the Clerk of the local governing body.

ARTICLE 8 ADMINISTRATIVE RELEIF

Section 801 Appeals

1. Appeals of any actions, omissions, decisions or rulings of the authority having jurisdiction shall be made to the Clerk of the local governing body and must be instituted within (30) days of the act, omission, decision, or ruling from which relief is sought.

2. Within thirty (30) days of receipt of a written appeal of an action, omission, decision, or ruling of the authority having jurisdiction the local governing body, convening as the Local Board of Health, shall give notice of a public hearing to be held on the appeal.

3. Within thirty (30) days of final adjournment of a public hearing, the local governing body shall affirm, modify or deny the action, decision or ruling of the authority having jurisdiction or correct any omission, approve, or approve with conditions or disapprove the appeal.

4. The decision of the local governing body shall be in writing and shall contain findings and the factual basis for each finding from the record of the hearing, which shall support the decision of the local governing body. The local governing body's discretion in considering an appeal under this local law shall not extend to granting variances from this local law but shall rather be limited to reviewing the authority having jurisdiction's interpretation or applications of the terms hereof. Variances from the substantive requirements (e.g. septic tank sizes, setback distances, etc.) remain under the jurisdiction of the NYSDOH and the NYSDEC.

ARTICLE 9 ENFORCEMENT

Section 901 Violation

1. In any instance where a wastewater treatment system is located, installed, constructed, altered, enlarged, or extended in violation of this local law, or in any instance where this local law is otherwise violated, the local governing body may maintain an action or proceeding in the name of the municipality in a court of competent jurisdiction to compel compliance with the terms of this local law or to restrain by injunction, the violation of this local law.

Section 902 Alternative Remedies

1. Any violation or threatened violation of any of the provisions of this local law, in addition to other remedies herein provided, the local governing body may institute any appropriate action or proceeding to prevent unlawful construction, alteration, repair, or reconstruction, to restrain, correct or abate such violation to prevent the use of the wastewater treatment system or to prevent any illegal act, conduct, business or use regarding such wastewater treatment system.

Section 903 Misrepresentation

1. Any permit or approval granted under this local law which is based upon or is granted in reliance upon any material misrepresentation, or upon failure to make material fact or circumstances known, by or on behalf of an applicant, shall be void.

Section 904 Penalties

1. Any person who violates any provision of this local law shall be subject to a fine not to exceed the sum of $250 or by imprisonment of not more than seven (7) days, or both. Each week such violation continues after notification to the person in violation shall constitute a separate violation. Such violation notice shall be served by certified mail, return receipt requested, or by personal service.

ARTICLE 10 MISCELLANEOUS PROVISIONS

Section 1001 Conflict of Law

1. In any case where a provision of this local law is found to be in conflict with a provision of any ordinance or local law, or with a provision of any statute, rule, regulation, or order of the State of New York, the provision which established the higher standard for the promotion of the health, welfare and safety of the citizens of the municipality shall prevail. In any case where a provision of this local law is found to be in conflict with a provision of any other ordinance or local law existing on the effective date of this local law, which established a lower standard for the promotion of the health, welfare and safety of the citizens of the municipality, the provisions of this local law shall be deemed to prevail.

Section 1002 Severability

1. The provisions of this local law shall be several, and if any clause, sentence, paragraph, subdivision, section, or part of this local law shall be judged by competent jurisdiction as being invalid, such judgement shall not affect, impair, or invalidate the remainder thereof, but shall be confined to the part thereof directly involved in the controversy in which such judgement shall have been rendered.

Section 1003 Savings Clause

1. The adoption of this local law shall not affect or impair any act done, offense committed or right accrued or acquired or liability, penalty, forfeiture or punishment incurred prior to the time this local law takes effect.

Section 1004 Effective Date

1. This local law shall take effect immediately upon filing with the New York State Secretary of State pursuant to *Article 3 of Municipal Home Rule Law*

Appendix J

Flood Regulation Model Ordinance

Model Ordinance for Flood Loss Reduction and Fish Habitat Enhancement (U.S. Federal Emergency Management Agency)

Federal
Law
Disaster Management; Floodplain Regulation; Flood Prevention; Floodwater Management
EPA Region- All
FEMA Model Ordinance for Flood Loss Reduction and Fish Habitat Enhancement

Summary

This model ordinance provides a framework for flood loss reduction regulations for use by any state in conjunction with affected counties or municipalities. Section one explicitly delegates State authority to local governmental bodies to adopt regulations to protect the public health, safety, and welfare of residents. Flood losses occur because of the cumulative effect of obstructions in special flood hazard areas. The purpose of the model ordinance is to promote the public health, safety, and welfare by reducing losses due to flooding by maintaining streams, to the maximum extent possible, in their natural state. The section also provides a list of methods for reducing flood losses. Section two defines the terms used throughout the model ordinance.

General provisions are listed in section three. This section identifies the areas to which the ordinance shall apply and its general requirement, i.e., that no land or structure be constructed, located, extended, converted, or altered without compliance with the ordinance and associated regulations. The Flood Insurance Study (FIS) and Flood Insurance Rate Map (FIRM) for affected areas are automatically incorporated in the ordinance through this section. The penalties for noncompliance are identified. A disclaimer is included that asserts areas outside the special flood hazard area are not immune from flooding and that the State, its employees, or Federal Insurance Administration are not liable.

Paragraph 4.1-1 states a permit shall be obtained before construction or development begins within any special flood hazard identified in Section 3.2. The remaining paragraphs in Section 4 set forth the requirements and procedures for obtaining a permit and identify the program administrator, her duties for permit review, and requirements for the granting of variances. Section 5 sets forth general flood hazard reduction standards for anchoring, construction materials and methods, utilities, subdivision proposals, and review of building permits. Specific standards are listed for residential and nonresidential construction, manufactured homes, and recreational vehicles. Additional standards for riparian ecosystem protection are also included.

Law

Flood Damage Prevention and Fish Habitat Protection
Model Ordinance

Developed by FEMA Region 10
Version 3 – Revised November 6, 2001

Note: This ordinance combines the minimum NFIP requirements found in the FEMA model Flood Hazard Prevention Ordinance (normal font) with other regulatory provisions designed to protect aquatic and riparian habitat *(italicized font).*

SECTION 1: STATUTORY AUTHORIZATION, FINDINGS OF FACT, PURPOSE, AND METHODS OF REDUCING FLOOD LOSSES

1.1. STATUTORY AUTHORIZATION.

The Legislature of the State of _____ has delegated the responsibility to local governmental units to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry. Therefore, the _____ of _____, does ordain as follows:

1.2. FINDINGS OF FACT.

A. The flood hazard areas of _____ are subject to periodic inundation which results in loss of life and property, health, and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety, and general welfare.

B. These flood losses are caused by placing capital development and infrastructure on areas prone to inundation the cumulative effect of obstructions in areas of special flood hazards, which increase flood heights and velocities, and when inadequately anchored, damage uses in other areas. Uses that are inadequately flood proofed, elevated, or otherwise protected from flood damage also contribute to the flood loss.

C. *Floodplain and stream connectivity is a major element in maintaining healthy riparian habitat and off-channel habitats for the survival of fish species and conveyance of floodwaters in the northwest. If river, floodplains and other systems are not viewed holistically as biological, geomorphological units, this can lead to serious degradation of habitat and increase flood hazards which, in turn, can contribute to listing of various fish species as threatened or endangered and result in extraordinary public expenditures for flood protection and relief.*

1.3. PURPOSE.

It is the purpose of this ordinance to promote the public health, safety, and general welfare, *to maintain streams and floodplains in their natural state to the maximum extent possible* so they support healthy biological ecosystems, and to minimize public and private losses due to flood conditions in specific areas by provisions designed:

A. To protect human life and health;

B. To minimize expenditure of public money for and costly flood control projects and flood damage repair;

C. To minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;

D. To minimize prolonged business interruptions;

E. To minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets, and bridges located in areas of special flood hazard;

F. To help provide maintain a stable tax base by providing for the sound use and development of areas of special flood hazard so as to minimize future flood blight areas;

G. To ensure that potential buyers are notified that property is in an area of special flood hazard; and,

H. To ensure that those who occupy the areas of special flood hazard assume responsibility for their actions.

I. To assure that flood loss reduction measures under the NFIP protect are consistent with retaining natural floodplain functions related to protecting riparian habitat and the natural processes that create and maintain habitat for fish.

J. To assure no net loss of hydraulic, geomorphic, and ecological functions of floodplains.

1.4. METHODS OF REDUCING FLOOD LOSSES.

In order to accomplish its purposes, this ordinance includes methods and provisions for:

A. Restricting or prohibiting uses which are dangerous to health, safety, and property due to water or

erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities;

B. Requiring that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction or relocated and possibly relocating uses outside of the floodplain;
C. Controlling the alteration of natural flood plains, stream channels, and natural protective barriers, which help accommodate or channel flood waters;

D. Controlling filling, grading, dredging, and other development which may increase flood damage and *alter beneficial natural stream processes*; and

E. Preventing or regulating the construction of flood barriers that would which will unnaturally divert floodwaters in such as way as to, *block natural channel migration,* or may increase flood hazards in other areas.

SECTION 2: DEFINITIONS

Unless specifically defined below, words or phrases used in this ordinance shall be interpreted so as to give them the meaning they have in common usage and to give this ordinance its most reasonable application.

2.1. APPEAL. "Appeal" means a request for a review of the interpretation of any provision of this ordinance or a request for a variance.

2.2. AREA OF SHALLOW FLOODING. "Area of Shallow Flooding" means a designated AO, or AH Zone on the Flood Insurance Rate Map (FIRM). The base flood depths range from one to three feet; a clearly defined channel does not exist; the path of flooding is unpredictable and indeterminate; and, velocity flow may be evident. AO is characterized as sheet flow and AH indicates ponding.

2.3. AREA OF SPECIAL FLOOD HAZARD. "Area of Special Flood Hazard" means the land in the floodplain within a community subject to a one percent or greater chance of flooding in any given year. Designation on maps always includes the letters A or V.

2.4. BASE FLOOD. "Base Flood" means the flood having a one percent chance of being equaled or exceeded in any given year. Also referred to as the "100-year flood." Designation on maps always includes the letters A or V.

2.5. BASEMENT. "Basement" means any area of the building having its floor subgrade (below ground level) on all sides.

2.6. BREAKAWAY WALL. "Breakaway Wall" means a wall that is not part of the structural

support of the building and is intended through its design and construction to collapse under specific lateral loading forces, without causing damage to the elevated portion of the building or supporting foundation system.

2.7. CHANNEL MIGRATION ZONE. "Channel Migration Zone" means the lateral extent of likely movement along a stream reach during the next one hundred years with evidence of active stream channel movement over the past one hundred years. Evidence of active movement can be provided from aerial photos or specific channel and valley bottom characteristics. A time frame of one hundred years was chosen because aerial photos and field evidence can be used to evaluate movement in this time frame. Also, this time span typically represents the time it takes to grow mature trees that can provide functional large woody debris to most streams. In large meandering rivers a more detailed analysis can be conducted to relate bank erosion processes and the time required to grow trees that function as stable large woody debris.

With the exception of shorelands in or meeting the criteria for the "natural" and "rural conservancy" environments, areas separated from the active channel by legally existing artificial channel constraints that limit bank erosion and channel avulsion without hydraulic connections shall not be considered within the CMZ. All areas, including areas within the "natural" and "rural conservancy" environments, separated from the natural channel by legally existing structures designed to withstand the 100-year flood shall not be considered within the CMZ. A tributary stream or other hydraulic connection allowing PTE species fish passage draining through a dike or other constricting structure shall be considered part of the CMZ.

2.8. COASTAL HIGH HAZARD AREA. "Coastal High Hazard Area" means an area of special flood hazard extending from offshore to the inland limit of a primary frontal dune along an open coast and any other area subject to high velocity wave action from storms or seismic sources. The area is designated on the FIRM as Zone V1-30, VE or V.

2.9. CRITICAL FACILITY. "Critical Facility" means a facility for which even a slight chance of flooding might be too great. Critical facilities include, but are not limited to schools, nursing homes, hospitals, police, fire and emergency response installations, installations which produce, use or store hazardous materials or hazardous waste. Critical facilities should not be sited in flood hazard zones, since history tells us that we cannot guarantee protection from flooding.

2.10. DEVELOPMENT. "Development" means any man-made change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations, storage of equipment or materials, *or any other activity which results in the removal of substantial amounts of vegetation or in the alteration of natural site characteristics* located within the area of special flood hazard.

2.11. ELEVATED BUILDING. "Elevated Building" means for insurance purposes, a no basement

building, which has its lowest elevated floor, raised above ground level by foundation walls, shear walls, post, piers, pilings, or columns.

2.12. EXISTING MANUFACTURED HOME, PARK, OR SUBDIVISION. "Existing Manufactured Home, Park, or Subdivision" means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including, at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed before the effective date of the adopted floodplain management regulations.

2.13. EXPANSION TO AN EXISTING MANUFACTURED HOME, PARK, OR SUBDIVISION. "Expansion to an Existing Manufactured Home, Park, or Subdivision" means the preparation of additional sites by the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads).

2.14. FLOOD OR FLOODING. "Flood" or "Flooding" means a general and temporary condition of partial or complete inundation of normally dry land areas from:

A. The overflow of inland or tidal waters and/or,

B. The unusual and rapid accumulation of runoff of surface waters from any source.

2.15. FLOOD INSURANCE RATE MAP (FIRM). "Flood Insurance Rate Map (FIRM)" means the official map on which the Federal Insurance Administration has delineated both the areas of special flood hazards and the risk premium zones applicable to the community.

2.16. FLOOD INSURANCE STUDY. "Flood Insurance Study" means the official report provided by the Federal Insurance Administration that includes flood profiles, the Flood Boundary-Floodway Map, and the water surface elevation of the base flood.

2.17. FLOODWAY. "Floodway" means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot

2.18. HABITAT. "Habitat" means the combination of essential elements in the ecological function of riverine and marine shoreline systems that, for threatened, endangered, and priority species of fish, included but not limited to adequate:

- *substrate;*
- *water quality;*
- *water quantity;*
- *water temperature;*

- *water velocity;*
- *cover/shelter;*
- *food (juveniles only);*
- *riparian vegetation;*
- *space;*
- *safe passage conditions;*
- *and stable channel and bed.*

Other elements may include an essential element in ecological functions of riverine and marine shoreline systems that, for threatened, endangered and priority species of fish, includes, but is not limited to, shade and moderation of water temperature, streambank stabilization, shoreline protection, riparian corridors, large woody debris (lwd), lwd recruitment processes, a natural range of variability of flows, and off-channel rearing areas control of sediment input from surface erosion, regulation of nutrient and pollutant inputs to streams, litter and woody debris recruitment, refugia, and food production.

2.19. HYPORHEIC ZONE. "Hyporheic Zone" is the saturated zone located beneath and adjacent to streams that contains some portion of surface waters and means the area of subsurface flow between surface water and the water table; it is generally above the groundwater level, serves as a filter for nutrients and maintains high water quality. Floodplains provide course beds of alluvial sediments through which these subsurface river flows pass, much like a filter, contributing to habitat.

2.20. IMPERVIOUS SURFACE. "Impervious Surface" means any material or land alteration (i.e., clearing, grading, etc.) that reduces or prevents absorption of storm water into previously undeveloped land. That hard surface area which either prevents or retards the entry of water into the soil, water that had entered under natural conditions prior to development; and/or that hard surface area that causes water to run off the surface in greater quantities or at an increased rate of flow from that present under natural conditions prior to development. Common impervious surfaces include, but are not limited to: roof tops, walkways, patios, driveways, parking lots or storage areas, concrete or asphalt paving, gravel roads, and packed earthen materials.

2.21. LOWEST FLOOR. "Lowest Floor" means the lowest floor of the lowest enclosed area (including basement). An unfinished or flood resistant enclosure, usable solely for parking of vehicles, building access or storage, in an area other than a basement area, is not considered a building's lowest floor, provided that such enclosure is not built so as to render the structure in violation of the applicable non-elevation design requirements of this ordinance found at Section 5.2.1(B).

2.22. MANUFACTURED HOME. "Manufactured Home" means a structure, transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when attached to the required utilities. The term "manufactured home" does not include a "recreational vehicle."

2.23. MANUFACTURED HOME, PARK, OR SUBDIVISION. "Manufactured Home, Park, or Subdivision" means a parcel (or contiguous parcels) of land divided into two or more manufactured

home lots for rent or sale.

2.24. NEW CONSTRUCTION. "New Construction" means structures for which the "start of construction" commenced on or after the effective date of this ordinance.

2.25. NEW MANUFACTURED HOME, PARK, OR SUBDIVISION. "New Manufactured Home, Park, or Subdivision" means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed on or after the effective date of adopted floodplain management regulations.

2.26. PROTECTED AREA. "Protected Area" means any land and vegetation that lies within the Riparian Buffer Zone, channel migration zone, and/or floodway, whichever is more restrictive.

2.27. QUALIFIED PROFESSIONAL. "Qualifies Professional" means a person with experience and training in fish and wildlife issues and/or river systems; who has experience analyzing fish and wildlife habitats and their functions and values, impacts to the habitats, channel morphology, and mitigation; who derives his/her livelihood from employment as a habitat management consultant or fisheries biologist, or who functions in these areas but as a fluvial geomorphologist. Qualifications include: [1] a B.S. or B.A. or equivalent degree in biology, environmental studies, fisheries, geomorphology or related field, and two years of related work experience, or; [2] five years of related work experience.

2.28. RECREATIONAL VEHICLE. "Recreational Vehicle" means a vehicle, which is:

A. Built on a single chassis;

B. 400 square feet or less when measured at the largest horizontal projection;

C. Designed to be self-propelled or permanently tow able by a light duty truck; and

D. Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.

2.29. RIPARIAN BUFFER ZONE. "Riparian Buffer Zone" means an overlay zone that encompasses all land within distances specified in the ordinance on all watercourses and on either side of all streams measured as a line extending perpendicularly ordinary high water, and within which vegetation retention, pervious surfaces and special management practices are required for the protection of water quality, hydrologic functions, and fish and wildlife habitat. The federal services consider riparian buffer zones as the land adjacent to a water body including off channel areas equal

to one site-potential tree height measured perpendicularly from the bank full flow.

2.30. START OF CONSTRUCTION. "Start of Construction" includes substantial improvement, and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, placement or other improvement was within 180 days of the permit date. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers, or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure. For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

2.31. STRUCTURE. "Structure" means a walled and roofed building including a gas or liquid storage tank that is principally above ground.

2.32. SUBSTANTIAL DAMAGE. "Substantial Damage" means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

2.33. SUBSTANTIAL IMPROVEMENT. "Substantial Improvement" means any repair, reconstruction, or improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure either:

A. Before the improvement or repair is started; or

B. If the structure has been damaged and is being restored, before the damage occurred. For the purposes of this definition "substantial improvement" is considered to occur when the first alteration of any wall, ceiling, floor, or other structural part of the building commences, whether or not that alteration affects the external dimensions of the structure.

The term does not, however, include:

A. Any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions;

B. Any alteration of a structure listed on the National Register of Historic Places or a State Inventory

of Historic Places.

2.34. VARIANCE. "Variance" means a grant of relief from the requirements of this ordinance, which permits construction in a manner that would otherwise be prohibited by this ordinance.

2.35. WATER DEPENDENT. "Water Dependent" means a structure or use for commerce or industry, which cannot exist in any other location and is dependent on the water by reason of the intrinsic nature of its operations. *A use that can be carried out only on, in or adjacent to water areas because the use requires access to the water body for waterborne transportation, recreation, energy production or source of water. Examples include ship cargo terminal loading areas, fishing, ferry and passenger terminals, barge loading facilities, ship building and dry docking, marinas, aquaculture, float plane facilities, hydroelectric dams, surface water intake, and sewer outfalls.*

2.36. WATER TYPING SYSTEM. "Water Typing System" means a system for classifying streams according to their size and fish habitat characteristics. The system is based generally on the Washington Department of Natural Resources classification system, and includes the following types:

A. Type 1 includes all major salmonid-bearing streams that are mapped on the FEMA Flood Insurance Rate Maps. In Washington State, this includes all waters inventoried as "shorelines of the State."

B. Type 2 includes segments of natural waters not classified as Type 1 that are salmonid-bearing, and are used by substantial numbers of fish for spawning, rearing or migration. Waters are presumed to have highly significant fish populations if they include stream segments having a defined channel 20 feet or greater within the bank full width, are lakes, ponds or impoundments having a surface area of one acre or greater, or are waters used by salmonids for off-channel habitat.

C. Type 3 includes segments of natural waters, which are not classified as Type 1 or 2, and have a moderate to slight fish, wildlife and human use. These waters typically have a defined channel of 5 to 20 feet within the bank full width, or are ponds or impoundments having a surface area of less than one acre.

D. Type 4 includes segments of natural waters with bank full widths of defined channels that are not Type 1, 2 or 3 waters, are typically less than 5 feet in width and which are perennial waters of nonfish-bearing streams.

E. Type 5 includes segments of natural waters with bank full widths of defined channels that are not Types 1-4, are less than 5' wide and are seasonal nonfish-bearing streams.

SECTION 3: GENERAL PROVISIONS

3.1. LANDS TO WHICH THIS ORDINANCE APPLIES. This ordinance shall apply to all areas of special flood hazards within the jurisdiction of _____.

3.2. BASIS FOR ESTABLISHING THE AREAS OF SPECIAL FLOOD HAZARD. The areas of special flood hazard identified by the Federal Insurance Administration in a scientific and engineering report entitled "The Flood Insurance Study for ____ (community name) ____ " dated _____, 19__, and any revisions thereto, with an accompanying Flood Insurance Rate Map (FIRM), and any revisions thereto, are hereby adopted by reference and declared to be a part of this ordinance. The Flood Insurance Study and the FIRM are on file at _____(community address)____. The best available information for flood hazard area identification as outlined in Section 4.3.2 shall be the basis for regulation until a new FIRM is issued which incorporates the data utilized under Section 4.3.2. *Any flood information that is more restrictive or detailed than the FEMA data can be used for flood loss reduction and/or fisheries habitat management purposes, including data on channel migration, more restrictive floodways, maps showing future build-out conditions, specific maps from watershed or related studies that show riparian habitat areas, or similar maps.*

3.3. PENALTIES FOR NONCOMPLIANCE. No structure or land shall hereafter be constructed, located, extended, converted, or altered without full compliance with the terms of this ordinance and other applicable regulations. Violations of the provisions of this ordinance by failure to comply with any of its requirements (including violations of conditions and safeguards established in connection with conditions) shall constitute a misdemeanor. Any person who violates this ordinance or fails to comply with any of its requirements shall upon conviction thereof be fined not more than or imprisoned for not more than _____days, or both, for each violation, and in addition shall pay all costs and expenses involved in the case. Nothing herein contained shall prevent the __from taking such other lawful action as is necessary to prevent or remedy any violation. You may want to include some language here about the potential consequences if the action also "takes" a species listed under the Endangered Species Act.

3.4. ABROGATION AND GREATER RESTRICTIONS. This ordinance is not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where this ordinance and another ordinance, easement, covenant, or deed restriction conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

3.5. INTERPRETATION. In the interpretation and application of this ordinance, all provisions shall be:

A. Considered as minimum requirements;

B. Liberally construed in favor of the governing body; and,

C. Deemed neither to limit nor repeal any other powers granted under State statutes.

3.6. WARNING AND DISCLAIMER OF LIABILITY. The degree of flood protection required by this ordinance is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur on rare occasions. Flood heights may be increased by man-made or natural causes. This ordinance does not imply that land outside the areas of special flood hazards or uses permitted within such areas will be free from flooding or flood damages. This ordinance shall not create liability on the part of _____, any officer or employee thereof, or the Federal Insurance Administration, for any flood damages that result from reliance on this ordinance or any administrative decision lawfully made hereunder.

SECTION 4: ADMINISTRATION

4.1. ESTABLISHMENT OF DEVELOPMENT PERMIT.

4.1.1. Development Permit Required.

A development permit shall be obtained before construction or development begins within any area of special flood hazard established in Section 3.2. The permit shall be for all structures including manufactured homes, as set forth in the "DEFINITIONS," and for all development including fill and other activities, also as set forth in the "DEFINITIONS."

4.1.2. Application for Development Permit.

Application for a development permit shall be made on forms furnished by the _____ and may include, but not be limited to, plans in duplicate drawn to scale showing the nature, location, dimensions, and elevations of the area in question; existing or proposed structures, fill, storage of materials, drainage facilities, and the location of the foregoing. Specifically, the following information is required:

A. Elevation in relation to mean sea level, of the lowest floor (including basement) of all structures;

B. Elevation in relation to mean sea level to which any structure has been flood proofed;

C. Certification by a registered professional engineer or architect that the flood proofing methods for any nonresidential structure meet the flood proofing criteria in Section 5.2.2;

D. Description of the extent to which a watercourse will be altered or relocated as a result of proposed development; and

E. Identification of the Riparian Buffer Zone, CMZ, and/or floodplain on the site map and location

of the building site location in relation to the Riparian Buffer Zone these areas.

4.2. DESIGNATION OF THE LOCAL ADMINISTRATOR. The (local administrator) is hereby appointed to administer and implement this ordinance by granting or denying development permit applications in accordance with its provisions.

4.3. DUTIES AND RESPONSIBILITIES OF THE LOCAL ADMINISTRATOR. Duties of the (local administrator) shall include, but not be limited to:

4.3.1.Permit Review.

A. Review all development permits to determine that the permit requirements of this ordinance have been satisfied.

B. Review all development permits to determine that all necessary permits have been obtained from those Federal, State, or local governmental agencies from which prior approval is required, including those local, State or Federal permits that may be required to assure compliance with the Endangered Species Act or other appropriate fisheries regulations. If Federal funding is involved, the applicant shall furnish evidence from the Federal agency assuring compliance with the Endangered Species Act.

C. Review all development permits to determine if the proposed development is located in the floodway, *or in the protected area of the Riparian Buffer Zone.* If located in the floodway, assure that the encroachment provisions of Section 5.4(A) are met. *If located in the protected area, assure that all provisions related to the Riparian Buffer Zone at Section 5.5 are met*.

The applicant shall be notified that the (city, county) has reviewed the permit for compliance with floodplain management and riparian buffer zone requirements of this ordinance, but that it has not been reviewed for compliance with the Endangered Species Act. The decision does not conclude that activities allowed will or will not conflict with provisions of the Federal ESA, and should not be construed to authorize any activity that will conflict with or violate the ESA. The applicant must ensure that the approved activities are designed, constructed, operated and maintained in a manner that complies with the ESA.

D. (OPTIONAL) The applicant shall be notified that during review of this development proposal, it was determined that this property contains land within the Riparian Buffer Zone, which is an area that must remain in an undisturbed condition in which only native plants are allowed to grow, and that the applicant is required by this ordinance to record a Notice on Title on the property before a permit may be issued.

E. In an effort to site structures as far away from the watercourse and protected area as possible, the

applicant will be apprised of the elevations of the 10-year and 50-year floods in detailed study areas at the same time that the (city, county) provides the 100-year elevation as a part of the permit review. The applicant, in addition to plotting the 100-year elevation near the building site, will also plot the 10 and 50-year elevations on the land. The 100-year flood has a 26% chance of occurring in a 30-year period, while the 50-year flood has almost twice that chance (45%) and the 10-year flood has a 96% chance, i.e., it will almost certainly happen at least once in the 30-year period. The purpose is to show the applicant the significantly lower risk of placing the structure further away from the watercourse.

4.3.2. Use of Other Base Flood Data (In A and V Zones).

When base flood elevation data has not been provided (A and V Zones) in accordance with Section 3.2, BASIS FOR ESTABLISHING THE AREAS OF SPECIAL FLOOD HAZARD, the (local administrator) shall obtain, review, and reasonably utilize any base flood elevation and floodway data available from a Federal, State or other source, in order to administer Sections 5.2, SPECIFIC STANDARDS, and 5.4 FLOODWAYS.

4.3.3. Information to be Obtained and Maintained.

A. Where base flood elevation data is provided through the Flood Insurance Study, FIRM, or required as in Section 4.3.2, obtain and record the actual elevation (in relation to mean sea level) of the lowest floor (including basement) of all new or substantially improved structures, and whether or not the structure contains a basement.

B. For all new or substantially improved flood proofed structures where base flood elevation data is provided through the Flood Insurance Study, FIRM, or as required in Section 4.3.2:

i. Obtain and record the elevation (in relation to mean sea level) to which the structure was flood proofed.

ii. Maintain the flood proofing certifications required in Section 4.1.2(C).

C. Maintain for public inspection all records pertaining to the provisions of this ordinance.

4.3.4. Alterations of Watercourses

A. Notify adjacent communities and the Department of Ecology prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Insurance Administration. Generally, stream relocations should not be allowed unless the primary function of the action is to restore ecological functioning.

B. Require that maintenance be provided within the altered or relocated portion of said watercourse so that the flood carrying capacity is not diminished. *If the maintenance program calls for future cutting of planted native vegetation used in performing the alteration, the system shall be oversized at the time of construction to compensate for said vegetation growth or any other natural factor that may need future maintenance.*

C. Alterations and relocations, including stabilization projects, shall not degrade fish habitat or the physical processes that create and maintain habitat, or cause increased flood hazard or erosion to other properties and shall be subject to the following provisions:

i. Bridges shall be used instead of culverts on all Type 1 streams, and shall meet fish habitat requirements of the State Department of Fish and Wildlife.

ii. Any culverts that are used on fish-bearing streams must be arch/bottomless culverts or provide comparable fish protection, and must meet fish habitat requirements of the State Department of Fish and Wildlife Design Manual for Culverts, or more restrictive local standards.

iii. Bridges or other crossings must allow for uninterrupted downstream movement of wood and gravel, must be as close to perpendicular to the stream as possible, be designed to minimize fill and to pass 100-year flood flows allow full channel migration and conveyance of flood water (100 year flood flows).

iv. Alterations must maintain natural meander patterns, channel complexity and floodplain connectivity. Where feasible, such characteristics must be restored as part of the alteration; if not feasible because the impact is minimal, the applicant shall pay a fee in lieu into a fund the (city, county) can use on the stream, adjacent to the site, where the impact would be greater.

v. The applicant shall identify the channel migration zone for the stream at the project site and for a reasonable reach upstream and downstream of the site, and shall not undertake actions as part of the alteration that would in any way inhibit movement of the channel.

vi. Wherever feasible as part of an alteration, culverts that do not meet fish habitat requirements must be removed or replaced as part of the project.

vii. Alteration projects shall not result in blockage of side channels. If at the time of the alteration there are known barriers to fish passage into side channels, they shall be removed.

viii. If man-made side channels are part of an alteration project for irrigation, industrial or similar purposes, they shall be adequately screened, per requirements of the State Department of Fish and Wildlife's Salmonid Screening Manual, or more restrictive local standards.

ix. For any alteration of a salmonid-bearing stream whose channel is subject to migration,

bioengineered ("soft") armoring of stream banks is required. For alteration of other fish-bearing streams, soft armoring of stream banks is required wherever possible, in order to allow for woody debris recruitment, gravels for spawning and creation of side channels. Whatever technique is used must be designed in accordance with the State Department of Fish and Wildlife's Stream Bank Guidelines, or more restrictive local standards. Note: this paragraph makes it seem like the only solution to altering a stream is to construct bioengineered armoring. Actually, the solution may be not to armor it at all. See the standards developed in the Shoreline Guidelines on bank stabilization.

4.3.5. Interpretation of FIRM Boundaries.

Make interpretations where needed, as to exact location of the boundaries of the areas of special flood hazards (for example, where there appears to be a conflict between a mapped boundary and actual field conditions). The person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in Section 4.4.

NOTE - If you do not include Section 4.4 (Variance Procedure), end the above sentence after the word "interpretation" and add the following sentence: "Such appeals shall be granted consistent with the standards of Section 60.6 of the Rules and Regulations of the National Flood Insurance Program (44 CFR 59-76)."

4.4. VARIANCE PROCEDURE.

4.4.1. Appeal Board.

A. The _____ as established by _____ shall hear and decide appeals and requests for variances from the requirements of this ordinance.

B. The _____ shall hear and decide appeals when it is alleged there is an error in any requirement, decision, or determination made by the _____ in the enforcement or administration of this ordinance.

C. Those aggrieved by the decision of the _____, or any taxpayer, may appeal such decision to the _____, as provided in _____.

D. In passing upon such applications, the _____ shall consider all technical evaluations, all relevant factors, standards specified in other sections of this ordinance, and:

i. The danger that materials may be swept onto other lands to the injury of others;

ii. The danger to life and property due to flooding or erosion damage;

iii. The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;

iv. The importance of the services provided by the proposed facility to the community;

v. The necessity to the facility of a waterfront location, where applicable;

vi. The availability of alternative locations for the proposed use which are not subject to flooding or erosion damage;

vii. The compatibility of the proposed use with existing and anticipated development;

viii. The relationship of the proposed use to the comprehensive plan and flood plain management program for that area;

ix. The safety of access to the property in times of flood for ordinary and emergency vehicles;

x. The expected heights, velocity, duration, rate of rise, and sediment transport of the flood waters and the effects of wave action, if applicable, expected at the site; and,

xi. The costs of providing governmental services during and after flood conditions, including maintenance and repair of public utilities and facilities such as sewer, gas, electrical, and water systems, and streets and bridges.

xii. Impacts to habitat and natural river processes that influence habitat.

E. Upon consideration of the factors of Section 4.4.1(D) and the purposes of this ordinance, the _____ may attach such conditions to the granting of variances, as it deems necessary to further the purposes of this ordinance.

F. The _____ shall maintain the records of all appeal actions and report any variances to the Federal Insurance Administration upon request.

4.4.2. Conditions for Variances.

A. Generally, the only condition under which a variance from the elevation standard may be issued is for new construction and substantial improvements to be erected on a lot of one-half acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood level, providing items (i-xi) in Section 4.4.1(D) have been fully considered. As the lot size increases the technical justification required for issuing the variance increases.

B. Variances may be issued for the reconstruction, rehabilitation, or restoration of structures listed on the National Register of Historic Places or the State Inventory of Historic Places, without regard to the procedures set forth in this section.

C. Variances shall not be issued within a designated floodway if any increase in flood levels during the base flood discharge would result.

D. Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.

E. Variances shall only be issued upon:

i. A showing of good and sufficient cause;
ii. A determination that failure to grant the variance would result in exceptional hardship to the applicant;
iii. A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of the public, or conflict with existing local laws or ordinances.

F. Variances as interpreted in the National Flood Insurance Program are based on the general zoning law principle that they pertain to a physical piece of property; they are not personal in nature and do not pertain to the structure, its inhabitants, economic or financial circumstances. They primarily address small lots in densely populated residential neighborhoods. As such, variances from the flood elevations should be quite rare.

G. Variances may be issued for nonresidential buildings in very limited circumstances to allow a lesser degree of flood proofing than watertight or dry-flood proofing, where it can be determined that such action will have low damage potential, complies with all other variance criteria except 4.4-2(1), and otherwise complies with Sections 5.1.1, 5.1.3, and 5.1-4 of the GENERAL STANDARDS.

H. Any applicant to whom a variance is granted shall be given written notice that the structure will be permitted to be built with a lowest floor elevation below the base flood elevation and that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation.

SECTION 5: PROVISIONS FOR FLOOD HAZARD REDUCTION

5.1. GENERAL STANDARDS. In all areas of special flood hazards, the following standards are required:

5.1.1. Anchoring.

A. All new construction and substantial improvements shall be anchored to prevent flotation, collapse, or lateral movement of the structure.

B. All manufactured homes must likewise be anchored to prevent flotation, collapse, or lateral movement, and shall be installed using methods and practices that minimize flood damage. Anchoring methods may include, but are not limited to, use of over-the-top or frame ties to ground anchors (Reference FEMA's "Manufactured Home Installation in Flood Hazard Areas" guidebook for additional techniques).

5.1.2. Construction Materials and Methods.

A. All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.

B. All new construction and substantial improvements shall be constructed using methods and practices that minimize flood damage. *If a lot has a buildable site out of the floodplain, new construction shall be directed to that area. For buildings that have no option and must be built in the floodplain, methods and practices include commonly-accepted measures, such as placing structures on the highest land on the lot, orienting structures parallel to flow rather than perpendicular, and siting structures as far away from the watercourse and protected area as possible (see Section 4.3.1[F]). Also, if the local administrator detects any evidence of active hyporheic exchange on a site, the building shall be located to minimize disruption of such exchange.*

C. Electrical, heating, ventilation, plumbing, and air-conditioning equipment and other service facilities shall be designed and/or otherwise elevated or located to prevent water from entering or accumulating within the components during conditions of flooding.

5.1.3. Utilities.

A. All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the systems;

B. New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the systems and discharges from the systems into flood waters; and

C. Onsite waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding. *New on-site sewage disposal systems are prohibited in the Riparian Buffer Zone, the floodway, in areas not yet mapped where there could be channel migration and within the 10-year floodplain elevation.*

5.1.4. Subdivision Proposals.

A. All subdivision proposals shall be consistent with the need to minimize flood damage;

B. All subdivision proposals shall have public utilities and facilities, such as sewer, gas, electrical, and water systems located and constructed to minimize or eliminate flood damage;

C. All subdivision proposals shall have adequate drainage provided to reduce exposure to flood damage; and,

D. Where base flood elevation data has not been provided or is not available from another authoritative source, it shall be generated for subdivision proposals and other proposed developments which contain at least 50 lots or 5 acres (whichever is less).

E. All subdivision proposals shall be consistent with the need to maximize riparian ecosystems, allow for channel migration and preserve existing beneficial natural functions, by:

i. Identifying the Riparian Buffer Zone, floodway, and channel migration zone (if known) on proposed subdivision maps. Note - Identifying channel migration zones is a requirement of the inventory that is done as part of developing a Shoreline Master Program under the new Shoreline Guidelines.
ii. Prohibiting new, buildable lots within the Riparian Buffer Zone, floodway and, if known, the channel migration zone.
iii. Requiring that new lots outside the Riparian Buffer Zone, floodway and, if known, the channel migration zone, have land with adequate building space outside the 100-year floodplain.
iv. For existing legal subdivisions in the floodplain, new construction on lots that have adequate buildable space outside the floodplain is directed to that location.
v. For any development that can occur in new subdivisions, such as access roads, utilities, parks, trails, etc., limits on impervious surfaces and native vegetation removal at Section 5.5 shall apply, and new road crossings over streams are prohibited.
vi. The local administrator should apply concepts of cluster development, density transfer, credits and bonuses, planned unit development, and transfer of development rights wherever possible and allowed by the (city's, county's) development codes.

5.1.5. Review of Building Permits.

Where elevation data is not available either through the Flood Insurance Study, FIRM, or from another authoritative source (Section 4.3.2), applications for building permits shall be reviewed to assure that proposed construction will be reasonably safe from flooding. The test of reasonableness is a local judgment and includes use of historical data, high water marks, photographs of past flooding,

etc., where available. Failure to elevate at least two feet above the highest adjacent grade in these zones may result in higher insurance rates.

5.2. SPECIFIC STANDARDS. In all areas of special flood hazards where base flood elevation data has been provided (Zones A1-30, AH, and AE) as set forth in Section 3.2, BASIS FOR ESTABLISHING THE AREAS OF SPECIAL FLOOD HAZARD, or Section 4.3.2, Use of Other Base Flood Data (In A and V Zones), the following provisions are required:

5.2.1. Residential Construction.

A. New construction and substantial improvement of any residential structure shall have the lowest floor, including basement, elevated one foot or more above the base flood elevation.

B. Fully enclosed areas below the lowest floor that are subject to flooding are prohibited, or shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or must meet or exceed the following minimum criteria:

i. A minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided.

ii. The bottom of all openings shall be no higher than one foot above grade.

iii. Openings may be equipped with screens, louvers, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.

5.2.2. Nonresidential Construction.

New construction and substantial improvement of any commercial, industrial or other nonresidential structure shall either have the lowest floor, including basement, elevated one foot or more above the base flood elevation; or, together with attendant utility and sanitary facilities, shall:

A. Be flood proofed so that below one foot or more above the base flood level the structure is watertight with walls substantially impermeable to the passage of water;

B. Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy;

C. Be certified by a registered professional engineer or architect that the design and methods of construction are in accordance with accepted standards of practice for meeting provisions of this subsection based on their development and/or review of the structural design, specifications and

plans. Such certifications shall be provided to the official as set forth in Section 4.3.3(B);

D. Nonresidential structures that are elevated, not flood proofed, must meet the same standards for space below the lowest floor as described in Section 5.2.1(2);

E. Applicant's flood proofing nonresidential buildings shall be notified that flood insurance premiums will be based on rates that are one foot below the flood proofed level (e.g. a building flood proofed to the base flood level will be rated as one foot below).

5.2.3. Manufactured Homes.

A. All manufactured homes to be placed or substantially improved on sites:

i. Outside of a manufactured home park or subdivision,

ii. In a new manufactured home park or subdivision,

iii. In an expansion to an existing manufactured home park or subdivision, or

iv. In an existing manufactured home park or subdivision on which a manufactured home has incurred "substantial damage" as the result of a flood;

shall be elevated on a permanent foundation such that the lowest floor of the manufactured home is elevated one foot or more above the base flood elevation and be securely anchored to an adequately designed foundation system to resist flotation, collapse and lateral movement.

B. Manufactured homes to be placed or substantially improved on sites in an existing manufactured home park or subdivision that are not subject to the above manufactured home provisions shall be elevated so that either:

i. The lowest floor of the manufactured home is elevated one foot or more above the base flood elevation, or

ii. The manufactured home chassis is supported by reinforced piers or other foundation elements of at least equivalent strength that are no less than 36 inches in height above grade and be securely anchored to an adequately designed foundation system to resist flotation, collapse, and lateral movement.

5.2.4. Recreational Vehicles.

Recreational vehicles placed on sites are required to either:

A. Be on the site for fewer than 180 consecutive days; or

B. Be fully licensed and ready for highway use, on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached additions; or

C. Meet the requirements of 5.2-3 above and the elevation and anchoring requirements for manufactured homes.

5.3. BEFORE REGULATORY FLOODWAY.

In areas with base flood elevations but where a regulatory floodway has not been designated, no new construction, substantial improvements, or other development (including fill) shall be permitted within Zones A1-30 and AE on the community's FIRM, unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one foot at any point within the community.

5.4. FLOODWAYS.

Located within areas of special flood hazard established in Section 3.2 are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of floodwaters, which carry debris, potential projectiles, and erosion potential, the following provisions apply:

A. Prohibit encroachments, including fill, new construction, substantial improvements, and other development unless certification by a registered professional engineer is provided demonstrating through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that the proposed encroachment shall not result in any increase in flood levels during the occurrence of the base flood discharge. *If the mapped floodway is the greater of the measures at Section 5.5.1, uses in the floodway are subject to the restrictions of the Riparian Buffer Zone, unless an exception is applied for per Section 5.5.3(i). Also, an exception to the no-rise criteria is allowed at the discretion of the local administrator for projects designed to create or restore fish habitat, including recruitment of woody debris.*

B. Construction or reconstruction of residential structures is prohibited within designated floodways, except for (i) repairs, reconstruction, or improvements to a structure which do not increase the ground floor area; and (ii) repairs, reconstruction or improvements to a structure, the cost of which does not exceed 50 percent of the market value of the structure either, (A) before the repair, or reconstruction is started, or (B) if the structure has been damaged, and is being restored, before the damage occurred. Any project for improvement of a structure to correct existing violations of state or local health,

sanitary, or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions or to structures identified as historic places shall not be included in the 50 percent.

C. If Section 5.4(A) is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of Section 5.0, PROVISIONS FOR FLOOD HAZARD REDUCTION.

5.5. ADDITIONAL STANDARDS FOR RIPARIAN ECOSYSTEM PROTECTION.

In all areas of special flood hazards, including unnumbered A and V zones, the following standards apply:

5.5.1. Riparian Buffer Zone (RBZ).

A Riparian Buffer Zone is established for all watercourses including off channel areas – areas outside this zone but within the Special Flood Hazard Area provide necessary protection to the RBZ. The RBZ is the greater of the following:

A. 150 feet measured perpendicularly from ordinary high water for Type 1 and 2 salmonid-bearing streams; for Type 2 nonsalmonid-bearing and Type 3 streams, lakes and marine shorelines, the distance is 100 feet; on Type 4 and 5 streams and in arid areas, it is 50 feet;

B. The Channel Migration Zone (where known) plus 50 feet;

C. The mapped Floodway (where available).

Note: Use DNR 's new definitions for stream types. Also, you could make this consistent with the standards for Vegetation Protection areas under the Shoreline Guidelines.

The Riparian Buffer Zone is an overlay zone that encompasses lands as defined above on either side of all streams, and for all other watercourses including off channel areas. The RBZ is a no-disturbance zone, other than for approved stream restoration activities. Any property or portion thereof that lies within the RBZ is subject to the restrictions of the RBZ, as well as any zoning restrictions that apply to the parcel in the underlying zone. Restrictions in this area apply to all development, per the definition of "development," and the following restrictions are specifically noted:

A. Buildings, including accessory buildings, are prohibited.

B. No new impervious surfaces may be created.

C. Removal of native vegetation is prohibited.

D. New clearing, grading, filling, land-disturbing activity or other "development" (see definition) is not allowed, other than for the purpose of replacing non-native vegetation with native vegetation, and for other restoration work that may be approved by the local administrator.

E. Septic tanks and drain fields, dumping of any materials, hazardous or sanitary waste landfills, and receiving areas for toxic or hazardous waste or other contaminants, are prohibited.

5.5.2. Outside the Riparian Buffer Zone.

Outside the Riparian Buffer Zone but within the floodplain, the following restrictions apply:

A. Buildings shall be set back 15 feet from the RBZ and shall be constructed using post, pier, piling or stem-wall construction techniques, which permit water to flow beneath the structure, or;

B. If a building is proposed to be built on earth fill, it must be set back 15 feet from the RBZ and the applicant must obtain a certification from a qualified professional that the fill will/will not harm fish habitat, and that it will/will not block side channels, or inhibit channel migration, or increase flood hazard to others i.e., the fill will not be placed within a channel migration zone, whether or not the [city, county] has delineated such zones as of the time of the application. This certification must comply with the (city's, county's) peer review process.

C. Balanced cut and fill techniques may be used to elevate a structure, provided the structure is set back 15 feet from the RBZ and the fill is approved by the local administrator, who shall require certification from a qualified professional that the fill will will/will not harm fish habitat, and that it will/will not block side channels or inhibit channel migration, or increase flood hazard to others i.e., the fill will not be placed within a channel migration zone whether or not the [city, county] has delineated such zones as of the time of the application. This certification must comply with the (city's, county's) peer review process. OPTIONAL: Change "may" to "shall" in (c) and require balanced cut and fill together with a required certification; replace (b) with (c).

D. Creation of new impervious surfaces shall not exceed 10 percent of the surface area of the portion of the lot in the floodplain.

E. Removal of native vegetation must leave 65 percent of the surface area of the portion of the lot in the floodplain in an undeveloped state; the 65 percent pertains to the entire portion of the lot in the floodplain, including that area in the RBZ, where removal of native vegetation is prohibited.

F. For existing lots created before the date of this ordinance, and for lots in degraded condition, the applicant can apply for an exception to the impervious surface and vegetation retention requirements.

The standard for exceptions is to minimize total building coverage and all other impervious surfaces to allow up to 3000 square feet of disturbance if the lot is less than 30,000 square feet, and no more than 10 percent if the lot is greater than 30,000 square feet. Disturbance includes land alteration involving grading, utility installation and landscaping, but does not include land used for an on-site sewage disposal system. If the applicant cannot meet the impervious surface and/or vegetation retention standards because of site degradation, he/she will be notified of possible consequences related to the Endangered Species Act, and provided such notification described at Section 4.3.1(D), the purpose of which is to encourage restoration.

G. The proposed action must be designed and located so that it will not require new structural flood protection (e.g., levees)

5.5.3. Exceptions to Restrictions of the Riparian Buffer Zone.

The local administrator may grant an exception to the requirements of the Riparian Buffer Zone. Such an exception must be based on a report prepared by a qualified professional for the applicant, and shall require conditions of approval, including mitigation and/or restoration, necessary to assure that the action will not in any way degrade riparian ecosystem functions.

A. Some uses are allowed outright, including activities such as: [1] repair or remodel of an existing building in its existing footprint, including buildings damaged by fire or other casualties; [2] removal of noxious weeds; [3] replacement of non-native vegetation with native vegetation; [4] ongoing activities such as lawn and garden maintenance; [5] removal of hazard trees; [6] normal maintenance of public utilities and facilities; and [7] restoration or enhancement of floodplains, riparian areas and streams that meet Federal and State standards.

B. Water-dependent uses, such as fish enhancement projects approved by the (city, county), private boat docks, marinas, boat ramps, etc.

C. Normal farm practices, other than buildings, in existence at the date of adoption of this ordinance, on land zoned for agriculture.

D. Crossings by transportation facilities and utility lines. Issuance of permits for such uses or activities is contingent upon the completion of a feasibility study that identifies alternative routing strategies that do not violate the RBZ, and on a mitigation plan that assures no net loss of ecological functions in the RBZ and provides restoration where the RBZ is degraded.

E. Trails are only allowed after a critical areas study documents no loss of buffer function, mitigation is added which may include increasing buffer widths equal to the width of the trail, construction uses pervious materials, and the trail is located on the portion of the buffer that is farther away from the stream.

F. New construction of single-family buildings is not permitted except as may be approved through a variance related to size, shape or topography of the property weighed against the possibility of a taking for a parcel that was legally created prior to the date of this ordinance, and may only be allowed if the action results in an equal or greater level of ecological function than the current condition, as certified by a qualified professional.

G. Buffer width averaging may be allowed by the local administrator if it is based on a Habitat Management Plan prepared by a qualified professional, will provide additional natural resource protection over existing conditions, and the total area contained in the buffer on the development proposal site does not decrease nor is there more than a 25 percent decrease anywhere within the buffer. The local administrator may increase buffer widths when necessary to protect streams. This action will be supported by appropriate documentation demonstrating that: [1] a larger buffer is necessary to maintain critical habitat; [2] increased protection is necessary based on evidence of a migrating stream channel; or [3] the adjacent land is susceptible to severe erosion and erosion control measures cannot effectively prevent adverse impacts to the riparian area.

H. *Floodway exception. If a proposed site is in a floodway that exceeds the other two distance measurements in the RBZ, the applicant has the option to determine whether or not the site is located within the elevation of the 10-year floodplain. If it is both within the floodway and 10-year floodplain, the RBZ and floodway restrictions apply; if it is within the floodway but outside the 10-year floodplain, floodway restrictions and restrictions outside the RBZ apply.*

I. *Modifications based on detailed community studies. If a community has completed, documented and adopted a detailed, comprehensive watershed-type analysis that better defines riparian areas based on site conditions, etc., that material can be used to modify the RBZ distances (150, 100 and 50 feet) in Section 5.5.1.*

Editor's Note: This is a separate supporting document and not typically a part of the FEMA Model Ordinance. It is included here to provide additional information to the reader.

SUPPORTING INFORMATION

FEMA Region 10 Model Ordinance for Flood Loss Reduction and Fish Habitat Enhancement

---

What will we leave for our children – Excuses, or Salmon?

Purpose

The purpose of this report is to document measures that were added to the FEMA Region 10 Model Flood Damage Prevention Ordinance to enhance fish habitat in the Northwest. The Regional Office has long been aware that certain measures allowed by FEMA's flood loss reduction regulations are sometimes not conducive to maintaining healthy fish habitats, and the intent of this activity is to bring about greater consistency between flood loss reduction and fish habitat enhancement.

The major product is addition of several provisions to the long-standing Model Ordinance, in the context of the model, i.e., the same basic model is intact, but with additions that are noted. The additions in the Model for fish enhancement are in **bold** type, and appear as phrases, whole sentences and, sometimes, whole new sections. In all cases, however, the additions can be distinguished by the bold type.

There is a tremendous amount and variety of information that is available relating to ecosystem and riparian area protection, fish habitat enhancement, Endangered Species Act implications in the Northwest, protection and restoration activities and similar areas. There is little problem with lack of information; rather, the problem is how to focus the available information for the purpose of this project.

Thus, the purpose of this report is to provide the user of the Model Ordinance with supporting information showing the science or technical material that was used in deriving specific measures that were placed into the basic model.

Background

FEMA has provided local governments with model ordinances since the mid-1970s. The models are based on Federal regulations at 44 CFR 60.3, and basically relate to flood loss reduction activities. This stems from the enabling legislation of the National Flood Insurance Act of 1968, as amended, and from the aforementioned regulations, which specify flood loss reduction almost exclusively. However, through the years, FEMA staff, both at the Headquarters Office and in the Regional Offices, have recognized limitations posed by an exclusive focus on flood loss reduction measures. There are

several activities FEMA has taken or been involved with that significantly broaden the somewhat limited scope of this focus, such as:

- FEMA chairs the Federal Interagency Floodplain Management Task Force, which was established in 1975 to carry out the responsibility of the President to prepare for the Congress a Unified National Program for Floodplain Management, and which consists of all Federal agencies that have a role in floodplain management. One of the more recent documents produced by the Task Force is "Protecting Floodplain Resources," which is a very holistic look at natural floodplain values and functions beyond only dealing with flood loss reduction measures.

- FEMA was an early advocate of Multi-Objective Management of floodplains (MOM). The agency produced guidance material to spur planning around this concept, and stimulated its application through reports, at professional conferences, and in other ways.

- The floodplain management, or flood loss reduction regulations of the National Flood Insurance Program (NFIP) are considered to be minimal, and are the basic measures a community must adopt for eligibility in the NFIP. However, FEMA has a program that is part of the NFIP, called the Community Rating System (CRS), which is literally a bible of good floodplain management practices. The basic measures communities must adopt are spelled out in six pages in the Federal regulations; the CRS defines good floodplain management in over 450 pages (plus numerous additional appendices and other specialized documents). Several of these pages spell out multi-objective floodplain management concepts, including those dealing directly with preserving floodplain lands for the natural and beneficial functions they provide.

- Recent initiatives by the FEMA Director have involved gathering National leaders in floodplain management to discuss future directions, one purpose of which is to ascertain whether the focus needs to be further shifted to provide additional protection for natural values of floodplains.

Given the understanding and attention FEMA and its staff has paid to a more holistic view of floodplain management, and given the need for such a look in view of degradation of fish habitat as indicated through various Endangered Species Act listings, it is appropriate that FEMA promulgate measures to at least conserve and protect existing habitat, and to correct certain existing legal measures, such as indiscriminate filling in floodplains, that may actually be harmful to fish habitat.

It is recognized that the proposed measures cannot in any way be construed as required measures a community must adopt in order to retain eligibility in the NFIP, since fish enhancement/riparian ecosystem protection is not within the authorities of the NFIP. Rather, the measures are recommended as a way a community may be able to protect itself in terms of complying with rules of the Endangered Species Act. FEMA recognizes that the best approach for ecosystem protection is the overall approach utilizing comprehensive watershed management planning, but also recognizes that such planning may not be possible or achievable in the near future for some communities. The revised Model Ordinance, in such cases, can be viewed as at least an interim measure until a community can perform the desired level of comprehensive planning.

Literature Search

An extensive literature search was undertaken and maintained throughout this project. Early successes in this effort stemmed from attending the Annual Meeting of the Northwest Floodplain Managers Association, and from King County, through their Department of Natural Resources. There is extensive literature on various aspects of fish and fish habitat, from State and Federal agencies, academia, regional agencies, local governments, watershed groups, Indian Tribes and private consultants. The difficult part of the project was to focus this information on the task of producing new language for the existing FEMA Model Flood Damage Protection Ordinance, in view of the plethora of information available.

References consisting of books, documents, articles and excerpts that were obtained and reviewed for this project are identified in the Reference section beginning on page 46. There are over 75 documents in this bibliography, some of which are short articles, but several of which are quite lengthy. The text of this report refers throughout to documents that were reviewed from the list that is noted in the References.

Significance of the Floodplain

Floodplain connectivity with streams and other watercourses is recognized as a specific habitat element necessary to be maintained, protected or restored in order for wild salmon to continue to exist and evolve (*Extinction is Not An Option, page II.10).* Major State agencies in Washington and Oregon, and Regional efforts in the Northwest, such as Metro in Portland, emphasize the contributions of floodplains to healthy habitats for fish. This idea is perhaps best expressed in Portland Metro's *Streamside CPR,* as follows: The Riparian area "encompasses the area beginning at the ordinary high water line and extends to that portion of the terrestrial landscape that directly influences the aquatic ecosystem by providing shade, fine or large woody materials, nutrients, organic and inorganic debris, terrestrial insects, or habitat for riparian-associated wildlife. It includes the entire extent of the floodplain because that area significantly influences and is influenced by the stream system during flood events." That report goes on to specify that in larger river-floodplain systems, most of the aquatic productivity occurs in the floodplain. "The interaction of the channel with its floodplain tends to create unique biological communities, cutoff oxbows, sandbars, backwaters, undercut banks, floodplain pools and extensive high water tables. Much of the aquatic productivity occurs in the floodplain."

This is consistent with many of the technical documents that were reviewed. For example, J.V. Ward, in an article published in *Freshwater Wetlands and Wildlife* in 1989 states that "Riverine-wetland ecosystems evolved in response to dynamic interactions between the river channel and the floodplain" and he concludes that "The floodplain is thus an integral functional component of river ecosystems." Much of this aspect of floodplain functions is focused on food production in floodplains, which is echoed by many authors, including Stanford in *A General Protocol for Restoration of Regulated Rivers*, wherein he states that "Food webs are complex and change predictably along the stream

continuum in direct response to variations in the strength of interconnections between channel groundwater, floodplain and upland elements of the catchment."

The Forest Ecosystem Management Assessment Team (FEMAT) defined riparian reserves as the stream plus the outer edges of the 100-year floodplain, as one alternative for achieving riparian protection. The National Marine Fisheries Service (NMFS) states that in streams with a broad valley floor, it is more appropriate to define the riparian zone based on some measure of the floodplain (*Streamside CPR*, page 38). Also, "In streams, aquatic productivity is almost exclusively concentrated in the channel; in larger river-floodplain systems most of the aquatic productivity occurs in the floodplain." Metro goes on to state that "According to the scientific literature reviewed for this report (*Streamside CPR)*, the riparian zone of influence includes the extent of the floodplain because of the movement of the stream or river across the floodplain through time. Therefore the proposed riparian area width includes the extent of the floodplain. In cases where the floodplain exceeds the 175-foot riparian area width, the extent of the 100-year FEMA floodplain or the area of inundation of the 1996 flood, whichever is greater, is the proposed riparian area width." While this denotes the importance of floodplains, it should be pointed out that at the time of this writing, the Metro Council had not yet decided on a specific riparian area width for regulatory purposes.

In Washington, the significance of floodplains is noted in the *State/Tribal Wild Salmonid Policy* Action Strategy, thusly: "Protect (and restore where feasible) floodplain habitat of value for wild salmonids." *Extinction is Not An Option* calls for restoration of natural floodplain functions which will "benefit habitat for aquatic and riparian species as floodplains resume their natural character." The document also recommends changes to: "Integrate engineering concepts of flood hazard management and biological concepts of salmon recovery into a unified management strategy." Also, the State's new Shoreline Master Program Guidelines specify floodplain connectivity and floodplain management throughout the Default and Optional Approaches that have been promulgated.

Finally, the University of Washington Center for Streamside Studies, in a paper prepared for the Washington Department of Fish and Wildlife, devotes the entire paper to describing the relationships between floodplains and habitat; the paper is called *Ecological Issues in Floodplains and Riparian Corridors.* Among its many findings regarding floodplains, it concludes that "Large streams and rivers (where most people are) usually occupy flatter, gentler terrain where there is a large potential for an extensive zone of influence between the river and the floodplain."

Based on the above information and numerous related documents, it is clear that good stewardship of floodplains can be an extremely important factor in protecting habitat for fish, and that an enhanced Model Ordinance incorporating measures to protect riparian ecosystems of floodplains can be of great value.

Questionnaire and Personal Interviews

Supporting Information – FEMA Model Ordinance

The FEMA Model Ordinance Project involved a review of documents obtained from the Literature Search, mainly from State, Federal and regional agencies. Major efforts have been undertaken by the States, as documented in *Extinction is Not An Option* in Washington and *The Oregon Plan.* State agencies in Idaho, Oregon and Washington have produced a wealth of information in support of these and other plans, and much of this information was reviewed as background to support changes in the FEMA Model Ordinance.

However, some of the most valuable input for this project was that which was obtained from local governments, mainly in Oregon and Washington. This was accomplished primarily through questionnaires and personal interviews. In January, a questionnaire was sent to 106 local governments in the three States, 49 to counties and 57 to cities (49 in Washington, 52 in Oregon and 5 in Idaho). The questionnaire asked these local governments: [1] whether their floodplain management ordinance contained any measures beyond the FEMA minimums that are aimed at enhancing fish habitat; [2] if their community had fish enhancement measures in other codes that would be appropriate in the floodplain ordinance; [3] what fish enhancement measures they would recommend if they were preparing a floodplain ordinance; and [4] how they would view several measures that were being contemplated by FEMA for the Model Ordinance.

Detailed responses are contained in a companion document "Analysis of Questionnaires and Personal Interviews." In summary, there were no communities that had measures in their floodplain ordinances aimed specifically at fish enhancement. Several had measures that clearly were "fish-friendly," but they were not adopted on that basis. For example, Skagit County prohibits fill for structural support in their ordinance, a measure that is good for fish habitat, but was adopted for other reasons. Most all the communities responding to the second question would retain their fish habitat regulations in areas other than the floodplain section of the code (such as their sensitive areas-type ordinances). The four ideas that were most evident in reviewing responses to what local officials would recommend if they were preparing a "fish-friendly" floodplain ordinance were:

- Establish and regulate a riparian protection zone;
- Limit fill in the floodplain;
- Limit removal of native vegetation; and
- Develop stronger prohibitions in floodways.

Concerning specific measures in Question 4, local officials, first, were not in favor of outright allowance of fish enhancement measures in stream channels and floodways. They appreciated the flexibility FEMA has offered through its "Policy on Fish Enhancement Structures in the Floodway," but they felt a need for some degree of control, in view of the hazards and safety issues these projects could present to others. This was particularly true of woody debris, where the majority of respondents did not approve of an outright requirement that woody debris deposited from floods be retained onsite or in close proximity, again in view of the potential hazard and public safety issue.

Most respondents thought riparian area protection was better placed in an area of the code other than the floodplain section, though several were favorable to requiring riparian protection in the floodway. Similarly, most recognized the need for establishing buffer zones together with restrictions in these zones, but would place them in other parts of the code.

Concerning floodplain fills, many expressed a desire to not allow them, but this was tempered by the fact that fill is such a prevalent construction technique that prohibiting it might not be possible. Respondents were virtually unanimous in strictly limiting watercourse alterations that would diminish fish habitat (this included such measures as requiring culverts that assure fish passage, prohibiting barriers and blockages to side channels, and requiring screening where needed). See "Analysis of Questionnaires and Personal Interviews" for additional information on these questions and responses.

The personal interviews were conducted primarily with local city and county officials – they accounted for 23 of the 29 interviews. There were also two interviews with the Regional agencies in Seattle and Portland, two with private consultants and one each with a State agency and the University of Washington. People interviewed were primarily floodplain managers, since it is the floodplain ordinance that is being modified and new fish habitat measures would become part of their administration of the ordinance (at most of these meetings, if the locality had a "fish person" on staff, that person also participated).

Raw notes from the personal interviews are included in "Analysis of Questionnaires and Personal Interviews," as is a summary of salient points from these interviews. There were a wealth of excellent, new ideas from these interviews that have made their way into the new Model Ordinance (these ideas are usually identified in the discussion of new measures below). Besides the valuable ideas provided by these local officials, measures they already have that relate to fish enhancement were obtained, and were of tremendous use in formulating various aspects of the additional ordinance provisions.

Floodplain and Fisheries Resource Management Workshop

On February 27, 2001, FEMA hosted a workshop to explore mutual ideas for flood loss reduction and fish habitat preservation and restoration, at the Federal Regional Center in Bothell. There were 38 participants, divided more or less evenly on the basis of "flood" and "fish" people. The entire FEMA flood staff participated, as did four people from the National Marine Fisheries Service. There were also representatives from the Oregon and Washington Departments of Fish and Wildlife, the State Coordinators for the National Flood Insurance Program, private consultants, and university personnel. Significantly, there were nine local government representatives, and the two facilitators were also from a local government (King County). This was important because they are the end users of any fish enhancement measures that will be included in an augmented model ordinance, and they can (and did) provide extremely important input on how such measures could work.

The workshop was considerably more far-reaching than merely focusing on the Model Ordinance;

there were good discussions on many concepts of mutual concern that noted complexities and issues well beyond merely adding fish enhancement measures to a model ordinance. The results of this workshop are chronicled in a companion document that summarizes day-long sessions, including the initial presentations by FEMA and NMFS and the detailed discussions that ensued in the morning and afternoon. While this Workshop covered issues that were quite comprehensive, the comments that have been recorded and the discussions that were held proved very valuable to formulating ideas for inclusion in the Model Ordinance. Where specific ideas were brought up at this workshop, they are so noted in the discussion of specific ordinance measures below.

The Basic FEMA Model Ordinance

FEMA has had model ordinances since the mid-1970s. They were published in a series of documents called the Community Assistance Series, and were labeled "Guide for Ordinance Development." They were published by the Washington D.C. office of the Federal Insurance Administration (then a part of HUD, now a part of FEMA), and contained actual model ordinance language, together with separate columns explaining the rationale for particular provisions. This ordinance language was derived from the Federal regulations at 44 CFR 60.3, closely following the regulations but putting them in the context of a local land use ordinance. The models also include sections on variances, penalties for noncompliance, etc., that are not in the regulations but are needed to assure that the ordinance is legally enforceable.

Concurrent with issuance of the series of National model ordinances, the Regional Office issued its own versions of the models. They were straight-typed and easier to view in ordinance format, and were done mainly because there were few copies of the National model available. However, the Regional model did not vary at all from the National model; it couldn't, in view of the fact that the ordinance had to be based on the regulations, and there was not latitude enabling a field office to change the National model. That has been the case to this day. While there have been cosmetic changes and State-specific measures added to the Regional model ordinances, and while the ordinance has changed a bit through the years with changes in the regulations, the models that exist today are essentially the same as the original models.

The major sections of the model ordinances are the following:

1.0 Statutory Authorization, Findings of Fact, Purpose and Objectives
2.0 Definitions
3.0 General Provisions
4.0 Administration
5.0 Provisions for Flood Hazard Reduction

The new model totally follows the existing model ordinance format. Most of the additions are in Sections 4 and 5. Section 4 includes language that establishes the required development permit and discusses duties and responsibilities of the local administrator. There are significant additions to these duties that relate to the local administrator's review of permits for restrictions in the Riparian Buffer

Zone. There are also significant additions to the section that describes requirements that must be met if a watercourse is to be altered. These new requirements relate to the need to maintain floodplain connectivity in any alteration, use bridges instead of culverts, use bioengineered armoring, and several others. Section 4 also includes provisions that describe other base flood data that should be used, the need to obtain and maintain elevation and floodproofing certificates, and a major part of this section is devoted to the variance process (which is not mandatory language). This variance process relates mainly to flood loss reduction measures, not fish enhancement measures (a later section covers exceptions to restrictions in the Riparian Buffer Zone).

The most important fish enhancement additions are in Section 5, which is the heart of all of the model ordinances. This section consists of: [1] General Standards, which include anchoring, construction materials and methods, utilities and subdivision proposals; and of [2] Specific Standards, which give the performance standards for residential construction, nonresidential construction, manufactured homes, recreational vehicles, and the more restrictive floodway standards. A new section is added to the Specific Standards, Section 5.5, called "Additional Standards for Riparian Ecosystem Protection," which consists of the Riparian Buffer Zone, Outside the Riparian Buffer Zone, and Exceptions to Restrictions of the Riparian Zone. It is this section that contains the most important additions to the model for fish enhancement purposes.

Limitations of the Revised Model Ordinance

There are limitations that are acknowledged at the outset that may reduce usability of the revised Model Ordinance. They are the following:

1. **The ordinance is not mandatory.** Although the FEMA model ordinances were not mandatory in that they had to be used exactly as they were published, the provisions in the model were, nevertheless, taken directly from the Federal regulations and were, consequently, the easiest way for most jurisdictions to comply with those regulations. While the model *per se* was not mandatory, compliance with the regulations definitely was mandatory. The new fish provisions are not based on Federal regulations and are, therefore, not mandatory. Although the Background and Significance of the Floodplain sections above provide some reasons for FEMA involvement in riparian ecosystem protection, there is no basis in regulation to support this involvement. However, a large majority of the 723 communities that participate in the NFIP in the Northwest are under mandates to comply with rules set forth by the NMFS and U.S. F&W Service for threatened and endangered fish species. Since floodplains are such a key factor, if this ordinance can supply some degree of protection under those rules, it may be in the best interest of the community to consider adoption of the Model. Rather than mandating the ordinance per regulations, it is offered on the basis of it being an **incentive** to comply with the ESA.

2. **The ordinance applies only to the floodplain.** The basic construct of the FEMA model ordinances is that all floodplain management measures apply to mapped streams that were studied by either detailed or approximate study methods and appear on Flood Insurance Rate Maps. The 100-year floodplains appear as either Zone A or V, AE or VE, A1-30, V1-30, AO, or AH, and are also

termed Special Flood Hazard Areas. In some communities, this will be adequate, i.e., all streams will be covered. For others, however, the study and maps will not cover all streams, particularly those that are quite small. FEMA has a general threshold that study will not be performed for streams that have a contributing drainage basin that is less than one square mile. Also, not all lakes, estuaries, lagoons, etc., are always included on FEMA maps. A comprehensive program for riparian habitat may include lands beyond what is on FEMA maps, including very small streams, many intermittent streams (some of these are on FEMA maps), upland areas, entire watersheds, all lakes, reservoirs, estuaries, and wetlands, etc.

3. **Conservation and protection, but little restoration.** Restoration is very important, as stated in the Final Joint Washington Department of Fish & Wildlife/Tribal *Wild Salmonid Policy* thusly: "The Wild Salmonid Policy Goal will not be attained without active restoration of lost and damaged habitat." Although there is a presumption that NMFS will accept conditions that already exist whether or not habitat is severely degraded (a bit like zero-based budgeting) it is, nevertheless, important to encourage restoration activities wherever possible. In the Model Ordinance, there are some references to restoration (restoration is encouraged under Alteration of Watercourses, is a use permitted outright if the restoration meets Federal and State standards, and is required in order for certain exceptions to be approved); however, restoration is more difficult to work into an ordinance than achieving it as part of a comprehensive watershed program, which defines valuable habitat land, suggests grant programs to acquire such land and has a host of other planning elements.

Ordinance Changes – Section by Section

1.2 Findings of Fact

The two statements at this section in the existing model relate to floods causing damages to the built environment, and to damages being exacerbated by improper building techniques. The paragraph that is added relates to a view of rivers as interconnected systems that are a geomorphological creation with biological features that produce and nourish various fish species. Many today are beginning to look at managing rivers in an ecologically beneficial way, which is very different than just a few years ago when river management was based largely on hydraulic engineering concepts. This older approach has produced measures that allow fills to be placed in large parts of the floodplain (the flood fringe), regardless of whether or not the fills block natural channel migration; has allowed hardening of river banks that constrain channel meandering; has produced impervious surfaces that reduce floodplain storage and make floodwaters move more efficiently, thereby conveying flood flows faster which, in turn, disrupt natural channel forming processes, reduce water supply, etc. Some of these practices, such as indiscriminate fill in the flood fringes, can actually cause greater degradation of habitat, even though it is a "legal" and normal practice. Addition of the clause in the Findings of Fact recognizes a broader view of river systems that is not only becoming more acknowledged among practitioners, but also realistically recognizes that present practices can actually result in serious degradation of natural processes that protect habitat, thereby maintaining fisheries resources. This

idea was expressed by a private consultant at the February 27, 2001 Fish-Flood Workshop (see page 8 of the Summary of the Workshop).

1.3 Statement of Purpose

All eight of the original model ordinance purpose clauses relate to loss reduction measures. They, of course, are derived from the original Act and its implementing regulations. This was observed by a local government representative at the Fish-Flood Workshop, who suggested that a statement of purpose with respect to protection of fish needed to be added to the ordinance. That has been done both in the introduction to the Statement of Purpose ("…to maintain streams in their natural state to the maximum extent possible…"), and through addition of two specific purpose statements, numbers 9 and 10. These statements recognize the value of stream ecosystems, and advocate steps to stem damaging, but legal, past practices regarding building in floodplains. They denote an expansion of the singular approach to floodplain management that has been the norm, and fulfill the multiple objectives that have been encouraged for over 15 years by numerous agencies, including FEMA (see "Background" above). Similar phrases are added in Section 1.4, Methods of Reducing Flood Losses.

2.0 Definitions

Six terms are added to the definitions, and two are expanded. The new terms are: [1] channel migration zone; [2] habitat; [3] impervious surface; [4] protected area; [5] qualified professional; and [6] riparian buffer zone. The two terms that are expanded somewhat are "development," and "water dependent." Following are brief comments on these terms:

Channel Migration Zone. This term is taken from definitions in local ordinances (e.g., Mason County), the Washington Department of Ecology's Shoreline Master Program Guidelines, The Washington Forest Practices Manual and NMFS Take Limit #12 from the 4[d] Rule for Threatened Salmon and Steelhead on the West Coast. It is included in the definitions because it is one of three criteria used to define the Riparian Buffer Zone.

Development. Words are added to this already all-encompassing definition to assure that vegetation removal requires a permit, in view of its importance in retaining natural functions. Vegetation removal is a major tenet in the Washington Shoreline Master Program Guidelines as it likewise is in both the Portland Metro and Puget Sound Tri-County Regional efforts. It is also important to obtain a permit if there will be any alteration of natural site conditions, in view of the implications here on channel migration, and in view of the need to comply with prohibitions on clearing, grading or any other land disturbing activities in the Riparian Buffer Zone.

Habitat. This term is used throughout the revised Model Ordinance. It is defined as elements essential to the development and maintenance of aquatic species, particularly salmonids. The elements are derived from similar definitions in the Washington Shoreline Master Program

Guidelines, from the Spence Report (*An Ecosystem Approach to Salmonid Conservation),* from the NMFS definition of Properly Functioning Condition, and from Snohomish County's Administrative Rules, among others.

Impervious Surface. Several local ordinances define impervious surfaces, and the definition in the revised model is a patchwork from those ordinances. Restrictions on impervious surfaces in riparian areas is a concept that is central to the major Regional planning efforts of Portland's Metro and Tri-County in the Puget Sound Region, as well as to State guidelines, such as those in the Washington Shoreline Master Program.

Protected Area. This term defines those lands that are within the Riparian Buffer Zone. Protected denotes the categories of restrictions that apply in the RBZ, at Section 5.5-1.

Qualified Professional. This definition also is derived from similar provisions in local ordinances (e.g., Issaquah, Mason County, etc.). The intent is to direct applicants to professionals who can make judgments relative to fish habitat, including that aspect of habitat that deals with channel movement, to assure that fills that could harm fish or block natural channel migration are detected.

Riparian Buffer Zone. This definition is adapted from a model ordinance prepared through the Carl Vinson Institute of Government at the University of Georgia, entitled "*Protecting Stream and River Corridors."* The term is similarly defined or referenced in several local ordinances, and is thoroughly discussed in the Spence report, Portland Metro's *Streamside CPR* report, *Ecological Issues in Floodplains and Riparian Corridors* (pages 8-10), the *Final Joint WDFW/Tribal Wild Salmonid Policy*, Tri-County's *Regulation of Near-shore and Aquatic Development*, and many more. This is the zone wherein the protected area restrictions are applied at Section 5.5-1.

Water Dependent. The definition builds on the NFIP definition, mainly by providing examples of water dependent uses, some of which are particularly applicable to jurisdictions in the Northwest.

Water Typing System. Stream typing systems "come in all sizes and shapes," according to the research, personal interviews and ordinances that were obtained. Various ordinances use various terms, classifications, etc., although they all seem to be based loosely on similar general parameters. This is true for those ordinances that were examined in both Oregon and Washington. The typing system used in the model ordinance attempts to use an "official" typing system, with minor interpretations to fit the objective of the ordinance. Thus, the Washington Department of Natural Resources Water Typing System, found at WAC 222-16-030, is the basis for the definition in the Model Ordinance. It was used because it relates to fish-bearing capacity, particularly salmonid-bearing, and it includes understandable physical parameters, viz., width of channels, that relate well to size of buffers. It is understood that DNR is presently revising this system; however, none of the ordinances that were examined had the new language, and the existing terms are, therefore, retained until the new system is in common use.

3.2 Basis for Establishing the Areas of Special Flood Hazard

The sentence that was added here refers the user to employ any relevant data that is more restrictive than data on the FEMA maps, both for flood loss reduction and fisheries habitat management purposes. Some jurisdictions are familiar with use of more restrictive floodway and future conditions data in their flood loss reduction activities, since these concepts have been advocated for some time and, in the case of more restrictive floodways, is required in some 13 States and by several localities in the Northwest.

What is new here is the referral that is made to more restrictive data for fisheries management purposes, specifically the use of channel migration data and data from watershed or related studies. There are several communities that were observed during the personal interviews that have information on channel migration, even though that information was not necessarily on official maps; such data should be used for the purpose of defining the Riparian Buffer Zone, per Section 5.5-1 of the model. Also, whenever a community has a detailed, comprehensive watershed-type program that better defines riparian areas, whether or not the information produces larger protected areas, it may be used. This is because it is recognized that referring to a number, such as the 150 foot distance of the protected area at Section 5.5-1, is subject to refinement, but only as a product of such a detailed study. This action is allowed as an exception to the RBZ restrictions, at Section 5.5-3(j).

4.1-2 Application for Development Permit

Applications for development permits require much information as spelled out in the opening paragraph of this section, and also require description of the elevation for all structures, floodproofing elevation and certification (if applicable) and a description of any alteration that may occur to a watercourse. What is added here is that the applicant is required to identify the Riparian Buffer Zone on the site map, and show the relationship between the building site location and the RBZ. This is because buildings must be located outside the RBZ per Section 5.5-1, and must be at least 15 feet away from the RBZ. Inclusion of this information will give the local administrator a basis for determining whether or not this standard will be met by the applicant.

4.3-1 Permit Review

At subsection 2, the local administrator is directed to review any permits that may be required to assure compliance with the ESA or other appropriate fisheries regulations (e.g., State regulations), as a part of the basic requirement to obtain all necessary permits from those Federal, State or local governmental agencies from which prior approval is required. It is recognized there is a certain redundancy here, in view of the fact that the basic requirement (Federal, State or local permits) encompasses all, including any ESA permits that could be required. It is also recognized that there is no specific ESA permit requirement. However, the clause is inserted merely to reinforce the need to be aware of any implications of the ESA. This tracks one of the conclusions in the "Analysis of Questionnaires and Personal Interviews," wherein the majority of respondents did think this should be included, mainly because "It can't hurt to emphasize (reinforce) the need to get appropriate fish-related review," regardless of whether or not this implies duplication. Where Federal funding is

involved, however, there must be documentation from the Federal agency that there is compliance with the ESA, a practice that one of the cities that was interviewed already employs, in recognition of the Federal nexus.

In subsection 3, development permits are required to be reviewed by the local administrator to determine if the proposed development is located in the floodway, and they are then directed to the floodway requirements. Similarly, this review now must also determine if the proposed development is located in the RBZ and, if it is, the applicant is directed to requirements of the protected area in the RBZ at Section 5.5-1, or if outside the RBZ to requirements at Section 5.5-2. The applicant should have this information on his/her site plan, per Section 4.1-2, but the local administrator confirms that information here, and describes the implications of it from Section 5.5.

Subsection 4 is a disclaimer for the local administrator. It is recognized here that local governments do not generally have people who are qualified in fish habitat and ecological functions, nor are they necessarily aware of all the implications of the ESA. The local administrator's decision, therefore, is based on adherence to floodplain management and RBZ requirements of the ordinance; it does not specify that the proposed development does or does not specifically comply with the ESA. The practice and wording here are taken from one local government (Clackamas County) that has successfully applied this kind of disclaimer in its permit issuance procedures, and is considered to be appropriate in view of the high level of uncertainty with regard to the ESA and its implications for local governments.

In subsection 5, a Notice on Title procedure is specified. This is a process that was observed to be used by several local governments (e.g., King County, Clallam County), particularly to record information in cases where sensitive lands are part (or all) of a lot under consideration. For example, King County requires that the owner of any property containing sensitive areas or buffers on which a development proposal is submitted must file such a notice in order to inform the public of the presence of the sensitive areas or buffers, and that development limitations may exist. This process is recommended for disclosure purposes, but is shown as an optional process a community may or may not decide to include in its ordinance.

4.3-4 Alteration of Watercourses

One of two existing standards is clarified in this section, and an entirely new standard is added for fish habitat purposes. The standard that is clarified is Subsection 2, which requires that the flood carrying capacity of an altered watercourse be maintained. One of the meanings of maintenance here is that a maintenance program has to be established by the applicant, so that the altered watercourse will have the same carrying capacity in the future as it has on the day it is completed. This could imply that there would have to be practices such as cutting of vegetation on a routine basis in order to comply with the standard. To avoid this, in view of the value of native vegetation (which would have to be planted for such a project to be approved), the standard is altered to require oversizing of the system at the time of construction, which will obviate the need for future cutting of the vegetation. This idea was suggested by Whatcom County during the personal interviews, and is appropriately added to the

Model Ordinance.

The new standard specifies that any alteration, including streambank stabilization projects, cannot result in any degradation of fish habitat, and there are 9 elements that define specific measures to avoid such degradation:

a) Bridges are required for crossings on all Type 1 salmonid-bearing streams. Clear span bridges are acknowledged as a preferred method of doing crossings, when they have to be done, in most of the literature. For example, the NMFS Take Limits at No. 12, *Municipal, Residential, Commercial and Industrial Development and Redevelopment (MRCI),* specifies that: "Where a crossing is unavoidable, the plan or ordinance should minimize its effect by preferring bridges over culverts;" There are several local ordinances that require bridges over Type 1 waters (e.g., Redmond, King County, Clallam County), and most refer to the State Department of Fish and Wildlife manual for bridges, culverts and other crossings.

b) The standard for arch/bottomless culverts is found in some local ordinances (e.g., Mason County), and is defined in State Fish and Wildlife manuals such as the Washington DFW document "Fish Passage Design at Road Culverts." There are many other options these manuals provide that offer "comparable fish protection."

c) The standards in this subsection are found in part or totally in existing ordinances or proposed programs. Some of this measure is found, for example, in Tri-County's "*Regulation of Near-Shore and Aquatic Development*," other parts are found in Portland Metro's Title 3, Jefferson County's Unified Development Code, Mason County's Resource Ordinance, Gresham's Flood Management Performance Standards, and Lane County's proposed Critical Habitat Conservation Overlay Zone; i.e., these are common practices in Northwest communities.

d) Maintaining natural meander patterns, channel complexity and floodplain connectivity are concepts that are taken directly from the Final Joint Washington Department of Fish and Wildlife/Tribal *Wild Salmonid Policy* as action strategies that are recommended for maintaining or restoring stream channel complexity. These practices are repeated in much of the scientific literature. In essence, this does not allow alteration of a natural channel, unless restoration to more natural conditions is appropriate. Indeed, the policy recommends that wherever feasible, channels that are not natural should be restored to achieve features including side channels, meander patterns, channel complexity and floodplain connectivity. The suggestion in the model ordinance regarding restoration is based on a circumstance where an applicant has proposed altering a stream and, because he/she is in for such a permit, in order to achieve their objectives, the local government can also achieve the objective of restoration of a segment of the stream in return. The ordinance also suggests that if restoration would not have a significant impact in the segment in the proposal, a fee in lieu be collected that could be used nearby on the same stream – this was a suggestion from the City of Beaverton, where that practice is recommended.

e) Subsection (e) requires that the applicant identify the channel migration zone prior to any alteration of a watercourse. For those jurisdictions that have identified CMZs, they will be able to rely on their information; however, few have CMZ data, and this requirement places the responsibility on the applicant. This is important in situations where, for example, a streambank stabilization project is being proposed; this measure would prohibit any armoring project that would stop the stream from its natural migration. By requiring the applicant to provide the data, constrictions on channel movement will not occur just because the local government has not produced data on channel movement.

f) Removal of existing culverts that inhibit healthy fish habitat, called for in subsection (f), is a restoration measure. Restoration is not within the general purview of this ordinance; however, in view of its importance (e.g., *Extinction* states that: "The Wild Salmonid Policy goal will not be attained without active restoration of lost and damaged habitat"), and in view of the fact that a proposed project that alters the watercourse is under consideration, it is appropriate to obtain a reasonable degree of restoration, especially in cases where there are clearly non-functional culverts. Fixing a single culvert can open many miles of a stream for spawning. This is consistent with aggressive culvert removal initiatives that are funded and being implemented both by the States of Washington and Oregon, and by several local governments.

g) Subsection (g) prohibits blockage of side channels during the course of an alteration. This is in keeping with allowing streams to perform natural meanders, and in recognition of the tremendous value of side channels for fish habitat. Off-channel habitat was emphasized by Mike Parton of NMFS at the Fish-Flood Workshop, as generally being more productive than in-channel habitat, and this is echoed by most all the scientific literature (e.g., the Washington *Wild Salmonid Policy* specifies a Performance Measure thusly: "Side channels and other off-channel habitat, including wetlands, should remain connected and passable by salmonids to the channel proper"). Also, the Draft Washington *Integrated Streambank Protection Guidelines* state that: "For any project that eliminates off-channel habitat or reduces the opportunity for its creation in the future, compensating off-channel habitat should be created, restored, or enhanced." This subsection, like (d) and (f) above, calls for restoration as part of project approval, i.e., removal of blockages to side channels, just as suggested in the ensuing language in the *Wild Salmonid Policy*: ". . .and other structures that are constricting floodplains should be removed or modified to allow flood flow, storage, recharge and release." A restoration action here would be called for only in the proximate segment of stream for which the proposal is being made.

h) For alterations that involve creation of man-made side channels, there must be adequate fish barriers or screening to assure that fish will not become trapped, lost, stranded or destroyed through diversions for irrigation, water supply, recreation, hydropower, etc. In Washington alone, there are over 60,000 places where water is diverted from streams, rivers and lakes. Both Oregon and Washington State laws require that diversions be screened to protect fish. This provision is placed in the Ordinance merely to assure consistency with the State laws, and to give the proponent a picture of all that would be required if an alteration is proposed. Screening requirements of the State are specified for compliance with this standard.

i) As can be seen in this standard in the Model, soft armoring is the preferred treatment for any streambank strengthening project; for a salmonid-bearing stream subject to migration (whether or not there are CMZs formally published on maps), soft armoring is mandatory. The NMFS Take Limits clearly steer away from hard armoring ("In most circumstances, activities that call for hardening stream banks are not consistent with properly functioning conditions"). They aim this statement at streams that are subject to migration, and state that streams must be allowed to meander naturally. The new Washington Shoreline Master Program Guidelines require that the softest feasible method of stabilization be used as the first priority. "Generally, the harder the construction measure, the greater the impact on shoreline processes, including sediment transport, geomorphology, and biological functions. Soft approaches shall be used unless demonstrated not to be sufficient to protect primary structures, dwellings, and businesses." Soft armoring or use of appropriate streamside vegetation is also a prevalent theme in several local ordinances (e.g., Jefferson County, Mason County).

5.1-3 Construction Materials and Methods

Subsection (2) calls for using methods and practices that minimize flood damage in reviewing permits for new construction. This is a general performance standard that has never been defined in the regulations. At the Fish-Flood Workshop, there were three people who asked that there be more guidance in sections like this to better define the general standards (they were representatives from NMFS, the State of Alaska and King County). Over the years, there have been a couple of techniques that were commonly suggested here, such as placing new structures on the highest ground on the site and orienting the structure parallel to flow, not perpendicular. The additions to the text now include these measures.

However the most important additions are three new standards that are included in this section with adequate definition. They are, first, a requirement that if a lot has a buildable site outside the floodplain, new construction is directed to that area. By locating outside the floodplain, the applicant is not subject to the building restrictions at Section 5.5-2 (flow-through construction, qualified professional opinion if fill is used, and limitations on impervious surfaces and vegetation removal). However, this is not an absolute requirement, and can be challenged by the applicant through the exception process.

The second addition to this standard relates to placement of a building on a floodplain site. Numerous people who were interviewed suggested that FEMA devise some way to site structures as far away from the stream/watercourse as possible, even going so far as to suggest lower insurance rates the further the structure is located from the stream. Using the insurance mechanism would not work, but a method is placed in the Model that should induce an applicant to locate further back on a site. It first requires that the local administrator, who must check the Flood Profiles for accurate reading of the Base Flood Elevation, also read the profile elevations for the 10- and 50-year floods. This is a simple task, which takes virtually no extra time for the local administrator, who will then advise the applicant of the probabilities of occurrence attached to the three different floods in a 30-year time period . The applicant then, in staking out his/her property, would have to plot the three elevations on

or near the site (the 10, 50 and 100-year elevations). Knowing that the 10-year flood has an almost certainty of happening, and there is almost twice the probability of the 50-year flood happening vs. the 100-year flood, this would provide information the applicant may well consider in siting the structure appropriately.

The third addition gives the a local administrator a tool to use in judging proposals in relation to the hyporheic zone. The hyproheic zone is one of three interactive aquatic habitats: surface or in-channel habitat, floodplain habitat, and subsurface (hyporheic) habitat. It is the area of subsurface flow between surface water and the water table (it is generally above the groundwater level), which serves as a filter for nutrients and maintains high water quality. Floodplains provide course beds of alluvial sediments through which these subsurface river flows pass, much like a filter (Gregory and Bisson). "Thus, in areas of extensive alluvial gravel floodplains (much of the Northwest), the hyporheic zone contributes substantially to total habitat area" (Naiman), including food production for fish.

While the hyporheic zone is very difficult to actually delineate on a map (Bolton), it can be detected from well samples, presence of stone flies and, sometimes, can be seen in an actively upwelling springbrook, where groundwater fed by the springbrook is derived from river water (Snyder). Disruptions to the hyporheic zone can negatively impact water flow, temperature, nutrient supply, water quality and survival-to-emergence for salmonids in the river environment; development in the floodplain should not cause dewatering of the hyporheic zone, interrupt groundwater exchange within the hyporheic zone or inhibit recharge of the hyporheic zone (Snohomish County Administrative Rules). If a local administrator knows about such a circumstance, or has technical resources he/she can draw on to review development applications for areas that are particularly sensitive to hyporheic exchanges, additional data from the applicant should be obtained to assure that the development produces minimal disruption to this system.

5.1-4 Utilities

In the revised Model Ordinance, septic systems are prohibited in the RBZ, the floodway, 10-year floodplain and areas that could be subject to channel migration. Many local governments already prohibit septic systems in floodways (a few even prohibit systems everywhere in the floodplain). Examples include King County, which prohibits septic systems in the floodway, in the Extreme CMZ and requires that they be located out of the floodplain unless no feasible alternative site is available; systems are prohibited in the CMZs of Clallam County and in the 150 foot riparian buffer zones in Jefferson County and Mason County; they are prohibited in the entire floodplain in Vancouver, Redmond and Puyallup; in Lane County, they would be prohibited in their Inner Setback Area; the systems are prohibited in the floodway in Thurston, Clackamas, and Whatcom Counties.

Generally, impacts from septic systems relate to water quality and vegetation removal. However, another very important factor is to assure that these systems are not put into active channel migration areas. The Washington SMA Guidelines specify that local programs must include provisions that prevent restrictions to channel movement within the CMZ. While septic systems can prevent channel migration, the more likely scenario is that these systems will be destroyed when the channel does

migrate, and that is a major reason for keeping them out of the CMZ (such as is being done already in a few communities noted above). Keeping septic systems out of the 10-year floodplain is another measure introduced to the model ordinance. This relates to the frequency of flooding. As discussed under the Riparian Buffer Zone below, the 10-year floodplain is very significant in terms of riparian protection. Additional support for this measure was in an early requirement of the State of Minnesota, which prohibited septic systems in the 10-year floodplain early on, in view of the certainty and frequency of flooding.

5.1-5(5) Subdivision Proposals

The basic change here is that new, buildable lots are prohibited outright in the floodway, RBZ and CMZ if it is known; also, in the remainder of the floodplain, new lots must have buildable space outside the floodplain. For lots in existing subdivisions that have buildable space outside the floodplain, new construction is directed to those areas, just as with the provision above in 5.1-3(2) dealing with construction methods (and subject to the same caveat). Development that can occur within the floodplain must meet limitations on impervious surfaces and vegetation that any other floodplain development would have to meet. Also, new road crossings as part of new subdivisions are prohibited.

There is support for the new subdivision measures, both in guidance material and in practice. Excellent background information is contained in a recent publication by the American Planning Association entitled *Subdivision Design in Flood Hazard Are*as. The following quotation from that document is very relevant to effects of subdivisions on ecosystem considerations for fish:

"FEMA regulations, procedures, and guidance provided through NFIP have long focused on protecting individual structures from flood risk. This is typically accomplished by requiring the lowest floors of homes to be elevated to or above the base flood level (BFE). To a certain extent, this approach reflects a belief that development in floodplains is unavoidable. In many communities, that may be true.

But after nearly 30 years of experience with NFIP, thousands of floods, and billions of dollars in property losses, many communities are now focusing less on how to artificially remove buildings from the floodplain and instead using methods to steer development out of the floodplain."

Steering development away from floodplains may be a general trend in many parts of the Country, but it is a necessity in the Northwest because of the tremendous implications floodplain development has on habitat, and because of ESA mandates. The APA document goes on to specify a hierarchy of four options for subdivisions, starting with "what we consider to be the best policy for a community – prohibit new subdivisions in flood hazard areas."

The next policy option is to plat the subdivision in such a way that each lot has a buildable portion on natural high ground (without fill). The document explains that: "**The minimum buildable area of each lot that must be outside the floodplain can be included in subdivision and floodplain**

ordinances." That is the option that is reflected in the revised model ordinance; it is realistic because there is solid justification in the literature and in practice that floodplain connectivity with streams is the most important habitat feature a community can deal with to preserve salmonid species – "Some of the most important components of habitat restoration include protection or restoration of **floodplains** and riparian plant communities" (from *Degradation and Loss of Anadromous Salmonid Habitat in the Pacific Northwest*, by Gregory and Bisson). The Washington SMA Guidelines specify that lots resulting from subdivisions must be large enough or configured in such a way that a residence may be developed without causing ecological impacts to properly functioning conditions and other ecological functions.

From a practical standpoint, much is already happening with regard to restrictions on new subdivisions in floodplains, i.e., the ordinance measures are not that unusual in Northwest communities. Of the small number of communities that were interviewed, at least seven do not allow any new buildable lots from subdivisions in the entire floodplain. They include King County, Clallam County, Jefferson County, and the cities of Beaverton, Troutdale and Bellingham (Corvallis is proposing this). While there are reasonable use exceptions available in some, the basic policy is that no new buildable lots can be subdivided in floodplains. Additionally, Clallam County also specifies that if a portion of a pre-existing lot lies outside the floodplain, new construction is directed to that area (as in subsection [d] of the revised Model Ordinance), and Jefferson County prohibits new stream crossings as a result of new subdivisions (as in Subsection [e] in the revised model Ordinance). Subsection (a) requires that the applicant identify the RBZ, floodway and channel migration zone (if known) on their proposed subdivision map. This, of course, would be subject to review by the local administrator, but would be a flag at the outset of the process that these are sensitive lands that have severe restrictions. The Washington SMA Guidelines are specific on this: "Do not allow the creation of new lots that would require development in the Channel Migration Zone in order to achieve a viable use." The CMZ must be plotted on the applicant's maps whether or not the community has identified such a zone, i.e., he/she will have to obtain the services of a qualified professional to ascertain this.

Thus, there is substantial reason and practice to justify the proposed requirements regarding subdivisions. Justification for restrictions on impervious surfaces and vegetation removal is described in the supporting information for Section 5.5-1 and 5.5-2. Finally, the local administrator is directed to the concepts of cluster development, density transfer, credits and bonuses, PUDs and transfer of development rights. Where these concepts are already adopted by a community, they should be made available to applicants in order to allow them relief for not being able to develop in the floodplain. Where they are not available, they are recommended for adoption in communities that could have future floodplain development. A good description of the concepts is in the APA's "*Subdivision Design in Flood Hazard Areas*."

5.4 Floodways

Subsection (1) is the basic encroachment standard that has been in effect since the inception of the NFIP regulations that specifies that any encroachment proposed for the floodway has to undergo a

step-backwater analysis to determine if there will be any rise in flood levels – the standard is no-rise, i.e., 0.00 rise from the analysis.

Added onto the no-rise floodway encroachment standard is language identifying the floodway as one of three criteria that makes up the protected area of the Riparian Buffer Zone. The supporting information will be explained in the Section 5.5 discussion. Another provision that is in Subsection (1) is an exception to the no-rise criteria which is allowed for projects designed to enhance fish habitat. This measure stems from a policy that FEMA Region 10 issued in 1998 that gave some relief to local officials judging the many fish enhancement projects that were occurring, and are occurring even more now (projects such as drop structures, log drops, root wads, placement of woody debris, rock deflectors, etc.). The policy acknowledged that requiring the no-rise standard for these projects could be more expensive than the projects themselves, and it was not appropriate to judge most of these projects as strictly as judging a new building, fill, etc.

The policy made it possible for the local administrator to rely on an informed judgment regarding the fish enhancement structures, most of which are in-stream projects, short of the maximum hydraulic analysis required for other projects. It allowed the community to defer to the judgment of a qualified professional such as staff of Rural Conservation and Development and the Natural Resource Conservation Service to certify that projects were designed to keep any rise in 100-year flood levels as close to zero as practically possible and that no structures (buildings) would be impacted by a potential rise. Through the questionnaires in this project and, to some extent, through the personal interviews, an attempt was made to ascertain whether or not local officials wanted to place this policy into language of the Model Ordinance, by allowing fish enhancement measures outright in the floodway.

Results from the questionnaire were surprising in that most local officials either did not want this allowed outright, or wanted it but with a certain degree of control available. The control is necessary in view of public safety issues related to potential hazards with in-stream placements and placements deposited by floods. A few pointed out that some projects could be cloaked in the guise of a fish enhancement project that might really be wanted in the development for other purposes. Others emphasized that some placements clearly could present hazards to other existing uses.

This measure is closely aligned with another from the Questionnaire that asked if woody debris from floods should be retained outright, either onsite or in close proximity. Bolton emphasizes that large woody debris is particularly conducive to good salmonid habitat. A study by Sedell estimated that salmonid production can be increased several times by raising the debris load in streams with limited amounts of large woody debris. Most recognized the value of woody debris (provides refuge for juvenile and adult fish, forms pools, creates hydraulic complexity and roughness, provides food sources and habitat for aquatic insects and wildlife, helps stabilize streambanks and reduces excessive erosion; see Bolton, page 14); however, slightly more than half of the respondents (23 to 20) thought it was not a good idea to require retention of the woody debris and not require a no-rise standard. The main reason was the potential hazard and public safety issue (e.g., logs could hang up on bridges, thereby threatening them, people living in close proximity to log deposits could be threatened, etc.).

Other responses included the thought that a particular project might not be good either for fish or for people, but one wouldn't know if there were no analysis. Also, most were okay with a watershed group proposal for a fish enhancement project, but were concerned with novices and some developers. The City of Redmond always requires a step-backwater analysis (as does Bellingham), because they require mitigation/compensation for any rise that is created, thereby improving hydraulics and helping fish.

In the personal interviews, it was explained that the revised Model Ordinance had proposed language that gave the local administrator the discretion to require a step-backwater analysis, or not require it. Of the 23 local administrators questioned at these interviews, only one felt there was no need for requiring the analysis; the other 22 felt they needed the discretion to decide whether or not to require it (including deposits of woody debris), based on the project.

5.5 Additional Standards for Riparian Ecosystem Protection

This section is new to the FEMA Model Ordinance, and is the heart of the provisions for fish enhancement. It creates a Riparian Buffer Zone (RBZ), and requires restrictions in the rest of the 100-year floodplain as, in essence, a buffer to the buffer zone; i.e., the area outside the RBZ but inside the actual floodplain serves to protect the riparian area, to assure proper functioning of the RBZ. It provides the essential connectivity between floodplains and streams that is so frequently mentioned in the literature. Support for adding this language to a floodplain ordinance is found in the University of Georgia Carl Vinson Institute of Government publication *"Protecting Streams and River Corridors:"*

"A floodplain protection ordinance can be a reasonable mechanism for riparian buffer protection. There is now growing recognition among government agencies that floodplains should be managed in a way that preserves their natural ecological functions."

It should be noted that these zones apply to **all** of the Special Flood Hazard Areas (the 100-year floodplains) delineated on the FEMA maps, including detailed and approximate study areas. These are generally quite extensive, though they can also be somewhat limited, particularly for very small streams (see Limitations above).

5.5-1 Riparian Buffer Zone (RBZ)

The most frequently asked question, and biggest challenge in terms of protecting fish habitat, seems to be "how much is enough," meaning how large is the area that needs to be protected in order to have effective riparian habitat. This was the question that was introduced early by NMFS's Mike Parton in his presentation on "Critical Riparian Habitat Zones" at the February 27 Fish-Flood Workshop, and it was the subject of considerable discussion throughout the workshop (with no unanimous resolution).

Likewise from the questionnaires and personal interviews, there was no universally accepted distance nor method for calculating the distance, that surfaced. Which is not to say there were no riparian

areas established; on the contrary, there were many communities with some kind of fish habitat zone, but the numbers were not consistent, and the methods for deriving the distances were not universal. Bolton, in her *Ecological Issues in Floodplains and Riparian Corridors* states that: "Definitions that can be used to unquestionably identify exact undisputed boundaries of stream corridors or riparian areas or channel migration zones are hard to come by." That was indeed true, judging from this project. Also from Wenger's *A Review of the Scientific Literature on Riparian Buffer Width, Extent and Vegetation*: "Scientifically-based guidelines for local riparian buffer ordinances are not readily available."

However, there is no shortage of warning and guidance urging all at the State and local levels to incorporate some kind of riparian habitat zone in their planning and regulations. The Washington *Wild Salmonid Policy* states it very clearly: "Fundamentally, protection of wild salmonid **habitat** is the most effective way to ensure preservation of the salmonid resource." Also from *Extinction is Not An Option: "Fo*r wild salmon to continue to exist and evolve, specific **habitat** conditions must be maintained, protected or restored. Specific habitat elements include water quality, base and peak water flows, riparian vegetation, habitat access and passage, channel and watershed conditions, floodplain connectivity, and estuarine and nearshore water quality and physical conditions."

Perhaps the most authoritative document on the subject in the Northwest, *An Ecosystem Approach to Salmonid Conservation*, what is referred to here as the Spence report for author Brian C. Spence (though there are four authors), makes the statement most succinctly: "…there is consensus in the scientific community that protection of riparian ecosystems should be central to all salmonid conservation efforts on both public and private lands. If ecosystems are allowed to function in a natural manner, habitat characteristics favorable to salmonids will result." The report goes on to say: "The establishment of riparian buffer zones is generally accepted as the most effective way of protecting aquatic and riparian habitats" (quoting from Cummins et al.).

During the course of the questionnaires and personal interviews, it became clear that riparian buffers were not a new concept to Northwest communities; virtually all had them but, again, there was little uniformity in terms of size, and in terms of methods used in determining the buffers. Here are some representative examples:

- Clark County – 250 feet for Type 1 and 2 waters
- Clallam County – 150' for Type 1 and 2
- Issaquah – 100' for Type 1 and Type 2 with salmonids
- Jefferson County – 150' for Types 1 and 2
- Mason County – 150' for Types 1, 2 and 3 waters
- Puyallup – 150 feet for Type 1 waters (proposed)
- Redmond – 150' for Type 1
- King County – 100' for Type 1 and 2 (150' for Bear Creek)
- Skagit County – 200' for Type 1 and 2
- Clackamas County – 100' for large streams (150' is proposed)
- Columbia County – 50' for Class 1 streams

- Jackson County – 50' for Class 1 (100' for some activities)
- Lane County – 150' for Class 1 (consists of an Inner and Outer Setback)(proposed)
- Medford – 50' for its streams
- Tigard – 75' (the Oregon "Safe Harbor" distance)
- Umatilla County – 100' for most activities

The few ordinances that were reviewed for this project were limited by the scope of the project, and generally to those communities that responded to the questionnaire. As can be seen, a distance in Washington that was commonly observed was 150' for riparian buffers on the larger streams (all communities specified smaller buffers for smaller streams). Smaller buffers were observed in Oregon; however, this number would have been larger had the coastal counties (e.g., Clatsop, Tillamook, Lincoln) been included, as well as some other areas where comprehensive programs have been undertaken.

Uses, restrictions and limitations varied among the jurisdictions that had riparian buffer zones. Analysis of the differences is not provided here, but basically, buffers were perceived as "no-touch" or "no-disturbance" zones. Restrictions are, therefore, analogous to those in the FEMA floodways, though for entirely different reasons. A major difference between these buffers and those proposed in the revised Model Ordinance is that, generally, the buffers in these jurisdictions were the extent of the area with restrictions; in the revised Model, the remainder of the floodplain also contains restrictions that are designed to "buffer the buffer," i.e., to maintain the buffer in a properly functioning condition.

It is instructive at this point to look at the major regional efforts underway in the Northwest, since they probably represent the most thorough investigations and analyses. The original proposal in Portland Metro's *Streamside CPR* contained several options; it is difficult to synthesize in a few words here, but did specify for floodplain streams or rivers (vs. headwater or midsection streams) that the regulated area be the greater of 200 feet, or a break in steep slope plus a 25 foot impact area, or the floodplain plus a 25 foot impact area. The report summarized its protection program thusly:

"Chapter V concluded that the environmental, economic, social and energy (ESEE) decision is to limit or prohibit conflicting uses in the riparian area (175') and impact area (25') – referred to in the proposed Streamside CPR Protection Program as the "regulated area." For individual parcels of land that are wholly or substantially within the regulated area, conflicting uses would be limited. For parcels of land for which conflicting uses can be accommodated outside the resource, conflicting uses within the regulated area would be prohibited."

As background for these distances, Metro stated that: "After considering all comments.. . staff proposes 175 feet as the Site-Potential Tree Height (SPTH). This determination was based on averaging the original 150-foot SPTH proposed in the preliminary draft of this report, and the 200-foot SPTH recommended by the Goal 5 TAC members and peer reviewers." They also gave strong consideration to the floodplain:

"According to the scientific literature reviewed for this report, the riparian zone of influence includes the extent of the floodplain because of the movement of the stream or river across the floodplain through time (Spence et al. 1996). Therefore, the proposed riparian area width includes the extent of the floodplain. In cases where the floodplain exceeds the 175-foot riparian area width, the extent of the 100-year FEMA floodplain or the area of inundation of the 1996 flood, whichever is greater, is the proposed riparian area width."

It should be emphasized that this was proposed in Metro's December 1999 *Streamside CPR* document. These distances and concepts have not been formally adopted, and are under review at this time (March 2001).

The Tri-County effort in the Puget Sound area also has many options and is difficult to simplify in a few words here. The basic concept that is used is application of a Management Zone (MZ) for all streams and shorelines. It is described thusly:

"The aquatic and adjacent nearshore areas that either provide salmonid habitat or are important to the proper functioning of salmonid habitat are collectively defined as the Management Zone (MZ). The Management zone is further divided into inner and outer zones. The purpose of the inner zone is to protect the aquatic body and to provide the majority of nearshore habitat functions necessary for the salmonid conservation. . .. The outer zone is intended to provide additional benefits and, most importantly, is intended to ensure the proper functioning of the inner management zone."

The basic width of the MZ for all "shorelines of the State" and fish-bearing streams is 200 feet. In urban areas, the Inner Management Zone (IMZ) is 115 feet and the Outer Management Zone (OMZ) is 85 feet on these watercourses. In rural areas, the IMZ is 150 feet and the OMZ is 50 feet. Under the Fixed Regulations option, the IMZ is generally a no-disturbance zone; there are vegetation retention and impervious surface requirements in the OMZ. Generally, the requirements specify that no buildings be allowed in the IMZ, and buildings in the OMZ must be set back 15 feet from the IMZ. No effective impervious surfaces may be created within the entire MZ. Clearing and grading is not generally permitted within the IMZ, and there is no vegetation removal allowed in the IMZ; a portion of the OMZ vegetation must also be retained in order to achieve an average of 65% in an undeveloped state over the entire area of the site located within the overall MZ.

The Tri-County MZ is a fixed number (200' for floodplain streams), but is not applied uniformly that way. The intent of the proposal is to build the MZ onto the Channel Migration Zone (CMZ) where that zone is delineated – "On each side of a stream's course, the outermost (landward) edge of the CMZ forms the streamward boundary from which the Management Area and its Zones are measured. Wherever no CMZ can be found for a stream, the waterline during bankfull flow shall be the streamward edge of the Management Area." Thus, the regulated area can be significantly expanded in areas where channel migration information is available.

The scientific basis for Tri-County's MZ proposal relates to necessary riparian functions ("Our review of the extensive scientific studies on the subject makes it clear that there is no suitable, long-term

substitute for healthy riparian forest as both a protector and generator of the diverse habitats to which Puget Sound's salmonids are adapted"). They further cite work by Pollack and Kennard, and May, wherein setback distances are properly related to specific habitat functions, including channel migration, woody debris production, adequate shade, litterfall, stream temperature control, sediment removal, streambank erosion control, nutrient and pollutant removal, etc. Pollack and Kennard (1998) point out that "riparian buffers are the key component of any salmonid habitat conservation strategy because they. . .provide the majority of the ecological goods and services required to keep salmonid habitat functional."

Based on the science they obtained, Tri-County formulated MZ widths, which include recommendations for the IMZ ("no-touch") and the OMZ (limited activity), with the intent of the OMZ to provide protection (therefore certainty) that the IMZ will function properly. They summarize this concept as follows:

"These widths are consistent with the above literature recommendations in that the IMZ alone. . .should be sufficient to allow about 60% to nearly 100% of potential performance of riparian forest functions with regard to LWD supply, shade and humidity control. In many areas, particularly along large streams and mainstem rivers, significant additional protection will be provided by inclusion of CMZs as part of the IMZ. MZ width will generally be 200 feet (aside from additional CMZ width) along salmonid-bearing water bodies, and 100 feet along other waters. The 150-foot IMZ width is based on the approximate mean site-potential tree height for the Tri-County area. . .should be sufficient to yield long-term LWD, SWD, and litterfall supplies to the waters involved, as well as usually providing sufficient shade and other salmonid-hatitat-forming functions. . .."

Other widths are specified in the Tri-County proposal for perennial, non-salmonid-bearing streams and for non-perennial, non-bearing streams. These categories are phrased in the new classification system that Washington DNR is developing, and generally can be related to the existing Water Type System still in use, and that is used in the Model Ordinance.

A report was prepared for the University of Georgia Institute of Ecology by Seth Wenger, entitled: *A Review of the Scientific Literature on Riparian Buffer Width, Extent and Vegetation."* In that document, the author emphasizes that: ". . .scientifically-based guidelines for local riparian buffer ordinances are not readily available." The purpose of his work was to do a National literature review in order to develop a scientific foundation for riparian buffer ordinances that are being established in Georgia. The basic finding is: "To maintain aquatic habitat, the literature indicates that 10-30 m (35-100 feet) native forested riparian buffers should be preserved or restored along all streams. This will provide stream temperature control and inputs of large woody debris and other organic matter necessary for aquatic organisms." The literature search was quite exhaustive. While the conclusion prescribes a distance that is less than most of the literature cited above, and less than what most ordinances in the Northwest already have, clearly the differences stem from differences between the Southeastern and Northwest Regions.

NMFS does not specify the distance it will approve for riparian buffers. However, they do have

strong language in their take limits that relates to this distance:

"NMFS' determinations are significantly influenced by science indicating that essential habitat functions are affected to varying (but significant) degrees by streamside activities conducted within a distance equal to the height of the tallest tree that can grow on that site (known as the site potential tree height). The distance is measured not from the stream itself, but from the edge of the area within which a stream naturally migrates back and forth over time (the channel migration zone)."

NMFS is gauging distances not in absolute numbers, but by functions that are necessary in riparian areas. The most definitive (and most quoted) document giving scientific background for riparian functions is the Spence report (*An Ecosystem Approach to Salmonid Conservation).* The document points out that, while entire watersheds can influence aquatic habitat, ". . .the most direct linkage between terrestrial and aquatic ecosystems occurs in the riparian area adjacent to the stream channel." The report then defines the essential functions performed by riparian vegetation and processes, which include shade, bank stabilization, sediment control, organic litter, large woody debris, nutrients and, to a lesser extent, microclimate and wildlife habitat. Graphs are provided showing the percent of effectiveness for four major quantifiable functions (shading, coarse wood debris, litter fall and root strength) as a function of tree height (height of the tree representing distance from the channel). These distances are cited frequently in much of the literature in the Northwest.

In discussions with State and, mainly, local officials in the Northwest, there is a hard-core, intuitive belief that regardless of technical biological formulas, site potential tree heights, channel migration zones, and other scientific methods for determining what an adequate riparian area should be, the real need is to preserve a basic area or strip of land along all streams; that basic area most frequently seems to be in the 100-150' range, with most believing the first 50 feet or so are the most important for riparian health. The science can become extremely complicated, technical and there is different science for different functions; however, few communities will have the scientific capability to draw a biological, geomorphological line that shows varying distances on different parts of stream reaches based on the different functions. A standard distance is what most want, with the ability for an applicant to modify the line based on more detailed habitat evaluations.

The Riparian Buffer Zone (RBZ) standard that is chosen for the Model Ordinance is 150 feet for all Type 1 and Type 2 salmonid-bearing streams. For Type 2 non-salmonid- bearing streams and for Type 3 streams, lakes and marine shorelines, the distance is 100 feet. For Type 4 and 5 streams and in arid areas, it is 50 feet. There are several reasons for these distances, and they are is consistent with documentation from other sources:

1. The major argument favoring this approach is that the 150 foot no-touch zone that is the RBZ is protected by strong limitations in the rest of the floodplain; i.e., viewing the entire floodplain as a system, there is considerable protection afforded the critical RBZ area by measures that are significantly strengthened for fish habitat protection in the outer portion of the floodplain. If the 150 feet fall short of some study's preferred riparian zone, protections in the remainder of the floodplain need to be factored into the total picture.

2. *Extinction is Not An Option* characterizes 150 feet or greater for fish bearing streams as "adequate" for stream buffer sizes (page 94).

3. From the Final Joint Washington Department of Fish and Wildlife/Tribal *Wild Salmonid Policy*, riparian areas for Water Types 1-3 are specified to need buffers of 100-150 feet (same for any salmonid-bearing stream greater than 5 feet in width), 100 feet for Type 4 streams and 50 feet for Type 5 streams. The ordinance is almost totally consistent with these recommended standards.

4. The original version of Portland Metro's *Streamside CPR* recommended a riparian distance of 150 feet, based on site potential tree height (a tree height of 120 feet plus 30 feet to protect the root system). This figure was debated among the various review groups; one group recommended 200 feet. Metro averaged the 150 and 200 foot figures, and came up with 175 feet; however, that figure has not yet been adopted. In the Model Ordinance, an additional 15 feet is added onto the 150 feet for buildings, making it 165 feet, very close to Metro's 175 foot figure.

5. From the Tri-County work, their Inner Management Zone for rural areas (outside urban growth boundaries) is 150 feet. "The 150-foot IMZ width is based on the approximate mean site-potential tree height for the Tri-County area and, therefore, . . .should be sufficient to yield long-term LWD, SWD, and litterfall supplies to the waters involved, . . ." The 150 feet in the Model Ordinance is augmented in most circumstances with restrictions in the remainder of the floodplain which can be quite wide, vs. the 50 feet specified for the Outer Management Zone.

6. The Wenger/Fowler report *Protecting Stream and River Corridors* contains a Model Riparian Buffer Ordinance that produces an overlay zone specifying 100 feet as the buffer distance to be used for Georgia communities. If 100 feet is adequate in the Southeast, a distance of at least 150 feet can easily be seen as a distance that is needed in the Northwest, based on differences in vegetation, specifically tree heights.

7. The Washington SMP Guidelines require that: "Local governments shall institute protective setbacks, buffers, standards for retention or restoration of native species, clearing restrictions, and/or other provisions to ensure that (riparian) functions are provided." The Guidelines specify one sight potential tree height for riverine shorelines where trees naturally grow, a half SPTH and 60 feet for other areas that generally coincide with the distances and Water types listed in the Ordinance. While there are different descriptions of SPTH in the Northwest, the 150 foot figure is within the bounds of reasonableness for an estimated SPTH for much of the Northwest, particularly when protection in the remainder of the floodplain is factored in (restrictions outside the RBZ but within the floodplain).

8. As shown above (page 24), many local governments already have buffer areas designed for aquatic habitat that are generally consistent with the 150 foot figure. From the Washington community ordinances that were obtained as part of this project, the average buffer distance for Type 1 streams was 156 feet; it was 144 for Type 2 streams and 100 feet for Type 3 streams. Thus, what is being proposed in the model ordinance is already being practiced in many communities. These were

not just the "big" jurisdictions; rather, they are very representative of large and small counties and cities.

9. From *An Ecosystem Approach to Salmonid Conservation*, the report concludes: "If the goal is to maintain instream processes over a relatively short time frame (years to decades), then fully protected riparian buffers of approximately one site potential tree height (30-45 m [roughly 100 to 150 feet] in most Pacific Northwest forests) are likely adequate to maintain 90% to 100% of most key functions. . ."

The 150 feet is the recommended riparian buffer distance, but the RBZ can be determined using two other criteria, the channel migration zone (CMZ) or the floodway. Use of the CMZ is prominently mentioned in the scientific literature, is already in use in some jurisdictions and in Washington forest lands, and gets strong attention from NMFS in their take limits: "An MRCI development ordinance or plan adequately protects historic stream meander patterns and channel migration zones. . .. The (RBZ) distance is measured not from the stream itself, but from the edge of the area within which a stream naturally migrates back and forth over time (the channel migration zone)."

According to the Washington Forest Practices Board Manual (which NMFS has recognized), streams have occupied each part of the valley floor in geologic time, but "the current channel pattern and migration potential are more closely related to recent climatic and erosional patterns. Thus, on the time scale of decades, rivers generally influence only a portion of the valley floor." This document defines CMZ "as the lateral extent of likely movement along a stream reach with evidence of active stream channel movement over the past 100 years. . .chosen because aerial photos and field evidence can be used to evaluate movement in this time frame (and) this time span typically represents the time it takes to grow mature trees that can provide functional large woody debris to most streams." The report concludes that CMZs are found in only a small percentage of the entire stream network, though they can be prominent in mainstem rivers.

The Washington SMP Guidelines specify that: ". . .master programs shall include provisions that prevent restrictions to channel movement within the channel migration zone and that contribute to achieving more natural channel characteristics on a comprehensive basis over time." The Guidelines then say: "Local governments shall institute protective setbacks, buffers, standards for retention or restoration of native species, clearing restrictions and/or other provisions to ensure that those functions are provided" and as a general guide if there is not a more detailed local program, specifies: "For riverine shorelines where trees naturally grow: One site potential tree height measured perpendicular from the channel migration zone or, absent a channel migration zone, bank full width."

While Metro's *Streamside CPR* does not emphasize CMZs *per se,* the Tri-County effort in the Puget Sound Region does emphasize CMZs as a basis for establishing their Management Zone (MZ): "On each side of a stream's course, the outermost (landward) edge of the CMZ forms the streamward boundary from which the Management Area and its Zones are measured. Wherever no CMZ can be found for a stream, the waterline during bankfull flow shall form the streamward edge of the

Management Area."

Channel Migration Zones are already being implemented in King County. They are a Chapter in the County's Sensitive Areas Ordinance wherein specific restrictions on development are defined. The County's adoption of this measure was primarily justified on the basis of public safety, not specifically fish enhancement. Clallam County also has mapped CMZs and practices limitations in these zones, through their Critical Areas Code. Whatcom County has identified a CMZ for the Nooksack River, and mapped that area.

CMZs do exist in some Northwest communities and, where they do, would be used in the Model Ordinance if they extend beyond the specific buffer distances (150, 100 and 50 feet), as the basis for defining the RBZ. While much of the literature suggests starting the RBZ from the CMZ, there is no uniformity of opinion on this among practitioners that were interviewed. Indeed, many thought the extent of the CMZ would generally be sufficient to define the RBZ, while others felt there needed to be some distance established to assure adequate area to grow vegetation, including trees. One county proposed a distance of 25 feet for shade beyond the CMZ, and suggested that trees be maintained and planted within the CMZ; when streams migrate, they take their buffers with them. Generally, there was considerable skepticism to building a RBZ on top of the CMZ, on the part of most local officials.

The conclusion that is in the Model Ordinance is to use the CMZ plus 50 feet as the RBZ, if that is a greater distance than the specified distances based on SPTH or the floodway. While the 50 foot distance is greater than a 25 foot distance that is practiced in Whatcom County, 50 feet is the distance that is used in Clallam County, and is being recommended in Clark County (there may be more, but these were the only ones for which data was gathered in this project).

The third criterion for determining the RBZ is the FEMA floodway. As noted earlier, this concept is not based on considerations relative to fisheries resources; rather, it is purely a hydraulic engineering concept that is a product of a step-backwater analysis that reserves a conveyance area for 100-year flood flows, leaving the remainder of the floodplain for development that would cause no greater than a one-foot increase in flood levels. The importance of the concept is that the floodway is, and always has been interpreted also as a "no-touch" zone; no-touch for different reasons and derived through totally different methods, but still a zone where little in terms of development can occur.

Some activities can occur in a floodway that cannot occur in a healthy riparian zone, including parking lots, ball fields, golf courses, etc. These uses do not block conveyance (assuming they are built at grade), but they can create impervious surfaces. In the Model Ordinance, such uses would not be allowed. There is backup for this concept from the interviews and questionnaires.

Generally, when the question was asked in the interviews, responses were along the lines that it's about time FEMA made the floodway a tool that cannot be "worked" by those wanting to develop closer to the stream. Indeed, applicants proposing development in floodways hire engineers who can redo the step-backwater analysis, which can show "no-rise" as a result of an encroachment (often a structure), with consequent approval from the local administrator. A strong sentiment from local

officials who were interviewed was that this should not be allowed. In King County, where there are CMZs along certain streams, there is somewhat of a correlation between the CMZs and floodways, i.e., the CMZs are more or less spatially equivalent to floodways, with minor differences. Incorporating both to define the RBZ in such cases makes much sense.

Several responded to the questionnaire (question #4[b]) that they thought riparian protection was appropriate in the floodway. Of the 42 responses, 24 communities either wanted to see this outright or wanted it if adequate measures were in the ordinance to allow certain water-dependent uses, maintenance of public facilities, etc. Another 10 felt riparian protection was needed, but not in a floodplain management ordinance (which it would have to be if floodways are to be used). Also, several answered question #3, which asked communities what they would put into a floodplain ordinance that incorporated fish measures, by expressing the need to strengthen floodway requirements. Some of these people were incredulous that anything could go into a floodway, since they had always interpreted it as a no-build, or no-touch zone.

The Model Ordinance does use floodways as one criterion for defining the RBZ. It is a zone that is on virtually every community's map where detailed study has been performed, it is a known entity among local officials generally as a no-touch zone, and it generally aligns well with deeper and faster flowing waters. These reasons justify its use for riparian protection. The floodway has also been shown to correlate well generally with limits of the 10-year floodplain; e.g., early studies in Douglas County, Oregon showed a strong correlation when that County mapped its 10-year floodplain (before FEMA required its conveyance floodway). The 10-year floodplain is an "easy sell" to those who are generally opposed to regulation, because it is an area that is frequently flooded whereas the floodway is based on a computer model (see Carl Cook's comments from the Fish-Flood Workshop). Philip Williams expressed opinions at the Fish-Flood Workshop that strongly suggested concentrating on smaller floodplains, like the 2-year or 10-year floodplain, because of the great ecological value these floodplains have, a sentiment that was corroborated by many in attendance.

As a result of these ideas, an exception to use of the floodway as the RBZ is allowed in the ordinance if a person can show that their property is in the floodway but outside the elevation of the 10-year floodplain. This would give relief to those seeking to use a part of the floodway for a use that might not be compatible with riparian functions; it would not be allowed outright (the floodway would still define the RBZ if it is the greater of the three criteria), and, if it involved above-ground encroachment, would still require a no-rise certification.

RBZ Restrictions. Restrictions in the Model Ordinance call for prohibitions on new buildings, creation of impervious surfaces and removal of native vegetation. New clearing, grading and other land-disturbing activities are also prohibited, except for approved restoration projects. Finally, septic systems, dumping, landfills and storage of toxic or hazardous waste are also prohibited (non-allowance of hazardous materials was specifically suggested at the Fish-Flood Workshop by the State of Oregon DF&W).

These restrictions are consistent with efforts that are already being implemented in several

communities, with findings from the literature, and with the major regional efforts underway in the Northwest. The only document that was found that focuses strictly on identifying riparian buffer zones was Georgia's "*Protecting Stream and River Corridors,*" which is based on an earlier review of the scientific literature on how to define riparian buffers. The model ordinance provided through these documents shows very similar restrictions on uses in the riparian buffer zone, as summarized in the text (these measures are aimed more at water quality than fish enhancement, thus they may be a bit less restrictive than measures that are being considered for fish habitat areas):

"All significant sources of aquatic contamination and degradation should be excluded from buffers. These include construction resulting in land disturbance, impervious surfaces, logging roads, mining, septic tank drain fields, agricultural fields, waste disposal sites, stormwater detention ponds (except those designed as wetlands), access of livestock, and clear cutting of forests. Application of pesticides and fertilizers should also be prohibited."

Restrictions in the Regional efforts in the Northwest include those in Metro's *Streamside CPR,* which specifies the following regulations:

"Under the Regional Safe Harbor Program, no new development, redevelopment or disturbance is allowed within the regulated area (roughly the first 200 feet from top of bank as described above), except in the instance where an existing lot of record is so situated or so small that the regulated area cannot be avoided when development of the property is proposed. Disturbance areas shall be located as far from the water feature as possible with development first located in the unregulated portion of the property."
In this Metro standard, disturbance activities include placement of buildings and structures, paving, filling, grading, removal of vegetation (except for restoration), or other human-caused change.

In the Tri-County effort, the following basic measures pertain in the "Fixed Regulations" option (these measures generally have no disturbance within the IMZ, and meet the vegetation retention and impervious surface requirements in the OMZ):

- Buildings must be set back 15 feet from the IMZ.
- No effective impervious surfaces may be created within the MZ.
- New clearing and grading is not permitted in the IMZ.
- No development is allowed within 50 feet of the waterbody or CMZ edge, or any side channel, oxbow, spring, or other type of off-channel habitat except as otherwise authorized by the prescriptive standards.

There are several other measures and refinements of these basic measures, but it is clear from the above measures that this is a no-disturbance area.

Existing local ordinances already contain a host of restrictions in their riparian areas – some, such as Clallam, Mason and Jefferson Counties', all start with the requirement that buffers shall be retained in their natural condition (no-touch), then give some exceptions, which are too lengthy to mention here.

A sampling:

- Puyallup and Redmond allow no structures or improvements except those related to trails, educational facilities, docks and other water-dependent uses, etc.
- The only uses allowed in Skagit County's riparian buffer include certain roads (under strict conditions), docks, limited park or recreational access, low impact uses such as removal of noxious vegetation, and removal of hazardous or diseased trees, etc.
- Jackson County prohibits structures other than for water-dependent uses, prohibits septic systems and has strict vegetation removal standards in their riparian setback areas.
- Lane County prohibits grading, fill, new structures, impervious surfaces vegetation removal, etc. in its proposed Inner Setback Area (though there are exceptions).
- Medford prohibits new structures, impervious surfaces, excavation, grading, fill, stream alteration and removal of vegetation, expansion of non-native ornamental landscaping, dumping or disposal of yard debris and other material in its Riparian Corridors.

There are numerous other examples. The restrictions in the Model Ordinance are consistent with the general description of restrictions in the local ordinances that were viewed. Some of these local ordinances had riparian areas that were smaller than those in the Model Ordinance, and did not use the remainder of the floodplain to protect the RBZ.

5.5-2 Outside the Riparian Buffer Zone

The area outside the RBZ will be a very large area if the floodplain is large; or, there may be no area outside the RBZ on floodplains of smaller streams. As mentioned, the main purpose of the outside area is to provide protection to the RBZ. This section gives standards for construction techniques for buildings in the floodplain; it emphasizes post and piling construction over use of fill material, gives certain standards that must be met if fill or even balanced cut and fill is to be used, and gives standards for creation of new impervious surfaces and vegetation removal. In all cases of placing buildings in this area, they must be set back 15 feet from the RBZ. This is a standard that provides additional protection to vegetation within the RBZ, assuring that it can grow properly.

Subsection [a] directs buildings to be built using post, pier, piling or stem-wall construction, in order to minimize impervious surfaces and allow floodwaters to flow beneath the structure. **Subsection [b]** allows the use of fill, but on the condition that the applicant obtain a certification from a qualified professional that the fill will or will not harm fish. **Subsection [c]** allows the use of fill using balanced cut and fill techniques, but also requires a certification from a qualified professional as in [b], since areas where the cuts and fills are placed may not be the best in terms of fish enhancement (a statement corroborated by Bill Way at the Fish-Flood Workshop). Requiring balanced cut and fill is optional in the model, because this technique cannot be specifically justified on the basis of fish enhancement. It is a highly recommended technique for water quality purposes and for preserving storage; preserving storage can impact the hydrology of a stream system which, in turn, can impact fish by increasing flood velocities, raising water temperatures, and having other indirect effects. In ~~that sense, FEMA will highly recommend use of this option (see FEMA Region 10's public~~ation on

Higher Regulatory Standards).

Fill in floodplains is an issue that has and continues to be hotly debated. In the standard FEMA floodplain depiction, it is assumed that fill will occur over time in flood fringe areas that border streams generally equally on both sides. In essence, this is creating a low-level levee bordering on the floodway, thereby having the ultimate effect when all is developed of channelizing the stream. Such channelization is detrimental to natural processes of streams. Bolton lists a litany of adverse effects:

"Channelization has immediate and direct effects on stream processes because it involves direct modification of the river channel. The ecological effects of channelization consist of both physical and biologic effects to the aquatic system. Channelized rivers tend to have increased water temperatures, less shading from trees, little cover for fish, greater fluctuations in stream temperature and less organic matter input.

A host of other adverse effects of filling are described in *Ecological Issues in Floodplains and Riparian Corridors.* While most situations will not get to the point where fringes are totally filled thereby resulting in something akin to a channelized stream, fill is clearly detrimental to stream systems, as noted in *Streamside CPR* thusly:

Placement of fill material in floodplains for development can impact the flood storage capacity of streams, degrade habitat and instream structure. Excavation in floodplains to meet balanced cut and fill standards may also alter habitat and instream structure upon which fish and aquatic life are dependent for food, shelter, and suitable habitat for reproduction and other life stages.

Extinction is Not An Option discusses degradation by urbanization, specifying that land development changes the natural hydrologic cycle by, among other things, adding impervious surfaces consisting of roads, buildings, lawns and other compacted soils, i.e., fills. The discussion of impervious surfaces below shows a clear correlation between filling and creation of impervious surface, thereby making floodplain filling a major detrimental effect on natural stream/floodplain systems.

Another detrimental effect fills can have is on the process of channel migration. Tri-County points this out in its definition of CMZ, which is: ". . .the swath that must be set aside without artificial structures that block such movement (e.g., fills) and without harm to the dense vegetation that normally keeps the channel from changing course too fast." The Washington SMP Guidelines directly describe impacts of fill thusly: "Fills shall be located, designed, and constructed to protect shoreline ecological functions and specifically shall not adversely affect or preclude the attainment of properly functioning conditions and hydrological and geomorphological processes, including channel migration."

The practice of filling in the floodplain was included in the questionnaire and in the personal interviews. The questionnaire asked whether or not fills should be prohibited unless approved as meeting ESA requirements. Of the 43 responses, 23 said yes they should (17) or yes but with reservations on the practice (6); thus, 18 said no to banning fills in floodplains. The feeling seemed to

be that fill has been a normal construction practice for years, and to ban it now would be inconsistent with past practice. Some said not all fills were bad for fish, and suggested discretion to determine when and when not to allow fills for fish habitat purposes. It was revealed through this part of the project that one major community, Skagit County, already bans use of fill for structural support of residential buildings. Several other major counties reported that fills are rarely used as a construction technique in their jurisdictions (Thurston, Kittitas, Lane, Clackamas, Snohomish and King Counties), and all jurisdictions in the Portland are required to use balanced cut and fill techniques, per Metro's Title 3.

From the personal interviews, of 24 jurisdictions 2 do not allow fills, 7 would ban the practice if they could, 8 require balanced cut and fill, 4 think the practice of filling is okay (all cities with very urbanized floodplains), and 3 feel it depends on circumstances (i.e., some fills are not detrimental to fish habitat). A conclusion from the interviews is that there was strong support for the idea of either not allowing fill, or requiring that a qualified professional certify that a proposed fill will not be harmful to fish, and that it will not restrict channel migration. Most were also favorably disposed to the idea of the peer review process, whereby the applicant hires not only his/her qualified professional, but also pays for the peer reviewer on staff or on retainer for the community. Clearly, there was support for banning the practice of using fills, but there was a realization that that would not be feasible in many of the communities; it is thought that requiring a qualified professional's certification will stop much filling in floodplains and that such a procedure would be tied to very legitimate (scientific) purposes vs. merely relying on an assertion that fills are bad.

Subsection [d] specifies that new impervious surfaces shall not exceed 10 percent of the surface area of the portion of the lot that is in the floodplain. There is quite unanimous acceptance of this standard, and there is good science to support it. In natural forested environments, surface runoff is rare (Wenger and Fowler):

"Impervious surfaces, on the other hand, transfer most precipitation into runoff, leading to increased surface erosion, higher and faster storm flows in streams, and increased channel erosion. As a consequence, urban streams characteristically have greatly elevated sediment levels. Flow from impervious surfaces also carries pollutants directly to streams, bypassing the natural filtration that would occur by passage through soil."

The Wenger/Fowler report goes on to say that: "A stream may be considered to be impacted when more than 10-12 percent of its watershed is covered by impervious surfaces; when impervious surface levels reach 30 percent, the stream can be considered degraded." The NMFS Take Limits state that by reducing impervious surfaces, conditions will, in turn, "maintain essential habitat processes such as natural water infiltration rates, transpiration rates, stormwater runoff rates, sediment filtering, and provide hydrographic conditions that maintain and sustain aquatic life." From Spence: "Research indicates that stream quality impairment is correlated to the percentage of watershed imperviousness. Impaired water quality becomes noticeable at 8% - 12% imperviousness and becomes severe above 30% imperviousness."

The State of Oregon, through its Goal 5 Natural Resource Element, requires that for riparian corridors, a local ordinance must prevent permanent alteration of the riparian areas such as grading and placing structures or impervious surfaces in buffer areas. *Streamside CPR* points out that when total impervious area in a watershed reaches 10 percent, stream ecosystems begin to show evidence of degradation. The 10 percent figure is used in Washington's SMP Guidelines: ". . .development shall be limited to a maximum of 10 percent total impervious surface area within the lot or parcel lying in shoreline jurisdiction. . .." This is the same standard that is used in Tri-County's Draft Stormwater Mangement regulations.

Subsection [e] specifies that the maximum removal of native vegetation on a lot in the floodplain is 35 percent, and this pertains to the entire lot including that portion that may be in the RBZ, where removal of native vegetation is not allowed. This is an important tenet in the NMFS Take Limits: "The existence of native vegetation along stream corridors is a condition that can support essential habitat processes such as temperature control, bank stability, stream complexity over time, the filtering of pollutants, or contributions of large logs and other woody debris to a stream." Wenger and Fowler describe vegetation needs: "Effective performance of all functions, including protection of aquatic habitat, requires forested buffers. Therefore, we recommend that riparian buffers be preserved in a naturally vegetated state consisting of native forest." *Upstream: Salmon and Society in the Pacific Northwest* stresses the importance of vegetation:

"Riparian vegetation mediates key interactions between aquatic and terrestrial ecosystems and in many respects controls the productivity of streams by influencing water, sediment, and nutrient dynamics; shading; inputs of fine particulate organic matter and woody debris: and the stability of streambanks and floodplain terraces. The direct influence of riparian vegetation on streams declines with increasing distance from the channel and with the height of the dominant tree species."

Streamside CPR devotes many pages to the values of natural vegetation cover and concludes that: "Removal of vegetation and the construction of structures within the riparian area are the activities most likely to conflict with riparian functions and values." The Washington SMP Guidelines also give much attention to the values associated with native vegetation and the need to retain it:

"Vegetation conservation along shorelines is critical to protect aquatic resources including many priority species and their critical habitat. The intent of vegetation conservation is to protect existing and restore degraded habitat so as to contribute to ecological functions. . . and ecosystem-wide processes performed by vegetation along shorelines. Vegetation conservation should also be undertaken to protect human safety and property, to increase the stability of river banks and coastal bluffs, to reduce the need for structural shoreline stabilization measures, to improve the visual and aesthetic qualities of the shoreline, to protect plant and animal species and their habitats, and to enhance shoreline uses."

While the Guidelines emphasize the need to conserve and protect vegetation, the standards do not apply retroactively to existing uses and structures, such as existing agricultural practices. Local master programs are directed to vegetation characteristics described in *Management*

Recommendations for Washington's Priority Habitats, a publication of the Washington Department of Fish and Wildlife. Specific standards are required of local programs that include native vegetation removal limits and related standards for retention or restoration of native species. Local Master programs are required to set minimum standards in each zone (e.g., there can be no significant vegetation removal in the natural environment, no significant vegetation removal except as demonstrated to be necessary for an allowed development in the rural conservancy areas, no significant removal of existing native vegetation except for water-dependent uses in the high intensity environment, and so on).

The Tri-County proposal contains specific vegetation removal standards, as follows:

"65% of the MZ shall be set aside in an undeveloped state to protect, to the extent practicable, existing hydrologically mature vegetation or the potential of future reestablishment of such vegetation. In addition to the IMZ, which shall be set aside in its entirety, a portion of the OMZ shall also be set aside, as necessary, to achieve an average of 65% in an undeveloped state over the entire area of the site located within the MZ."

The 65% retention of native vegetation is a figure that is mentioned in some local programs, including King County's (Clackamas County requires that a minimum of 75% of the setback area be preserved with native vegetation). Most jurisdictions require a vegetation management plan before any removal can commence. Most do not allow any removal of native vegetation in their riparian buffer zone (other than noxious weeds and replacement of other non-native vegetation with native vegetation). Statements such as this in the Puyallup Sensitive Areas Code are typical: "Buffers shall consist of an undisturbed area of native vegetation." In the Model Ordinance, there can be no removal of native vegetation in the RBZ, and the 65% figure is used in the area outside the RBZ.

An exception to both the impervious surface and vegetation retention standards is provided in **Subsection [f].** This exception recognizes there could be circumstances peculiar to a particular lot, or a lot may be severely degraded and, for these reasons, it would be difficult to meet the specified standards. Similar disturbance allowances by variance are contained in King County's Rules and Regulations for "Sensitive Areas: Presumption of Salmonids, Sensitive Area and Buffer Modifications, and Mitigation Requirements." They are also incorporated into Tri-County's proposed "Permitted Activities Requiring Project-Specific Mitigation" from their *Regulation of Near-Shore and Aquatic Development*. The notification regarding the ESA is modeled after Clackamas County's, which is used effectively to induce development proponents to undertake restoration (planting) programs to higher levels of native vegetation – in some cases, this practice can come close to achieving the desired 65% figure.

5.5-3 Exceptions to Restrictions of the Riparian Buffer Zone

The local administrator is provided with the ability to grant exceptions to requirements of the RBZ, on the condition that the major performance standard be met, i.e., actions may not in result in any degradation of riparian ecosystem functions. Any exception, however, must be based on a report from the applicant, prepared by a qualified professional, assuring that the project will meet the performance

standard regarding maintaining riparian ecosystem functions. There are 10 exceptions listed, all of which can be found in existing ordinances from communities around the Northwest. The significance of allowing exceptions is highlighted in Wenger and Fowler's *Protecting Stream and River Corridors:*

"Ensuring a degree of flexibility in delineating riparian buffers is an important strategy when creating an ordinance. A buffer ordinance. . .should withstand any legal challenges based on property rights. It will not usually preclude use of a property and will not necessarily reduce property values. In those cases where properties are severely impacted, the owner should receive a variance. Local governments can, as shown in the model ordinance, make an exception for existing land uses. These are defined as uses that, prior to the effective date of the ordinance, are either completed, ongoing (as in the case of agricultural activity), under construction. . . etc."

Subsection [a] describes uses that are allowed outright. All or parts of these uses are found in the critical areas-type ordinances of Jefferson County, Mason County, Skagit County and Clackamas County, among others. Restoration projects that meet Federal and State standards (#7) is taken from Metro's Title 3 Model Ordinance, which permits any restoration or enhancement project outright if it meets Federal and State standards.

Subsection [b] allows water-dependent uses in the RBZ. These especially must be done with the performance standard under the general description in 5.5-3 in mind "to assure that the action will not in any way degrade riparian ecosystem functions." Similar clauses are found in critical areas-type ordinances of Clallam County, Clackamas County, Jackson County, Lane County, and Medford, among others.

Subsection [c] permits normal farm practices, other than buildings, that were in existence at the time of adoption of the ordinance. Agricultural operations are a special concern in that they often can be sources of contamination, and there are many areas where they are already in operation in floodplains, making it difficult to change. This is consistent with the SMP Guidelines, which say that "new shoreline master program provisions do not apply retroactively to existing agricultural uses." While this provision in the model ordinance allows such operations to continue to exist, an agricultural operation that does not currently use the riparian area could not plant the area, spread manure, allow grazing, or otherwise use the RBZ in nondesignated ways after the ordinance is enacted. This is also evident in the SMP Guidelines, which say "New development, clearing and grading in support of agricultural uses shall be located and designed to avoid significant ecological impacts," and must include standards for setbacks, vegetation conservation, etc. Exceptions are provided in the Georgia Model Riparian Buffer Ordinance as follows: "Agricultural production, provided that it is consistent with all state and federal laws, regulations promulgated by the Georgia Department of Agriculture, and best management practices established by the Georgia Soil and Water Conservation Commission." Wording similar to that in the Model is also contained in the Lane County Critical Habitat Conservation Zone (proposed) and Medford Riparian Corridor Ordinance, among others.

Subsection [d], crossings, is similar to wording that was found in virtually every local ordinance that

was reviewed, as well as in the Georgia Model Riparian Buffer Ordinance. The NMFS Take Limits treats crossings thusly:

"An MRCI development ordinance or plan avoids stream crossings – whether by roads, utilities, or other linear development – wherever possible and, where crossings must be provided, minimize impacts. Where a crossing is unavoidable, the plan or ordinance should minimize its effect by preferring bridges over culverts; sizing bridges to a minimum width; designing bridges and culverts to pass at least the 100-year flood (and associated debris). . .."

Wording in the Model Ordinance is consistent with this language; additional Model Ordinance language that is relevant here is found at Section 4.3-4, Alteration of Watercourses. Specific and more detailed language on crossings in habitat areas is found in the ordinances of Clallam County, Issaquah, Jefferson County, King County, Mason County, Redmond, Skagit County, Clackamas County, Gresham, Jackson County, Lake Oswego, Lane County, and Medford.

Subsection [e] provides an exception for trails in the RBZ, on conditions that there be no loss of buffer function, buffer widths be increased through mitigation, pervious materials must be used, and trails must be located as far from the stream as possible. These, again, are from provisions in existing ordinances in Northwest communities that are adopted and are being implemented. Trails can be an important factor in increasing consciousness of habitat areas by allowing people to view them up close. They can be made using pervious surfaces (the City of Redmond has such a requirement in their ordinance), thereby complying with the standard of creating no new impervious surfaces. Provisions for trails are specifically contained in the ordinances of Lane County, Medford, Tigard, Troutdale, Clallam County, Issaquah, Jefferson County, Mason County, Redmond and Skagit County. In some cases, there is a fairly detailed description of how trails can be built, such as in the Clallam and Jefferson County ordinances.

Subsection [f] deals with an exception from the prohibition of single-family buildings in the RBZ. While few would like to see new construction of houses in a riparian buffer zone, without some kind of allowance keyed to the taking issue, the ordinance would be subject to some vulnerability. This was recognized by the writers of the Georgia Model Riparian Buffer Ordinance, who also had a provision to allow construction of a single family residence by exception when: ". . .it is not reasonably possible to construct a single-family dwelling without encroaching upon the Riparian Buffer Zone."

The Washington SMP Guidelines require that local governments require a letter of exemption for certain kinds of development to assure that new development meets the conditions and objectives of the Guidelines – construction of or addition to a single-family residence is one of those development types. The SMP Management policies specify that: "limited single-family residential development may be allowed as a conditional use . . . if such shoreline master program provisions result in an equal or greater level of ecological functions and properly functioning condition."

Generally, local ordinances contain some kind of relief to allow construction of a single-family

residence when there is no option but to use some of the buffer area. King County, for example, allows an exception to its moderate channel migration zone for a primary dwelling unit provided that the structure is located on a pre-platted separate lot, there is no feasible alternative location outside the migration area, and the proposed structure will be located the farthest distance from the migrating channel. Snohomish County reports that, in practice, exemptions are sometimes granted for construction of single-family structures in their Native Growth Protection Area, when there is absolutely no alternative (and the proposed site is not in the floodway).

Clackamas County allows development of residences in their River and Stream Setback Ordinance for lots of record where lot depth precludes compliance with the setback standards. Structures must be sited the maximum distance from the stream given the lot configuration, and the structure footprint cannot exceed 25% of the lot area. Lane County, in its proposed Critical Habitat Conservation Zone, would authorize a variance to allow a structure within the outer setback area (the outer 75 feet), in order to "avoid a taking of the property development rights on a lot or parcel that was lawfully created prior to the adoption of the ordinance." There are numerous conditions attached to the granting of such a variance. While not many ordinances specifically identify this kind of exception or variance, it is expected that, in practice, most do grant some kind of relief when there is absolutely no alternative, similar to the practice identified by Snohomish County.

Subsection [g] allows buffer width averaging at the discretion of the local administrator. This practice can be allowed if there is a Habitat Management Plan prepared by the applicant (through a qualified professional) that is provided to the community, if the plan shows there will be additional protection over existing conditions, and the total area of the buffer on the site does not decrease nor is there more than a 25 percent decrease anywhere within the buffer. Virtually every local ordinance that was reviewed has some kind of buffer averaging technique, in recognition of the idea that not all areas of all buffers offer the same level of protection. This is a practice that is even recognized in the Spence report, where it is stated that: ". . .watershed analysis can be used to justify smaller or larger buffers and more or less harvest within riparian zones as long as riparian functions are not impaired." In the Wenger/Fowler report, buffer averaging is included in their model ordinance as a minor variance. They say that buffer averaging: "allows the buffer width to be reduced at certain points as long as the average buffer width remains the same along a parcel. It is very likely that cases will arise in which it is necessary and ecologically defensible to reduce the buffer width at certain points."

Some of the local ordinances, such as King County's, do not specify a percentage that averaging can incur: "Buffer width averaging may be allowed by King County if it will provide additional natural resource protection, as long as the total area contained in the buffer on the development proposal site does not decrease." But most specify 25 percent as the maximum averaging can alter the buffer. For example, Snohomish County ties averaging to degraded sites: "An applicant may be allowed to reduce the width of the fish and wildlife habitat conservation area by up to 25% in places where the riparian habitat has been legally previously degraded, if the applicant provides restoration of the functions and values of the degraded riparian habitat." Examples from other ordinances:

- Clark County's Habitat Conservation Ordinance says "portions of the riparian zone can be reduced up to 50%. . .if riparian zone widths are correspondingly increased elsewhere within the applicant parcel, such that the overall size and function and values of the riparian zone are maintained in the parcel."
- In Clallam County, buffers can be reduced or increased, the only limit being that buffers cannot be reduced to less than 50 feet at any point.
- Jefferson County allows averaging if it is justified on the basis of a Habitat Management Plan, and is not reduced anywhere in the buffer by more than 25%.
- Skagit County allows averaging to reduce buffer widths to 50%, as long as there is no net loss of HCA riparian functional values.

Although there are two examples above that allow averaging to reduce parts of buffers by up to 50%, the norm in viewing the other ordinances is 25%. Some have proposed reducing this to 10%, but as long as this practice results in some restoration or improvement (as in the Model Ordinance), the 25% figure is considered adequate. This idea was mentioned in Washington's *Wild Salmonid Policy*: "Averaging buffers to meet buffer requirements will not be permitted except where it would result in greater protection."

Subsection [h] provides the local administrator with the ability to increase buffer widths, which is important for areas of particularly sensitive habitat and, especially, for areas of channel migration, including those that may not yet be mapped. This element is absolutely essential, particularly where the local administrator is aware of detailed watershed studies that alert him/her to habitat needs that are in excess of the distances specified in the ordinance. Most ordinances already in existence that are designed to protect fish habitat do contain this kind of provision giving the local administrator appropriate discretion to expand the buffer distances. For example, Jefferson County allows buffers to be increased when a larger width is necessary to protect the structure, function and character of its Fish and Wildlife Habitat Area and to prevent a significant adverse environmental impact to that area. The determination must be supported by considerable specified documentation. This process is virtually identical to the process in Mason County, and both relate to severe erosion and channel migration issues as possible triggers for increasing buffers.

Subsection [i] is the floodway exception described earlier under the description of the Riparian Buffer Zone (RBZ). Here, if the floodway is the larger of the three criteria that define the RBZ, the other two being the specified distance based on SPTH (150, 100 or 50 feet) and the channel migration zone plus 50 feet, the RBZ can be determined by whether or not the property is within the 10-year flood elevation. If it is not within the 10-year flood elevation, the RBZ restrictions can be excepted. There was strong sentiment at the Fish-Flood Workshop to recognize the values of smaller floodplains *vis a vis* their contributions to fish habitat, as described above under the RBZ discussion. The 10-year floodplain was prominently mentioned in these discussions.

Additionally, a recent study has shown that because floods at and near bankfull stage are associated with processes that tend to shape the stream channel and riparian habitat, a reduction in velocities ~~would reduce excessive scour and, therefore, reduce the risk of riparian and in-channe~~l habitat

disturbances and impacts on fish production. This study concludes that maximum floodplain storage may be achieved at elevations that have average values corresponding to the 10-year flood elevations (Coulton). Factoring this together with the perceived spatial correlation between the floodway and 10-year floodplain as well as the clear "marketability" of the 10-year floodplain, leads to the conclusion that this measure should be an important determinant in defining the RBZ.

Subsection [j] is recognition that FEMA supports the comprehensive watershed approach to the study, planning and implementation of measures to achieve proper fish habitat conservation, protection and restoration. The comprehensive effort is best documented by reference to Oregon LCDC's Goal 5 Natural Resource requirements, and Washington's Shoreline Master Program Guidelines. In the SMP Guidelines, there are numerous references to how a local jurisdiction should develop its plans and ordinances from the comprehensive perspective. Following are quotes from the Guidelines:

*"The preferred method for local governments to accomplish a detailed, **comprehensive inventory** of ecological conditions is to participate in an interjurisdictional statewide, regional, or watershed-based inventory."*

*"The objective of shoreline management provisions for critical areas shall be the protection of existing ecological functions and ecosystem-wide processes and restoration of degraded areas to upgrade ecological functions and ecosystem-wide processes. Local governments should accomplish this on a **comprehensive basis**."*

*"Effective management of riverine corridors depends on conservatively regulating the uses within shoreline jurisdiction, the stream channel, associated channel migration zone, wetlands, and the floodplain. Water quality and hydrological processes also depend upon subsurface flows through the adjacent hyporheic zone, surface water run-off, and ground water in lands outside the floodplain. For this reason, **comprehensive watershed efforts** are the most effective approach to corridor management."*

*"Master program provisions for riverine corridors shall, where applicable, be based on the information from **comprehensive watershed management planning."** Flood hazard reduction measures are most effective when integrated into **comprehensive strategies** that recognize the natural hydrogeological and biological processes of water bodies."*

Whenever a more detailed analysis becomes available, it should be used as the basis for this kind of program. If pieces of such a program become available before the entire program is finished, they could easily be used immediately under this exception clause. Also, this provision feeds Subsection [h] above, in that better information based on a comprehensive study may be used at any time by the local administrator to increase the width of buffers.

References

American Planning Association, *Subdivision Design in Flood Hazard Areas,* PAS Report Number 473, Marya Morris (Principle Author), 1997.

Association of State Floodplain Managers, *Planning Ahead, Reducing Flood Losses in the 21st Century,* Proceedings of the 23rd Annual conference, May 24-28, 1999.

Angermeier, Paul L. and James R. Karr, *Relationship between Woody Debris and fish Habitat in a Small Warmwater Stream,* University of Illinois Department of Ecology, Ethology and Evolution, November 1984.

Abbe, Timothy B. and David R. Montgomery, *Large Woody Debris Jams, Channel Hydraulics and Habitat Formation in Large Rivers,* University of Washington Department of Geological Sciences, in Regulated Rivers, Vol. 12, 201-221, 1996.

Bean, Tom, *Testimony at SEPA Appeal Hearing on King County River Maintenance Program,* June 1997.

Bilby, Robert E. and James W. Ward, *Changes in Characteristics and Function of Woody Debris with Increasing Size of Streams in Western Washington,* Weyerhaeuser Company, Western Forestry Research Center, Centralia, Washington, 1989.

Bolton, Susan, *Ecological Issues in Floodplains and Riparian Corridors,* University of Washington Center for Streamside Studies, for Washington Department of Fish and Wildlife, November 3, 2000.

Coulton, Kevin G. and Philip Williams, *Reducing Flood Risk and Restoring Salmon: A Blueprint for Oregon's Integrated River Management Strategy,* prepared for U.S. Fish and Wildlife Service, April 13, 1998.

Corps of Engineers, *Color it Green,* from Civil Works Futures, 1995.

Cramer, S. P. and Associates, *Predicting Effects of Land Use on Salmonid Production,* for the Oregon Building Industry Association, January 30, 2001.

Cummins, K., D. Botkin, et al., *Status and Future of Salmon of Western Oregon and Northern California: Management of the Riparian Zone for the Conservation and Production of Salmon,* Center for the Study of the Environment, Santa Barbara, 1994.

Eitemiller, Douglas J., Morris L. Uebelacker, David A. Plume, Clay P. Arango, and Kelly L. Clark, *Anthropogenic alterations on Select Alluvial Floodplains Within the Yakima River Basin, Washington, 2000.*

Extinction is Not An Option, prepared by the Washington State Joint Natural Resources Cabinet, September 21, 1999.

Federal Interagency Stream Restoration Working Group, *Stream Corridor Restoration,* October 1998.

Federal Interagency Floodplain Management Task Force, *Protecting Floodplain Resources,* June 1996.

Gregory, Stanley V. and Peter A. Bisson, *Degradation and Loss of Anadromous Salmonid Habitat in the Pacific Northwest,* 1997.

King County Guidelines for Bank Stabilization Projects in the Riverine Environments of King County, King County Department of Public Works, June 1993.

King County River Maintenance Program SEPA Threshold Determination Appeal, Office of the Hearing Examiner, King County, Washington, July 10, 1997.

Lane County Riparian Area Technical Report, Upper Willamette Spring Chinook Working Group, October 16, 2000.

Lane County Critical Habitat Conservation Zone, Working Draft, Lane County Land Management Division, February 23, 2001.

League of Oregon Cities, *Endangered Species Act Assessment Manual,* prepared with the Oregon Water Utilities Council and Oregon Association of Clean Water Agencies, by CH2M-Hill, April 2000.

Lisle, Thomas E., *Effects of Woody Debris on Anadromous Salmonid Habitat, Prince of Wales Island, Southeast Alaska,* U.S. Forest Service, Arcata, California, 1986.

Marmonier, P., J. V. Ward and D. L. Danielopol, *Biodiversity in Groundwater/Surface Water Ecotones: Central Questions,* Department of Biology, Colorado State University, 1997.

Metro, Portland, *Protecting Our Region's Rivers, Floodplains and Wetlands, June 1998.*

Metro, Portland, *Policy Analysis and Scientific Literature Review for Title 3 of the Urban Growth Management Functional Plan: Water Quality and Floodplain Management Conservation,* Metro Growth Management Services Department, July 1997.

Metro, Portland, *Title 3 Model Ordinance, etc.,* Metro Growth Management Committee, May 28, 1998.

Metro, Portland, *Development of Measures to Conserve, Protect and Restore Riparian Corridors in*

the Metro Region, "Streamside CPR," Metro Growth Management Services, December 1999.

Naiman, Robert J., *Watershed Management: Balancing Sustainability and Environmental Change,* Springer-Verlag, 1992.

National Marine Fisheries Service, *The Endangered Species Act of 1973,* 1973.

National Marine Fisheries Service, *Endangered Species Consultation Handbook,* with the U.S. Fish and Wildlife Service, March 1998.

National Marine Fisheries Service, *A Citizen's Guide to the 4(d) Rule for Threatened Salmon and Steelhead on the west Coast,* June 20, 2000.

National Marine Fisheries Service, *2000 Federal Columbia River Power System Biological Opinion,* December 21, 2000.

Nehlsen, Willa, Jack E. Williams, and James A. Lichatowich, *Pacific Salmon at the Crossroads: Stocks at Risk from California, Oregon, Idaho, and Washington,* Division of Wildlife and Fisheries, U.S. Bureau of Land Management, Washington D.C., 1991.

Oregon Water Resources Research Institute, *Gravel Disturbance Impacts on Salmon Habitat and Stream Health,* Volume 1, Summary Report and Volume 2, Technical Background, prepared for the Oregon Division of State Lands, March 1995.

Oregon Plan, The, *Oregon Aquatic Habitat Restoration and Enhancement Guide Under the Oregon Plan for Salmon Watersheds,* July 1999.

Oregon Plan, The, *Coastal Salmon Restoration Initiative Executive Summary and Overview,* Jay Nicholas (Principle Writer), March 7, 1997.

Oregon Plan, The, *Oregon Coastal Salmon Restoration Initiative, Chapter 17I, Oregon's Land Use Program and 17J, Habitat Restoration Guides,* March 10, 1997.

Pollack, M. M. and P.M. Kennard, *A Low Risk Strategy for Preserving Riparian Buffers Needed to Protect and Rstore Salmonid Habitat in Forested Watersheds of Washington State,* 10,000 Years Institute, Bainbridge Island, Washington, 1995.

Pusch, and Fiebig, Brettar, Eisenmann, Ellis, Kaplan, Lock, Naegeli and Traunspurger, *The Role of Micro-Organisms in the Ecological Connectivity of Running Waters,* Blackwell Science Ltd., 1998.

Return of the Kings, King County Endangered Species Act Policy Coordination Office, March 16, 1999.

Return to the River: Restoration of Salmonid Fishes in the Columbia River Ecosystem, The Independent Scientific Group, September 10, 1996.

Riley, Ann L., *Restoring Streams in Cities,* 2000.

Sakrison, Rodney, and peter Sturtevant, *Watershed Management to Protect Declining Species,* American Water Resources Association, Middleburg, Virginia, TPS-99-4, 1999.

Saele, Leland M., *Guidelines for the Design of Stream Barbs,* for Streambank Protection and Restoration Conference, September 1994.

Sedell, J. R., and P.A. Bisson, et al., *What we Know About Large Trees That Fall Into Streams and Rivers,* From the Forest to the Sea, U.S. Department of Agriculture, Forest Service, Portland, Oregon, 1989.

Shapiro and Associates, *City of Beaverton Local Wetland Inventory and Riparian Assessment,* March 7, 2000

Sommer, T. R., with M. L. Nobriga, W. C. Harrell, W. Batham, and W. J. Kimmerer, *Floodplain Rearing of Juvenile Chinook Salmon: Evidence of Enhanced Growth and Survival,* NRC Research Press, January 23, 2001.

Spence, Brian C., with Gregg A. Lomnicky, Robert M. Hughes and Richard P. Novitzki, *An Ecosystem Approach to Salmonid Conservation,* Man Tech, December 1996.

Stanford, Jack A., *Rivers in the Landscape: Introduction to the Special Issue on Riparian and Groundwater Ecology,* University of Montana Flathead Lake Biological Station, in Freshwater Biology, 1998.

Stanford, Jack A., with J.V. Ward, William J. Liss, Christopher A. Frissell, Richard N. Williams, James A. Lichatowich, and Charles C. Coutant, *A General Protocol for Restoration of Regulated Rivers,* in Regulated Rivers: Research and Management, Vol. 12, 391-413, 1996.

State of the Salmon, Submitted by the Office of the Governor in Fulfillment of Requirements in RCW 77.85.020, December 2000.

Stypula, J.M., *Stream Hydraulics Overview,* prepared for King County Hearing Examiner for King County River Maintenance Program SEPA Threshold Determination Appeal, June 1997.

Tri-County Endangered Species Act Response, *Regulation of Near-Shore and Aquatic Development,* December 20, 2000.

Tri-County Endangered Species Act Response, *Tri-County Urban Issues ESA Study*, 2000.

Tri-County Endangered Species Act Response, *Draft Tri-County 4(d) Stormwater Proposal*, November 2000.

Upstream: Salmon and Society in the Pacific Northwest, National Research Council Committee on Protection and Management of Pacific Northwest Anadromous Salmonids, 1995.

Wallowa County/Nez Perce Tribe Salmon Habitat Recovery Plan, September 1999.

Ward, James V., *An Expansive Perspective of Riverine Landscapes: Pattern and Process Across Scales*, GAIA, 1997.

Ward, James V and J.A. Stanford, *Ecological Connectivity in Alluvial River Ecosystems and its Disruption by Flow Regulation*, in Regulated Rivers: Research & Management, Vol. 11, 105-119, 1995.

Ward, James V., *Riverine-Wetland Interactions*, in Freshwater Wetlands and Wildlife, DOE Symosium Series No. 61, 1989.

Ward, James V., and G. Bretschko, M. Brunke, D. Danielopol, J. Gibert, T. Gonser and A. G. Hildrew, *The Boundaries of River Systems: The Metazoan Perspective*, in Freshwater Biology, 1998.

Washington State Wetland Function Assessment Project, Department of Ecology Shorelands and Water Resources Program, June 1996.

Washington Department of Natural Resources, *Forest Practices Board Manual*, March 2000.

Washington State Agencies' Action Plan, May 2000.

Washington Shoreline Administrator's Manual, Department of Ecology, Second Edition, 1994.

Washington Department of Natural Resources, *Forest and Fish Forever Appendix D, Riparian Habitat Analyses*, March 2000.

Washington Department of Natural Resources, *Washington Forest Practices Rules, Chapter 222-16 WAC.*

Washington Department of Natural Resources, *Standard Method for Measuring Physical Parameters of Streams and Channel Migration Zones*, from Board Manual for Emergency Rules, March 2000.

Washington Department of Natural Resources, *Forest and Fish Forever Appendix B, Riparian*

Strategies, February 2001.

Washington Department of Fish and Wildlife, *Development of Guidelines for Salmonid Habitat Protection and Restoration,* 2001.

Washington Department of Fish and Wildlife, *Draft Integrated Streambank Protection Guidelines,* February 2000.

Washington Department of Fish and Wildlife, *Final Joint WDFW/Tribal Wild Salmonid Policy,* 1997.

Washington Department of Ecology, *State Master Program Approval/Amendment Procedures and Shoreline Master Program Guidelines,* November 2000.

Washington Department of Ecology, *Responsiveness Summary: State Shoreline Master Program Guidelines, Parts III and IV,* November 2000.

Wenger, Seth, *A Review of the Scientific Literature on Riparian Buffer Width, Extent and Vegetation,* Office of Public Service and Outreach, Institute of Ecology, University of Georgia, March 5, 1999.

Wenger, Seth J. and Laurie Fowler, *Protecting Stream and River Corridors: Creataing Effective Local Riparian Buffer Ordinances (Model Ordinance Included),* Carl Vinson Institute of Government, University of Georgia Public Policy Research Series, 2000.

Appendix K

Wetland Model Ordinances

Wetland Conservation Overlay District (Village of Trumansburg, NY)

Freshwater Wetlands and Watercourse Protection (Town of Pawling, NY)

ARTICLE VI – OVERLAY DISTRICTS

Section 601. Effect of Overlay Districts.
Overlay Districts combine with and add to the regulations of the basic districts established in this Ordinance. All uses in any Overlay District require a Site Plan Review.

Section 602. Conservation Overlay Districts. The intent of the Conservation Overlay Districts is to protect fragile natural areas, including stream corridors and wetlands, where changes and/or development would be adverse to the environment, community values, public health, safety and general welfare of the Village, in accordance with the Village of Trumansburg Comprehensive Plan. The provisions of this section take precedence over any other zoning section, law or code to the extent that the provisions of this section are inconsistent with the other provisions.

Section 603. Site Plan Review in Conservation Overlay Districts.
Any Site Plan Review conducted within a Conservation Overlay District shall include, in addition to any other requirements of this ordinance, additional project review criteria and additional submission materials.

Section 604. Stream Corridor Conservation Overlay District. Section 723 of this Ordinance establishes minimum stream buffers for perennial and intermittent streams throughout the Village. Within the Stream Corridor Conservation Overlay District, additional requirements apply.

Section 604.1. Protection Requirements for Perennial Streams. All perennial streams shall require a riparian buffer and a setback area. All site plan applications, special permits, special approval and variance applications, building permit applications, and excavation or fill permit applications shall require the delineation of any applicable riparian buffers and setback areas. Prior to any soil-disturbing activity, the riparian buffer and setback area shall be clearly delineated on site and shall be undisturbed until the project is complete.

1. Riparian Buffer Established. The riparian buffer will begin at the top of the stream bank and extend a minimum of fifty (50) feet horizontally measured in a direction directly perpendicular to the stream bank in a horizontal plane. Should a steep slope or wetland exist within this riparian buffer the entirety of that area will be added to the measurement of the riparian buffer. In addition to those minimum requirements, Site Plan Review shall consider whether additional buffer width is appropriate along perennial streams within the Stream Corridor Conservation Overlay District to protect and promote:
   a. Habitat and Biodiversity, by providing terrestrial wildlife habitat and travel corridors, and food and habitat in aquatic ecosystems.
   b. Stream Stability, by attenuating flooding, stabilizing stream banks and preventing erosion of stream banks and streambeds.
   c. Water Quality, by removing pollutants and moderating temperatures.
   d. Financial Savings, by preventing property damage, reducing public investment and protecting public facilities from flooding or other hazards.

2. Riparian Buffer Restrictions. Riparian buffers shall maintain native vegetation in a natural state. Development may not modify or interrupt more than 10% of the entire riparian buffer area unless necessary for the protection of human health, utility usage, public infrastructure, or the betterment of the riparian corridor. Development within the riparian buffer is limited to:
   a. Benches or seating.
   b. Educational and scientific research.
   c. Flood control, stormwater management structures, and stream bank stabilization measures approved by the Tompkins County Soil and Water Conservation District, Natural Resource Conservation Service, Army Corps of Engineering, or NYS Department of Environmental Conservation.
   d. Maintenance of roadways or impervious surfaces existing at the time of the adoption of this provision.
   e. Stream crossings necessary to access the property by driveway, transportation route, or utility line which have minimal negative impacts on the stream and riparian buffer.
   f. Public water supply intake or public wastewater outfall structures.
   g. Public access and public recreational facilities that must be on the water including boat ramps, docks, foot trails leading directly to the stream, fishing platforms and overlooks.

h. Public sewer lines and/or other utility easements.
i. Non-paved recreational trails no wider than 10 feet that either provide access to the stream or are part of a continuous trail system running roughly parallel to the stream.
j. Temporary use of erosion control measures such as silt fencing.

3. Setback Area Established. The Setback Area will begin at the outward edge of the Riparian Buffer and extend an additional fifty (50) feet from the top of stream bank.

4. Setback Area Restrictions. Within the setback area development uses are restricted to the following:
   a. All development and uses permitted in the riparian buffer.
   b. Minor recreational structures and surfaces to allow passive recreation in the setback area such as decks, picnic tables, playground equipment, and small concrete slabs, the total area of which is not to exceed 200 square feet each and in aggregate occupy no more than 10% of the setback area.
   c. Fences, provided such structures do not impede floodwaters.
   d. Landscaping, mowing, decorative planting or improvements that do not encroach upon or impact the integrity of the riparian buffer.

Section 604.2. Submission Materials. In addition to any other materials required by this ordinance, the proposed site plan shall show the location of the top of banks of any perennial stream within fifty (50) feet of the property.

Section 604.3. Prohibited Activities. The following activities are explicitly prohibited within any riparian buffer or setback area:
a. Storage or placement of any hazardous materials.
b. Purposeful introduction of invasive vegetative species that reduce the persistence of native vegetation.
c. Waste storage, placement, or disposal, including but not limited to disposal and dumping of snow and ice, recyclable materials, manure, hazardous or noxious chemicals, inoperative automobiles or appliance structures, and other abandoned materials.
d. Mining or removal of soil, sand and gravel, and quarrying of raw materials.
e. Dredging, deepening, widening, straightening or any such alteration of the beds and banks of natural streams except where the New York State Department of Environmental Conservation has issued a permit expressly allowing such activities.
f. Application of herbicide, pesticides, fertilizers, or other chemicals.
g. Parking of motorized vehicles, except as permitted as a Special Use by the Board of Appeals.

Section 604.4. Exemptions. The following specific activities are exempt from the requirements of the Stream Corridor Conservation Overlay District.
a. This section shall not apply to agricultural land use activity existing as of the effective date of this ordinance.
b. Work consisting of the repair or maintenance of any lawful use of land that is approved for such use on or before the effective date of this ordinance.

605. Wetland Conservation Overlay District.

Section 605.1. Buffer Requirement.

1. Buffer Required. A minimum setback of 100 feet shall be required from the delineated boundaries of all wetlands of two acres or more within the Wetland Conservation Overlay District. The Planning Board may, in reviewing any site plan within the Wetland Overlay District, require greater setbacks.

2. Exempt activities. The following activities shall be permitted within a Wetland Overlay District without a Site Plan Review provided they do not require structures, grading, fill, draining, or dredging:
   a. Normal ground maintenance including mowing, trimming of vegetation.
   b. Repair of existing decorative landscaping and planting native species.
   c. Repair of existing walkways, walls, and driveways.

d. Public health activities, in emergencies only, of the County Department of Health and/or New York State Department of Health.
e. Operation of existing dams and water control devices.

3. Prohibited activities. The following activities are explicitly prohibited in both the setback area.
   a. Storage or placement of any hazardous materials.
   b. Purposeful introduction of invasive vegetative species that reduce the persistence of native vegetation.
   c. Waste storage, placement, or disposal, including but not limited to disposal and dumping of snow and ice, recyclable materials, manure, hazardous or noxious chemicals, used automobiles or appliance structures, and other abandoned materials.
   d. Mining or removal of soil, sand and gravel, and quarrying of raw materials.
   e. Alteration of wetlands except where the New York State Department of Environmental Conservation or the U.S. Army Corps of Engineers has issued a permit expressly allowing such activities.
   f. Application of herbicide, pesticides, fertilizers, or other chemicals.
   g. Parking of motorized vehicles, except as permitted as a Special Use by the Board of Appeals.

Section 605.2. Project Review Criteria. Site Plan Review within the Wetland Conservation Overlay District shall consider the impact of any proposed project on:

1. The ability of the wetland to filter harmful toxins, nutrients, and sediment from surface and stormwater runoff.
2. The ability of the wetland to store floodwaters and reducing the magnitude of flood events.
3. The ability of the wetland to provide valuable habitat for a diverse array of flora and fauna, including any existing rare, threatened, or endangered species.
4. The ability of the wetland to maintain surface-water flow during dry periods.
5. The impact of any excessive siltation resulting from surface runoff from construction sites, road, bridge, and pipeline construction and lack of erosion control on steep slopes.
6. The impact of pollution by road salt and chemical pollution from parking lots and treated lawns.
7. The impact of pollution by garbage, litter, and refuse.
8. The impact of a reduction in the flow of watercourses due to destruction of wetlands.

Section 605.3. Submission Materials. In addition to any other materials required by this ordinance, the proposed site plan shall show the boundaries of any wetland as determined by field investigation. The Planning Board may require flagging and subsequent survey by a licensed land surveyor. The Planning Board may consult and/or may require the applicants to consult with approved biologists, hydrologists, soil scientists, ecologists, botanists, legal counsel, engineers, or other experts necessary to make this determination.

Section 719. Extraction of Natural Products. In any district, the removal of sod, loam, sand, gravel or quarried stone for sale, except when incidental to, or in connection with, the construction of a building shall be prohibited.

Section 720. Access to Business or Manufacturing Use. No driveway or other means of access for vehicles, other than a public street, shall be maintained or used in any residence district for the servicing of a business or manufacturing use located in a commercial or industrial district.

Section 721. Gas Stations. No gasoline or oil pump, no oiling or greasing mechanism and no other service appliance installed in connection with any gasoline sales station or public garage shall be within thirty (30) feet of any street right-of-way or within fifty (50) feet of any residential zoning district.

Section 722. Swimming Pools. All swimming pools shall be constructed and installed in accordance with the requirements of the New York State Uniform Fire Prevention and Building Code and require a building permit. Swimming pools shall meet the setback requirements for accessory structures. The sides of pools must be firm and not able to be bent or lowered by body weight or ladders or other point of entry equipment.

Section 723. Stream Buffers. This section is intended to promote the prevention of sediment, nutrient and pollutant loads from entering streams by maintaining stream buffers from the top of stream bank.

Section 723.1. Protection Requirements for Perennial and Intermittent Streams. All perennial and intermittent streams shall require a riparian buffer with a total width of fifty (50) feet from the top of stream bank. All site plan applications, special permits, special approval and variance applications, building permit applications, and excavation or fill permit applications shall require the delineation of any applicable riparian buffers. Prior to any soil-disturbing activity, the riparian buffer shall be clearly delineated on site and shall be undisturbed until the project is complete.

Section 723.2. Riparian Buffer. The riparian buffer will begin at the top of the stream bank and extend a minimum of fifty (50) feet horizontally measured in a direction directly perpendicular to the stream bank in a horizontal plane. Should a steep slope or wetland exist within this riparian buffer the entirety of that area will be added to the measurement of the riparian buffer. Riparian buffers shall maintain native vegetation in a natural state. Development may not modify or interrupt more than 10% of the entire riparian buffer area unless necessary for the protection of human health, utility usage, public infrastructure, or the betterment of the riparian corridor. Development within the riparian buffer is limited to:

a. Benches or seating.
b. Educational and scientific research.
c. Flood control, stormwater management structures, and stream bank stabilization measures approved by the Tompkins County Soil and Water Conservation District, Natural Resource Conservation Service, Army Corps of Engineering, or NYS Department of Environmental Conservation.
d. Maintenance of roadways or impervious surfaces existing at the time of the adoption of this provision.
e. Stream crossings necessary to access the property by driveway, transportation route, or utility line which have minimal negative impacts to the stream and riparian buffer.
f. Public water supply intake or public wastewater outfall structures.
g. Public access and public recreational facilities that must be on the water including boat ramps, docks, foot trails leading directly to the stream, fishing platforms and overlooks.
h. Public sewer lines and/or other utility easements.
i. Non-paved recreational trails no wider than 10 feet that either provide access to the stream or are part of a continuous trail system running roughly parallel to the stream.
j. Temporary use of erosion control measures such as silt fencing.

Section 723.3. Exemptions. The following specific activities are exempt from the requirements of this section.

a. This section shall not apply to agricultural land use activity existing as of the effective date of this ordinance.
b. Work consisting of the repair or maintenance of any lawful use of land that is approved for such use on or before the effective date of this ordinance.

Section 723.4. Prohibited Activities. The following activities are explicitly prohibited in the riparian buffer.

a. Storage or placement of any hazardous materials.
b. Purposeful introduction of invasive vegetative species that reduce the persistence of native vegetation.
c. Waste storage, placement, or disposal, including but not limited to disposal and dumping of snow and ice, recyclable materials, manure, hazardous or noxious chemicals, used automobiles or appliance structures, and other abandoned materials.
d. Mining or removal of soil, sand and gravel, and quarrying of raw materials.
e. Dredging, deepening, widening, straightening or any such alteration of the beds and banks of natural streams except where the New York State Department of Environmental Conservation has issued a permit expressly allowing such activities.
f. Application of herbicide, pesticides, fertilizers, or other chemicals.
g. Parking of motorized vehicles, except as permitted as a Special Exception by the Board of Appeals.

Section 724. Private Roads. Any private road serving more than one lot or more than two buildings shall be constructed to meet Village specifications for right-of-way, grade and cross section, as approved by the Village Superintendent of Public Works or Village Engineer.

Chapter 111. FRESHWATER WETLANDS AND WATERCOURSE PROTECTION

§ 111-1. Title and purpose.
§ 111-2. Legislative intent.
§ 111-3. Definitions and word usage.
§ 111-4. Applicability.
§ 111-5. Conflicts with other laws.
§ 111-6. Permit applications.
§ 111-7. Administration of permit application.
§ 111-8. Inspection.
§ 111-9. Penalties and corrective action.
§ 111-10. Appeals.
§ 111-11. Exception.
§ 111-12. Compliance with other code and regulation provisions.

[HISTORY: Adopted by the Town Board of the Town of Pawling 3-9-1993 as L.L. No. 4-1993. Amendments noted where applicable.]

GENERAL REFERENCES

Zoning — See Ch. **215**.
Subdivision of land — See Ch. **A230**.

§ 111-1. Title and purpose.

This chapter shall be known as the "Freshwater Wetlands and Watercourse Protection Law of the Town of Pawling." Its purpose is to regulate the dredging, filling, deposition or removal of materials, including vegetation; the diversion or obstruction of water flow; the placement of structures in, and other uses of, the ponds, lakes, reservoirs, natural drainage systems and wetlands located in the Town of Pawling; and the requirement of permits therefor, providing for the protection and control of wetlands, waterbodies and watercourses.

§ 111-2. Legislative intent.

A. The Town Board of the Town of Pawling has determined that the public interest, health and safety and the economic and general welfare of the residents of the Town of Pawling will be best served by providing for the protection, preservation, proper maintenance and use of the town's ponds, lakes, reservoirs, waterbodies, rivers, streams, watercourses, wetlands, natural drainage systems and adjacent land areas from encroachment, spoiling, polluting or elimination resulting from rapid population growth attended by commercial development, housing, road construction and/or disregard for natural resources.

B. The wetlands, watercourses and controlled areas adjacent to wetlands and/or watercourses in Pawling are a valuable natural resource which serve to benefit the entire Town and the surrounding region by performing one or more of the following functions:

(1) Providing a common linkage between aquatic systems (aquifers, floodplains, wetlands, lakes, rivers, etc.).

(2) Preventing watershed diversion of ground- or subsurface water.

(3) Preventing uncontrolled stormwater drainage.

(4) Providing drainage and flood control through hydrologic absorption, natural storage and flood conveyance.

(5) Protecting subsurface water resources, watersheds and groundwater recharge systems.

(6) Providing a critical living, breeding, nesting and feeding environment for many forms of wildlife, including but not limited to mammals, wildfowl, shorebirds, rare species, especially endangered and threatened species, and other dependent plants and animals.

(7) Treating pollution through natural biological degradation and chemical oxidation.

(8) Controlling erosion by serving as sedimentation areas and filter basins, capturing silt and organic matter.

(9) Providing sources of nutrients in freshwater food cycles.

(10) Serving as nursery grounds and sanctuaries for freshwater fish.

(11) Providing recreation areas for hunting, fishing, boating, hiking, bird-watching, photography, camping and other uses.

(12) Serving as an educational and research resource.

(13) Preserving natural open space which serves to satisfy human psychological and aesthetic needs.

C. Areas adjacent to wetlands and watercourses provide essential protection by serving as mitigation from the impacts of activities taking place on surrounding lands. For the purpose of this chapter, these buffer areas are defined as controlled areas.

D. The protection of wetlands, watercourses and controlled areas is a matter of concern to the entire town. The establishment of regulatory and conservation practices for wetlands, watercourses and controlled areas serves to protect the Town by ensuring review and regulation of any activity on or along wetlands, watercourses and controlled areas that might adversely affect the town's citizens' health, safety and welfare.

E. Wetlands, watercourses and controlled areas in Pawling and other areas form an ecosystem that is not confined to any one property owner or neighborhood. Experience has demonstrated that effective wetlands protection requires consistency of approach to preservation and conservation efforts throughout the town.

F. Loss of wetlands or any activity along watercourses and their controlled areas can cause or aggravate flooding, erosion, sedimentation, diminution of water supply and water quality for drinking and waste treatment and may pose a threat to the health, safety and welfare of the people of Pawling and the surrounding region.

G. Regulation of wetlands, watercourses and controlled areas is consistent with the legitimate interests of farmers to graze and water livestock, make reasonable use of water resources, harvest natural products of wetlands, watercourses and controlled areas, selectively cut timber and fuel wood and otherwise engage in the use of land for agricultural production.

H. The State of New York has enacted legislation entitled the "Freshwater Wetlands Act," found in Article 24 of the Environmental Conservation Law, which authorizes local governments to establish their own procedures for the protection and regulation of wetlands lying within their jurisdiction. The New York State Department of Environmental Conservation has promulgated implementing regulations for local government adoption of Article 24 authority, found in Part 665 of Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York (6 NYCRR Part 665). It is not the intent of this chapter to regulate wetlands under NYSDEC jurisdiction.

I. This chapter is enacted pursuant to the above-referenced law and any and all applicable laws, rules and regulations of the State of New York, and nothing contained herein shall be deemed to conflict with any such laws, rules or regulations.

J. It is the intent of this chapter to incorporate the consideration of wetlands and watercourse protection, as well as that of their controlled areas, into the town's land use and development approval procedures, so as to provide a reasonable balance between the rights of the individual property owners to the use of their property and the rights of present and future generations.

§ 111-3. Definitions and word usage.

A. Except where specifically defined herein, all words used in this chapter shall carry their customary meanings. Words used in the present tense include the future, and the plural includes the singular. The word "shall" is intended to be mandatory.

B. As used in this chapter, the following terms shall have the meanings indicated:

AGRICULTURE

All activities directly related to the grazing, growing or raising of crops or livestock, including but not limited to horticulture and fruit production, which operates on 10 acres or more and produces average annual gross sales of agricultural products valued at $10,000 or more. Timber harvesting, pond construction, drainage or permanent alteration of wetlands, watercourses or controlled areas is not included in agricultural activities.

[Amended 9-9-2003 by L.L. No. 1-2003]

ALTER

To change, move or disturb any vegetation, soil, drainageway or other natural material or system within a wetland, watercourse or controlled area as defined by this chapter.

APPLICANT

Any individual or individuals, firm, partnership, association, corporation, company, organization or other legal entity of any kind, including municipal corporations, governmental agencies or subdivisions thereof, who has a request for a permit to conduct a regulated activity before the Code Enforcement Officer or who has an application pending pursuant to § **111-6** of this chapter before the Planning Board.

AQUACULTURE

Cultivating and harvesting products, including fish and vegetation, that are produced naturally in freshwater wetlands, and installing cribs, racks and other in-water structures for cultivating these products, but does not include filling, dredging, peat mining or the construction of any buildings or any water-regulating structures, such as dams.

CLEAN FILL

Soil or earth free of all deleterious and/or organic matter and shall be composed of no more than 10% by volume of stone, rocks or boulders with their maximum size measuring no more than 12 inches in either length or diameter. It shall not include: (1) construction or demolition debris; (2) putrescible materials; (3) slag; (4) dredgings from waterways or water bodies; (5) more than 50% clay by weight.

[Added 2-8-2005 by L.L. No. 1-2005]

CLEAR CUTTING

Complete cutting and removing of an entire stand of trees, replaced by natural or planted regeneration.

CODE ENFORCEMENT OFFICER

The individual designated by the Pawling Town Board and charged with the enforcement of zoning, building and fire codes.

COMPLETE APPLICATION

An application which has been declared to be complete by the Environmental Director or which has been deemed complete as a result of the Environmental Director's failure to evaluate it for completeness within the required time period.

CONSERVATION ADVISORY BOARD (CAB)

The duly appointed Conservation Board of the Town of Pawling as created pursuant to § 239 of the General Municipal Law.

CONTROLLED AREA

A buffer area surrounding a wetland or watercourse that is also subject to the regulations of this chapter, determined as follows:

(1) For all wetlands, the "controlled area" shall extend to the greater of the following: 100 feet away from the edge of the wetland boundary, or, in cases where the wetland is bounded with a steep slope 25% or greater, the buffer shall extend 100 feet from the top of the steep slope.

(2) The "controlled area" of a watercourse shall extend to all adjacent surfaces for 100 feet as measured from the top of the bank of the watercourse.

DATE OF RECEIPT OF COMPLETE APPLICATION

A complete application shall be deemed received by the Planning Board on the date of the first regular meeting of the Planning Board following the filing of the complete application and supporting plans with the Planning Board by the Code Enforcement Officer pursuant to the provisions of § **111-6** of this chapter.

DAMS AND WATER CONTROL MEASURES AND DEVICES

Barriers used to obstruct the flow of water to raise, lower or maintain the water level in wetlands.

DEPOSIT

To fill, place, eject or dump any material.

[Amended 9-9-2003 by L.L. No. 1-2003]

DCSWCD

The Dutchess County Soil and Water Conservation District.

ENVIRONMENTAL DIRECTOR

The individual designated by the Pawling Town Board and charged with reviewing and evaluating the environmental impacts of all wetland permit applications as well as determining their "completeness" in accordance with the provisions of this chapter.

FLOOD-PRONE AREAS

The Planning Board may, when it deems it necessary for the health, safety or welfare of the present and future population of the area and necessary to the conservation of water, drainage and sanitary facilities, prohibit the subdivision of any portion of the property which lies within the flood-prone area of any stream or drainage course. These flood-prone areas shall be preserved from any and all destruction or damage resulting from clearing, grading or dumping of earth, waste material or stumps, except at the discretion of the Planning Board.

[Added 2-8-2005 by L.L. No. 1-2005]

FRESHWATER WETLANDS MAP

The Town of Pawling Freshwater Wetlands and Watercourse Map prepared by the Dutchess County Environmental Management Council dated February 24, 1993, was produced from digitized natural resource data of Pawling and is intended to be used as a guide. Finite wetland/watercourse boundaries shall be determined by field investigation using criteria described in this chapter.

LOT AREA

The total area within the property lines, excluding external roads. The property line adjacent to the road, for the purpose of this chapter, shall be deemed to be not less than 25 feet from the center line of a minor road, nor less than 30 feet from the center line of a collector road, nor less than 40 feet from the center line of a major road, nor less than 60 feet from the center line of an arterial highway. To calculate the lot area, not more than 10% of the minimum area required by the Town Code may be comprised of land which is under water or subject to periodic flooding.

[Added 2-8-2005 by L.L. No. 1-2005]

MATERIAL

Liquid, solid or gaseous substances, including but not limited to soil, silt, gravel, rock, sand, clay, peat, mud, debris and refuse; any organic or inorganic compound, chemical agent or matter, including sewage, sewage sludge or effluent; and agricultural, industrial or municipal solid waste.

NYSDEC

The New York State Department of Environmental Conservation.

PERMIT OR WETLANDS PERMIT

That form of Town approval required by this chapter for the conduct of a regulated activity within any wetland, watercourse or controlled area.

PERSON

See "applicant."

PLANNING BOARD

The duly appointed Planning Board of the Town of Pawling.

POLLUTION

The presence in the environment of human-induced conditions or contaminants in quantities or characteristics which are or may be injurious to human, plant or animal life or to property.

PROJECT

Any action resulting in direct or indirect physical or chemical impact on a wetland, watercourse or controlled area, including but not limited to any regulated activity.

REMOVE

To dig, dredge, suck, bulldoze, dragline, blast or otherwise excavate or regrade, or the act thereof.

STATE ENVIRONMENTAL QUALITY REVIEW ACT (SEQRA)

The law pursuant to Article 8 of the New York Environmental Conservation Law providing for environmental quality review of actions which may have a significant effect on the environment.

STRUCTURE

Anything constructed or erected, the use of which requires location on or in the ground or attachment to something having location on the ground. The term includes but is not limited to tennis courts and swimming pools.

TIMBER HARVESTING

Any activity which may alter the physical characteristics of any forested land, including but not limited to any activity involving or associated with the cutting of trees, except that the following activities shall not be considered to be "timber harvesting:"

(3) The routine maintenance of roads, easements and rights-of-way and the clearing of farm fence lines; and

(4) The clearing of approved subdivision roads, site plans and public utility easements.

TOWN BOARD

The duly elected Town Board of the Town of Pawling.

TOWN CLERK

The duly elected Town Clerk of the Town of Pawling.

TOWN ENGINEER

Any person or firm employed by the Town of Pawling as the Town Engineer.

WATERBODY

Any natural or artificial pond, lake, reservoir or other area which usually or intermittently contains water and which has a discernible shoreline.

WATERCOURSE

Any natural or artificial, permanent or intermittent, public or private waterbody or water segment, such as ponds, lakes, reservoirs, rivers, streams, brooks, waterways or natural drainage swales, that is contained within, flows through or borders on the Town of Pawling.

WETLANDS

(a) All geographic areas greater than one-fourth (1/4) acre, but not including wetlands regulated by the NYSDEC, and characterized by any or all of the following:

[1] Marshes, swamps, bogs or other areas of permanent water retention fed by springs or natural drainage systems.

[2] Soil types that are poorly drained or very poorly drained, alluvial or floodplain soils or potential hydric soils as defined by the updated Soil Survey of the United States Department of Agriculture, Soil Conservation Service, and the Dutchess County Soil and Water Conservation District, including but not limited to the following:

Hydric Soils	Potential Hydric Soils*

Hydric Soils	**Potential Hydric Soils***
Canandaigua (Ca)	Kingsbury and Rhinebeck (Kn)
Carlisle (Cc)	Linlithgo (Ln)
Fluvaquents (Ff)	Massena A (MnA)
Halsey (Ha)	Massena B (MnB)
Hydraquents (Hy)	Punsit (Pz)
Livingston (Lv)	Udorthents (Ue)
Medisaprists (Hy)	Fredon (Fr)
Palms (Pc)	Raynham Silt Loam (Ra)
Sun (Su)	
Wayland (Wy)	

NOTES:

*Those soils found by field determination to contain any

[3] Lands and submerged lands commonly called marshes, swamps, sloughs, bogs and flats, supporting aquatic or semiaquatic vegetation of the following vegetative types:

[a] Wetland trees, which depend upon seasonal or permanent flooding or sufficiently waterlogged soils to give them a competitive advantage over other trees; including, among others, red maple, (Acer rubrum), willows (Salix spp.), black spruce (Picea mariana), swamp white oak (Quercus bicolor), red ash (Fraxinus pennsylvanica), American elm (Ulmus americana) and larch (Larix laricina);

[b] Wetland shrubs, which depend upon seasonal or permanent flooding or sufficiently waterlogged soils to give them a competitive advantage over other shrubs; including, among others, alder (Alnus spp.), buttonbush (Cephalanthus occidentalis), bog rosemary (Andromeda giaucophylla) and leatherleaf (Chamaedaphne calyculata);

[c] Emergent vegetation, including, among others, cattails (Typha spp.), pickerelweed (Pontederia cordata), bulrushes (Scirpus spp.), arrow-arum (Peltandra virginica), arrowheads (Sagittaria spp.), reed (Phragmites communis), wild rice (Zizania aquatica), bur reeds (Sparganium spp.), purple loosestrife (Lythrum salicaria), swamp loosestrife

(Decodon verticillatus) and water plantain (Alisma plantago-aquatica);

[d] Rooted, floating-leaved vegetation; including, among others, water lily (Nymphaea odorata), water shield (Brasenia Schreberi) and spatterdock (Nuphar spp.);

[e] Free-floating vegetation; including, among others, duckweed (Lemna spp.), big duckweed (Spirodela polyrhiza) and watermeal (Wolffia spp.);

[f] Wet meadow vegetation, which depend upon seasonal or permanent flooding or sufficiently waterlogged soils to give them a competitive advantage over other open land vegetation; including, among others, sedges (Carex spp.), rushes (Juncus spp.), cattails (Typha spp.), rice cut-grass (Leersia oryzoides), reed canary grass (Phalaris arundinacea), swamp loosestrife (Decodon verticillatus) and spikerush (Eleocharis spp.);

[g] Bog mat vegetation; including, among others, sphagnum mosses (Sphagnum spp.), bog rosemary (Andromeda glaucophylla), leatherleaf (Chamaedaphne calyculata), pitcher plant (Sarracenia purpurea) and cranberries (Viccinium macrocarpon and V. oxycoccos);

[h] Submergent vegetation; including, among others, pondweeds (Potamogeton spp.), naiads (Naias spp.), bladderworts (Utricularia spp.), wild celery (Vallisneria americana), coontail (Ceratophyllum demersum), water milfoils (Myriophyllum spp.), musk grass (Chara spp.), stonewort (Nitella spp.), waterweeds (Elodea spp.) and water smartweed (Polygonum amphibium).

(b) Finite boundaries of wetlands shall be established on each parcel or parcels by the DCSWCD or an appropriately qualified individual, as approved by the Planning Board.

§ 111-4. Applicability.

A. Regulated acts which require a wetlands permit. Except as otherwise provided in § **111-4B** or **111-6I** below, it shall be unlawful, in the absence of a permit issued pursuant to this chapter, to do any of the following activities in any wetland, watercourse or controlled area:

(1) Place or construct any structure.

(2) Conduct any form of draining, dredging, excavation or removal of material, either directly or indirectly.

(3) Conduct any form of dumping, filling or depositing of material, either directly or indirectly.

(4) Install any service lines or cable conduits.

(5) Introduce any form of pollution, including but not limited to the installing of a septic tank, the running of a sewer outfall or the discharging of sewage treatment effluent or other liquid wastes into, or so as to drain into, a wetland or watercourse; deposit or introduce organic or inorganic chemicals, such as fertilizers, herbicides, pesticides, etc.

(6) Alter or grade natural and/or existing man-made features and contours, alter drainage conditions or divert any flow of a wetland, watercourse or waterbody.

(7) Construct dams, other water-control devices (including swales), pilings or bridges, whether or not they change the ebb and flow of the water.

(8) Install any pipes or wells.

(9) Construct a driveway or road.

(10) Strip any area of vegetation, including clear cutting.

(11) Conduct any other activity that impairs or may impair any of the functions that wetlands, watercourses and controlled areas perform as described in § **111-2B** of this chapter.

B. Acts allowed without a permit. The following acts are allowed without a permit within wetlands, watercourses or controlled areas, provided that they do not constitute a pollution or erosion hazard, interfere with proper drainage or adversely affect reasonable water use by others. Such acts must conform to Chapter **215**, Zoning, and any and all other applicable laws and statutes.

(1) Normal ground maintenance, including mowing, trimming of vegetation and removal of dead or diseased vegetation around a residence.

(2) Repair of existing walkways and walls.

(3) Maintenance and repair of preexisting structures (excluding expansion of any existing facilities).

(4) Decorative landscaping and planting, excluding those items regulated in § **111-4A**, which regulates the use of fertilizers.

(5) Operation and maintenance of existing dams and water control devices in lakes, involving the adjustment of water elevations less than 18 inches in height for periods of less than one week, after which the water level is returned to its previous level.

(6) Construction of wooden docks.

(7) Public health activities, orders and regulations of the Department of Health for emergencies only.

(8) The depositing or removal of the natural products of wetlands through recreational or commercial fishing, aquaculture, hunting or trapping where otherwise legally permitted.

(9) Agricultural activities, as defined in § **111-3B**.

§ 111-5. Conflicts with other laws.

If, in any case, the provisions of this chapter conflict with any other provisions of the Code of the Town of Pawling, the provisions which impose the more stringent requirement shall apply.

§ 111-6. Permit applications.

A. Wetlands/watercourse permit application.

(1) Any person proposing to conduct or causing to be conducted a regulated activity requiring a permit under this law shall file five copies of an application for a permit with the Code Enforcement Officer, together with the filing fee established by resolution of the Town Board. All costs incurred by the Town in the review of this application shall be borne by the applicant.

(2) All permit applications must include the following:

(a) The name, address and telephone number of the owner.

(b) The street address and tax map designation of the property.

(c) A statement of authority from the owner for any agent making application.

(d) A list of adjacent landowners.

(e) A sketch of wetland boundaries and site soil designations.

(f) A description of proposed work and purpose.

(g) A completed Environmental Assessment Form.

(h) Copies of any correspondence and/or any Article 24 Wetland Permit from the NYSDEC with reference to an adjacent New York State regulated wetland.

B. Single application required. Where an application has been made to the Code Enforcement Officer, Town Board or Planning Board for an action that is subsequently determined to require a permit pursuant to this chapter, a copy of the said application may be submitted as the permit application.

C. Additional information. Where deemed appropriate and necessary, the applicant may be required to submit more detailed information and submit plans for the proposed site alterations. Said plans may be required to be certified by an engineer, architect, land surveyor or landscape architect licensed in the State of New York, and such additional information may include any or all of the following:

(1) The location of construction or area proposed to be disturbed and its relation to property lines, roads, wetlands, watercourses and controlled areas.

(2) Mapping of soils, wetlands, watercourses and controlled areas on the parcel to be disturbed.

(3) Estimated quantities of material for excavation or fill, computed from cross sections and location of disposal sites for excavated materials.

(4) Location of any well and the depth, if known, and any subsurface sanitary disposal system within 200 feet of the proposed disturbed area.

(5) Existing and adjusted contours at two-foot intervals in the proposed disturbed area, to a distance of 50 feet beyond the disturbed area, and at one-foot intervals on those parts of a plan where one-foot intervals are deemed necessary in order to analyze the impact of the alteration.

(6) Details of any drainage system proposed both for conduct of the work and after completion thereof and measures proposed to control erosion both during and after the work.

(7) A detailed assessment of the functions and values of the affected wetlands, watercourses and controlled areas and the potential impact of the proposed project on each.

(8) A completed Long Environmental Assessment Form (EAF).

(9) A written narrative explaining the nature of the proposal, including any future development proposals for the property, and whether alternative locations exist for the proposed activity.

D. Fees for technical review. In the event that an application requires the Town to incur additional expenses for technical assistance in the review of an application, the applicant shall pay the reasonable expenses incurred by the town. The applicant shall be notified of the expenses and shall deposit said necessary funds prior to the cost being incurred.

E. Review of applications. The Code Enforcement Officer shall refer all applications and related plan materials to the Environmental Director within five business days of receipt. The Environmental Director may conduct such site inspections as deemed necessary in order to evaluate the application. The review of all applications by the Environmental Director shall involve a two-step process. First, within 14 days of receipt, the Environmental Director shall determine the following and submit a written report to the Code Enforcement Officer:

(1) What additional information, described in § **111-6C** above, is required in order to process the application.

(2) Completeness of the application. If the application is incomplete, the specific information necessary to make the application complete shall be identified.

(3) If the application is deemed complete, this report shall include a recommendation on whether referrals should be made to the Town Engineer, the Conservation Advisory Board and/or the DCSWCD.

(4) If the Environmental Director's report finds that the application is incomplete, then within 10 business days of the receipt of this report, the Code Enforcement Officer shall notify the applicant, in writing, of the information which must be filed in order to make the application complete. Upon the receipt of this subsequent information, the Code Enforcement Officer shall make the same referrals as specified in this section. If the Environmental Director's report finds that the application is complete, then within 10 business days of the receipt of this report, the Code Enforcement Officer shall refer the complete application and supporting documents and all referral letters to the Planning Board for its review and action. If the Environmental Director does not file a report on the application within the required time period, the application shall be deemed complete, and the Code Enforcement Officer shall process the application as provided in this section. Once the Environmental Director deems an application complete, a detailed review of the permit application will be performed. As Step 2, the Environmental Director shall make a report to the Code Enforcement Officer and Planning Board within 30 days of receipt of the application and supporting materials from the Code Enforcement Officer. The report from the Environmental Director shall address, at a minimum, the following matters:

(a) A recommendation of approval, disapproval or approval with conditions of the application, based upon an evaluation of the values and functions of

the wetland, watercourse and/or controlled area and the potential impact on each.

(b) A recommendation on whether any waivers permitted under § **111-6I**, Waiver of requirements, should be granted by the Planning Board.

(c) If deemed appropriate by the Environmental Director or the Code Enforcement Officer, the application and supporting documents may also be referred to the Town Engineer, the Conservation Advisory Board and/or the DCSWCD. If performed, all such referrals shall be made within 10 business days of an application being deemed complete. All outside agencies receiving the application materials shall submit a written report to the Planning Board within 30 days of receipt. If an application is referred to the Town Engineer, the report from the Town Engineer should address, as a minimum, the following items:

[1] A recommendation of approval, disapproval or approval with conditions of the application, based upon an evaluation of the values and functions of the wetland, watercourse and/or controlled area and the potential impact.

[2] A recommendation on whether any waivers permitted under § **111-6I**, Waiver of requirements, should be granted by the Planning Board.

[3] A recommendation as to the amount of the performance bond to be posted to guarantee completion of work, including stabilization and site restoration.

F. Duty of Planning Board.

(1) During its review of the application, the Planning Board shall:

(a) Review the application to determine that the requirements of this chapter have been satisfied and to ensure that applicable State Environmental Quality Review Act (SEQRA) *Editor's Note: See Art. 8 of the Environmental Conservation Law.*regulations are met.

(b) Hold a public hearing on the application, unless waived in accordance with § **111-6I(1)(b)**.

[Amended 9-9-2003 by L.L. No. 1-2003]

(c) Approve, approve with conditions or deny applications, in accordance with this chapter.

(d) Establish the amount of a performance bond or other security as a condition of approval, the amount of such bond or other security to be approved by the Town Board, in accordance with procedures contained in

Chapter **171**, Soil Erosion, Sediment Control and Steep Slopes Protection. No more than one performance bond shall need to be posted in order to fulfill these requirements pursuant to both chapters.

(e) Mail a copy of their decision to the applicant and file a copy in the offices of the Planning Board, the Code Enforcement Officer and the Town Clerk.

(2) The Planning Board shall have the right to delegate any or all of the above-mentioned duties to the Code Enforcement Officer or Environmental Director. If the Code Enforcement Officer or Environmental Director is so delegated, he or she is subsequently responsible for all applicable written reports related to a particular delegated duty. In addition, the Code Enforcement Officer or Environmental Director shall provide a monthly written status report to the Planning Board on any applications so delegated.

[Amended 9-9-2003 by L.L. No. 1-2003]

G. Public hearing and notification.

(1) Within 45 days after receipt of a complete application from the Code Enforcement Officer, the Planning Board shall hold a public hearing on such application.

(2) The applicant shall notify the adjacent landowners of the public hearing via certified United States mail, return receipt requested, no less than 10 days prior to the date of hearing. At the public hearing, the applicant shall provide to the Planning Board certification of mailing of the required notice.

(3) The Planning Board shall publish notice of the public hearing in the official newspaper of the Town no less than five days prior to the date of hearing.

(4) This public hearing should be coordinated with any other public hearings required by the applicant in order to expedite the application wherever possible.

H. Wetlands and watercourses in more than one jurisdiction. Where a regulated wetland lies within two or more municipalities, the Code Enforcement Officer shall provide copies of the application to the other neighboring municipality(ies).

I. Waiver of requirements.

(1) Should the Planning Board determine, after review of said application and upon recommendation of the Environmental Director, that an action proposed for a regulated area is insignificant, the Planning Board shall have the power to:

(a) Waive any information requirements contained in § **111-6A** and **C**.

(b) Waive the public hearing required in § **111-6F(1)(b)**.

[Amended 9-9-2003 by L.L. No. 1-2003]

(c) Waive referrals to outside agencies.

(d) Waive the requirement for a performance bond.

(e) Suspend the permitting process for the action and authorize the immediate issuance of the permit.

(2) Where the Planning Board finds that any waivers are appropriate, it shall set forth its decision and reasons therefor in writing and file the same with the Code Enforcement Officer, the Conservation Advisory Board (CAB), the Office of the Planning Board and the Town Clerk.

J. Inactive applications. Applications must be diligently pursued by the applicant. Should any application before the Planning Board remain inactive for six months while awaiting receipt of information as requested by either the Code Enforcement Officer or the Planning Board, the application shall be considered abandoned. The Planning Board may consider the granting of no more than one six-month extension for the submittal of the requested information, and only upon the written request of the applicant if, in its opinion, particular circumstances warrant it. The declaration of an application as abandoned shall not prevent the submission of a subsequent new application, including fees, which shall be considered without reference to the prior application.

K. Time extensions. Any time period referenced in these regulations can be extended by mutual consent of the applicant and the Planning Board.

§ 111-7. Administration of permit application.

A. Public hearing. Within 45 days after its receipt of a complete application for a permit regarding a proposed regulated activity and after the publication of a notice of application pursuant to § **111-6G** above, the Planning Board shall hold a public hearing on such application, unless waived. To the greatest extent practicable, said public hearing will be incorporated with any other hearing required by other local law or by the New York State Environmental Quality Review Act. *Editor's Note: See Art. 8 of the Environmental Conservation Law.*

B. Time to act. Within 60 days of the date of receipt of a complete application from the Code Enforcement Officer, the Planning Board must approve, approve with conditions or deny applications, in accordance with this chapter.

C. Permit decisions.

(1) In approving, denying or conditioning any permit, the Planning Board shall consider the effect of the proposed activity with reference to the protection or

enhancement of the several functions of the affected wetlands, watercourses and/or controlled areas and the benefits they provide, which are set forth in § **111-2** of this chapter and in § 24-0103 of the Environmental Conservation Law.

(2) In granting, denying or conditioning any permit, the Planning Board shall consider the following:

(a) All evidence offered at any public hearing;

(b) Any reports from other commissions and/or federal, county, state or Town agencies;

(c) Additional requested information by the Planning Board; and

(d) All relevant facts and circumstances, including but not limited to the following:

[1] The environmental impact of the proposed action;

[2] The alternatives to the proposed action;

[3] Irreversible and irretrievable commitments of resources that would be involved in the proposed activity;

[4] The character and degree of injury to, or interference with, safety and/or health or the reasonable use of property that is caused or threatened;

[5] The suitability or unsuitability of such activity to the area for which it is proposed;

[6] The availability of further technical improvements or safeguards that could feasibly be added to the plan or action;

[7] The possibility of further avoiding reduction of the wetlands', watercourse's and/or controlled area's natural capacity to support desirable biological life, prevent flooding, supply water, control sedimentation and/or prevent erosion, assimilate wastes, facilitate drainage and provide recreation and open space.

(3) No permit shall be approved by the Planning Board and issued by the Code Enforcement Officer pursuant to this law unless the Planning Board shall find that:

(a) The proposed regulated activity is consistent with the policy of this law to preserve, protect and also conserve freshwater wetlands, watercourses, associated controlled areas and the benefits derived therefrom, to prevent the despoliation and destruction of freshwater wetlands, watercourses and

controlled areas and to regulate the development of such wetlands, watercourses and controlled areas in order to secure the natural benefits derived therefrom, consistent with the general welfare and the beneficial economic and social development of the Town of Pawling.

(b) The proposed regulated activity is compatible with the public health and welfare.

(c) The proposed regulated activity is reasonable and necessary.

(d) There is no practicable alternative for the proposed regulated activity on a site which is not a freshwater wetland, watercourse or controlled area or which cannot practicably be relocated on the site so as to eliminate or reduce the intrusion into the wetland and/or controlled area.

(e) The proposed regulated activities are in compliance with the standards set forth in 6 NYCRR Part 665.7(e) and 665.7(g).

(4) The applicant shall have the burden of proof with regard to the required findings set forth in Subsection **C(3)** of this section.

(5) Duly filed written notice by the state, agency or subdivision thereof to the Planning Board that the state or any such agency or subdivision is in the process of acquiring the affected area on which a proposed regulated activity would be located by negotiation or condemnation shall be sufficient basis for denial of a permit for such regulated activity. Such notice shall be in accordance with 6 NYCRR, Part 665.7(i), and may be provided at any time prior to the Planning Board's decision to issue or deny a permit for the regulated activity.

D. Permit issuance. A permit granted pursuant to this chapter shall be issued by the Code Enforcement Officer in accordance with the decision rendered by the Planning Board.

E. Permit conditions.

(1) Every permit issued pursuant to this chapter shall contain the following general conditions:

(a) The Planning Board, Code Enforcement Officer and/or Environmental Director have the right to inspect the project at any reasonable time, including weekends and holidays.

(b) The permit holder shall notify the Code Enforcement Officer of the date on which project construction is to begin at least five days in advance of such date.

(c) The permit shall be prominently displayed at the project site during the undertaking of the activities authorized by the permit.

(d) The boundaries of the project shall be clearly staked or marked.

(e) All permits shall be valid for a period of one year, unless otherwise indicated, but shall expire upon completion of the acts specified.

(2) Any permit issued pursuant to this chapter may also be issued with specific conditions beyond those listed above. Such conditions may be attached as are necessary to assure the preservation and protection of affected freshwater wetlands and to assure compliance with the policy and provisions of this law and the provisions of the Planning Board's rules and regulations.

F. Permit renewal. Upon written request of the applicant, the Code Enforcement Officer may renew a permit for a period of one year, if authorized by the Planning Board. The fee for a permit renewal will be determined by resolution of the Town Board. *Editor's Note: Specific fee amounts are on file and available for inspection in the office of the Town Clerk.*

G. Bonding requirements. In accordance with the requirements of § **111-6F(1)(d)**, the Planning Board may require posting of a performance bond or collateral as a condition of approval.

§ 111-8. Inspection.

A. General procedure. The Planning Board, Code Enforcement Officer and/or the Environmental Director may enter upon the lands or waters for the purpose of inspections to determine compliance with this chapter and/or for the purpose of undertaking any investigations, examinations, surveys or other activities necessary for the purposes of this chapter. When at all possible, the landowner shall be notified prior to field investigation.

B. Inspection fee. Where the Planning Board deems inspections to be necessary, an applicant shall be required to pay an inspection fee in an amount set forth in a fee schedule established by resolution of the Town Board. *Editor's Note: Specific fee amounts are on file and available for inspection in the office of the Town Clerk.*

C. Notification. The applicant shall notify the Code Enforcement Officer when reaching stages of the activity as may be required in the permit. No activity requiring inspection will be approved without such notification. Advance notice of at least two working days shall be given whenever possible.

§ 111-9. Penalties and corrective action.

A. Stop-work order. The Code Enforcement Officer may issue a stop-work order when he or she finds that the permittee is in violation of the provisions of applicable laws, ordinances and/or regulations, has not complied with any term

of such permit issued pursuant to this chapter, has exceeded the authority granted in the permit or has failed to undertake or complete the project in the manner set forth in the permit. A stop-work order shall be issued by notifying the permittee performing the work to suspend all work. Any person served with a stop-work order shall forthwith suspend all activity until the stop-work order has been rescinded. Such order and notice shall be in writing, shall state the conditions under which work may be resumed and shall be served upon the person to whom it is directed either by delivering it to the individual personally or by posting the same upon a conspicuous portion of the area and sending a copy of the same, by registered or certified United States mail, return receipt requested, to the permittee at the address shown on the permit or approval. The Code Enforcement Officer shall immediately notify the Environmental Director and the Planning Board when a stop-work order has been issued. The Environmental Director must inspect and approve corrective actions prior to any lifting of a stop-work order issued.

B. Corrective action. If, upon inspection, it is found that any of the activities have not been undertaken in accordance with the permit, the applicant shall be responsible for completing those activities according to the permit. Failure of the Code Enforcement Officer to carry out inspections shall not in any way relieve the applicant or the bonding company of their responsibilities. When any person has been found violating any provision of this chapter or conditions imposed by the Planning Board upon an approved permit and whose permit has been suspended or upon whom a stop-work order has been issued, corrective action shall be carried out as follows:

(1) When the terms of an approved permit have been violated and a stop-work order has been issued, the Code Enforcement Officer may provide a reasonable and specified time within which corrective action shall be completed by the violator to restore, insofar as possible, the affected wetland, watercourse and/or controlled area to its condition prior to the violation.

(2) When the violation of the terms of the permit is of such a serious nature that the Code Enforcement Officer has suspended the permit or recommends the revocation of the permit, the Code Enforcement Officer shall refer the matter to the Planning Board for its determination.

C. Civil sanctions. Any person who violates, disobeys or disregards any provisions of this chapter, in addition to a criminal sanction, shall be liable to the people of the Town of Pawling for a civil penalty.

D. Criminal sanctions.

(1) Any infraction of the provisions of this chapter by failure to comply with any of its requirements, including any infraction of a condition of a permit issued pursuant to this chapter, shall constitute a violation.

(a) Any person violating any order of the Town regulating wetlands shall, for the first offense, be guilty of a violation punishable by a fine not exceeding $350 or a term of imprisonment not to exceed 15 days.

(b) Each day's continued violation shall constitute an additional offense.

(2) A second infraction of the provisions of this chapter, as per the stipulations mentioned above, shall constitute a misdemeanor. For a second and each subsequent infraction by any person within a three-year period, the aforesaid shall be guilty of a Class A misdemeanor punishable by a fine not exceeding $1,000 or a term of imprisonment of not less than 15 days nor more than six months, or both.

(3) The Town shall prosecute persons alleged to have violated the provisions of the law and may seek equitable relief to restrain any violation or threatened violation of its provisions.

E. Injunctions and orders to show cause. Notwithstanding any of the penalties or fines hereinabove provided, the Town of Pawling may maintain any action or proceeding in a court of competent jurisdiction to compel compliance with or to restrain by injunction the noncompliance of any provision of this law or permit issued thereunder.

§ 111-10. Appeals.

A. Any person aggrieved by any order or decision by the Code Enforcement Officer may seek relief from the Town Zoning Board of Appeals.

B. Any person aggrieved by any order or decision of the Planning Board may seek judicial review pursuant to a petition in accordance with Article 78 of the Civil Practice Law and Rules in the Supreme Court for the County of Dutchess. Such petition shall be brought within 30 days after the date of the filing of such order or decision with the Town of Pawling Town Clerk.

§ 111-11. Exception.

A. The provisions of this chapter shall not apply to any development, alteration or improvement of property for which final approval shall have been obtained and not expired and the approved work not completed prior to the effective date of this chapter.

B. As used in this section, the term "final approval" shall mean:

(1) In the case of the subdivision of land, final plat approval or conditional approval of a final plat as such terms are defined in § 276 of the Town Law.

(2) In the case of a site plan not involving the subdivision of land, adoption by the Planning Board of a resolution granting approval.

(3) In those cases not covered above, the issuance of a building permit or other authorization for the commencement of the development, alteration or improvement of property or for those developments, alterations or improvements for which the Town of Pawling does not require such permits, the actual commencement of the development, alteration or improvement of property.

§ 111-12. Compliance with other code and regulation provisions.

All development and improvement allowed by right or allowed by permit shall also conform with all rules and regulations contained in the Code of the Town of Pawling and all other applicable laws and regulations.

Appendix L

Riparian Buffer/Shoreline Protection Model Ordinances

Tompkins County Model Stream Buffer Ordinance, Riparian Protection Agreement & Riparian Buffer Easement

Stream Setback Ordinance (Town of Ithaca, NY)

Erosion & Sediment Control with Riparian Protections (Town of Geneseo, NY)*

Stream Buffer Conservation Overlay District (Village of Trumansburg, NY)**

*As included in the *Protecting Water Resources through Local Controls and Practices: An Assessment Model for New York Municipalities* Guide, prepared by the Genesee Finger Lakes Regional Planning Council. Appropriate for a non-MS4 Community.

***simplified version of the Tompkins County Model*

[Name of municipality], Tompkins County, New York
Model Stream Buffer Ordinance [April 2009]

1. Title

This ordinance shall be known and may be cited as the "Stream Buffer Ordinance of the_____(jurisdiction)." [If applied to zoning – This ordinance shall amend the Zoning Ordinance of the_____(jurisdiction) to add Article (section) entitled "Stream Buffer Requirements."]

2. Purpose

The purpose of this ordinance (article) is to establish requirements for creating and maintaining buffers to protect the water quality in the streams of the_____(jurisdiction), Tompkins County. This ordinance (article) promotes the prevention of sediment, nutrient and pollutant loads from entering streams by maintaining stream buffers of at least 100 feet from the top of stream bank. Research has shown that this distance is the minimum necessary to filter nutrients and pollutants to protect water quality. Although it is not regulated in this ordinance (article), the_____(jurisdiction) strongly encourages landowners to maintain stream buffers of 330 feet from the top of stream bank, on undeveloped land where feasible, in order to protect wildlife habitat.

3. Definitions

Buffer: land on each side of a stream that shall be left vegetated to provide riparian corridor functions. Buffers are measured horizontally from the top of the stream bank in a direction directly perpendicular to the bank and in the horizontal plane.

Development: the construction, reconstruction, conversion, structural alteration, relocation, or enlargement of any structure including that intended for agricultural use; any mining excavation, landfill, or land disturbance, including grading and filling.

Intermittent Stream: surface water drainage channels with definite bed and banks in which there is not a permanent flow of water (and is represented as a dashed line on United State Geological Survey (USGS) 7.5 Minute Quadrangle maps).

Impervious Surface: any paved, hardened or structural surface including, but not limited to, buildings, dams, decks, driveways, parking areas, patios, streets, swimming pools, tennis courts, walkways, and other non-permeable structures.

Perennial Stream: a stream that flows continuously throughout the year in a natural or man-made channel (which is represented as a solid blue line on United States Geological Survey (USGS) 7.5 Minute Quadrangle maps).

Steep Slope: any slope of 15% grade or greater.

Stream: the full length and width, including the bed and banks, of any watercourse, that has a channel which periodically or continuously contains moving water. It further has a defined bed, and has banks that serve to confine water at low to moderate flows (and is represented as either a solid or dashed blue line on United States Geological Survey (USGS) 7.5 Minute Quadrangle maps). For the purpose of this ordinance, constructed drainage-ways, including water bars, swales, and roadside ditches, are not considered streams.

Stream Bank: the lateral confines of a stream which contain the normal flow of the stream.

Parcel: a designated tract or area of land established by plat, subdivision, or as otherwise permitted by law, to be separately owned, used, developed, or built upon.

Top of Stream Bank: the primary edge of the ordinary high water mark, or break in slope for a watercourse, which maintains the integrity of the watercourse.

Wetlands: lands, including submerged lands, saturated by water at a frequency and duration sufficient to support vegetation adapted for life in saturated soil conditions. For the purpose of this ordinance, wetlands are limited to those lands that are categorized as wetlands by either the New York State Department of Environmental Conservation (DEC) or the National Wetlands Inventory (NWI) or have been documented and mapped as part of an officially adopted community wetlands inventory.

4. Applicability

These requirements do not supercede or replace any greater applicable buffer requirements established under state or federal law and are applicable to all land within _____(jurisdiction). This ordinance shall apply to all proposed development.

5. Requirements

5.1. Protection Requirements for Perennial Streams

A vegetative buffer shall be required for all development activities that occur in proximity to perennial streams with additional considerations for wetlands and steep slopes. Protection shall be divided into a Riparian Buffer and a Setback Area that protects overall water quality by limiting development in accordance with the adjacent land's ability to filter sediment, nutrients and other pollutants. This protection will provide stability to the stream and stream bank. The minimum total

setback width for all perennial streams combined is 100 feet. There is no established maximum setback width.

The _____(jurisdiction) shall require the delineation of any applicable Riparian Buffer and Setback Areas on all subdivision plats, site plan applications, special permits, special approval and variance applications, building permit applications, and excavation or fill permit applications. This delineation shall be subject to review and approval by the appropriate board or officer.

Prior to any soil-disturbing activity, the Riparian Buffer and Setback Area shall be clearly delineated on site and shall be undisturbed until the project is complete.

5.1.1 Riparian Buffer: The function of the Riparian Buffer is to protect the physical and ecological integrity of the portion of the riparian corridor in closest proximity to the stream through protection and enhancement of the native vegetation. Native vegetation provides shade, leaf litter, woody debris, erosion protection, and filtering of sediment, nutrient and pollutant loads to the stream.

a. The Riparian Buffer will begin at the top of the stream bank and extend a minimum of 50 feet horizontally measured in a direction directly perpendicular to the stream bank in a horizontal plane. Should a steep slope or wetland exist within this Buffer the entirety of that area will be added to the measurement of the Riparian Buffer. This full area will utilize the restrictions accorded to the Riparian Buffer.

b. Development and use are restricted to the following, the entirety of which may not modify or interrupt more than 10% of the entire Riparian Buffer unless necessary for the protection of human health, utility usage, public infrastructure, or the betterment of the riparian corridor.
    - Benches or seating;
    - Implementation of educational and scientific research that does not negatively impact the native vegetation;
    - Flood control, stormwater management structures, and stream bank stabilization measures approved by the Tompkins County Soil and Water Conservation District, Natural Resource Conservation Service, Army Corps of Engineering, or NYS Department of Environmental Conservation;
    - Maintenance of roadways or impervious surfaces existing at the time of the adoption of this provision;
    - Stream crossings necessary to access the property by driveway, transportation route, or utility line which are

designed to minimize negative impacts to the stream and Riparian Buffer;

- Public water supply intake or public wastewater outfall structures;
- Public access and public recreational facilities that must be on the water including boat ramps, docks, foot trails leading directly to the stream, fishing platforms and overlooks;
- Public sewer lines and/or other utility easements.
- Techniques to remove invasive species;
- Non-paved recreational trails no wider than 10 feet that either provide access to the stream or are part of a continuous trail system running roughly parallel to the stream;
- Temporary use of erosion control measures such as silt fencing;
- Limited tree cutting, forestry or vegetation management done in accordance with a Forest Stewardship Plan prepared by the Department of Environmental Conservation, a forester who is certified by the Society of American Foresters or such successor organization as is later created, or a Cooperating Consulting Forester with the New York State Department of Environmental Conservation. Any harvest must furthermore be done in accordance with the *New York State Forestry Best Management Practices for Water Quality – BMP Field Guide*. Tree cutting may not compromise the integrity of the stream bank or negatively impact the function of the Riparian Buffer. Tree cutting within 25 feet of the top of stream bank is prohibited. Any such activity must retain at a minimum 50% of the tree canopy in the Riparian Buffer at all times.

5.1.3. Setback Area: The function of the Setback Area is to filter sediment, nutrients and pollutants in runoff and slow the rate at which runoff enters the Riparian Buffer.

a. The Setback Area will begin at the outward edge of the Riparian Buffer and provide a minimum width of 50 feet. Should a steep slope or wetland exist within this Area the entirety of that area will be added to the measurement of the Setback Area. This full area will utilize the restrictions accorded to the Setback Area.

b. Within the Setback Area development uses are restricted to the following:
   - All development and uses permitted in the Riparian Buffer;

- Minor recreational structures and surfaces to allow passive recreation in the Setback Area such as decks, picnic tables, playground equipment, and small concrete slabs, the total area of which is not to exceed 200 square feet each and in aggregate occupy no more than 10% of the Setback Area;
- Fences, provided such structures do not impede floodwaters;
- Landscaping, mowing, decorative planting or improvements that do not encroach upon or impact the integrity of the Riparian Buffer.

5.2 Prohibited Activities

The following activities are explicitly prohibited in both the Riparian Buffer and Setback Area.

5.2.1. Storage or placement of any hazardous materials, before the following setback allotment, is prohibited. All sewage systems, both drain fields and raised systems and replacement of existing wells, must adhere to a 100-foot buffer from perennial streams. Any property that cannot accommodate such a buffer requires a variance.

5.2.2. Purposeful introduction of invasive vegetative species that reduce the persistence of local vegetation is prohibited. For a listing of invasive vegetation to avoid, refer to the Tompkins County "Environmental Management Council's Invasive Plants of Tompkins County" (1998, as revised).

5.2.3. Waste storage and disposal including but not limited to disposal and dumping of snow and ice, recyclable materials, manure, hazardous or noxious chemicals, used automobiles or appliance structures, and other abandoned materials.

5.2.4. No combination of allowed or exempt activities may compromise or alter more than 10% of the total riparian buffer and setback area that lies within a tax parcel.

5.2.5. Public water supply wells must be greater than 200 feet from top of stream bank; private wells are not allowed in the Riparian Buffer. Any property whose water supply cannot accommodate such a buffer requires a variance.

5.2.6. Mining or removal of soil, sand and gravel, and quarrying of raw materials.

5.2.7. Dredging, deepening, widening, straightening or any such altercation of the beds and banks of natural streams except where the New York State

Department of Environmental Conservation has issued a permit expressly allowing such activities on the parcel.

5.2.8. Application of herbicide, pesticides, fertilizers, or other chemicals.

5.2.9. Parking of motorized vehicles.

5.3 Protection Requirements for Intermittent Streams

For those streams classified as intermittent, only the Riparian Buffer shall apply. For an intermittent stream the buffer will begin at the top of the stream bank and extend a minimum of 50 feet horizontally measured in a direction directly perpendicular to the stream bank in a horizontal plane. All provisions applicable to the Riparian Buffers for perennial streams should apply to intermittent streams.

6. Exemptions

The following specific activities are exempt from the requirements of this ordinance.

6.1. General Exemptions

6.1.1. The ordinance shall not apply to agricultural land use activity existing as of the effective date of this ordinance.

6.2. Grandfather Provisions

6.2.1. Work consisting of the repair or maintenance of any lawful use of land that is approved for such use on or before the effective date of this ordinance.

6.3. Variance Procedures

Variances from the above buffer and setback requirements may be granted only in accordance with the following provisions. Except as provided below, the _____(appeals board) of _____ (jurisdiction) shall grant no variance from this ordinance without conducting a public hearing on the application for variance, and issue a notice of public meeting on such variance in a newspaper of general circulation in the municipality at least ten working days prior to such hearing. Such notice shall be forwarded at least ten working days in advance by a registered letter to the superintendent of highways or commissioner of public works, to the clerk of the county legislative body, and to the county planning board, if any, and appropriate state and federal agencies affected.

6.3.1. A variance shall be granted only upon a finding that a property's shape, topography or other physical conditions prevents land development unless a variance is granted, or that strict adherence to the minimal buffer and setback requirements would create extreme hardship.

6.3.2. A variance request shall include the following information in written documentation:

- A to-scale site map with stream, wetlands, slopes and other natural features locations as determined by field survey;
- Description of the topography, slopes and soil type, shape of property, natural vegetation, and other distinguishing or prohibitive physical characteristics of the property;
- The locations and footprint of all existing structures and other impervious cover on a site map, with footprint for proposed structures. This map shall include the limits of all existing and proposed land disturbance, both inside and outside the buffer and setback;
- The exact area of the affected buffer and setback, and nature of proposed changes to be made to these areas shall be accurately and clearly indicated. A calculation of the total area and length of the proposed intrusion and any pre-existing intrusions shall be included;
- A stormwater management plan given the proposed changes and intrusions;
- Documentation of supposed hardship should the buffer be maintained;
- Proposed mitigation for the intrusion.

6.3.3 The following matters will be considered in determining whether to issue a variance:

- The shape and physical characteristics of the property;
- The locations of all streams on and/or adjacent to the property;
- The location and extent of the proposed buffer or setback intrusion;
- Whether alternative designs are possible which require less intrusion;
- The water-quality impacts of the proposed variance.

7. Administration and Enforcement

7.1 This ordinance shall be administered by _____(Jurisdiction Administrator, i.e. Code Enforcement Officer) or other official as designated.

7.2 A development plan shall not be approved, and therefore a building permit shall not be issued, unless the development plan satisfies the requirements under this ordinance. The _____(jurisdiction) may deny, suspend, or revoke any development plan if the plan violates this ordinance.

7.2. The _____(jurisdiction) may cancel or revoke any approved development plan or issued building permit if it fails to maintain the requirements of this ordinance; and may take legal action to stop, revoke or cancel the approval or the building permit.

References Used for Model Ordinance Development

Anderson, P., Bradford, D., Frissell, C., Olson, D., & Welsh, H. (2007). *Biodiversity management approaches for stream-riparian areas: Perspectives for Pacific Northwest headwater forests, microclimates, and amphibians.* Forest Ecology and Management, 246, pp. 81-146.

Bren, L. (2000). A case study in the use of threshold measures of hydrologic loading in the design of stream buffer strips. Forest Ecology and Management, 132, pp. 243-257.

Enhancing Water Resources in Tompkins County: Benefits of Riparian Stream Areas and Stream Buffers: Tompkins County Planning Department, 2004. http://www.tompkins-co.org/planning/Water%20Resources/FINAL%20STREAM%20DOC.pdf

Guidance for Agency Act 250 and Section 248: Comments regarding Riparian Buffers: Vermont Agency of Natural Resources. December 9, 2005.

Markaroff, D., & Ng, R. (1995). *Schemes for implementing buffer sharing in continuous-media systems.* Information systems, 20 (6), pp. 445-464.

New York State Forestry Best Management Practices for Water Quality – BMP Field Guide - http://www.dec.ny.gov/docs/lands_forests_pdf/dlfbmpguide.pdf

Part I: A Strategic Approach to Natural Stewardship: Tompkins County Conservation Plan. Tompkins County Planning Department. 2007.

Tompkins County Conservation Plan: Section I: A strategic approach to natural resource stewardship. Tompkins County Planning Department, 2007.

Town of Ithaca Local Law No. (undecided) of 2006 as amendment to Chapter 270 of Town of Ithaca Code. *Proposed, "Zoning, to add stream setback provisions.*" Reviewed copy of 9/8/06. Town Board of the Town of Ithaca, 2007.

Town of Ulysses. *Zoning Law.* Accessed February 1, 2008. Ulysses, 2005. http://www.trumansburg.ny.us/ulysses/zoning-law_08-30-05.pdf

TOWN OF ITHACA

LOCAL LAW NO. 8 OF THE YEAR 2012

A Local Law Amending Chapter 270 of the Town of Ithaca Code, Titled Zoning, to Add Stream Setback Provisions and Related Definitions

Be it enacted by the Town Board of the Town of Ithaca as follows:

Section 1. Chapter 270 (Zoning), Article III (Terminology) of the Town of Ithaca Code, Section 270-5, titled "Definitions," is amended by adding the following definitions:

AGRICULTURAL ACTIVITY -- The production of agricultural products, such as crops, livestock, poultry and dairy goods, and the preparation or marketing of such products produced, or derived from products produced, predominantly on-site. Agricultural activity shall also include practices that allow land used for agricultural activity to lie fallow for a period not exceeding five consecutive years.

BANKFULL – The condition where streamflow just fills a stream channel up to the top of the bank and at a point where the water begins to flow over its bank.

IMPERVIOUS SURFACE – Any paved, hardened or structural surface which does not allow infiltration of water. Such surfaces include, but are not limited to, impervious streets, driveways, parking lots, and tennis courts, buildings, and swimming pools.

RIPARIAN AREA – An area adjacent to a stream that typically contains trees, shrubs, and other ground covers.

SELECTION TREE CUTTING – A forestry practice used to create or maintain uneven-aged stands of trees by periodic removal of individual trees.

SLOPE – The increase in elevation per unit of horizontal distance, expressed as a percent.

STREAM – A watercourse or surface depression characterized by a defined channel and stream bed that contain rocks or gravel and where water flows perennially or intermittently; this does not include man-made stormwater conveyances, such as grassy or rip-rap stabilized swales, roadside ditches, or stormwater management practices.

STREAM BANK – The sides of the active stream channel, usually marked by a break in slope.

STREAM SETBACK – An area that extends horizontally landward a specified distance from each side of a stream bank or from its centerline, as set forth in § 270-219.5.D.

STREAM SETBACK MAP – The map, as it may be amended from time to time, showing applicable minimum stream setbacks (subject to further extensions on a site-specific basis for streamside wetlands and/or steep slopes) and prepared by the Town of Ithaca Planning Department.

STREAMSIDE WETLAND – The area immediately adjacent to a stream that is inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances does support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

Section 2. Chapter 270, Article XXVI of the Town of Ithaca Code, entitled "Special Regulations," is amended by adding Section 270-219.5 as follows:

"§ 270-219.5 Stream Setback.

A. Findings.

The Town Board of the Town of Ithaca finds that steady population growth and land disturbance in the Town have resulted in the continual loss of much of its natural riparian (streamside) vegetation. Properly vegetated riparian areas provide numerous benefits including:

(1) Riparian vegetation lessens the severity of stream bank erosion because the deep and extensive root systems of the vegetation hold soil in place;

(2) The soil-root complex of the vegetation filters and absorbs various chemicals and particulates, keeping them out of streams;

(3) At times of heavy rain or flooding, vegetation slows water runoff velocity to maintain the streambed and stream bank and lessens the effects of flooding;

(4) By slowing runoff velocity, riparian vegetation allows recharging of the ground water;

(5) By reducing the amount of particulates and chemicals in streams that enter Cayuga Lake, vegetated riparian areas are a cost-effective way to maintain the quality of this important drinking water source for the Town;

(6) Undisturbed riparian areas provide the space needed to accommodate the natural meandering of stream channels;

(7) Vegetated riparian areas provide important habitat for birds and other wildlife and they improve the environment for aquatic species by stabilizing water temperatures and reducing levels of sediment and pollutants. These benefits are better realized if non-native invasive plant species are not present, as these plants tend to crowd out native plant species, eliminating plant diversity and providing less food, cover, and shade for those fish and wildlife species that depend on vegetated riparian areas; and

(8) Vegetated riparian areas enhance the natural beauty of streams and preserve scenic values and recreational opportunities.

B. Purpose and Objectives.

The purpose of this section is to promote the public health, safety and general welfare by establishing requirements for stream set-backs to protect streams, other water resources, property, and riparian ecosystems within the jurisdiction of the Town of Ithaca. The objectives of this section are to:

(1) Regulate activities that harm streams and native riparian vegetation, so that the benefits provided by such vegetation are not lost;

(2) Reduce the amount of sediment, organic matter, pesticides, and pollutants entering streams;

(3) Protect public and private property from losses due to flood damage and erosion;

(4) Ensure land use proposals are compatible with the above purposes and specify land use in areas where standard zoning practices are not adequate;

(5) Allow reasonable use of land that is consistent with responsible land management and that will conserve and protect streams, riparian vegetation, and streamside wetlands to the extent practicable;

(6) Recognize the legitimate interests of landowners to make reasonable use of water resources, and otherwise engage in the use of land for certain agricultural activities;

(7) Minimize expenditure of public money to reduce stream erosion and siltation; and

(8) Protect the right of the public to full enjoyment of the recreational opportunities offered by the Town's streams and by Cayuga Lake.

C. Applicability.

(1) The requirements in this § 270-219.5 apply in all zoning districts in the Town. To the extent they impose more restrictive requirements than those in the underlying districts, the requirements of this section apply.

(2) This section shall apply as follows:

(a) For parcels that are 0.5 acre or less as of the effective date of this section and contain a stream (or portion thereof) described in Subsection D(1) below, the provisions in § 270-219.5(D)(1), (4)-(5), and (12)-(15), E(13)(a) and (b), H and I shall apply.

(b) For parcels that are greater than 0.5 acre as of the effective date of this section and contain at least a portion of a stream setback described in Subsection D below, all of the provisions in § 270-219.5 except § 270-219.5(D)(12) shall apply.

D. Stream setback standards.

(1) Stream setbacks are required for those portions of streams that have upstream drainage areas equal to, or greater than, 35 acres. Streams covered by this law are shown on the Stream Setback Map, copies of which are available for inspection or by distribution to the public at Town offices and on the Town's website. The size of stream drainage areas is determined by the Town of Ithaca's Geographical Information System (GIS).

(2) The required setback width at any point along a stream is determined by the size of the upstream drainage area, the slope of the land adjacent to the stream, and the existence of any streamside wetland.

(3) The setback shall be composed of two distinct zones. Specified activities listed in Subsections E and F are prohibited as described in those subsections.

(4) Streams covered by this section, with their corresponding setback widths based on drainage area, are found on the Stream Setback Map.

(5) Notwithstanding any other provisions in this subsection, if a road shown on the Official Map of the Town is located within a stream setback, the setback shall extend from the stream to the edge of the road right-of-way or to the deeded road property line and not continue over or past the road right-of-way or deeded road property line, as applicable.

(6) Definitions and purposes of Stream Setback Zones 1 and 2 (see Figure 1a and 1b in Appendix A).

(a) Stream Setback Zone 1 is the streamside zone.

[1] The streamside zone is intended to protect the physical and ecological integrity of the stream.

[2] To assure proper functioning of this zone, vegetation must remain undisturbed as described in Subsection F.

[3] For streams with upstream drainage areas less than 175 acres, this zone will begin at the stream centerline. For streams with upstream drainage areas of 175 or more acres, this zone will begin at the edge of a defined watercourse at

the bankfull flow or level mark. (See Appendix A, Figure 2 for a bankfull depth illustration.) For all streams, this zone will be measured horizontally landward, along lines perpendicular to the stream bank or stream centerline at the relevant starting points, the required distance as determined by drainage area, presence of streamside wetlands, and slope, to the beginning of Stream Setback Zone 2.

[4] For streams with upstream drainage areas of 175 or more acres, certain prohibitions apply to the stream as well as to Stream Setback Zone 1. See Subsection F below.

(b) Stream Setback Zone 2 is the outer setback zone.

[1] The outer zone is intended to prevent encroachment into the streamside zone, and to provide distance between certain developments/activities and the streamside zone.

[2] Vegetation in this zone may vary, but planting of non-native invasive species is not allowed.

[3] The outer zone will be measured perpendicularly from the outer edge of Stream Setback Zone 1 and extend horizontally the remaining distance of the setback as required by drainage area, presence of streamside wetlands, and slope.

(7) Required minimum stream setback widths based on drainage area are shown in Table 1. For streams with upstream drainage areas less than 175 acres, this setback measurement will begin at the stream centerline. For streams with upstream drainage areas of 175 or more acres, the setback measurement will begin at the edge of a defined watercourse at the bankfull flow or level mark. For all streams, the setback will be measured horizontally landward, along lines perpendicular to the stream bank or stream centerline at the relevant starting points, the specified distance required by the drainage area.

Table 1
Minimum Stream Setback Widths (Feet)

Drainage Area (Acres)	Setback Zone 1	Setback Zone 2	Total Setback Width
≥ 35 acres and less than 175 acres	20	15	35
≥ 175 acres and less than 1500 acres	30	20	50
≥ 1500 acres	50	50	100

(8) Where a property has overlapping setbacks because of the proximity of more than one stream, the more restrictive measures shall apply in the area of overlap (for example, if part of a property is in Zone 1 for one stream, and some of Zone 1 overlaps with Zone 2 for another stream, the Zone 1 requirements shall apply in the area of overlap).

(9) If there are no slopes of 25 percent or greater and no streamside wetlands present within the setbacks required by Table 1, then the total setback width will be determined on the basis of drainage area alone as indicated on Table 1.

(10) Setback width adjustment when streamside wetlands exist:

(a) Where streamside wetlands are identified within a stream setback, the streamside wetland is not counted towards the required setback width. In these cases, it will be necessary to extend the setback width beyond that required by Subsection D(7) to make up for the amount of land excluded due to the existence of streamside wetlands (see Appendix A, Figure 3). The adjustment in width of the stream setback shall apply only to the areas on the parcel where streamside wetlands are located.

(b) Setbacks required by this section may coincide with, and are to be located and measured without regard to the presence or absence of, wetland buffers required by federal, state or local law or regulations, including buffers required by the NYS Environmental Conservation Law.

(c) Unless the property owner and Town agree on the streamside wetland delineation, streamside wetlands shall be delineated by a qualified professional under guidelines established by the U.S. Army Corps of Engineers and NYS Department of Environmental Conservation. Delineation is required under this subsection 10 for streamside wetlands that have been previously identified as well as for the areas where streamside wetlands may exist due to the presence of hydric soils or wetland plant indicators.

(11) Setback width adjustments for steep slopes of 25 percent (with a run of four feet for every foot of rise) or greater.

(a) Where steep slopes (25 percent or greater) are identified within Stream Setback Zone 1 (as extended, if necessary, due to the presence of streamside wetlands), that portion of the land containing the steep slopes within Setback Zone 1 shall not be counted towards the required setback width. In these cases it will be necessary to extend the setback width in Setback Zone 1 beyond

that required by Subsections D(7) and D(10) to make up for the amount of land excluded due to the existence of the steep slopes. Notwithstanding the foregoing, the adjusted width in Setback Zone 1 due to steep slopes shall in no case exceed two times the required minimum stream setback width specified under Setback Zone 1 in Table 1. The adjustment in width of the stream setback due to steep slopes shall apply only to the areas on the parcel where steep slopes exist. Setback Widths for Zone 2 will remain the same as specified in Table 1. (See Appendix A, Figure 4.)

(b) Steep slopes of 25 percent or greater shall be determined by using one of the following resources or methods, as appropriate:

[1] On-site measurement of slopes by registered professional engineers, surveyors, or landscape architects, using accepted engineering practices;

[2] Use of two-foot topographic data created with the use of Light Detection and Ranging (LIDAR)-derived information;

[3] United States Geological Survey 7.5 Minute Quadrangles; or

[4] Other resources or methods that Town staff determine are of similar or greater accuracy than those listed above.

(12) For parcels that are 0.5 acre or less as of the effective date of this section and contain a stream (or portion thereof) described in Subsection D(1) above:

(a) Except as concerns the application of herbicides and pesticides, the required setback width is 15 feet regardless of drainage area size, and no setback width adjustments are required for streamside wetlands or steep slopes of 25 percent or greater. With regard to the application of herbicides and pesticides, the required setback width is 35 feet regardless of drainage area size, and no setback width adjustments are required for streamside wetlands or steep slopes of 25 percent or greater. Within the 35-foot setback, the application of herbicides and pesticides is prohibited, except as allowed under § 270-219.5.E(13)(a) and (b);

(b) For streams with upstream drainage areas less than 175 acres, the setback measurement will begin at the stream centerline. For streams with upstream drainage areas of 175 or more acres, the setback measurement will begin at the edge of a defined

watercourse at the bankfull flow or level mark. For all streams, the setback will be measured horizontally landward, along lines perpendicular to the stream bank or stream centerline;

(c) The only prohibition within the 15-foot setback (in addition to that applicable to the application of herbicides and pesticides as described above) is on the construction of new buildings. This prohibition does not apply to maintenance or repair of buildings. The replacement, renovation or restoration of buildings that exist within the setback as of the effective date of this section is also permitted, provided that the following conditions are met:

[1] The new structure's footprint within the setback is in the same location and has the same or smaller dimensions as the replaced, renovated or restored structure's footprint; and

[2] None of the dimensions of the portions of the structure located within the setback increase in size.

(13) An applicant will be responsible for delineating and identifying the stream setback zones on all subdivision applications. In addition, an applicant will be responsible for delineating and identifying the stream setback zones on all site plan applications, special permit, special approval and variance applications, building permit applications, and excavation or fill permit applications, except if the project limits (which term includes any soil-disturbing activity, staging, or other development-related activity) are more than 150 feet from the outer edge of Zone 2, including adjustments for slopes and wetlands. This delineation shall be done at the time of submission of any application. This delineation shall be subject to review and approval by the appropriate board or officer.

(14) The Planning Board shall require the delineation and identification of any stream setback zones on all subdivision plats and site plans for properties to which this § 270-219.5 applies. The Planning Board and Zoning Board of Appeals shall reference any stream setback zones in any special permits, special approvals or variances they grant. The Planning Board and Zoning Board of Appeals may require stream setback zone restrictions to be incorporated into the deeds for properties that contain such setbacks.

(15) The Planning Board, Zoning Board of Appeals, Public Works staff, or Code Enforcement staff may require, prior to any soil-disturbing activity, that the stream setback zones be clearly delineated with construction fencing, staking, or other suitable material by the applicant on site, and such delineation be maintained in an undisturbed state, until Public Works

or Code Enforcement staff determine that soil-disturbing activities are completed within and adjacent to the stream setback zones.

(16) Through the subdivision, site plan review, special permit, special approval and variance processes, the Planning Board and Zoning Board of Appeals may require stream setbacks for streams with upstream drainage areas less than 35 acres where environmental conditions warrant the establishment of such setbacks. Such environmental conditions may include, for example, anticipated development impacts on wetlands or vernal pools, or stormwater management, flooding or pollution problems that the proposed development is anticipated to create. Where the Planning Board or Zoning Board of Appeals requires stream setbacks pursuant to this subsection, the size of the setbacks shall be no larger than that specified in Subsection D(7) above for drainage areas from 35 to less than 175 acres, and the prohibited uses in Setback Zones 1 and 2 shall not be any more restrictive than the prohibitions for the respective zones pursuant to Subsections F and E below.

E. Prohibited activities in stream setback zone 2.

Unless otherwise permitted by Subsection H, the following structures and uses are prohibited in Stream Setback Zone 2:

(1) The construction, installation or erection of buildings or other structures on or after the effective date of this section, except fences and walls that are in compliance with the requirements in § 270-223. This prohibition does not apply to maintenance or repair of buildings or other structures;

(2) The construction or installation of parking lots, parking spaces, or impervious surfaces on or after the effective date of this section, including impervious terraces, steps, unroofed porches and other similar features regardless of their height and regardless of § 270-223.1;

(3) Replacement, renovation or restoration of any structure, unless all of the following conditions are met:

(a) The new structure's footprint within the setback zone is in the same location and has the same or smaller dimensions as the replaced, renovated or restored structure's footprint; and

(b) None of the dimensions of the portions of the structure located within the setback zone increases in size;

(4) Agricultural activities that begin on or after the effective date of this section, and agricultural activities beginning before and existing as of the effective date of this section that thereafter cease for a period of more than

one year (or the land thereafter lays fallow for a period of more than five consecutive years, in the case of land used for agricultural activity that is lying fallow). Notwithstanding the foregoing, the following agricultural activities are permitted regardless of when they begin or if they cease for more than a year and thereafter begin again:

(a) Grazing of livestock, where livestock are allowed by this chapter, in accordance with a conservation plan approved by the Tompkins County Soil and Water Conservation District; and

(b) Haying, and growing of crops for commercial, educational, research or other purposes;

(5) Land-disturbing activities that begin on or after the effective date of this section, and land-disturbing activities beginning before and existing as of the effective date of this section that thereafter cease for a period of more than one year. Notwithstanding the foregoing, the following land-disturbing activities are permitted regardless of when they begin or if they cease for more than a year and thereafter begin again:

(a) Mowing and maintenance of lawns and sports fields, landscaping, and gardening, provided that for activities beginning on or after the effective date of this section, non-native invasive species are not planted and such activities do not harm the riparian area;

(b) Construction of stormwater ponds and wetlands;

(c) Demolition of structures;

(d) Emergency slope stabilization; and

(e) Non-emergency slope stabilization and restoration, provided that:

[1] The property owner consults with either a qualified professional engineer or the Tompkins County Soil and Water Conservation District about the stabilization project;

[2] The Town approves the relevant Stormwater Pollution Prevention Plan (SWPPP) required by Chapter 228, or a Simple Erosion and Sedimentation Control Plan if no SWPPP is required by Chapter 228;

[3] The property owner complies with the requirements of Chapter 157, Flood Damage Prevention, if the project takes place in an area of special flood hazard; and

[4] The property owner complies with the applicable requirements of § 270-217 regarding the deposit or removal of fill or related products;

(6) Motorized recreational activities, except for:

(a) Use of motorized golf carts on golf courses existing as of the effective date of this section; and

(b) Use of motorized wheelchairs and scooters for the mobility-impaired;

(7) Shelters and blinds associated with hunting, recreational, educational and agricultural activities that are erected on or after the effective date of this section, except for temporary blinds that are in place for a period of no more than 180 days within a 12-month period on any parcel;

(8) Installation of utility lines and connections, such as water, sewer, electric, gas, telephone and cable lines and connections, on or after the effective date of this section, except the following shall be allowed:

(a) Installation of water wells and connections;

(b) Utility lines and connections for one-family and two-family dwellings;

(c) For uses and structures other than one-family and two-family dwellings, the installation of utility lines and connections is permitted only upon receipt of a special permit for same from the Planning Board in accordance with the procedures set forth in this chapter; and

(d) Repair and replacement of utility lines and connections;

(9) Tree cutting and disturbance of vegetation, except for:

(a) Selection tree cutting that maintains the protective function of the setback zone;

(b) Disturbance of existing vegetation to:

[1] Remove diseased, damaged or dead trees or shrubs or non-native invasive vegetation;

[2] Remove vegetation in a proactive effort to minimize the spread of disease; or

[3] Remove vegetation that presents safety or health hazards;

(c) Pruning of trees and vegetation;

(d) Restoration of riparian habitat and native vegetation; and

(e) Development of a narrow permeable (non-paved) footpath within the stream setback;

(10) Deicing of impervious and pervious surfaces, if more than the minimal amount of deicing material necessary to maintain vehicular and pedestrian safety is applied to the surface;

(11) Dumping or disposal of snow or ice collected from roadways or parking lots located wholly outside a stream setback zone;

(12) Installation of outlets from stormwater management practices and footer drains on or after the effective date of this section, except where sheet flow or infiltration is not practical and areas disturbed by such outlets are revegetated;

(13) Application of herbicides, pesticides, fertilizers or other chemicals, except the following applications are allowed:

(a) The selective application of herbicides to control non-native invasive species, and the selective application of pesticides to protect native plant species; and

(b) Application of herbicides, pesticides, fertilizers or other chemicals for the protection of human or animal safety, or for agricultural purposes for farms, in accordance with product label instructions and pursuant to applicable New York State laws and regulations;

(14) Mining or removal of soil, sand and gravel, and quarrying of raw materials, except where the New York State Department of Environmental Conservation has issued a permit expressly allowing such activities on the parcel;

(15) Outdoor waste storage and outdoor deposition of waste, including but not limited to garbage, refuse, recyclable materials, tires, rubble, discarded motor vehicles, discarded appliances and other bulk items, except:

(a) Ordinary household trash temporarily stored in a covered garbage can;

(b) Ordinary household recyclables set out at curbside for pickup; and

(c) Composting of residential materials.

(16) Outdoor storage or disposal of hazardous or noxious materials;

(17) Storage or disposal of manure;

(18) Installation of septic tanks or septic drain fields on or after the effective date of this section.

F. Prohibited activities in stream setback zone 1 and streams.

Unless otherwise permitted by Subsection H, the following structures and uses are prohibited in Stream Setback Zone 1 and in streams:

(1) All uses and activities prohibited by Subsection E above;

(2) Mowing and maintenance of lawns and sports fields, landscaping and gardening, where such activity begins on or after the effective date of this section, or such activity begins before and exists as of the effective date of this section and thereafter ceases for a period of more than one year;

(3) Grazing of livestock, where grazing begins on or after the effective date of this section, or grazing begins before and exists as of the effective date of this section and thereafter ceases for a period of more than one year;

(4) Composting of residential materials, unless they are contained in such a way that does not allow leaching;

(5) Construction of stormwater ponds and wetlands;

(6) Installation of water wells and connections;

(7) Haying, and growing of crops for any purpose, where such activity begins on or after the effective date of this section, or such activity begins before and exists as of the effective date of this section and thereafter ceases for a period of more than one year;

(8) Dredging, deepening, widening, straightening or any such alteration of the beds and banks of natural streams, except where:

(a) The New York State Department of Environmental Conservation has issued a permit expressly allowing such activities on the parcel; or

(b) Dredging is performed to maintain dam safety or operational effectiveness;

(9) Stream bank stabilization, unless all of the following conditions are met:

(a) The property owner consults with either a qualified professional engineer or the Tompkins County Soil and Water Conservation District about the stabilization project;

(b) The Town approves the relevant Stormwater Pollution Prevention Plan (SWPPP) required by Chapter 228, or a Simple Erosion and Sedimentation Control Plan if no SWPPP is required by Chapter 228;

(c) The property owner complies with the requirements of Chapter 157, Flood Damage Prevention, if the project takes place in an area of special flood hazard; and

(d) The property owner complies with the applicable requirements of § 270-217 regarding the deposit or removal of fill or related products;

(10) Construction of the following types of crossings on or after the effective date of this section:

(a) Crossings of streams through the stream setback by driveways, roadways, vehicles, pathways, bridges, storm sewers, sewer and/or water lines, and other utility lines, except for crossings that are built substantially perpendicular to stream flow, are designed to minimize downstream siltation and negative impacts to the stream and setback zones, and, in the case of utility line crossings, the utility lines are otherwise permitted by Subsections E(8) and F(1);

(b) Livestock stream crossings, except for crossings that are constructed and maintained to minimize negative impacts to the stream and setback zones with fencing substantially perpendicular and through the setback to direct animal movement.

G. Prior nonconforming uses and activities.

The provisions of § 270-204 relating to nonconforming uses of land shall not apply to uses and activities prohibited by Subsections E and F above.

H. Transition provisions.

(1) The prohibitions in Subsections D(12), E and F above against construction of new buildings and structures in setback zones shall not apply to the following buildings and structures:

(a) For buildings and structures that require site plan approval, subdivision approval, special approval, and/or special permit, the prohibitions shall not apply if completed applications for all necessary approvals for site plan, subdivision, special approval, and special permit have been submitted before the effective date of this section, provided such applications are thereafter diligently prosecuted to completion; and

(b) For buildings and structures that do not require site plan approval, subdivision approval, special approval, or special permit, the prohibitions shall not apply if all necessary building permits and fill permits have been issued before the effective date of this section.

(2) For the purposes of this section only, an application shall be deemed "completed" if it contains all required information, materials, initial SEQR forms and fees normally and reasonably required by the appropriate Town official(s) (e.g., Director of Planning with respect to subdivision, special permit, and site plan approval applications, and the Director of Code Enforcement with respect to special approval applications) to commence the review process by the appropriate Town board. An application shall be deemed "diligently prosecuted to conclusion" if the applicant promptly responds to any inquiries and promptly supplies any additional information reasonably required by the reviewing Town officials and/or boards, appears at all required scheduled public hearings, and otherwise cooperates so as to permit and enable the appropriate Town boards to adequately and completely review the application and render a decision on same within a reasonable period of time of its submission, and in any event within 12 months of its submission.

I. Variances.

The Zoning Board of Appeals may grant variances from the requirements of this section pursuant to § 270-235 of this chapter. A variance from the requirements of this section is an area variance, provided any use proposed to be located within the stream setback is a permitted use in the relevant zoning district. In addition to the items required by the Town for all variance applications, the applicant shall provide a proposed mitigation plan that offsets the effects of the proposed encroachment into the stream setback, if such a plan is possible for the parcel that is the subject of the variance application. Where a Planning Board approval (such

as site plan, subdivision or special permit approval) is also sought pursuant to the provisions of this chapter, the Planning Board shall make a recommendation to the Zoning Board of Appeals on any proposed mitigation plan that is submitted to the Zoning Board of Appeals in connection with a variance application. Failure of the Planning Board to make a recommendation before the Zoning Board of Appeals must act as required by law shall not preclude action by the Zoning Board of Appeals nor otherwise affect the validity of any actions taken by the Zoning Board of Appeals."

Section 3. If any provision of this local law is found invalid by any court of competent jurisdiction, such invalidity shall not affect any other provisions of this local law, which shall remain in full force and effect.

Section 4. This local law shall take effect immediately upon filing with the New York Secretary of State.

APPENDIX A
Section 270-219.1 of Town of Ithaca Code
Stream Setback Law

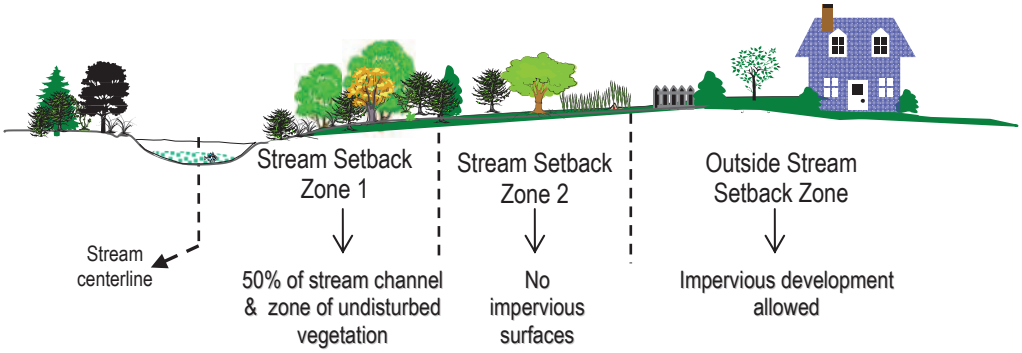


Figure 1a – Stream Setback Zones 1 & 2 for <u>small streams</u> requiring measurement from the stream centerline.

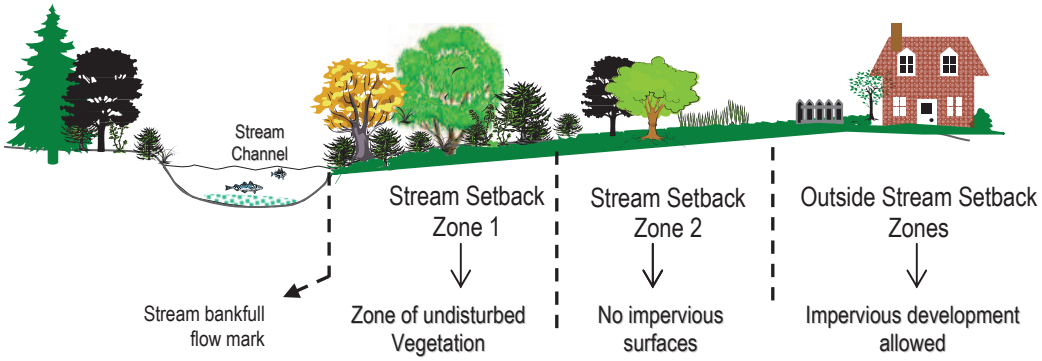


Figure 1b – Stream Setback Zones 1 & 2 for <u>larger streams</u> requiring measurement from the bankfull flow mark.

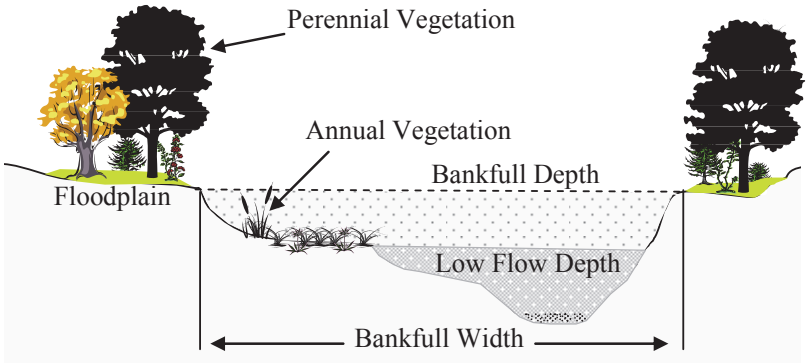


Figure 2 – Bankfull Depth Illustration

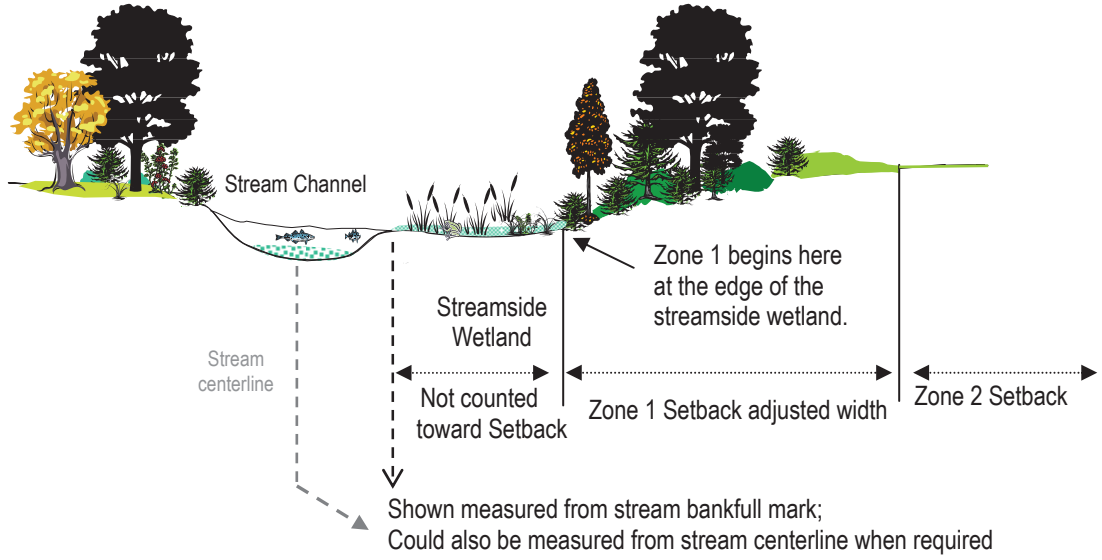


Figure 3 – Stream Setback adjustment for streamside wetland

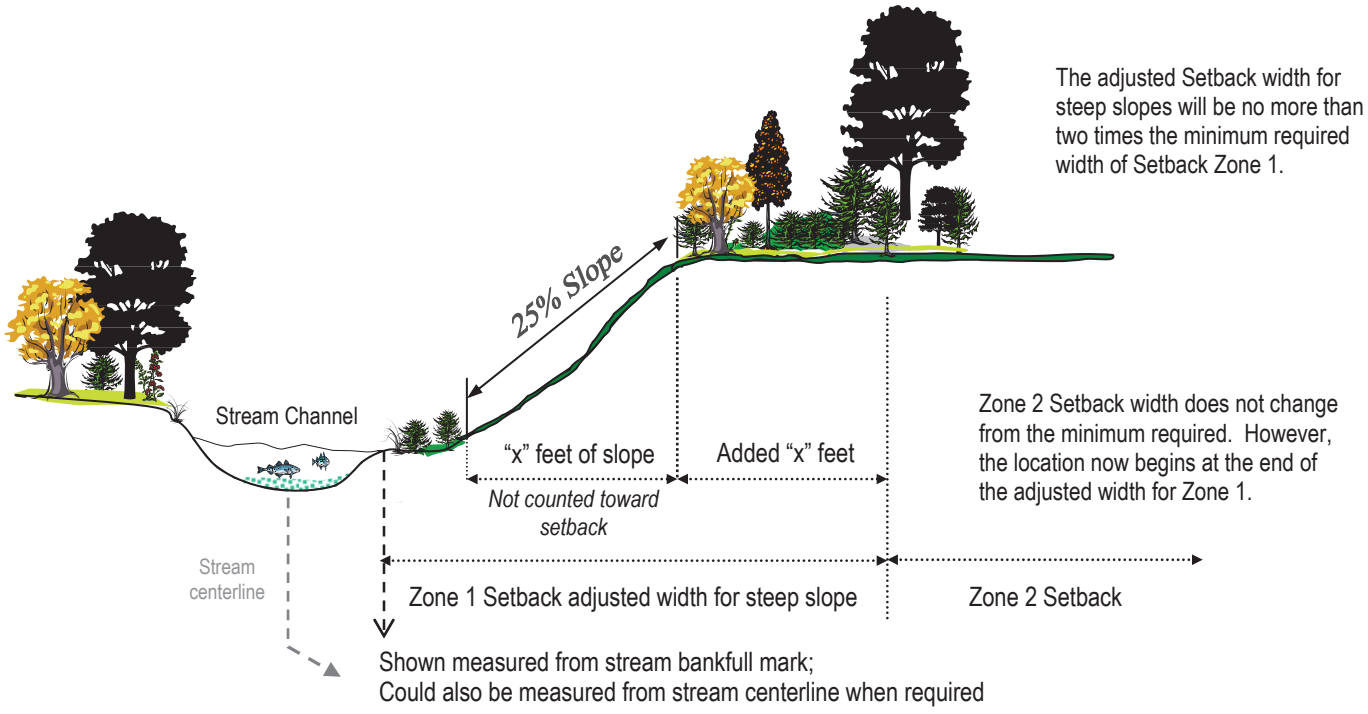


Figure 4 – Stream Setback adjustment for 25% slope or greater

Sediment and Erosion Control Law With Riparian Protection

History: Adopted by the Town Board of the Town of Geneseo 4-11-2002 by L.L. No. 2-2002. Proposed revisions noted in *italics*.

54-1

This chapter shall be known as the "Erosion and Sediment Control Law of the Town of Geneseo."

54-2. Findings of fact.

The town board of the town of Geneseo finds that uncontrolled drainage and runoff associated with land development has a significant impact upon the health, safety and welfare of the community by potentially causing substantial recreational, aesthetic, environmental and economic losses resulting from adverse impacts on community waters specifically:

A. Construction requiring land clearing and the alteration of natural topography tends to increase erosion;
B. Storm water runoff can carry pollutants into receiving water bodies, degrading water quality'
C. Improper design and construction of erosion control devices can increase the velocity of runoff thereby increasing stream bank erosion and sedimentation;
D. Improper design and construction of erosion control devices can increase the velocity of runoff thereby increasing stream bank erosion and sedimentation;
E. Siltation of water bodies resulting from increased water, interferes with navigation , and harms flora and fauna;
F. Development as defined in this chapter and activities associated with development, as well as land grading and earth moving can have a significant and potentially adverse impact on the environment.
G. Riparian areas require protection to stabilize banks, limit erosion, reduce flood size flows and filter and settle out runoff pollutants.

54-3. Purpose

The Purpose of this local regulation is to safeguard persons, protect property, prevent damage to the environment of the Town of Geneseo, including the Village of Geneseo and Conesus Lake, as well as all bodies of water or watercourses in the Town of Geneseo, and promote the public welfare by guiding and regulating the design, construction, and maintenance of any development or other activity which disturbs or breaks the topsoil or results in the movement of earth on land in the Town of Geneseo.

54- 4. Statutory authority

In accordance with Article 10 of the Municipal Home Rule Law of the State of New York, the Town Board has the authority to enact local laws for the purpose of promoting the health, safety or general welfare of the Town.

54-5. Conformance required.

All site preparation, construction and development activities as defined hereinafter occurring in the Town of Geneseo shall be in conformance with the provisions set forth herein.

54-6. Word Usage.

A. Unless specifically defined below, words or phrases shall be interpreted so as to give them the meaning s they have in common usage and to give this chapter its most effective application. Words used in the singular shall include the plural and the plural and the singular; words used in the present tense shall include the future tense. The word "shall" connotes mandatory and not discretionary; the word "may" is permissive.

B. As used in this chapter, the following terms shall have the meanings indicated:

AGRICULTURAL OPERATONS (AS DEFINED IN ARTICLE 25AA OF THE NYS AGRICULTURE AND MARKETS LAW) – Land and on-farm buildings, equipment and practices which contribute to the production, preparation and marketing of crops, livestock and livestock products as a commercial enterprise.

CERTIFICATE OF COMPLIANCE ---- A written certificate that is issued to the applicant by the Code Enforcement Officer after all final grading and seeding is completed and all permanent erosion control measures are established as specified in the erosion control permit and the satisfaction of the Code Enforcement Officer.

CERTIFIED PROFESSIONAL ---- A licensed architect, a licensed engineer, a licensed landscape architect, or an International Erosion Control Association (IECA) certified professional in erosion and sediment control.

DEVELOP ---- Any physical alteration of a site or area, including, but not limited to, providing access to a site, clearing of vegetation, grading, earth moving, providing utilities and other services such as parking facilities, stormwater management and erosion control systems, and sewage disposal systems, altering landforms, or construction of a structure on the land.

EROSION ---- The removal of soil particles by the action of the water, wind, ice or other geological agents.

EROSION CONTROL PLAN ---- A document prepared by a certified professional that identifies predevelopment and post development conditions on a site and outlines the erosion control measures that will be used on a site. This document is required for projects exposing more than 10,000 square feet of soil.

FLOOD PLAIN ---- For a given flood event, that area of land temporarily covered by water which adjoins a watercourse.

GARDEN ---- A plot of ground where herbs, fruits, flowers, or vegetables are cultivated, excluding agricultural operations as defined herein.

GABION ---- A galvanized wire basket filled with stone used for structural purposes. When they are fastened together, they are used as retaining walls, slope protection and similar structures.

GRADING ---- Excavation or fill of material, including the resulting conditions thereof.

NATURAL DRAINAGE CHANNEL ---- A swale, watercourse in a gully, ora n unprotected stream.

PERFORMANCE STANDARDS ---- The set of standards outlining the erosion control requirements for construction and soil disturbing activities.

PERIMETER CONTROL ---- A barrier that prevents sediment from leaving a site either by filtering sediment laden runoff, or diverting it to a sediment trap or basin.

PHASING ---- Clearing a parcel of land in distinct phases, with the stabilization of each phase occurring before the clearing of the next.

RIPARIAN AREA ---- Areas that extend beyond stream banks and are at least periodically influenced by flooding. When managed properly riparian areas help to stabilize banks, limit erosion, reduce flood size flows and filter and settle out runoff pollutants.

RIPARIAN SETBACK ---- Distance lines set back from each bank of a stream to protect the riparian area and stream from impacts of development, and streamside residents from the impacts of flooding and land loss from erosion.

RIPRAP ---- A combination of large stone, cobbles and boulders used to line channels, stabilize stream banks, and reduce run off velocities.

STABILIZATION ---- The use of practices that prevent exposed soil from eroding.

START OF CONSTRUCTION ---- The first land disturbing activity associated with a development, including land preparation such as clearing, grading and filling; installation of streets, driveways, parking areas and walkways; excavation for basements, footings, piers or foundations; erection of temporary forms; and installation of accessory buildings such as garages.

STEEP SLOPE ---- Grade change of 15% or more.

STOP-WORK ORDER ---- A written order issued by the Code Enforcement Officer to cease and desist all activity and development on a site until such time as the violation is corrected.

STREAM ---- A surface watercourse with a well-defined bed and bank either natural or artificial which confines and conducts continuous or periodic flowing water in such a way that terrestrial vegetation cannot establish roots within the channel.

STREAM CORRIDOR ---- The landscape features on both sides of a stream, including soils, slope and vegetation, whose alteration can directly impact the stream's physical characteristics and biological properties.

SWALE ---- A natural or man-made depression or wide shallow ditch used to temporarily route or filter runoff.

UTILITIES ---- Public and private services, including but not limited to, public water and sewer connection, private wells and septic systems, and telephone, natural gas, electric, and cable television services.

WATERSHED ---- A region or area bounded by a greater elevation and draining ultimately to a particular body of water.

54-7. Applicability of provisions.

A. This chapter shall apply to all development, as defined herein, which involves the uncovering, exposure or disturbance of 500 or more square feet of soil. Excepted herefrom are agricultural operations, whether or not within an agricultural district, as defined in Article 25AA of the New York State Agriculture and Market Laws, and private gardens.
B. No person, corporation, entity, organization, or public agency shall initiate any development activities, land clearing, land grading, or earthmoving activities (hereinafter also collectively referred to as "land disturbance activity") unless in conformity with the regulations of this chapter.
C. No person, agency, corporation or other entity shall commence any development or land disturbing activities without obtaining n erosion control permit issued by the Town Enforcement Officer.
D. No person shall be granted an erosion control permit for land disturbing activity that would require the disturbance or uncovering of 10,000 or more square feet without the approval of an erosion control plan by the Town Planning board.
E. No person shall develop land within any riparian area using riparian setbacks as defined below:
    (1) 300 feet on each side of all streams draining an area greater than 300 sq. mi.
    (2) 100 feet on each side of all streams draining an area greater than 20 sq miles up to 300 sq. mi.
    (3) 75 feet on each side of all streams draining an area greater than 0.5 sq mi (320 Acres) up to 20 sq mi.
    (4) 50 feet on each side of all streams draining an area greater than 0.05 sq mi.(32 acres) up to 0.5 sq mi (320 Acres).

(5) 30 feet on each side of all streams draining an area less that 0.05 sq mi. (32 acres)
(6) If the 100-year floodplain is wider that the designated setback, the setback width will increase to meet the 100-year floodplain.

F. Exemptions. The following activities are exempt from the erosion control plan requirement but must comply with the performance standards listed in * 54-11 and have the applicable erosion control measures approved by the Code Enforcement Officer:
(1) Development or land disturbing activities involving at least 500 square feet of soil, but less than 10,000 square feet of soil;
(2) Development of one single family residential structure or one duple unit and accessory structures and utilities thereto;
(3) The installation of a lawn for one single-family residential structure; and
(4) The installation of a driveway for one single-family residential structure.
(5) The installation of all septic systems which are subject to the review, inspection and/or approval of the Livingston County Department of Health. **[Amended 8-8-2002 by L.L. No. 4-2002]**

54-8. Erosion control permit; inspections; certificate of compliance; certificate of occupancy.

A. Erosion control permit.

(1) An applicant shall submit an erosion control permit application to the Code Enforcement Officer, who shall inform the applicant within seven days if the application is incomplete.
(2) The Code Enforcement Officer shall refer all complete erosion control permit applications for lands within the Conesus Lake Watershed District to the Conesus Lake Watershed Inspector within seven days of receipt for review and comment.
(a) The Watershed Inspector shall have 14 days to comment on the application and return those comments to the Code Enforcement Officer; and
(b) The Code Enforcement Officer shall consider comments from the Watershed Inspector if the comments are received within this period of time.
(3) If an erosion control plan is not required, the Code Enforcement Officer shall review the application to determine whether the proposed erosion control measures comply with the performance standards outlined in * 54-11 of this chapter and approve or deny the erosion control permit based on that review. A preconstruction meeting with the Code Enforcement Officer, the Conesus Lake Watershed Inspector, and the applicant may be required prior to the issuance of an erosion control permit.
(4) If an erosion control plan is not required, an erosion control permit must be approved or denied within 60 days of receipt of a complete erosion control application by the Code Enforcement Officer.
(5) Issuance of an erosion control permit does not authorize development of the site unless and until all other applicable permits or approvals, including a building permit are issued pursuant to federal, state and local law.

B. Inspections. The applicant shall arrange with the Code Enforcement Officer for scheduling inspections of the site. The Code Enforcement Officer shall inspect the work and either approve it or notify the applicant in writing of any failure to comply with the requirements of the approved erosion control plan and/ or erosion control permit. The Code Enforcement Officer and the Watershed Inspector may conduct inspection at reasonable times to ensure effective control of erosion and sedimentation during all phases of construction. The Code Enforcement Officer ay have the Town Engineer consulted for an inspection, the applicant shall be responsible for the cost of such consultation, pursuant to Article VI of Chapter 106 of the Code of the Town of Geneseo.
C. A certificate of compliance shall be issued by the Code Enforcement Officer after all final grading and seeding are completed and all permanent erosion control measures are established as specified in the erosion control permit and to the satisfaction of the Code Enforcement Officer.
D. A Permanent certificate of occupancy shall not be issued until a certificate of compliance is issued for the satisfactory installation and/ or completion of erosion control measures.

54-9. Contents of erosion control plan.

A. Erosion control plans shall be prepared by a certified professional. Plans must contain the information set froth in this section to enable the Town Planning Board to determine whether the plan will prevent the development from adversely affecting the water quality of the surface water due to erosion. In making this determination, plans shall be evaluated pursuant to the performance standards in * 54-11 hereof, and must therefore contain sufficient information to permit such evaluation.
B. The erosion control plan shall contain the name, address, and telephone number of the owner, contractor, and developer. In addition, the legal description of the property shall be provided, and its location with reference to such landmarks as major water bodies, adjoining roads, railroads, subdivisions, or towns shall be clearly identified on a map.
C. The structure and content of the erosion control plan shall be as follows:
    (1) Background information.
        (a) Project description which shall include, but not be limited to, a sequence of construction of the development site, including stripping and clearing, rough grading, construction of utilities, infrastructure, and buildings, and final grading and landscaping. Sequencing shall identify the expected date on which clearing will begin, the estimated duration of exposure of cleared areas, and the sequence of clearing, installation of temporary erosion and sediment measures, and establishment of permanent vegetation.
        (b) Existing (predevelopment) conditions, including but not limited to, an identification of soils, slopes, and existing vegetative cover and drainage conditions.
        (c) Proposed future (development) conditions, including, but not limited to, an identification of drainage conditions and changes in vegetative cover anticipated to result from the proposed activity.

    (2) Erosion and sediment control.

(a) Identification of temporary erosion and sediment control measures, including, but not limited to, seeding mixtures and rates, types of sod, method of seedbed preparation, expected seeding dates, and type and quantity of mulching for both temporary and permanent vegetative control measures.
(b) Identification of permanent erosion and sediment control measures.

(3) Implementation schedule and maintenance, including, but not limited to, easements and estimates of the cost of maintenance.

54-10. Erosion control plan review process

A. The applicant shall submit a complete erosion control plan to the Code Enforcement Officer.
B. The Code Enforcement Officer shall inform the applicant in writing within 14 days if the erosion control plan is incomplete. The erosion control plan shall automatically be deemed complete if the Code Enforcement Officer does not inform the applicant within 14 days.
C. When the erosion control plan is determined to be complete, the Code enforcement officer shall then schedule it for review at the next available Town Planning Board meeting, to be held not later than 31 days after the erosion control plan is determined to be complete.
D. All erosion control plans for development in the Conesus Lake Watershed must be referred to the Conesus Lake Watershed Inspector for review and comment within five days of Code Enforcement Officer receipt of the plan. Comments received from the Conesus Lake Watershed Inspector prior to the Town Planning Board meeting will be considered by the Code Enforcement Officer and the Town Planning Board.
E. The applicant shall receive written notice of the time and place of the Town Planning Board meeting where the erosion control plan will be reviewed no less than five days prior to the Town Planning Board meeting.
F. An erosion control plan shall also be reviewed by the Town Engineer or any other certified professional retained by the Town. The Engineer or certified professional may then recommend approval or disapproval of the plan to the Town Planning Board prior to the scheduled Planning Board meeting where the plan will be discussed. A recommendation for approval or disapproval of the plan must be based on conformance to the performance standards listed in 55-11.
G. The Town Planning Board shall have the authority to impose reasonable condition to ensure that the objectives of this chapter are met.
H. The Town Planning Board shall approve or disapprove the erosion control plan. Approval or disapproval of the plan must be based on conformance to the performance standards listed in 54-11, so as to protect the water quality of Conesus Lake, and should clearly identify why it does not, in the instance of a disapproval, conform to the performance standards.
I. The Town Planning Board shall report the decision to the Code Enforcement Officer and the applicant within 10 days of approval or disapproval for the plan.

J. If the erosion control plan is approved, the Code Enforcement Officer shall issue the applicant an erosion control permit within 10 days of receipt of the Town Planning Board decision.

54-11. Performance Standards

The following performance standards must be applied to all land disturbing activities described in this chapter, including those exempted under 54-5 hereof, as well as those for which a permit is required hereunder:

A. Existing vegetation on a project sites hall be retained and protected as much as possible to minimize soil loss from the project site.
B. Sediment control practices/measures shall be designed to protect the natural character of water bodies on-site as well as off-site. The practices must be in place before the start of land disturbance activities until the establishment of permanent stabilization.
    (1) The off-site impacts of erosion and sedimentation from the development site shall not be any grater during and following land disturbance activities than under predevelopment conditions.
    (2) Water in stream reaches on-site and downstream of construction areas shall not have substantial visible contrast relative to color, taste, odor, turbidity and sediment deposition from the water in reaches upstream of the construction area.
    (3) Sediment laden runoff shall not be allowed to enter any water body and result in deposition on the bottom of the water body, degrade its natural biological function, or be deleterious to the classified usage of the water.
C. All erosion and sediment control measures shall be constructed prior to beginning any land disturbance activities. All runoff from disturbed areas shall be directed to sediment control devices. These devices shall not be removed until the disturbed land areas are stabilized.
D. Specific guidance.
    (1) Exposure restrictions. No more than 10 acres of unprotected soil shall be exposed at any one time. Previous earthwork shall be stabilized in accord with approved design standards and specifications referenced in Subsection D(8) before additional area is exposed.
    (2) Grading. Perimeter grading shall blend with adjoining properties.
    (3) Vegetative protection. Where protection of trees and/or other vegetation is required, the location shall be shown on the erosion control plan or on the drawings for the proposed development project. The method of protecting vegetation during the construction shall conform to the design specifications reference in Subsection D(8).
    (4) Drainage control.
        (a) Surface runoff that is relatively clean and sediment free shall be diverted or otherwise prevented from flowing through areas of construction activity on the project site. (This will greatly reduce sediment loading in surface runoff.)
        (b) A fill associated with an approved temporary sediment control structure or permanent stormwater management structure shall not be created which

causes water to pond off0-ste on adjacent property, without first having obtained ownership or permanent easement for such use form the owner of the off-site or adjacent property.

(c) Natural drainage channels shall not be altered. Pursuant to Article 15 of the Environmental Conservation Law, a protected stream and banks thereof shall not be altered or relocated without the approval of the Department of Environmental Conservation.

(d) Runoff from any land disturbing activity shall not be discharged or have the potential to be discharged off-site or into storm drains or into water courses unless such discharge is directed through a properly designed, installed and maintained structure, such as a sediment trap, rot retain sediment on-site. Accumulated sediment shall be removed when it takes up 60% of the storage capacity of the sediment retention structure. (See Subsection D98 below for design specifications.)

(e) For finished grading, adequate gradients shall be provided so as to prevent water from standing on the surface of lawns for more than 24 hours after the end of a rainfall, except in a swale flow area which may drain as long as 48 hours after the end of rainfall.

(f) Permanent swales or other point of concentrate water flow shall be stabilized. Biotechnical approaches using certain types of grasses, such as reed canary grass, are preferable to using sod, gabions and riprap where water quality enhancement is a high priority and the swale design allows. However, sod, gabions, or riprap may be used to stabilize swales where soils and gradient preclude the use of grasses. Use of grasses may require an erosion control matting as provided for in the design specification reference in Subsection D(8) below.

(g) Surface lows over cut and fill slopes shall be controlled as provided for in the design specification for vegetating waterways reference in Subsection D(8).

(5) Timing

(a) Except as noted below, all sites shall be seeded and mulched with erosion control materials, such as rye grass, straw mulch, jute, or excelsior (wood shavings), within 15 days of initial disturbance. Of construction has been suspended, or sections completed, areas shall be seeded immediately and stabilized with erosion control materials. Maintenance shall be performed as necessary to ensure continued stabilization.

(b) For active construction areas, such as borrow or stockpile areas roadway improvements and areas within 50 feet of a building under construction, a perimeter sediment control system consisting, for example, of silt fencing or hay bales, shall be installed and maintained to contain soil.

(c) On cut sides of roads, ditches shall be stabilized immediately with rock riprap or other non-erodable liners, where appropriate, vegetative measures such as sod. When seeding is approved, an anchor mulch shall be used and soil shall be limed and fertilized in accord with recommendations referenced in Subsection D(8).

(d) Permanent seeding shall optimally be undertaken in the spring from April 1 through June 15, and in late summer from August 1 to October 15. During the peak summer months an in the fall after October 15 when seeding is found to be impracticable, an appropriate mulch shall be applied. Permanent seeding may be undertaken during summer if plans provide for adequate watering of the seedbed.

(e) All slopes steeper than 15%, as well as basin or tap embankments, and perimeter dikes shall, upon completion, be stabilized with sod, seed and anchored straw mulch, or other approved stabilization measures. Areas outside of the perimeter sediment control system shall not be disturbed. Maintenance shall be performed as necessary to ensure continued stabilization.

(f) Temporary sediment trapping devices shall be removed within 30 calendar days following establishment of permanent stabilization in all contributory drainage areas. Stormwater management structures used temporarily for sediment control shall be made permanent within this time period as well. Accumulated sediments removed from temporary sediment traps or permanent stormwater management facilities shall be disposed in a manner so as not to erode and enter a water body.

(6) Stream corridor management. The bed and banks of all on-site and off-site streams which may be impacted by land clearing, grading, and construction activities shall be protected to prevent sedimentation, stream bank erosion, stream enlargement, or degradation or loss of fisheries habitat. Measures of protecting the bed and/or banks of a stream may include gabion baskets, riprap, log cribbing, or a vegetative measure. Whenever possible, vegetative stream bank stabilization practices, such are recommended over structural practices, such as riprap and gabion linings that may unnecessarily alter the existing stream ecosystem. Native species of vegetation shall be used for stream bank stabilization where practical. In undertaking stream bank stabilization activities for protected streams, the applicant shall comply with appropriate protection of water revisions in Article 15 of the Environmental Conservation Law of the State of New York.

(7) Maintenance.

(a) All points of construction ingress and egress shall be protected to prevent the deposition of materials onto traversed public thoroughfares either by installing and maintaining a stabilized construction entrance or by maintaining a vehicle wash area in a safe disposal area to wash vehicle shells and undercarriage. All materials deposited onto public thoroughfares shall be removed immediately. Proper precaution shall be taken to assure that the removal of materials deposited onto public thoroughfares will not enter catch basins, storm sewers or water bodies.

(b) Accumulated sediment shall be removed when 60% of the storage capacity of sediment retention structures is reached. All removed sediment shall be disposed of in a spoil area where it can be graded, mulched and seeded to prevent erosion and sedimentation.

(8) Design specifications. The designs, standards and specifications for controlling erosion and sedimentation found in the most recent version of the following publication are acceptable for use and shall be identified and shown in the erosion control plan: New York Guidelines for Urban Erosion and Sediment Control, Urban Soil Erosion and Sediment Control Committee.

54-12 Performance bond.

A. In order to ensure the full and faithful completion of all construction activities related to compliance with all conditions set forth by the Town Planning Board in its approval of the erosion control plan, the Town Planning Board may require the applicant and/or the applicant's contractor to provide, prior to construction, a performance bond, escrow account certification, or irrevocable letter of credit from an appropriate financial or surety institution which guarantees satisfactory completion of the project and names the Town as the beneficiary. The security shall be in an amount to be determined by the Town Planning Board based on submission of final design plans, with reference to actual construction costs.
B. Where erosion and sediment control facilities are to be operated and maintained by the applicant or by any person or entity that owns or manages a commercial or industrial facility, the applicant, prior to construction, may be required to provide the Town with a performance bond or an irrevocable letter of credit from an appropriate financial institution or noted surety to ensure proper operation and maintenance of all erosion control facilities for the life of the project.
C. The performance bond or letter of credit shall remain in force until the surety is released from liability by the Town.
D. Per annum interest on the performance bond or letter of credit shall be reinvested in the account until the surety is released from liability.
E. If the developer or owner fails to properly operate and maintain erosion and sediment control facilities, the Town may draw upon the account or notify the surety to cover the costs of proper operation and maintenance.

54-13 Enforcement.

A. Any development activity that is commenced without first being granted an erosion control permit, or which is conducted contrary to an approved erosion control plan, or contrary to the performance standards listed in *54-11 hereof may be issued a notice of violation and restrained by a stop-work order issued by the Code Enforcement Officer.
B. Service of a notice of violation shall be sufficient if directed to the owner, agent of the owner or contractor and left at his or her last known place of business or residence, if within the municipality; and if no place of business or residence can be found, then the notice shall be served by posting in a conspicuous place on the premises which is the subject of the violation.
C. A stop-work order shall also be issued on the project if any of the following conditions are not met during development of the land:

(1) There shall be no increase in turbidity that will cause a substantial visible contrast to natural conditions;
(2) There shall be no suspended, colloidal and settleable solids that will cause deposition or impair waters in the area for their best usages; and
(3) There shall be no residue from oil and floating substances, visible oil film, globules, or grease (6 NYCRR, Part 703, Surface Water and Groundwater Quality Standards and Groundwater Effluent Limitations).

D. Civil and criminal penalties. In addition to or as an alternative to any penalty provided herein or by law, any person who violates the provisions of this chapter shall be punished by a fine of not less than $200 per day nor more than $1,000 per day or by imprisonment for a period not to exceed 60 days, or both such fine and imprisonment. Such person shall be guilty of a separate offense for each day during which the violation occurs or continues.
E. Any violator may be required to restore land to its undisturbed condition. In the event that restoration is not undertaken within a reasonable time after notice, the Town may take necessary corrective action, the cost of which shall become a lien upon the property until paid.

54-14 Appeals

Any person aggrieved by the action of any official charged with the enforcement of this chapter, as the result of the disapproval or approval of an erosion control permit or an alleged failure by the Code Enforcement Officer to properly enforce the chapter in regard to a specific application, shall have the right to appeal the action to the Town Zoning Board of Appeals. The appeal shall be filed in writing within 20 days of the date of official transmittal of the final decision or determination to the applicant, shall state clearly the grounds on which the appeal is based, and shall be processed in the manner prescribed for hearing administrative appeals under state/local code provisions.

54-15 Variances.

The Town Zoning Board of Appeals may grant a written variance from any requirement of this chapter using the following criteria:

A. There are special circumstances applicable to the subject property or its intended use; and
B. The granting of the variance shall not result in:
(1) An increase or decrease in the rate or volume of surface water runoff;
(2) An adverse impact on a wetland, watercourse or water body;
(3) Degradation of water quality; or
(4) Otherwise impair attainment of the objectives of this chapter.

ARTICLE VI – OVERLAY DISTRICTS

Section 601. Effect of Overlay Districts.
Overlay Districts combine with and add to the regulations of the basic districts established in this Ordinance. All uses in any Overlay District require a Site Plan Review.

Section 602. Conservation Overlay Districts. The intent of the Conservation Overlay Districts is to protect fragile natural areas, including stream corridors and wetlands, where changes and/or development would be adverse to the environment, community values, public health, safety and general welfare of the Village, in accordance with the Village of Trumansburg Comprehensive Plan. The provisions of this section take precedence over any other zoning section, law or code to the extent that the provisions of this section are inconsistent with the other provisions.

Section 603. Site Plan Review in Conservation Overlay Districts.
Any Site Plan Review conducted within a Conservation Overlay District shall include, in addition to any other requirements of this ordinance, additional project review criteria and additional submission materials.

Section 604. Stream Corridor Conservation Overlay District. Section 723 of this Ordinance establishes minimum stream buffers for perennial and intermittent streams throughout the Village. Within the Stream Corridor Conservation Overlay District, additional requirements apply.

Section 604.1. Protection Requirements for Perennial Streams. All perennial streams shall require a riparian buffer and a setback area. All site plan applications, special permits, special approval and variance applications, building permit applications, and excavation or fill permit applications shall require the delineation of any applicable riparian buffers and setback areas. Prior to any soil-disturbing activity, the riparian buffer and setback area shall be clearly delineated on site and shall be undisturbed until the project is complete.

1. Riparian Buffer Established. The riparian buffer will begin at the top of the stream bank and extend a minimum of fifty (50) feet horizontally measured in a direction directly perpendicular to the stream bank in a horizontal plane. Should a steep slope or wetland exist within this riparian buffer the entirety of that area will be added to the measurement of the riparian buffer. In addition to those minimum requirements, Site Plan Review shall consider whether additional buffer width is appropriate along perennial streams within the Stream Corridor Conservation Overlay District to protect and promote:
   a. Habitat and Biodiversity, by providing terrestrial wildlife habitat and travel corridors, and food and habitat in aquatic ecosystems.
   b. Stream Stability, by attenuating flooding, stabilizing stream banks and preventing erosion of stream banks and streambeds.
   c. Water Quality, by removing pollutants and moderating temperatures.
   d. Financial Savings, by preventing property damage, reducing public investment and protecting public facilities from flooding or other hazards.

2. Riparian Buffer Restrictions. Riparian buffers shall maintain native vegetation in a natural state. Development may not modify or interrupt more than 10% of the entire riparian buffer area unless necessary for the protection of human health, utility usage, public infrastructure, or the betterment of the riparian corridor. Development within the riparian buffer is limited to:
   a. Benches or seating.
   b. Educational and scientific research.
   c. Flood control, stormwater management structures, and stream bank stabilization measures approved by the Tompkins County Soil and Water Conservation District, Natural Resource Conservation Service, Army Corps of Engineering, or NYS Department of Environmental Conservation.
   d. Maintenance of roadways or impervious surfaces existing at the time of the adoption of this provision.
   e. Stream crossings necessary to access the property by driveway, transportation route, or utility line which have minimal negative impacts on the stream and riparian buffer.
   f. Public water supply intake or public wastewater outfall structures.
   g. Public access and public recreational facilities that must be on the water including boat ramps, docks, foot trails leading directly to the stream, fishing platforms and overlooks.

h. Public sewer lines and/or other utility easements.
i. Non-paved recreational trails no wider than 10 feet that either provide access to the stream or are part of a continuous trail system running roughly parallel to the stream.
j. Temporary use of erosion control measures such as silt fencing.

3. Setback Area Established. The Setback Area will begin at the outward edge of the Riparian Buffer and extend an additional fifty (50) feet from the top of stream bank.

4. Setback Area Restrictions. Within the setback area development uses are restricted to the following:
   a. All development and uses permitted in the riparian buffer.
   b. Minor recreational structures and surfaces to allow passive recreation in the setback area such as decks, picnic tables, playground equipment, and small concrete slabs, the total area of which is not to exceed 200 square feet each and in aggregate occupy no more than 10% of the setback area.
   c. Fences, provided such structures do not impede floodwaters.
   d. Landscaping, mowing, decorative planting or improvements that do not encroach upon or impact the integrity of the riparian buffer.

Section 604.2. Submission Materials. In addition to any other materials required by this ordinance, the proposed site plan shall show the location of the top of banks of any perennial stream within fifty (50) feet of the property.

Section 604.3. Prohibited Activities. The following activities are explicitly prohibited within any riparian buffer or setback area:
a. Storage or placement of any hazardous materials.
b. Purposeful introduction of invasive vegetative species that reduce the persistence of native vegetation.
c. Waste storage, placement, or disposal, including but not limited to disposal and dumping of snow and ice, recyclable materials, manure, hazardous or noxious chemicals, inoperative automobiles or appliance structures, and other abandoned materials.
d. Mining or removal of soil, sand and gravel, and quarrying of raw materials.
e. Dredging, deepening, widening, straightening or any such alteration of the beds and banks of natural streams except where the New York State Department of Environmental Conservation has issued a permit expressly allowing such activities.
f. Application of herbicide, pesticides, fertilizers, or other chemicals.
g. Parking of motorized vehicles, except as permitted as a Special Use by the Board of Appeals.

Section 604.4. Exemptions. The following specific activities are exempt from the requirements of the Stream Corridor Conservation Overlay District.
a. This section shall not apply to agricultural land use activity existing as of the effective date of this ordinance.
b. Work consisting of the repair or maintenance of any lawful use of land that is approved for such use on or before the effective date of this ordinance.

605. Wetland Conservation Overlay District.

Section 605.1. Buffer Requirement.

1. Buffer Required. A minimum setback of 100 feet shall be required from the delineated boundaries of all wetlands of two acres or more within the Wetland Conservation Overlay District. The Planning Board may, in reviewing any site plan within the Wetland Overlay District, require greater setbacks.

2. Exempt activities. The following activities shall be permitted within a Wetland Overlay District without a Site Plan Review provided they do not require structures, grading, fill, draining, or dredging:
   a. Normal ground maintenance including mowing, trimming of vegetation.
   b. Repair of existing decorative landscaping and planting native species.
   c. Repair of existing walkways, walls, and driveways.

d. Public health activities, in emergencies only, of the County Department of Health and/or New York State Department of Health.
e. Operation of existing dams and water control devices.

3. Prohibited activities. The following activities are explicitly prohibited in both the setback area.
   a. Storage or placement of any hazardous materials.
   b. Purposeful introduction of invasive vegetative species that reduce the persistence of native vegetation.
   c. Waste storage, placement, or disposal, including but not limited to disposal and dumping of snow and ice, recyclable materials, manure, hazardous or noxious chemicals, used automobiles or appliance structures, and other abandoned materials.
   d. Mining or removal of soil, sand and gravel, and quarrying of raw materials.
   e. Alteration of wetlands except where the New York State Department of Environmental Conservation or the U.S. Army Corps of Engineers has issued a permit expressly allowing such activities.
   f. Application of herbicide, pesticides, fertilizers, or other chemicals.
   g. Parking of motorized vehicles, except as permitted as a Special Use by the Board of Appeals.

Section 605.2. Project Review Criteria. Site Plan Review within the Wetland Conservation Overlay District shall consider the impact of any proposed project on:

1. The ability of the wetland to filter harmful toxins, nutrients, and sediment from surface and stormwater runoff.
2. The ability of the wetland to store floodwaters and reducing the magnitude of flood events.
3. The ability of the wetland to provide valuable habitat for a diverse array of flora and fauna, including any existing rare, threatened, or endangered species.
4. The ability of the wetland to maintain surface-water flow during dry periods.
5. The impact of any excessive siltation resulting from surface runoff from construction sites, road, bridge, and pipeline construction and lack of erosion control on steep slopes.
6. The impact of pollution by road salt and chemical pollution from parking lots and treated lawns.
7. The impact of pollution by garbage, litter, and refuse.
8. The impact of a reduction in the flow of watercourses due to destruction of wetlands.

Section 605.3. Submission Materials. In addition to any other materials required by this ordinance, the proposed site plan shall show the boundaries of any wetland as determined by field investigation. The Planning Board may require flagging and subsequent survey by a licensed land surveyor. The Planning Board may consult and/or may require the applicants to consult with approved biologists, hydrologists, soil scientists, ecologists, botanists, legal counsel, engineers, or other experts necessary to make this determination.

Section 719. Extraction of Natural Products. In any district, the removal of sod, loam, sand, gravel or quarried stone for sale, except when incidental to, or in connection with, the construction of a building shall be prohibited.

Section 720. Access to Business or Manufacturing Use. No driveway or other means of access for vehicles, other than a public street, shall be maintained or used in any residence district for the servicing of a business or manufacturing use located in a commercial or industrial district.

Section 721. Gas Stations. No gasoline or oil pump, no oiling or greasing mechanism and no other service appliance installed in connection with any gasoline sales station or public garage shall be within thirty (30) feet of any street right-of-way or within fifty (50) feet of any residential zoning district.

Section 722. Swimming Pools. All swimming pools shall be constructed and installed in accordance with the requirements of the New York State Uniform Fire Prevention and Building Code and require a building permit. Swimming pools shall meet the setback requirements for accessory structures. The sides of pools must be firm and not able to be bent or lowered by body weight or ladders or other point of entry equipment.

Section 723. Stream Buffers. This section is intended to promote the prevention of sediment, nutrient and pollutant loads from entering streams by maintaining stream buffers from the top of stream bank.

Section 723.1. Protection Requirements for Perennial and Intermittent Streams. All perennial and intermittent streams shall require a riparian buffer with a total width of fifty (50) feet from the top of stream bank. All site plan applications, special permits, special approval and variance applications, building permit applications, and excavation or fill permit applications shall require the delineation of any applicable riparian buffers. Prior to any soil-disturbing activity, the riparian buffer shall be clearly delineated on site and shall be undisturbed until the project is complete.

Section 723.2. Riparian Buffer. The riparian buffer will begin at the top of the stream bank and extend a minimum of fifty (50) feet horizontally measured in a direction directly perpendicular to the stream bank in a horizontal plane. Should a steep slope or wetland exist within this riparian buffer the entirety of that area will be added to the measurement of the riparian buffer. Riparian buffers shall maintain native vegetation in a natural state. Development may not modify or interrupt more than 10% of the entire riparian buffer area unless necessary for the protection of human health, utility usage, public infrastructure, or the betterment of the riparian corridor. Development within the riparian buffer is limited to:

a. Benches or seating.
b. Educational and scientific research.
c. Flood control, stormwater management structures, and stream bank stabilization measures approved by the Tompkins County Soil and Water Conservation District, Natural Resource Conservation Service, Army Corps of Engineering, or NYS Department of Environmental Conservation.
d. Maintenance of roadways or impervious surfaces existing at the time of the adoption of this provision.
e. Stream crossings necessary to access the property by driveway, transportation route, or utility line which have minimal negative impacts to the stream and riparian buffer.
f. Public water supply intake or public wastewater outfall structures.
g. Public access and public recreational facilities that must be on the water including boat ramps, docks, foot trails leading directly to the stream, fishing platforms and overlooks.
h. Public sewer lines and/or other utility easements.
i. Non-paved recreational trails no wider than 10 feet that either provide access to the stream or are part of a continuous trail system running roughly parallel to the stream.
j. Temporary use of erosion control measures such as silt fencing.

Section 723.3. Exemptions. The following specific activities are exempt from the requirements of this section.

a. This section shall not apply to agricultural land use activity existing as of the effective date of this ordinance.
b. Work consisting of the repair or maintenance of any lawful use of land that is approved for such use on or before the effective date of this ordinance.

Section 723.4. Prohibited Activities. The following activities are explicitly prohibited in the riparian buffer.

a. Storage or placement of any hazardous materials.
b. Purposeful introduction of invasive vegetative species that reduce the persistence of native vegetation.
c. Waste storage, placement, or disposal, including but not limited to disposal and dumping of snow and ice, recyclable materials, manure, hazardous or noxious chemicals, used automobiles or appliance structures, and other abandoned materials.
d. Mining or removal of soil, sand and gravel, and quarrying of raw materials.
e. Dredging, deepening, widening, straightening or any such alteration of the beds and banks of natural streams except where the New York State Department of Environmental Conservation has issued a permit expressly allowing such activities.
f. Application of herbicide, pesticides, fertilizers, or other chemicals.
g. Parking of motorized vehicles, except as permitted as a Special Exception by the Board of Appeals.

Section 724. Private Roads. Any private road serving more than one lot or more than two buildings shall be constructed to meet Village specifications for right-of-way, grade and cross section, as approved by the Village Superintendent of Public Works or Village Engineer.

Appendix M

Stormwater Management,

Sediment and Erosion Control Model Ordinances

Sample Local Law for Stormwater Management and Erosion & Sediment Control (NYS DEC)

Erosion & Sediment Control with Riparian Protections (Town of Geneseo, NY)*

*As included in the *Protecting Water Resources through Local Controls and Practices: An Assessment Model for New York Municipalities* Guide, prepared by the Genesee Finger Lakes Regional Planning Council. Appropriate for a non-MS4 Community.

Sample Local Law for Stormwater Management and Erosion & Sediment Control *(Revised 3/06)*

This model local law is intended to be a guidance tool for communities that are subject to the Municipal Separate Storm Sewer System (MS4) Phase II stormwater management requirements of the National Pollutant Discharge Elimination System (NPDES) regulations, administered by New York State through the State Pollutant Discharge Elimination System (SPDES) regulations. The goal of providing this model law is to assist communities in amending existing laws and ordinances and/or adopting new provisions of local law to meet the new federal and state guidelines for stormwater control. In designing a model stormwater law for a New York State audience, we include suggestions for standard language and concepts that we believe a good stormwater management program should contain. This local law should not be construed as an exhaustive listing of all the language needed for a local law, but represents a good base that communities can build upon and customize to be consistent with the local conditions and staff resources available in their municipality.

Throughout the local law, there are sections in which you must insert the name of your municipality and the agency that you have given regulatory power over stormwater management issues. These sections are denoted by **bold** text placed in brackets. By using this document and customizing these sections, you can create a viable local law with minimal editing. Municipalities should work with their municipal attorney throughout the process.

Italicized text with this symbol ➲ should be interpreted as comments, instructions, or information to assist the local law writer. This text *should not appear* in your final local law.

The contents of this local law are as follows:

Local Law title and enacting clause	2
Article 1 - General Provisions	2
Article 2 - Amendment to Zoning Law	4
Article 3 - Amendment to Subdivision Law	12
Article 4 - Amendment to Site Plan Review Law	13
Article 5 - Amendment to Erosion & Sediment Control Law	13
Article 6 - Administration and Enforcement	13
Schedule A - Stormwater Management Practices Acceptable for Water Quality	18
Schedule B - Sample Stormwater Control Facility Maintenance Agreement	19

Sample Local Law for Stormwater Management and Erosion & Sediment Control

A local law to amend the **(Zoning Law/Subdivision Law/Site Plan Review Law/Erosion and Sediment Control Law)** of the **((City/Town/Village) of _____),** Local law Number _____of the Year _____.

➲*Article 1 and Article 2 must be adopted for proper implementation. The municipality and its legal counsel, after reviewing their local codes and this model language, should pick additional provisions from Articles 3, 4, 5 and 6 to ensure review and enforcement of stormwater pollution prevention plans at the local level.*

Be it enacted by the **(City Council/Town Board/Village Board of Trustees)** of the **((City/Town/Village) of _____)** as follows:

Article 1. General Provisions

Section 1. Findings of Fact

It is hereby determined that:

1.1 Land development activities and associated increases in site impervious cover often alter the hydrologic response of local watersheds and increase stormwater runoff rates and volumes, flooding, stream channel erosion, or sediment transport and deposition;

1.2 This stormwater runoff contributes to increased quantities of water-borne pollutants, including siltation of aquatic habitat for fish and other desirable species;

1.3 Clearing and grading during construction tends to increase soil erosion and add to the loss of native vegetation necessary for terrestrial and aquatic habitat;

1.4 Improper design and construction of stormwater management practices can increase the velocity of stormwater runoff thereby increasing stream bank erosion and sedimentation;

1.5 Impervious surfaces allow less water to percolate into the soil, thereby decreasing groundwater recharge and stream baseflow;

1.6 Substantial economic losses can result from these adverse impacts on the waters of the municipality;

1.7 Stormwater runoff, soil erosion and nonpoint source pollution can be controlled and minimized through the regulation of stormwater runoff from land development activities;

1.8 The regulation of stormwater runoff discharges from land development activities in order to control and minimize increases in stormwater runoff rates and volumes, soil erosion, stream channel erosion, and nonpoint source pollution associated with stormwater runoff is in the public interest and will minimize threats to public health and safety.

1.9 Regulation of land development activities by means of performance standards governing stormwater management and site design will produce development compatible with the natural functions of a particular site or an entire watershed and thereby mitigate the adverse effects of erosion and sedimentation from development.

Section 2. Purpose

The purpose of this local law is to establish minimum stormwater management requirements and controls to

protect and safeguard the general health, safety, and welfare of the public residing within this jurisdiction and to address the findings of fact in Section 1 hereof. This local law seeks to meet those purposes by achieving the following objectives:

2.1 Meet the requirements of minimum measures 4 and 5 of the SPDES General Permit for Stormwater Discharges from Municipal Separate Stormwater Sewer Systems (MS4s), Permit no. GP-02-02 or as amended or revised;

2.2 Require land development activities to conform to the substantive requirements of the NYS Department of Environmental Conservation State Pollutant Discharge Elimination System (SPDES) General Permit for Construction Activities GP-02-01 or as amended or revised;

2.3 Minimize increases in stormwater runoff from land development activities in order to reduce flooding, siltation, increases in stream temperature, and streambank erosion and maintain the integrity of stream channels;

2.4 Minimize increases in pollution caused by stormwater runoff from land development activities which would otherwise degrade local water quality;

2.5 Minimize the total annual volume of stormwater runoff which flows from any specific site during and following development to the maximum extent practicable; and

2.6 Reduce stormwater runoff rates and volumes, soil erosion and nonpoint source pollution, wherever possible, through stormwater management practices and to ensure that these management practices are properly maintained and eliminate threats to public safety.

➲ *The above list is a general set of objectives to reduce the impact of stormwater on receiving waters. Section 2.1 applies to regulated MS4s; a municipality not currently under this program may wish to leave this objective out, although the community may become regulated in the future. The advantage to adopting a local law for all municipalities is that the local government then has control over review and approval of Stormwater Pollution Prevention Plans (SWPPPs) during subdivision and site plan review. The local government may also wish to set some more specific objectives, based on priority water quality (refer to New York State 303 (d) list of priority waters at* www.dec.state.ny.us/website/dow/303dcalm.html *) and habitat problems (e.g., to reduce phosphorus loads being delivered to recreational lakes, to sustain a Class TS trout fishery).*

Section 3. Statutory Authority

In accordance with Article 10 of the Municipal Home Rule Law of the State of New York, the **(City Council/Town Board/Village Board of Trustees of _____)** has the authority to enact local laws and amend local laws and for the purpose of promoting the health, safety or general welfare of the **((City/Town/Village) of _____)** and for the protection and enhancement of its physical environment. The **(City Council/Town Board/Village Board of Trustees of _____)** may include in any such local law provisions for the appointment of any municipal officer, employees, or independent contractor to effectuate, administer and enforce such local law.

Section 4. Applicability

4.1 This local law shall be applicable to all land development activities as defined in this local law, Article 2, Section 1**.**

4.2 The municipality shall designate a Stormwater Management Officer who shall accept and review all stormwater pollution prevention plans and forward such plans to the applicable municipal board. The

Stormwater Management Officer may (1) review the plans, (2) upon approval by the ((City Council/Town Board/Village Board of Trustees) of the (Town/Village/City) of _____), engage the services of a registered professional engineer to review the plans, specifications and related documents at a cost not to exceed a fee schedule established by said governing board, or (3) accept the certification of a licensed professional that the plans conform to the requirements of this law.

4.3 All land development activities subject to review and approval by the **(applicable board of the (City/Town Village) of _____)** under **(subdivision, site plan, and/or special permit)** regulations shall be reviewed subject to the standards contained in this local law

4.4 All land development activities not subject to review as stated in section 4.3 shall be required to submit a Stormwater Pollution Prevention Plan (SWPPP) to the Stormwater Management Officer who shall approve the SWPPP if it complies with the requirements of this law.

Section 5. Exemptions

The following activities may be exempt from review under this law.

➲ *The municipality may elect to include some or all of the exemptions in Section 5.*

5.1 Agricultural activity as defined in this local law.

5.2 Silvicultural activity except that landing areas and log haul roads are subject to this law.

5.3 Routine maintenance activities that disturb less than five acres and are performed to maintain the original line and grade, hydraulic capacity or original purpose of a facility.

5.4 Repairs to any stormwater management practice or facility deemed necessary by the Stormwater Management Officer.

5.5 Any part of a subdivision if a plat for the subdivision has been approved by the **((City/Town/Village) of _____)** on or before the effective date of this law.

5.6 Land development activities for which a building permit has been approved on or before the effective date of this law.

5.7 Cemetery graves.

5.8 Installation of fence, sign, telephone, and electric poles and other kinds of posts or poles.

5.9 Emergency activity immediately necessary to protect life, property or natural resources.

5.10 Activities of an individual engaging in home gardening by growing flowers, vegetable and other plants primarily for use by that person and his or her family.

5.11 Landscaping and horticultural activities in connection with an existing structure.

Article 2. Zoning Law Amendment: Stormwater Control

➲*Municipalities that do not have zoning should add the language in Article 2 to Article 3 (Subdivision Regulation Amendment) or Article 4 (Site Plan Review Law Amendment) as applicable for their municipality.*

The Zoning Law is hereby amended to include Article ___, a new supplemental regulation titled Stormwater Control.

Section 1. Definitions

The terms used in this local law or in documents prepared or reviewed under this local law shall have the meaning as set forth in this section.

➲*Definitions should be incorporated into the appropriate section of the municipality's zoning law which contains definitions.*

Agricultural Activity - the activity of an active farm including grazing and watering livestock, irrigating crops, harvesting crops, using land for growing agricultural products, and cutting timber for sale, but shall not include the operation of a dude ranch or similar operation, or the construction of new structures associated with agricultural activities.

Applicant - a property owner or agent of a property owner who has filed an application for a land development activity.

Building - any structure, either temporary or permanent, having walls and a roof, designed for the shelter of any person, animal, or property, and occupying more than 100 square feet of area.

Channel - a natural or artificial watercourse with a definite bed and banks that conducts continuously or periodically flowing water.

Clearing - any activity that removes the vegetative surface cover.

Dedication - the deliberate appropriation of property by its owner for general public use.

Department - the New York State Department of Environmental Conservation

Design Manual - the *New York State Stormwater Management Design Manual,* most recent version including applicable updates, that serves as the official guide for stormwater management principles, methods and practices.

Developer - a person who undertakes land development activities.

Erosion Control Manual - the most recent version of the "New York Standards and Specifications for Erosion and Sediment Control" manual, commonly known as the "Blue Book".

Grading - excavation or fill of material, including the resulting conditions thereof.

Impervious Cover - those surfaces, improvements and structures that cannot effectively infiltrate rainfall, snow melt and water (e.g., building rooftops, pavement, sidewalks, driveways, etc).

Industrial Stormwater Permit - a State Pollutant Discharge Elimination System permit issued to a commercial industry or group of industries which regulates the pollutant levels associated with industrial stormwater discharges or specifies on-site pollution control strategies.

Infiltration - the process of percolating stormwater into the subsoil.

Jurisdictional Wetland - an area that is inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated soil conditions, commonly known as hydrophytic vegetation.

Land Development Activity - construction activity including clearing, grading, excavating, soil disturbance or placement of fill that results in land disturbance of equal to or greater than one acre (*see* ➲*Note)*, or activities disturbing less than one acre of total land area that is part of a larger common plan of development or sale, even though multiple separate and distinct land development activities may take place at different times on different schedules.

➲ *A community should review the local site plan, subdivision, zoning and erosion & sediment control laws and ordinances to see if there are minimum land disturbance requirements already specified in those laws. To meet the SPDES guidelines under GP-02-02, the municipality must require SWPPPs for construction activities that result in land disturbance equal to or greater than one acre, or activities disturbing less than one acre if they are part of a larger common plan of development or sale or in a specified watershed. The municipality may wish to reduce this threshold to a lesser amount of disturbance to conform to local standards which may be stricter than the standards set forth in the state regulations. Many communities regulate land disturbance activities of more than 5000 square feet (1/8 acre), with an exemption if the amount of impervious cover created does not exceed 1000 square feet.*

Landowner - the legal or beneficial owner of land, including those holding the right to purchase or lease the

land, or any other person holding proprietary rights in the land.

Maintenance Agreement - a legally recorded document that acts as a property deed restriction, and which provides for long-term maintenance of stormwater management practices.

Nonpoint Source Pollution - pollution from any source other than from any discernible, confined, and discrete conveyances, and shall include, but not be limited to, pollutants from agricultural, silvicultural, mining, construction, subsurface disposal and urban runoff sources.

Phasing - clearing a parcel of land in distinct pieces or parts, with the stabilization of each piece completed before the clearing of the next.

Pollutant of Concern - sediment or a water quality measurement that addresses sediment (such as total suspended solids, turbidity or siltation) and any other pollutant that has been identified as a cause of impairment of any water body that will receive a discharge from the land development activity.

Project - land development activity

Recharge - the replenishment of underground water reserves.

Sediment Control - measures that prevent eroded sediment from leaving the site.

Sensitive Areas - cold water fisheries, shellfish beds, swimming beaches, groundwater recharge areas, water supply reservoirs, habitats for threatened, endangered or special concern species.

SPDES General Permit for Construction Activities GP-02-01 - A permit under the New York State Pollutant Discharge Elimination System (SPDES) issued to developers of construction activities to regulate disturbance of one or more acres of land.

SPDES General Permit for Stormwater Discharges from Municipal Separate Stormwater Sewer Systems GP-02-02 - A permit under the New York State Pollutant Discharge Elimination System (SPDES) issued to municipalities to regulate discharges from municipal separate storm sewers for compliance with EPA established water quality standards and/or to specify stormwater control standards

Stabilization - the use of practices that prevent exposed soil from eroding.

Stop Work Order - an order issued which requires that all construction activity on a site be stopped.

Stormwater - rainwater, surface runoff, snowmelt and drainage

Stormwater Hotspot - a land use or activity that generates higher concentrations of hydrocarbons, trace metals or toxicants than are found in typical stormwater runoff, based on monitoring studies.

Stormwater Management - the use of structural or non-structural practices that are designed to reduce stormwater runoff and mitigate its adverse impacts on property, natural resources and the environment.

Stormwater Management Facility - one or a series of stormwater management practices installed, stabilized and operating for the purpose of controlling stormwater runoff.

Stormwater Management Officer - an employee or officer designated by the municipality to accept and review stormwater pollution prevention plans, forward the plans to the applicable municipal board and inspect stormwater management practices

> ➲*The Stormwater Management Officer would likely be the Code Enforcement Officer or his/her staff. A consultant cannot be appointed as Stormwater Management Officer. Plan reviews and site inspections may be delegated to a consultant paid for through the applicant's escrow account, however the final approval must be made by a municipal employee or board member.*

Stormwater Management Practices (SMPs) - measures, either structural or nonstructural, that are determined to be the most effective, practical means of preventing flood damage and preventing or reducing point source or nonpoint source pollution inputs to stormwater runoff and water bodies.

Stormwater Pollution Prevention Plan (SWPPP) - a plan for controlling stormwater runoff and pollutants from a site during and after construction activities.

Stormwater Runoff - flow on the surface of the ground, resulting from precipitation

Surface Waters of the State of New York - lakes, bays, sounds, ponds, impounding reservoirs, springs, wells, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Atlantic ocean within the territorial seas of the state of New York and all other bodies of surface water, natural or artificial, inland or coastal, fresh or salt, public or private (except those private waters that do not combine or effect a junction with natural surface or underground waters), which are wholly or partially within or bordering the state or within its jurisdiction.

Storm sewers and waste treatment systems, including treatment ponds or lagoons which also meet the criteria of this definition are not waters of the state. This exclusion applies only to manmade bodies of water which neither were originally created in waters of the state (such as a disposal area in wetlands) nor resulted from impoundment of waters of the state.

Watercourse - a permanent or intermittent stream or other body of water, either natural or man-made, which gathers or carries surface water.

Waterway - a channel that directs surface runoff to a watercourse or to the public storm drain.

Section 2. Stormwater Pollution Prevention Plans

2.1. Stormwater Pollution Prevention Plan Requirement

No application for approval of a land development activity shall be reviewed until the appropriate board has received a Stormwater Pollution Prevention Plan (SWPPP) prepared in accordance with the specifications in this local law.

2.2 Contents of Stormwater Pollution Prevention Plans

2.2.1 All SWPPPs shall provide the following background information and erosion and sediment controls:

1. Background information about the scope of the project, including location, type and size of project.
2. Site map/construction drawing(s) for the project, including a general location map. At a minimum, the site map should show the total site area; all improvements; areas of disturbance; areas that will not be disturbed; existing vegetation; on-site and adjacent off-site surface water(s); wetlands and drainage patterns that could be affected by the construction activity; existing and final slopes; locations of off-site material, waste, borrow or equipment storage areas; and location(s) of the stormwater discharges(s);

➲*Site map should be at a scale no smaller than 1"=100' (e.g. 1"=500" is smaller than 1"=100")*

3. Description of the soil(s) present at the site;
4. Construction phasing plan describing the intended sequence of construction activities, including clearing and grubbing, excavation and grading, utility and infrastructure installation and any other activity at the site that results in soil disturbance. Consistent with the New York Standards and Specifications for Erosion and Sediment Control (Erosion Control Manual), not more than five (5) acres shall be disturbed at any one time unless pursuant to an approved SWPPP.

➲ *A municipality may choose to reduce the amount of land that may be exposed at any one time.*

5. Description of the pollution prevention measures that will be used to control litter, construction chemicals and construction debris from becoming a pollutant source in

stormwater runoff;

6. Description of construction and waste materials expected to be stored on-site with updates as appropriate, and a description of controls to reduce pollutants from these materials including storage practices to minimize exposure of the materials to stormwater, and spill -prevention and response;
7. Temporary and permanent structural and vegetative measures to be used for soil stabilization, runoff control and sediment control for each stage of the project from initial land clearing and grubbing to project close-out;
8. A site map/construction drawing(s) specifying the location(s), size(s) and length(s) of each erosion and sediment control practice;
9. Dimensions, material specifications and installation details for all erosion and sediment control practices, including the siting and sizing of any temporary sediment basins;
10. Temporary practices that will be converted to permanent control measures;
11. Implementation schedule for staging temporary erosion and sediment control practices, including the timing of initial placement and duration that each practice should remain in place;
12. Maintenance schedule to ensure continuous and effective operation of the erosion and sediment control practice;
13. Name(s) of the receiving water(s);
14. Delineation of SWPPP implementation responsibilities for each part of the site;
15. Description of structural practices designed to divert flows from exposed soils, store flows, or otherwise limit runoff and the discharge of pollutants from exposed areas of the site to the degree attainable; and
16. Any existing data that describes the stormwater runoff at the site.

2.2.2 Land development activities as defined in Section 1 of this Article and meeting Condition "A", "B" or "C" below shall also include water quantity and water quality controls (post-construction stormwater runoff controls) as set forth in Section 2.2.3 below as applicable:

Condition A - Stormwater runoff from land development activities discharging a pollutant of concern to either an impaired water identified on the Department's 303(d) list of impaired waters or a Total Maximum Daily Load (TMDL) designated watershed for which pollutants in stormwater have been identified as a source of the impairment.

Condition B - Stormwater runoff from land development activities disturbing five (5) or more acres.

Condition C - Stormwater runoff from land development activity disturbing between one (1) and five (5) acres of land during the course of the project, exclusive of the construction of single family residences and construction activities at agricultural properties.

2.2.3 SWPPP Requirements for Condition A, B and C:

1. All information in Section 2.2 .1 of this local law
2. Description of each post-construction stormwater management practice;
3. Site map/construction drawing(s) showing the specific location(s) and size(s) of each post-construction stormwater management practice;
4. Hydrologic and hydraulic analysis for all structural components of the stormwater management system for the applicable design storms
5. Comparison of post-development stormwater runoff conditions with pre-development conditions

6. Dimensions, material specifications and installation details for each post-construction stormwater management practice;
7. Maintenance schedule to ensure continuous and effective operation of each post-construction stormwater management practice.
8. Maintenance easements to ensure access to all stormwater management practices at the site for the purpose of inspection and repair. Easements shall be recorded on the plan and shall remain in effect with transfer of title to the property.
9. Inspection and maintenance agreement binding on all subsequent landowners served by the on-site stormwater management measures in accordance with Article 2, Section 4 of this local law.
10. For Condition A, the SWPPP shall be prepared by a landscape architect, certified professional or professional engineer and must be signed by the professional preparing the plan, who shall certify that the design of all stormwater management practices meet the requirements in this local law.[1]

2.3 Other Environmental Permits

The applicant shall assure that all other applicable environmental permits have been or will be acquired for the land development activity prior to approval of the final stormwater design plan.

2.4 Contractor Certification

2.4.1 Each contractor and subcontractor identified in the SWPPP who will be involved in soil disturbance and/or stormwater management practice installation shall sign and date a copy of the following certification statement before undertaking any land development activity : "I certify under penalty of law that I understand and agree to comply with the terms and conditions of the Stormwater Pollution Prevention Plan. I also understand that it is unlawful for any person to cause or contribute to a violation of water quality standards."

2.4.2 The certification must include the name and title of the person providing the signature, address and telephone number of the contracting firm; the address (or other identifying description) of the site; and the date the certification is made.

2.4.3 The certification statement(s) shall become part of the SWPPP for the land development activity.

2.5 A copy of the SWPPP shall be retained at the site of the land development activity during construction from the date of initiation of construction activities to the date of final stabilization.

[1] Revised 3/06 - formerly Section 2.3. This section was moved under Section 2.2.3 to more closely meet the New York State requirements for Condition A in Section 2.2.2. The NY SPDES General Permit for Stormwater Runoff from Construction Activities (GP-02-01) requires that SWPPPs be prepared by a licensed professional for land development activities discharging a pollutant of concern to an impaired water identified on the Department's 303(d) list of impaired waters or to a Total Maximum Daily Load (TMDL) designated watershed for which pollutants in stormwater have been identified as a source of the impairment.

Section 3. Performance and Design Criteria for Stormwater Management and Erosion and Sediment Control

All land development activities shall be subject to the following performance and design criteria:

3.1 Technical Standards

For the purpose of this local law, the following documents shall serve as the official guides and specifications for stormwater management. Stormwater management practices that are designed and constructed in accordance with these technical documents shall be presumed to meet the standards imposed by this law:

3.1.1 The New York State Stormwater Management Design Manual (New York State Department of Environmental Conservation, most current version or its successor, hereafter referred to as the Design Manual)

3.1.2 New York Standards and Specifications for Erosion and Sediment Control, (Empire State Chapter of the Soil and Water Conservation Society, 2004, most current version or its successor, hereafter referred to as the Erosion Control Manual).

➲ *The New York State technical guidance documents may be ordered from The Department. An order form as well as downloadable versions of the Manuals are available on the Internet at;*

http://www.dec.state.ny.us/website/dow/toolbox/escstandards/index.html

http://www.dec.state.ny.us/website/dow/toolbox/swmanual/

3.2 Equivalence to Technical Standards[2]

Where stormwater management practices are not in accordance with technical standards, the applicant or developer must demonstrate equivalence to the technical standards set forth in Article 2, Section 3.1 and the SWPPP shall be prepared by a licensed professional.

3.3 Water Quality Standards

Any land development activity shall not cause an increase in turbidity that will result in substantial visible contrast to natural conditions in surface waters of the state of New York.

Section 4. Maintenance, Inspection and Repair of Stormwater Facilities[3]

4.1 Maintenance and Inspection During Construction[4]

4.1.1 The applicant or developer of the land development activity or their representative shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the applicant or developer to achieve compliance with the conditions of this local law. Sediment shall be removed from sediment

[2] Added 3/06 to ensure that the local law addresses the New York State requirement for applicants to demonstrate through preparation by a licensed professional that stormwater management practices that are not prepared in accordance with NYSDEC technical standards will work in the field to prevent soil erosion and maintain water quality.

[3] Revised 3/06 to add the word "Inspection" to the title to more closely reflect the content of the section.

[4] Revised 3/06 to add the word "Inspection" to the title to more closely reflect the content of the section.

traps or sediment ponds whenever their design capacity has been reduced by fifty (50) percent.

4.1.2 For land development activities as defined in Section 1 of this Article and meeting Condition A, B or C in Section 2.2.2, the applicant shall have a qualified professional conduct site inspections and document the effectiveness of all erosion and sediment control practices every 7 days and within 24 hours of any storm event producing 0.5 inches of precipitation or more. Inspection reports shall be maintained in a site log book.[5]

4.1.3 The applicant or developer or their representative shall be on site at all times when construction or grading activity takes place and shall inspect and document the effectiveness of all erosion and sediment control practices.[6]

➲ *4.1.3 is an optional clause for municipalities that are interested in requiring more oversight by the developer during construction activities*.

4.2 Maintenance Easement(s)

Prior to the issuance of any approval that has a stormwater management facility as one of the requirements, the applicant or developer must execute a maintenance easement agreement that shall be binding on all subsequent landowners served by the stormwater management facility. The easement shall provide for access to the facility at reasonable times for periodic inspection by the **((City/Town/Village) of _____)** to ensure that the facility is maintained in proper working condition to meet design standards and any other provisions established by this local law. The easement shall be recorded by the grantor in the office of the County Clerk after approval by the counsel for the **((City/Town/Village) of _____)**.

4.3 Maintenance after Construction

The owner or operator of permanent stormwater management practices installed in accordance with this law shall ensure they are operated and maintained[7] to achieve the goals of this law. Proper operation and maintenance also includes as a minimum, the following:

4.3.1 A preventive/corrective maintenance program for all critical facilities and systems of treatment and control (or related appurtenances) which are installed or used by the owner or operator to achieve the goals of this law.

4.3.2 Written procedures for operation and maintenance and training new maintenance personnel.

---

[5] Revised 3/06. This clause was rewritten to more closely meet the New York State requirements for Conditions A, B and C in Section 2.2.2. The NY SPDES General Permit for Stormwater Runoff from Construction Activities (GP-02-01) requires that inspections be conducted every 7 days and within 24 hours of any storm event producing 0.5 inches of precipitation or more for all projects that are required to prepare full SWPPPs as stated in Conditions A, B and C, and to copy such reports to a site log book.

[6] Revised 3/06. Originally part of 4.1.2, this clause was relocated as a separate section to show that it is optional.

[7] Revised 3/06 to correct a grammatical error.

4.3.3 Discharges from the SMPs shall not exceed design criteria or cause or contribute to water quality standard violations in accordance with Article 2, section 3.3.

4.4 Maintenance Agreements

The **((City/Town/Village) of _____)** shall approve a formal maintenance agreement for stormwater management facilities binding on all subsequent landowners and recorded in the office of the County Clerk as a deed restriction on the property prior to final plan approval. The maintenance agreement shall be consistent with the terms and conditions of Schedule B of this local law entitled Sample Stormwater Control Facility Maintenance Agreement. The **((City/Town/Village) of _____)**, in lieu of a maintenance agreement, at its sole discretion may accept dedication of any existing or future stormwater management facility, provided such facility meets all the requirements of this local law and includes adequate and perpetual access and sufficient area, by easement or otherwise, for inspection and regular maintenance.

Section 5. Severability and Effective Date

5.1 Severability

If the provisions of any article, section, subsection, paragraph, subdivision or clause of this local law shall be judged invalid by a court of competent jurisdiction, such order of judgment shall not affect or invalidate the remainder of any article, section, subsection, paragraph, subdivision or clause of this local law.

5.2 Effective Date

This Local Law shall be effective upon filing with the office of the Secretary of State.

Approved by: _____ Date _____

Article 3. Subdivision Regulation Amendment

Sections ___ and ___ of the Subdivision Regulations of the **((City/Town/Village) of _____)** are hereby amended by adding the following to the information requirements:

A. *For Preliminary Subdivision Plat add*: Stormwater Pollution Prevention Plan: A Stormwater Pollution Prevention Plan (SWPPP) consistent with the requirements of Article 1 and 2 of this local law shall be required for Preliminary Subdivision Plat approval. The SWPPP shall meet the performance and design criteria and standards in Article 2 of this local law. The approved Preliminary Subdivision Plat shall be consistent with the provisions of this local law.

B. *For Final Subdivision Plat approval add*: Stormwater Pollution Prevention Plan: A Stormwater Pollution Prevention Plan consistent with the requirements of Article 1 and 2 of this local law and with the terms of preliminary plan approval shall be required for Final Subdivision Plat approval. The SWPPP shall meet the performance and design criteria and standards in Article 2 of this local law. The approved Final Subdivision Plat shall be consistent with the provisions of this local law.

➲ *If the municipality has only one requirement for a final plan (no preliminary) then use Paragraph A language only.*

Article 4. Site Plan Review Regulation Amendment

Sections ___ and ___ of the Site Plan Review regulations of the **((City/Town/Village) of _____)** are hereby amended by adding the following to the information requirements:

For Site Plan Approval add: Stormwater Pollution Prevention Plan: A Stormwater Pollution Prevention Plan consistent with the requirements of Article 1 and 2 of this local law shall be required for Site Plan Approval. The SWPPP shall meet the performance and design criteria and standards in Article 2 of this local law. The approved Site Plan shall be consistent with the provisions of this local law.

Article 5. Erosion & Sediment Control Law Repeal or Amendment[8]

Repeal:

The Erosion & Sediment Control Law of the **((City/Town/Village) of _____)** is hereby repealed.

➲ *By adopting Articles 1 and 2 (and 3, 4 and 6 where necessary) of the Model Local Law for Stormwater Management and Erosion & Sediment Control, the municipality will have regulatory authority for both erosion & sediment control and post-construction stormwater management so a separate erosion & sediment control law is not needed.*

OR

Amendment:

Section _____of the Erosion & Sediment Control Law of the **((City/Town/Village) of _____)** is hereby amended by adding the following clause: Stormwater Pollution Prevention Plan: A Stormwater Pollution Prevention Plan consistent with the requirements of Article 1 and 2 of this local law shall be required. The SWPPP shall meet the performance and design criteria and standards in Article 2 of this local law. The approved erosion control permit shall be consistent with the provisions of this local law.

➲ *The municipality must also adopt Articles 1, 2, 3 and 4 (as applicable for their municipality) in order to address post-construction stormwater runoff control in stormwater pollution prevention plans.*

Article 6. Administration and Enforcement

➲***The following provisions for construction inspection, performance guarantees and bonds, and enforcement are important to include in a stormwater control program, but may already exist in local law. Therefore the municipality and its counsel should review their existing provisions for these activities, compare them with the following provisions, and consider whether revisions or amendments are necessary to achieve the purposes of this local law.***

Section 1. Construction Inspection

[8] Revised 3/06 to clarify that adoption of this Sample Local Law provides all the required language for local regulation of erosion & sediment control, therefore repeal of an existing erosion & sediment control law and replacement with the Sample Local Law may be the best option for many municipalities.

1.1 Erosion and Sediment Control Inspection

The **((City/Town/Village) of _____)** Stormwater Management Officer may require such inspections as necessary to determine compliance with this law and may either approve that portion of the work completed or notify the applicant wherein the work fails to comply with the requirements of this law and the stormwater pollution prevention plan (SWPPP) as approved. To obtain inspections, the applicant shall notify the **((City/Town/Village) of _____)** enforcement official at least 48 hours before any of the following as required by the Stormwater Management Officer:

1.1.1 Start of construction

1.1.2 Installation of sediment and erosion control measures

1.1.3 Completion of site clearing

1.1.4 Completion of rough grading

1.1.5 Completion of final grading

1.1.6 Close of the construction season

1.1.7 Completion of final landscaping

1.1.8 Successful establishment of landscaping in public areas.

If any violations are found, the applicant and developer shall be notified in writing of the nature of the violation and the required corrective actions. No further work shall be conducted except for site stabilization until any violations are corrected and all work previously completed has received approval by the Stormwater Management Officer.

1.2 Stormwater Management Practice Inspections

The **((City/Town/Village) of _____)** Stormwater Management Officer, is responsible for conducting inspections of stormwater management practices (SMPs). All applicants are required to submit "as built" plans for any stormwater management practices located on-site after final construction is completed. The plan must show the final design specifications for all stormwater management facilities and must be certified by a professional engineer.

1.3 Inspection of Stormwater Facilities After Project Completion

Inspection programs shall be established on any reasonable basis, including but not limited to: routine inspections; random inspections; inspections based upon complaints or other notice of possible violations; inspection of drainage basins or areas identified as higher than typical sources of sediment or other contaminants or pollutants; inspections of businesses or industries of a type associated with higher than usual discharges of contaminants or pollutants or with discharges of a type which are more likely than the typical discharge to cause violations of state or federal water or sediment quality standards or the SPDES stormwater permit; and joint inspections with other agencies inspecting under environmental or safety laws. Inspections may include, but are not limited to: reviewing maintenance and repair records; sampling discharges, surface water, groundwater, and material or water in drainage control facilities; and evaluating the condition of drainage control facilities and other stormwater management practices.

➲*Inspections may be performed by local government staff or the local government may designate an inspector required to have a Professional Engineer's (PE) license or Certified Professional in Erosion and Sediment Control (CPESC) certificate, as long as the designated inspector is required to submit a report.*

1.4 Submission of Reports

The ((City/Town/Village) of _____) Stormwater Management Officer may require monitoring and reporting from entities subject to this law as are necessary to determine compliance with this law.

1.5 Right-of-Entry for Inspection

When any new stormwater management facility is installed on private property or when any new connection is made between private property and the public storm water system, the landowner shall grant to the **((City/Town/Village) of _____)** the right to enter the property at reasonable times and in a reasonable manner for the purpose of inspection as specified in paragraph 1.3.

Section 2. Performance Guarantee

2.1 Construction Completion Guarantee

In order to ensure the full and faithful completion of all land development activities related to compliance with all conditions set forth by the **((City/Town/Village) of _____)** in its approval of the Stormwater Pollution Prevention Plan, the **((City/Town/Village) of _____)** may require the applicant or developer to provide, prior to construction, a performance bond, cash escrow, or irrevocable letter of credit from an appropriate financial or surety institution which guarantees satisfactory completion of the project and names the **((City/Town/Village) of _____)** as the beneficiary. The security shall be in an amount to be determined by the (**(City/Town/Village) of _____)** based on submission of final design plans, with reference to actual construction and landscaping costs. The performance guarantee shall remain in force until the surety is released from liability by the **((City/Town/Village) of _____)**, provided that such period shall not be less than one year from the date of final acceptance or such other certification that the facility(ies) have been constructed in accordance with the approved plans and specifications and that a one year inspection has been conducted and the facilities have been found to be acceptable to the **((City/Town/Village) of _____).** Per annum interest on cash escrow deposits shall be reinvested in the account until the surety is released from liability.

2.2 Maintenance Guarantee

Where stormwater management and erosion and sediment control facilities are to be operated and maintained by the developer or by a corporation that owns or manages a commercial or industrial facility, the developer, prior to construction, may be required to provide the **((City/Town/Village) of _____)** with an irrevocable letter of credit from an approved financial institution or surety to ensure proper operation and maintenance of all stormwater management and erosion control facilities both during and after construction, and until the facilities are removed from operation. If the developer or landowner fails to properly operate and maintain stormwater management and erosion and sediment control facilities, the **((City/Town/Village) of _____)** may draw upon the account to cover the costs of proper operation and maintenance, including engineering and inspection costs.

2.3 Recordkeeping

The ((City/Town/Village) of _____) may require entities subject to this law to maintain records demonstrating compliance with this law.

Section 3. Enforcement and Penalties

3.1 Notice of Violation.

When the **((City/Town/Village) of _____)** determines that a land development activity is not being carried out in accordance with the requirements of this local law, it may issue a written notice of violation to the landowner. The notice of violation shall contain :

3.1.1 the name and address of the landowner, developer or applicant;

3.1.2 the address when available or a description of the building, structure or land upon which the violation is occurring;

3.1.3 a statement specifying the nature of the violation;

3.1.4 a description of the remedial measures necessary to bring the land development activity into compliance with this local law and a time schedule for the completion of such remedial action;

3.1.5 a statement of the penalty or penalties that shall or may be assessed against the person to whom the notice of violation is directed;

3.1.6 a statement that the determination of violation may be appealed to the municipality by filing a written notice of appeal within fifteen (15) days of service of notice of violation.

3.2 Stop Work Orders

The **((City/Town/Village) of _____)** may issue a stop work order for violations of this law. Persons receiving a stop work order shall be required to halt all land development activities, except those activities that address the violations leading to the stop work order. The stop work order shall be in effect until the **((City/Town/Village) of _____)** confirms that the land development activity is in compliance and the violation has been satisfactorily addressed. Failure to address a stop work order in a timely manner may result in civil, criminal, or monetary penalties in accordance with the enforcement measures authorized in this local law.

3.3 Violations

Any land development activity that is commenced or is conducted contrary to this local law, may be restrained by injunction or otherwise abated in a manner provided by law.

3.4 Penalties

In addition to or as an alternative to any penalty provided herein or by law, any person who violates the provisions of this local law shall be guilty of a violation punishable by a fine not exceeding three hundred fifty dollars ($350) or imprisonment for a period not to exceed six months, or both for conviction of a first offense; for conviction of a second offense both of which were committed within a period of five years, punishable by a fine not less than three hundred fifty dollars nor more than seven hundred dollars ($700) or imprisonment for a period not to exceed six months, or both; and upon conviction for a third or subsequent offense all of which were committed within a period of five years, punishable by a fine not less than seven hundred dollars nor more than one thousand dollars ($1000) or imprisonment for a period not to exceed six months, or both. However, for the purposes of conferring jurisdiction upon courts and judicial officers generally, violations of this local law shall be deemed misdemeanors and for such purpose only all provisions of law relating to misdemeanors shall apply to such violations. Each week's continued violation shall constitute a separate additional violation.

3.5 Withholding of Certificate of Occupancy

If any building or land development activity is installed or conducted in violation of this local law the Stormwater Management Officer may prevent the occupancy of said building or land.

3.6 Restoration of lands

Any violator may be required to restore land to its undisturbed condition. In the event that restoration is not undertaken within a reasonable time after notice, the **((City/Town/Village) of _____)** may take necessary corrective action, the cost of which shall become a lien upon the property until paid.

Section 4. Fees for Services

The **((City/Town/Village) of _____)** may require any person undertaking land development activities regulated by this law to pay reasonable costs at prevailing rates for review of SWPPPs, inspections, or SMP maintenance performed by the **((City/Town/Village) of _____)** or performed by a third party for the **((City/Town/Village) of _____)**.

Schedule A

Stormwater Management Practices Acceptable for Water Quality (*From: New York State Stormwater Management Design Manual, Table 5.1*)		
Group	**Practice**	**Description**
Pond	Micropool Extended Detention Pond (P-1)	Pond that treats the majority of the water quality volume through extended detention, and incorporates a micropool at the outlet of the pond to prevent sediment resuspension.
	Wet Pond (P-2)	Pond that provides storage for the entire water quality volume in the permanent pool.
	Wet Extended Detention Pond (P-3)	Pond that treats a portion of the water quality volume by detaining storm flows above a permanent pool for a specified minimum detention time.
	Multiple Pond System (P-4)	A group of ponds that collectively treat the water quality volume.
	Pocket Pond (P-5)	A stormwater wetland design adapted for the treatment of runoff from small drainage areas that has little or no baseflow available to maintain water elevations and relies on groundwater to maintain a permanent pool.
Wetland	Shallow Wetland (W-1)	A wetland that provides water quality treatment entirely in a shallow marsh.
	Extended Detention Wetland (W-2)	A wetland system that provides some fraction of the water quality volume by detaining storm flows above the marsh surface.
	Pond/Wetland System (W-3)	A wetland system that provides a portion of the water quality volume in the permanent pool of a wet pond that precedes the marsh for a specified minimum detention time.
	Pocket Wetland (W-4)	A shallow wetland design adapted for the treatment of runoff from small drainage areas that has variable water levels and relies on groundwater for its permanent pool.
Infiltration	Infiltration Trench (I-1)	An infiltration practice that stores the water quality volume in the void spaces of a gravel trench before it is infiltrated into the ground.
	Infiltration Basin (I-2)	An infiltration practice that stores the water quality volume in a shallow depression before it is infiltrated into the ground.
	Dry Well (I-3)	An infiltration practice similar in design to the infiltration trench, and best suited for treatment of rooftop runoff.
Filtering Practices	Surface Sand Filter (F-1)	A filtering practice that treats stormwater by settling out larger particles in a sediment chamber, and then filtering stormwater through a sand matrix.
	Underground Sand Filter (F-2)	A filtering practice that treats stormwater as it flows through underground settling and filtering chambers.
	Perimeter Sand Filter (F-3)	A filter that incorporates a sediment chamber and filter bed as parallel vaults adjacent to a parking lot.
	Organic Filter (F-4)	A filtering practice that uses an organic medium such as compost in the filter in place of sand.
	Bioretention (F-5)	A shallow depression that treats stormwater as it flows through a soil matrix, and is returned to the storm drain system.
Open Channels	Dry Swale (O-1)	An open drainage channel or depression explicitly designed to detain and promote the filtration of stormwater runoff into the soil media.
	Wet Swale (O-2)	An open drainage channel or depression designed to retain water or intercept groundwater for water quality treatment.

Schedule B

SAMPLE STORMWATER CONTROL FACILITY MAINTENANCE AGREEMENT

Whereas, the Municipality of _____("Municipality") and the _____ ("facility owner") want to enter into an agreement to provide for the long term maintenance and continuation of stormwater control measures approved by the Municipality for the below named project, and

Whereas, the Municipality and the facility owner desire that the stormwater control measures be built in accordance with the approved project plans and thereafter be maintained, cleaned, repaired, replaced and continued in perpetuity in order to ensure optimum performance of the components. Therefore, the Municipality and the facility owner agree as follows:

1. This agreement binds the Municipality and the facility owner, its successors and assigns, to the maintenance provisions depicted in the approved project plans which are attached as Schedule A of this agreement.

2. The facility owner shall maintain, clean, repair, replace and continue the stormwater control measures depicted in Schedule A as necessary to ensure optimum performance of the measures to design specifications. The stormwater control measures shall include, but shall not be limited to, the following: drainage ditches, swales, dry wells, infiltrators, drop inlets, pipes, culverts, soil absorption devices and retention ponds.

3. The facility owner shall be responsible for all expenses related to the maintenance of the stormwater control measures and shall establish a means for the collection and distribution of expenses among parties for any commonly owned facilities.

4. The facility owner shall provide for the periodic inspection of the stormwater control measures, not less than once in every five year period, to determine the condition and integrity of the measures. Such inspection shall be performed by a Professional Engineer licensed by the State of New York. The inspecting engineer shall prepare and submit to the Municipality within 30 days of the inspection, a written report of the findings including recommendations for those actions necessary for the continuation of the stormwater control measures.

5. The facility owner shall not authorize, undertake or permit alteration, abandonment, modification or discontinuation of the stormwater control measures except in accordance with written approval of the Municipality.

6. The facility owner shall undertake necessary repairs and replacement of the stormwater control measures at the direction of the Municipality or in accordance with the recommendations of the inspecting engineer.

7. The facility owner shall provide to the Municipality within 30 days of the date of this agreement, a security for the maintenance and continuation of the stormwater control measures in the form of (a Bond, letter of credit or escrow account).

8. This agreement shall be recorded in the Office of the County Clerk, County of _____together with the deed for the common property and shall be included in the offering plan and/or prospectus approved pursuant to _____.

9. If ever the Municipality determines that the facility owner has failed to construct or maintain the stormwater control measures in accordance with the project plan or has failed to undertake corrective action specified by the Municipality or by the inspecting engineer, the Municipality is authorized to undertake such steps as reasonably necessary for the preservation, continuation or maintenance of the stormwater control measures and to affix the expenses thereof as a lien against the property.

10. This agreement is effective _____ .

_____ _____

***From: Lake George Park Commission Model Stormwater Management Ordinance, Schedule** E*

Sediment and Erosion Control Law With Riparian Protection

History: Adopted by the Town Board of the Town of Geneseo 4-11-2002 by L.L. No. 2-2002. Proposed revisions noted in *italics*.

54-1

This chapter shall be known as the "Erosion and Sediment Control Law of the Town of Geneseo."

54-2. Findings of fact.

The town board of the town of Geneseo finds that uncontrolled drainage and runoff associated with land development has a significant impact upon the health, safety and welfare of the community by potentially causing substantial recreational, aesthetic, environmental and economic losses resulting from adverse impacts on community waters specifically:

A. Construction requiring land clearing and the alteration of natural topography tends to increase erosion;
B. Storm water runoff can carry pollutants into receiving water bodies, degrading water quality'
C. Improper design and construction of erosion control devices can increase the velocity of runoff thereby increasing stream bank erosion and sedimentation;
D. Improper design and construction of erosion control devices can increase the velocity of runoff thereby increasing stream bank erosion and sedimentation;
E. Siltation of water bodies resulting from increased water, interferes with navigation , and harms flora and fauna;
F. Development as defined in this chapter and activities associated with development, as well as land grading and earth moving can have a significant and potentially adverse impact on the environment.
G. Riparian areas require protection to stabilize banks, limit erosion, reduce flood size flows and filter and settle out runoff pollutants.

54-3. Purpose

The Purpose of this local regulation is to safeguard persons, protect property, prevent damage to the environment of the Town of Geneseo, including the Village of Geneseo and Conesus Lake, as well as all bodies of water or watercourses in the Town of Geneseo, and promote the public welfare by guiding and regulating the design, construction, and maintenance of any development or other activity which disturbs or breaks the topsoil or results in the movement of earth on land in the Town of Geneseo.

54- 4. Statutory authority

In accordance with Article 10 of the Municipal Home Rule Law of the State of New York, the Town Board has the authority to enact local laws for the purpose of promoting the health, safety or general welfare of the Town.

54-5. Conformance required.

All site preparation, construction and development activities as defined hereinafter occurring in the Town of Geneseo shall be in conformance with the provisions set forth herein.

54-6. Word Usage.

A. Unless specifically defined below, words or phrases shall be interpreted so as to give them the meaning s they have in common usage and to give this chapter its most effective application. Words used in the singular shall include the plural and the plural and the singular; words used in the present tense shall include the future tense. The word "shall" connotes mandatory and not discretionary; the word "may" is permissive.

B. As used in this chapter, the following terms shall have the meanings indicated:

AGRICULTURAL OPERATONS (AS DEFINED IN ARTICLE 25AA OF THE NYS AGRICULTURE AND MARKETS LAW) – Land and on-farm buildings, equipment and practices which contribute to the production, preparation and marketing of crops, livestock and livestock products as a commercial enterprise.

CERTIFICATE OF COMPLIANCE ---- A written certificate that is issued to the applicant by the Code Enforcement Officer after all final grading and seeding is completed and all permanent erosion control measures are established as specified in the erosion control permit and the satisfaction of the Code Enforcement Officer.

CERTIFIED PROFESSIONAL ---- A licensed architect, a licensed engineer, a licensed landscape architect, or an International Erosion Control Association (IECA) certified professional in erosion and sediment control.

DEVELOP ---- Any physical alteration of a site or area, including, but not limited to, providing access to a site, clearing of vegetation, grading, earth moving, providing utilities and other services such as parking facilities, stormwater management and erosion control systems, and sewage disposal systems, altering landforms, or construction of a structure on the land.

EROSION ---- The removal of soil particles by the action of the water, wind, ice or other geological agents.

EROSION CONTROL PLAN ---- A document prepared by a certified professional that identifies predevelopment and post development conditions on a site and outlines the erosion control measures that will be used on a site. This document is required for projects exposing more than 10,000 square feet of soil.

FLOOD PLAIN ---- For a given flood event, that area of land temporarily covered by water which adjoins a watercourse.

GARDEN ---- A plot of ground where herbs, fruits, flowers, or vegetables are cultivated, excluding agricultural operations as defined herein.

GABION ---- A galvanized wire basket filled with stone used for structural purposes. When they are fastened together, they are used as retaining walls, slope protection and similar structures.

GRADING ---- Excavation or fill of material, including the resulting conditions thereof.

NATURAL DRAINAGE CHANNEL ---- A swale, watercourse in a gully, ora n unprotected stream.

PERFORMANCE STANDARDS ---- The set of standards outlining the erosion control requirements for construction and soil disturbing activities.

PERIMETER CONTROL ---- A barrier that prevents sediment from leaving a site either by filtering sediment laden runoff, or diverting it to a sediment trap or basin.

PHASING ---- Clearing a parcel of land in distinct phases, with the stabilization of each phase occurring before the clearing of the next.

RIPARIAN AREA ---- Areas that extend beyond stream banks and are at least periodically influenced by flooding. When managed properly riparian areas help to stabilize banks, limit erosion, reduce flood size flows and filter and settle out runoff pollutants.

RIPARIAN SETBACK ---- Distance lines set back from each bank of a stream to protect the riparian area and stream from impacts of development, and streamside residents from the impacts of flooding and land loss from erosion.

RIPRAP ---- A combination of large stone, cobbles and boulders used to line channels, stabilize stream banks, and reduce run off velocities.

STABILIZATION ---- The use of practices that prevent exposed soil from eroding.

START OF CONSTRUCTION ---- The first land disturbing activity associated with a development, including land preparation such as clearing, grading and filling; installation of streets, driveways, parking areas and walkways; excavation for basements, footings, piers or foundations; erection of temporary forms; and installation of accessory buildings such as garages.

STEEP SLOPE ---- Grade change of 15% or more.

STOP-WORK ORDER ---- A written order issued by the Code Enforcement Officer to cease and desist all activity and development on a site until such time as the violation is corrected.

STREAM ---- A surface watercourse with a well-defined bed and bank either natural or artificial which confines and conducts continuous or periodic flowing water in such a way that terrestrial vegetation cannot establish roots within the channel.

STREAM CORRIDOR ---- The landscape features on both sides of a stream, including soils, slope and vegetation, whose alteration can directly impact the stream's physical characteristics and biological properties.

SWALE ---- A natural or man-made depression or wide shallow ditch used to temporarily route or filter runoff.

UTILITIES ---- Public and private services, including but not limited to, public water and sewer connection, private wells and septic systems, and telephone, natural gas, electric, and cable television services.

WATERSHED ---- A region or area bounded by a greater elevation and draining ultimately to a particular body of water.

54-7. Applicability of provisions.

A. This chapter shall apply to all development, as defined herein, which involves the uncovering, exposure or disturbance of 500 or more square feet of soil. Excepted herefrom are agricultural operations, whether or not within an agricultural district, as defined in Article 25AA of the New York State Agriculture and Market Laws, and private gardens.
B. No person, corporation, entity, organization, or public agency shall initiate any development activities, land clearing, land grading, or earthmoving activities (hereinafter also collectively referred to as "land disturbance activity") unless in conformity with the regulations of this chapter.
C. No person, agency, corporation or other entity shall commence any development or land disturbing activities without obtaining n erosion control permit issued by the Town Enforcement Officer.
D. No person shall be granted an erosion control permit for land disturbing activity that would require the disturbance or uncovering of 10,000 or more square feet without the approval of an erosion control plan by the Town Planning board.
E. No person shall develop land within any riparian area using riparian setbacks as defined below:
    (1) 300 feet on each side of all streams draining an area greater than 300 sq. mi.
    (2) 100 feet on each side of all streams draining an area greater than 20 sq miles up to 300 sq. mi.
    (3) 75 feet on each side of all streams draining an area greater than 0.5 sq mi (320 Acres) up to 20 sq mi.
    (4) 50 feet on each side of all streams draining an area greater than 0.05 sq mi.(32 acres) up to 0.5 sq mi (320 Acres).

(5) 30 feet on each side of all streams draining an area less that 0.05 sq mi. (32 acres)
(6) If the 100-year floodplain is wider that the designated setback, the setback width will increase to meet the 100-year floodplain.

F. Exemptions. The following activities are exempt from the erosion control plan requirement but must comply with the performance standards listed in * 54-11 and have the applicable erosion control measures approved by the Code Enforcement Officer:
(1) Development or land disturbing activities involving at least 500 square feet of soil, but less than 10,000 square feet of soil;
(2) Development of one single family residential structure or one duple unit and accessory structures and utilities thereto;
(3) The installation of a lawn for one single-family residential structure; and
(4) The installation of a driveway for one single-family residential structure.
(5) The installation of all septic systems which are subject to the review, inspection and/or approval of the Livingston County Department of Health. **[Amended 8-8-2002 by L.L. No. 4-2002]**

54-8. Erosion control permit; inspections; certificate of compliance; certificate of occupancy.

A. Erosion control permit.

(1) An applicant shall submit an erosion control permit application to the Code Enforcement Officer, who shall inform the applicant within seven days if the application is incomplete.
(2) The Code Enforcement Officer shall refer all complete erosion control permit applications for lands within the Conesus Lake Watershed District to the Conesus Lake Watershed Inspector within seven days of receipt for review and comment.
(a) The Watershed Inspector shall have 14 days to comment on the application and return those comments to the Code Enforcement Officer; and
(b) The Code Enforcement Officer shall consider comments from the Watershed Inspector if the comments are received within this period of time.
(3) If an erosion control plan is not required, the Code Enforcement Officer shall review the application to determine whether the proposed erosion control measures comply with the performance standards outlined in * 54-11 of this chapter and approve or deny the erosion control permit based on that review. A preconstruction meeting with the Code Enforcement Officer, the Conesus Lake Watershed Inspector, and the applicant may be required prior to the issuance of an erosion control permit.
(4) If an erosion control plan is not required, an erosion control permit must be approved or denied within 60 days of receipt of a complete erosion control application by the Code Enforcement Officer.
(5) Issuance of an erosion control permit does not authorize development of the site unless and until all other applicable permits or approvals, including a building permit are issued pursuant to federal, state and local law.

B. Inspections. The applicant shall arrange with the Code Enforcement Officer for scheduling inspections of the site. The Code Enforcement Officer shall inspect the work and either approve it or notify the applicant in writing of any failure to comply with the requirements of the approved erosion control plan and/ or erosion control permit. The Code Enforcement Officer and the Watershed Inspector may conduct inspection at reasonable times to ensure effective control of erosion and sedimentation during all phases of construction. The Code Enforcement Officer ay have the Town Engineer consulted for an inspection, the applicant shall be responsible for the cost of such consultation, pursuant to Article VI of Chapter 106 of the Code of the Town of Geneseo.
C. A certificate of compliance shall be issued by the Code Enforcement Officer after all final grading and seeding are completed and all permanent erosion control measures are established as specified in the erosion control permit and to the satisfaction of the Code Enforcement Officer.
D. A Permanent certificate of occupancy shall not be issued until a certificate of compliance is issued for the satisfactory installation and/ or completion of erosion control measures.

54-9. Contents of erosion control plan.

A. Erosion control plans shall be prepared by a certified professional. Plans must contain the information set froth in this section to enable the Town Planning Board to determine whether the plan will prevent the development from adversely affecting the water quality of the surface water due to erosion. In making this determination, plans shall be evaluated pursuant to the performance standards in * 54-11 hereof, and must therefore contain sufficient information to permit such evaluation.
B. The erosion control plan shall contain the name, address, and telephone number of the owner, contractor, and developer. In addition, the legal description of the property shall be provided, and its location with reference to such landmarks as major water bodies, adjoining roads, railroads, subdivisions, or towns shall be clearly identified on a map.
C. The structure and content of the erosion control plan shall be as follows:
    (1) Background information.
        (a) Project description which shall include, but not be limited to, a sequence of construction of the development site, including stripping and clearing, rough grading, construction of utilities, infrastructure, and buildings, and final grading and landscaping. Sequencing shall identify the expected date on which clearing will begin, the estimated duration of exposure of cleared areas, and the sequence of clearing, installation of temporary erosion and sediment measures, and establishment of permanent vegetation.
        (b) Existing (predevelopment) conditions, including but not limited to, an identification of soils, slopes, and existing vegetative cover and drainage conditions.
        (c) Proposed future (development) conditions, including, but not limited to, an identification of drainage conditions and changes in vegetative cover anticipated to result from the proposed activity.

    (2) Erosion and sediment control.

(a) Identification of temporary erosion and sediment control measures, including, but not limited to, seeding mixtures and rates, types of sod, method of seedbed preparation, expected seeding dates, and type and quantity of mulching for both temporary and permanent vegetative control measures.
(b) Identification of permanent erosion and sediment control measures.

(3) Implementation schedule and maintenance, including, but not limited to, easements and estimates of the cost of maintenance.

54-10. Erosion control plan review process

A. The applicant shall submit a complete erosion control plan to the Code Enforcement Officer.
B. The Code Enforcement Officer shall inform the applicant in writing within 14 days if the erosion control plan is incomplete. The erosion control plan shall automatically be deemed complete if the Code Enforcement Officer does not inform the applicant within 14 days.
C. When the erosion control plan is determined to be complete, the Code enforcement officer shall then schedule it for review at the next available Town Planning Board meeting, to be held not later than 31 days after the erosion control plan is determined to be complete.
D. All erosion control plans for development in the Conesus Lake Watershed must be referred to the Conesus Lake Watershed Inspector for review and comment within five days of Code Enforcement Officer receipt of the plan. Comments received from the Conesus Lake Watershed Inspector prior to the Town Planning Board meeting will be considered by the Code Enforcement Officer and the Town Planning Board.
E. The applicant shall receive written notice of the time and place of the Town Planning Board meeting where the erosion control plan will be reviewed no less than five days prior to the Town Planning Board meeting.
F. An erosion control plan shall also be reviewed by the Town Engineer or any other certified professional retained by the Town. The Engineer or certified professional may then recommend approval or disapproval of the plan to the Town Planning Board prior to the scheduled Planning Board meeting where the plan will be discussed. A recommendation for approval or disapproval of the plan must be based on conformance to the performance standards listed in 55-11.
G. The Town Planning Board shall have the authority to impose reasonable condition to ensure that the objectives of this chapter are met.
H. The Town Planning Board shall approve or disapprove the erosion control plan. Approval or disapproval of the plan must be based on conformance to the performance standards listed in 54-11, so as to protect the water quality of Conesus Lake, and should clearly identify why it does not, in the instance of a disapproval, conform to the performance standards.
I. The Town Planning Board shall report the decision to the Code Enforcement Officer and the applicant within 10 days of approval or disapproval for the plan.

J. If the erosion control plan is approved, the Code Enforcement Officer shall issue the applicant an erosion control permit within 10 days of receipt of the Town Planning Board decision.

54-11. Performance Standards

The following performance standards must be applied to all land disturbing activities described in this chapter, including those exempted under 54-5 hereof, as well as those for which a permit is required hereunder:

A. Existing vegetation on a project sites hall be retained and protected as much as possible to minimize soil loss from the project site.
B. Sediment control practices/measures shall be designed to protect the natural character of water bodies on-site as well as off-site. The practices must be in place before the start of land disturbance activities until the establishment of permanent stabilization.
    (1) The off-site impacts of erosion and sedimentation from the development site shall not be any grater during and following land disturbance activities than under predevelopment conditions.
    (2) Water in stream reaches on-site and downstream of construction areas shall not have substantial visible contrast relative to color, taste, odor, turbidity and sediment deposition from the water in reaches upstream of the construction area.
    (3) Sediment laden runoff shall not be allowed to enter any water body and result in deposition on the bottom of the water body, degrade its natural biological function, or be deleterious to the classified usage of the water.
C. All erosion and sediment control measures shall be constructed prior to beginning any land disturbance activities. All runoff from disturbed areas shall be directed to sediment control devices. These devices shall not be removed until the disturbed land areas are stabilized.
D. Specific guidance.
    (1) Exposure restrictions. No more than 10 acres of unprotected soil shall be exposed at any one time. Previous earthwork shall be stabilized in accord with approved design standards and specifications referenced in Subsection D(8) before additional area is exposed.
    (2) Grading. Perimeter grading shall blend with adjoining properties.
    (3) Vegetative protection. Where protection of trees and/or other vegetation is required, the location shall be shown on the erosion control plan or on the drawings for the proposed development project. The method of protecting vegetation during the construction shall conform to the design specifications reference in Subsection D(8).
    (4) Drainage control.
        (a) Surface runoff that is relatively clean and sediment free shall be diverted or otherwise prevented from flowing through areas of construction activity on the project site. (This will greatly reduce sediment loading in surface runoff.)
        (b) A fill associated with an approved temporary sediment control structure or permanent stormwater management structure shall not be created which

causes water to pond off0-ste on adjacent property, without first having obtained ownership or permanent easement for such use form the owner of the off-site or adjacent property.

(c) Natural drainage channels shall not be altered. Pursuant to Article 15 of the Environmental Conservation Law, a protected stream and banks thereof shall not be altered or relocated without the approval of the Department of Environmental Conservation.

(d) Runoff from any land disturbing activity shall not be discharged or have the potential to be discharged off-site or into storm drains or into water courses unless such discharge is directed through a properly designed, installed and maintained structure, such as a sediment trap, rot retain sediment on-site. Accumulated sediment shall be removed when it takes up 60% of the storage capacity of the sediment retention structure. (See Subsection D98 below for design specifications.)

(e) For finished grading, adequate gradients shall be provided so as to prevent water from standing on the surface of lawns for more than 24 hours after the end of a rainfall, except in a swale flow area which may drain as long as 48 hours after the end of rainfall.

(f) Permanent swales or other point of concentrate water flow shall be stabilized. Biotechnical approaches using certain types of grasses, such as reed canary grass, are preferable to using sod, gabions and riprap where water quality enhancement is a high priority and the swale design allows. However, sod, gabions, or riprap may be used to stabilize swales where soils and gradient preclude the use of grasses. Use of grasses may require an erosion control matting as provided for in the design specification reference in Subsection D(8) below.

(g) Surface lows over cut and fill slopes shall be controlled as provided for in the design specification for vegetating waterways reference in Subsection D(8).

(5) Timing

(a) Except as noted below, all sites shall be seeded and mulched with erosion control materials, such as rye grass, straw mulch, jute, or excelsior (wood shavings), within 15 days of initial disturbance. Of construction has been suspended, or sections completed, areas shall be seeded immediately and stabilized with erosion control materials. Maintenance shall be performed as necessary to ensure continued stabilization.

(b) For active construction areas, such as borrow or stockpile areas roadway improvements and areas within 50 feet of a building under construction, a perimeter sediment control system consisting, for example, of silt fencing or hay bales, shall be installed and maintained to contain soil.

(c) On cut sides of roads, ditches shall be stabilized immediately with rock riprap or other non-erodable liners, where appropriate, vegetative measures such as sod. When seeding is approved, an anchor mulch shall be used and soil shall be limed and fertilized in accord with recommendations referenced in Subsection D(8).

(d) Permanent seeding shall optimally be undertaken in the spring from April 1 through June 15, and in late summer from August 1 to October 15. During the peak summer months an in the fall after October 15 when seeding is found to be impracticable, an appropriate mulch shall be applied. Permanent seeding may be undertaken during summer if plans provide for adequate watering of the seedbed.

(e) All slopes steeper than 15%, as well as basin or tap embankments, and perimeter dikes shall, upon completion, be stabilized with sod, seed and anchored straw mulch, or other approved stabilization measures. Areas outside of the perimeter sediment control system shall not be disturbed. Maintenance shall be performed as necessary to ensure continued stabilization.

(f) Temporary sediment trapping devices shall be removed within 30 calendar days following establishment of permanent stabilization in all contributory drainage areas. Stormwater management structures used temporarily for sediment control shall be made permanent within this time period as well. Accumulated sediments removed from temporary sediment traps or permanent stormwater management facilities shall be disposed in a manner so as not to erode and enter a water body.

(6) Stream corridor management. The bed and banks of all on-site and off-site streams which may be impacted by land clearing, grading, and construction activities shall be protected to prevent sedimentation, stream bank erosion, stream enlargement, or degradation or loss of fisheries habitat. Measures of protecting the bed and/or banks of a stream may include gabion baskets, riprap, log cribbing, or a vegetative measure. Whenever possible, vegetative stream bank stabilization practices, such are recommended over structural practices, such as riprap and gabion linings that may unnecessarily alter the existing stream ecosystem. Native species of vegetation shall be used for stream bank stabilization where practical. In undertaking stream bank stabilization activities for protected streams, the applicant shall comply with appropriate protection of water revisions in Article 15 of the Environmental Conservation Law of the State of New York.

(7) Maintenance.

(a) All points of construction ingress and egress shall be protected to prevent the deposition of materials onto traversed public thoroughfares either by installing and maintaining a stabilized construction entrance or by maintaining a vehicle wash area in a safe disposal area to wash vehicle shells and undercarriage. All materials deposited onto public thoroughfares shall be removed immediately. Proper precaution shall be taken to assure that the removal of materials deposited onto public thoroughfares will not enter catch basins, storm sewers or water bodies.

(b) Accumulated sediment shall be removed when 60% of the storage capacity of sediment retention structures is reached. All removed sediment shall be disposed of in a spoil area where it can be graded, mulched and seeded to prevent erosion and sedimentation.

(8) Design specifications. The designs, standards and specifications for controlling erosion and sedimentation found in the most recent version of the following publication are acceptable for use and shall be identified and shown in the erosion control plan: New York Guidelines for Urban Erosion and Sediment Control, Urban Soil Erosion and Sediment Control Committee.

54-12 Performance bond.

A. In order to ensure the full and faithful completion of all construction activities related to compliance with all conditions set forth by the Town Planning Board in its approval of the erosion control plan, the Town Planning Board may require the applicant and/or the applicant's contractor to provide, prior to construction, a performance bond, escrow account certification, or irrevocable letter of credit from an appropriate financial or surety institution which guarantees satisfactory completion of the project and names the Town as the beneficiary. The security shall be in an amount to be determined by the Town Planning Board based on submission of final design plans, with reference to actual construction costs.
B. Where erosion and sediment control facilities are to be operated and maintained by the applicant or by any person or entity that owns or manages a commercial or industrial facility, the applicant, prior to construction, may be required to provide the Town with a performance bond or an irrevocable letter of credit from an appropriate financial institution or noted surety to ensure proper operation and maintenance of all erosion control facilities for the life of the project.
C. The performance bond or letter of credit shall remain in force until the surety is released from liability by the Town.
D. Per annum interest on the performance bond or letter of credit shall be reinvested in the account until the surety is released from liability.
E. If the developer or owner fails to properly operate and maintain erosion and sediment control facilities, the Town may draw upon the account or notify the surety to cover the costs of proper operation and maintenance.

54-13 Enforcement.

A. Any development activity that is commenced without first being granted an erosion control permit, or which is conducted contrary to an approved erosion control plan, or contrary to the performance standards listed in *54-11 hereof may be issued a notice of violation and restrained by a stop-work order issued by the Code Enforcement Officer.
B. Service of a notice of violation shall be sufficient if directed to the owner, agent of the owner or contractor and left at his or her last known place of business or residence, if within the municipality; and if no place of business or residence can be found, then the notice shall be served by posting in a conspicuous place on the premises which is the subject of the violation.
C. A stop-work order shall also be issued on the project if any of the following conditions are not met during development of the land:

(1) There shall be no increase in turbidity that will cause a substantial visible contrast to natural conditions;
(2) There shall be no suspended, colloidal and settleable solids that will cause deposition or impair waters in the area for their best usages; and
(3) There shall be no residue from oil and floating substances, visible oil film, globules, or grease (6 NYCRR, Part 703, Surface Water and Groundwater Quality Standards and Groundwater Effluent Limitations).

D. Civil and criminal penalties. In addition to or as an alternative to any penalty provided herein or by law, any person who violates the provisions of this chapter shall be punished by a fine of not less than $200 per day nor more than $1,000 per day or by imprisonment for a period not to exceed 60 days, or both such fine and imprisonment. Such person shall be guilty of a separate offense for each day during which the violation occurs or continues.
E. Any violator may be required to restore land to its undisturbed condition. In the event that restoration is not undertaken within a reasonable time after notice, the Town may take necessary corrective action, the cost of which shall become a lien upon the property until paid.

54-14 Appeals

Any person aggrieved by the action of any official charged with the enforcement of this chapter, as the result of the disapproval or approval of an erosion control permit or an alleged failure by the Code Enforcement Officer to properly enforce the chapter in regard to a specific application, shall have the right to appeal the action to the Town Zoning Board of Appeals. The appeal shall be filed in writing within 20 days of the date of official transmittal of the final decision or determination to the applicant, shall state clearly the grounds on which the appeal is based, and shall be processed in the manner prescribed for hearing administrative appeals under state/local code provisions.

54-15 Variances.

The Town Zoning Board of Appeals may grant a written variance from any requirement of this chapter using the following criteria:

A. There are special circumstances applicable to the subject property or its intended use; and
B. The granting of the variance shall not result in:
(1) An increase or decrease in the rate or volume of surface water runoff;
(2) An adverse impact on a wetland, watercourse or water body;
(3) Degradation of water quality; or
(4) Otherwise impair attainment of the objectives of this chapter.

Appendix N

Model Ordinances for Steep Slopes

Land Conservation Regulations (Town of Livonia, NY)

Steep Slopes Ordinance (Town of Cortland, NY)

New York
Law
Open Space Preservation, Natural Resource Protection, Scenic Resources, Historic Preservation, Floodplain Regulation, Erosion & Sedimentation Control, Steep Slope Protection, Watershed Protection
EPA Region 2
Municipality- Town of Livonia
Land Conservation

Summary

This law outlines the Town's procedure for creating Land Conservation Areas, and for protecting these areas from potentially harmful development. These areas were created on the basis of a soil and existing land use survey, and have been grouped in to seven categories, which include: natural forest/woodland, wetland, steep slope, floodplain, major scenic overlook, stream corridor, watershed and sites of historical/archaeological significance.

Law

Town of Livonia NY Land Conservation
Code of the Town Of Livonia NY
Chapter 150: Zoning
Article VII: Regulations Applicable to All Zoning Districts

General Code

§ 150-68. Land conservation.

A. Intent. The purpose of this land conservation section is to delineate and help to protect areas in Livonia where substantial development of the land, including changing the character or use of, may cause ecological harm, create a public health or safety problem or degrade significant community features, such as scenic views or sites of historic or archaeological significance. Special or unusual conditions of topography, drainage, soil permeability, floodplain or other natural conditions and the lack of proper facilities or improvements may result in the land not being suitable for development at the present time.

B. Derivation. Land conservation areas in Livonia have been derived generally on the basis of soils and existing land use studies and data and have been mapped to identify the following specific conservation areas: natural forest/woodland, wetland, steep slope, floodplain, major scenic overlook, stream corridor, watershed and sites of historical/archaeological significance. The above mapped conservation areas are official supplemental guides to the Zoning Map to be used by Livonia in ascertaining

what special conditions, if any, should be imposed or precautions taken before allowing development to proceed.

C. Procedure for processing zoning permits using conservation areas maps. Whenever an application is made for a zoning permit in Livonia, the Code Enforcement Officer shall proceed as follows:

(1) Identify the approximate location of the proposed building site and/or use and check to see if the site is situated in one or more of the mapped conservation areas.

(2) If the applicant's proposed development or use is found to be located well outside of any identified conservation area shown on the supplemental map Editor's Note: The supplemental map is on file in the Building and Zoning Department. , the Code Enforcement Officer may issue a zoning permit, provided that all other requirements and conditions of the chapter are met.

(3) If the applicant's property is found to be located completely or partially within one or more of the mapped conservation areas or bordering thereon, the Code Enforcement Officer shall accompany the applicant to the site to confirm the exact location and existing physical conditions.

(4) If the Code Enforcement Officer confirms the location of the proposed development and/or use within any of the conservation districts, the activity proposed shall be subject to review by the Joint Planning Board in accordance with the site plan review requirements of Article XIV and the standards of this section.

D. The following is a list of the mapped land conservation areas and relevant review standards.

(1) Forest/woodland.

(a) Whenever possible, the site plan shall be so designed as to minimize the number of trees 30 feet and over in height which would have to be removed or would otherwise disturb the forest floor.

(b) Activities, such as subdivisions, campgrounds, mobile home parks and most commercial or industrial uses, shall be guided in their layout by a qualified forester or landscape professional.

(2) Wetland.

(a) Development activities in wetland and wetland buffer areas shall be regulated by state and federal permit requirements.

(b) The development and/or use shall be designed so as not to disturb the natural function and process of the wetland.

(3) Steep slope.

(a) The site plans submitted to the Joint Planning Board for review shall be prepared by a licensed architect or professional engineer and engineered specifically for the steep slope where the building will be placed.

(b) Architectural design of the house or structure shall be such as to minimize the amount of cutting into the embankment, general grading and removal of vegetative cover. A rectangular-shape structure which can be placed parallel to the contour of the hill and/or designing a cantilevered structure for maximum exposure above the ground is acceptable.

(c) Location of driveway, walkway, accessory buildings and structures and general grading shall minimize disturbance of steep slope areas and potential for erosion.

(d) Terracing, sodding, planting and the construction of retaining walls shall be performed as found necessary.

(4) Floodplain. In accordance with National Flood Insurance specifications and Chapter 80 of the Code of the Town of Livonia or Chapter 93 of the Code of the Village of Livonia, the following conditions shall apply:

(a) Structures shall be designed and anchored to prevent the flotation, collapse or lateral movement of the structure or portion of the structure due to flooding.

(b) Construction materials and utility equipment that are resistant to flood damage shall be used.

(c) Construction methods and practices that will minimize flood damage shall be used.

(d) Adequate drainage shall be provided in order to reduce exposure to flood hazards.

(e) Public utilities and facilities shall be located on the site in such a manner as to be elevated and constructed to minimize or eliminate flood damage. Such utilities and facilities include sewer, gas, electrical and water systems.

(5) Major scenic overlook.

(a) No identified major scenic overlook shall be seriously threatened by any proposed new construction if the Joint Planning Board determines that a reasonable alternative exists. This may include the modification of the architectural design or relocation of the building site.

(b) If no reasonable alternative, as defined in Subsection D(5)(a) above, exists, site plan review approval may be withheld up to but no longer than 120 days, during which time a municipal agency or a philanthropic organization can be given the opportunity to preserve the site by acquisition or other means.

(6) Stream corridor. These regulations shall apply to streams shown on the Livonia base map and to any major drainageway.

(a) No new public road or private road shall be located within 25 feet of the mean high-water mark except for such portions as are necessary for

crossing the stream. Where alternative access to the other side of the stream is available, new crossings shall be discouraged.

(b) New structures, except for fences, bridges and fishing parking areas, shall not be constructed within 25 feet of the mean high-water mark.

(c) A buffer strip consistent with the following standards shall separate all new structures, except fences, bridges and fishing parking areas, from the stream.

Slope of Land	Degrees from Horizontal (feet)	Width of Buffer Strip in Critical Area from Mean High Water Mark
		50
10	6	90
20	12	130
30	17	170
40	23	210
50	26	250
60	31	290
70	35	330
80	39	370
90	42	410

Source: Hartung, R.E., and Kress, S.W,; Woodlands of Northeast, United States Department of Agriculture (USDA), Soil Conservation Service (SCS), and Forest Service, Philadelphia, Pennsylvania, 1977.

(d) New structures and roads shall be designed and constructed in accord with erosion control standards and stormwater control standards contained in the supplemental stream conservation resource document. Refer to erosion and sediment control best management practices (BMP's) and stormwater management BMP's from pages 65 to 93 in Chapter 6 of the New York State Department of Environmental Conservation (NYSDEC) Stream Corridor Management Manual.

(e) Within the buffer strip identified hereunder, woody shrubs and trees shall be retained sufficient to maintain the stability of the stream bank and to minimize stream bank erosion and direct runoff. Forest management roads or skid trails shall not be allowed inside the mean high-water mark, except at necessary stream crossings, and they shall be allowed at a distance from the mean high-water mark that is consistent with the following criteria for establishing buffer strips for logging areas.

Slope of	Degrees From	Width of Buffer Strip for

Land	Horizontal	Logging Areas (feet)
		50
10	6	50
20	12	65
30	17	85
40	23	106
50	26	125
60	31	145
70	35	165
80	39	185
90	42	205
100	45	225

Source: Hartung, R.E., and Kress, S.W,; Woodlands of Northeast, USDA, SCS, and Forest Service, Philadelphia, Pennsylvania, 1977.

(f) To protect the water quality, bed and banks of a stream from the impacts associated with logging, no more than 1/3 of the timber will be removed in a ten-year period within the buffer strip designated under Subsection D(6)(e) above. A professional timber harvesting program is required, including restoration measures for disturbed land and skid trail. A letter of credit may be required if deemed necessary by the governing board.

(g) Diseased vegetation and rotten or damaged trees or other vegetation presenting safety, environmental or health hazards may be removed. Firewood for personal use may be removed, within the limits of Subsection D(6)(f) above.

(7) Conesus and Hemlock Lake Watersheds.

(a) New structures shall be designed and constructed in such manner as to avoid undue adverse environmental impacts and in accord with erosion control standards and stormwater control standards contained in the supplemental stream conservation resource document. Refer to erosion and sediment control best management practices and stormwater management best management practices from pages 65 to 93 in Chapter 6 of the NYSDEC Stream Corridor Management Manual.

(b) Storm sewer outlets shall not be made directly to lakes, impoundments, streams or their tributary watercourses, without other treatment as specified in current engineering design criteria. Provision shall be made to discharge to the surface at least 100 feet from lakes, impoundments, streams and their tributary watercourses.

(c) The dumping of more than two cubic yards of snow removed from streets, road and parking areas directly into lakes, reservoirs, impoundments or streams is prohibited.

(d) Animal wastes.

[1] No concentration of animal wastes from an agricultural operation, including but not limited to manure piles, feedlots, barnyards and yarding areas, shall be located within a linear distance of 250 feet from any lake, reservoir, impoundment or watercourse.

[2] Barnyards, feedlots, yarding areas and manure piles shall be separated from streams and water bodies by ditches or surface grading to prevent their runoff from entering streams and water bodies.

[3] Drainage from barnyards, feedlots, yarding areas or manure piles shall not be discharged directly to a lake, reservoir, impoundment or watercourse. Such drainage shall be dispersed over the surface of the ground at a minimum distance of 250 linear feet from any lake, reservoir, impoundment or watercourse.

[4] Provision shall be made for satisfactory disposal of milk house waste either by surface or subsurface irrigation that prevents any discharge to any lake, reservoir, impoundment or watercourse. Such facilities shall be located at least 100 linear feet from the lake, reservoir, impoundment or watercourse.

(e) Industrial sludge and toxic chemicals. Toxic chemicals shall not be buried in the soil, spread upon the surface of the ground or allowed to enter surface waters.

(f) Fertilizer use.

[1] Open storage of chemical fertilizers for commercial use is prohibited.

[2] Fertilizer use for all applications shall be in accordance with best management practices.

(g) Pesticide and herbicide use.

[1] Use of lakes, reservoirs or streams for makeup water or washing of equipment is prohibited.

[2] Pesticides and herbicides shall be used in accordance with label instructions.

(h) Stockpiles.

[1] Storage of chloride salts is prohibited within a linear distance of 500 feet of a lake, reservoir, impoundment or watercourse, except in weatherproof buildings or watertight vessels.

[2] Calcium chloride shall be used instead of sodium chloride where

possible to limit sodium input to area waters.

(i) All land-disturbing activity, including general construction, highway construction, access road construction and maintenance, is prohibited except where remedial measures have been put in place to minimize erosion and sediment production as per the standards of the Livonia Design Criteria and New York State Guidelines for Stream Corridor Management and Erosion and Sediment Control.

(8) Sites of historic or archaeological significance. No sites of historic or archaeological significance shall be seriously threatened by any proposed new construction if the Joint Planning Board determines that a reasonable alternative exists. This may include the modification of the architectural design or relocation of the building site.

Appendix B – Steep Slope Model

TOWN OF _____

ARTICLE _____ - STEEP SLOPE REGULATIONS

Section 1. Title.

Steep Slope Regulations and Districts - Amendment to the _____ Zoning Ordinance of the Town of _____.

Section 2. Purpose and Intent.

The purpose of the Steep Slope Regu1ation is to protect and manage slopes with grades of 15% or more in order to:

A. Minimize erosion, pollution and environmental damage;

B. Reduce soil, pavement and building subsidence;

C. Ensure proper emergency access;

D. Comply with New York State Pollution Discharge Effluent System (SPDES) permit requirements; and

E. Preserve and enhance, to the extent practicable, public scenic views as identified in the Comprehensive Plan for the Town of _____ therefore,

Include subsection E only if the municipality has identified such views

Section 3. General Provisions.

A. Steep Slopes Area Designation. The Town of _____ has adopted as part of its Official Town Zoning Map, the Steep Slopes Overlay District. This district identifies and categorizes lands exhibiting slopes in three categories: 1) less than l5%; 2) between 15% and 50%; and 3) greater than 50%.

B. No construction, grading, excavation or other development, except for non-tillable farming purposes, is permitted on any land with slope of fifty percent (50%) or greater. Any construction, grading, excavation, or other development of land with a slope of more than fifteen percent (15%) but less than fifty percent (50%) shall conform to these Steep Slope Regulations. An exception is granted for farming purposes using standard farming practices.

C. No driveway, vehicular access lane, or private road may be constructed that exceeds 15% slope for more than 5% of its total length.

D. Any parcel that falls in whole or in part in a Steep Slope Overlay District shall be considered to contain steep slopes any construction, grading, excavation, or other development on such a parcel shall require a Steep Slopes Permit. Determination of the status of a particular parcel shall be made by the Code Enforcement Officer.

E. Submission Requirements. Applicants for Steep Slope Permits shall submit the following information in writing to the Code Enforcement Officer (CEO) to begin the review process:

Note: Towns may wish to modify these submission requirements; however consistency throughout the watershed can help developers understand the regulations.

1. Development in steep slope areas requires the minimum lot size for that district plus any additional acreage that may be needed to comply with proper engineering requirements.

2. Plans to minimize flooding by maintaining storm water runoff to pre-development levels. Strict adherence to the technical standards (see Section 3, Subsection H) shall be required.

3. Plans to limit the amount of pollution transported by storm water at predevelopment levels.

4. Plans to minimize decreases in groundwater recharge and stream base flow.

5. Plans to maintain existing stream and drainage geometry.

6. Plans to minimize and control erosion and sedimentation

F. Verification of compliance with the requirements of the NYS Department of Environmental Conservation State Pollutant Discharge Elimination System (SPDES) General Permit for Construction Activities General Permit (GP) 02-01 or as amended or revised.

G. A plan prepared by a licensed professional engineer showing and certifying the following:

1. All existing and proposed natural and artificial drainage courses and other features for the control of drainage, erosion and water.

2. The calculated volume and velocity of water run-off from the slopes and from the lot in question, as unimproved.

3. The calculated volume and velocity of water run-off from the slopes and from the lot in question, as improved.

4. The existence, location, and capacity of all natural and artificial drainage courses and facilities within five hundred feet (500') of the lot, which are or will be used to carry or contain the water run-off from the slope and the lot.

5. The effect of any increased water run-of on all adjacent properties and any other property which will be materially affected by increased water run-off and infiltration.

6. Subsurface geology and hydrology that would impact the proposed development or downstream or adjacent properties.

H. Technical Standards

1. For the purpose of this zoning law, the following documents shall serve as the official guides and specifications for stormwater management. Stormwater management practices that are designed and constructed in accordance with these technical documents shall be presumed to meet the standards imposed by this law:

    a. *The New York State Stormwater Management Design Manual* (New York State Department of Environmental Conservation, most current version or its successor, hereafter referred to as the Design Manual)

    b. *New York Standards and Specifications for Erosion and Sediment Control*, (Empire State Chapter of the Soil and Water Conservation Society, 2004, most current version or its successor, hereafter referred to as the Erosion Control Manual).

Section 4. Erosion and Stormwater Control.

A. A Stormwater Pollution Prevention Plan (SWPPP) for development in the Steep Slope Overlay District shall be submitted to the Town of _____ in connection with any application for a Site Plan, Subdivision proposal, Building Permit, Special Use Permit or Variance. (Note: a SWPPP may be required for development in the town not falling within the Steep Slope Overlay District criteria)

B. A Stormwater Pollution Prevention Plan (SWPPP) shall contain provisions to control erosion and sedimentation and reduce the impacts of stormwater; stormwater infiltration and runoff from the site based on best management practices. The objective of such practices is to maintain or reduce the impact of stormwater, stormwater infiltration and run-off from the site and to prevent soil erosion. Such practices are described in the technical standards (see Section 3, Subsection H).

Alternative principles, methods and procedures may be used with prior approval of the Town of _____ based upon a favorable recommendation from all of the following: 1) Town Engineer (staff)/Town's Consulting Engineer; 2) County Soil and Water Conservation District; 3) Canandaigua Watershed Inspector

Wherever possible, erosion shall be prevented by minimizing disturbance to existing land cover. The Stormwater Pollution Prevention Plan (SWPPP) shall contain the following:

1. Background information about the scope of the project, including location, type and size of project.

2. Site map/construction drawing(s) for the project, including a general location map. At a minimum, the site map should show the total site area; all improvements; areas of disturbance; areas that will not be disturbed; existing vegetation; on-site and adjacent off-site surface water(s); wetlands and drainage patterns that could be affected by the construction activity; existing and final slopes; locations of off-site material, waste, borrow or equipment storage areas; and location(s) of the stormwater discharges(s);

   [Site map should be at a minimum 1:100 or greater detail (e.g. 1:50 is greater detail than 1:100)]

   Note: Towns can require maps in greater detail.

3. Description of the soil(s) present at the site;

4. Construction phasing plan describing the intended sequence of construction activities, including clearing and grubbing, excavation and grading, utility and infrastructure installation and any other activity at the site that results in soil disturbance. Consistent with, and in addition to, the *New York Standards and Specifications for Erosion and Sediment Control* (Erosion Control Manual), not more than one-quarter (1/4) acre shall be disturbed at any one time unless pursuant to an approved SWPPP.

5. Description of the pollution prevention measures that will be used to control litter, construction chemicals and construction debris from becoming a pollutant source in stormwater runoff;

6. Description of construction and waste materials expected to be stored on-site with updates as appropriate, and a description of controls to reduce pollutants from these materials including storage practices to minimize exposure of the materials to stormwater, and spill prevention and response;

7. Temporary and permanent structural and vegetative measures to be used for soil stabilization, runoff control and sediment control for each stage of the project from initial land clearing and grubbing to project close-out;

8. A site map/construction drawing(s) specifying the location(s), size(s) and length(s) of each erosion and sediment control practice;

9. Dimensions, material specifications and installation details for all erosion and sediment control practices, including the siting and sizing of any temporary sediment basins;

10. Temporary practices that will be converted to permanent control measures;

11. Implementation schedule for staging temporary erosion and sediment control practices, including the timing of initial placement and duration that each practice should remain in place;

12. Maintenance schedule to ensure continuous and effective operation of the erosion and sediment control practice;

13. Name(s) of the receiving water(s);

14. Delineation of SWPPP implementation responsibilities for each part of the site;

15. Description of structural practices designed to divert flows from exposed soils, store flows, or otherwise limit runoff and the discharge of pollutants from exposed areas of the site to the degree attainable; and

16. Any existing data that describes the stormwater runoff at the site.

Note to Towns adopting this zoning amendment: the State model law mandates that commercial developments of 1 acre or more disturbance and residential developments of 5 acres or more disturbance include all 24 items in this list of SWPPP components. All other developments needing a SWPPP need only provide items 1-16. The Canandaigua Lake Watershed Land Use Subcommittee (LUSC) recommends lowering the State's threshold for SWPPP components. The LUSC recommends that all development (commercial and residential) within the Steep Slope Overlay that disturbs 1 acre of more must include all 24 items on its SWPPP; all development (commercial and residential) that disturbs between 0 and 1 acre must include items 1-16. Towns adopting this zoning amendment can ultimately set the thresholds at their discretion as long as they are equal to or more stringent than the State model.

17. Description of each post-construction stormwater management practice;

18. Site map/construction drawing(s) showing the specific location(s) and size(s) of each post-construction stormwater management practice;

19. Hydrologic and hydraulic analysis for all structural components of the stormwater management system for the applicable design storms

20. Comparison of post-development stormwater runoff conditions with pre-development conditions

21. Dimensions, material specifications and installation details for each post-construction stormwater management practice;

22. Maintenance schedule to ensure continuous and effective operation of each post-construction stormwater management practice.

23. Maintenance easements to ensure access to all stormwater management practices at the site for the purpose of inspection and repair. Easements shall be recorded on the plan and shall remain in effect with transfer of title to the property.

24. Inspection and maintenance agreement binding on all subsequent landowners served by the on-site stormwater management measures.

C. The Town of _____ Planning Board shall refer the Stormwater Pollution Prevention Plan (SWPPP) to a qualified engineering consultant and/or to the County Soil and Water Conservation District for professional advice concerning compliance of the plan. The Town of _____ shall not approve the Special Use Permit, Site Plan or Subdivision Application unless it finds that the Stormwater Pollution Prevention Plan (SWPPP) complies with this section.

Section 5. Review Process.

To the extent practicable, Steep Slopes Permit reviews shall run concurrently and be coordinated with other local approvals.

A. Pre-application Sketch Plan: The applicant is encouraged to present a sketch plan of the proposal to the Planning Board for informal review and discussion. The Planning Board is not authorized to and shall not take any formal action on sketch plans.

B. Final Decision: Findings of fact must be made by the Planning Board for all decisions to approve, deny, or modify steep slope permits. “Findings” are a written description of facts relevant to and in support of the decision made and shall be made part of the public record. No Steep Slopes Permit shall be granted unless it is consistent with this zoning law.

C. Provisions for Inspection: A Steep Slopes Permit may be approved only after physical inspections of the property have been made by the Town at the times and in the manner described below. The applicant shall arrange with the Town of _____ Code Enforcement Officer (CEO) for scheduling of the following inspections:

1. Initial inspection: prior to final approval of the requested Steep Slopes Permit.

2. Erosion Control Inspection; to ensure erosion control practices are in accordance with the approved plan.

3. Bury Inspection; prior to backfilling of any underground drainage or stormwater conveyance structures.

4. Final Inspection: when all work, including construction of stormwater management facilities, has been completed.

5. Annual Report: for any development that includes permanent post-construction stormwater facilities, the owner shall maintain a maintenance record and submit it

annually to the CEO. The CEO retains the right to access and inspect such facilities.

Section 6. Sureties

A. Completion of Work: To ensure compliance with all requirements of an approved permit, the Town Board may require the applicant to provide a performance guarantee or surety, prior to construction in the form of a performance bond, escrow account certification, or irrevocable letter of credit from an insured financial institution. The guarantee shall be for the full cost of all work to be performed on the property subject to the permit and shall be payable solely to the Town of _____. The Town Board shall determine the amount based on the final design plans and actual construction costs.

B. Maintenance of Facilities: Where stormwater management and erosion control facilities are to be operated and maintained by the developer, or by a corporation that owns or manages the development, the Town Board shall require the developer to provide the Town of _____ with a performance guarantee/surety in the form of a performance bond, escrow account certification, or irrevocable letter of credit from an insured financial institution, payable to the Town of _____ to ensure maintenance of all stormwater management and erosion control facilities which have been approved for the Steep Slopes Permit during the life of the facility.

C. Duration: Sureties will remain in force until the Town of _____ releases the responsible party from liability. All accrued interest in any surety account shall be reinvested to the benefit of the account and may be applied only to the purposes originally established for the surety until the Town of _____ releases the responsible party from liability.

D. Compliance Failure: If the developer or owner fails to perform as required under the permit, the Town of _____ may draw any portion of the amount guaranteed for the purpose of work in default under the permit. If the developer, owner or other named responsible party fails to maintain facilities as required, the Town of _____ may draw any portion of the amount guaranteed to pay the costs of operation and maintenance of permitted facilities.

E. Costs: In addition to application fees, the costs of reviewing plans by legal, engineering, planning consultants, and outside agencies, and inspecting sites for compliance, shall be paid by the applicant.

Appendix O

Model Junk Yard Ordinances

Model Junkyard Ordinance, James Coon Local Government Technical Series

Junk Storage Model Law (Town of Groveland, NY)*

*As included in the *Protecting Water Resources through Local Controls and Practices: An Assessment Model for New York Municipalities* Guide, prepared by the Genesee Finger Lakes Regional Planning Council.

Controlling Junk

JAMES A. COON LOCAL GOVERNMENT TECHNICAL SERIES

NEW YORK STATE
Andrew M. Cuomo
Governor

DEPARTMENT OF STATE
Cesar A. Perales
Secretary of State

This publication is the result of a cooperative effort by the following:

NEW YORK STATE TUG HILL COMMISSION
DULLES STATE OFFICE BUILDING
317 WASHINGTON STREET
WATERTOWN, NY 13601-3782
http://www.tughill.org

NEW YORK STATE DEPARTMENT OF STATE
99 WASHINGTON AVENUE
ALBANY, NEW YORK 12231-0001
http://www.dos.ny.gov

Revised 2010
Reprint Date: 2012



Contents

PAGE

1. Introduction 1

2. The State Motor Vehicle Junkyard Law - General Municipal Law §136 2

   A: Applications for a Motor Vehicle Junkyard License 2
   B: Applicability of State Motor Vehicle Junkyard Law 4
   C: Enforcement of State Motor Vehicle Junkyard law 4
   D: State Environmental Quality Review Act 5

3. The New York State Uniform Fire Prevention and Building Code 6

4. Other State Programs Relevant to Junkyards 7

   A: Automobile Recyclers 7
   B: Dismantler's Permit 7
   C: Junk Dealer's License 8

5. Regulating Junk by Local Law 8

   A: Environmental Review of Proposed Law 9
   B: Enforcing a Local Junkyard and Junk Storage Law 9
   C: Contents of a Local Junkyard Law 10
   D: Contents of a Local Junk Storage Law 26

6. Appendices 32

   A: Sample Application for a Junkyard Permit 33
   B: Sample Notice to Comply 34
   C: Fire Protection of Outdoor Storage 35
   D: General Municipal Law §136 36

7. Endnotes 40

1 Introduction

The accumulation of junk can reduce property values, be an eyesore and an attractive hazard to children, and be a potential health risk. Unfortunately, the inadequate disposal of junk is a problem that predates the birth of the nation. The problems associated with junk motor vehicles are a more recent phenomena. In the early 1960s, soaring new car production coupled with plummeting demand for automobile scrap metal by the steel industry led to an epidemic of abandoned cars nationwide. By 1965, thirty-five states either had or were considering state junkyard legislation. In September of 1965, New York State adopted a State junkyard law that is still applicable in many communities today.

In adopting the State statute discussed later in this publication, the State Legislature found that a "clean, wholesome, attractive environment" was of key importance to inhabitants of New York. At the same time, the Legislature recognized that commercial junkyard and salvage operations are necessary services that can contribute to the local economy and provide a controlled place for the disposal of certain items. Balancing the health and aesthetic impacts associated with allowing junkyards against the public need for junk and salvage operations has largely been left to city, town and village officials.

This publication was prepared to inform municipalities of the options available to them to control the accumulation of junk motor vehicles as well as other household debris. A municipality may use statutory authority to adopt local regulations requiring junkyards to be licensed. These regulations can limit the potential location of a new junkyard if the applicant is unable to meet separation or other requirements. In addition, the location of junkyards may also be limited through zoning. A municipality may also adopt junk storage regulations that address household debris and other clutter, not just abandoned motor vehicles and their parts. A municipality that chooses not to adopt local regulations may enforce the provisions contained in the State's motor vehicle junkyard law, as well as the New York State Uniform Fire Prevention and Building Code (Uniform Code). The pertinent parts of the Uniform Code, presented in Section Three of this publication, address the storage of junk motor vehicles and provide fire safety provisions related to debris in the yard. The State motor vehicle junkyard law, discussed in section two, applies to the accumulation of two or more junk motor vehicles, but not to other kinds of junk, such as old refrigerators or bicycles. It sets up a process for the review and issuance of junkyard licenses by local governing boards. Most automobile junkyard operators will also need a State-issued dismantler's permit, which is discussed in Section Four of the publication.

Section Five of this publication contains a discussion of the procedures to be followed by municipalities for controlling motor vehicle junkyards using local laws or ordinances; issues that should be considered when developing a local junkyard or junk storage law; guidance as to provisions that could be included in a law regulating motor vehicle junkyards or simply household debris stored in the open; and sample administrative forms.

2 The State Motor Vehicle Junkyard Law: General Municipal Law §136

The State motor vehicle junkyard law applies in any municipality that has not enacted its own law regulating junk motor vehicles. General Municipal Law (GML) §136 directs that no person shall operate, establish or maintain a junkyard until that person has obtained a license to do so and has obtained a certificate of approval for the location of the junkyard. A person who has a junkyard or wishes to establish one must follow the procedures in GML §136 unless the municipality has its own law or ordinance regulating motor vehicle junkyards. The State defines a "junk yard" in GML §136 as:

> *". . . any place of storage or deposit, whether in connection with another business or not, where two or more unregistered, old, or secondhand motor vehicles, no longer intended or in condition for legal use on the public highways, are held, whether for the purpose of resale of used parts therefrom, for the purpose of reclaiming for use some or all of the materials therein, whether metal, glass, fabric or otherwise, for the purpose of disposing of the same or for any other purpose; such term shall include any place of storage or deposit for any such purposes of used parts or waste materials from motor vehicles which, taken together, equal in bulk two or more such vehicles . . ."*

This broad definition encompasses many of the activities common to motor vehicle junkyards, but limits the application of the statute to those places where two or more inoperable, unregistered "motor vehicles" are stored or deposited. Its lack of application to tire piles or hubcap collections is an example of how limiting the language is, as those items do not "equal in bulk two or more such vehicles . . .". A municipality may apply this section of the law to property where such vehicles are stored, regardless of whether the vehicles are being kept for resale or for personal use. The term "motor vehicle" is defined as "all vehicles propelled or drawn by power other than muscular power originally intended for use on public highways."[1] This excludes manufactured homes and trailers, as well as all-terrain vehicles (ATVs) and snowmobiles. It could, however, include stock cars.

A *Applications for a Motor Vehicle Junkyard License*

The process of licensing a motor vehicle junkyard under GML §136 is initiated by a written application made by the prospective junkyard owner to the governing board of the municipality (town board, village board of trustees, or city council) for a junkyard license and a certificate of approved location. The application for a license to operate a junkyard must include a description of the land to be used as the junkyard. If a community has zoning regulations, the application must be accompanied by a certificate from the local zoning board of appeals that the proposed location is not within a zoning district that prohibits such uses or that the proposed location is otherwise contrary to zoning.[2]

Upon receipt of the application, the governing board must schedule a public hearing to discuss the application. The hearing must be held not less than two or more than four weeks from the date that the governing board receives the application. Notice of the hearing must be mailed to

the applicant and published in a newspaper having a circulation in the municipality at least seven days in advance of the hearing.[3]

The statute provides that a $25 license fee must be paid to the municipality by the applicant at the time of application for the license and certificate of approved location. This fee must be returned to the applicant if the application is denied. If the license is issued, the fee must be paid annually. In addition to the $25 license fee, the municipality is authorized to charge the applicant for the cost of advertising the application and for the other reasonable costs associated with conducting the hearing.[4]

At the public hearing, the governing board shall hear from the applicant and "all other persons" who wish to be heard regarding the application. The board must take into consideration the factors below before issuing or denying a license to operate a junkyard and a certificate of approved location.

For a License to Operate:

- the applicant's ability to comply with the fencing requirements of the General Municipal Law or other reasonable local regulations; and
- a record of prior or existing willful violations of the statute.[5]

For a Certificate of Approved Location: [6]

- whether, in a community with zoning, the zoning board of appeals has certified that the property is in a zone that permits the use;
- proof of legal ownership or the right to use the property where the junkyard is to be located;
- the nature and development of the surrounding properties;
- whether the proposed location can be reasonably protected from affecting the public health and safety by reason of offensive or unhealthy odors or smoke or of other causes; and
- information contained in the environmental assessment form (EAF).

Aside from the factors that a governing board must take into consideration when issuing a junkyard license, the statute entitles it to take into account the goal of a clean, wholesome and attractive environment. The governing board may consider the following aesthetic factors: [7]

- the type of roads servicing the site or from which the site may be seen;
- the proximity of the proposed junkyard to residential and recreational areas or to major routes leading to these areas;
- the reasonable availability of other sites; and
- the types of barriers that can be used to screen the proposed junkyard site from view.

Before granting a license and certificate of approved location, the municipality must be assured that the junkyard is, or will be, surrounded by a fence at least eight feet high that is placed no nearer than 50 feet away from any public highway.[8] The fence must have a gate that is closed and locked when the junkyard is not supervised, and it must "substantially screen" the contents of the junkyard from outside view.[9] The statute allows the governing board, in its discretion, to vary the fencing requirements where topography or vegetation provide adequate screening. Substantially all junkyard activities must take place within the enclosed area.[10]

Within two weeks of closing the public hearing, the governing board must either grant or deny the license and certificate sought. The applicant must be given written notice of the decision by mail. If the application is approved, the license and certificate must be issued by the municipality, and will remain in effect until the following April 1st. It should be noted that both the license and certificate are issued to the applicant, and are not transferable to another party.[11]

An applicant must apply for a license renewal on an annual basis. A hearing may be required if (1) the applicant has not complied with all provisions of GML §136 and the previously issued license during the license period; (2) if the junkyard has become a public nuisance under the common law; or (3) if the applicant is convicted of any type of larceny or the receiving of stolen goods. A decision by the municipal governing board may be appealed to the State Supreme Court to review the municipal decision.



Applicability of State Motor Vehicle Junkyard Law

General Municipal Law §136 applies in cities (except New York City), towns and villages that have not adopted any ordinance or local law (including zoning laws) that license or regulate motor vehicle junkyards.[12]

If a city, town or village adopts its own local law or ordinance to license or regulate junkyards, as that term is defined by GML§136, then §136 will not apply, and may not be used as a basis for enforcement against an unlicensed motor vehicle junkyard operator.[13] This rule applies whether or not the local law or ordinance is more or less restrictive than GML§136.[14] The exception to this statement is subdivision 14 of GML§136, which applies at all times. It prohibits the establishment of motor vehicle junkyards where any part or yard of the junkyard is within five hundred feet of "a church, school, hospital, public building or place of public assembly."[15]

Does GML§136 apply if a local government has adopted zoning? The language of the statute indicates that it applies even if a local government has enacted zoning, as long as the zoning regulation does not "license or regulate" junkyards. In practice, it may be difficult to assess whether a zoning law that permits junkyards in certain districts and not in others would be deemed to "regulate" that use. For local governments with zoning, a less ambiguous approach to regulating junkyards would be to adopt a separate local law or ordinance regulating junk.[16]

Even where the junkyard predates the enactment of the local junkyard law, owners must have applied for a license for the junkyard within sixty days from the passage of the State law, and are subject to fencing requirements and other requirements of the law.[17]



Enforcement of State Motor Vehicle Junkyard Law

If a junkyard (as defined by GML§136) is operating without the required license or certificate of approval, or the junkyard is not in compliance with the license or certificate of approval, the municipality has the authority to seek enforcement under General Municipal Law §136. The municipality should identify by local law the public officers authorized to enforce the provisions of GML§136. While the building inspector or zoning enforcement officer is frequently authorized to enforce GML§136, another officer of the municipality may be charged with enforcing it.

A violation of GML§136 is prosecuted in the local criminal courts (justice courts, city courts, or on Long Island, district courts). Effective prosecution requires knowledge of criminal procedure, including the various methods for properly commencing a proceeding in the local criminal courts. The statute limits the remedy to a fine of $100 for each week the violation continues.



State Environmental Quality Review Act

When a municipal board reviews an application for a junkyard, whether it is a motor vehicle junkyard under GML §136 or a junkyard as defined by local law or ordinance, the provisions of the State Environmental Quality Review Act (SEQRA) must be complied with. SEQRA applies to the granting of applications for licenses required by local, as well as to licenses and certificates under GML§136(4), since such applications involve discretionary approvals that may affect the environment by changing the use, appearance or condition of land.

Though no reported case has directly addressed the issue, it would appear that since the *reissuance* of a license does not involve a discretionary decision, the reissuance would be classified as a Type II action exempting the action from SEQRA.[18] Therefore, SEQRA would not apply to applications involving pre-existing or established junkyards unless the junkyard will be substantially increased in size or expanded in function.

Generally speaking, an applicant must complete an Environmental Assessment Form (EAF) which is reviewed by the governing board, assuming the governing board is the only involved agency. Based on the EAF and other relevant information, the governing board will then determine whether the proposed junkyard may have a potentially significant adverse impact on the environment. If the governing board determines there won't be a potentially significant adverse impact on the environment, the governing board issues a "negative declaration" and the SEQRA process is complete.[19] If not, a "positive declaration" is issued and a draft environmental impact statement (DEIS) must be prepared. The DEIS is used to analyze the impacts of the junkyard application, as well as alternatives and mitigation measures to reduce environmental impacts.

The application for a junkyard permit is not complete until the board has either issued a negative declaration or has accepted the DEIS as satisfactory with respect to scope, content and adequacy. The public hearing may then be held.

A detailed discussion of SEQRA's procedures and substance can be found on the New York State Department of Environmental Conservation website. (http://www.dec.ny.gov/permits/6208.html) The website also contains guides on assessing visual impacts and stormwater run-off, common environmental concerns associated with junkyards.

3 The New York State Uniform Fire Prevention and Building Code

The New York State Uniform Fire Prevention and Building Code (the Uniform Code) prescribes minimum standards for both fire prevention and building construction. It is applicable in every municipality of the State except the City of New York. All property owners must comply with the Uniform Code, with some limited exceptions discussed below.[20] The Uniform Code provisions dealing with junk and property maintenance are contained in The Property Maintenance Code. The exterior property section includes a section on junk cars:

> §302.8 Motor vehicles. Except as provided for in statute or other regulations, two or more inoperative or unlicensed motor vehicles shall not be parked, kept or stored on any premises, and no vehicle shall at any time be in a state of major disassembly, disrepair, or in the process of being stripped or dismantled. Painting of vehicles is prohibited unless conducted inside an approved spray booth.
>
> Exception: A vehicle of any type is permitted to undergo major overhaul, including body work, provided that such work is performed inside a structure or similarly enclosed area designated and approved for such purposes.

This provision regulates the parking or storage of inoperative or unlicensed motor vehicles where a municipality has not adopted a local law or ordinance addressing junk motor vehicles. If a municipality adopts a local junk car law or ordinance, the restrictions of §302.8 would not apply in that municipality as the Uniform Code would defer to the provisions of the local law. For example, some local laws allow more than one inoperative or unlicensed motor vehicle if the vehicles belong to a member of the armed services or if the vehicle is an antique car undergoing restoration. It is also the opinion of the New York State Department of State Codes Division that §302.8 does not apply to unlicensed vehicles used by farm operations in a county adopted, State certified, agricultural district.[21]

Another part of the Uniform Code, the Fire Code, addresses the outdoor storage of materials. While it does not address junk yards as such, several fire safety provisions within the Fire Code apply to related issues, such as those dealing with the storage of combustible materials (Chapter 3), the ability to provide fire protection (Chapter 5), and tire storage (Chapter 25).

4 Other State Programs Relevant to Junkyards

Many other sections of the State statutes and regulations impact junkyards and junk dealers. Examples from the Environmental Conservation Law, Vehicle and Traffic Law, and General Business Law are below.

A *Automobile Recyclers*

In addition to establishing SEQRA regulations, the Department of Environmental Conservation (DEC) regulates aspects of the automotive recycling industry to ensure protection of the environment. The subjects of regulation include disposal of waste fluids, control of storm water runoff, tank registration, refrigerant reclamation, waste tire storage, waste battery storage, open burning, solid waste disposal, and storage of used oil. DEC has published a guide on its website entitled, "Environmental Compliance and Pollution Prevention Guide for Automobile Recyclers." http://www.dec.ny.gov/chemical/28650.html
Where serious environmental problems are suspected, a municipality should contact the regional office of the Department of Environmental Conservation.

Disposal of waste tires is an important solid waste issue facing automobile recyclers. According to the Department of Environmental Conservation (DEC), "[W]aste tires pose a significant environmental threat to public health and the environment. Waste tire piles provide a breeding ground for mosquitoes, which may carry disease, and also present a serious fire hazard."[22] State law prohibits the storage of 1,000 or more waste tires without a permit. This requirement includes both whole tires and pieces of tires, as well as used tires being held for resale. Used tires that are still on rims and bolted on the automobiles (up to four per vehicle) are not regulated and do not count as part of regulatory threshold of 1,000 waste tires.[23]

B *Dismantler's Permit*

Regardless of whether a municipality has a junkyard law, persons owning and operating a junkyard may need to obtain a dismantler's permit from the New York State Department of Motor Vehicles, Division of Vehicle Safety Services under Vehicle and Traffic Law §415-a.[24] This permit is required where the permittee will be a vehicle dismantler, defined in the statute as "any person who is engaged in the business of acquiring motor vehicles or trailers for the purpose of dismantling the same for parts or reselling such vehicles as scrap," or will be undertaking any of the other activities relating to the salvage of vehicles which are regulated. Since many junkyard business owners engage in those activities, they will also need to apply for a dismantler's permit from the State.

A local government has limited involvement in the dismantler's permit process. The applicant for a dismantler's permit must first provide a copy of a license, issued by the municipality, evidencing that the business conforms to all local laws and ordinances, as well as conforming to GML §136 when it applies in the municipality.[25]Alternatively, the applicant may provide a statement from the local governing body that the business may operate at its location and that no local law license or permit is required. The statement must be on municipal letterhead and must contain the printed name, signature and title of the official preparing it.[26]

The New York State Department of Motor Vehicles is charged with administering and enforcing dismantler's permits, and if notified will send an inspector to the site of a possible unpermitted operation.[27] Acting as a dismantler without a permit from the State is a violation of Vehicle & Traffic Law §415-a (1), and carries criminal penalties.



Junk Dealer's License

Article 6 of the New York State General Business Law requires that a person who is engaging in the business of buying or selling old metal obtain a junk dealer license from the chief elected official of the municipality. An exception is made for people who have obtained a scrap processing license under Article 6-C of the General Business Law. The junk dealer's license expires on June 30th of each year and costs five dollars to renew. No person who has been convicted of larceny or knowingly receiving stolen property may receive such a license.



Regulating Junk by Local Law

In addition to the State programs and laws which have been adopted to combat the ill effects of unregulated junk, municipalities may adopt their own local laws, ordinances and programs. This exercise of 'home rule' power enables the municipality to tailor a law to meet its own needs, and to exert greater (or lesser) control over the accumulation of junk.[28] Specifically, the municipality can more broadly define "junk" beyond simply motor vehicles, such as including industrial scrap metal or household debris, enabling it to control most situations where junk is accumulated.

A municipality may adopt zoning to regulate the location and operation of junkyards. Closer scrutiny of junkyard applications may be done through review of a special use permit, a zoning tool, or through review of a site plan application, which may even be used by communities that have not adopted zoning. Municipalities may also adopt business licensing laws, including the licensing of junkyards, junk dealers and dealers in second hand articles. Applicants for a license to operate a junkyard would have to meet the requirements of the local law, which could be less or more restrictive than the state junkyard law. The business of collecting and selling junk is addressed in the ***sample junkyard local law*** which follows. Municipalities with county adopted, State certified agricultural districts may want to exempt farm operations from the application of junk storage laws, as such defined junk vehicles often have many viable agricultural purposes on farms. For more information, see the New York State Agriculture and Markets publication entitled "Guidelines for Review of Local Laws Affecting Junk, Litter and Junkyards." http://www.agmkt.state.ny.us/AP/agservices/guidancedocuments/305-aJunk_Junkyard%20Guidelines.pdf

Rather than dealing with business concerns, municipalities may need to address more general issues which stem from inadequate storage or disposal of litter, debris, and junk. Many State statutes give municipalities the authority to address property maintenance issues such as trimming of shrubs and lawns, repair of fences, and similar aesthetic, health and safety issues through the enactment of local laws and ordinances or the adoption of municipal clean-up programs. The

sample junk storage law which follows, illustrates one approach to the municipal regulation of messy yards.

Local laws are filed with the Secretary of State on forms available from the Department of State (DOS) or its website. http://www.dos.ny.gov/forms/corporations/0239-f-l.pdf The publication, "Adopting Local Laws" http://www.dos.ny.gov/LG/publications/Adopting_Local_Laws_in_New_York_State.pdf is also available on the DOS website.



Environmental Review of Proposed Law

The adoption of a local junkyard or junk storage law or ordinance is an "action" under the State Environmental Quality Review Act (SEQRA).

The municipal governing board is responsible for preparing or overseeing preparation of an environmental assessment form (EAF) and determining whether the adoption of the proposed local law or ordinance may have a significant adverse impact on the environment. The municipal governing board would use the EAF to determine whether adoption of the proposed law or ordinance may have a significant adverse impact on the environment. The issuing of a "positive declaration" would require the preparation of a draft environmental impact statement (DEIS) by the legislative body.

The DEIS is used to analyze the impact or impacts of the proposed law or ordinance, as well as proposing alternatives and mitigation measures to reduce the identified environmental impacts. A detailed discussion of the SEQRA procedures and substance can be found on the New York State DEC website.



Enforcing a Local Junkyard or Junk Storage Law

Although the goal of any local law should be voluntary compliance, such compliance does not always occur. Where a party fails or refuses to comply with the local law, the local enforcement officer should follow the procedures specified in the local junkyard law, junk storage law, or the law which was enacted to enforce the Building Code.[29]

A local law may provide for criminal or civil enforcement or both. Criminal enforcement, assuming the local law provides for criminal penalties, takes place in the local criminal courts. Except in Long Island and New York City, the local criminal courts are the city courts and town and village justice courts. Criminal remedies include fines or prison time or both.

Civil remedies, if provided for in the local law, may include fines, or injunction, or both. An injunction is a court order requiring a person to do, or refrain from doing, a particular act. For example, an injunction may restrain an unlawful junkyard from continuing to operate. Injunctions may be issued by the New York State Supreme Court and city courts.

In some instances, local laws may also provide for a 'self-help' civil remedy. The authority to enact a 'self-help' provision derives from the constitutional delegation of police power authority to municipalities and the Municipal Home Rule Law.[30] Additionally, Town Law §64(5-a) authorizes towns to compel removal of debris at the owner's expense, and Town Law §130(16) authorizes the use of self-help provisions relating to unsafe buildings.[31] Self-help provisions allow the

municipality to take direct action to remove offending material from the property, upon the owner's failure to do so after proper notice. The cost of the removal may be assessed against the property. Among the issues the municipality may need to address is the question of where material would be disposed of, and the legal issues surrounding due process and the Fourth Amendment protection against unreasonable searches and seizures.[32]

Where a local junkyard license has been issued, but the requirements and conditions of the license are violated, enforcement measures may include the revocation of the license or permit. Due process requires that the permit holder receive notice and have an opportunity to be heard prior to permit revocation. The person in violation of the permit needs to receive notice of the hearing. At the revocation hearing, the board should listen to the permit holder and all other persons wishing to be heard on the revocation of the junkyard permit. If the board decides to revoke a permit, the reasons for such revocation should be stated in the board minutes. The permit holder should be immediately notified of the revocation by certified mail. The notification should direct the operator to cease and desist from operating a junkyard, and to remove all junk appliances, junk furniture, junk mobile homes, junk vehicles and materials originating from those items from the premises within a stated number of days.



Contents of a Local Junkyard Law

A community may wish to regulate the placement of junk within junkyards, and license and control these facilities. The sample language which is included is intended to illustrate possible provisions of a junkyard law. This sample is not aimed at controlling the other kinds of junk that can be accumulated by residential users, that topic is covered by the junk storage law sample language.

Municipal officials seeking to adopt junkyard regulations should consider to what degree residents of the community may wish the upkeep of private property to be regulated. Officials are encouraged to consult with legal counsel in the drafting of the proposed local law or ordinance.

The adoption of a local junkyard law is often a response to problems arising from an existing use. While illegally operating junkyards may be eliminated through enforcement action, it is also possible for a municipality to terminate existing legal junkyards located in a part of the municipality no longer considered appropriate for a junkyard. An amortization provision, which allows the owner a phase-out period during which his or her investment in the property may be recouped, is often enacted as part of a junkyard control law. In enacting such a law, the municipality must carefully consider whether the amortization period is adequate in relation to the investment. It should also consider the harm caused by the yard, the difficulty of relocating a junkyard, and other factors.[33] When considering the length of the amortization period, the Court of Appeals has recognized that the critical question is whether the public gain achieved by the exercise of the police power outweighs the private loss suffered by owners of nonconforming uses.[34]

The samples here use general terms, such as "municipality" and "governing board," whereas the local law a community may adopt should use specifics, such the "Town of Smallville" or the "Village Board of Trustees." The samples are not all-inclusive, but are instead intended to guide you as you prepare your own local law.

OUTLINE OF A JUNKYARD LAW

ARTICLE A. INTRODUCTION
Section 1. Authority
Section 2. Title
Section 3. Purpose
Section 4. Definitions

ARTICLE B. JUNKYARD PERMIT
Section 1. Permit Required
Section 2. Prior Existing Junkyards

ARTICLE C. APPLICATION PROCEDURE
Section 1. Application
Section 2. Application Fee
Section 3. Junkyard Application Contents
Section 4. Environmental Compliance
Section 5. Public Hearing
Section 6. Board Action
Section 7. Issuance of Permit
Section 8. Waivers

ARTICLE D. EXCLUSIONS
Section 1. Restoration Permits
Section 2. Seasonal Vehicle Permit
Section 3. Vehicle For Sale Permits

ARTICLE E. GENERAL CONSIDERATIONS

ARTICLE F. SPECIFIC REQUIREMENTS
Section 1. Location
Section 2. Fencing and Screening
Section 3. Fire Safety
Section 4. Approved Junkyard Items
Section 5. Burning and Burying

ARTICLE G. ADMINISTRATION AND ENFORCEMENT
Section 1. Enforcement Officer
Section 2. Revocation of Permit
Section 3. Operating a Junkyard Without a Permit
Section 4. Penalties and Remedies
Section 5. Abandoned Vehicles

ARTICLE H. MISCELLANEOUS PROVISIONS
Section 1. Severability
Section 2. Prior Existing Junkyard Law
Section 3. Effective Date

Sample Provisions

ARTICLE A: INTRODUCTION

Section 1. Authority

The enacting clause is specifically stated in Municipal Home Rule Law, Section 20(2). This quoted wording must appear in every local law. Failure to include an enacting clause renders a local law invalid.

> ***Be it enacted by the (name the legislative body) of the (name of local government) as follows:***

Section 2. Title

The introduction to the law should contain a reference to the authority under which the law is being adopted, as well as its title.

> ***This local law is adopted pursuant to the authority granted the municipality in Section 10 of the Municipal Home Rule Law and in [Section 130(6) of the Town Law or Section 4-412(1) of Village Law].***

Section 3. Purpose

The purpose of the regulations is also an important part of the local law. Common reasons for enacting such a law are shown.

> ***The purpose of this law is, through the regulation of junkyards, to promote a clean, wholesome, and attractive environment; protect the community from potential hazards to property and persons; protect water resources; preserve the aesthetic qualities of the municipality; prevent depreciation of the property on which a junkyard is located and the property of other persons in the neighborhood and the community; and to further the goals of the comprehensive plan***.

Section 4. Definitions

Another important component in the introduction article of a junkyard law is the definition section. Defining crucial terms helps make the law more enforceable and more understandable to average citizens.

> ***Enforcement Officer: The person(s) appointed by the governing board to enforce the provisions of this law.***
>
> ***Junk Appliance: Any household appliance, including but not limited to, a stove, washing machine, dryer, dishwasher, freezer refrigerator, air conditioner, water heater, or television, which is stored outside of any residence or structure.***
>
> ***Junk Furniture: Abandoned, discarded, or irreparably damaged furniture including, but not limited to, sofas, lounge chairs, mattresses, bed frames, desks, tables, chairs, and chests of drawers.***
>
> ***Junk Manufactured Home: Any abandoned or discarded structure, or part thereof, transportable in one or more sections, which, in the traveling mode, is eight body feet or more in width or forty body feet or more in length, or, if erected on a site, is three hundred twenty or more square feet, and which is built on a permanent chassis and designed to be used as a dwelling with or without a permanent foundation when connected to the required utilities, and includes the plumbing, heating, air conditioning, and electrical systems contained therein. To qualify as a junk manufactured home, the dwelling must meet two out of three of the following conditions for six months or more:***

(1) the electrical service is disconnected or terminated.
(2) it is abandoned as a dwelling unit.
(3) it is no longer habitable for residential occupancy.

Junk Accessory Vehicle: Any abandoned or discarded truck camper, camping trailer, camper, travel trailers, pop-up trailer, tent trailer or overnight trailer.

Junk Storage Area: The areas of any real property used or intended to be used for the placement, storage or deposit of one or more of the following: junk appliances, junk furniture, junk mobile homes, and junk motor vehicles.

Laws that require proof of intent for their enforcement are more difficult to enforce since it is hard to prove what is on someone's mind (though it can be show circumstantially). In *People v. Scott*, the Court of Appeals said, "Minimum due process requires that the prohibition must 'be spelled out in words even more explicitly, so that the citizen may receive unequivocal warning before conduct otherwise innocent be made the cause of fine or imprisonment' [citation omitted]. Standing alone, 'inoperative' does not satisfy that requirement."[35] The inclusion of presumptive language will help make the definition even more explicit.

Junk Motor Vehicle: Any motor vehicle or used parts or waste materials from motor vehicles which, taken together, equal in bulk one or more such vehicle, which is:

(1) unlicensed or unregistered; or
(2) abandoned, wrecked, stored, discarded, dismantled, or partly dismantled; or
(3) not in condition for legal use upon the public highways.

The fact that a motor vehicle does not display a current motor vehicle registration or license plate shall be presumptive evidence that such motor vehicle is not in condition for legal use upon the highways.

With respect to any motor vehicle not required to be licensed or a motor vehicle not usually used on public highways, the fact that such motor vehicle is not in condition to be removed under its own power shall be presumptive evidence that such motor vehicle is a junk motor vehicle unless refuted by verifiable and credible proof.

The municipality must determine how much junk is sufficient to regulate property as a junkyard. Note that the definition below specifies that a junkyard involves outside storage. Therefore, a vehicle that can not be legally operated on the highway could be maintained on the property as long as it is stored inside.

Junkyard: The outdoor storage or deposit of any of the following, whether in connection with another business or not:
(1) ___ or more junk motor vehicles.

(2) ___ or more junk mobile homes.
(3) ___ or more junk appliances.
(4) ___ or more pieces of junk furniture.
(5) Any combination of the above that totals ___ or more items.

The definition of "motor vehicle" could also be expanded to include watercraft, construction equipment, and trailers.

Motor Vehicle: All vehicles propelled or drawn by power other than muscular power originally intended for use on public highways, including but not limited to automobile, bus, trailer, truck, tractor, motor home, motorcycle, and mini-bicycle. This term shall also include an all-terrain vehicle or snowmobile.

Outdoor Storage: Storage other than in a completely enclosed structure, such as a garage or barn.

Owner of Motor Vehicle: A person, other than a lien holder, having possession or title to a motor vehicle. The term includes a person entitled to the use and possession of a motor vehicle subject to a security interest in another person and also includes any lessee or bailee of a motor vehicle having the exclusive use thereof, under a lease or otherwise, for a period of greater than thirty (30) days.

Person: An individual, partnership, association, corporation, or entity of any other kind.

ARTICLE B: JUNKYARD PERMIT

Section 1. Permit Required

It is not enough to define what a junkyard is, a municipality must also regulate whether one may be established. A clear statement identifying when a permit is required should be made. Through zoning, a municipality may regulate the location of junkyards within the community.

No person shall establish or maintain a junkyard or permit the storage of junk unless a permit has first been issued for such junkyard pursuant to this law. No person shall license, lease or knowingly allow the use of real property for a junkyard unless a permit shall have been issued for such junkyard pursuant to section ___ of this law.

Section 2. Prior Existing Junkyards

The municipality can inventory existing property that falls into the definition of a junkyard. The local law may require existing junkyards to apply for a temporary permit within a limited time span. The enforcement officer can begin enforcement proceedings against those who fail to apply for the permit, and track whether those who do apply for the temporary permit come into compliance with the new law. The inventory that is assembled can also be used if a municipality decides after a period of time to eliminate, or amortize, existing junkyards.

Any person maintaining a junkyard pursuant to a license issued under General Municipal Law §136 shall apply for a permit within 60 days of the effective date of this law. If the junkyard does not meet the requirements of this law, a temporary permit shall be granted for a period not to exceed one year, during which time the junkyard shall be brought into compliance with said requirements. If at the end of such period the junk storage area does not comply with said requirements, such person shall cease and desist from maintaining a junkyard and all junk shall be removed from the premises by such person at their expense.

The municipality may decide that there are junkyards operating in undesirable locations. Rather than allowing them to continue under a new permit, the municipality may opt to establish a time period (amortization period) after which a junkyard must cease to exist. This amortization period would apply only to junkyards which are lawfully existing, not to junkyards which haven't received licenses under GML §136 or a prior local junkyard law, or to junkyards which have been established in violation of the zoning law.

Any junkyard that is lawfully existing on the effective date of this local law in a zoning district where junkyards are not a permitted use will be considered a nonconforming use. Such nonconforming use shall be discontinued and all junk shall be removed from the premises within _____ years of the effective date of this law or the nonconformance shall be deemed to have continued in violation of this law. Such period shall be known as the amortization period. The person operating such junkyard may make an application to the governing board within six months of the effective date of this law establishing the due to specific circumstances such amortization period is unreasonable and will result in a substantial loss of investment. The governing board may, after consideration of such application and any evidence provided, grant a reasonable extension of the amortization period. Relevant factors for consideration will include: (1) initial capital investment; (2) investment realization to date; (3) life expectancy of the investment; (4) the existence or non-existence of a lease obligation.

ARTICLE C: APPLICATION PROCEDURE

If a junkyard is allowed, there should also be a mechanism established to ensure that it is operating legally. This is typically done through a permit process. Permits may be issued for a specific term, after which time a renewal can be required.

Section 1. Application

The law should also establish a procedure in which to apply for a junkyard license.

An application for a license under this local law shall be made in writing to the governing board on forms provided by the municipal clerk and be filed with the municipal clerk. The application shall be signed by the applicant(s) and the property owner(s) if different from the applicant.

Section 2. Application Fee

The law should also require payment of appropriate fees and submission of a proposed junkyard plan. While many local laws establish the amount of the fee in the law itself, a better practice is to authorize the fee and indicate that it will established by a resolution of the governing board.

> ***The annual license fee shall be set at the annual organizational meeting of the governing board and paid at the time of the application and annually thereafter in the event of renewal. If the application is not granted, the fee shall be returned to the applicant less the cost of advertising if a hearing is held on such application, and any other reasonable costs incidental to the hearing and clearly attributable thereto. If the license is granted following a hearing, the issuance of such license shall be conditional upon the payment by the applicant (in addition to the application fee) of all costs that may be assessed pursuant to this local law.***

Section 3. Junkyard Application Contents

The junkyard plan should be drawn to scale or indicate all dimensions and show all the items listed in the local law. Examples of such items are shown. The application should also ask for information about the applicants. Examples of possible inquires are shown.

> ***Each person applying for a junkyard license shall complete an application supplied by the municipality and contain the following information:***
> ***(1) A map of the site where the junkyard is proposed, including address and real property tax number drawn at a scale of not more than one inch equals ___ feet;***
> ***(2) property lines including the names of owners of adjacent property;***
> ***(3) streams, lakes, wetlands, flood plains, and other water bodies, including those available for fire protection purposes;***
> ***(4) the topography of the site and any plans for grading the property to be shown at a contour interval of not more than five feet;***
> ***(5) the location of all wells and sanitary facilities on the property or within 100 feet of the boundary of the property;***
> ***(6) drainage patterns on the site;***
> ***(7) existing and proposed structures, including fences;***
> ***(8) roads and easements adjacent to, on or through said property;***
> ***(9) existing and proposed junk storage areas, indicating the type of junk or material which will be stored in each area; and***
> ***(10) existing and proposed access ways, aisles, parking and loading areas.***
> ***(11) the name, residence, address and telephone number of each individual owner, partner, or if a corporation or other organization, each officer and director.***
> ***(12) the trade name, address and telephone number of the business***
> ***(13) a statement as to whether or not the applicant has been convicted of any crime, misdemeanor, or violation of any municipal ordinance, or any violation of Article 6 of the General Business Law.***
> ***(14) the name and address of the owner of the real property and the nature of the right under which the applicant possess the property.***

(15) whether the applicant has obtained a valid junk dealer's license under Article 6 of the New York State General Business Law.

Section 4. Environmental Compliance

The need to comply with environmental laws should also be noted in a local junkyard law.

An environmental assessment form (EAF) shall be completed and submitted with all applications. For unlisted actions, the board may require either a short- or long-form EAF. For Type I actions the applicant shall submit a long-form EAF. If the board determines that the proposed activity may have a potentially significant adverse impact on the environment, the board shall prepare or cause to be prepared a draft environmental impact statement. The application shall not be deemed complete for review until the board has either issued a negative declaration or accepted a DEIS as satisfactory with respect to scope, content and adequacy.

Section 5. Public Hearing

The licensing process should include a public hearing. The board may determine how many days in advance of the hearing the public notice must published in the newspaper.

The governing board shall conduct a public hearing within 62 days from the date a complete application is received. Notice of the hearing shall be made in a newspaper in general circulation in the municipality at least five days prior to the date of the hearing.

Section 6. Board Action

The responsibilities of the reviewing board should also be established in the local law. If the applicant agrees to extend the time period for the board to make a decision, the board should request a written agreement to that effect.

Within 62 days of the close of said hearing the governing board shall render a decision on the application for a junkyard permit based upon general considerations and the ability to meet the junkyard regulations. The 62 day period may be extended by mutual consent of the applicant and the board. The board shall have the authority to impose reasonable conditions and restrictions as are directly related to and incidental to the proposed junkyard permit.

The board shall make findings related to the standards and purposes set forth in this law, and shall enter such findings into the official minutes. The decision of the board shall be filed in the office of the municipal clerk within five business days from the date it was rendered and the applicant shall be notified of the decision and the reasons for such decision by mail within five business days of the decision of the board. If denied, the board shall include reasons for such denial.

Section 7. Issuance of Permit

The permit should not be issued until the applicant has paid the appropriate fees and expenses.

> ***Upon approval of the junkyard plan and application, and payment of the fees and reimbursable costs due the municipality, the board shall endorse its approval upon a copy of the final junkyard plan and application.***

Section 8. Waivers

The local law may authorize the reviewing board to grant a waiver of certain requirements of the law where they find special circumstances, such as those listed opposite.

> ***The governing board may waive certain requirements of the law if one or more of the following circumstances are met:***
> ***(1) granting the waiver would be in keeping with the intent and spirit of this law, and is in the best interests of the community; or***
> ***(2) denying the waiver would result in undue hardship to the applicant, provided that such hardship has not been self-imposed.***
> ***The governing board shall state the grounds for any waiver granted in the minutes of its decision. The waiver granted should be the minimum necessary to accomplish the purpose.***

ARTICLE D: EXCLUSIONS

The level at which a municipality may want to regulate junk motor vehicles varies. A municipality may choose to allow unlicensed, unregistered vehicles to be kept under certain circumstances. A explanation of what is excluded from the general prohibitions or licensing provisions would need to be provided. When developing exclusions, municipalities need to include relevant definitions. These definitions would be inserted in the definition section of Article A.

> ***The following conditions are hereby excluded from the definition of a junkyard:***
> ***(1) Unlicensed vehicles in operating condition stored by or for the owner while the owner is (a) a full time student of the immediate family attending a school, college, or university; and (b) a member of the United States Armed Forces.***
> ***(2) Seasonal vehicles or machinery during their off-season if kept in a location not visible from any road, street or highway, when practicable, otherwise a seasonal use permit must be applied for and received.***
> ***(3) Farm machinery, including tractors, where such machinery is actively used. Farm machinery kept for parts shall be kept in a location not visible from any road, street or highway.***
> ***(4) An antique or classic motor vehicles which is being restored under the conditions of a restoration permit.***
>
> ***Antique Motor Vehicle - a motor vehicle, but not a reproduction thereof, manufactured more than twenty-five years prior to the current year, which has been***

maintained in or restored to, or will be maintained in or restored to, a condition which is substantially in conformance with the manufacturer's specifications.

Classic Motor Vehicle - a motor vehicle, but not a reproduction thereof, manufactured more than ten years prior to the current year and which because of discontinued production and limited availability, is considered to be a model or make of significant value to collectors or exhibitors and which has been maintained in or restored to a condition which is substantially in conformity with the manufacturer's specifications and appearance.

Section 1. Restoration Permits

To prevent an accumulation of excluded vehicles from becoming a junkyard, or to prevent vehicles from being kept that really don't qualify for the exclusion, the municipality may want to use a permit system. For example, the law could provide for restoration permits.

Upon written application and a fee to be established by resolution of the governing board, the municipal clerk shall issue a permit for the open storage of one motor vehicle or one antique or classic vehicle otherwise prohibited by this local law, pending the making of such repairs as are necessary to place this vehicle in condition for legal operation for use on the public highway or for such use as it was originally intended. Such permit shall be valid only for the vehicle and location identified. Application for a restoration permit shall include the following:

(1) The name, address and telephone number of the applicant. The applicant shall be the owner of the vehicle.

(2) The name, address and telephone number of the owner or tenant of the property where the inoperable, unregistered or junk motor vehicle is stored. If the owner of the motor vehicle is not the owner or tenant of the property where the vehicle is stored, written permission from the owner or tenant of the property must accompany this application.

(3) The make, model, year of manufacture, serial number, and color of the motor vehicle.

(4) The most recent year of registration, state registered in, plate number and registration number.

(5) The expiration date of the most recent inspection and serial number of the inspection sticker.

(6) Identification of who will make the repairs and the location where those repairs will be made.

(7) Certification that the owner intends to restore said motor vehicle within ___ months from the date of the application.

The motor vehicle shall be adequately supported and shall not create a safety hazard while repairs are being made. Any violation will result in the immediate revocation of the restoration permit, and the vehicle shall be subject to the provisions of this junk law. Permits shall be valid for _____ days and may be

renewed for a specific vehicle ____ times for a period of ___ days. A copy of the restoration permit shall be affixed to the interior of the windshield in order that the permit information is visible from the street.

Section 2. Seasonal Vehicle Permit

Many people also keep a vehicle for transportation use during only part of the year, for example a late model car for winter travel or an old pick up truck for snow plowing. An exclusion and permit system could also be established for seasonal vehicles.

Upon written application and a fee to be established by resolution of the governing board, the municipal clerk shall issue a permit for the open storage of one seasonal use vehicle per property, subject to the following conditions:
(1) The vehicle shall be owned by one of the inhabitants of the property.
(2) The vehicle shall have a current registration and inspection sticker permanently attached to the windshield.
(3) The permit shall be issued for not more than 180 days.
(4) The permit shall not be issued if the property has a "for sale" or restoration permit issued for another vehicle.

Section 3. Vehicle For Sale Permits

Many vehicle owners choose to sell their vehicles by themselves, rather than working with a car dealer. To accommodate this means of disposing of personal property while preventing the land from being used as a commercial used car sales lot, the municipality may want to require that a permit be obtained in order to keep an unlicensed and registered vehicle on the lot for sale.

Upon written application and a fee to be established by resolution of the governing board, the municipal clerk shall issue a permit for the open storage of one vehicle for the purpose of offering for sale a vehicle that is currently not registered or licensed or inspected under New York State law subject to the following conditions:
(1) The vehicle shall be owned by one of the inhabitants of the property where the vehicle is being offered for sale.
(2) The vehicle shall be setback from the road so as not to create a visibility hazard.
(3) A copy of the permit shall be affixed to the interior of the windshield in order that the permit information is visible from the street.

ARTICLE E: GENERAL CONSIDERATIONS

The local law should establish general considerations that the governing board will consider in granting or denying a permit. These might include the following.

To protect the clean, wholesome, safe and attractive environment of the community, the municipal board shall take the following factors into consideration in granting or denying a permit:
(1) the type of road servicing the junkyard or from which the junkyard can be seen;
(2) natural or artificial barriers protecting the junkyard from view;

(3) proximity of the site to established residential or recreational areas or main access routes thereto;
(4) the nature and development of surrounding property;
(5) whether or not the proposed location will affect the public health and safety by reason of offensive or unhealthy noise, odors or smoke, or of other causes;
(6) the proximity of flood plains, groundwater supplies, and public water supplies;
(7) local drainage patterns;
(8) the availability of municipal fire protection and the adequacy of the water supply for fire protection purposes;
(9) the comprehensive plan for the municipality;
(10) proximity of the site to established residential or recreational areas;
(11) availability of other suitable sites for the junkyard;
(12) the type of junk to be stored or deposited in the junkyard; and
(13) any record the applicant has of convictions for larceny or receiving stolen property.

ARTICLE F: SPECIFIC REQUIREMENTS
To better control the location, appearance, and activities associated with the junkyard, a local law may also list specific requirements.

Section 1. Location
In addition to repeating the limitations on location pursuant to GML §136 (14), the local law might establish other distance requirements.

No junk storage area shall be located within 500 feet [or greater] from the following: any adjoining property line; any public park, church, educational facility, nursing home, public building or other place of public gathering; any stream, lake, pond, wetland or other body of water; or the right-of-way of communities that wish to control the accumulation of household waste and debris, and want to simply ban the accumulation of junk within public view, may choose to adopt a local junk storage law. This approach would allow property owners to accumulate junk out of view of the road or neighboring properties.

Section 2. Fencing and Screening
To shield the junkyard from public view, fencing and screening requirements may be listed. The fencing provision could also allow a waiver where topography or other natural conditions effectively prohibit the entrance of children and others to the junkyard.

Options on the type of fencing or screening may also be written into the law. Instead of a fence, the permitted screening could be accomplished by adequate planting of evergreen trees or shrubbery, provided that a sufficient setback of the junk storage area from the highway is established.

The applicant shall erect and maintain a fence that is ___ feet high, encloses the entire junkyard, contains a locking gate that is adequate to prohibit the entrance of children and others into the area of the activity or business, and contains within the fence all junk appliances, junk furniture, junk mobile homes, junk motor vehicles and materials originating from such items.

Where a junkyard is or would be visible from a public highway or from neighboring properties, the fence would be made of wood or other materials sufficient to totally screen the junkyard from view of roadways or neighboring properties.

Section 3. Fire Safety

Because of the flammable nature of many of the items contained in a junkyard, a municipality may want to provide for a fire break and for safe access on the site for fire vehicles. Several suggestions are contained in Appendix C. An additional example is opposite.

Inside, adjacent to and continuous with the fence or enclosure, one strip of land at least ten feet in width which shall be kept free of all dry grass, junk, plant growth, or other combustible material so as to provide a fire lane or break around the entire area where business activity is conducted.

Section 4. Approved Junkyard Items

The municipality may also explicitly limit the type of junk that is deposited in the junkyard. The governing board can specify in the junkyard permit which types of junk may be stored or deposited in the junk storage area, and the local law should state that no items shall be stored in any junk storage area other than those items specified on a junkyard permit.

The governing board shall specify in the junkyard permit which types of junk may be stored or deposited in the junk storage area. No items shall be stored in any junk storage area other than those items specified on a junkyard permit approved by the governing board pursuant to this law.

Storage of tires is a special concern. The Department of Environmental Conservation requires a permit for the storage of 1000 or more tires, whether they are whole or shredded. A municipality can regulate lesser amounts of tires.

No person shall knowingly store, dump, litter, dispose of, or otherwise place more than 100 waste tires on private property. The term 'waste tire' shall mean whole tires or portions of tires.

Section 5. Burning and Burying

How the junkyard owner disposes of the junk should also be a concern of the municipality. Both burning and burying of items should only be done in compliance with state law.

No materials shall be burned or buried in a junkyard except in compliance with Article 27 of the Environmental Conservation Law of the State of New York and its implementing regulations promulgated by the New York State Department of Environmental Conservation (Part 360 of Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York or "6 NYCRR Part 360") and any other applicable law or ordinance of the municipality.

ARTICLE G: ADMINISTRATION AND ENFORCEMENT

For a local law to operate successfully, violations of that local law need to be addressed before they become more widespread.

Section 1. Enforcement Officer

A local junkyard law should delegate enforcement responsibility to the governing board.

This law may be enforced by the building inspector, the zoning enforcement officer, or by any police officer of the municipality. Said persons shall have the authority to enforce the provisions of this chapter and to inspect premises within the municipality as necessary for said enforcement. The enforcement officer shall make periodic inspections of the municipality to ensure that all existing junkyards have permits and that the requirements of this law are met.

Section 2. Revocation of Permit

Where the requirements and conditions of a junkyard license are being violated, the license may be revoked. The person in violation of the permit needs to receive notice of the hearing.

The governing board may revoke a junkyard permit upon reasonable cause should the applicant fail to comply with any provision of this law or any condition of the permit. Before a permit may be revoked, a public hearing shall be held by the governing board. Notice of the hearing shall be made in the official newspaper at least five days prior to the date thereof. The permit holder shall be notified of the hearing by written notice prior to the hearing.

Written notice may be served by personal service or through certified mail return receipt requested to the last known address of the property owner or junkyard operator if different than the property owner. Service of such notice shall be made ___ days before the scheduled hearing. When service is made by certified mail return receipt requested, service shall be deemed complete upon delivery of the notice.

In the above examples, the person is personally served or served through the mail by certified mail return receipt requested. The Civil Practice Law and Rules of the State of New York set forth alternative kinds of service, which may be included as part of a local law for those situations where personal service and service by certified mail return receipt requested fail.

Section 3. Operating a Junkyard Without a Permit

Where the enforcement officer finds that a person is operating a junkyard without a permit, the local law should provide a mechanism for getting the violator into court. One simple method is to authorize the enforcement officer to issue an appearance ticket. The violator would then have to appear before the municipal justice. An example is on the right.

> ***If the enforcement officer shall find that an alleged junkyard exists without the necessary permit, the enforcement officer is hereby authorized pursuant to Criminal Procedure Law Section 150.20 (3) to issue an appearance ticket to any person whom the enforcement officer has reason to believe has violated this law, and shall cause such person to appear before the [town/village/city] justice.***

Section 4. Penalties and Remedies

The municipality should consider classifying the offense as a violation, which would avoid the need for a jury trial. Penalties or other remedies may be assessed against persons found in violation of the local junkyard law. In order to discourage repeat offenders and to encourage resolution of the violation, the local law should allow for penalties to be assessed weekly, much like a parking ticket that only gets more costly the longer you wait to pay it.

> ***Any person who shall violate any of the provisions of this law shall be guilty of a violation and subject to the following: (1) a fine not to exceed $350.00 or imprisonment for a period not to exceed fifteen days, or both; or (2) a penalty of $350.00 to be recovered by the municipality in a civil action.***
>
> ***Every such person shall be deemed guilty of a separate violation for each week such violation, disobedience, omission, neglect or refusal shall continue.***

The municipality should also include a provision in the local law allowing it to seek injunctive relief from the Supreme Court.

> ***The municipal board may also maintain an action or proceeding in the name of the municipality in a court of competent jurisdiction to compel compliance with or restrain by injunction the violation of any provision of this law.***

Section 5. Abandoned Vehicles

A municipality may find that a motor vehicle has been abandoned within the municipality. Vehicle and Traffic Law §1224 authorizes municipalities to remove and dispose of motor vehicles found to have been abandoned. A local junkyard law could authorize the enforcement officer to execute all notices and documents required to be given, mailed or filed with the Department of Motor Vehicles or any person. The procedure for enforcing this law should be spelled out.

> ***On notification by a property owner that a motor vehicle has been abandoned on his/her property by other than the owner, the owner's spouse, parents, children or***

entity in which the owner has an ownership interest, the enforcement officer may follow the procedures established in Vehicle and Traffic Law §1224 to achieve the removal of the abandoned vehicles.

ARTICLE H: MISCELLANEOUS PROVISIONS

Section 1. Severability:

To make the local law complete, it should include a "severability" section that prevents the whole law from being struck down just because a part of it is found defective. Such language is standard in many zoning laws. In addition, the law should also repeal existing junkyard laws, as well as indicate an effective date, typically upon filing with the Secretary of State.

If any clause, sentence, paragraph, section or article of this law shall be adjudged by any court of competent jurisdiction to be invalid, such judgment shall not affect, impair or invalidate the remainder thereof, but shall be confined in its operation to the clause, sentence, paragraph, section or article thereof directly involved in the controversy in which such judgment shall have been rendered.

Section 2. Prior Existing Junkyard Law

In addition to severability and effective date provision, the local law should repeal existing junkyard provisions in effect in the municipality.

The following local laws or ordinances are hereby repealed: _____ [list local laws or ordinances which are being repealed] _____.

Section 3. Effective Date:

Unless otherwise stated, a local law becomes effective twenty days after it is filed with the Secretary of State.

This local law shall become effective upon the date it is filed in the Office of the New York Secretary of State.



Contents of a Local Junk Storage Law

The junk storage law outlined here is intended to allow a municipality to regulate the unwanted accumulation of household waste and debris. (Additional provisions could be added to the law that would apply to commercial and industrial properties as well.) This type of regulation may be adopted as a stand alone law or ordinance (except in villages which may only adopt local laws), may be incorporated into a law or ordinance which also regulates junk cars, or may be part of a more comprehensive local property maintenance law or ordinance.

Where the provisions are similar to those included in a junkyard law, they have been omitted in this document for the sake of brevity.

SAMPLE OUTLINE OF A LOCAL JUNK STORAGE LAW

ARTICLE A. INTRODUCTION
Section 1. Authority
Section 2. Title
Section 3. Purpose
Section 4. Applicability
Section 5. Definitions

ARTICLE B. PROHIBITED ACTS

ARTICLE C. EXCLUSIONS

ARTICLE D. ADMINISTRATION AND ENFORCEMENT
Section 1. Enforcement Officer
Section 2. Complaints
Section 3. Notice to Comply
Section 4. Enforcement and Summary Abatement
Section 5 Penalties and Remedies

ARTICLE E. MISCELLANEOUS
Section 1. Severability
Section 2. Prior Existing Junk Storage Law
Section 3. Effective Date

Sample Provisions

ARTICLE A: INTRODUCTION

Section 1. Authority

The same authority for adopting a junk yard law may be used to adopt a junk storage law. Be sure to include the enacting clause as well.

Section 2. Title

Municipal Home Rule Law, Section 20(3) provides that every local law shall embrace only one subject, and that the title shall briefly refer to the subject matter.

> ***This local law shall be known as "A local law regulating junk storage in the [Town, Village, City] of _____."***

Section 3. Purpose

The purposes for adopting a junk storage law are similar to those for adopting a junkyard law.

> ***The Governing Board hereby declares that a clean, wholesome, and attractive environment is of vital importance to the continued general welfare of its citizens, and that regulation of the deposit, accumulation, or maintenance of junk regardless of quantity is hereby prohibited anywhere within sight of persons lawfully traveling the public highways or within sight of neighboring property. By adoption of this law the municipality declares its intent to preserve and promote a reasonable quality of environment and aesthetics and to prohibit actions and conduct that tend to depreciate not only the property on which it is located but also the property of other persons in the neighborhood and the community generally.***

Section 4. Applicability

The municipality may have already adopted other local laws or ordinances which address property maintenance, such as unsafe buildings laws and a junkyard law. This section clarifies how this law relates to those laws.

> ***The provisions of this law shall apply in addition to the provisions of any other local law or ordinance adopted by the municipality. Where there is a conflict the more restrictive provision shall apply.***

Section 5. Definitions

Because the focus of this law is on junk in general, several definitions not used in the junkyard law would typically be included in a junk storage law. If the municipality does not have a separate junkyard law, consider including the following definitions as well: enforcement officer, junk appliance, junk furniture, junk mobile home, junk motor vehicle, motor vehicle, and person.

> ***Garbage: All putrescible animal and vegetable waste resulting from growing, processing, marketing and preparation of food items, including container in which packaged.***
>
> ***Rubbish, Clutter, Litter and Debris: Ordinary household or commercial trash such as paper and paper products, barrels, cartons, boxes, cardboard, cans, glass, metals, machinery, plastics, rubber, crates, furniture, rugs, clothing, rags, mattresses, blankets, cigarettes, tires, lumber, brick, stone and other building materials no longer intended or in condition for ordinary use; and any and all tangible personal property no longer intended or in condition for ordinary and customary use.***

Junk: Worn out or discarded material of little or no value including, but not limited to a junk appliance, junk furniture, junk mobile home, junk motor vehicle or garbage, rubbish and debris.

Outdoor Storage: The placing, maintaining or keeping of junk, rubbish, clutter, litter or debris in a place other than a structure with a roof and fully enclosed on all sides.

ARTICLE B: PROHIBITED ACTS

The local law should clearly state what acts are prohibited.

It shall be unlawful for any person to store, deposit, place, maintain or cause or permit to be stored, deposited, placed or maintained outdoors, any junk, clutter, litter and debris upon private property within the municipality.

A second example is less restrictive, prohibiting the storage of junk only where it is visible from outside of the property.

The deposit, accumulation, or storage of junk, regardless of quantity, is hereby prohibited within sight of persons traveling the public highways or within sight of neighboring property. The provisions of this law shall also be applicable to conditions existing at the time of enactment.

The municipality may also want to address the storage of junk in nontraditional structures, such as buses, uninhabited mobile homes, semi-trailers, and cargo containers.

It shall be unlawful for any person to use a bus, uninhabited mobile home, truck, truck trailer, horse trailer, semi-trailer, tank truck, or similar vehicles or units for the storage of junk on any premises. Exceptions shall be made for the temporary use of such vehicles or units for construction purposes for periods of less than ninety (90) days, or when actively used in connection with active farming or agricultural operations.

ARTICLE C: EXCLUSIONS

An unintended consequence of a junk storage law may be to restrict the storage of ordinary household items or items legitimately placed as part of a commercial operation, such as a licensed junkyard. To avoid confusions, some specific exclusions could be provided.

Article B shall not apply to the storage or placement on the premises of the following material:
(1) Wood intended for consumption in a wood burning stove, furnace or fireplace located in a building on the premises.
(2) Lawn or yard or garden ornaments and implements.
(3) Lawn and patio furniture.
(4) Operable farm, garden and yard machinery and apparatus used on the premises.

(5) Standing fences.
(6) Hoses and sprinklers used for watering lawns or gardens.
(7) Storage or placement and accumulation of materials in connection with a commercial operation duly conducted on the premises where such storage, placement and accumulation is expressly permitted by the laws of the municipality.
(8) Construction materials and equipment used for the construction or renovation of a building on the premises for which a building permit has been issued.

ARTICLE D: ADMINISTRATION AND ENFORCEMENT

Section 1. Enforcement Officer

To be effective, an enforcement officer should be designated by local law to enforce the junk storage law.

This law may be enforced by the building inspector, zoning enforcement officer, or by any police officer of the municipality. Said persons shall have the authority to enforce the provisions of this chapter and to inspect premises within the municipality as necessary for said enforcement.

Section 2. Complaints

A system for handling complaints should be established to address when the accumulation of junk becomes a problem. People should be able to file a complaint with the enforcement officer, who should record and investigate the complaint. The enforcement officer should also be able to investigate any alleged violation that he or she has reason to believe has occurred or is occurring.

Any person may file a complaint with the enforcement officer that a violation of this law may have taken place. The enforcement officer shall properly record and investigate any such complaint. The enforcement officer may also investigate any alleged violation that he or she has reason to believe has occurred or is occurring.

Section 3. Notice to Comply

Following an investigation of the property, the law would authorize the enforcement officer to prepare a written "Notice to Comply" (see Appendix B). The Notice to Comply could be served in the same manner as discussed for the junkyard law.

The written notice to comply should contain the following information:
(1) The name of the owner or occupant to whom the notice shall be addressed.
(2) The location of the premises involved in the violation.
(3) A statement of the facts which it is alleged violates this law.
(4) A demand that the junk be removed or placed so as to be in compliance with the law within a specified number of days after the service or mailing of the notice.
(5) A statement that a failure to comply with the demand may result in prosecution.
(6) A copy of the law.

Section 4. Enforcement and Summary Abatement

As in the case of an unlawful junkyard, the junk storage law should provide a method for getting a violator in court if they fail to comply with the notice. For example, municipalities may by local law authorize the enforcement officer to issue appearance tickets.

> ***The enforcement officer is hereby authorized pursuant to Criminal Procedure Law §150.20(3) to issue an appearance ticket to any person whom the enforcement officer has reason to believe has violated this law, and shall cause such person to appear before the municipal justice.***

Municipalities may find that some violators will refuse to clean up their property. In that situation, the municipality may in certain cases activate a 'self help' procedure specified in their local law. Since a municipality will incur expenses when removing junk from a premises, a statement allowing for recoupment of the costs should also be included in the self-help language. The local law could state:

> ***Upon the failure of an owner, tenant or occupant with notice to correct a violation of the [name of local government], the governing board may hold a public hearing to determine whether the violation constitutes a public nuisance requiring abatement by the municipality. The public hearing shall be held upon notice posted conspicuously on the subject property. The notice shall also be sent to the last known address of the property owner, as it appears on the current assessment records of the municipality, by certified mail, return receipt requested or served on the owner by personal service. Posting and service of such notice shall not be less than 15 calendar days, exclusive of the date of service, prior to the date of the public hearing. The notice shall:***
>
> ***(1) identify the premises as the same appears on the current assessment role;***
> ***(2) contain a statement of the conditions on the property deemed upon inspection to constitute a public nuisance;***
> ***(3) contain a demand that the condition or conditions constituting the public nuisance be immediately abated or removed before the date of the hearing specified in the notice;***
> ***(4) contain a statement that a failure or refusal to comply within the period specified may result in a duly authorized officer, agent or employee of the municipality entering upon the property and abating or removing the public nuisance; and***
> ***(5) contain a statement that the cost and expense of such abatement or removal shall be the responsibility of the owner, tenant or occupant, and, without limitation on the municipality's potential remedies to recoup its expenses, such cost and expense shall be assessed against the described property and shall constitute a lien thereon to be collected as provided by law.***
>
> ***Where the governing board finds, based on substantial evidence in the public hearing record, that the violation or violations amount to a public nuisance requiring abatement by the municipality, the governing board may cause the abatement or removal of the public nuisance. The abatement or removal may be***

performed by the municipality or by its designee, or agent, including a private contractor lawfully engaged and authorized by the municipality. The governing board shall ascertain the cost of removal, and assess such expense against the record owner of the property. The expense so assessed shall constitute a lien in charge on real property on which it is levied until paid or otherwise satisfied or discharged and shall be collected in the same manner and at the same time as other town/village/city charges. The foregoing shall not be construed as a limitation on the municipality's potential remedies to recover its costs.

The removal of any nuisance by the municipality's agents, shall not operate to excuse such owner, tenant or occupant from properly maintaining the premises as required by this law. Such owner, tenant or occupant shall, in addition to the remedies provided herein, be subject any other penalties provided for by this law.

ARTICLE E: MISCELLANEOUS

Section 2. Prior Existing Junk Storage Law

In addition to severability and effective date provision, the local law should repeal existing junk storage provisions in effect in the municipality.

The following local laws or ordinances are hereby repealed: _____ [list local laws or ordinances which are being repealed] _____.

6 Appendices

Appendix A: Sample Application for a Junkyard Permit

Application for Junkyard Permit

OFFICE USE ONLY

Application No. _____
Date of Application: _____
Date of Public Hearing: _____
Date of Final Action: _____
Date Fee paid: _____

Name: _____
Phone: _____
Address:_____
_____
Location of proposed junkyard - address:
_____
_____
County Tax Map Section: _____Block:_____Lot:_____
Is the proposed location of the junkyard within a zoning district which permits junkyards? _____
Is a special use permit required? _____ If yes, has one been granted? _____

Attach the following items:

____ a description of the land to be included within the junkyard.
____ a description of the nature and development of surrounding property.
____ a list of property owners whose property is adjacent to property proposed to be used as a junkyard.
____ proof of legal ownership of the property or right to use the property for a junkyard.
____ a copy of a short environmental assessment form, part 1 completed.
____ payment of the application and permit fee.
A map drawn to scale which includes:
____ the area to be used as a junk storage area, indicating the type of material or junk to be stored in each junk storage area.
____ buildings located or proposed to be located within the junkyard area.
____ the location of proposed entrances and exits from the property.
____ identification of the roads servicing the site.
____ the location of proposed aisles, parking and loading areas within the site.
____ the location of gates, fencing and other barriers.
____ property lines and easements that are within ____ feet of the boundary lines of the area proposed to be used for the junkyard.
____ the location of any places of worship, schools, hospitals, public buildings or other places of public gathering within _____ feet of the boundary lines of the area to be used for the junkyard.
____ identification of any streams or bodies of water within ____ feet of the boundary lines of the area proposed to be used for the junkyard.
____ identification of a water supply available for fire protection purposes.
____ an indication of the existing drainage pattern and proposed drainage pattern after grading.
____ identification of any residential and/or recreational areas within ____ feet of the boundary lines of the area proposed to be used for the junkyard.

Please indicate what types of barriers you propose to use to screen the junkyard._____
_____
Have you ever been convicted of larceny or receiving stolen property? _____
If yes, please indicate when the conviction(s) occurred._____
_____

_____ _____
Applicant's Signature Date

Appendix B: Sample Notice to Comply

Notice to Comply with Junk Storage Law

(name)
(address)
(city, state, zip code)

Dear _____,

According to records of the [Town, Village, City] of _____Assessor, you are the owner of property located at _____*(violation address)*_____. On *(inspection date)*, I observed an apparent violation of the Junk Storage Law/Junkyard Law on your property, specifically: _____ *(description of violation)*_____
_____.

That activity is a violation of Article _____, Section _____ of the Junk Storage Law/Junkyard Law, a copy of which is attached for your information. I hereby request that you either eliminate the violation or file plans with this office for corrective measures by _____*(date)*_____.

If you believe that you are not in violation of the Junk Storage Law/Junkyard Law, please contact this office to review the situation. If you intend to bring your property into compliance with the law, but you cannot meet the stated deadline, please contact this office and we will attempt to work with you on a short extension.

If you do not take the requested action or make other arrangements with this office by *(date)*, we will begin formal enforcement action against you. You will **NOT** receive an additional warning before we begin formal enforcement action.

THIS IS THE ONLY LETTER YOU WILL RECEIVE. Your next communication from us will involve formal enforcement action.

If you wish to discuss any aspect of your case, you can call me at *(phone number)*. Because I am often in the field, the best time to reach me is between *(time and days available)*
.

Sincerely,

_____ _____
(name and title) (date)

Appendix C: Fire Protection of Outdoor Storage

General fire protection recommendations have been offered by the Department of State Office of Fire Prevention and Control, based on recommendations contained within Appendix B- National Fire Protection Association Standard #230 - 1999 "Fire Protection of Storage."

General Items

Emphasis should be placed on:

- Control of potential ignition sources
- Elimination of items that may contribute to fire spread
- Providing favorable physical conditions to reduce fire spread
- Improving on-site fire protection capabilities

Site Considerations

- Availability of municipal fire protection
- Adequate water supply for fire protection purposes
- Adequate all-weather roads for emergency service access
- Sufficient clear space from buildings or other exposure hazards

Proper fencing or other security measures to assure site security

Material Piling

- Materials should be stored as low in height and small in area as practical
- Maximum height should be influenced by stability of pile, effective reach of hose streams, combustibility of material, and ease of pile breakdown
- Long narrow piles are preferred over large square piles
- Aisles should be maintained between piles, piles and buildings, and between piles and property lines
- Aisle width should be at least twice the pile height with a minimum width of 15 feet

Buildings and Other Structures

- Comply with requirements contained within the New York State Uniform Fire Prevention and Building Code

Management Responsibility

- Proper storage practices to prevent undue concentration
- Proper protection based on the hazards presented

Yard Maintenance and Operations

- Free of accumulation of unnecessary combustible materials. Periodic clean up of the yard should occur
- Vegetation and weeds should be controlled
- Electrical equipment and installations should be in accordance with applicable codes and standards
- Use of open fires should be prohibited unless specifically required for the operation. In such a case, adequate safeguards should be in place to prevent ignition of the storage piles
- Smoking should be prohibited except in designated "safe" areas
- Welding and cutting operations should be done in accordance with standard safe practices
- Storage and handling of motor fuels and other flammable or combustible liquids should be in accordance with safe practices
- Repair operations should be adequately separated from storage operations

Fire Protection

- Provision should be in place for prompt notification of fire department
- Provisions should be made for adequate, properly accessible water supply

Adequate portable fire extinguishers shall be provided on site

Appendix D: General Municipal Law §136

§ 136. Regulation of automobile junk yards.

1. Legislative intent. A clean, wholesome, attractive environment is declared to be of importance to the health and safety of the inhabitants and the safeguarding of their material rights against unwarrantable invasion and, in addition, such an environment is deemed essential to the maintenance and continued development of the economy of the state and the general welfare of its citizens. It is further declared that the unrestrained accumulation of junk motor vehicles is a hazard to such health, safety and welfare of citizens of the state necessitating the regulation, restraint and elimination thereof. At the same time, it is recognized that the maintenance of junk yards as hereinafter defined, is a useful and necessary business and ought to be encouraged when not in conflict with the express purposes of this section.

2. Definitions.

   For the purposes of this section, "junk yard" shall mean any place of storage or deposit, whether in connection with another business or not, where two or more unregistered, old, or secondhand motor vehicles, no longer intended or in condition for legal use on the public highways, are held, whether for the purpose of resale of used parts therefrom, for the purpose of reclaiming for use some or all of the materials therein, whether metal, glass, fabric or otherwise, for the purpose of disposing of the same or for any other purpose; such term shall include any place of storage or deposit for any such purposes of used parts or waste materials from motor vehicles which, taken together, equal in bulk two or more such vehicles provided, however, the term junk yard shall not be construed to mean an establishment having facilities for processing iron, steel or nonferrous scrap and whose principal produce is scrap iron, steel or nonferrous scrap for sale for remelting purposes only.

   "Municipality" as used in this section shall mean a city of less than one million in population, town or village.

   "Motor vehicle" shall mean all vehicles propelled or drawn by power other than muscular power originally intended for use on public highways.

3. Requirement for operation or maintenance. No person shall operate, establish or maintain a junk yard until he

   (1) has obtained a license to operate a junk yard business and
   (2) has obtained a certificate of approval for the location of such junk yard.

4. Application for license and certificate of approval. Application for the license and the certificate of approved location shall be made in writing to the governing board of the municipality where it is proposed to locate the junk yard, and, in municipalities having a zoning ordinance or local law and a zoning board, the application shall be accompanied by a

certificate from the zoning board that the proposed location is not within an established district restricted against such uses or otherwise contrary to the prohibitions of such zoning ordinance or local law. The application shall contain a description of the land to be included within the junk yard.

5. Hearing. A hearing on the application shall be held within the municipality not less than two nor more than four weeks from the date of the receipt of the application by the legislative body. Notice of the hearing shall be given to the applicant by mail, postage prepaid, to the address given in the application and shall be published once in a newspaper having a circulation within the municipality, which publication shall be not less than seven days before the date of the hearing.

6. License requirements. At the time and place set for hearing, the governing board shall hear the applicant and all other persons wishing to be heard on the application for a license to operate, establish or maintain the junk yard. In considering such application, it shall take into account the suitability of the applicant with reference to his ability to comply with the fencing requirements or other reasonable regulations concerning the proposed junk yard, to any record of convictions for any type of larceny or receiving of stolen goods, and to any other matter within the purposes of this section.

7. Location requirements. At the time and place set for hearing, the governing board shall hear the applicant and all other persons wishing to be heard on the application for certificate of approval for the location of the junk yard. In passing upon same, it shall take into account, after proof of legal ownership or right to such use of the property for the license period by the applicant, the nature and development of surrounding property, such as the proximity of churches, schools, hospitals, public buildings or other places of public gathering; and whether or not the proposed location can be reasonably protected from affecting the public health and safety by reason of offensive or unhealthy odors or smoke, or of other causes.

8. Aesthetic considerations. At the hearing regarding location of the junk yard, the governing board may also take into account the clean, wholesome and attractive environment which has been declared to be of vital importance to the continued general welfare of its citizens by considering whether or not the proposed location can be reasonably protected from having an unfavorable effect thereon. In this connection the governing board may consider collectively the type of road servicing the junk yard or from which the junk yard may be seen, the natural or artificial barriers protecting the junk yard from view, the proximity of the proposed junk yard to established residential and recreational areas or main access routes thereto, as well as the reasonable availability of other suitable sites for the junk yard.

9. Grant or denial of application; appeal. After hearing the governing board shall, within two weeks, make a finding as to whether or not the application should be granted, giving notice of their finding to the applicant by mail, postage prepaid, to the address given on the application. If approved, the license, including the certificate of approved location, shall be forthwith issued to remain in effect until the following April first. Approval shall be personal to the applicant and not assignable. Licenses shall be renewed thereafter upon payment of the annual license fee without hearing, provided all provisions of this chapter are complied with

during the license period, the junk yard does not become a public nuisance under the common law and the applicant is not convicted of any type of larceny or the receiving of stolen goods. The determination of the governing board may be reviewed under article seventy-eight of the civil practice law and rules.

10. License fees. The annual license fee shall be twenty-five dollars to be paid at the time the application is made and annually thereafter in the event of renewal. In event the application is not granted, the fee shall be returned to the applicant. A municipality, in addition to the license fee, may assess the applicant with the costs of advertising such application and such other reasonable costs incident to the hearing as are clearly attributable thereto and may make the license conditional upon payment of same.

11. Fencing. Before use, a new junk yard shall be completely surrounded with a fence at least eight feet in height which substantially screens and with a suitable gate which shall be closed and locked except during the working hours of such junk yard or when the applicant or his agent shall be within. Such fence shall be erected not nearer than fifty feet from a public highway. All motor vehicles and parts thereof stored or deposited by the applicant shall be kept within the enclosure of the junk yard except as removal shall be necessary for the transportation of same in the reasonable course of the business. All wrecking or other work on such motor vehicles and parts and all burning of same within the vicinity of the junk yard shall be accomplished within the enclosure. Where the topography, natural growth of timber or other considerations accomplish the purposes of this chapter in whole or in part, the fencing requirements hereunder may be reduced by the legislative body, upon granting the license, provided, however, that such natural barrier conforms with the purposes of this chapter.

12. Effect of local ordinances or local laws. This section shall not be construed to affect or supersede zoning ordinances or local laws or any other ordinances or local laws for the control of junk yards now in effect or hereafter enacted in any municipality within the proper exercise of the police power of such a municipality and shall not be deemed to apply to any municipality which has any ordinance or local law or regulation to license or regulate junk yards.

13. Established junk yards. For the purposes of this section the location of junk yards already established shall be considered approved by the governing board of the municipality where located and the owner thereof deemed suitable for the issuance of a license. Within sixty days from the passage of this section, however, the owner shall furnish the governing board the information as to location which is required in an application, together with the license fee, and the governing board shall issue him a license valid until the next April first, at which time such owner may apply for renewal as herein provided. Such owner shall comply with all other provisions of this section including the fencing requirements set forth in subdivision eleven of this section.

14. Notwithstanding any of the foregoing provisions of this section, no junk yard, hereafter established, shall be licensed to operate of such yard or any part thereof shall be within five hundred feet of a church, school, hospital, public building or place of public assembly.

15. Violators of any of the portions of this section shall be guilty of an offense punishable by a fine not exceeding one hundred dollars and each week that such violation is carried on or continues shall constitute a separate violation.

7 Endnotes

1. GML 136(2)

2. GML 136(4)

3. N.Y. Gen. Mun. Law §136 (5) (McKinney's 2007). Section 135 (5) states: "Notice of the hearing shall be given to the applicant by mail, postage prepaid, to the address given in the application and shall be published once in a newspaper having a circulation within the municipality. .. ."

4 . *Id.* at N.Y. Gen. Mun. Law §136 (10).

5 . Olsen v. Town Board of the Town of Saugerties, 161 A.D.2d 1077 (3rd Dept. 1990). Arguably, such violations must have occurred on the same property.

6 . *Id.* at §136 (7).

7 . *Id.* at §136 (8).

8 . *Id.* at §136 (11).

9 . *Id.* at §136 (11). The courts have interpreted "substantially screens" to refer to "more than the type of material to be used in a fence. The phrase has been interpreted to refer to screening from view the operation of the automobile junk yard and its junk contents." Bingham v. Town Board of the Town of Burlington, 116 A.D.2d 900 (3rd Dept. 1986).

10 . N.Y. Gen. Mun. Law §136 (11).

11 . *Id.* at §136 (9).

12 . *Id.* at §136 (12).

13 . Blesi v. Andruzzi, 173 A.D.2d 584 (2nd Dept. 1991); Town of Islip v. Serio, 105 Misc.2d 1078 (Sup. Ct. Suffolk Co. 1980).

14 . *Id.*

15 . N.Y. Gen. Mun. Law §136 (14).

16 . In Scopelliti v. Board of Zoning Appeals of Hempstead, 115 A.D.2d 651 (2d Dept. 1985), the zoning board of appeals determined that an automobile dismantling business was an allowed use in a certain district under the town's zoning law. The petitioners claimed that

the town did not have an ordinance "regulating junk yards" and that section 136 of the General Municipal Law applied. The lower court and the Appellate Division disagreed (citing Town of Islip v. Serio) and held that section 136 did not apply. This case illustrates the difficulty a local government could have if it has a zoning law and wishes to rely on section 136 as its means to regulate junkyards.

17 . The effective date of General Municipal Law §136 was September 1, 1965.

18 . See 6 NYCRR Part 617.5.

19 . See, generally, 6 NYCRR Part 617. The regulations and additional SEQRA-related materials are available on the Department of Environmental Conservation's website at http://www.dec.ny.gov/regs/4490.html

20 . The Codes of New York State are published by the International Codes Council (ICC). To obtain copies, visit the ICC website at http://publicecodes.citation.com/st/ny/st/index.htm or the Department of State's website at http://www.dos.ny.gov/DCEA/

21 . A copy of an advisory letter relating to junk cars in agricultural districts may be found at http://www.dos.state.ny.us/code/pdf/TBPMmotorvehicles07.pdf The Technical Services Unit of the Department of State, Division of Code Enforcement and Administration provides assistance to Code Enforcement Officials, design professionals, and the general public on the Uniform Fire Prevention and Building Code. Unlicensed vehicles have been protected as an essential activity to a farm operation in a state agricultural district under the §305-a of the Agriculture and Markets Law.

22. NYS Dep't. Env'tl. Conserv., Environmental Compliance and Pollution Protection Guide for Automobile Recyclers, p. 22 (January 2003).

23. To store more than 1000 tires you need to be a permitted Solid Waste Management Facility under 6 NYCRR Part 360.

24. A permit is also required for those who operate as: salvage pools, mobile car crushers or itinerant vehicle collectors. N.Y. Vehicle & Traffic. Law §415-a (2) (McKinney's 1996). Under Vehicle & Traffic Law §415-a(1-a) "salvage pools" is defined as: "any person acting on behalf of the vehicle owner or an insurance company, who sells, offers for sale or solicits bids for the sale of junk or salvage vehicles or major component parts of such vehicles, or displays or permits the display of such vehicles or parts upon premises owned or controlled by him, but who does not dismantle vehicles." Vehicle & Traffic Law §415-a(1-c) defines "itinerant vehicle collectors" as: "any person who is engaged in the business of acquiring non-operable vehicles and who sells such vehicles or major component parts thereof to a vehicle dismantler or scrap processor."Additional information about how the Department of Motor Vehicles regulates junk and salvage businesses may be found at http://www.nysdmv.com/forms/cr81.pdf

25. N.Y. Veh. Traf. Law §415-a (4)(a) states: "Except as otherwise provided herein, no registration shall be issued or renewed unless the applicant has a permanent place of business at which the activity requiring registration is performed which conforms to section one hundred thirty-six of the general municipal law as such section applies and to all local laws or ordinances. . ." An exception to this would be applicants that have operated at the location since September 1, 1973. N.Y. Veh. Traf. Law §415-a(4)(c) (McKinney 1996).

26. 15 NYCRR §81.2.

27. To report violations of dismantling licenses, contact the Department of Motor Vehicles, Office of Vehicle Safety in Albany at (518) 474-5282.

28. Municipal Home Rule Law §10 provides authority to counties, cities, towns and villages to adopt local laws, not inconsistent with general state law, for the protection and enhancement of the physical and visual environment, as well as to provide for the "safety, health and well-being" of the community. See Mun. Home Rule Law §10(1)(ii)(a) (11) and (12) (McKinney 1994), respectively; see also N.Y. Town Law §130(6) (McKinney 1987); N.Y. Village Law §4-412(1) (McKinney 1996); and N.Y. General City Law §20(13) (McKinney 2003). General Municipal Law §136 does not preclude the adoption of a local law on the topic of junkyards. See N.Y. Gen. Mun. Law §136 (12) (McKinney 1999); Blesi v. Andruzzi, 173 A.D.2d 584 (2d Dept. 1991).

29. For additional information, see the Department of State publication entitled "Administration and Enforcement of the Uniform Fire Prevention And Building Code and the Energy Conservation Construction Code" at http://www.dos.ny.gov/LG/publications/Administration_and_Enforcement_of_the_Uniform_Code.pdf

30. See 1980 Opns. St. Comp. 157, citing Lane v. City of Mount Vernon, 38 N.Y.2d 344 (1976).

31. See 4M Holding Company, Inc. v. Town Board of the Town of Islip, 81 N.Y.2d 1053 (1993).

32. Id.

33. Patricia E. Salkin, New York Zoning Law and Practice, Section 13:16 at pp. 13.20-13.21 (4th Ed. 2001).

34. Modjeska Sign Studios, Inc. v. Berle, 43 N.Y.2d 468 (1977).

35. People v. Scott, 26 N.Y.2d 286 (1970).

Junk/Rubbish Storage Law
of
the Town of Groveland, Livingston County, New York

Article 1: Introduction

Section 1. Authority

Be it enacted by the Town Board of the Town of Groveland as follows:

The Town of Groveland Junk/Rubbish Storage Law is adopted pursuant to the authority granted the Town in Section 10 of the New York State Municipal Home Rule Law and in Section 130 (6) of New York State Town Law.

Section 2. Title

This local law shall be known as the "Junk/Rubbish Storage Law of the Town of Groveland, New York."

Section 3. Purpose

By adoption of this law the Town of Groveland declares its intent to regulate and control the storage or keeping of junk and rubbish on both residential and commercial properties. The Town Board hereby declares that a clean, wholesome, and attractive environment is of vital importance to the continued welfare if its citizens, and that junk/rubbish can constitute a hazard to property, persons, and water resources, and can be a public nuisance. The presence of junk/rubbish is unsightly and tends to detract from the value of surrounding properties.

The purpose of this law is to further;

- Avoid, prevent and eliminate conditions, which if permitted to exist or continue will depreciate or tend to depreciate the value of adjacent or surrounding properties.
- Preserve property values in the Town of Groveland
- Maintain the value and economic health of the commercial properties and businesses that serve and support the Town of Groveland and its citizens

Section 4. Prior Existing Junk Law

This local law shall replace and supersede any prior existing law regarding property maintenance and junk/rubbish storage within the Town of Groveland.

Section 5. Interpretation

Where the conditions imposed by any provision of this law, are either more restrictive than comparable conditions imposed by any other law, ordinance, resolution, rule or regulation of any

kind, the regulations which are more restrictive or which impose higher standards or requirements shall govern.

Section 6. Definitions

As used in this chapter, the terms defined in Appendix A shall have the meanings indicated. Please refer to Appendix A.

Article 2: Junk Maintenance Regulations

The exterior of all premises shall be kept free of the following matter, material, or condition:

- Rubbish or junk as defined in this law
- Rodents, vermin, pest infestations or rodent harborages.
- Nuisance as herein before defined.

Article 3: Exclusions

Article B shall not apply to the storage or placement on the premises of the following material:

- Wood intended for consumption in a wood burning stove, furnace or fireplace located in a building on the premises.
- Lawn or yard or garden ornaments and implements.
- Lawn and patio furniture.
- Operable farm, garden and yard machinery and apparatus used on the premises.
- Standing fences.
- Hoses and sprinklers used for watering lawns or gardens.
- Storage or placement and accumulation of materials in connection with a
- commercial operation duly conducted on the premises where such storage, placement and accumulation is expressly permitted by the laws of the municipality.
- Construction materials and equipment used for the construction or renovation of a building on the premises for which a building permit has been issued.

Article 4: Administration and Enforcement

Section 1. Enforcement Officer

The code enforcement officer and/or building inspector of the Town are hereby designated, unless otherwise designated by the Town, as the officer(s) charged with the enforcement of this chapter and is hereinafter referred to as the enforcement officer.

The enforcement officer shall make periodic inspections of the Town to ensure that violations of this statute do not exist, and the requirements of this law are met. Any observed violations shall be noted and the property owner contacted for compliance.

The enforcement officer shall enter the premises of any private property with the consent of the owner or upon a proper court order, or may make an evaluation from any public way.

Section 2. Notice of violation; Issuance of Summons

Whenever the enforcement officer determines that there is a violation of any provision of this chapter, he shall give notice of such violation to the person, persons or entities responsible therefore under this chapter.

Such notice shall be in writing and shall include a concise statement of the reason for the issuance.

Such notice shall be deemed to be properly and sufficiently served if a copy thereof is sent by certified mail to the last known address of the person or entity upon which the same is served, as shown by the most recent tax lists of the municipality, or a copy thereof handed to such person or persons, or copy thereof left at the usual place or abode or office of such person or entities.

Notice shall be given as aforesaid within or without the municipality.

The notice shall also state that unless the violation is abated, removed, cured, prevented, or desisted from within thirty (30) days of the date of the service of such notice (exclusive of the date of service) a summons shall be issued for such violation

The enforcement officer may, at any time he issues the notice, extend the period for compliance with the violation stated in the notice for period in excess of the foresaid thirty (30) days if, in his judgment, the abatement, removal, prevention, cessation of or cure of the condition violated cannot reasonably be effected within the thirty (30) day period. In such cases, the enforcement officer shall state such reasonably required extended period in the notice, which shall then be applicable instead of the aforesaid thirty (30) days.

In the event that the violation is not abated, removed, cured, prevented or desisted from or successfully remedied within the thirty (30) day period or within such period as set forth in the notice pursuant to foregoing, a summons shall then be issue against the person, persons, or companies so notified.

Section 3. Penalties

A. Any person who shall violate any of the provisions of this local law shall be guilty of an offense and subject to a mandatory fine

- not to exceed one hundred dollars ($100.00) for the first violation
- and two hundred and fifty dollars ($ 250.00) for each offense after
- and up to fifteen (15) days in jail.

B. Every persons shall be deemed guilty of a separate offense for each day such violation, disobedience, omission, neglect or refusal shall continue.

Article 5: Severability

If any clause, sentence, paragraph, section or article of this local law shall be adjusted by any court of completive jurisdiction to be invalid, such judgment shall not affect, impair or invalidate the remainder thereof, but shall be confined in its operation to the clause, sentence, paragraph, section or article thereof directly involved in the controversy in which such judgment shall have been rendered.

Article 6: Effective Date

This law shall be effective upon filling with the Secretary of State

Appendix A

ENFORCEMENT OFFICER - Any person appointed by the Town Board to represent them in particular matters pertaining to this local law

JUNK - The outdoor storage or deposit of any, but not limited to, of the following shall constitute junk.

MOTOR VEHICLES - Two or more inoperative or unlicensed, uninsured, uninspected, motor vehicles, or the used parts or waste materials from motor vehicles which, taken together, equal in bulk two or more such vehicle, shall not be parked, kept or stored on any premises, except as provided for in statute or other regulations. No vehicle shall at any time be in a state of major disassembly, disrepair, or in the process of being stripped or dismantled. Painting of vehicles is prohibited unless contained inside an approved spray booth.

Exception: A vehicle of any type is permitted to undergo major overhaul, including body work, provided that such work is performed inside a structure or similarly enclosed area designed and approved for such purposes.

Exception: Vehicles regularly operated and used onsite in the day-to-day activities of a commercial and/or industrial premises shall not be construed as junk.

APPLIANCES - One or more abandoned or inoperable appliance including but not limited to any stove, washing machine, dryer, dish washer, refrigerators, freezers, television, computer equipment, hot water heaters, water purification units or other household device or equipment abandoned, junked, discarded, or wholly or partially dismantled, or otherwise left un-housed or otherwise left exposed to the elements, no longer intended or in the condition for ordinary use.

FURNITURE - One or more abandoned or irreparably damaged pieces of indoor or outdoor furniture including but not limited to sofas, lounge chairs, mattresses, bed frames, desk, tables, chairs, and chest of drawers

LAWN EQUIPMENT - One or more items of abandoned, discarded, or obviously unusable lawn or garden equipment.

RECREATIONAL VEHICLE - One or more boat, water craft, recreational equipment, four-wheeler, all-terrain vehicle, mini bike, snowmobile, not able to be used.

FIXTURES - One or more kitchen or bathroom fixtures, including but not limited to sinks, toilets, tubes, showers, faucets, counter tops.

MANUFACTURED HOME/MOBILE HOME - A structure, transportable in one or more sections, built on a permanent chassis and designed to be used as a dwelling unit, which

is currently not inhabited and is no longer habitable under the New York State Uniform Fire Protection and Building Code.

JUNK YARD - A commercial enterprise that recycles material and/or sells used parts of all sorts. Any junkyard will require a junkyard permit from the Town of Groveland. The junkyard enterprise must demonstrate the possession of all applicable town, county, state, and federal permits for this type of operation.

MOTOR VEHICLE - All vehicles propelled or drawn by power other than muscular power originally intended for use on public highways.

NUISANCE - Any public or private condition that would constitute a nuisance according to the statutes, laws and regulations of the State of New York or its governmental agencies or the ordinances or local laws of the Town.

Any physical condition existing in or the exterior of any premises, which is potentially dangerous, detrimental, or hazardous to the life, health or safety of persons on, near or passing within the proximity of the premises where such condition exist.

PERSONS - Any individual, firm, partnership, association, corporation, company, or organization of any kind.

RUBBISH - All discarded, useless, unusable, unused or worthless solid waste matter or materials, including but limited to garbage, trash, ashes, paper, paper goods and products, wrappings, cans, bottles, containers, yard clippings, garden waste, debris, junk, glass, boxes, crockery, wood, mineral matter, plastic, rubber, tires, leather, furniture, household goods, appliances, bedding, scrap metal, construction material. Inoperable machinery or parts thereof, garden equipment, and supplies, dead or rotting vegetation, abandoned, inoperative, or unusable automobiles and vehicles and solid commercial or industrial waste.

STORAGE AREA - The areas of any parcel of land or body of water used for the placement, storage or deposit of junk other than a commercial junkyard.

Appendix P

Model Ordinance for Logging/Silviculture Practices

Canandaigua Watershed Council Timber Harvesting Law*

*As included in the *Protecting Water Resources through Local Controls and Practices: An Assessment Model for New York Municipalities* Guide, prepared by the Genesee Finger Lakes Regional Planning Council.

Timber Harvesting Model Law

I - Purpose

The purpose of this chapter is to promote the health and safety of the residents of the Town of _____ by protecting the natural environment as affected by timber harvesting. The town recognizes that timber resources are of significant value and will be harvested. The town also recognizes that if harvesting practices are carried out poorly, they can result in significant and direct environmental damage to the property and to the adjacent lands and waters. This chapter requires the landowner and his agent to be responsible for implementation of the best management practices as outlined in this chapter. Proper management practices will limit subsequent environmental damage, particularly from soil erosion and sediment-laden run-off. Therefore, the following requirements are intended to regulate those harvesting activities that are most likely to cause environmental damage, such as stream crossings, location of landings, haul roads and skid trails and reclamation efforts.

II - Conflict with other provisions

Whenever the requirements of this chapter are at variance with the requirements of any other lawfully adopted rules, regulations, ordinances or laws, the most restrictive shall govern.

III - Definitions

For the purpose of this Chapter, the following terms shall apply:

ACE – Army Corps of Engineers.

APPLICANT – The landowner in conjunction with his/her (landowner's) agent.

BEST MANAGEMENT PRACTICES – devices and procedures to be considered and used as necessary to protect the values and functions of forested land during harvesting and other forest management operations.

BUFFER STRIP – Strip of land containing grass and/or vegetation/ground cover and/or woods that separates an area of concern from an intensive land use area (logging).

BOARD FOOT - A measure of lumber twelve by twelve by one (12 x 12 x 1) inches.

CLASSIFIED STREAM – A stream protected under Article 15 of the Environmental Conservation Law. A permit is required from the NYS DEC for any work disturbing a classified streams bed or banks.

CLEARCUTTING – A method of timber harvesting where virtually all trees on a site are removed.

CODE ENFORCEMENT OFFICER (CEO) – The official designated by the Town Board to enforce the provisions of the Chapter.

COMMERCIAL TIMBER HARVESTING (LOGGING) – Timber harvest activity that fells trees whose volume is greater than twenty-five (25) standard cords or ten thousand (10,000) board feet of timber as measured by the International Log Rule. The clearing of lands for agricultural, development purposes or utility right-of ways which shall fell trees greater than the aforesaid volumes shall specifically be included within this definition.

HAUL ROADS – A constructed road of dirt and/or gravel utilized for moving cut trees from the point where they are loaded on a truck to exit from the site.

INTERNATIONAL ¼" LOG RULE – The legally recognized NYS method for estimating the amount of lumber in board feet that can be obtained from logs or trees.

LANDINGS – An open or cleared area used for loading logs onto trucks or used for any purpose such as storing logs or servicing equipment.

LANDOWNERS AGENT – The logger, forester and/or consultant representing the landowner.

LOGGING SLASH AND DEBRIS – Any residue of trees or of the associated cutting left on the site after harvesting, including but not limited to trunks, tops and vegetative litter.

STANDARD CORD - Cut wood stacked four feet high by four feet wide by eight feet long.

STREAM – A body of running water flowing continuously or intermittently in a channel on the ground surface.

IV - Permit Requirements

It is hereby required that a timber harvesting permit application is to be filed with the Town CEO by anyone desiring to harvest timber in quantities greater than 25 standard cords of wood or 10,000 board feet of timber as measured by the International Log Rule in any one year within the town. The property owner and the logger shall apply for such permit jointly.

No person, firm, partnership, corporation or other entity shall engage in any logging activity whether the same shall be for profit or otherwise unless the aforesaid entity complies with the provisions of this Chapter and the following:

A. A timber-harvesting permit, to be issued by the Town Code Enforcement Officer, shall be required before any logging operation is conducted within the town.

B. A registration fee to be paid in an amount deemed reasonable and set through resolution of Town Board and updated as necessary.

V - Standard Operating Procedures

All timber harvesting pursuant to this Chapter shall comply with the following standards:

A. 1) No forest haul road or skid road to exceed a slope of 15% for a distance of more than 200 feet. 2) The applicant shall take appropriate measures (waterbars, dips) to divert running water from the roads at intervals in order to minimize erosion. Temporary waterbars are to be installed to protect any stream (including road ditches) on skid roads, landings or other areas of considerable disturbance as forecasted wet weather deems necessary.
B. There shall be no skidding up and down any stream channel, and all logging slash and debris shall be promptly removed from any such channels.
C. All streams are to be crossed only when necessary and by the most direct route, at a right angle to the stream channel. All streams to be crossed will have crossing appropriate structures installed to prevent damage to the bed and banks of the stream, i.e. temporary bridges, fords, culverts etc. The landowner and/or agent will be responsible for complying with all NYSDEC and ACE permitting requirements on classified streams.
D. 1) No harvesting allowed within 15 feet of streams or other surface waters except necessary maintenance. 2) No haul or skid roads (except direct route stream crossing) within a 100-foot set back distance from streams or other surface waters, i.e. lakes and ponds. Trees harvested within this area should be directionally felled away from stream channel. 3) No landings shall be located within buffer strips abutting streams.
E. Directionally fell trees, within the stream set back distance, so tops land away from waterways.
F. 1) No haul or skid roads (except main route to landing) within a 100-foot set back from public roads. 2) Landings located in buffer strips abutting roads shall be properly graded and waterbarred to prevent sediment from washing into the drainage ditches along the public roads.
G. The entrance of haul roads onto town roads shall be done in compliance with town regulations.
H. All trash and garbage are to be removed on a daily basis.
I. **Site reclamation** – To be performed by the applicant upon completion of the harvesting activity.
    1. Haul roads and primary skid trails shall have permanent erosion control and drainage structures installed. Waterbars should be placed at the following intervals:

Grade percent	**Feet**
<5%	200’
6-15%	150’
>16%	100’

    2. Manage and divert overland flow on haul roads and skid trails by properly shaping, sloping, and ditching to prevent erosion.
    3. All disturbed areas, such as roadways and landings, prone to erosion, will be stabilized by seeding and mulching.
    4. All temporary culverts and bridges at stream crossings shall be removed and stream banks restabilized and protected with waterbars. All reclamation efforts shall be subject to inspection by the town to assure compliance with this provision.

VI - Permit application procedure

The permit application package will include a basic application, a full application, a copy of this chapter, and a "New York State Forestry Best Management Practices for Water Quality, Field Guide".

1. The **Basic Timber Harvest Application** requires the following information;
    a. Applicants certificate of insurance for $250,000/$500,000 property damage and personal liability, specifically covering damage to roadways and culverts.
    b. Name/addresses of landowner and logger/forester (agent).
    c. Physical description of property to be logged, copy of USGS Topographic maps with property boundaries, streams, landings and area to be logged clearly marked.
    d. Local and county roads to be used for transport by log trucks and heavy equipment.

If the area to be harvested is less than 15% slope and no streams are present in or contiguous to the harvest area, the above steps will complete the information needed and the Town CEO will issue a permit within 5 business days.

If the grade is over 15% and/or a stream is included or adjacent to the harvest area then a full timber harvest plan will be required in addition to the basic application.

2. In addition to the above, the **Full Timber Harvest Application** will require;
    a. A description of the Best Management Practices applied to the basic plan pertaining to the stream crossings, skid and haul roads and landings.
    b. The BMP locations will be identified on the project maps in the basic application, described in narrative and subject to inspection by the Town CEO.

3. A copy of all approved permits will be sent to NYSDEC Region #8 Office, Ontario County Soil and Water Conservation District, the Town Highway Superintendent and the contiguous landowners. Notice will also be sent to town and county highway departments whose roads are intended to be used for transport of heavy equipment.

VII - Regulation and penalties for offenses.

A. It shall be the duty of the Code Enforcement Officer to enforce the provisions of this chapter.
B. The Code Enforcement Officer, may with due cause and without hindrance, reasonably enter, examine and survey all grounds affected by the timber harvest in a prudent manner, upon complaint or administrative warrant in order to ascertain whether such rules and regulations in this section are complied with by any person regulated by this chapter.
C. Upon notification by the CEO to the applicant of any violation hereunder, the timber-harvesting permit granted to such applicant shall be suspended and/or revoked. Upon suspension or revocation, as the case may be, all operations shall immediately cease, and the applicant shall take immediate steps to implement the restoration of the property and remove the debris, all as set forth in the application and timber-harvesting permit. Such suspension or revocation notice may contain conditions to be met to obtain reinstatement of the permit.

D. Any person violating any provision of this chapter shall be guilty of an offense punishable by a fine not to exceed $300.00 or imprisonment for a period not to exceed fifteen days, or both.
E. Pursuant to 150.20 of the Criminal Procedure law and in accordance with section 10(4)(a) of the Municipal Home Rule Law, the CEO of the town is hereby authorized to issue and serve appearance tickets in respect to any violation of this chapter.
F. In addition to or as an alternative to the above provided penalties, the Town Board may also maintain an action in the name of the town in a court of competent jurisdiction to compel compliance with or restrain by injunction any violation of this chapter.

Appendix Q

Model Ordinances for Marinas, Boat Launches & Docks

Docks, Wharfs, Moorings and Marina Regulations (Lake George Park Commission)

Lakeshore District Regulations (Town of Ulysses, NY)

LAKE GEORGE PARK COMMISSION

RULES AND REGULATIONS: PART 646

SUBSTANTIVE REGULATIONS
Statutory authority: Environmental Conservation Law Sections 43-0107 (8)&(32), 43-0115 (3), and 43-0117 (4), Navigation Law Section 44-a (not subdivided)

SUBPART 646-1
DOCKS, WHARFS, MOORINGS AND MARINAS
Section

Section 646-1.1 Docks, Wharfs and Moorings.

(a) General Prohibitions:

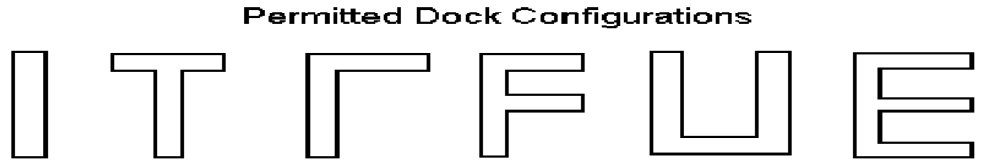
(1) No person shall construct, erect, place, alter, modify, enlarge, or expand any dock, wharf or mooring on waters of Lake George without having first obtained a permit from the Commission; and

(2) No person shall use or maintain a dock, wharf or mooring on waters of Lake George unless the dock, wharf or mooring is registered with the Commission, and the fees required pursuant to Subpart 645-7 are paid in full when due.

(b) Annual Registration. Each dock, wharf and mooring shall, on or before April 1 of each year, be registered with the Commission on such forms as the Commission may prescribe. Such forms shall include certification by the owner or operator of the number of vessels to be berthed at the facility and the names of the owners thereof, including the vessels that will be registered to the owner or the owner's immediate family, and the vessels that will be registered to other persons.

(c) Special Requirements. All new docks, wharfs and moorings shall comply with the provisions of this paragraph:

(1) No dock or wharf shall be constructed in a configuration other than a straight pier, T, L, U, E or F-shaped. For the convenience of the regulated community, the following specific configurations are authorized configurations:



(These configurations shall not be interpreted to indicate which side of the structure should be connected to land.)

(2) No dock or wharf shall be constructed so as to exceed the following offshore distance criteria:

(i) No dock or wharf may extend offshore for more than forty feet beyond the man low-water mark where the wharf intersects the mean low-water mark;

(ii) In streams, no dock or wharf may extend more than twenty percent (20%) of the width of the stream at the point of construction; and

(iii) No dock, wharf or mooring shall be constructed or placed so as to extend offshore more than 100 feet from the mean high water mark.

(3) No dock, wharf or mooring shall be constructed or placed so as to interfere with normal navigation or reasonable access to adjacent docks, wharfs, moorings or lands.

(4) The maximum surface area of any dock or wharf shall be seven hundred square feet, including any walkway. For the purpose of computing the maximum surface area, no portion of the structure shall be included within the computation which extends upland of the mean high water mark, and the minimum allowable width of any dock, wharf, pier, lateral projection or finger shall be two feet.

(5) The maximum width of any pier shall be eight feet.

(6) The maximum width of any dock or wharf, including all lateral projections, shall be forty feet.

(7) The maximum number of docks, wharfs or moorings permitted per lakefront lot or parcel shall be limited as follows:

(i) Forty-five to sixty-five feet of lakefront - one dock or wharf constructed as a straight pier (a minimum of forty-five feet is required for the construction of a wharf);

(ii) Sixty-six to one hundred and fifty feet of lakefront - one dock or wharf constructed as a straight pier, T, L or U-shaped, plus one mooring;

(iii) One hundred and fifty one to two hundred and fifty feet of lakefront - two docks or wharfs constructed in any combination of straight pier, T, F, L or U-shaped, or one E shaped wharf, plus two moorings;

(iv) Two hundred and fifty one to five hundred feet of lakefront - three docks or wharfs constructed of any combination of straight pier, T, L, U, or F-shaped, or two E-shaped wharfs, plus three moorings; or

(v) Five hundred and one or more feet of lakefront - four docks or wharfs constructed as a straight pier, T, F, E, L or U- shaped wharf, plus four moorings, and one additional dock or wharf plus one additional mooring for each additional one hundred and fifty feet of lakefront. In

determining the maximum number of permitted docks, wharfs or moorings, the Commission may review any subdivision of land created on or after the effective date of these regulations which involved the lot or parcel in issue to determine the maximum number of docks, wharfs or moorings permitted and base such number upon the total footage of lakefront prior to the subdivision.

(8) No structure shall be constructed on a dock, wharf or mooring which exceeds sixteen feet in height above the mean high water mark and which is not in compliance with local zoning.

(9) All crib wharfs shall be of the open crib type.

(10) No dock or wharf shall be constructed unless designed to withstand forces of flowing water and wave washes.

(11) Every dock or wharf constructed shall have a minimum setback of twenty feet from the adjacent property line extended into the lake on the same axis as the property line runs onshore where it meets the lake, or at a right angle to the mean high-water mark, whichever results in the greater setback. This provision shall control over the provisions of section 646-1.6 (k) of this Subpart.

(12) Moorings shall be placed so that vessels moored to them, at the full swing of their mooring or anchor line, will be no closer than twenty feet to the projection of the property lines extended into the lake along the axis of the property lines as they intersect the lake, or a line extended at a right angle to the mean high-water mark, whichever results in the greater setback. Moorings shall not be placed so that the full swing of the vessel extends more than one hundred feet offshore from the mean high-water mark.

Section 646-1.2 Class A Marinas. In addition to the requirements of other sections of this Subpart, all Class A marinas servicing the waters of Lake George shall comply with the following:

(a) General requirements.

(1) No person shall construct, expand, or operate a Class A marina servicing the waters of Lake George, or alter or expand the number or type of services or recreational activities offered without obtaining a permit from the commission, or if a permit has been issued for the subject facility, a modification to the permit for that facility which authorizes the new or expanded services or recreational uses. Permits shall be issued for a maximum of five years.

(2) No permit shall be issued for the construction, operation or expansion of a quick launch facility which was not in existence and operating, or for which no permit was issued, prior to the effective date of these regulations.

(3) Permits issued pursuant to Section 646-1.2 (a) (1) of this Title may be issued only to the owner of the facility or in the alternative to a lessee of the facility and shall authorize activities and uses at that facility. A permit may not be relocated to other facilities unless a permit for the

different facility has been issued by the Commission. Marina permits will be modified to reflect a sale or transfer of the facility to another owner subject to a determination by the Commission that the facility is in accordance with the requirements of this Subpart and permits issued in accordance with this Subpart. Lakefront marina facilities at separate locations under common ownership shall require separate permits pursuant to Section 646-1.2 (a) (1) of this Title.

(4) Special Permits. A special permit is a permit granted by the Commission to operate any new recreational activity as defined in Section 646-2.4 (1) of this Title or the recreational activities or uses contained in Section 646-1.4 of this Subpart. Special permits are not transferrable to another location and shall not be leased or transferred to another location, facility or operator.

(b) Specific Requirements: No Class A marina shall be constructed, expanded or operated without providing the following:

(1) Restrooms, including toilet facilities, for the use by customers, which shall be available at all times from May 1 to October 31 of each year.

(2) One on-site parking space or adequate off-site parking for each vessel berthed. Where the Class A marina offers rides, instruction or water-based recreation for a fee, adequate parking must be provided for customers of the Class A marina.

(3) An adequate storage area for trailers or the storage of trailers shall be prohibited.

(4) Where applicable, proof of compliance with New York State fire code standards and DEC bulk storage standards for the storage of gasoline and hazardous materials. If applicable, no permit application shall be complete until proof of compliance is submitted to the Commission.

(5) For each Class A marina with a petroleum sales facility, a plan relative to the inspection and maintenance of petroleum storage facilities and all associated equipment, and appropriate measures relative to spill prevention and countermeasures. Such plan shall include:

(i) the inspection of all plumbing and related pumping equipment, not less than daily, to guard against leakage of petroleum products into the waters of the Park;

(ii) the training of each person pumping motor fuels in procedures to guard against the spillage of such motor fuels into the waters of the park and procedures to respond to a spill; and

(iii) the maintenance, in close proximity to the pumping facilities, of such equipment as is necessary to respond to any spill of petroleum products into the waters of the Park or on to land or structures where it may flow into the waters of the Park.

(6) Adequate garbage and debris disposal facilities with leakproof containers, which must be properly maintained.

(7) Facilities for the disposal of sanitary wastes from vessels with on-board sanitary equipment including:

(i) on-site pumpout facilities, or proven access to pumpout facilities, for use by vessels which use the services of the Class A marina; and

(ii) facilities for the disposal of waste from portable marine toilets, or proven access to such facilities, for use by vessels which use the services of the Class A marina. Such facilities shall be designed, installed, operated and maintained to prevent the discharge of contaminants from marine toilets to the waters of the Park or the ground from which they may flow into the waters of the Park. For the purposes of this paragraph, vessels using the services of the Class A marina shall include vessels which moor, dock or are quick launched by the marina. Written proof of access to disposal facilities for a period equal to the life of the permit shall be required. Off-site facilities must be located within a reasonable distance from the Class A marina.

(8) A boat cleaning area that is designed, operated and maintained in such a manner to prevent contamination of the waters of the Park shall be provided, or boat cleaning shall be prohibited.

(9) All Class A marina owners or operators engaged in the rental of personal watercraft (PWC) as that term is defined in Section 646- 2.3 (a) (3) of this Title upon the waters of Lake George shall in addition to the regulations governing PWC contained in Subpart 646-2 of this Title comply with the following regulations:

(i) The owner or operator of a PWC shall ensure that prior to operation all users of PWC have read the rules and regulations governing their operation as contained in this Subpart, as well as Subpart 646-2 of this Title. All users shall sign a form prepared by the owner or operator that indicates the user has read said rules and regulations. The owner or operator shall maintain written records that the above requirements have been complied with. The records are subject to inspection by the Commission upon reasonable notice.

(ii) If the PWC is part of a rental fleet or group of PWCs, a tour guide shall operate a vessel with the fleet or group.

(iii) A fleet or group shall not consist of more than six (6) PWC. The tour guide shall guide the operations and behavior of the fleet or group. The tour guide shall not be in charge of more than one (1) fleet or group at any time.

Section 646-1.3 Class B Marinas. In addition to the requirements of other sections of this Subpart, Class B marinas located on the waters of Lake George shall comply with the following:

(a) General requirements. The owner of any dock, wharf or mooring used as a Class B marina shall register the same with the Commission on such forms as the Commission may prescribe.

(b) Specific requirements. No Class B marina shall be operated without providing the following:

(1) a restroom, including a toilet, for use by customers, which shall be available at all times from May 1 to October 31 of each year;

(2) one on-site parking space or suitable off-site parking for each vessel berthed;

(3) adequate garbage and debris disposal facilities, which must be properly maintained; and

(4) adequate facilities, or proven access to such facilities, for the disposal of sanitary waste from vessels and waste from portable marine toilets in accordance with the requirements of Section 646-1.2 (b) (7) of this Subpart, or vessels with such facilities shall be prohibited at the facility. Written proof of access to disposal facilities for the period of annual registration shall be required. Off-site facilities must be located within a reasonable distance from the site of the Class B marina.

(c) The failure to register a Class B marina or the failure to provide the services required by paragraph (b) of this section shall be a violation of this Subpart.

(d) Upon receipt of a complaint regarding a Class B marina from any nearby property owner or at the request of any municipality wherein such use is located, the commission shall, or upon its own initiative may, undertake a review of the availability and adequacy of the services required to be provided by the owner pursuant to this section.

(e) Following investigation by the Commission, the Commission shall render a report concerning the findings of its investigation to the complainant and the owner of the facility. Such a report shall include a finding whether the facility is in compliance with the requirements of this section. If the Commission determines that the facility is not in compliance with the requirements of this section, or that the facility unreasonably impacts the resources of the Park, navigation, or the character of the neighborhood, the Commission may include within its report an order requiring the owner to bring the facility into compliance within a stated time period, or to cease such commercial use, or imposing upon the owner reasonable restrictions to abate any condition which the Commission finds objectionable under this section.

(f) Upon receipt of such an order, the owner may either comply with the same, or request a hearing in accordance with the procedure specified in section 645-5.10 (c) of this Title, which shall be held and determined in accordance with subdivisions (d) and (e) of such section.

Section 646-1.4 Special Permits for Recreational Uses.

(a) New Recreational Activities. No person shall operate or engage in any new recreational activity as defined in Section 646-2.3 (1) of this Title or recreational use without first obtaining a special permit from the Commission pursuant to this Subpart.

(b) Seaplanes.

(1) No person, except for a gratuitous guest, shall berth a seaplane or use any dock, wharf, mooring or ramp, or any other facility for the berthing of a seaplane without having first obtained a special permit from the Commission. When issued, a special permit shall be issued to the person owning the seaplane. Special permits issued pursuant to this Section are not transferrable. Discontinuation of the authorized use for a period of one (1) year or more shall result in expiration of the special permit.

(2) A special permit pursuant to this Section shall be granted upon timely application and payment of any application fees, to any person owning a dock, wharf or berthing facility, mooring or ramp which has been in continual use for the berthing of a seaplane prior to the effective date of these regulations except that such permit shall be conditioned on, and each such seaplane owner shall conform with, the provisions of Section 646-1.4 (b) (1) of this Subpart.

(3) The following provisions shall apply to the operation of seaplanes:

(i) Commercial use of a seaplane to or from the waters of Lake George is prohibited as provided in Section 248 of the General Business Law of the State of New York.

(ii) Seaplanes shall be operated in such a manner so as not to cause unnecessary audible impacts to adjacent property owners.

(iii) All facilities used for seaplanes including any dock, wharf or mooring or other berthing facility shall conform with the provisions of this Subpart.

(iv) Seaplanes shall be berthed in accordance with the provisions of this Subpart.

(v) Issuance of a special permit pursuant to this Section shall be subject to the requirements set forth in Sections 646-1.2 and 646-1.5 of this Title.

(c) Parasails.

(1) No person shall use or operate a parasail on the waters of Lake George without first having obtained a special permit from the Commission. Special permits issued pursuant to this Section are not transferrable. Discontinuation of the use or operation of any parasail for a period of one (1) year or more shall result in expiration of the special permit.

(2) Whenever a parasailing operation and the facility where the parasailing operation is berthed and maintained are held in common ownership with the facilities of a Class A marina, the special permit required herein will be merged with approvals pursuant to Section 646-1.2 of this Title and only one application to the Commission shall be required.

(3) Existing Parasail and Parasail Operations. The owner of any parasail or the owner of any parasail business in continuous operation prior to the effective date of these regulations and registered with the Commission pursuant to Subpart 646-2 of this Title shall, upon timely filing of application and payment of any application fees, be granted a special permit subject to the requirements set forth in Sections 646-1.2 and 646-1.5 of this Title.

(4) All parasail operators shall conform with the following provisions:

(i) Each parasail operator shall be limited to a maximum of two (2) take-off and landing craft and three (3) parasails in the air at any one time.

(ii) Spectators shall not be permitted on the take-off and landing craft.

(iii) Take-off and landing craft with parasails in flight shall maintain a minimum distance between the craft of one-half mile. If such distance separation is not provided by the respective parasail operators, then the Commission may prescribe zones of operation and schedules for the use of such zones as part of any special permit. Such zones and schedules shall be designed to afford competing business equal access to more desirable operating areas.

(iv) Parasails shall be operated only between the hours of 8:00 a.m. to 7:00 p.m. or sunset whichever is earlier.

(v) Parasails shall not be in flight within five hundred (500) feet of shore.

(5) Staff.

(i) Each operator shall maintain a crew of at least two (2), including a pilot and an observer on the tow craft at all times during operation. The observer on the tow craft must be at least sixteen (16) years of age. The observer must maintain visual contact with the parasail at all times while the parasail is in the air.

(ii) Drivers. All drivers of tow craft must pass the New York State written pilot-engineer examination. In addition, with the exception of pilots engaged, participating or employed in parasail operation upon the waters of Lake George prior to July 1, 1990, all pilots must log a minimum of fifty (50) hours actual driving time accompanied by a qualified and experienced pilot. A pilot is qualified and experienced if the pilot has logged at least two hundred (200) hours of actual driving time or operated a tow craft for two (2) full seasons on Lake George.

(iii) Raft Crew Members. There shall be a crew of at least two (2), including the driver on the raft at all times. With the exception of raft crew members engaged, participating or employed in parasailing activities upon the waters of Lake George prior to July 1, 1990 all raft crew members must log a minimum of ten (10) hours actual working time on Lake George with a qualified and experienced crew member present on the raft. A crew member is qualified and experienced if the crew member has one hundred (100) hours of actual crew time or has participated in a crew at least one (1) full season on Lake George.

(iv) The owner or operator must maintain written records that the above requirements have been complied with. The records are subject to inspection by the Commission upon reasonable notice.

(6) Equipment.

(i) Any parasail which contains a rip, hole, damaged line, or damaged or inoperable hardware must be immediately withdrawn from service until repaired.

(ii) All harnesses must be kept in good and working condition and be free from any damage.

(iii) All parasails, accompanying apparatus and equipment shall be inspected by the owner or operator prior to use, on a daily basis. Written records of the inspections shall be maintained by the owner or operator and made available to the Commission for review upon reasonable notice.

(iv) The owner or operator shall maintain written records of the size, make and condition of the parasail and the date of purchase of the parasail. The records are subject to inspection by the Commission upon reasonable notice.

(v) Rafts shall be equipped with radios which are capable of receiving and transmitting on marine channel 16.

(vi) A United States Coast Guard approved personal flotation device shall be provided for each person on the raft. All persons engaged in parasailing shall wear a United States Coast Guard approved Type III personal flotation device.

(7) Accidents. Accidents involving parasails shall be reported in writing by the owner or operator to the Commission within forty- eight (48) hours after such accident.

(d) Tour Boats.

(1) No person shall construct or operate a tour boat on the waters of Lake George without first obtaining a special permit pursuant to this Section. A special permit shall be granted for any tour boat which was placed into service on Lake George prior to the effective date of these regulations. Special permits shall be issued for a term not to exceed five (5) years. Special permits are subject to the requirements set forth in Sections 646-1.2 and 646-1.5 of this Title.

(2) The following provisions shall apply to the operation of existing tour boats and in the review of applications for tour boats:

(i) Tour boats shall not be berthed so as to interfere with navigation, access to adjacent property, significantly interrupt views or encroach on riparian rights of another.

(ii) All tour boats shall be designed to minimize wakes produced and shall not be operated in such a way as to produce a wake which will cause shoreline erosion or property damage or endanger the safety of others.

(iii) No tour boat shall by use of loud speakers, live music or other sound producing machines or equipment, except a horn, exceed a sound level of 86 db as measured at fifty (50) feet from 8:00 a.m. to 7:00 p.m. or sunset whichever is earlier or 72 db as measured from any point upland of the mean high-water mark from 7:00 p.m. or sunset whichever is earlier and 8:00 a.m.

(iv) Tour boat operators shall take all necessary steps to prevent any litter or debris from being thrown or discharged from the vessel and shall announce the prohibition contained in ECL Section 17-1711 against littering in Lake George by loud speaker at the beginning of each tour. Each tour boat shall be equipped with an adequate number of covered receptacles.

(v) Tour boats shall be operated from properly permitted marina facilities.

(vi) Tour boats shall provide systems for the safe removal, handling and disposal of fuel, sewage, wastewater, oil and other lubricants and solid wastes.

(vii) Whenever a tour boat and the facility where it is berthed are held in common ownership with the facilities of a Class A marina, the special permit required herein will be merged with approvals pursuant to Section 646-1.2 of this Title and only one application to the Commission shall be required.

Section 646-1.5 General Provisions Applicable to Special Permits.

(a) Prior to the issuance of any special permit pursuant to the provisions of this Subpart, the Commission may require submission of information necessary to determine whether the proposed activity will result in overcrowding, congestion, safety hazards or impair the water quality or other environmental resources of the Park. This may include, but not be limited to, specifications on the craft, its power, maneuverability, craft speed, equipment, noise output, lighting, wake, proposed operation including points of departure and landing, course, speed of operation and hours of operation.

(b) The Commission may require the submission of alternative design, equipment or methods of operation to mitigate specific impacts identified by the Commission.

Section 646-1.6 Miscellaneous Provisions.

(a) Prior to granting any permit relative to a dock, wharf, mooring or marina, the Commission shall ascertain the probable effect of the proposed facility and the operation thereof on the health, safety and welfare of the public and on the resources of the Park. The Commission shall also ascertain the impact of the proposed facility upon the congestion of Lake George and the probable visual, cultural and audible effects of the proposed facility on the neighborhood in which the facility is proposed and on the Park. Where the Commission determines that the facility will have an undue impact upon the health, safety, or welfare of the public of the resources of the park, lead to overcrowding or congestion, or cause undue visual, cultural or audible impacts on the neighborhood or the Park, a permit shall be denied.

(b) Any person owning, operating, or constructing a dock, wharf or mooring, shall be responsible for the complete removal of pilings, cribs, chains and blocks, floats and/or any other related components which are abandoned or fall into disuse.

(c) All persons shall comply with all conditions issued with any permit issued for the construction, operation or use of a dock, wharf, mooring or marina. Failure to comply with any such condition shall be a violation and grounds for the immediate revocation of the permit and/or the imposition of a fine for each day from the date the violation first occurred until the violation is corrected.

(d) A permit shall not be required for maintenance and repair of an existing dock, wharf or mooring if such repairs do not alter the size or shape of the dock or wharf. All repairs must conform to the requirements of this Subpart.

(e) Any change in use of an existing marina which increases the number and/or types of vessels serviced shall require a modification to any previously issued permit.

(f) Prior to the issuance of any permit which involves the commercial use of a dock, wharf or mooring, or the registration of any such facility, the Commission shall require the applicant to certify that the facilities and associated land uses are in compliance with applicable provisions of state and local laws, ordinances, rules and regulations.

(g) No person shall clean any vessel with chemicals or detergents where runoff into or contamination of the waters of the Park is likely to occur.

(h) No person shall launch a vessel into or remove a vessel from the waters of the Park without inspecting the vessel and its trailer, if any, to ensure the detection of marine growth, including macrophytes (weeds), or any other hull contamination, and removing said growth and disposing of it so as to ensure that it is not discharged into the waters of the park.

(i) No person shall launch any vessel into the waters of the Park, or operate a vessel on the waters of the Park, which is not permanently sealed to prevent the discharge of wastewater into the waters of the Park.

(j) No permit shall be issued under Sections 646-1.1 and 646-1.2 of this Subpart, and no facility shall be registered under Section 646- 1.3 of this Subpart unless the applicant demonstrates that the requirements of those sections have been complied with. If, during the life of the registration or permit the dock, wharf or mooring, or marina, ceases to meet the requirements of this Subpart, the registration or permit shall be subject to immediate revocation and the owner or operator shall be subject to the imposition of a fine for each day until the violation is corrected.

(k) No vessel shall be berthed at a dock, wharf or mooring without the prior consent of the adjoining landowner so as to encroach beyond the adjacent property line extended into the lake on the same axis as the property line runs onshore where it meets the lake, or at a right angle to the mean high-water mark, whichever results in the lesser setback.

(l) No person shall operate or put to use a commercial dock, wharf, mooring, Class A marina or Class B marina without implementing a maintenance program sufficient to keep all docks, wharves, adjacent shoreline, water and lake bottom clean of debris.

(m) The construction of a dock, wharf or mooring may also require a permit from other agencies, including the following: The Department; the U.S. Army Corps of Engineers, in certain locations, a wetlands permit or a land use permit from the APA; and/or municipal zoning approval.

Section 646-1.7 Exemptions. The permit application requirements of this Subpart shall not be applicable to the State, including agencies of the State, or any municipality acting in a governmental capacity.

Article IX-LS-Lakeshore District

9.1 Purpose

The purposes of the Lakeshore District are (1) to protect the fragile environment of the lakeshore, that area east of State Route 89 to the centerline of Cayuga Lake, in accordance with the Town of Ulysses Comprehensive Plan, (2009), (2) to provide a regulatory framework through which development can occur with minimal environmental impact, and (3) to develop design standards for houses and accessory structures that create a harmonious effect for the natural environment and the residents.

In particular, the following are important aspects or considerations for the Lakeshore District:

- Among the important natural and ecological features of the Lakeshore District are steep slopes, mature forests, fragile cliffs, tributaries, and seasonal streams feeding into Cayuga Lake.

- In recognition of their natural and ecological significance, several areas of the Lakeshore District have been designated as Unique Natural Areas by the Tompkins County Environmental Management Council.

- The Town has designated a Slope Overlay Area, which recognizes six soil types that when disturbed are significantly erodible and unstable based on their characteristics and slope steepness (see Article IV – Definitions).

Nothing in these regulations is intended to require or permit activities which contravene any laws, rules, or regulations or permits of the United States or New York State, or any agency thereof, nor are any of the provisions intended to supersede any requirements for obtaining any permits or approvals required by the United States or New York State, or any agency thereof.

9.2 Permitted Uses

Only the following buildings or uses are permitted in this District, and Site Plan Approval, pursuant to the provisions of Article III, Section 3.4, is required in Unique Natural Areas and Slope Overlay Areas:

Single-family residences and their accessory buildings.

Two-family residences and their accessory buildings.

Any municipal or public utility purpose necessary to the maintenance of utility services except that substations and similar structures shall be subject to the same setback requirements that apply to residences.

Land disturbance activities, associated with grading, excavation, filling, driveways, and drainage ways, are only allowed after obtaining a building permit for the permitted activity.

9.3 Permitted accessory uses

The following are permitted accessory uses, which are customarily incidental to the permitted uses listed above in Section 9.2:

Accessory buildings, as defined in Article IV and subject to provisions of Article XXIV, Section 24.9.

Elder cottage, subject to the provisions of Article XX, Section 20.10.

Open-sided elevators/lifts.

Temporary buildings, as defined in Article IV.

Site Plan Approval, pursuant to the provisions of Article III, Section 3.4, is required in Unique Natural Areas and Slope Overlay Areas for the permitted accessory uses listed in this section.

9.3.1 Permitted Accessory Uses without Site Plan Approval

Such uses as are customarily incidental to the permitted uses listed above in this Article, Section 9.2

Business directional signs, subject to the limitations set forth in Article XX, Section 20.4.4.

Home occupations, where no more than one person residing off the premises is employed.

9.4 Uses Permitted by Site Plan Approval

The following uses are allowed upon approval of a site plan by the Planning Board and subject to the design standards set forth in relevant sections of Article XX:

Adult care, family.

Agriculture.

Bed and breakfast operations where such is part of the residence.

Child care, family.

Professional offices where (a) such office is part of the residence property and (b) no more than three (3) persons residing off the premises are employed onsite.

9.5 Uses allowed by special permit

The following uses are allowed upon (1) Approval of a Special Permit pursuant to Article III, Section 3.3, subject to the design standards set forth in relevant sections of Article XX and (2) Site Plan Review by the Planning Board.

Fire stations or other public buildings necessary to the protection of or servicing of a neighborhood.

Restaurants.

Public or non-profit owned boat launching site, swimming beach, picnic area.

Public or non-profit owned park or playground including accessory buildings and improvements.

9.6 Lot area and yard requirements

Number of principal buildings per lot: two single-family residences or one two-family residence.

Minimum lot area shall be two (2) acres for lakeshore lots and five (5) acres for non-lakeshore lots.

Minimum lot width at the Mean High Water Elevation (MHWE) shall be 250 feet and minimum lot width at the road frontage shall be 250 feet for all non-flag lots.

Minimum lot depth shall be 250 feet for lakeshore lots and 450 feet for non-lakeshore lots.

Minimum setback, front and rear, shall be 50 feet from the highway right-of-way, and 50 feet where the lot abuts the lake; the MHWE shall be used for setback measurement. Docks, boat hoists, and boat ramps are permitted within the setback area.

Minimum side yard setbacks shall be fifteen (15) feet, except for a corner lot fronting on two (2) public streets, where the minimum yard setback for the side yard to the street or road shall be 25 feet.

Maximum building height for the principal dwelling shall be 32 feet above average grade measured at the building perimeter.

Maximum lot coverage for all building footprints shall be five (5) percent of the lot area. For lots with single-family and two-family residences, lot coverage calculations do not include driveways, walkways, or parking areas.

Minimum setback from a permanent or impermanent stream or wetland edge for any structure or parking area shall be 25 feet for impermanent streams and 50 feet for permanent streams, except in Unique Natural Areas where the setback to any stream shall be 75 feet.

No parking areas shall be constructed within 50 feet of the MHWE.

Flag lots shall meet minimum lake frontage (250 feet) and lot area (2 acre) requirements. Lot area excludes the pole. The pole shall connect to the road, not the lake. Non-lakeshore flag lots shall meet minimum lot area (5 acres) excluding the pole. See Article XX, Design Standard Section 20.12.

The above notwithstanding, in the case of a lot with frontage on the lake, accessory uses such as pump houses, docks, boat ramps and boat hoists typically associated with water-oriented recreational pursuits are permitted within the front yard setback area fronting on the lake, provided, however, that they are located outside of the required side yard setback areas and conform to the regulations or permits of the United States or New York State.

For the purposes of cluster development on a lakeshore lot, one dwelling unit will be allowed per 150 feet of lake frontage.

Lot Area and Yard Requirements Summary		
Requirement	**Lakeshore**	**Non-lakeshore**
Lot coverage, maximum	5%	5%
Building height, maximum	32 ft	32 ft
Lot area, minimum	2 acres	5 acres
Lakeshore frontage, minimum	250 ft	Not applicable
Lot width at road frontage, minimum	250 ft	250 ft
Lot depth, minimum	250 ft	450 ft
Setback from lakeshore, minimum, measured from MHWE	50 ft	Not applicable
Setback from road or rear property line	50 ft	50 ft
Side yard setback, minimum	15 ft	15 ft
Structure or parking area setback from impermanent / permanent stream or wetland edge (not in Unique Natural Area), minimum	25 ft / 50 ft	25 ft / 50 ft
Structure or parking area setback from any stream or wetland edge in Unique Natural Area and Slope Overlay Areas, minimum	75 ft	75 ft

9.7 Design standards for the Lakeshore District

In the event of any conflict between the provisions of this Section 9.7 and other provisions of the Zoning Law, the provisions of this section shall prevail.

9.7.1 Streams

Permanent and impermanent streams are, and wetlands may become, prominent features of the Lakeshore District and the condition of these water bodies directly affects the health of Cayuga Lake and the various creatures that depend on the water for sustenance. As such, it is the intent of these Lakeshore District regulations to ensure the continued preservation and health of these many Cayuga Lake tributaries for current and future generations.

For the purposes of this section, the area of a wetland is defined by both state and federal governing regulations. Buffer areas apply to federally protected wetlands greater than one-tenth (0.1) acre.

Requirements:

To the extent possible, permanent and impermanent streams **shall** be protected from sediment, effluent, sewage, and driveway runoff.

Diverting or altering the course of permanent or impermanent streams **shall** be prohibited, except where a NYSDEC permit is obtained in advance of starting work.

Unless otherwise authorized by the Planning Board or state or federal agency, no disturbance as listed previously in this section **shall** be located within 100 feet of any wetland.

During the site plan approval process where there is evidence of a wetland, the Planning Board **may require** a wetland delineation study to determine potential impacts of development on said wetland.

Recommendations:
Plowing of salt laden snow from driveways into streams **should** be avoided.

The proximity of docks to mouths of tributaries **should** consider natural variation in stream boundary location so as to not interfere with stream flow over time.

Stream bank vegetation **should** be encouraged to minimize erosion. Where necessary, stream banks should be replanted with native species.

Flow of water in Cayuga Lake tributaries **should** not be impeded by human-made structures in or spanning streams.

9.7.2 Vegetation and landscape

The intent of the Town of Ulysses is to preserve and encourage vegetation, especially non-invasive trees and shrubs, in the Lakeshore District in order to prevent erosion, sedimentation of the lake and streams, and maintain the rural, scenic nature of the Town. The intent of this section is to encourage landowners in this district to preserve and encourage vegetation for the benefit of current and future residents of the Town.

The intent of the Town of Ulysses is to preserve the natural features of the Lakeshore District and as such, to allow development that uses mechanisms that minimize disruption of the current ecological balance. The Zoning Officer and Planning Board shall review all development with the following guidelines when reviewing a site plan for approval.

Requirements:

Tree removal is allowed in the Lakeshore District according to the following terms and conditions:

(1) Without Town approval: a tree or trees whose location and conditions combine to make it a threat to human life or property.
(2) With the approval of the Zoning Officer and the possession of a valid building permit: those trees that are in the footprint of a construction site, septic system, parking areas, and the driveway access.
(3) Clear-cutting of forest stands for any use other than necessary minimal clearing for the requirements of a building project is prohibited.
(4) In Unique Natural Areas or Slope Overlay Areas, a Woodland Management Plan shall be filed with and approved by the Zoning Officer and/or the Town's consulting forester for multiple trees removed for the landowner's firewood or lumber use, and for forest management and forest improvement. A Woodland Management Plan shall be prepared by a professional forester with Society of American Foresters certification or by a cooperating consulting forester with the New York State Department of Environmental Conservation.

Recommendations:

In areas outside of Unique Natural Areas and Slope Overlay Areas, a Woodland Management Plan is recommended when removing multiple trees for the landowner's firewood or lumber use and for forest management and forest improvement.

Existing non-invasive vegetation should be maintained to the extent practicable to minimize runoff.

Buffer areas proximal to waterbodies are to be promoted using non-invasive plants to protect water resources.

Removal of trees for the purpose of expanding a view is discouraged.

Removal of trees for the purpose of expanding sunlight exposure is discouraged.

Native plants should be encouraged, especially shrubs and trees that produce edible fruit and nuts for wildlife.

Removal of invasive plants (garlic mustard, swallowwort, barberry, honeysuckle, buckthorn, multiflora rose, Russian olive and Norway maple, etc.) is encouraged so long as this effort does not contribute to significant soil disturbance or erosion.

Wildlife habitats, biological corridors, contiguous forests, and open space linkages should be encouraged and preserved.

Dead trees that do not pose a threat to life, property or a healthy forest should be left to provide wildlife habitat for both birds and animals.

New development should not compromise scenic views, in particular viewing points from adjacent roads and trails.

Regrading should blend in with the natural contours and undulations of the land.

Buildings proposed to be located within significant viewing areas should be screened and landscaped to minimize their intrusion on the character of the area.

Building design should harmonize with the natural setting.

Building materials should harmonize with their natural setting and be compatible with neighboring land uses.

9.7.3 Soil and sediment control

A structure or parking area shall have a minimum setback to permanent and impermanent streams of 50 and 25 feet respectively, as measured from the top edge of the slope rising from the bank of the stream. See Section 20.6.2 of the Town of Ulysses Zoning law.

On sites within the Slope Overlay Area or Unique Natural Area there shall be no excavation, grading or filling unless:

> It is determined by the Planning Board that such excavation, grading or filling is necessary to prevent erosion and/or protect the shoreline. The Planning Board may seek recommendations from a licensed engineer selected by the Town and paid for by the applicant;
>
> or
>
> such excavation, grading or filling is in conjunction with construction pursuant to a building permit legally issued by the Town Code Enforcement Officer after an engineer selected by the Town has reviewed the proposed construction and any required or necessary erosion control measures and has determined that the conduct of such work will not adversely affect the shoreline or neighboring properties.

In addition to the requirements of this article, any construction, grading, or other activities shall be conducted in accordance with any federal, state, or other local law or requirement pertaining to such activity, including but not limited to any requirements of the New York State Department of Environmental Conservation and the United States Army Corps of Engineers.

Roads and driveways should follow existing contours to the extent practicable to minimize erosion from cuts and fills.

9.7.4 Driveways and Parking

Requirements:
For new impervious surfaces proposed for driveways, parking areas, or walkways in Unique Natural Areas or Slope Overlay Areas, Site Plan Review procedures shall be followed, and the Planning Board may seek recommendations from a licensed engineer selected by the Town and paid for by the applicant.

For safety purposes, parking areas shall be designed and built to avoid the necessity for drivers to back their vehicles onto Route 89.

Recommendations:
Semi-pervious and pervious surfaces for driveways and parking areas are encouraged to minimize runoff and erosion.

Driveways and parking areas should be designed to include a combination of pervious and impervious surface materials as needed to provide for safe passage of traffic and to minimize the total area of impervious surface, which would contribute to runoff.

Driveways and parking areas should follow contour lines of the land as much as possible.

Excavation and regrading of slopes for parking areas should be minimized.

9.8 Subdivision in the Lakeshore District

In addition to the existing requirements for subdivision application and review, the following will apply:

Simple, minor and cluster subdivisions are permitted.

Major subdivisions are not permitted except for cluster subdivisions.

For cluster subdivisions, see Article 21.3.15, Town of Ulysses Zoning Law.

All subdivisions in the Lakeshore District will be reviewed by the Planning Board.

Simple subdivisions in the Lakeshore District will be reviewed by the Planning Board according to Minor Subdivision procedures.

In addition to the mapping requirements stated for minor and cluster subdivision application and review; the following will be shown on preliminary and final subdivision maps:

- Wetlands.
- Slopes of 25% or greater.
- Streams/watercourses.
- Set-backs.
- Mean High Water Line.

Appendix R

Evaluation Charts for In-Depth Municipal Assessments of Laws and Practices Affecting Water Quality

Phase 1

Town of Tonawanda

City of Lackawanna

City of Niagara Falls

City of North Tonawanda

Town of Sheldon

Town of Elma

Town of Newstead

Town of Grand Island

Town of Colden

Village of Williamsville

Town of Batavia*

Town of Bethany*

Town of Orangeville*

Phase 2

Village of Springville

Town of Concord

Town of Holland

Town of Westfield

Town of Yorkshire

*Evaluation Charts are available through the Genesee Finger Lakes Regional Planning Council

PHASE 1

Town of Tonawanda

City of Lackawanna

City of Niagara Falls

City of North Tonawanda

Town of Sheldon

Town of Elma

Town of Newstead

Town of Grand Island

Town of Colden

Village of Williamsville

Town of Batavia*

Town of Bethany*

Town of Orangeville*

*Evaluation Charts are available through the Genesee Finger Lakes Regional Planning Council

Town of Tonawanda Assessment Form

Completed May 2013

Section 1. Development: Existing Development

	Best Management Practices (BMPs)	Existing Means of Implementation (Law, Regulation, Practice, etc.)	Score	Meeting Notes, Follow-Up Questions & Comments
1-01	Identify retrofit opportunities	**Practice:** Implementing Green Infrastructure on town owned properties & facilities.	1	
1-02	Identify habitat and natural conveyance system restoration	**Regulation (limited):** Environmental Conservation Commission Powers & Duties §8-6, Advise Town Board, conduct studies. **Practice:** Conservation language is drafted into Comprehensive Plan. Separate Parks Comprehensive Plan.	1	
1-03	Establish retention/detention areas	**Regulation:** Approval of Site Plans §215-152, drainage plan, SWPPP required in W-MU, WB, RHC and WID Districts. **Regulation:** Stormwater Management §73-9, Performance and Design Criteria.	2	Tonawanda sees a need for more on-site detention, but aesthetics are a concern. Doesn't have ability for staff to inspect and enforce periodic maintenance (no fines set up for aesthetic maintenance).
1-04	Acquire additional land for locating treatment facilities		0	Not in the process of aquiring additional land for treatment facilities.
1-05	Encourage homeowners to place cornpost piles awayfrom waterbodies and roadways		0	Educational Brochure recommends composting, but vague on locating compost piles.
1-06	Encourage proper use and disposal of lawn and other household chemicals	**Regulation:** Solid Waste Management §181. **Practice:** Educational brochure on website.	2	
1-07	Institute turf management practices on golf courses and parks and recreation areas	**Practice:** Turf Management Program for some parks (golf courses are considered part of the park system).	1	
1-08	Undertake storm drain stenciling	**Practice:** Participating in WNY Stormwater Coalitions Medallion Program	2	Not currently done by the Town itself.
1-09	Encourage volunteer programs, such as adopt-a-highways and adopt-a-stream, etc.	**Practice:** Erie County coordinates an Adopt-a-Highway Program.	1	Not currently in place locally.
1-10	Include high percentage of indigenous plants in new landscaping on privately-owned properties (excluding arboretums, horticultural gardens, and sites requiring turf grasses)	**Practice:** Encouraged through Site Plan Approval process.	1	Town encourages the use of indiginous plants, but doesn't have the "teeth" to require native plantings. Looking to give planning board more authoritiy in that regard during code update process, where they are looking to give planning board site plan approval currently, most developers are receptive
1-11	Encourage water conservation		0	Not being done at this time.
1-12	Develop outreach programs targeted at specific problems related to water quality management & resource conservation	**Practice:** Educational brochures on Town website, WNY Stormwater Coalition, Erie County Water Quality Committee have programs.	2	
1-13	Encourage proper control of pet wastes	**Regulation:** Solid Waste Management §181-14, Dogs §71-5.	2	

1-14	Encourage continued operation of private storm water runoff control structures	**Regulation:** Stormwater Management §73. **Practice:** Town sends letters to property owners on up-keep and gives out fines for maintenance .	2	Limited ability to regulate at the moment, as there are no fines in place. No authority to issue citations in regards to dumping. There are a few properties that have garbage in retention ponds.
1-15	Discourage feeding of waterfowl		0	Dogs are used to chase away geese.
1-16	Discourage the introduction of exotic aquatic species (Eurasion water milfoil, zebra mussels, water chestnut, etc		0	Only 1 municipally owned Boat Launch facility. No signage provided currently.
1-17	Encourage continuted (periodic) operation and maintenance of private septic disposal systems	n/a	n/a	No properties have onsite septic systems
1-18	Effective and consistent application and enforcement of stormwater requlations & requirements	**Regulation:** Stormwater Management §73. **Practice:** Stormwater Management Officer oversees sites and works with contractors on-site.	2	Good success so far.
1-19	Require certification of existing on-site septic systems for property transfers or building expansions.	n/a	n/a	
1-20	Require entire property (existing as well as proposed) to be included in stormwater analysis/calculation.	**Regulation:** Stormwater Management §73. **Practice:** Stormwater Management Officer oversees sites and works with contractors on-site.	2	Engineer's report required to calculate how much onsite retention will be needed. Most properties are rehab properties, which is why retention ponds are the only alternative.

Section 1. Development: New Development and Substantial Redevelopment

1-21	Minimize the amount of land disturbed and the duration of disturbance	**Regulation:** Stormwater Management §73.	2	There is basic lot coverage minimum in zoning code; just enacted in Delaware Business District.
1-22	Preserve natural features and conform subtantially with the natural boundaries and alignment of waterbodies	**Regulation:** Subdivision §185-39, Stormwater Management §73-1, Zoning District Regulations §215-70.11, §215-70.24, §215-70.30 Preservation of significant existing vegetation as part of the design standards in the WID, WMU, WB, and River Road Overlay.	2	Viewsheds are protected. No real riparian protection, not much more than landscaped buffers for aesthetics. Building dept. relies on DEC permitting process in regards to wetlands.
1-23	Retain and protect trees and other natural vegetation on and near disturbed sites	**Regulation:** Stormwater Management §73-1, Zoning District Regulations §215-70.11, §215-70.24, §215-70.30 Preservation of significant existing vegetation as part of the design standards in the WID, WMU, WB, and River Road Overlay. No restrictions on Tree Cutting outside of ROW.	2	Zoning District Regulations were designed for aesthetics.
1-24	Account for topography and soil types in efforts to minimize erosion potential	**Regulation:** Stormwater Management §73, Subdivision §185, Approval of Site Plans §215-152.	2	Town has approximately 5-6 subdivisions/year and maybe 1 residential-housing subdivision that includes new roads every 30 years. Town is mostly built out, development potential still exists near Waterfront/River Road area.
1-25	Maintain run-off rates similar to pre-construction levels	**Regulation:** Stormwater Management §73, SWPPP approval process.	2	

1-26	Minimize the creation of impervious areas	**Practice:** Implementing green infrastructure, rain gardens at Golf Dome and parks buildings.	1	LWRP makes mention of maximum lot coverage, (ranging from 65%-75%) but only for waterfront mixed use district, and waterfront industrial district.
1-27	Control increased run-off caused by changed surface conditions to minimize the danger of flooding, erosion, sedimentation and pollutants entering waterbodies prior to, during and after construction	**Regulation:** Stormwater Management §73, Excavation §179.	2	
1-28	Use temporary vegetation and mulching to protect exposed and critical areas during development	**Regulation:** Stormwater Management §73, Excavation §179, SWPPPs.	2	
1-29	Redistribute topsoil within the boundaries of the disturbed land for seeding and planting	**Regulation:** Stormwater Management §73, Excavation §179.	2	
1-30	Stabilize distrubed soils as soon as possible	**Regulation:** Stormwater Management §73, Excavation §179, SWPPPs.	2	
1-31	Minimize the use of cut & fill operations. Conform such operations to topography and soils to minimize erosion potential and adequately accommodate run-off	**Regulation:** Subdivision §185, Stormwater Management §73-1, Approval of Site Plans §215-152, River Road Overlay.	2	
1-32	Use appropriate solid and hazardous waste generation and disposal practices including source controls and recycling	**Regulation:** Solid Waste Management §181-14 Hazardous Waste.	2	
1-33	Encourage construction site manangement techniques which include the proper hanging and disposal of pesticides and petroleum products and containers	**Regulation:** Stormwater Management §73 , Solid Waste Management §181	2	
1-34	Ensure proper operation and maintenance of run-off manangement facilities	**Regulation:** Stormwater Management §73, **Practice:** Notice of Violation Letters sent to owner requesting maintenance.	2	Regulations enforce maintenance by property owners, however the Town only issues letters to maintain stormwater facilities. They currently have no means for enforcement (i.e. fines) associated with poor up-keep.
1-35	Target training for contractors, inspectors, zoning and planning officials	**Practice:** Town staff participate in WNY Stormwater Coalition trainings.	2	There are updates all the time through contractors & MS4 annual conferences
1-36	Require tree surveys and/or cutting plans	**Practice:** Permits for ROW tree removal only	1	
1-37	Develop priority list for BMP's - use of vegetative low areas for retention/infiltration	**Practice:** Town aims to use vegetation first, retention ponds only if necessary.	1	
1-38	Encourage cluster development	n/a	n/a	Town is almost entirely built out, and never sees multi-lot subdivision applications, would have limited benefit from this regulation anyway.
1-39	Require connection to and/or extension of existing water & sewer if project is within 500 feet of existing infrastructure	**Regulation:** Public Sewers §165	2	

1-40	Enact limits on driveway grades	n/a	n/a	No steep grades in town, follows NYSDOT Highway Design Manual anyway.
1-41	For redevelopment, employ regulations that provide for technologically advanced (on and off) site wastewater treatment systems to optimize efficiences and address challenging sites	n/a	n/a	Town has no on-site waste water systems.
1-42	Implement Fed/State Stormwater (SPDES) Phase II requirements	**Regulation:** Stormwater Management §73, Solid Waste Management §181, Sewers §165. **Practice:** Educational brochures on Town website. Other outreach activities occuring through the WNY Stormwater Coalition.	2	Phase II Requirements includes 1) public edu & outreach 2) public participation & involvement 3) illicit discharge detection & elimination 4) construction site run-off 5) post construction run-off control and 6) pollution prevention & good housekeeping.

Final Score: 56 out of 74 Total Possible Points 56

Number of BMPs addressed (either fully or partially): 32 out of 37 BMPs (86%)

Section 2. Forestry & Agriculture: Forestry

Best Management Practices (BMPs)		Existing Means of Implementation (Law, Regulation, Practice, etc.)	Score
2-01	Consider potential water quality impacts when selecting silviculture system (yarding system, site preparation, pesticides employment, etc.)	n/a	n/a
2-02	Consider harvesting practices	n/a	n/a
2-03	Seasonal preference for logging operations	n/a	n/a
2-04	Have specialists (Geologists, soil scientists, geotechnical engineers, wildland hydrologists) review plans in high erosion hazard areas	n/a	n/a
2-05	Preplan harvest areas, skid trails, and access so as to be on stable soils, avoiding steep gradients, multiple stream crossings, poor drainage areas etc.	n/a	n/a
2-06	Limit grades of access roads	n/a	n/a
2-07	Require stabilization of roads/drives to forestry site	n/a	n/a
2-08	Employ natural topography and contour for design of road network	n/a	n/a
2-09	Require stormwater controls for increased runoff from ground cover modification	n/a	n/a
2-10	Consider site restoration	n/a	n/a

Section 2. Forestry & Agriculture: Agriculture

2-11	Use agricultural environmental management (AEM)	n/a	n/a
2-12	Require farms seeking agricultural value assessment to participate in AEM	n/a	n/a

Section 3. Waterways & Wetlands: Modified Waterways

	Best Management Practices (BMPs)	Existing Means of Implementation (Law, Regulation, Practice, etc.)	Score	
3-01	Develop an operation and maintenance program for existing modified streams that includes identification of opportunities and actions to restore habitat and the physical and chemical characteristics of these streams	**Practice:** Town maintains creeks' shorelines. Town identifies problem shorelines based on resident complaints and implements solutions, prioritizing vegetative solutions. Uses Rip Rap as a last resort.	1	Initiatives are mostly triggered by significant erosion, however the focus on vegetation as a primary mitigation method is a form of habitat restoration. There is an upcoming project on a ditch that channels water from Amherst to Ellicott Creek.
3-02	Improve stream quality by controlling instream sedimentation and selectively clearing debris	**Regulation (limited):** Local Waterfront Revitalization §129, LWRP Polic	1	Not actively doing, sedimentation issues are addressed mostly through complaints (See 3-01).
3-03	Establish or re-establish riparian buffers		0	LWRP mentions buffers many times, usually referring to the setback regulations in place. Suggests native vegetation, or landscaped open areas . Planning to address via setbacks, overlay in future code revisions.
3-04	Prevent animal wastes from entering waterbodies	**Regulation:** Solid Waste Management §181-14, Dogs §71-5.	2	
3-05	Attempt vegetative stablization before undertaking structural measures	**Regulation (limited):** Local Waterfront Revitalization §129, LWRP: Policy 17 **Practice:** Town first utilizes vegetative stabilization before implementing more structural means (i.e. rip rap).	1	
3-06	Design and construct shore erosion control facilities in accordance with an erosion and sedimentation control plan, in areas where marsh creation and soil bioengineering are ineffective or where existing protection methods are being flanked or are failing	**Regulation:** Stormwater Management §73, SWMP 2010 Plan, NYS Erosion & Sediment Control Manual.	2	Town follows the NYS DEC Erosion and Sedimentation Control Manual for design of facilities.
3-07	Schedule the periodic maintenance of sediment control measures, and inspect and repair them as needed in conformance with established schedule	**Practice:** Town Stormwater Management Officer, Engineers, and conduct periodic inspections.	2	

3-08	Protect streambanks through direct nonstructural means, such as new vegetation or protection of existing vegetation; direct structural means, such as revetments and bulkheads; indirect nonstructural means, such as regulating irrigation near stream-banks or outing overbank drainange; or indirect structural means, such as deflecting channel flow away from streambanks with dikes, board fences and gabions	**Regulation (limited):** Local Waterfront Revitalization §129, LWRP Policy 17. **Practice:** Town first utilizes vegetative stabilization before implementing more structural means (i.e. rip rap).	1	
3-09	Use setbacks to minimize disturbance of land adjacent to streambanks and shorelines	**Regulation (limited):** Setback regulations for water features are limited to certain areas of town, and include flexible language. WMU District §215-70.5 = minimum 50' Niagara River, all other districts treated as side/rear yard (25'), WB District §215-70.11 = 50' Buffers required along Two-Mile Creek and Rattlesnake Creek, River Road Overlay §215-70.30 and WMU allow for extension of setbacks to preserve vista, natural areas, unique characteristics of the shoreline (never used).	1	Mostly setbacks from the road side of property is considered, not the river side. Until Site Plan Approval, setbacks are just a recommendation. Docks are an issue in flood plains, Town may implement permitting for docks in the future.
3-10	Prevent discharges to waterbodies in amounts that would adversely affect the taste, color or odor of the waters, or would impair the waters for their best usages	**Regulation:** Public Sewers §165-43, Stormwater Management §73 (Illicit Discharge Language), Local Waterfront Revitalization §129, LWRP Policy 30.	2	

Section 3. Waterways & Wetlands: Wetlands and Riparian Area Management and Restoration

FYI -These BMPs mostly address approaching wetlands as a non-point source pollution mitigation resource (as they currently exist) in MS4 communities.

3-11	Consider wetlands and riparian areas and their nps control potential on a watershed scale		0	
3-12	Identify existing functions of those wetland and riparian areas with significant nps control potential when implementing nps management practices. Do not alter wetlands or riparian areas to improve their water quality at the expense of their other functions	**Regulation (limited):** Local Waterfront Revitalization §129.	1	LWRP Policy 7 & 7A talks at length about the implications of modifying wetlands and other habitats. While not specifically addressing nps controls, it talks about other wetland and habitat functions (esp. regarding Strawberry Island-Motor Island)
3-13	Conduct permitting, licensing, certification and non-regulatory nps pollution activities in a manner that protects wetland functions	**Regulation (limited):** Subdivision of Land §185, Stormwater Management §73, Local Waterfront Revitalization §129.	1	North Hammer commerce center project includes a total separation of wetlands and stormwater system (ACOE Project). Currently relocating wetlands because of this. Don't want to impact wetlands.

3-14	Special zoning considerations to protect wetland areas	**Regulation (limited):** Subdivision of Land §185, Stormwater Management §73, Local Waterfront Revitalization §129.	1
3-15	Use appropriate pretreatment practices such as vegetated systems or detention or retention basins to prevent adverse impacts to wetland functions that affect nps pollution abatement from hydrologic changes, hydrologic changes, sedimentation or contaminants	**Regulation:** Stormwater Management §73, SWPPP approval process.	2
3-16	All projects should require wetlands certification	**Regulation:** Local Waterfront Revitalization §129, Environmental Quality Review §76. **Practice:** All projects with designated State or Federal Wetlands are submitted to NYS DEC and ACOE for review.	1

Final Score: 19 out of 32 Total Possible Points 19

Number of BMPs addressed (either fully or partially): 14 out of 16 BMPs (87%)

Section 4. Marinas: Existing Marinas

	Best Management Practices (BMPs)	Existing Means of Implementation (Law, Regulation, Practice, etc.)	Score	
4-01	Clean maintenance areas regularly. Preferably by vacuuming to remove trash, sandings, paint chips etc.	**Regulation (limited):** Local Waterfront Revitalization §129, LWRP Policy 2 subtopic.	2	See exerpt below
4-02	Prevent residue from being carried into surface waters by performing abrasive blasting within plastic tarp enclosures on windless days or withing spray booths	**Regulation (limited):** Local Waterfront Revitalization §129, LWRP Policy 2 subtopic.	2	"Boat maintenance activities, including washing, sanding, painting, draining bilge water and servicing motors shall not discharge waste water or other substances into any waterbody, nor shall any waste materials be disposed of in such a manner that they run overground and into a waterbody."
4-03	Provide proper disposal/recycling facilities to marina patrons, preferably covered receptacles	**Practice:** Garbage totes are available at the public boat launch.	1	
4-04	Establish fish cleaning areas, and implement rules governing the conduct of fish cleaning operations		0	LWRP speaks of fishing areas, but no mention of disposal of caught fish.
4-05	Educate boaters on the importance of proper fish cleaning practices		0	
4-06	Implement fish composting where appropriate		0	
4-07	Store materials in areas impervious to the type of material stored. Build curbs, berms, or other barriers around the areas to contain spills	**Regulation (limited):** Solid Waste Management §181.	1	Doesn't speak specifically on curbs or berms, but repeatedly talks about appropriate proper disposal and storage of different materials

P 11 - No municipally owned marina's, only four privately owned marinas (Mid River, Collin's, Dupont Boat Club, and Stingers), and one public boat launch (at Aqua Lane Park).

4-08	Use separate, clearly labeled containers for the disposal of oil, gasoline, antifreeze, diesel, kerosene and mineral spirits	**Regulation:** Solid Waste Management §181.	2	
4-09	Target outreach programs about proper disposal at marinas through the use of signs, mailings and other means		0	
4-10	Promote the use in bilges of oil-absorbing materials, and replace them as necessary, preferably recycling, or disposing of them in accordance with petroleum disposal regulation.		0	
4-11	Use a container under the air vent while refueling inboard tanks if the tank vents are not equipped with a fuel/air separator		0	
4-12	Prohibit in-water hull scrapings or any underwater process to remove paint from boat hulls	**Regulation (limited):** Local Waterfront Revitalization §129, LWRP Policy 2 subtopic.	1	
4-13	Wash the boat hull above the waterline by hand, using only necessary amounts of detergents and cleaning compounds that are phosphate free and bio-degradable		0	
4-14	Prohibit the use of detergents and cleaning compounds containing ammonia, sodium hypochloride, chlorinated solvents, petroleum distillates, alcohol or lye	**Regulation (limited):** Local Waterfront Revitalization §129, LWRP Policy 2 subtopic.	1	LWRP repeatedly talks about avoiding contamination of the water, whether through cleaning practices or general marina functions. Doesn't mention solvents specifically.
4-15	Educate individuals about the importance of trash reduction and recyling through: interpretive and instructional signs placed at marinas and boat launching sites, pamphlets or flyers, newsletters, inserts in billings, meetings and presentations, workshops, and certification programs	**Practice:** Educational recycling mailer on Town website.	1	
4-16	Inspect pumpout facilities regularly, and repair them if practical, under a maintenance contract with a competant contractor		0	

4-17	Add language to slip lease agreements mandating the use of pumpout facilities and specifying penalties for failure to comply	**Regulation (limited):** Local Waterfront Revitalization §129, LWRP Policy 34.	2	With two exceptions: marinas that serve boats that are less than 26 ft. in length and are not equipped with marine sanitation devices, Marinas that provide less than 25 slips for boats over 26 ft in length and there are marina's near by that offer pumpout facilities.
4-18	Place dye tablets in holding tanks to identify and discourage illegal disposal		0	
4-19	Prohibit motorized vessels from areas (define areas) that contain important shallow-water habitats	**Regulation (limited):** Local Waterfront Revitalization §129, LWRP Policy.	2	Outlined in Strawberry Island & Motor Island Shallows Impact Assessment in LWRP. Motor Island Shallows identified as an important habitat that should not be disturbed by: "Dredging, filling, bulkheading, or development of boatlaunching facilities".
4-20	Establish and enforce no-wake zones to decrease turbidity and reduce erosion potential from boat wakes	**Regulation (limited):** Local Waterfront Revitalization §129, LWRP Policy.	2	LWRP says marinas should be designed with adequate protection from boat wakes (Marina Siting).

Section 4. Marinas: New Marinas

4-21	Design and site marinas to maximize exchange of marina basin water. Limit basins and channels with square corners that tend to trap flotsam, and place dock structures in a manner that promotes circulation	**Regulation (limited):** Waterfront Mixed Use District (WMU) §215-70.5, references marina design standards shall be governed by all applicable federal and state standards and regulations.	1	Facilities over a certain size are required to obtain a NYS DEC "Protection of Waters Permit". Many of the small docks in Tonawanda Creek and Ellicott Creek are exempt from this requirement.
4-22	Perform a preconstruction assessment, which includes a water quality monitoring and modeling methodology, to predict post-construction water quality conditions	**Regulation:** Stormwater Management §73, SWPPPs, LWRP Marina "Siting Standards".	2	LWRP Marina "Siting Standards".
4-23	Monitor water quality during construction to protect ambient water quality to the maximum practicable extent	**Regulation:** Stormwater Management §73, SWPPPs. **Practice:** required SWPPPs for sites under 1 acre (selective cases).	2	
4-24	Develop a marina siting policy to discourge development in areas containing important habitat designated by local, State, or federal agencies	**Regulation:** Local Waterfront Revitalization §129-8, LWRP Policy 2 Subtopic, Waterfront Mixed Use District (WMU) §215-70.5, references marina design standards shall be governed by all applicable federal and state standards and regulations.	2	
4-25	Conduct surveys and employ rapid bioassessment techniques to assess historic habitat function (e.g. spawning, nursery, and migration pathways) and potential impacts to these and other biological functions and resources	**Regulation:** Local Waterfront Revitalization §129, documents habitats.	2	

4-26	Encourage the redevelopment or expansion of existing marina facilities that have demonstrated minimal environmental impacts instead of developing new marina facilities		0	
4-27	Consider alternative sites with minimal potential environmental impacts when the use of previously disturbed sites is not feasible		0	
4-28	Minimize disturbance of indigenous vegetation in the riparian area	**Regulation (limited):** Zoning District Regulations §215-70.11, §215-70.24, §215-70.30 Preservation of significant existing vegetation as part of the design standards in the WID, WMU, WB, and River Road Overlay. Setback regs: WMU District §215-70.5 = minimum 50' Niagara River, WB District §215-70.11 = 50' Buffers required along Two-Mile Creek and Rattlesnake Creek, River Road Overlay §215-70.30 and WMU allow for extension of setbacks to preserve vista, natural areas, unique characteristics of the shoreline (never used).	1	
4-29	Use soil bioengineering or plants, wherever conditions allow, to restore damaged habitat along shorelines and streambanks	**Practice:** Town maintains Creek shorelines. ID's problem shorelines based on resident complaints and implements solutions, prioritizing vegetative solutions. Uses Rip Rap as a last resort.	1	
4-30	Use properly designed and constructed engineering practices that minimize shoreline disturbance in areas where soil bioengineering and plants are ineffective	**Practice:** Town first utilizes vegetative stabilization before implementing more structural means (i.e. rip rap).	1	
4-31	Use appropriate shore erosion control methods, such as returns or return walls, in areas where existing protection methods are being flanked or are falling	**Regulation (limited):** Local Waterfront Revitalization, LWRP Policy 13A **Practice:** Conducted on a site-by-site basis where needed.	1	LWRP Policy 13A talks about this in relation to Strawberry Island
4-32	Plan and design all steambank, shoreline, and navigation structures so that they do not transfer erosion energy to or otherwise cause visible loss of surrounding streambanks or shorelines	**Practice:** Conducted on a site-by-site basis where needed.	1	
4-33	Locate and design fuel stations so that spills can be contained in a limited area		0	

4-34	Design and install underground fuel storage tanks according to State regulations, including the provision of detection systems and automatic fuel tank and pump leak shut-offs	**Regulation:** Building Code Administration §54, Part of the NYS Uniform Fire Prevention and Building Code.	2	Requires permits for all tank and pump installations, reviewed for compliance with NFPA regulations, regulates tank size and locations and oversee inspections.
4-35	Provide aboveground fuel tanks and fueling areas with a curbed or diked storage area to handle containment volumes meeting State (and local) codes and inspect regularly	**Regulation:** Building Code Administration §54, Part of the NYS Uniform Fire Prevention and Building Code.	2	Requires permits for all tank and pump installations, reviewed for compliance with NFPA regulations, regulates tank size and locations and oversee inspections.
4-36	Use preferred pumpout systems: fixed-point, portable, dedicated slipside, and pumpout boats		0	
4-37	Design onsite wastewater treatment systems to specifically handle waste from vessels	n/a	n/a	Town has no on-site wastewater treatment systems.
4-38	Post pumpout facility location and regulations at the marina. Charge fees that encourage rather than discourage facility use. Consider offsetting the cost of maintaining pumpout facilities by fuel sales where these facilities are conveniently located in close proximity to one another		0	

Section 4. Marinas: All Marinas (Existing & New)

4-39	Restrict boat repair and maintenance activities to clearly marked designated areas to prevent debris from falling into the water and preventing invasive species	**Regulation (limited):** Local Waterfront Revitalization §129, LWRP Policy 2 subtopic.	1	BMPs
4-40	Secure all fueling facilities and storage areas with appropraite shut-off devices and security locks and inspect regularly	**Regulation:** Zoning §215.41 & 215.71.	2	References OSHA requirements.
4-41	Design fueling stations with spill containment equipment that is stored in a clearly marked location, accessible to work and storage areas. Post emergency phone numbers in a prominent location	**Regulation:** Zoning §215.41 & 215.71.	2	References OSHA requirements.

4-42	Design a spill contingency plan		0	LWRP Policy 36: "Activities related to the shipment and storage of petroleum and other hazardous materials will be conducted in a manner that will prevent or at least minimize spills into coastal waters; all practicable efforts will be undertaken to expedite the cleanup of such discharges; and restitution for damages will be required when these spills occur". Does not specify a spill contingency plan is a required permitting condition.
4-43	Inspect and maintain all containment berms or devices in accordance with State regulations. Investigate immediately signs of leakage or spillage, and undertake cleanup in accordance with applicable best management practices	**Regulation:** Zoning §215.41 & 215.71.	2	References OSHA requirements and in accordance with National Fire Protection Association.
4-44	Have a trained operator present and prepared to respond to accidental spills	n/a	n/a	This is the responsibility of marina operator, not the Town (no town-owned marinas).
4-45	Maintain daily inventory records to identify abnormal loss or gain of liquid		0	
4-46	Prohibit the cleaning of hoses, fittings, pumps, and other accessory equipment on piers, docks or adjacent upland to prevent runoff into the marina basin or other surface or groundwater	**Regulation (limited):** Local Waterfront Revitalization §129, LWRP Policy 2 subtopic.	1	BMPs
4-47	Create and/or maintain a dedicated fund for maintenance in the case of government-owned facilities	n/a	n/a	No town-owned marinas.
4-48	Restrict the operation of pumpout facilities to trained marina personnel only		0	

Final Score: 43 out of 90 Total Possible Points 43

Number of BMPs addressed (either fully or partially): 28 out of 45 BMPs (62%)

Section 5. Roads and Bridges: Existing Roads & Bridges

Best Management Practices (BMPs)	Existing Means of Implementation (Law, Regulation, Practice, etc.)	Score	
5-01	Conduct road and bridge maintenance (deicing material usage and storage, pot-hole repair, bridge washing, scraping and painting, etc) according to best management practices		0	No info given on Best Management Practices. Should be using the NYS Highway Superintendent Roads and Water Quality Handbook.

Town is not responsible for the bridges in town.

5-02	Conduct right-of-way activities (mowing, brush removal, pesticide and fertilizer use, etc) according to best management practices		0	
5-03	Include high percentage of indigenous plants in new landscaping on public-owned properties (excluding arboretums, horticultural gardens, and site requiring turf grasses)	**Practice:** Town policy to use native vegetation as much as possible.	1	
5-04	Implement a regular inspection and maintenance plan of existing structures	**Practice:** Conducts visual inspection of streets to assess conditions & develop priority lists for maintenance and repairs.	1	
5-05	Develop and identify erosion/sediment control areas (examples include steep slopes, easily erodible soils, and nearby sensitive areas) and retrofit opportunities		0	
5-06	Require percentage of roads to be tested with non-ice and non-sand de-icing.		0	Not doing this

Section 5. Roads and Bridges: New Roads & Bridges

5-07	Minimize the amount of land disturbed and the duration of disturbance.	**Regulation:** Stormwater Management §73, SWPPP requirement. **Practice:** Town tries to stay within ROW.	2	There might be temporary storing of materials, but restoration after the fact. No new roads in the town in 30 years. Most are rebuilds About once every 10 years there is a new road.
5-08	Preserve natural features and conform substantially with the natural boundaries and alignment of waterbodies	**Regulation:** Subdivision §185, Stormwater Management §73, Approval of Site Plans §215-150, WB District Zoning §215-70.11, River Road Overlay §215-70.30. **Practice:** Avoid natural features first, then relocate (i.e. wetlands).	2	Town tries to relocate wetlands if necessary
5-09	Retain and protect trees and other natural vegetation on and near disturbed sites	**Regulation:** Stormwater Management §73-1, Zoning District Regulations §215-70.11, §215-70.24, §215-70.30 Preservation of significant existing vegetation as part of the design standards in the WID, WMU, WB, and River Road Overlay. No restrictions on Tree Cutting outside of ROW.	2	Not usually an issue.
5-10	Retain additional runoff sites	**Regulation:** Stormwater Management §73, SWPPP requirement, Town of Tonawanda Stormwater Prevention Plan (WNY Stormwater Coalition Model).	2	
5-11	Minimize the creation of impervious areas	**Regulation:** Local MS4 Permit = Town of Tonawanda Stormwater Prevetion Plan (WNY Stormwater Coalition Model), **Practice:** Implementing green infrastructure, rain gardens at Golf Dome and parks buildings.	1	Priority in Stormwater Management Plan.

5-12	Treat increased runoff caused by changed surface conditions to minimize the danger of flooding, erosion and pollutants entering waterbodies prior to, during and after construction	**Regulation:** Stormwater Management §73, SWPPP requirement, Town of Tonawanda Stormwater Prevention Plan (WNY Stormwater Coalition Model).	2	
5-13	Use temporary vegetation and mulching to protect exposed and critical areas during development	**Regulation:** Stormwater Management §73, SWPPP requirement, Town of Tonawanda Stormwater Prevention Plan (WNY Stormwater Coalition Model).	2	
5-14	Redistribute topsoil within the boundaries of the disturbed land for seeding and planting	**Regulation:** Stormwater Management §73, SWPPP requirement, Town of Tonawanda Stormwater Prevention Plan (WNY Stormwater Coalition Model).	2	
5-15	Stabilize disturbed soils as soon as possible	**Regulation:** Stormwater Management §73, SWPPP requirement, Town of Tonawanda Stormwater Prevention Plan (WNY Stormwater Coalition Model).	2	
5-16	Minimize the use of cut and fill operations. Conform such operations to topography and soils to minimize erosion potential and adequately accommodate runoff	**Regulation:** Stormwater Management §73, SWPPP requirement, Town of Tonawanda Stormwater Prevention Plan (WNY Stormwater Coalition Model).	2	
5-17	Control erosion and sedimentation prior to, during and after site preparation and construction	**Regulation:** Stormwater Management §73, SWPPP requirement, Town of Tonawanda Stormwater Prevention Plan (WNY Stormwater Coalition Model).	2	
5-18	Require long term stormwater management plan.	**Regulation:** Stormwater Management §73, SWPPP requirement, Town of Tonawanda Stormwater Prevention Plan (WNY Stormwater Coalition Model).	2	Stormwater Prevention Plan looks to reduce impervious surfaces. Most recently installed rain gardens at Golf Dome & Parks building. Rain gardens are designed for minimal maintenance and maintaned by trained parks staff.
5-19	Require long term sedimentation control & maintenance.	**Regulation:** Stormwater Management §73, SWPPP requirement, Town of Tonawanda Stormwater Prevention Plan (WNY Stormwater Coalition Model).	2	

Section 5. Roads and Bridges: All Roads & Bridges (Existing & New)

5-20	Target existing public holdings, such as parks, for removing unecessary impervious surfaces	**Regulation:** Local MS4 Permit = Town of Tonawanda Stormwater Prevetion Plan (WNY Stormwater Coalition Model), **Practice:** Implementing green infrastructure, rain gardens at Golf Dome and parks buildings.	2

5-21	Incorporate NYSDOT design and guidance documents, standard specifications, and procedural manuals (Highway Design Manual, Environmental Procedures Manual, Maintenance Guidelines, etc) into local laws and operating procedures	**Practice**: Both Town Highway Department. and Engineering Department follow NYS DOT Highway Design Manuals & Guidelines. Neither are incorporated into local laws or operating procedures.	1
5-22	Ensure application of appropriate solid and hazardous waste generation and disposal practices including source controls and recycling	**Regulation:** Solid Waste Management §181.	2
5-23	Ensure proper operation and maintenance of runoff management facilities	**Regulation:** Stormwater Management §73, SWPPP requirement, Town of Tonawanda Stormwater Prevention Plan (WNY Stormwater Coalition Model).	2
5-24	Participate in Cornell Local Roads Program activities and training	**Practice:** Town staff regularly attends trainings.	2
5-25	Target training programs at highway officials, contractors, construction workers, inspectors, zoning and planning officials	**Practice:** Town staff regularly attends trainings.	2
5-26	Target training and outreach programs about the proper handling of materials, leakage and spill prevention and spill response procedures at maintenance staff and workers	**Practice:** Town staff is trained on Hazardous Waste Operations and Emergency Response (HAZWOPER).	2

Final Score: 40 out of 52 Total Possible Points 40

Number of BMPs addressed (either fully or partially): 22 out of 26 BMPs (77%)

Section 6: Onsite Wastewater Treatment Systems

	Best Management Practices (BMPs)	Existing Means of Implementation (Law, Regulation, Practice, etc.)	Score
6-01	Conduct regular inspections of OWTS at a frequency adequate to determine failure and undertake required maintenance	n/a	n/a
6-02	Institute setback guidelines	n/a	n/a
6-03	Promulgate plumbing codes that require practices that are compatible with OWTS	n/a	n/a
6-04	Target outreach programs at homeowners, contractors and developers	n/a	n/a

FYI- There are No on-site wastewater systems in town.

6-05	Inspection of all OWTS at property transfer or within 1 year prior to transfer	n/a	n/a
6-06	Require all properties within 500' of municipal service to connect.	**Regulation:** Public Sewers §165	2
6-07	Set goals for effluent limits (nitrogen, phosphorous, BOD, etc)	n/a	n/a

Final Score: 2 out of 2 Total Possible Points 2

Number of BMPs addressed (either fully or partially): 1 out of 1 (100%)

Overall Assessment Score: 160 out of 250 Total Possible Points 160

Number of BMPs addressed (either fully or partially): 97 out of 125 BMPs (78%)

City of Lackawanna Assessment Form

Section 1. Development: Existing Development

	Best Management Practices (BMPs)	Existing Means of Implementation (Law, Regulation, Practice, etc.)	Score	Meeting Notes, Follow-Up Questions & Comments
1-01	Identify retrofit opportunities	**Regulation:** Utilizing minimum lot coverage requirements as part of Zoning Districts to reduce impervious surfaces on a lot. Greenspace Performance Standards in Districts. **Practice:** Utilize SWPPPs process to ensure landscaping design absorbs some run-off.	2	Any time a business remodels, they have to install greenspace/flower beds. There are greenspace requirements. Water is not allowed to discharge into the street. The city doesn't want all asphalt but rather landscaping/greenspace. While existing buildings are not required to meet code, as soon as a building goes for a permit, they must comply with greenspace requirements. When building demos are done, everything must be restored to grass "shovel ready".
1-02	Identify habitat and natural conveyance system restoration	**Regulation**: §230.85 Wind Farm application, §230-28 Regulations Applicable to All Districts, §230-34 Landscaping	2	site restoration plan required for wind farms
1-03	Establish retention/detention areas	**Regulation:** §230.43 Stormwater Management	2	
1-04	Acquire additional land for locating treatment facilities	n/a		Sewer district issue. They are in the process of updating plants and system lines, but most likely not aquiring new land. Lines are consolidated and handled through ECSA
1-05	Encourage homeowners to place cornpost piles awayfrom waterbodies and roadways	**Regulation (limited):** §95 deals with commercial composting (in some detail) **Practice:** The city has mailed educational materials to businesses, but not homeowners.	1	
1-06	Encourage proper use and disposal of lawn and other household chemicals	**Regulation:** Storm Drainage §185.34	2	
1-07	Institute turf management practices on golf courses and parks and recreation areas	**Practice:** City conducts Mowing only, no fertilizers or pesticides.	2	
1-08	Undertake storm drain stenciling	**Regulation:** Storm Drainage §185.46 **Practice**: Participation in WNY Stormwater Coalition.	2	Medaillion Program?
1-09	Encourage volunteer programs, such as adopt-a-highways and adopt-a-stream, etc.	**Practice:** Erie County Coordinates Adopt-a-Highway Programs	2	
1-10	Include high percentage of indigenous plants in new landscaping on privately-owned properties (excluding arboretums, horticultural gardens, and sites requiring turf grasses)	**Regulation:** §230.34 Landscaping	2	
1-11	Encourage water conservation	**Practice:** The city does what is required for MS4 municipalities.	1	They participated in a rain barrel contest. They are in the process of designing a water/rain garden between the front steps of city hall which would collect & utilize water harvested from the roof.

1-12	Develop outreach programs targeted at specific problems related to water quality management & resource conservation	**Practice:** Outreach Programs are managed/provided through City's participation in WNY Stormwater Coalition.	2	
1-13	Encourage proper control of pet wastes	**Regulation:** Dogs §66.19	2	
1-14	Encourage continued operation of private storm water runoff control structures	**Regulation:** Stormwater Management §230.93	2	
1-15	Discourage feeding of waterfowl			Not specifically. There is an easement along Smokes Creek which runs along people's yards. Waterfrontage doesn't have access to the waterfront currently.
1-16	Discourage the introduction of exotic aquatic species (Eurasion water milfoil, zebra mussels, water chestnut, etc	n/a		No Marina's in town, Ships along the Lake Erie waterfront are for shipping and do not come in or out.
1-17	Encourage continuted (periodic) operation and maintenance of private septic disposal systems	n/a		Private Septic Prohibited
1-18	Effective and consistent application and enforcement of stormwater requlations & requirements	**Regulation:** §230.93 Stormwater Management. City Code Enforcement Officer is also the Stormwater Management Officer, has limited time to devote to enforcement.	2	Not always enough man power to check for violations. When do inspect, finding a very limited amount of violations.This doesn't seem to be an issue.
1-19	Require certification of existing on-site septic systems for property transfers or building expansions.	n/a		Private Septic Prohibited
1-20	Require entire property (existing as well as proposed) to be included in stormwater analysis/calculation.	**Regulation:** §230.94 Stormwater Management	2	Who's doing this work of the SMO & ZA was eliminated?

Newest Development is a 48 house subdivision, which required on-site stormwater, protection of wetland and open space requirements, and SWPPP for development. Most development occuring is in-fill and redevelopment of existing lots. City's priority for existing lots is to improve greenspace (undeveloped portion or urbanized lots) create more suburban atmosphere and reduce impervious surfaces.

Section 1. Development: New Development and Substantial Redevelopment

1-21	Minimize the amount of land disturbed and the duration of disturbance	**Regulation:** Stormwater Management §230.94, §230.91	2	
1-22	Preserve natural features and conform subtantially with the natural boundaries and alignment of waterbodies	**Regulation:** §230.29 Cluster Development, §230.95 Stormwater Management, §230.34 Landscaping, Chp. 223 WaterfrontRevitalization Program, LWRP,	2	At least 25% of the total development acreage is to be preserved and maintained for its scenic, recreation or conservation value via inclusion in the open space zone.
1-23	Retain and protect trees and other natural vegetation on and near disturbed sites	**Regulation:** §230.29 Cluster Development, §230.71 Site plan review, §230.34 Landscaping, §230-21 Smokes Creek Overlay.	2	At least 25% of the total development acreage is to be preserved and maintained for its scenic, recreation or conservation value via inclusion in the open space zone.
1-24	Account for topography and soil types in efforts to minimize erosion potential	**Regulation:** Stormwater management §230.94	2	

1-25	Maintain run-off rates similar to pre-construction levels	**Regulation:** §230.43 Stormwater Management, §230.94 Stormwater Management	2	
1-26	Minimize the creation of impervious areas	**Regulation**: §230.36 Parking, §230.21 (Smokes Creek Overlay District), Performance Standard = % Greenspace in District Zones.	2	Regulation §230.36 mentions shared parking, but only if owners can prove that they set up an official agreement to share.
1-27	Control increased run-off caused by changed surface conditions to minimize the danger of flooding, erosion, sedimentation and pollutants entering waterbodies prior to, during and after construction	**Regulation**: Stormwater Management §230.90	2	
1-28	Use temporary vegetation and mulching to protect exposed and critical areas during development	**Regulation:** §230.32 Erosion & Sediment, Stormwater Management §230.94	2	
1-29	Redistribute topsoil within the boundaries of the disturbed land for seeding and planting	**Regulation:** §230.32 Erosion & Sediment, §230. 94 Stormwater Management	2	
1-30	Stabilize distrubed soils as soon as possible	**Regulation:** §230.32 Erosion & Sediment, §230.94 Stormwater Management	2	
1-31	Minimize the use of cut & fill operations. Conform such operations to topography and soils to minimize erosion potential and adequately accommodate run-off	**Regulation:** §230.94 Stormwater Management	2	§230.32 (outlines grades for cut & fill)
1-32	Use appropriate solid and hazardous waste generation and disposal practices including source controls and recycling	**Regulation:** §119 Hazardous Chemicals, §190 Garbage & Refuse	2	
1-33	Encourage construction site manangement techniques which include the proper hanging and disposal of pesticides and petroleum products and containers	**Regulation:** §230. 94 Stormwater Management	2	
1-34	Ensure proper operation and maintenance of run-off manangement facilities	**Regulation**: §230.96 Stormwater Management	2	
1-35	Target training for contractors, inspectors, zoning and planning officials	**Practice:** City participates in WNY Stormwater Coalition	2	
1-36	Require tree surveys and/or cutting plans	**Practice:** There is a tree service file. The city tries to prune & take out dead branches. When demolishing a building, the city evaluates existing trees & determines whether to keep or cut down. Preference is to keep as many healthy trees as possible.	2	Smoke Creek gets cleaned regularly of branches & debris. The city is working with DEC & Army Corps to expand project. Debris removal is part of on-going efforts to reduce erosion and flooding issues in Smokes Creek.
1-37	Develop priority list for BMP's - use of vegetative low areas for retention/infiltration	**Regulation:** §230.21 (Smoke Creek Overlay District), §230.43 Stormwater Management	2	Mentions buffer use for retention/detention - Are there ways they can stregthen this regulation?
1-38	Encourage cluster development	**Regulation**: §230.29 Cluster Development	2	

1-39	Require connection to and/or extension of existing water & sewer if project is within 500 feet of existing infrastructure	**Regulation:** §185.6 Sewers (connection required).	2
1-40	Enact limits on driveway grades	**Regulation:** §230.32 Erosion & Sedimentation	2
1-41	For redevelopment, employ regulations that provide for technologically advanced (on and off) site wastewater treatment systems to optimize efficiences and address challenging sites	**Practice:** Code employs additional greenspace to reduce impervious surfaces during redevelopment, but overall City is not actively looking to employ new on-site and off-site treatment technologies. Wouldn't be opposed to such systems if drafted into SWPPPs.	2
1-42	Implement Fed/State Stormwater (SPDES) Phase II requirements	**Regulation:** Stormwater Management §230.94 **Practice:** Educational outreach activities occuring through the WNY Stormwater Coalition.	2

City in planning stages for rain garden at City Hall. Man-power is the main issue regarding this. City has good intentsion but limited personnel to execute changes in design and stormwater management.

Final Score: 72 out of 78 Total Possible Points 72

Number of BMPs addressed (either fully or partially): 37 out of 38 BMPs (97%)

Section 2. Forestry & Agriculture: Forestry

Best Management Practices (BMPs)		Existing Means of Implementation (Law, Regulation, Practice, etc.)	Score
2-01	Consider potential water quality impacts when selecting silviculture system (yarding system, site preparation, pesticides employment, etc.)	n/a	
2-02	Consider harvesting practices	n/a	
2-03	Seasonal preference for logging operations	n/a	
2-04	Have specialists (Geologists, soil scientists, geotechnical engineers, wildland hydrologists) review plans in high erosion hazard areas	n/a	
2-05	Preplan harvest areas, skid trails, and access so as to be on stable soils, avoiding steep gradients, multiple stream crossings, poor drainage areas etc.	n/a	
2-06	Limit grades of access roads	n/a	
2-07	Require stabilization of roads/drives to forestry site	n/a	
2-08	Employ natural topography and contour for design of road network	n/a	
2-09	Require stormwater controls for increased runoff from ground cover modification	n/a	

2-10	Consider site restoration	n/a	

Section 2. Forestry & Agriculture: Agriculture

2-11	Use agricultural environmental management (AEM)	n/a	
2-12	Require farms seeking agricultural value assessment to participate in AEM	n/a	

Section 3. Waterways & Wetlands: Modified Waterways

	Best Management Practices (BMPs)	Existing Means of Implementation (Law, Regulation, Practice, etc.)	Score	
				City has a LWRP from 1989, in which the goal of waterfront development for private sector use conflicts with efforts to provide public access to the waterfront. The main goals of the LWRP are to redevelop the former Bethlehem Steel Plant and to facilitate and maintain the water-dependent/enhanced uses on or alongside the waterfront. Concepts to balance both should be updated/flushed out further given the BOA process.
3-01	Develop an operation and maintenance program for existing modified streams that includes identification of opportunities and actions to restore habitat and the physical and chemical characteristics of these streams	**Regulation:** Chp. 223 (Waterfront Revitalization Program)	2	City works extensively with (relies on) the ACOE and EC Soil & Water on the issues surrounding Smokes Creek.
3-02	Improve stream quality by controlling instream sedimentation and selectively clearing debris	**Regulation:** §230.91 Stormwater Management **Practice:** City along with COE and DEC dredge Smokes Creek every couple of years.	2	Creek has major erosion issues and receives a lot of sedimentation. Again, ACOE and Soil & Water are trying to address the erosion situation with Smokes Creek.
3-03	Establish or re-establish riparian buffers	**Regulation**: §230.21 (Smokes Creek Overlay District) **Practice:** Actively working with ACOE & DEC to reduce erosion issues.	2	Not actively establishing/ restoring actual buffers. Smokes Creek Regulations protects 50' of shoreline, vegetation required for 15' of shoreline (could be expanded).
3-04	Prevent animal wastes from entering waterbodies	**Regulation:** §66 Dogs	2	
3-05	Attempt vegetative stablization before undertaking structural measures	**Regulation:** §230 Stormwater Management	2	ACOE & Soil & Water
3-06	Design and construct shore erosion control facilities in accordance with an erosion and sedimentation control plan, in areas where marsh creation and soil bioengineering are ineffective or where existing protection methods are being flanked or are failing	**Regulation:** Stormwater Management §230	2	ACOE & Soil & Water
3-07	Schedule the periodic maintenance of sediment control measures, and inspect and repair them as needed in conformance with established schedule	**Practice:** City is responsible in maintaining flood control projects associated with Smokes Creek.	2	Every few years prisoners cut vegetation & clear debris out of Smokes Creek.

3-08	Protect streambanks through direct nonstructural means, such as new vegetation or protection of existing vegetation; direct structural means, such as revetments and bulkheads; indirect nonstructural means, such as regulating irrigation near stream-banks or outing overbank drainange; or indirect structural means, such as deflecting channel flow away from streambanks with dikes, board fences and gabions	**Regulation:** Stormwater Management §230	2	Consider adding provisions that give bonuses, incentives to green infrastructure onsite.
3-09	Use setbacks to minimize disturbance of land adjacent to streambanks and shorelines	**Regulation:** §230.17 Smokes creek overlay (50 ft setback), BRA Zone adds another 50' buffer to Smokes Creek Overlay Zone, and 50' side and rear yards in waterfront (BRA Zone).	2	Lake Erie buffer protections are limited to setbacks with in BRA Zones, and range from 25-50' with no provisions for riparian, vegetation protections.
3-10	Prevent discharges to waterbodies in amounts that would adversely affect the taste, color or odor of the waters, or would impair the waters for their best usages	**Regulation:** §230.43 Stormwater Management (illicit discharge language).	2	

Section 3. Waterways & Wetlands: Wetlands and Riparian Area Management and Restoration

FYI -These BMPs mostly address approaching wetlands as a non-point source pollution mitigation resource (as they currently exist) in MS4 communities.

3-11	Consider wetlands and riparian areas and their nps control potential on a watershed scale	**Regulation:** §230.94 SWPPP	2	Much of Lackawanna's wetlands have limited encroachment. Future devleopment unlikely due to bounding properties (Catholic Church and Cemetaries).
3-12	Identify existing functions of those wetland and riparian areas with significant nps control potential when implementing nps management practices. Do not alter wetlands or riparian areas to improve their water quality at the expense of their other functions	**Practice:** Wetlands are evaluated before every new development as part of DEC requirements.	1	Wetlands are mostly protected by default, in that they are almost entirely within or bordered by bordered the Catholic cemetaries.
3-13	Conduct permitting, licensing, certification and non-regulatory nps pollution activities in a manner that protects wetland functions	**Regulation:** §230 Stormwater management	2	
3-14	Special zoning considerations to protect wetland areas	**Regulation (limited):** §230 Stormwater management	1	

3-15	Use appropriate pretreatment practices such as vegetated systems or detention or retention basins to prevent adverse impacts to wetland functions that affect nps pollution abatement from hydrologic changes, hydrologic changes, sedimentation or contaminants	**Regulation:** §230 Stormwater management	2	Check Environmental Qualtiy Review…
3-16	All projects should require wetlands certification	**Practice:** All projects with designated State or Federal Wetlands are submitted to NYS DEC and ACOE for review.	1	There is no engineer on staff. City consults with DEC.

Final Score: 29 out of 32 Total Possible Points 29

Number of BMPs addressed (either fully or partially): 16 out of 16 BMPs (100%)

Section 4. Marinas: Existing Marinas

	Best Management Practices (BMPs)	Existing Means of Implementation (Law, Regulation, Practice, etc.)	Score	
4-01	Clean maintenance areas regularly. Preferably by vacuuming to remove trash, sandings, paint chips etc.	n/a		FYI - No publically held land on Waterfront. Marina's are a permitted use in Zoning at this time, however none exist. Entire waterfront is privately held and zoned Bethlehem Redevelopment Area. Future Marina development unlikely based on past shoreline fill, but allowable according to Zoning and LWRP.
4-02	Prevent residue from being carried into surface waters by performing abrasive blasting within plastic tarp enclosures on windless days or withing spray booths	n/a		
4-03	Provide proper disposal/recycling facilities to marina patrons, preferably covered receptacles	n/a		
4-04	Establish fish cleaning areas, and implement rules governing the conduct of fish cleaning operations	n/a		
4-05	Educate boaters on the importance of proper fish cleaning practices	n/a		
4-06	Implement fish composting where appropriate	n/a		
4-07	Store materials in areas impervious to the type of material stored. Build curbs, berms, or other barriers around the areas to contain spills	n/a		
4-08	Use separate, clearly labeled containers for the disposal of oil, gasoline, antifreeze, diesel, kerosene and mineral spirits	n/a		

4-09	Target outreach programs about proper disposal at marinas through the use of signs, mailings and other means	n/a	
4-10	Promote the use in bilges of oil-absorbing materials, and replace them as necessary, preferably recycling, or disposing of them in accordance with petroleum disposal regulation.	n/a	
4-11	Use a container under the air vent while refueling inboard tanks if the tank vents are not equipped with a fuel/air separator	n/a	
4-12	Prohibit in-water hull scrapings or any underwater process to remove paint from boat hulls	n/a	
4-13	Wash the boat hull above the waterline by hand, using only necessary amounts of detergents and cleaning compounds that are phosphate free and bio-degradable	n/a	
4-14	Prohibit the use of detergents and cleaning compounds containing ammonia, sodium hypochloride, chlorinated solvents, petroleum distillates, alcohol or lye	n/a	
4-15	Educate individuals about the importance of trash reduction and recyling through: interpretive and instructional signs placed at marinas and boat launching sites, pamphlets or flyers, newsletters, inserts in billings, meetings and presentations, workshops, and certification programs	n/a	
4-16	Inspect pumpout facilities regularly, and repair them if practical, under a maintenance contract with a competant contractor	n/a	
4-17	Add language to slip lease agreements mandating the use of pumpout facilities and specifying penalties for failure to comply	n/a	
4-18	Place dye tablets in holding tanks to identify and discourage illegal disposal	n/a	

4-19	Prohibit motorized vessels from areas (define areas) that contain important shallow-water habitats	n/a		
4-20	Establish and enforce no-wake zones to decrease turbidity and reduce erosion potential from boat wakes	n/a		

Section 4. Marinas: New Marinas

4-21	Design and site marinas to maximize exchange of marina basin water. Limit basins and channels with square corners that tend to trap flotsam, and place dock structures in a manner that promotes circulation		0	Zoning Code allows marinas (Maritime Activities) as a Permitted use within the BRA district, but code does not include any other regulations on the design of such facilties.
4-22	Perform a preconstruction assessment, which includes a water quality monitoring and modeling methodology, to predict post-construction water quality conditions		0	
4-23	Monitor water quality during construction to protect ambient water quality to the maximum practicable extent	**Regulation (limited):** Stormwater Management §230, SWPPPs.	1	
4-24	Develop a marina siting policy to discourge development in areas containing important habitat designated by local, State, or federal agencies	**Regulation (limited):** Chp. 223 Waterfront Revitalization Program, LWRP	1	Note: LWRP was developed in 1989. Dated and missing detail and relevance to BOA but still in effect.
4-25	Conduct surveys and employ rapid bioassessment techniques to assess historic habitat function (e.g. spawning, nursery, and migration pathways) and potential impacts to these and other biological functions and resources		0	
4-26	Encourage the redevelopment or expansion of existing marina facilities that have demonstrated minimal environmental impacts instead of developing new marina facilities	n/a	n/a	
4-27	Consider alternative sites with minimal potential environmental impacts when the use of previously disturbed sites is not feasible		0	
4-28	Minimize disturbance of indigenous vegetation in the riparian area		0	

4-29	Use soil bioengineering or plants, wherever conditions allow, to restore damaged habitat along shorelines and streambanks	**Regulation (limited):** Chp. 223 Waterfront Revitalization Program, LWRP	1	Recommended in LWRP, not sure if practice is being employed.
4-30	Use properly designed and constructed engineering practices that minimize shoreline disturbance in areas where soil bioengineering and plants are ineffective		0	
4-31	Use appropriate shore erosion control methods, such as returns or return walls, in areas where existing protection methods are being flanked or are falling		0	
4-32	Plan and design all steambank, shoreline, and navigation structures so that they do not transfer erosion energy to or otherwise cause visible loss of surrounding streambanks or shorelines	**Regulation (limited):** Chp. 223 Waterfront Revitalization Program, LWRP	1	
4-33	Locate and design fuel stations so that spills can be contained in a limited area		0	
4-34	Design and install underground fuel storage tanks according to State regulations, including the provision of detection systems and automatic fuel tank and pump leak shut-offs	**Regulation:** Building Code Administration Chp. 75, Part of the NYS Uniform Fire Prevention and Building Code.	2	Confirm with Steve
4-35	Provide aboveground fuel tanks and fueling areas with a curbed or diked storage area to handle containment volumes meeting State (and local) codes and inspect regularly	**Regulation:** Building Code Administration Chp. 75-11, Part of the NYS Uniform Fire Prevention and Building Code.	2	
4-36	Use preferred pumpout systems: fixed-point, portable, dedicated slipside, and pumpout boats		0	
4-37	Design onsite wastewater treatment systems to specifically handle waste from vessels		0	

4-38	Post pumpout facility location and regulations at the marina. Charge fees that encourage rather than discourage facility use. Consider offsetting the cost of maintaining pumpout facilities by fuel sales where these facilities are conveniently located in close proximity to one another		0

Section 4. Marinas: All Marinas (Existing & New)

4-39	Restrict boat repair and maintenance activities to clearly marked designated areas to prevent debris from falling into the water and preventing invasive species		0
4-40	Secure all fueling facilities and storage areas with appropraite shut-off devices and security locks and inspect regularly		0
4-41	Design fueling stations with spill containment equipment that is stored in a clearly marked location, accessible to work and storage areas. Post emergency phone numbers in a prominent location		0
4-42	Design a spill contingency plan		0
4-43	Inspect and maintain all containment berms or devices in accordance with State regulations. Investigate immediately signs of leakage or spillage, and undertake cleanup in accordance with applicable best management practices		0
4-44	Have a trained operator present and prepared to respond to accidental spills		0
4-45	Maintain daily inventory records to identify abnormal loss or gain of liquid		0
4-46	Prohibit the cleaning of hoses, fittings, pumps, and other accessory equipment on piers, docks or adjacent upland to prevent runoff into the marina basin or other surface or groundwater		0

4-47	Create and/or maintain a dedicated fund for maintenance in the case of government-owned facilities	n/a	n/a
4-48	Restrict the operation of pumpout facilities to trained marina personnel only		0
			8

Majorly lost points, but unlikely that a Marina would locate on the shoreline do to it's past use, extension of land based on steel industry slag and ecomically challenged area in general. Entire waterfront in the City needs major incentives to spur revitalization, but city is struggling financially.

Final Score: 8 out of 50 Total Possible Points
Number of BMPs addressed (either fully or partially): 6 out of 26 BMPs (23%)

Section 5. Roads and Bridges: Existing Roads & Bridges

	Best Management Practices (BMPs)	Existing Means of Implementation (Law, Regulation, Practice, etc.)	Score	
5-01	Conduct road and bridge maintenance (deicing material usage and storage, pot-hole repair, bridge washing, scraping and painting, etc) according to best management practices	**Practice:** City follows BMPs in NYS Highway Superintendent's Roads and Water Quality Handbook.	2	See Mary Rossi's MS4 Assessments for additional info.
5-02	Conduct right-of-way activities (mowing, brush removal, pesticide and fertilizer use, etc) according to best management practices	**Practice:** The city only mows. No fertilizer or pesticides.	2	Mostly, out of budget issues
5-03	Include high percentage of indigenous plants in new landscaping on public-owned properties (excluding arboretums, horticultural gardens, and site requiring turf grasses)	**Regulation:** §230.34 Landscaping	2	
5-04	Implement a regular inspection and maintenance plan of existing structures	**Practice**: Inspections happen several times a year.	1	
5-05	Develop and identify erosion/sediment control areas (examples include steep slopes, easily erodible soils, and nearby sensitive areas) and retrofit opportunities	**Regulation:** §230.32 Erosion & Sedimentation	1	Not actively conducting retrofit opportunities unless part of a scheduled road maintenance project?
5-06	Require percentage of roads to be tested with non-ice and non-sand de-icing.	**Regulation (limited):** Sidewalks §193.23 (use sand and other de-icing materials pre shoveling).	1	

Section 5. Roads and Bridges: New Roads & Bridges

5-07	Minimize the amount of land disturbed and the duration of disturbance.	**Regulation:** Stormwater Management §230	2

5-08	Preserve natural features and conform substantially with the natural boundaries and alignment of waterbodies	**Regulation:** Stormwater Management §230.90, §230.1 Zoning Purpose, §230-28 Regulations Applicable to All Districts, §230-34 Landscaping.	2
5-09	Retain and protect trees and other natural vegetation on and near disturbed sites	**Regulation:** Stormwater Management §230.90, §230.1 Zoning Purpose, §230-28 Regulations Applicable to All Districts, §230-34 Landscaping.	2
5-10	Retain additional runoff sites	**Regulation:** §230 Stormwater Management	2
5-11	Minimize the creation of impervious areas	**Regulation:** §230.21 Smoke Creek Overlay, §230.36 Parking & Loading, Greenspace Performance Standards in Zoning District requirements.	2
5-12	Treat increased runoff caused by changed surface conditions to minimize the danger of flooding, erosion and pollutants entering waterbodies prior to, during and after construction	**Regulation:** §230 Stormwater Management	2
5-13	Use temporary vegetation and mulching to protect exposed and critical areas during development	**Regulation**: §230 Stormwater Management, §230.32 Erosion & Sedimentation, §230.34 Landscaping	2
5-14	Redistribute topsoil within the boundaries of the disturbed land for seeding and planting	**Regulation**: §230 Stormwater Management, §230.32 Erosion & Sedimentation, §230.34 Landscaping	2
5-15	Stabilize disturbed soils as soon as possible	**Regulation:** §230 Stormwater Management, §230.32 Erosion & Sedimentation, §230.34 Landscaping.	2
5-16	Minimize the use of cut and fill operations. Conform such operations to topography and soils to minimize erosion potential and adequately accommodate runoff	**Regulation:** §230 Stormwater Management	2
5-17	Control erosion and sedimentation prior to, during and after site preparation and construction	**Regulation:** §230 Stormwater Management, §230.32 Erosion & Sedimentation, §230.34 Landscaping	2
5-18	Require long term stormwater management plan.	**Regulation:** §230 Stormwater Management	2
5-19	Require long term sedimentation control & maintenance.	**Regulation:** §230 Stormwater Management	2

Section 5. Roads and Bridges: All Roads & Bridges (Existing & New)

5-20	Target existing public holdings, such as parks, for removing unecessary impervious surfaces	**Regulation**: §230-36 Parking, Art. III Zoning Districts - Lot Coverage requirements. **Practice:** Developing a Rain Garden for City Hall. There is a big push to increase permeablity with new development.	2	Example: Pulled out old gas station and re-greened site.
5-21	Incorporate NYSDOT design and guidance documents, standard specifications, and procedural manuals (Highway Design Manual, Environmental Procedures Manual, Maintenance Guidelines, etc) into local laws and operating procedures	**Practice:** City's engineering firm always follows NYS specs.	2	Town does not have in-house engineering. Contracts out to TVGA.
5-22	Ensure application of appropriate solid and hazardous waste generation and disposal practices including source controls and recycling	**Regulation:** §190 Solid Waste **Practice:** Educational outreach for recycling & instituting larger recycling totes.	2	
5-23	Ensure proper operation and maintenance of runoff management facilities	n/a	n/a	Discuss with Erie County Sewer District. There are no ditches in the city, only sewer.
5-24	Participate in Cornell Local Roads Program activities and training	Not currently	0	The city is having difficulting have people attend extra training, as they are short staffed.
5-25	Target training programs at highway officials, contractors, construction workers, inspectors, zoning and planning officials	**Practice:** Limited numbers of staff attend (when possible).	1	The city is having difficulting have people attend extra training, as they are short staffed. The Code enforcemenet/MS4 officer is up to date on all training
5-26	Target training and outreach programs about the proper handling of materials, leakage and spill prevention and spill response procedures at maintenance staff and workers	**Practice:** Town staff is trained on Hazardous Waste Operations and Emergency Response (HAZWOPER).	2	

Final Score: 44 out of 50 Total Possible Points 44

Number of BMPs addressed (either fully or partially): 24 out of 25 BMPs (96%)

Section 6: Onsite Wastewater Treatment Systems

	Best Management Practices (BMPs)	Existing Means of Implementation (Law, Regulation, Practice, etc.)	Score	
6-01	Conduct regular inspections of OWTS at a frequency adequate to determine failure and undertake required maintenance	n/a	n/a	FYI- There are no on-site wastewater systems in town.
6-02	Institute setback guidelines	n/a	n/a	
6-03	Promulgate plumbing codes that require practices that are compatible with OWTS	n/a	n/a	

6-04	Target outreach programs at homeowners, contractors and developers	n/a	n/a
6-05	Inspection of all OWTS at property transfer or within 1 year prior to transfer	n/a	n/a
6-06	Require all properties within 500' of municipal service to connect.	**Regulation:** Sewers §185	2
6-07	Set goals for effluent limits (nitrogen, phosphorous, BOD, etc)	n/a	n/a

Final Score: 2 out of 2 Total Possible Points 2

Number of BMPs addressed (either fully or partially): 2 out of 2 (100%)

Overall Assessment Score: 155 out of 212 Total Possible Points 155

Number of BMPs addressed (either fully or partially): 85 out of 107 BMPs (79%)

City of Niagara Falls Assessment Form

Completed November 2014

Section 1. Development: Existing Development

	Best Management Practices (BMPs)	Existing Means of Implementation (Law, Regulation, Practice, etc.)	Score	Meeting Notes, Follow-Up Questions & Comments
1-01	Identify retrofit opportunities	**Regulation:** §1319.2.8 Zoning Ordinance	2	Gives guidelines for infill development
1-02	Identify habitat and natural conveyance system restoration	**Regulation:** §1316.1 Open Space District	2	
1-03	Establish retention/detention areas	**Practice:** New initiatives with Riverkeeper at Hyde Park Lake	1	Hyde park
1-04	Acquire additional land for locating treatment facilities	n/a		
1-05	Encourage homeowners to place cornpost piles away from waterbodies and roadways		0	
1-06	Encourage proper use and disposal of lawn and other household chemicals	**Regulation:** Waste Management Regulations	2	waste management
1-07	Institute turf management practices on golf courses and parks and recreation areas		0	
1-08	Undertake storm drain stenciling		0	
1-09	Encourage volunteer programs, such as adopt-a-highways and adopt-a-stream, etc.		0	The City tried but it wasn't sustainable.
1-10	Include high percentage of indigenous plants in new landscaping on privately-owned properties (excluding arboretums, horticultural gardens, and sites requiring turf grasses)	**Regulation:** §1322.4 Site Plan Approval (General Requirements)	2	
1-11	Encourage water conservation	**Regulation:** NYS Building Codes	2	
1-12	Develop outreach programs targeted at specific problems related to water quality management & resource conservation		0	tried but it didn't work
1-13	Encourage proper control of pet wastes	**Regulation:** Waste Management Regulations	2	
1-14	Encourage continued operation of private storm water runoff control structures	**Practice:** Stormwater is underground, only enforced if there is a known problem.	2	
1-15	Discourage feeding of waterfowl		0	
1-16	Discourage the introduction of exotic aquatic species (Eurasion water milfoil, zebra mussels, water chestnut, etc		0	
1-17	Encourage continuted (periodic) operation and maintenance of private septic disposal systems	N/A		
1-18	Effective and consistent application and enforcement of stormwater requlations & requirements	**Regulation:** Stormwater Management Ordinance	2	
1-19	Require certification of existing on site septic systems for property transfers or builing expansions.	N/A		
1-20	Require entire property (existing as well as proposed) to be included in stormwater analysis/calculation.	**Regulation:** Stormwater Management Ordinance	2	

Section 1. Development: New Development and Substantial Redevelopment

1-21	Minimize the amount of land disturbed and the duration of disturbance	**Regulation:** §1322.4 Site Plan Approval (General Requirements)	2	
1-22	Preserve natural features and conform subtantially with the natural boundaries and alignment of waterbodies	**Regulation:** §1322.4 Site Plan Approval (General Requirements)	2	
1-23	Retain and protect trees and other natural vegetation on and near disturbed sites	**Regulation:** §1322.4 Site Plan Approval (General Requirements)	2	
1-24	Account for topography and soil types in efforts to minimize erosion potential	**Limited Regulation:** Stormwater Management Ordinance	1	
1-25	Maintain run-off rates similar to pre-construction levels	**Regulation:** Stormwater Management Ordinance	2	
1-26	Minimize the creation of impervious areas	**Limited Regulation:** Landscaping & Buffers (partial)	1	
1-27	Control increased run-off caused by changed surface conditions to minimize the danger of flooding, erosion, sedimentation and pollutants entering waterbodies prior to, during and after construction		0	Claims addressed in SEQRA Process
1-28	Use temporary vegetation and mulching to protect exposed and critical areas during development	**Regulation:** Stormwater Management Ordinance	2	
1-29	Redistribute topsoil within the boundaries of the disturbed land for seeding and planting	**Regulation:** Stormwater Management Ordinance	2	
1-30	Stabilize distrubed soils as soon as possible	**Regulation:** Stormwater Management Ordinance	2	
1-31	Minimize the use of cut & fill operations. Conform such operations to topography and soils to minimize erosion potential and adequately accommodate run-off	N/A		
1-32	Use appropriate solid and hazardous waste generation and disposal practices including source controls and recycling	**Regulation:** §1328.11 Special permits, Light manufacturing	2	
1-33	Encourage construction site manangement techniques which include the proper hanging and disposal of pesticides and petroleum products and containers		0	
1-34	Ensure proper operation and maintenance of run-off manangement facilities	**Practice:** Water Board Function	1	
1-35	Target training for contractors, inspectors, zoning and planning officials		0	
1-36	Require tree surveys and/or cutting plans	Practice: Mature trees are sometimes identified for protection in site plan review.	1	
1-37	Develop priority list for BMP's - use of vegetative low areas for retention/infiltration		0	On city agenda
1-38	Encourage cluster development	**Practice:** Clustering is not applicable, but the City does have a density requirement.	1	
1-39	Require connection to and/or extension of existing water & sewer if project is within 500 feet of existing infrastructure	**Regulation:** Sewer	2	

1-40	Enact limits on driveway grades	N/A		
1-41	For redevelopment, employ regulations that provide for technologically advanced (on and off) site wastewater treatment systems to optimize efficiences and address challenging sites	**Practice:** Water Board function, allowed.	1	need fence around storm management ponds
1-42	Implement Fed/State Stormwater (SPDES) Phase II requirements	**Regulation:** Stormwater Management Ordinance, WNY Stormwater Coalition Participation.	2	

Section 2. Forestry & Agriculture: Forestry

Best Management Practices (BMPs)	Existing Means of Implementation (Law, Regulation, Practice, etc.)		

There is no forestry or agriculture in the City.

Section 2. Forestry & Agriculture: Agriculture

Section 3. Waterways & Wetlands: Modified Waterways

Best Management Practices (BMPs)		Existing Means of Implementation (Law, Regulation, Practice, etc.)		
3-01	Develop an operation and maintenance program for existing modified streams that includes identification of opportunities and actions to restore habitat and the physical and chemical characteristicsof these streams	**Practice:** Hyde Park Lake Restoration (also serves as stormwater facility), and regularly monitors streams for debris that would cause flooding.	1	Monitor & report to DPW - Cayuga Creek
3-02	Improve stream quality by controlling instream sedimentation and selectively clearing debris	**Practice:** See above.	1	
3-03	Establish or reestablish riparian buffers		0	City relies on SEQRA for this.
3-04	Prevent animal wastes from entering waterbodies	**Regulation:** Waste Management Ordinance	1	
3-05	Attempt vegetative stablization before undertaking structural measures		0	
3-06	Design and construct shore erosion control facilities in accordance with an erosion and sedimentation control plan, in areas where marsh creation and soil bioengineering and ineffective or where existing protection methods are being flanked or are failing		0	
3-07	Schedule the periodic maintenance of sediment control measures, and inspect and repair them as needed in conformance with established schedule		0	

3-08	Protect streambanks through direct nonstructural means, such as new vegetation or protection of existing vegetation; direct structural means, such as revetments and bulkheads; indirect nonstructural means, such as regulating irrigation near stream-banks or outing overbank drainange; or indirect structural means, such as deflecting channel flow away from streambanks with dikes, board fences and gabions		0	
3-09	Use setbacks to minimize disturbance of land adjacent to streambanks and shorelines	**Limited Regulation:** Overlay for Cayuga Island (equal to front yard setbacks - 15 feet).	1	Confirm this
3-10	Prevent discharges to waterbodies in amounts that would adversely affect the taste, color or odor of the waters, or would impair the waters for their best usages	**Regulation:** §1328.11 Light Manufacturing	2	

Section 3. Waterways & Wetlands: Wetlands and Riparian Area Management and Restoration

3-11	Consider wetlands and riparian areas and their nps control potential on a watershed scale		0	Check with Rick Roll
3-12	Identify existing functions of those wetland and riparian areas with significant nps control potential when implementing nps management practices. Do not alter wetlands or riparian areas to improve their water quality at the expense of their other functions		0	Check with Rick Roll
3-13	Conduct permitting, licensing, certification and non-regulatory nps pollution activities in a manner that protects wetland functions		1	City uses SEQRA two track review system. There is no site plan review necessary for level 1.
3-14	Special zoning considerations to protect wetland areas	**Limited Regulation:** Scenic protections only	1	
3-15	Use appropriate pretreatment practices such as vegetated systems or detention or retention basins to prevent adverse impacts to wetland functions that affect nps pollution abatement from hydrologic changes, hydrologic changes, sedimentation or contaminants		0	Check with Rick Roll
3-16	All projects should require wetlands certification		0	City uses SEQRA

Section 4. Marinas: Existing Marinas

Best Management Practices (BMPs)		Existing Means of Implementation (Law, Regulation, Practice, etc.)		
4-01	Clean maintenance areas regularly. Preferably by vacuuming to remove trash, sandings, paint chips etc.		0	

The City does not own or operate any marinas. There is one active marina and numerous docks

4-02	Prevent residue from being carried into surface waters by performing abrasive blasting within plastic tarp enclosures on windless days or withing spray booths		0	Griffin Park has a boat launch, there's a private marina at Buffalo Avenue that is no longer in operation.
4-03	Provide proper disposal/recycling facilities to marina patrons, preferably covered receptacles		0	
4-04	Establish fish cleaning areas, and implement rules governing the conduct of fish cleaning operations		0	City falls back on Army Corp of Engineers and NYS DEC for regulations addressing waterfront and in-water docks and marinas.
4-05	Educate boaters on the importance of proper fish cleaning practices		0	
4-06	Implement fish composting where appropriate		0	
4-07	Store materials in areas impervious to the type of material stored. Build curbs, berms, or other barriers around the areas to contain spills		0	
4-08	Use separate, clearly labeled containers for the disposal of oil, gasoline, antifreeze, diesel, kerosene and mineral spirits		0	
4-09	Target outreach programs about proper disposal at marinas through the use of signs, mailings and other means		0	
4-10	Promote the use in bilges of oil-absorbing materials, and replace them as necessary, preferably recycling, or disposing of them in accordance with petroleum disposal regulation.		0	
4-11	Use a container unde the air vent while refueling inboard tanks if the tank vents are not equipped with a fuel/air separator		0	
4-12	Prohibit in-water hull scrapings or any underwater process to remove paint from boat hulls		0	
4-13	Wash the boat hull above the waterline by hand, using only necessary amounts of detergents and cleaning compounds that are phosphate free and bio-degradable		0	
4-14	Prohibit the use of detergents and cleaning compounds containing ammonia, sodium hypochloride, chlorinated solvents, petroleum distillates, alcohol or lye		0	
4-15	Educate individuals about the importance of trash reduction and recyling through: interpretive and instructional signs placed at marinas and boat launching sites, pamphlets or flyers, newsletters, inserts in billings, meetings and presentations, workshops, and certification programs		0	
4-16	Inspect pumpout facilities regularly, and repair them if practical, under a maintenance contract with a competant contractor		0	

4-17	Add language to slip lease agreements mandating the use of pumpout facilities and specifying penalties for failure to comply		0
4-18	Place dye tablets in holding tanks to identify and discourage illegal disposal		0
4-19	Prohibit motorized vessels from areas (define areas) that contain important shallow-water habitats		0
4-20	Establish and enforce no-wake zones to decrease turbidity and reduce erosion potential from boat wakes		0

Section 4. Marinas: New Marinas

4-21	Design and site marinas to maximize exchange of marina basin water. Limit basins and channels with square corners that tend to trap flotsam, and place dock structures in a manner that promotes circulation		0
4-22	Perform a preconstruction assessment, which includes a water quality monitoring and modeling methodology, to predict post-construction water quality conditions		0
4-23	Monitor water quality during construction to protect ambient water quality to the maximum practicable extent		0
4-24	Develop a marina siting policy to discourge development in areas containing important habitat designated by local, State, or federal agencies		0
4-25	Conduct surveys and employ rapid bioassessment techniques to assess historic habitat function (e.g. spawning, nursery, and migration pathways) and potential impacts to these and other biological functions and resources		0
4-26	Encourage the redevelopment or expansion of existing marina facilities that have demonstrated minimal environmental impacts instead of developing new marina facilities		0
4-27	Consider alternative sites with minimal potential environmental impacts when the use of previously disturbed sites is not feasible		0
4-28	Minimize disturbance of indigenous vegetation in the riparian area		0
4-29	Use soil bioengineering or plants, wherever conditions allow, to restore damaged habitat along shorelines and streambanks		0

4-30	Use properly designed and constructed engineering practices that minimize shoreline disturbance in areas where soil bioengineering and plants are ineffective		0
4-31	Use appropriate shore erosion control methods, such as returns or return walls, in areas where existing protection methods are being flanked or are falling		0
4-32	Plan and design all steambank, shoreline, and navigation structures so that they do not transfer erosion energy to or otherwise cause visible loss of surrounding streambanks or shorelines		0
4-33	Locate and design fuel stations so that spills can be contained in a limited area		0
4-34	Design and install underground fuel storage tanks according to State regulations, including the provision of detection systems and automatic fuel tank and pump leak shut-offs		0
4-35	Provide aboveground fuel tanks and fueling areas with a curbed or diked storage area to handle containment volumes meeting State (and local) codes and inspect regularly		0
4-36	Use preferred pumpout systems: fixed-point, portable, dedicated slipside, and pumpout boats		0
4-37	Design onsite wastewater treatment systems to specifically handle waste from vessels		0
4-38	Post pumpout facility location and regulations at the marina. Charge fees that encourage rather than discourage facility use. Consider offsetting the cost of maintaining pumpout facilities by fuel sales where these facilities are conveniently located in close proximity to one another		0

Section 4. Marinas: All Marinas (Existing & New)

4-39	Restrict boat repair and maintenance activities to clearly marked designated areas to prevent debris from falling into the water and preventing invasive species		0
4-40	Secure all fueling facilities and storage areas with appropraite shut-off devices and security locks and inspect regularly		0
4-41	Design fueling stations with spill containment equipment that is stored in a clearly marked location, accessible to work and storage areas. Post emergency phone numbers in a prominent location		0
4-42	Design a spill contingency plan		0

4-43	Inspect and maintain all containment berms or devices in accordance with State regulations. Investigate immediately signs of leakage or spillage, and undertake cleanup in accordance with applicable best management practices		0
4-44	Have a trained operator present and prepared to respond to accidental spills		0
4-45	Maintain daily inventory records to identify abnormal loss or gain of liquid		0
4-46	Prohibit the cleaning of hoses, fittings, pumps, and other accessory equipment on piers, docks or adjacent upland to prevent runoff into the marina basin or other surface or groundwater		0
4-47	Create and/or maintain a dedicated fund for maintenance in the case of government-owned facilities		0
4-48	Restrict the operation of pumpout facilities to trained marina personnel only		0

Section 5. Roads and Bridges: Existing Roads & Bridges

	Best Management Practices (BMPs)	Existing Means of Implementation (Law, Regulation, Practice, etc.)		
5-01	Conduct road and bridge maintenance (deicing material usage and storage, pot-hole repair, bridge washing, scraping and painting, etc) according to best management practices	**Limited Practice:** Follows DOT manual.	1	Limited basis @ Lasalle waterfront park
5-02	Conduct right-of-way activities (mowing, brush removal, pesticide and fertilizer use, etc) according to best management practices		0	
5-03	Include high percentage of indigenous plants in new landscaping on public-owned properties (excluding arboretums, horticultural gardens, and site requiring turf grasses)	**Practice:** Yes, when Planning Department reviews Dept of Public Works projects native species are required. Otherwise DPW installs what they want.	1	
5-04	Implement a regular inspection and maintenance plan of existing structures	There is a regular inspection of structures, especially in flood prone areas.	1	
5-05	Develop and identify erosion/sediment control areas (examples include steep slopes, easily erodible soils, and nearby sensitive areas) and retrofit opportunities		0	
5-06	Require percentage of roads to be tested with non-ice and non-sand de-icing.		0	

Section 5. Roads and Bridges: New Roads & Bridges

New roads and redesigns are rare.

5-07	Minimize the amount of land disturbed and the duration of disturbance	N/A	
5-08	Preserve natural features and conform substantially with the natural boundaries and alignment of waterbodies	N/A	
5-09	Retain and protect trees and other natural vegetation on and near disturbed sites	**Practice:** Yes, when possible	1
5-10	Retain additional runoff sites	N/A	
5-11	Minimize the creation of impervious areas	**Practice:** Yes, when possible	1
5-12	Treat increased runoff caused by changed surface conditions to minimize the danger of flooding, erosion and pollutants entering waterbodies prior to, during and after construction		0
5-13	Use temporary vegetation and mulching to protect exposed and critical areas during development	**Regulation:** Stormwater Management Ordinance	2
5-14	Redistribute topsoil within the boundaries of the disturbed land for seeding and planting	**Regulation:** Stormwater Management Ordinance	2
5-15	Stabilize disturbed soils as soon as possible	**Regulation:** Stormwater Management Ordinance	2
5-16	Minimize the use of cut and fill operations. Conform such operations to topography and soils to minimize erosion potential and adequately accommodate runoff	**Regulation:** Stormwater Management Ordinance	2
5-17	Control erosion and sedimentation prior to, during and after site preparation and construction	**Regulation:** Stormwater Management Ordinance	2
5-18	Require long term stormwater management plan.	**Regulation:** Stormwater Management Ordinance	2
5-19	Require long term sedimentation control & maintenance.	**Regulation:** Stormwater Management Ordinance	2

Section 5. Roads and Bridges: All Roads & Bridges (Existing & New)

5-20	Target existing public holdings, such as parks, for removing unecessary impervious surfaces	**Practice:** Yes, Limited opportunities. Removed pavement at LaSalle waterfront park, replace with porous unilock.	1
5-21	Incorporate NYSDOT design and guidance documents, standard specifications, and procedural manuals (Highway Design Manual, Environmental Procedures Manual, Maintenance Guidelines, etc) into local laws and operating procedures	**Practice:** Yes	1
5-22	Ensure application of appropriate solid and hazardous waste generation and disposal practices including source controls and recycling	**Practice:** Yes	1
5-23	Ensure proper operation and maintenance of runoff management facilities		0

5-24	Participate in Cornell Local Roads Program activities and training		0
5-25	Target training programs at highway officials, contractors, construction workers, inspectors, zoning and planning officials		0
5-26	Target training and outreach programs about the proper handling of materials, leakage and spill prevention and spill response procedures at maintenance staff and workers	**Regulation:** Hazwhoper & OSHA	2

Section 6: Onsite Wastewater Treatment Systems		
Best Management Practices (BMPs)	**Existing Means of Implementation (Law, Regulation, Practice, etc.)**	The City has no Onsite Wastewater Treatment Systems
		77

Final Score: 77 out of 238 Total Possible Points

City of North Tonawanda Assessment Form *Completed December 2014*

Section 1. Development: Existing Development

	Best Management Practices (BMPs)	Existing Means of Implementation (Law, Regulation, Practice, etc.)	Score	Meeting Notes, Follow-Up Questions & Comments
1-01	Identify retrofit opportunities	Practice: City is actively identifying opportunities for green infrastructure on existing structures	2	Rain Gardens in parking lots, Webster Street Green Infrastructure
1-02	Identify habitat and natural conveyance system restoration	Limited Regulations: §48 Stormwater Management, Chp. 91 Trees	1	
1-03	Establish retention/detention areas	Regulation: §48 Stormwater Management. Practice: The city is against retention basins. They do have detention for quantity and quality, but don't want standing water with mosquitos and other liabilities. When it rains the city has invested a lot of money on storm sewers and storm infrastructure. Want to address water before flood conditions. There is not a lot of detention but city is meeting the quality needs.	2	
1-04	Acquire additional land for locating treatment facilities	City has limited ability to do this as they are primarily built out. Additional infrastructure should focus on limiting stormwater inflows into combined system.	2	There are few overflow events. All flows go into treatment facility (City sells about 3 million gallons per day and treats about 3 million gallons per day. The city stores storm events on the left side of the plant and then after the event, they run water through (acts as a holding faciilty). any storm overflows must be reported within 48 hours. Pumping events have gone down in number
1-05	Encourage homeowners to place cornpost piles awayfrom waterbodies and roadways	Regulation: §48 Stormwater Management	2	
1-06	Encourage proper use and disposal of lawn and other household chemicals	Regulation: §45 Solid Waste	2	
1-07	Institute turf management practices on golf courses and parks and recreation areas	Yes. City follows proper procedures for fertilization & pesticide application.	1	
1-08	Undertake storm drain stenciling	Regulation: §75.34 Storm Sewers	2	
1-09	Encourage volunteer programs, such as adopt-a-highways and adopt-a-stream, etc.		0	
1-10	Include high percentage of indigenous plants in new landscaping on privately-owned properties (excluding arboretums, horticultural gardens, and sites requiring turf grasses)	Regulation: §103.26 Site Development	2	
1-11	Encourage water conservation	Stormwater coalition brochures are on display in city buildings as well as occasionally in the public library	1	
1-12	Develop outreach programs targeted at specific problems related to water quality management & resource conservation	Stormwater management info page on City website	1	
1-13	Encourage proper control of pet wastes	Regulation: §33 Dogs	2	
1-14	Encourage continued operation of private storm water runoff control structures	Regulation: §48 Stormwater Management	2	
1-15	Discourage feeding of waterfowl		0	Nothing official.

1-16	Discourage the introduction of exotic aquatic species (Eurasion water milfoil, zebra mussels, water chestnut, etc	Regulation: §103.26 Site Development	2	
1-17	Encourage continuted (periodic) operation and maintenance of private septic disposal systems	§69.10 Septic Tanks Public sewers required	2	There are a few combined sewers in the historic part of the city, but mostly MS4
1-18	Effective and consistent application and enforcement of stormwater requlations & requirements	Regulation: §48 Stormwater Management	2	Yearly spring clean-ups
1-19	Require certification of existing on site septic systems for property transfers or builing expansions.	1 (known) onsite septic system in city. Any onsite septic systems grandfathered in, but if found, abated by the city	1	
1-20	Require entire property (existing as well as proposed) to be included in stormwater analysis/calculation.	Regulation: §48 Stormwater Management	2	

Section 1. Development: New Development and Substantial Redevelopment

Flooding is still a major issue

1-21	Minimize the amount of land disturbed and the duration of disturbance	Regulation: Stormwater Management §48 Regulation: §103.26 Site Development Regulations	2	
1-22	Preserve natural features and conform subtantially with the natural boundaries and alignment of waterbodies	Regulation: Stormwater Management §48 Regulation: §103.26 Site Development Regulations	2	
1-23	Retain and protect trees and other natural vegetation on and near disturbed sites	Regulation: Stormwater Management §48 Regulation: §103.26 Site Development Regulations	2	
1-24	Account for topography and soil types in efforts to minimize erosion potential	Regulation: Stormwater Management §48 Regulation: §103.26 Site Development Regulations	2	
1-25	Maintain run-off rates similar to pre-construction levels	Regulation: §48 Stormwater Management	2	
1-26	Minimize the creation of impervious areas	Only 25% of a yard can be covered by a building. Anything over that must be reviewed & approved	1	Impervious Cover is difficult with extremely hydric soils.
1-27	Control increased run-off caused by changed surface conditions to minimize the danger of flooding, erosion, sedimentation and pollutants entering waterbodies prior to, during and after construction	Regulation: Stormwater Management §48 Regulation: §73.23 Discharge Prohibitions Regulation: §103.26 Site Development Regulations	2	
1-28	Use temporary vegetation and mulching to protect exposed and critical areas during development	Regulation: §48 Stormwater Management	2	
1-29	Redistribute topsoil within the boundaries of the disturbed land for seeding and planting	Regulation: §48 Stormwater Management	2	
1-30	Stabilize distrubed soils as soon as possible	Regulation: §48 Stormwater Management	2	
1-31	Minimize the use of cut & fill operations. Conform such operations to topography and soils to minimize erosion potential and adequately accommodate run-off	Regulation: §48 Stormwater Management	2	
1-32	Use appropriate solid and hazardous waste generation and disposal practices including source controls and recycling	Regulation: §45 Solid Waste	2	
1-33	Encourage construction site manangement techniques which include the proper hanging and disposal of pesticides and petroleum products and containers	Regulation: §48 Stormwater Management	2	
1-34	Ensure proper operation and maintenance of run-off manangement facilities	Regulation: §48 Stormwater Management	2	

1-35	Target training for contractors, inspectors, zoning and planning officials		0	
1-36	Require tree surveys and/or cutting plans	Regulation: §91-3 Tree Welfare	2	
1-37	Develop priority list for BMP's - use of vegetative low areas for retention/infiltration		0	
1-38	Encourage cluster development	More of a focus in the waterfront district	2	
1-39	Require connection to and/or extension of existing water & sewer if project is within 500 feet of existing infrastructure	Public sewers required	1	
1-40	Enact limits on driveway grades	Yes.	2	Grading ordinance enacted in the 70s
1-41	For redevelopment, employ regulations that provide for technologically advanced (on and off) site wastewater treatment systems to optimize efficiences and address challenging sites	Regulation: Public sewers required	2	
1-42	Implement Fed/State Stormwater (SPDES) Phase II requirements	Regulation: §48 Stormwater Management	2	

Section 2. Forestry & Agriculture: Forestry

There is no forestry or agriculture in North Tonawanda

Best Management Practices (BMPs)	Existing Means of Implementation (Law, Regulation, Practice, etc.)

Section 2. Forestry & Agriculture: Agriculture

Section 3. Waterways & Wetlands: Modified Waterways

Grading ordinance regulates based on two levels of land disturbance

Best Management Practices (BMPs)	Existing Means of Implementation (Law, Regulation, Practice, etc.)	
3-01	Develop an operation and maintenance program for existing modified streams that includes identification of opportunities and actions to restore habitat and the physical and chemical characteristicsof these streams	Regulation: Chapter 48 Grading and Stormwater Management	2
3-02	Improve stream quality by controlling instream sedimentation and selectively clearing debris	Regulation: Chapter 48 Grading and Stormwater Management	2
3-03	Establish or reestablish riparian buffers	Regulation: Chapter 48 Grading and Stormwater Management	2
3-04	Prevent animal wastes from entering waterbodies	Regulation: Chapter 48 Grading and Stormwater Management	2
3-05	Attempt vegetative stablization before undertaking structural measures	Regulation: Chapter 48 Grading and Stormwater Management	2
3-06	Design and construct shore erosion control facilities in accordance with an erosion and sedimentation control plan, in areas where marsh creation and soil bioengineering and ineffective or where existing protection methods are being flanked or are failing	Regulation: Chapter 48 Grading and Stormwater Management	2
3-07	Schedule the periodic maintenance of sediment control measures, and inspect and repair them as needed in conformance with established schedule	Regulation: Chapter 48 Grading and Stormwater Management	2

3-08	Protect streambanks through direct nonstructural means, such as new vegetation or protection of existing vegetation; direct structural means, such as revetments and bulkheads; indirect nonstructural means, such as regulating irrigation near stream-banks or outing overbank drainange; or indirect structural means, such as deflecting channel flow away from streambanks with dikes, board fences and gabions	Regulation: Chapter 48 Grading and Stormwater Management	2
3-09	Use setbacks to minimize disturbance of land adjacent to streambanks and shorelines	Regulation: Chapter 48 Grading and Stormwater Management	2
3-10	Prevent discharges to waterbodies in amounts that would adversely affect the taste, color or odor of the waters, or would impair the waters for their best usages	Regulation: Chapter 48 Grading and Stormwater Management	2

Section 3. Waterways & Wetlands: Wetlands and Riparian Area Management and Restoration

3-11	Consider wetlands and riparian areas and their nps control potential on a watershed scale	Limited Regulation: §44-1 Freshwater Wetlands (Legislative Intent)	1	§44 freshwater wetlands chapter. Defines legislative authority, but with no regulation to follow (confusing)
3-12	Identify existing functions of those wetland and riparian areas with significant nps control potential when implementing nps management practices. Do not alter wetlands or riparian areas to improve their water quality at the expense of their other functions	Limited Regulation: §44-1 Freshwater Wetlands (Legislative Intent)	1	Site development regulations include references but they are extremely limited in scope and guidance.
3-13	Conduct permitting, licensing, certification and non-regulatory nps pollution activities in a manner that protects wetland functions	Regulation: §48 Stormwater Management	2	
3-14	Special zoning considerations to protect wetland areas	Limited Regulation: §48 Stormwater Management	1	
3-15	Use appropriate pretreatment practices such as vegetated systems or detention or retention basins to prevent adverse impacts to wetland functions that affect nps pollution abatement from hydrologic changes, hydrologic changes, sedimentation or contaminants	Regulation: §103.26 Site Development Regulations (refer to federal & state standards)	2	
3-16	All projects should require wetlands certification	Defer to federal & state regulations	1	

Section 4. Marinas: Existing Marinas

City owns 6 marinas

Best Management Practices (BMPs)		Existing Means of Implementation (Law, Regulation, Practice, etc.)		
4-01	Clean maintenance areas regularly. Preferably by vacuuming to remove trash, sandings, paint chips etc.	§20 Boat Docks	2	
4-02	Prevent residue from being carried into surface waters by performing abrasive blasting within plastic tarp enclosures on windless days or withing spray booths		0	
4-03	Provide proper disposal/recycling facilities to marina patrons, preferably covered receptacles	§20 Boat Docks	2	
4-04	Establish fish cleaning areas, and implement rules governing the conduct of fish cleaning operations		0	Hoping to put in fish cleaning facilities in various marinas in the near future

4-05	Educate boaters on the importance of proper fish cleaning practices		0
4-06	Implement fish composting where appropriate		0
4-07	Store materials in areas impervious to the type of material stored. Build curbs, berms, or other barriers around the areas to contain spills		0
4-08	Use separate, clearly labeled containers for the disposal of oil, gasoline, antifreeze, diesel, kerosene and mineral spirits	§20 Boat Docks	2
4-09	Target outreach programs about proper disposal at marinas through the use of signs, mailings and other means	Limited Practice: Garbage signage uncertain, but there are waste receptacles	1
4-10	Promote the use in bilges of oil-absorbing materials, and replace them as necessary, preferably recycling, or disposing of them in accordance with petroleum disposal regulation.		0
4-11	Use a container unde the air vent while refueling inboard tanks if the tank vents are not equipped with a fuel/air separator		0
4-12	Prohibit in-water hull scrapings or any underwater process to remove paint from boat hulls		0
4-13	Wash the boat hull above the waterline by hand, using only necessary amounts of detergents and cleaning compounds that are phosphate free and bio-degradable		0
4-14	Prohibit the use of detergents and cleaning compounds containing ammonia, sodium hypochloride, chlorinated solvents, petroleum distillates, alcohol or lye	§20 Boat Docks	2
4-15	Educate individuals about the importance of trash reduction and recyling through: interpretive and instructional signs placed at marinas and boat launching sites, pamphlets or flyers, newsletters, inserts in billings, meetings and presentations, workshops, and certification programs		0
4-16	Inspect pumpout facilities regularly, and repair them if practical, under a maintenance contract with a competant contractor		0
4-17	Add language to slip lease agreements mandating the use of pumpout facilities and specifying penalties for failure to comply		0
4-18	Place dye tablets in holding tanks to identify and discourage illegal disposal		0
4-19	Prohibit motorized vessels from areas (define areas) that contain important shallow-water habitats		0
4-20	Establish and enforce no-wake zones to decrease turbidity and reduce erosion potential from boat wakes		0

Section 4. Marinas: New Marinas

Marinas are permitted uses/DEC & Army Corp

4-21	Design and site marinas to maximize exchange of marina basin water. Limit basins and channels with square corners that tend to trap flotsam, and place dock structures in a manner that promotes circulation		0

4-22	Perform a preconstruction assessment, which includes a water quality monitoring and modeling methodology, to predict post-construction water quality conditions	Regulation: Stormwater Management §48, SWPPPs	2	
4-23	Monitor water quality during construction to protect ambient water quality to the maximum practicable extent		0	
4-24	Develop a marina siting policy to discourge development in areas containing important habitat designated by local, State, or federal agencies		0	
4-25	Conduct surveys and employ rapid bioassessment techniques to assess historic habitat function (e.g. spawning, nursery, and migration pathways) and potential impacts to these and other biological functions and resources		0	
4-26	Encourage the redevelopment or expansion of existing marina facilities that have demonstrated minimal environmental impacts instead of developing new marina facilities		0	(Tonawanda BOA?)
4-27	Consider alternative sites with minimal potential environmental impacts when the use of previously disturbed sites is not feasible		0	
4-28	Minimize disturbance of indigenous vegetation in the riparian area		0	
4-29	Use soil bioengineering or plants, wherever conditions allow, to restore damaged habitat along shorelines and streambanks		0	
4-30	Use properly designed and constructed engineering practices that minimize shoreline disturbance in areas where soil bioengineering and plants are ineffective		0	
4-31	Use appropriate shore erosion control methods, such as returns or return walls, in areas where existing protection methods are being flanked or are falling		0	
4-32	Plan and design all steambank, shoreline, and navigation structures so that they do not transfer erosion energy to or otherwise cause visible loss of surrounding streambanks or shorelines		0	
4-33	Locate and design fuel stations so that spills can be contained in a limited area		0	
4-34	Design and install underground fuel storage tanks according to State regulations, including the provision of detection systems and automatic fuel tank and pump leak shut-offs		0	
4-35	Provide aboveground fuel tanks and fueling areas with a curbed or diked storage area to handle containment volumes meeting State (and local) codes and inspect regularly		0	
4-36	Use preferred pumpout systems: fixed-point, portable, dedicated slipside, and pumpout boats		0	
4-37	Design onsite wastewater treatment systems to specifically handle waste from vessels	Regulation: §20.9 Boat Docks (Use proper recepticles for all waste)	2	

4-38	Post pumpout facility location and regulations at the marina. Charge fees that encourage rather than discourage facility use. Consider offsetting the cost of maintaining pumpout facilities by fuel sales where these facilities are conveniently located in close proximity to one another		0

Section 4. Marinas: All Marinas (Existing & New)

4-39	Restrict boat repair and maintenance activities to clearly marked designated areas to prevent debris from falling into the water and preventing invasive species		0
4-40	Secure all fueling facilities and storage areas with appropraite shut-off devices and security locks and inspect regularly		0
4-41	Design fueling stations with spill containment equipment that is stored in a clearly marked location, accessible to work and storage areas. Post emergency phone numbers in a prominent location		0
4-42	Design a spill contingency plan		0
4-43	Inspect and maintain all containment berms or devices in accordance with State regulations. Investigate immediately signs of leakage or spillage, and undertake cleanup in accordance with applicable best management practices		0
4-44	Have a trained operator present and prepared to respond to accidental spills		0
4-45	Maintain daily inventory records to identify abnormal loss or gain of liquid		0
4-46	Prohibit the cleaning of hoses, fittings, pumps, and other accessory equipment on piers, docks or adjacent upland to prevent runoff into the marina basin or other surface or groundwater		0
4-47	Create and/or maintain a dedicated fund for maintenance in the case of government-owned facilities		0
4-48	Restrict the operation of pumpout facilities to trained marina personnel only		0

Section 5. Roads and Bridges: Existing Roads & Bridges

	Best Management Practices (BMPs)	Existing Means of Implementation (Law, Regulation, Practice, etc.)	
5-01	Conduct road and bridge maintenance (deicing material usage and storage, pot-hole repair, bridge washing, scraping and painting, etc) according to best management practices	Practice: Yes, City is doing this regularly	1
5-02	Conduct right-of-way activities (mowing, brush removal, pesticide and fertilizer use, etc) according to best management practices	Practice: City does not use pesticides or fertilizers	1

5-03	Include high percentage of indigenous plants in new landscaping on public-owned properties (excluding arboretums, horticultural gardens, and site requiring turf grasses)	Regulation: §103.26 Site Development Regulations	2
5-04	Implement a regular inspection and maintenance plan of existing structures	Practice: Yes, City is doing this regularly	1
5-05	Develop and identify erosion/sediment control areas (examples include steep slopes, easily erodible soils, and nearby sensitive areas) and retrofit opportunities	n/a no steep slopes, erosion issues are addressed in grading regulations	
5-06	Require percentage of roads to be tested with non-ice and non-sand de-icing.	Practice: The city does use alternatives to salt (specific solution)	1

Section 5. Roads and Bridges: New Roads & Bridges

5-07	Minimize the amount of land disturbed and the duration of disturbance	Regulation: §48 Grading & Stormwater Management	2
5-08	Preserve natural features and conform substantially with the natural boundaries and alignment of waterbodies	Regulation: §48 Grading & Stormwater Management	2
5-09	Retain and protect trees and other natural vegetation on and near disturbed sites	Regulation: §48 Grading & Stormwater Management	2
5-10	Retain additional runoff sites		0
5-11	Minimize the creation of impervious areas	Practice: Parking Lot Green Infrastructure and Webster Street project.	1
5-12	Treat increased runoff caused by changed surface conditions to minimize the danger of flooding, erosion and pollutants entering waterbodies prior to, during and after construction		0
5-13	Use temporary vegetation and mulching to protect exposed and critical areas during development	Regulation: §48 Grading & Stormwater Management	2
5-14	Redistribute topsoil within the boundaries of the disturbed land for seeding and planting	(§103.26 Site Development Regulations)	2
5-15	Stabilize disturbed soils as soon as possible	(§103.26 Site Development Regulations)	2
5-16	Minimize the use of cut and fill operations. Conform such operations to topography and soils to minimize erosion potential and adequately accommodate runoff		0
5-17	Control erosion and sedimentation prior to, during and after site preparation and construction	yes	1
5-18	Require long term stormwater management plan.	yes	1
5-19	Require long term sedimentation control & maintenance.	Regulation: §48 Stormwater Management/Erosion & Sediment Control	2

Section 5. Roads and Bridges: All Roads & Bridges (Existing & New)

5-20	Target existing public holdings, such as parks, for removing unecessary impervious surfaces	yes (implemented rain gardens on public streets)	1
5-21	Incorporate NYSDOT design and guidance documents, standard specifications, and procedural manuals (Highway Design Manual, Environmental Procedures Manual, Maintenance Guidelines, etc) into local laws and operating procedures	yes	1

5-22	Ensure application of appropriate solid and hazardous waste generation and disposal practices including source controls and recycling	yes	1
5-23	Ensure proper operation and maintenance of runoff management facilities		
5-24	Participate in Cornell Local Roads Program activities and training	Superintendent (and possibly the two assistant superintendents)	1
5-25	Target training programs at highway officials, contractors, construction workers, inspectors, zoning and planning officials	yes	1
5-26	Target training and outreach programs about the proper handling o materials, leakage and spill prevention and spill response procedures at maintenance staff and workers	yes	1

Section 6: Onsite Wastewater Treatment Systems

	Best Management Practices (BMPs)	Existing Means of Implementation (Law, Regulation, Practice, etc.)	
6-01	Conduct regular inspections of OWTS at a frequency adequate to determine failure and undertake required maintenance	Septic systems are not allowed	2
6-02	Institute setback guidelines	Septic systems are not allowed	2
6-03	Promulgate plumbing codes that require practices that are compatible with OWTS	Septic systems are not allowed	2
6-04	Target outreach programs at homeowners, contractors and developers	Septic systems are not allowed	2
6-05	Inspection of all OWTS at property transfer or within 1 year prior to transfer	Septic systems are not allowed	2
6-06	Require all properties within 500' of municipal service to connect.	Septic systems are not allowed	2
6-07	Set goals for effluent limits (nitrogen, phosphorous, BOD, etc)	Septic systems are not allowed	2
			153

Final Score: 153 out of 268 Total Possible Points

Town of Sheldon Assessment Form

Completed November 2014

Section 1. Development

	Best Management Practices (BMPs)	Existing Means of Implementation (Law, Regulation, Practice, etc.)	Score	Meeting Notes, Follow-Up Questions & Comments
1-01	Identify retrofit opportunities for existing development - ex: retention/detention areas, stormwater ponds, construction of wastewater treatment systems to replace older septic systems…	Art. 7030 Site Plan Review (Grading & Drainage plan)	2	
1-02	Encourage homeowners to place compost piles away from waterbodies and roadways.		0	
1-03	Encourage proper use and disposal of lawn and other household chemicals (res., com., indus., rec., uses etc.).		0	
1-04	Storm drain/curb stenciling/labeling program.		0	
1-05	Encourage volunteer programs.		0	
1-06	Encourage the use of indigenous plants in landscaping.		0	
1-07	Develop outreach programs targeted at water quality management. Target training for contractors, developers, inspectors and zoning and planning officials.		0	
1-08	Encourage proper control of pet wastes.		0	
1-09	Written details regarding enforcement of stormwater regulations & requirements - ex: responsibility, penalties, etc.		0	
1-10	Use of drainage districts.		2	
1-11	Minimize the amount of land disturbed (including cut and fill) and the duration of disturbance durring construction.	Regulation: Art. 7 Site Plan Review	2	
1-12	Preserve natural features and conform with the natural boundaries and alignment of waterbodies durring development. Account for topography and soil type to minimize erosion. Limit grades of access roads.	Regulation: Art. 7 Site Plan Review	2	
1-13	Retain and protect trees and other natural vegetation on and near disturbed sites. Require tree surveys and/or cutting plans.	Regulation: Art. 7 Site Plan Review	2	
1-14	Minimize the creation of impervious areas / encourage permeable surfaces.		0	
1-15	Maintain runoff rates, or control increased runoff caused by changed surface conditions to minimize flooding, erosion, sedimentation and pollutants entering waterbodies prior to, during and after construction.		0	
1-16	Stabilize disturbed soils; redistribute topsoil for seeding and planting; use temporary vegetation, silt barriers, and mulching - to protect exposed and critical areas during development. Timeline for completion.	Regulation: Art. 6 Special Use Permit & Regulations	2	

1-17	Use appropriate solid and hazardous waste generation and disposal practices including source controls and recycling.	Local Law 1-2000: Solid Waste Disposal	2	List of hazardous materials on town website
1-18	Ensure proper operation and maintenance of runoff management facilities.		0	
1-19	Encourage cluster development/conservation subdivisions.	Regulation: Art. 5 Regulations Applicable to Permitted Principle & Accessory Uses	2	
1-20	Implement Federal/State Stormwater (SPDES) Phase II requirements including MS4 (when applicable) and Construction Permits as well as Municipal and Industrial Discharge Permits		0	
1-21	Discourage development in flood plain and/or development below base flood elevation	Local Law 1-1987 Flood Damage Prevention	2	

Section 2. Forestry & Agriculture: Forestry

	Best Management Practices (BMPs)	Existing Means of Implementation (Law, Regulation, Practice, etc.)		
2-01	Site restoration practices for forrestry sites. Consider potential water quality impacts when selecting silviculture system (yarding system, site preparation, pesticides employment, etc.)		0	Timber is allowed, but no apparent regulation online
2-02	Have specialists (geologist, soil scientist, geotechnical engineer, wildland hydrologist) review plans in high erosion hazard areas.		0	
2-03	Consider Harvesting practices and preplan harvest areas - ex: operation season, skid trails/access on stable soils, avoiding-steep gradients/multiple stream crossings/poor drainage areas, etc.		0	

Section 2. Forestry & Agriculture: Agriculture

2-04	Implementation of the Agricultural Environmental Management (AEM) program.		0	
2-05	Ensure Concentrated Animal Feeding Operations (CAFO) regulations and permits are being followed and Comprehensive Nutrient Management Plans are being used.		0	
2-06	Implement barnyard runoff controls.		0	
2-07	Discourage grazing in environmentally sensitive areas (e.g. up to creek banks…)		0	
2-08	Use of agricultural protection such as agricultural districts, agricultural preservation ordinances and practices, right to farm laws, and agricultural and farmland protection plans	**Regulation**: §46 Farming, Right to Farm Community	2	

Section 3. Waterways & Wetlands: Modified Waterways

	Best Management Practices (BMPs)	Existing Means of Implementation (Law, Regulation, Practice, etc.)		
3-01	Control in stream sedimentation and/or clear debris. Schedule inspections of sediment control measures for maintenance/repair.	Regulation: Art. 9 Special Development	2	
3-02	Establish riparian buffers.		1	Buffers are encouraged for landscaping/visual purposes
3-03	Prevent animal wastes from entering waterbodies. Ex: animal control/animal waste disposal ordinances and/or practices.	Regulation: Art. 6 Special Permit & Regulations	2	
3-04	Protect stream banks - vegetative stabilization-maintain/add vegetation(before using structural measures); indirect nonstructural-ex: regulate nearby irrigation, rerouting overbank drainage; direct structural-ex: revetments and bulkheads; indirect structural-ex: deflecting channel flow dikes.	Art. 6 Special Use Permit & Regulations (Excavation operations)	2	
3-05	Use setbacks to minimize disturbance of land adjacent to stream banks and shorelines.		0	
3-06	Prevent discharges to waterbodies in amounts that would adversely affect the taste, color or odor of the waters, or would impair the waters for their best usages.	Art. 6 Special Use Permit & Regulations (General Standards)	2	

Section 3. Waterways & Wetlands: Wetlands and Riparian Area Management and Restoration

3-07	Prioritize wetlands and riparian areas and their non-point source (nps) control potential.	Art. 6 Special Use Permit & Regulations Art. 4 zoning	2
3-08	Identify wetlands and riparian areas with significant nps control potential especially when implementing nps management practices.		0
3-09	Include considerations/regulations to protect wetlands, ex: permitting, licensing, wetlands certification and non-regulatory nps pollution activities. Prevent adverse impacts to wetland functions that affect nps pollution abatement from hydrologic changes, sedimentation, or contaminant, ex: pretreatment practices: vegetated systems, detention/retention basins...		0

Section 4. Marinas: Existing Marinas

Best Management Practices (BMPs)	Existing Means of Implementation (Law, Regulation, Practice, etc.)

There are no navigable waterways or marinas in the Township.

Section 4. Marinas: New Marinas

Section 4. Marinas: All Marinas (Existing & New)

Section 5. Roads, Bridges & Public Rights of Way

	Best Management Practices (BMPs)	Existing Means of Implementation (Law, Regulation, Practice, etc.)	
5-01	Conduct road, bridge, and drainage/stormwater structure inspection and maintenance and procedures (de-icing material usage and storage, pot-hole repair, bridge washing, scraping and painting, cleaning catch basins, etc.) according to best management practices.		0
5-02	Conduct right-of-way activities (mowing, brush removal, pesticide and fertilizer use, etc.) - according to best management practices.		0
5-03	Develop and identify erosion/sediment control areas (examples include steep slopes, easily erodible soils, and nearby sensitive areas) and retrofit opportunities.	Regulation: Art. 9 Special Development	2
5-04	Incorporate alternatives to traditional de-icing practices including adjusting mix rates, using non-salt and non-sand alternatives. Store in a enclosed areas with impervious floor.		0
5-05	Target existing public holdings, such as parks, for removing unnecessary impervious surfaces.		0
5-06	Incorporate New York State Department of Transportation design and guidance documents, standard specifications, and procedural manuals (*Highway Design Manual, Environmental Procedures Manual,* Maintenance Guidelines, etc.) into local laws and operating procedures.		0
5-07	Participate in Cornell Local Roads Program activities and training.		0
5-08	Target training programs at highway officials, contractors, construction workers, inspectors, zoning and planning officials.		0
5-09	Culvert maintenance: routinely inspected, maintained and resized when necessary so that they will remain unobstructed during storm events. Blockages resulting from sedimentation, debris, excessive vegetation and structural failure should be identified and mitigated.		0

Section 6: Onsite Wastewater Treatment Systems

Town is heavily dependent on private septic systems

	Best Management Practices (BMPs)	Existing Means of Implementation (Law, Regulation, Practice, etc.)

6-01	Conduct regular inspections of septic/onsite wastewater treatment systems (OWTS), at minimum durring transfer of property or within 1 year prior to transfer.		0	
6-02	Institute setback guidelines	Regulation: Art. 5 Regulations Applicable to Permitted Principle & Accessory Uses	2	
6-04	Target OWTS outreach programs at homeowners, contractors and developers		0	
6-05	Require all properties with access to municipal sewer service to connect.	Art. 6 Special Use Permit & Regulations	2	Town wishes to increase public connection (Master plan)
			37	

Final Score: 37 out of 100 Total Possible Points

Town of Elma Assessment Form

Completed December 2014

Section 1. Development

	Best Management Practices (BMPs)	Existing Means of Implementation (Law, Regulation, Practice, etc.)	Score	Meeting Notes, Follow-Up Questions & Comments
1-01	Identify retrofit opportunities for existing development - ex: retention/detention areas, stormwater ponds, construction of wastewater treatment systems to replace older septic systems…		0	
1-02	Encourage homeowners to place compost piles away from waterbodies and roadways.		0	
1-03	Encourage proper use and disposal of lawn and other household chemicals (res., com., indus., rec., uses etc.).	**Regulation:** §115 (industrial users)	2	
1-04	Storm drain/curb stenciling/labeling program.	**Local Law:** §3-2007 (MS4 requirements)	2	
1-05	Encourage volunteer programs.		0	
1-06	Encourage the use of indigenous plants in landscaping.		0	
1-07	Develop outreach programs targeted at water quality management. Target training for contractors, developers, inspectors and zoning and planning officials.		0	
1-08	Encourage proper control of pet wastes.	**Regulation:** §65 (Dogs)	2	
1-09	Written details regarding enforcement of stormwater regulations & requirements - ex: responsibility, penalties, etc.	**Local Law:** §3-2007 (MS4 requirements)	2	
1-10	Use of drainage districts.	**Regulation:** §77 (grading & Filling)	2	
1-11	Minimize the amount of land disturbed (including cut and fill) and the duration of disturbance durring construction.	**Local Law:** §1-2012 (stormwater Management)	2	
1-12	Preserve natural features and conform with the natural boundaries and alignment of waterbodies durring development. Account for topography and soil type to minimize erosion. Limit grades of access roads.	**Regulation:** §82 (flood damage prevention)	2	
1-13	Retain and protect trees and other natural vegetation on and near disturbed sites. Require tree surveys and/or cutting plans.	**Regulation:** §144(zoning) **Regulation:** 123(Subdivision of Land)	2	
1-14	Minimize the creation of impervious areas / encourage permeable surfaces.	**Local Law**: §1-2012 (stormwater management)	2	
1-15	Maintain runoff rates, or control increased runoff caused by changed surface conditions to minimize flooding, erosion, sedimentation and pollutants entering waterbodies prior to, during and after construction.	**Local Law:** §1-2012 (stormwater Management)	2	

1-16	Stabilize disturbed soils; redistribute topsoil for seeding and planting; use temporary vegetation, silt barriers, and mulching - to protect exposed and critical areas during development. Timeline for completion.	**Local Law:** §1-2012 (Stormwater Management)	2
1-17	Use appropriate solid and hazardous waste generation and disposal practices including source controls and recycling.	**Regulation:** §119 (Solid Waste)	2
1-18	Ensure proper operation and maintenance of runoff management facilities.		0
1-19	Encourage cluster development/conservation subdivisions.	**Regulation:** §122 (subdivision regulations)	2
1-20	Implement Federal/State Stormwater (SPDES) Phase II requirements including MS4 (when applicable) and Construction Permits as well as Municipal and Industrial Discharge Permits		0
1-21	Discourage development in flood plain and/or development below base flood elevation	**Regulation:** §82 (flood damage prevention)	2

Section 2. Forestry & Agriculture: Forestry

There is no forestry in the Township

Best Management Practices (BMPs)		Existing Means of Implementation (Law, Regulation, Practice, etc.)	

Section 2. Forestry & Agriculture: Agriculture

2-04	Implementation of the Agricultural Environmental Management (AEM) program.		0
2-05	Ensure Concentrated Animal Feeding Operations (CAFO) regulations and permits are being followed and Comprehensive Nutrient Management Plans are being used.		0
2-06	Implement barnyard runoff controls.		0
2-07	Discourage grazing in environmentally sensitive areas (e.g. up to creek banks…)		0
2-08	Use of agricultural protection such as agricultural districts, agricultural preservation ordinances and practices, right to farm laws, and agricultural and farmland protection plans		0

Section 3. Waterways & Wetlands: Modified Waterways

Best Management Practices (BMPs)		Existing Means of Implementation (Law, Regulation, Practice, etc.)	
3-01	Control in stream sedimentation and/or clear debris. Schedule inspections of sediment control measures for maintenance/repair.		0

3-02	Establish riparian buffers.		0
3-03	Prevent animal wastes from entering waterbodies. Ex: animal control/animal waste disposal ordinances and/or practices.		0
3-04	Protect stream banks - vegetative stabilization-maintain/add vegetation(before using structural measures); indirect nonstructural-ex: regulate nearby irrigation, rerouting overbank drainage; direct structural-ex: revetments and bulkheads; indirect structural-ex: deflecting channel flow dikes.	**Local Law:** §1-2012 (Stormwater Management)	2
3-05	Use setbacks to minimize disturbance of land adjacent to stream banks and shorelines.		0
3-06	Prevent discharges to waterbodies in amounts that would adversely affect the taste, color or odor of the waters, or would impair the waters for their best usages.	**Local Law:** §1-2012 (Stormwater Management)	2

Section 3. Waterways & Wetlands: Wetlands and Riparian Area Management and Restoration

3-07	Prioritize wetlands and riparian areas and their non-point source (nps) control potential.	**Regulation:** §7 (Conservation Board)	2
3-08	Identify wetlands and riparian areas with significant nps control potential especially when implementing nps management practices.	**Local Law:** §1-2012 (Stormwater Management)	2
3-09	Include considerations/regulations to protect wetlands, ex: permitting, licensing, wetlands certification and non-regulatory nps pollution activities. Prevent adverse impacts to wetland functions that affect nps pollution abatement from hydrologic changes, sedimentation, or contaminant, ex: pretreatment practices: vegetated systems, detention/retention basins...	**Regulation: §**7 (Conservation Board)	2

Section 4. Marinas: Existing Marinas

Best Management Practices (BMPs)	Existing Means of Implementation (Law, Regulation, Practice, etc.)

There are no navigable waterways or marinas in the Village.

Section 4. Marinas: New Marinas

Section 4. Marinas: All Marinas (Existing & New)

Section 5. Roads, Bridges & Public Rights of Way

Best Management Practices (BMPs)	Existing Means of Implementation (Law, Regulation, Practice, etc.)

5-01	Conduct road, bridge, and drainage/stormwater structure inspection and maintenance and procedures (de-icing material usage and storage, pot-hole repair, bridge washing, scraping and painting, cleaning catch basins, etc.) according to best management practices.		0
5-02	Conduct right-of-way activities (mowing, brush removal, pesticide and fertilizer use, etc.) - according to best management practices.		0
5-03	Develop and identify erosion/sediment control areas (examples include steep slopes, easily erodible soils, and nearby sensitive areas) and retrofit opportunities.		0
5-04	Incorporate alternatives to traditional de-icing practices including adjusting mix rates, using non-salt and non-sand alternatives. Store in a enclosed areas with impervious floor.		0
5-05	Target existing public holdings, such as parks, for removing unnecessary impervious surfaces.		0
5-06	Incorporate New York State Department of Transportation design and guidance documents, standard specifications, and procedural manuals (*Highway Design Manual, Environmental Procedures Manual,* Maintenance Guidelines, etc.) into local laws and operating procedures.		0
5-07	Participate in Cornell Local Roads Program activities and training.		0
5-08	Target training programs at highway officials, contractors, construction workers, inspectors, zoning and planning officials.		0
5-09	Culvert maintenance: routinely inspected, maintained and resized when necessary so that they will remain unobstructed during storm events. Blockages resulting from sedimentation, debris, excessive vegetation and structural failure should be identified and mitigated.		0

Section 6: Onsite Wastewater Treatment Systems

	Best Management Practices (BMPs)	Existing Means of Implementation (Law, Regulation, Practice, etc.)	
6-01	Conduct regular inspections of septic/onsite wastewater treatment systems (OWTS), at minimum durring transfer of property or within 1 year prior to transfer.	**Regulation:** §115 Artivle IV (Private Wastewater Disposal)	2
6-02	Institute setback guidelines		0
6-04	Target OWTS outreach programs at homeowners, contractors and developers		0

6-05	Require all properties with access to municipal sewer service to connect.	**Regulation: §**115 Article IV (Private Wastewater disposal)	2
			42

Final Score: 42 out of 94 Total Possible Points

Town of Newstead Assessment Form

Completed December 2014

Section 1. Development

	Best Management Practices (BMPs)	Existing Means of Implementation (Law, Regulation, Practice, etc.)	Score	Meeting Notes, Follow-Up Questions & Comments
1-01	Identify retrofit opportunities for existing development - ex: retention/detention areas, stormwater ponds, construction of wastewater treatment systems to replace older septic systems…	Regulation: Stormwater Management and Erosion Control Law §349,	2	
1-02	Encourage homeowners to place compost piles away from waterbodies and roadways.		0	
1-03	Encourage proper use and disposal of lawn and other household chemicals (res., com., indus., rec., uses etc.).	Regulation: Prohibitions on wastewater discharges §311.18,	2	
1-04	Storm drain/curb stenciling/labeling program.	n/a		
1-05	Encourage volunteer programs.		0	
1-06	Encourage the use of indigenous plants in landscaping.		0	
1-07	Develop outreach programs targeted at water quality management. Target training for contractors, developers, inspectors and zoning and planning officials.		0	
1-08	Encourage proper control of pet wastes.	Regulation: Prohibitions on wastewater discharges §311.18,	2	
1-09	Written details regarding enforcement of stormwater regulations & requirements - ex: responsibility, penalties, etc.	Regulation: Stormwater Management and Erosion Control Law §349-9 Enforcement and Penalties,	2	
1-10	Use of drainage districts.		0	
1-11	Minimize the amount of land disturbed (including cut and fill) and the duration of disturbance durring construction.	Regulation: Stormwater Management and Erosion Control Law §349	2	
1-12	Preserve natural features and conform with the natural boundaries and alignment of waterbodies durring development. Account for topography and soil type to minimize erosion. Limit grades of access roads.	Regulation: Subdivision §360	2	
1-13	Retain and protect trees and other natural vegetation on and near disturbed sites. Require tree surveys and/or cutting plans.		0	
1-14	Minimize the creation of impervious areas / encourage permeable surfaces.	Regulation: Subdivision §360	2	
1-15	Maintain runoff rates, or control increased runoff caused by changed surface conditions to minimize flooding, erosion, sedimentation and pollutants entering waterbodies prior to, during and after construction.	Regulation: Stormwater Management and Erosion Control Law §349,	2	

1-16	Stabilize disturbed soils; redistribute topsoil for seeding and planting; use temporary vegetation, silt barriers, and mulching - to protect exposed and critical areas during development. Timeline for completion.	Regulation: Stormwater Management and Erosion Control Law §349,	2	
1-17	Use appropriate solid and hazardous waste generation and disposal practices including source controls and recycling.	Regulation: Solid Waste & Recycling §338	2	
1-18	Ensure proper operation and maintenance of runoff management facilities.			
1-19	Encourage cluster development/conservation subdivisions.	Regulation: Subdivision §360 - Cluster & Common Open Space	2	
1-20	Implement Federal/State Stormwater (SPDES) Phase II requirements including MS4 (when applicable) and Construction Permits as well as Municipal and Industrial Discharge Permits	n/a		Newstead is not a MS4 community and not subject to these requiremen
1-21	Discourage development in flood plain and/or development below base flood elevation	Regulation: Flood Damage Prevention §202	2	

Section 2. Forestry & Agriculture: Forestry

	Best Management Practices (BMPs)	Existing Means of Implementation (Law, Regulation, Practice, etc.)		
2-01	Site restoration practices for forrestry sites. Consider potential water quality impacts when selecting silviculture system (yarding system, site preparation, pesticides employment, etc.)		0	Timber is allowed, but no apparent regulation online
2-02	Have specialists (geologist, soil scientist, geotechnical engineer, wildland hydrologist) review plans in high erosion hazard areas.		0	
2-03	Consider Harvesting practices and preplan harvest areas - ex: operation season, skid trails/access on stable soils, avoiding-steep gradients/multiple stream crossings/poor drainage areas, etc.		0	

Section 2. Forestry & Agriculture: Agriculture

2-04	Implementation of the Agricultural Environmental Management (AEM) program.	Practice: Program is implemented through County Soil & Water.	1
2-05	Ensure Concentrated Animal Feeding Operations (CAFO) regulations and permits are being followed and Comprehensive Nutrient Management Plans are being used.	Practice: CAFOs are regulated by DEC and issues are identified by County Soil & Water, Newstead is not a MS4 community, and as such does not provide oversight to SPDES permitted facilities.	1
2-06	Implement barnyard runoff controls.		0

2-07	Discourage grazing in environmentally sensitive areas (e.g. up to creek banks…)		0
2-08	Use of agricultural protection such as agricultural districts, agricultural preservation ordinances and practices, right to farm laws, and agricultural and farmland protection plans	Regulation: Right to Farm Law §181, Rural Agricultural District Zoning §186.1.	2

Section 3. Waterways & Wetlands: Modified Waterways

	Best Management Practices (BMPs)	Existing Means of Implementation (Law, Regulation, Practice, etc.)		
3-01	Control in stream sedimentation and/or clear debris. Schedule inspections of sediment control measures for maintenance/repair.		0	
3-02	Establish riparian buffers.	Limited Regulation: Sudivision §360	1	Limited features identified in Subdivision regulation.
3-03	Prevent animal wastes from entering waterbodies. Ex: animal control/animal waste disposal ordinances and/or practices.		0	
3-04	Protect stream banks - vegetative stabilization-maintain/add vegetation(before using structural measures); indirect nonstructural-ex: regulate nearby irrigation, rerouting overbank drainage; direct structural-ex: revetments and bulkheads; indirect structural-ex: deflecting channel flow dikes.		0	
3-05	Use setbacks to minimize disturbance of land adjacent to stream banks and shorelines.		0	
3-06	Prevent discharges to waterbodies in amounts that would adversely affect the taste, color or odor of the waters, or would impair the waters for their best usages.	Regulation: Protection from accidental discharge §311-27	2	

Section 3. Waterways & Wetlands: Wetlands and Riparian Area Management and Restoration

3-07	Prioritize wetlands and riparian areas and their non-point source (nps) control potential.		0
3-08	Identify wetlands and riparian areas with significant nps control potential especially when implementing nps management practices.		
3-09	Include considerations/regulations to protect wetlands, ex: permitting, licensing, wetlands certification and non-regulatory nps pollution activities. Prevent adverse impacts to wetland functions that affect nps pollution abatement from hydrologic changes, sedimentation, or contaminant, ex: pretreatment practices: vegetated systems, detention/retention basins...	Regulation: Subdivision §360 Practice: Notice on website to check for floodplain or wetland before planning any actions.	2

Section 5. Marinas

Best Management Practices (BMPs)	Existing Means of Implementation (Law, Regulation, Practice, etc.)	

There are no navigable waterways or marinas in the Village.

Section 5. Roads, Bridges & Public Rights of Way

	Best Management Practices (BMPs)	Existing Means of Implementation (Law, Regulation, Practice, etc.)	
5-01	Conduct road, bridge, and drainage/stormwater structure inspection and maintenance and procedures (de-icing material usage and storage, pot-hole repair, bridge washing, scraping and painting, cleaning catch basins, etc.) according to best management practices.		0
5-02	Conduct right-of-way activities (mowing, brush removal, pesticide and fertilizer use, etc.) - according to best management practices.		0
5-03	Develop and identify erosion/sediment control areas (examples include steep slopes, easily erodible soils, and nearby sensitive areas) and retrofit opportunities.		0
5-04	Incorporate alternatives to traditional de-icing practices including adjusting mix rates, using non-salt and non-sand alternatives. Store in a enclosed areas with impervious floor.		0
5-05	Target existing public holdings, such as parks, for removing unnecessary impervious surfaces.		0
5-06	Incorporate New York State Department of Transportation design and guidance documents, standard specifications, and procedural manuals (*Highway Design Manual, Environmental Procedures Manual,* Maintenance Guidelines, etc.) into local laws and operating procedures.		0
5-07	Participate in Cornell Local Roads Program activities and training.		0
5-08	Target training programs at highway officials, contractors, construction workers, inspectors, zoning and planning officials.		0
5-09	Culvert maintenance: routinely inspected, maintained and resized when necessary so that they will remain unobstructed during storm events. Blockages resulting from sedimentation, debris, excessive vegetation and structural failure should be identified and mitigated.	Practice: Notice on website to remind owners to keep ditched clean and clear.	1

Much of these practices are not outlined in code. The Town may still be implementing them though.

Section 6: Onsite Wastewater Treatment Systems

	Best Management Practices (BMPs)	Existing Means of Implementation (Law, Regulation, Practice, etc.)	
6-01	Conduct regular inspections of septic/onsite wastewater treatment systems (OWTS), at minimum durring transfer of property or within 1 year prior to transfer.	Practice: Erie County Department of Health enforces inspections upon property transfer.	1
6-02	Institute setback guidelines		0
6-04	Target OWTS outreach programs at homeowners, contractors and developers		0
6-05	Require all properties with access to municipal sewer service to connect.	Regulation: Connection to public sewer required §311.6.	2
			37

Final Score: 37 out of 98 Total Possible Points

Grand Island Assessment Form

Completed November 2014

Section 1. Development

	Best Management Practices (BMPs)	Existing Means of Implementation (Law, Regulation, Practice, etc.)	Score	Meeting Notes, Follow-Up Questions & Comments
1-01	Identify retrofit opportunities for existing development - ex: retention/detention areas, stormwater ponds, construction of wastewater treatment systems to replace older septic systems…	Stormwater Management - § 407-199 Performance and design criteria for stormwater management and erosion and sediment control. § 407-198Stormwater pollution prevention plans.	2	
1-02	Encourage homeowners to place compost piles away from waterbodies and roadways.	Supplemental Regulations - § 407-167.1 Community gardens	2	
1-03	Encourage proper use and disposal of lawn and other household chemicals (res., com., indus., rec., uses etc.).	Use of Public Sewers - § 267-17 Discharge of certain matter prohibited.	2	
1-04	Storm drain/curb stenciling/labeling program.	Storm Sewers - § 267-46Alternative remedies.	2	
1-05	Encourage volunteer programs.		0	
1-06	Encourage the use of indigenous plants in landscaping.	Enhanced Environment Overlay District - § 407-92 Permitted uses. Landscaping Requirments - § 407-140 Landscaping plans. § 407-137 Purpose.	2	
1-07	Develop outreach programs targeted at water quality management. Target training for contractors, developers, inspectors and zoning and planning officials.	**Practice:** Participates in the WNY Stormwater Coalition & Building Inspectors are certified	1	
1-08	Encourage proper control of pet wastes.	Storm Sewers - § 267-37 Activities contaminating stormwater prohibited.	2	
1-09	Written details regarding enforcement of stormwater regulations & requirements - ex: responsibility, penalties, etc.	Stormwater Management - § 407-201 Administration and enforcement. § 407-198 Stormwater pollution prevention plans. § 267-41 Access and monitoring of discharges.	2	
1-10	Use of drainage districts.	§ 407-195 Stormwater Management - Findings; purpose.	2	Not really any established drainage districts in the town of Grand Island. Seem to be aware of individual stream sheds.
1-11	Minimize the amount of land disturbed (including cut and fill) and the duration of disturbance durring construction.	Enhanced Environment Overlay District - § 407-93 Special requirements. Stormwater Management - § 407-198 Stormwater pollution prevention plans. Landscaping Requirements - § 407-137 Purpose.	2	Attempt is made and provisions exist, but development does occur where clear cutting occurs. Difficult to get full benefit from incentive zoning.

1-12	Preserve natural features and conform with the natural boundaries and alignment of waterbodies durring development. Account for topography and soil type to minimize erosion. Limit grades of access roads.	Open Space District - § 407-88 Purpose. Site Plan Review - § 407-110 Criteria for review and recommendations. Stormwater Management - § 407-137 Purpose. Landscpaing Requirements - § 407-137 Purpose.	2	Just gave authority to Conservation Commission to Review and comment on development.
1-13	Retain and protect trees and other natural vegetation on and near disturbed sites. Require tree surveys and/or cutting plans.	Stormwater Management - § 407-198 Stormwater pollution prevention plans. Landscaping Requirements - § 407-137 Purpose.	2	Lack of identified natural areas limits boards ability to protect natural features in town.
1-14	Minimize the creation of impervious areas / encourage permeable surfaces.	Enhanced Environment Overlay District - § 407-92 Permitted uses. Landscaping Requirements - § 407-137 Purpose.	1	porous pavement and other green infrastructure is difficult to do the clay soils. Limited ability to address infiltration.
1-15	Maintain runoff rates, or control increased runoff caused by changed surface conditions to minimize flooding, erosion, sedimentation and pollutants entering waterbodies prior to, during and after construction.	Stormwater Management - § 407-198 Stormwater pollution prevention plans. § 407-201 Administration and enforcement.	2	
1-16	Stabilize disturbed soils; redistribute topsoil for seeding and planting; use temporary vegetation, silt barriers, and mulching - to protect exposed and critical areas during development. Timeline for completion.	Stormwaster Management - § 407-198 Stormwater pollution prevention plans.	2	
1-17	Use appropriate solid and hazardous waste generation and disposal practices including source controls and recycling.	Manufactured Homes and Manufactured Home Parks - § 225-16 Solid waste disposal. Solid Waste - § 309-8Unlawful activities. Use of Public Sewers - § 267-3 Discharge of untreated wastes prohibited. § 267-17 Discharge of certain matter prohibited.	2	
1-18	Ensure proper operation and maintenance of runoff management facilities.	Stormwater Management - § 407-200 Maintenance, inspection and repair of stormwater facilities. § 407-198 Stormwater pollution prevention plans. Ch 407 407e Sched V Sample Stormwater Control Fac Main Agree	1	Inspected periodically if it is brought to their attention that there is a problem.
1-19	Encourage cluster development/conservation subdivisions.	Conservation Easements - § 121-6 Procedure for establishing conservation easements.	2	Have cluster zoning, ZA is skeptical if its effective and actually provides benefit. Right now it's up to the developer to take advantage of these regulations.

1-20	Implement Federal/State Stormwater (SPDES) Phase II requirements including MS4 (when applicable) and Construction Permits as well as Municipal and Industrial Discharge Permits	Sewers - § 267-40 Suspension of access to MS4. § 267-37 Activities contaminating stormwater prohibited. § 267-39 Industrial or construction activity discharges. § 267-36 Discharge prohibitions. § 267-38 Prevention, control, and reduction of stormwater pollutants by use of best management practices required. § 267-42 Notification of spills.	2	
1-21	Discourage development in flood plain and/or development below base flood elevation	Regrading and Filling of Land - § 253-4 Requirements for issuance of permit. Supplemental Regulations - § 407-152 Drainage strips. Subdivision of Land - § 327-15 Land requirements. Flood Damage Prevention - § 155-3 Objectives. § 155-14 General standards.	2	Flood reg's raised development standard to 2 feet above base flood elevation.

Section 2. Forestry & Agriculture: Forestry

	Best Management Practices (BMPs)	Existing Means of Implementation (Law, Regulation, Practice, etc.)		
2-01	Site restoration practices for forrestry sites. Consider potential water quality impacts when selecting silviculture system (yarding system, site preparation, pesticides employment, etc.)	N/A		
2-02	Have specialists (geologist, soil scientist, geotechnical engineer, wildland hydrologist) review plans in high erosion hazard areas.	Site Plan Review - § 407-110 Criteria for review and recommendations.	2	Erosion Control Manual, Design Manual, USDA Natural Resources Conservation Service Engineering Field Manual, New York Guidelines for Urban Erosion and Sediment Control?
2-03	Consider Harvesting practices and preplan harvest areas - ex: operation season, skid trails/access on stable soils, avoiding-steep gradients/multiple stream crossings/poor drainage areas, etc.	Enhanced Environment Overlay District - § 407-92 Permitted uses.	2	

Section 2. Forestry & Agriculture: Agriculture

2-04	Implementation of the Agricultural Environmental Management (AEM) program.	N/A		
2-05	Ensure Concentrated Animal Feeding Operations (CAFO) regulations and permits are being followed and Comprehensive Nutrient Management Plans are being used.	N/A		Grand Island has no large farms.
2-06	Implement barnyard runoff controls.	N/A		

2-07	Discourage grazing in environmentally sensitive areas (e.g. up to creek banks…)	N/A	
2-08	Use of agricultural protection such as agricultural districts, agricultural preservation ordinances and practices, right to farm laws, and agricultural and farmland protection plans	Farming - § 145-3 Right-to-farm declaration.	2

Section 3. Waterways & Wetlands: Modified Waterways

	Best Management Practices (BMPs)	Existing Means of Implementation (Law, Regulation, Practice, etc.)		
3-01	Control in stream sedimentation and/or clear debris. Schedule inspections of sediment control measures for maintenance/repair.	Stormwater Management - § 407-195 Findings; purpose.	2	clear debris regularly
3-02	Establish riparian buffers.	Cluster Development - § 407-125 Open space requirement, Site Plan Review & Subdivision	1	Protections are limited and not fully enforced.
3-03	Prevent animal wastes from entering waterbodies. Ex: animal control/animal waste disposal ordinances and/or practices.	Supplemental Regulations - § 407-144 Agricultural animals. §407-149 Commercial riding stables.	2	Does not specifcally stipulate the entering of animal wastes into waterbodies.
3-04	Protect stream banks - vegetative stabilization-maintain/add vegetation(before using structural measures); indirect nonstructural-ex: regulate nearby irrigation, rerouting overbank drainage; direct structural-ex: revetments and bulkheads; indirect structural-ex: deflecting channel flow dikes.	Stormwater Management - § 407-198 Stormwater pollution prevention plans.	2	This is very limited. There is no specific details about what type of protection there is or that there is even a priority to protect stream banks using any of the techniques.
3-05	Use setbacks to minimize disturbance of land adjacent to stream banks and shorelines.	Riparian setbacks are based on stream classification	2	Largest of which is 80' (find in code)
3-06	Prevent discharges to waterbodies in amounts that would adversely affect the taste, color or odor of the waters, or would impair the waters for their best usages.	Stormwater Management - § 407-198 Stormwater pollution prevention plans. Sewer - § 267-36 Discharge prohibitions. § 267-37 Activities contaminating stormwater prohibited. § 267-38 Prevention, control, and reduction of stormwater pollutants by use of best management practices required.	2	

Section 3. Waterways & Wetlands: Wetlands and Riparian Area Management and Restoration

3-07	Prioritize wetlands and riparian areas and their non-point source (nps) control potential.	Design Standards and Required Improvements - § 327-22 Storm drainage. Parking, Stacking, and Loading Requirements - § 407-132 Exceptions. Stormwater Management - § 407-198 Stormwater pollution prevention plans. § 407-195 Findings; purpose. Sewers - § 267-38 Prevention, control, and reduction of stormwater pollutants by use of best management practices required.	2	Wetlands are utilized as stormwater infrastructure, where they are large enough.
3-08	Identify wetlands and riparian areas with significant nps control potential especially when implementing nps management practices.	Design Standards and Required Improvements - § 327-22 Storm drainage. Parking, Stacking, and Loading Requirements - § 407-132 Exceptions. Stormwater Management - § 407-198 Stormwater pollution prevention plans. § 407-195 Findings; purpose. Sewers - § 267-38 Prevention, control, and reduction of stormwater pollutants by use of best management practices required.	2	Documented in Town Engineering Department Maps, both State and Federal
3-09	Include considerations/regulations to protect wetlands, ex: permitting, licensing, wetlands certification and non-regulatory nps pollution activities. Prevent adverse impacts to wetland functions that affect nps pollution abatement from hydrologic changes, sedimentation, or contaminant, ex: pretreatment practices: vegetated systems, detention/retention basins...	Open Space Requirement - § 407-125 Open space requirement. Enhanced Environment Overlay District - § 407-91 Purpose.	2	

Section 4. Marinas

Best Management Practices (BMPs)		Existing Means of Implementation (Law, Regulation, Practice, etc.)		Town doesn't regulate Marinas despite their fully surrounded by water and have a number of private marina's in town. Marinas are allow in the zoning code and currently only regulated in terms of storage/visibility of boats.
4-01	Clean maintenance areas regularly. Preferably by vacuuming to remove trash, sandings, paint chips etc.		0	Ditto to above on Docks.
4-02	Prevent residue from being carried into surface waters by performing abrasive blasting within plastic tarp enclosures on windless days or withing spray booths		0	

4-03	Provide proper disposal/recycling facilities to marina patrons, preferably covered receptacles		0
4-04	Establish fish cleaning areas, and implement rules governing the conduct of fish cleaning operations		0
4-05	Educate boaters on the importance of proper fish cleaning practices		0
4-06	Implement fish composting where appropriate		0
4-07	Store materials in areas impervious to the type of material stored. Build curbs, berms, or other barriers around the areas to contain spills		0
4-08	Use separate, clearly labeled containers for the disposal of oil, gasoline, antifreeze, diesel, kerosene and mineral spirits		0
4-09	Target outreach programs about proper disposal at marinas through the use of signs, mailings and other means		0
4-10	Promote the use in bilges of oil-absorbing materials, and replace them as necessary, preferably recycling, or disposing of them in accordance with petroleum disposal regulation.		0
4-11	Use a container unde the air vent while refueling inboard tanks if the tank vents are not equipped with a fuel/air separator		0
4-12	Prohibit in-water hull scrapings or any underwater process to remove paint from boat hulls		0
4-13	Wash the boat hull above the waterline by hand, using only necessary amounts of detergents and cleaning compounds that are phosphate free and bio-degradable		0
4-14	Prohibit the use of detergents and cleaning compounds containing ammonia, sodium hypochloride, chlorinated solvents, petroleum distillates, alcohol or lye		0
4-15	Educate individuals about the importance of trash reduction and recyling through: interpretive and instructional signs placed at marinas and boat launching sites, pamphlets or flyers, newsletters, inserts in billings, meetings and presentations, workshops, and certification programs		0

4-16	Inspect pumpout facilities regularly, and repair them if practical, under a maintenance contract with a competant contractor		0
4-17	Add language to slip lease agreements mandating the use of pumpout facilities and specifying penalties for failure to comply		0
4-18	Place dye tablets in holding tanks to identify and discourage illegal disposal		0
4-19	Prohibit motorized vessels from areas (define areas) that contain important shallow-water habitats		0
4-20	Establish and enforce no-wake zones to decrease turbidity and reduce erosion potential from boat wakes		0

Section 4. Marinas: New Marinas

4-21	Design and site marinas to maximize exchange of marina basin water. Limit basins and channels with square corners that tend to trap flotsam, and place dock structures in a manner that promotes circulation		0
4-22	Perform a preconstruction assessment, which includes a water quality monitoring and modeling methodology, to predict post-construction water quality conditions		0
4-23	Monitor water quality during construction to protect ambient water quality to the maximum practicable extent		0
4-24	Develop a marina siting policy to discourge development in areas containing important habitat designated by local, State, or federal agencies		0
4-25	Conduct surveys and employ rapid bioassessment techniques to assess historic habitat function (e.g. spawning, nursery, and migration pathways) and potential impacts to these and other biological functions and resources		0
4-26	Encourage the redevelopment or expansion of existing marina facilities that have demonstrated minimal environmental impacts instead of developing new marina facilities		0

4-27	Consider alternative sites with minimal potential environmental impacts when the use of previously disturbed sites is not feasible		0	
4-28	Minimize disturbance of indigenous vegetation in the riparian area		0	
4-29	Use soil bioengineering or plants, wherever conditions allow, to restore damaged habitat along shorelines and streambanks		0	
4-30	Use properly designed and constructed engineering practices that minimize shoreline disturbance in areas where soil bioengineering and plants are ineffective		0	
4-31	Use appropriate shore erosion control methods, such as returns or return walls, in areas where existing protection methods are being flanked or are falling		0	
4-32	Plan and design all steambank, shoreline, and navigation structures so that they do not transfer erosion energy to or otherwise cause visible loss of surrounding streambanks or shorelines		0	
4-33	Locate and design fuel stations so that spills can be contained in a limited area		0	
4-34	Design and install underground fuel storage tanks according to State regulations, including the provision of detection systems and automatic fuel tank and pump leak shut-offs		1	The Town lets the State assume authority and that state regulations are being followed
4-35	Provide aboveground fuel tanks and fueling areas with a curbed or diked storage area to handle containment volumes meeting State (and local) codes and inspect regularly		0	
4-36	Use preferred pumpout systems: fixed-point, portable, dedicated slipside, and pumpout boats		0	
4-37	Design onsite wastewater treatment systems to specifically handle waste from vessels		0	

4-38	Post pumpout facility location and regulations at the marina. Charge fees that encourage rather than discourage facility use. Consider offsetting the cost of maintaining pumpout facilities by fuel sales where these facilities are conveniently located in close proximity to one another		0

Section 4. Marinas: All Marinas (Existing & New)

4-39	Restrict boat repair and maintenance activities to clearly marked designated areas to prevent debris from falling into the water and preventing invasive species		0
4-40	Secure all fueling facilities and storage areas with appropraite shut-off devices and security locks and inspect regularly		0
4-41	Design fueling stations with spill containment equipment that is stored in a clearly marked location, accessible to work and storage areas. Post emergency phone numbers in a prominent location		0
4-42	Design a spill contingency plan		0
4-43	Inspect and maintain all containment berms or devices in accordance with State regulations. Investigate immediately signs of leakage or spillage, and undertake cleanup in accordance with applicable best management practices		0
4-44	Have a trained operator present and prepared to respond to accidental spills		0
4-45	Maintain daily inventory records to identify abnormal loss or gain of liquid		0
4-46	Prohibit the cleaning of hoses, fittings, pumps, and other accessory equipment on piers, docks or adjacent upland to prevent runoff into the marina basin or other surface or groundwater		0
4-47	Create and/or maintain a dedicated fund for maintenance in the case of government-owned facilities		0
4-48	Restrict the operation of pumpout facilities to trained marina personnel only		0

Section 5. Roads, Bridges & Public Rights of Way

	Best Management Practices (BMPs)	Existing Means of Implementation (Law, Regulation, Practice, etc.)		
5-01	Conduct road, bridge, and drainage/stormwater structure inspection and maintenance and procedures (de-icing material usage and storage, pot-hole repair, bridge washing, scraping and painting, cleaning catch basins, etc.) according to best management practices.	Stormwater Management - § 407-199 Performance and design criteria for stormwater management and erosion and sediment control. § 407-200 Maintenance, inspection and repair of stormwater facilities. Sewers - § 267-38 Prevention, control, and reduction of stormwater pollutants by use of best management practices required.	2	
5-02	Conduct right-of-way activities (mowing, brush removal, pesticide and fertilizer use, etc.) - according to best management practices.	Practice: Town currently Mows, no fertilizers are used in ROWs.	1	Pesticides are used in certain locations within town properties and parks, not ROWs though.
5-03	Develop and identify erosion/sediment control areas (examples include steep slopes, easily erodible soils, and nearby sensitive areas) and retrofit opportunities.	Stormwater Management - § 407-198 Stormwater pollution prevention plans. Site Plan Review - § 407-110 Criteria for review and recommendations.	2	
5-04	Incorporate alternatives to traditional de-icing practices including adjusting mix rates, using non-salt and non-sand alternatives. Store in a enclosed areas with impervious floor.	Waterfront Consistency Review - § 403-4 Review of actions. Practice: switched to ice-additive mixture to help salt stick to roadways, focus application on intersections of neighborhoods to reduce usage.	2	Not very comprehensive or reliable action.
5-05	Target existing public holdings, such as parks, for removing unnecessary impervious surfaces.	Landscaping Requirements - § 407-137 Purpose. Practice: removed vacant buildings and infrastructure no longer in use.	2	Removed vacant and underutilized structures.
5-06	Incorporate New York State Department of Transportation design and guidance documents, standard specifications, and procedural manuals (*Highway Design Manual, Environmental Procedures Manual,* Maintenance Guidelines, etc.) into local laws and operating procedures.	Streets and Sidewalks - § 323-7 Concrete sidewalk specifications.	2	
5-07	Participate in Cornell Local Roads Program activities and training.	***Minutes — Town Board Meeting — 2013 — Regular Meeting Minutes 8/5/2013	1	Signed into Town Rule, Monday August 5th, 2013
5-08	Target training programs at highway officials, contractors, construction workers, inspectors, zoning and planning officials.	Minutes — Town Board Meeting — 2013 — 12-2-13 Regular Mtg #22 Minutes — Town Board Meeting — 2013 — Regular Meeting Minutes 8/5/2013	1	Training of road Officials through the Cornell Local Roads Program, Toxic Release Training
5-09	Culvert maintenance: routinely inspected, maintained and resized when necessary so that they will remain unobstructed during storm events. Blockages resulting from sedimentation, debris, excessive vegetation and structural failure should be identified and mitigated.	Design Standards and Required Improvements - § 327-22 Storm drainage. § 327-23 Drainage improvements.	2	Culverts are not regularly inspected. Culverts or other infrastructure issues are addressed when the Town becomes aware of an issue.

Section 6: Onsite Wastewater Treatment Systems

	Best Management Practices (BMPs)	Existing Means of Implementation (Law, Regulation, Practice, etc.)		
				A larger portion of town relies on private septic, and many systems are sand-systems. Town officials can tell systems are failing because of the smell in the summer time.
6-01	Conduct regular inspections of septic/onsite wastewater treatment systems (OWTS), at minimum durring transfer of property or within 1 year prior to transfer.	Practice: Approves local permits once local certificate is provided from County Health Dept.	1	Has cheater systems in town that drain right to the creeks/ditches.
6-02	Institute setback guidelines		0	
6-04	Target OWTS outreach programs at homeowners, contractors and developers		0	Defers to County Health Department
6-05	Require all properties with access to municipal sewer service to connect.	Sewers - § 267-7 Discontinuance of private system when public sewers become available. § 267-5 Connection to public sewer required where available.	2	
			79	

Final Score: 79 out of 190 Total Possible Points

44 Total BMPs addressed of possible 95 (46%)

Town of Colden Assessment Form

Completed November 2014

Section 1. Development

	Best Management Practices (BMPs)	Existing Means of Implementation (Law, Regulation, Practice, etc.)	Score	Meeting Notes, Follow-Up Questions & Comments
1-01	Identify retrofit opportunities for existing development - ex: retention/detention areas, stormwater ponds, construction of wastewater treatment systems to replace older septic systems…		0	
1-02	Encourage homeowners to place compost piles away from waterbodies and roadways.		0	
1-03	Encourage proper use and disposal of lawn and other household chemicals (res., com., indus., rec., uses etc.).		0	
1-04	Storm drain/curb stenciling/labeling program.		0	
1-05	Encourage volunteer programs.		0	
1-06	Encourage the use of indigenous plants in landscaping.		0	
1-07	Develop outreach programs targeted at water quality management. Target training for contractors, developers, inspectors and zoning and planning officials.		0	
1-08	Encourage proper control of pet wastes.		0	
1-09	Written details regarding enforcement of stormwater regulations & requirements - ex: responsibility, penalties, etc.		0	
1-10	Use of drainage districts.	**Regulation:** §52 Flood Damage Prevention	2	
1-11	Minimize the amount of land disturbed (including cut and fill) and the duration of disturbance durring construction.	**Regulation**: §106 Wind Energy conversion systems	2	
1-12	Preserve natural features and conform with the natural boundaries and alignment of waterbodies durring development. Account for topography and soil type to minimize erosion. Limit grades of access roads.	**Regulation**: §108-82: Preservation of Topsoil & Other Natural Features	2	
1-13	Retain and protect trees and other natural vegetation on and near disturbed sites. Require tree surveys and/or cutting plans.	**Regulation:** §108-82: Preservation of Topsoil & Other Natural Features	2	
1-14	Minimize the creation of impervious areas / encourage permeable surfaces.		0	

1-15	Maintain runoff rates, or control increased runoff caused by changed surface conditions to minimize flooding, erosion, sedimentation and pollutants entering waterbodies prior to, during and after construction.	**Regulation:** §52 Flood Damage Prevention	2	
1-16	Stabilize disturbed soils; redistribute topsoil for seeding and planting; use temporary vegetation, silt barriers, and mulching - to protect exposed and critical areas during development. Timeline for completion.	**Regulation:** §108-82 Zoning (Preservation of Topsoil & Other Natural Features)	2	
1-17	Use appropriate solid and hazardous waste generation and disposal practices including source controls and recycling.	**Regulation:** §102-7 Recycling (solid waste reduction)	2	List of hazardous materials on town website
1-18	Ensure proper operation and maintenance of runoff management facilities.		0	
1-19	Encourage cluster development/conservation subdivisions.	**Regulation**: §108-93 Zoning (Cluster Housing)	2	
1-20	Implement Federal/State Stormwater (SPDES) Phase II requirements including MS4 (when applicable) and Construction Permits as well as Municipal and Industrial Discharge Permits		0	
1-21	Discourage development in flood plain and/or development below base flood elevation	**Regulation**: §52 Flood Damage Prevention	2	

Section 2. Forestry & Agriculture: Forestry

	Best Management Practices (BMPs)	Existing Means of Implementation (Law, Regulation, Practice, etc.)		
2-01	Site restoration practices for forrestry sites. Consider potential water quality impacts when selecting silviculture system (yarding system, site preparation, pesticides employment, etc.)		0	Timber is allowed, but no apparent regulation online
2-02	Have specialists (geologist, soil scientist, geotechnical engineer, wildland hydrologist) review plans in high erosion hazard areas.		0	
2-03	Consider Harvesting practices and preplan harvest areas - ex: operation season, skid trails/access on stable soils, avoiding-steep gradients/multiple stream crossings/poor drainage areas, etc.		0	

Section 2. Forestry & Agriculture: Agriculture

2-04	Implementation of the Agricultural Environmental Management (AEM) program.		0	

2-05	Ensure Concentrated Animal Feeding Operations (CAFO) regulations and permits are being followed and Comprehensive Nutrient Management Plans are being used.		0
2-06	Implement barnyard runoff controls.		0
2-07	Discourage grazing in environmentally sensitive areas (e.g. up to creek banks…)		0
2-08	Use of agricultural protection such as agricultural districts, agricultural preservation ordinances and practices, right to farm laws, and agricultural and farmland protection plans	**Regulation**: §46 Farming, Right to Farm Community	2

Section 3. Waterways & Wetlands: Modified Waterways

Best Management Practices (BMPs)		Existing Means of Implementation (Law, Regulation, Practice, etc.)	
3-01	Control in stream sedimentation and/or clear debris. Schedule inspections of sediment control measures for maintenance/repair.		0
3-02	Establish riparian buffers.	**Regulation:** §108-22 Zoning (Special Permits)	2
3-03	Prevent animal wastes from entering waterbodies. Ex: animal control/animal waste disposal ordinances and/or practices.	**Regulation:** §46-1 Right to Farm	2
3-04	Protect stream banks - vegetative stabilization-maintain/add vegetation(before using structural measures); indirect nonstructural-ex: regulate nearby irrigation, rerouting overbank drainage; direct structural-ex: revetments and bulkheads; indirect structural-ex: deflecting channel flow dikes.		0
3-05	Use setbacks to minimize disturbance of land adjacent to stream banks and shorelines.		0
3-06	Prevent discharges to waterbodies in amounts that would adversely affect the taste, color or odor of the waters, or would impair the waters for their best usages.		0

Section 3. Waterways & Wetlands: Wetlands and Riparian Area Management and Restoration

3-07	Prioritize wetlands and riparian areas and their non-point source (nps) control potential.	**Regulation:** §108 Zoning	2

3-08	Identify wetlands and riparian areas with significant nps control potential especially when implementing nps management practices.		0
3-09	Include considerations/regulations to protect wetlands, ex: permitting, licensing, wetlands certification and non-regulatory nps pollution activities. Prevent adverse impacts to wetland functions that affect nps pollution abatement from hydrologic changes, sedimentation, or contaminant, ex: pretreatment practices: vegetated systems, detention/retention basins...	**Regulation:** §108 Zoning	2

Section 4. Marinas

Best Management Practices (BMPs)	Existing Means of Implementation (Law, Regulation, Practice, etc.)	

There are no navigable waterways or marinas in the Village.

Section 5. Roads, Bridges & Public Rights of Way

Best Management Practices (BMPs)		Existing Means of Implementation (Law, Regulation, Practice, etc.)	
5-01	Conduct road, bridge, and drainage/stormwater structure inspection and maintenance and procedures (de-icing material usage and storage, pot-hole repair, bridge washing, scraping and painting, cleaning catch basins, etc.) according to best management practices.		0
5-02	Conduct right-of-way activities (mowing, brush removal, pesticide and fertilizer use, etc.) - according to best management practices.		0
5-03	Develop and identify erosion/sediment control areas (examples include steep slopes, easily erodible soils, and nearby sensitive areas) and retrofit opportunities.		0
5-04	Incorporate alternatives to traditional de-icing practices including adjusting mix rates, using non-salt and non-sand alternatives. Store in a enclosed areas with impervious floor.		0
5-05	Target existing public holdings, such as parks, for removing unnecessary impervious surfaces.		0
5-06	Incorporate New York State Department of Transportation design and guidance documents, standard specifications, and procedural manuals (*Highway Design Manual, Environmental Procedures Manual,* Maintenance Guidelines, etc.) into local laws and operating procedures.		0

5-07	Participate in Cornell Local Roads Program activities and training.		0
5-08	Target training programs at highway officials, contractors, construction workers, inspectors, zoning and planning officials.		0
5-09	Culvert maintenance: routinely inspected, maintained and resized when necessary so that they will remain unobstructed during storm events. Blockages resulting from sedimentation, debris, excessive vegetation and structural failure should be identified and mitigated.	**Regulation**: §89 Streets & Sidewalks	2

Section 6: Onsite Wastewater Treatment Systems

Town is heavily dependent on private septic systems

Best Management Practices (BMPs)		Existing Means of Implementation (Law, Regulation, Practice, etc.)		
6-01	Conduct regular inspections of septic/onsite wastewater treatment systems (OWTS), at minimum durring transfer of property or within 1 year prior to transfer.		0	
6-02	Institute setback guidelines		0	
6-04	Target OWTS outreach programs at homeowners, contractors and developers		0	
6-05	Require all properties with access to municipal sewer service to connect.		0	Town wishes to increase public connection (Master plan)
			30	

Final Score: 30 out of 100 Total Possible Points

Village of Williamsville Assessment Form

Completed November 2014

Section 1. Development: Existing Development

	Best Management Practices (BMPs)	Existing Means of Implementation (Law, Regulation, Practice, etc.)	Score	Meeting Notes, Follow-Up Questions & Comments
1-01	Identify retrofit opportunities	**Practice:** Implementing Green Infrastructure on town owned properties & facilities.	1	
1-02	Identify habitat and natural conveyance system restoration	Mentioned in Comprehensive Plan **Practice:** Restoration of Lehigh walking path.	1	
1-03	Establish retention/detention areas	n/a		
1-04	Acquire additional land for locating treatment facilities	n/a		
1-05	Encourage homeowners to place cornpost piles awayfrom waterbodies and roadways	**Regulation:** §39.6 Accumulation. **Practice:** Garbage guideline pamphlet and enforcement.	2	Any compost or mulch pile shall be maintained in such fashion as not to attract rodents or cause the development of any odor or other hazard to the public health and safety.
1-06	Encourage proper use and disposal of lawn and other household chemicals	**Regulation:** §39.8 Hazardous Waste Practice: Garbage guideline pamphlet and enforcement.	2	
1-07	Institute turf management practices on golf courses and parks and recreation areas	**Practice:** Villiage practices turf management in Parks, doesn't fertilize, reseeds as appropriate and does not mow to the edge of waterfront parks.	1	
1-08	Undertake storm drain stenciling	**Practice:** Participating in WNY Stormwater Coalitions Medallion Program	1	Not currently done by the Village itself.
1-09	Encourage volunteer programs, such as adopt-a-highways and adopt-a-stream, etc.	**Practice: V**illage website has a volunteer page with links to get involved in various programs	1	
1-10	Include high percentage of indigenous plants in new landscaping on privately-owned properties (excluding arboretums, horticultural gardens, and sites requiring turf grasses)	**Practice:** Village does third itself and it is encouraged through Site Plan Approval process. Trees utilized in parks and ROW projects are certified by the state arborist as native species.	1	
1-11	Encourage water conservation	**Practice:** Encouraged in the Annual Water Quality Report. Village takes it's landscaping water from the creek	1	
1-12	Develop outreach programs targeted at specific problems related to water quality management & resource conservation	**Practice:** Educational brochures on Town website, WNY Stormwater Coalition, Erie County Water Quality Committee have programs.	1	
1-13	Encourage proper control of pet wastes	**Regulation:** §8.6 Animals. **Practice:** Encouraged in the Annual Water Quality Report.2	2	
1-14	Encourage continued operation of private storm water runoff control structures	**Regulation:** §112.28 Stormwater Management	2	
1-15	Discourage feeding of waterfowl	**Practice:** signs are various parks, Village also harrasses geese	1	
1-16	Discourage the introduction of exotic aquatic species (Eurasion water milfoil, zebra mussels, water chestnut, etc	n/a	0	
1-17	Encourage continuted (periodic) operation and maintenance of private septic disposal systems	**Regulation:** §81 Public Sewers - no illicit dumping	2	Citizens are to watch and report all hazardous spills.

1-18	Effective and consistent application and enforcement of stormwater requlations & requirements	**Regulation: §**112.28 Stormwater Management	2	
1-19	Require certification of existing on site septic systems for property transfers or builing expansions.	**Regulation:** §81 Public Sewers	2	Notification from Public
1-20	Require entire property (existing as well as proposed) to be included in stormwater analysis/calculation.	**Regulation:** §112.28 Stormwater Management	2	

Section 1. Development: New Development and Substantial Redevelopment

1-21	Minimize the amount of land disturbed and the duration of disturbance	**Regulation:** §112.28 Stormwater Management	2	
1-22	Preserve natural features and conform subtantially with the natural boundaries and alignment of waterbodies	**Regulation:** Site Plan review: (§112.23 F 2.a) §112.28 Stormwater Management	2	
1-23	Retain and protect trees and other natural vegetation on and near disturbed sites	**Regulation:** Required to be outlined in SWPPP (112.28) Mentioned in Landscaping (§57.4)	2	Village owns and protects all creeks
1-24	Account for topography and soil types in efforts to minimize erosion potential	**Regulation:** §112.28 Stormwater Management	2	
1-25	Maintain run-off rates similar to pre-construction levels	**Regulation:** Stormwater Management (§112.28 SWPPP C.5)	2	
1-26	Minimize the creation of impervious areas	**Practice:** Encouraged in site plan review	1	
1-27	Control increased run-off caused by changed surface conditions to minimize the danger of flooding, erosion, sedimentation and pollutants entering waterbodies prior to, during and after construction	**Regulation:** §112.28 Stormwater Management	2	
1-28	Use temporary vegetation and mulching to protect exposed and critical areas during development	**Regulation:** Must be outlined in SWPPP (§112.28)	2	
1-29	Redistribute topsoil within the boundaries of the disturbed land for seeding and planting	**Regulation:** §112.28 Stormwater Management	2	
1-30	Stabilize distrubed soils as soon as possible	**Regulation:** §112.28 Stormwater Management	2	
1-31	Minimize the use of cut & fill operations. Conform such operations to topography and soils to minimize erosion potential and adequately accommodate run-off	**Regulation:** §112.28 Stormwater Management	2	
1-32	Use appropriate solid and hazardous waste generation and disposal practices including source controls and recycling	**Regulation:** Recycling (§74.7)	2	
1-33	Encourage construction site manangement techniques which include the proper hanging and disposal of pesticides and petroleum products and containers	**Regulation:** §112.28 Stormwater Management	2	
1-34	Ensure proper operation and maintenance of run-off manangement facilities	**Regulation:** Stormwater Management (112.28 G(1)(a))	2	
1-35	Target training for contractors, inspectors, zoning and planning officials	**Practice:** Town staff participate in WNY Stormwater Coalition trainings.	2	There are updates all the time through contractors & MS4 annual conferences

1-36	Require tree surveys and/or cutting plans	**Regulation:** "Trees" §101	2	
1-37	Develop priority list for BMP's - use of vegetative low areas for retention/infiltration	Practice: replacing right-of-way with green infrastructure	1	
1-38	Encourage cluster development	n/a		Villiage is almost entirely built out, and never sees multi-lot subdivision applications, would have limited benefit from this regulation anyway.
1-39	Require connection to and/or extension of existing water & sewer if project is within 500 feet of existing infrastructure	**Regulation:** §81 Public Sewers	2	
1-40	Enact limits on driveway grades	n/a		Building code limits driveway square footage
1-41	For redevelopment, employ regulations that provide for technologically advanced (on and off) site wastewater treatment systems to optimize efficiences and address challenging sites	**Regulation:** §81 Public Sewers	2	
1-42	Implement Fed/State Stormwater (SPDES) Phase II requirements	**Regulation:** §112.28 Stormwater Management	2	

Section 2. Forestry & Agriculture: Forestry

Best Management Practices (BMPs)	Existing Means of Implementation (Law, Regulation, Practice, etc.)	
		There is no forestry or agriculture in the Village.

Section 2. Forestry & Agriculture: Agriculture

Section 3. Waterways & Wetlands: Modified Waterways

	Best Management Practices (BMPs)	Existing Means of Implementation (Law, Regulation, Practice, etc.)		
3-01	Develop an operation and maintenance program for existing modified streams that includes identification of opportunities and actions to restore habitat and the physical and chemical characteristicsof these streams	**Practice:** Villiage owns all its creeks and is activly restoring habitat.	2	
3-02	Improve stream quality by controlling instream sedimentation and selectively clearing debris	**Regulation:** Stormwater management (112.28 f.3)	2	
3-03	Establish or reestablish riparian buffers	**Practice:** Villiage establishes reparian buffers on all its creeks	2	Recent Glen Park repairs are an example
3-04	Prevent animal wastes from entering waterbodies	**Regulation:** §8.6 Animals	2	
3-05	Attempt vegetative stablization before undertaking structural measures	**Regulation:** §112.28 Stormwater Management	2	
3-06	Design and construct shore erosion control facilities in accordance with an erosion and sedimentation control plan, in areas where marsh creation and soil bioengineering and ineffective or where existing protection methods are being flanked or are failing	**Regulation:** §112.28 Stormwater Management	2	Town follows the NYS DEC Erosion and Sedimentation Control Manual for design of facilities.

3-07	Schedule the periodic maintenance of sediment control measures, and inspect and repair them as needed in conformance with established schedule	**Practice:** Villiage cleans the catch basin	2	Creek flows over hard bedrock
3-08	Protect streambanks through direct nonstructural means, such as new vegetation or protection of existing vegetation; direct structural means, such as revetments and bulkheads; indirect nonstructural means, such as regulating irrigation near stream-banks or outing overbank drainange; or indirect structural means, such as deflecting channel flow away from streambanks with dikes, board fences and gabions	**Regulation:** §112.28 Stormwater Management	2	
3-09	Use setbacks to minimize disturbance of land adjacent to streambanks and shorelines	n/a		Villiage owns the Creek and creekbanks
3-10	Prevent discharges to waterbodies in amounts that would adversely affect the taste, color or odor of the waters, or would impair the waters for their best usages	**Regulation:** Stormwater management (112,28/F.3)	2	

Section 3. Waterways & Wetlands: Wetlands and Riparian Area Management and Restoration

3-11	Consider wetlands and riparian areas and their nps control potential on a watershed scale	**Practice:**Villiage owns the waterway and is establishing a greenway.	1
3-12	Identify existing functions of those wetland and riparian areas with significant nps control potential when implementing nps management practices. Do not alter wetlands or riparian areas to improve their water quality at the expense of their other functions	**Practice**: Villiage worked with Army Corps of Engineers to keep more of the cooler water along the west branch of the creek along Island Park to improve and restore habitat.	2
3-13	Conduct permitting, licensing, certification and non-regulatory nps pollution activities in a manner that protects wetland functions	**Regulation:** §112.28 Stormwater Management	2
3-14	Special zoning considerations to protect wetland areas	**Regulation:** §112.28 Stormwater Management	2
3-15	Use appropriate pretreatment practices such as vegetated systems or detention or retention basins to prevent adverse impacts to wetland functions that affect nps pollution abatement from hydrologic changes, hydrologic changes, sedimentation or contaminants	**Regulation:** §112.28 Stormwater Management	2
3-16	All projects should require wetlands certification	**Regulation:** §112.28 Stormwater Management	2

Section 4. Marinas: Existing Marinas

Best Management Practices (BMPs)	Existing Means of Implementation (Law, Regulation, Practice, etc.)	
		There are no navigable waterways or marinas in the Village.

Section 4. Marinas: New Marinas

Section 4. Marinas: All Marinas (Existing & New)

Section 5. Roads and Bridges: Existing Roads & Bridges

	Best Management Practices (BMPs)	Existing Means of Implementation (Law, Regulation, Practice, etc.)	
5-01	Conduct road and bridge maintenance (deicing material usage and storage, pot-hole repair, bridge washing, scraping and painting, etc) according to best management practices	**Practice:** Village uses the NYS Highway Superintendent Roads and Water Quality Handbook.	2
5-02	Conduct right-of-way activities (mowing, brush removal, pesticide and fertilizer use, etc) according to best management practices	Practice: Village uses BMPs in all its parks and right-of-way activities	2
5-03	Include high percentage of indigenous plants in new landscaping on public-owned properties (excluding arboretums, horticultural gardens, and site requiring turf grasses)	**Practice:** Village uses plans developed by Landscape Architects to maximize indigenous plants.	2
5-04	Implement a regular inspection and maintenance plan of existing structures	**Practice:** Every spring the Village conducts visual inspection of streets for maintenance and repairs to be done that year.	2
5-05	Develop and identify erosion/sediment control areas (examples include steep slopes, easily erodible soils, and nearby sensitive areas) and retrofit opportunities	n/a	
5-06	Require percentage of roads to be tested with non-ice and non-sand de-icing.		0

Section 5. Roads and Bridges: New Roads & Bridges

5-07	Minimize the amount of land disturbed and the duration of disturbance	**Regulation:** §112.28 Stormwater Management	2
5-08	Preserve natural features and conform substantially with the natural boundaries and alignment of waterbodies	**Regulation:** §112.28 Stormwater Management	2
5-09	Retain and protect trees and other natural vegetation on and near disturbed sites	**Regulation:** §112.28 Stormwater Management	2
5-10	Retain additional runoff sites	**Regulation:** §112.28 Stormwater Management	2
5-11	Minimize the creation of impervious areas	**Regulation:** §112.28 Stormwater Management	2
5-12	Treat increased runoff caused by changed surface conditions to minimize the danger of flooding, erosion and pollutants entering waterbodies prior to, during and after construction	**Regulation:** §112.28 Stormwater Management	2

5-13	Use temporary vegetation and mulching to protect exposed and critical areas during development	**Regulation:** §112.28 Stormwater Management	2
5-14	Redistribute topsoil within the boundaries of the disturbed land for seeding and planting	**Regulation:** §112.28 Stormwater Management	2
5-15	Stabilize disturbed soils as soon as possible	**Regulation:** §112.28 Stormwater Management	2
5-16	Minimize the use of cut and fill operations. Conform such operations to topography and soils to minimize erosion potential and adequately accommodate runoff	**Regulation:** §112.28 Stormwater Management	2
5-17	Control erosion and sedimentation prior to, during and after site preparation and construction	**Regulation:** §112.28 Stormwater Management	2
5-18	Require long term stormwater management plan.	**Regulation:** §112.28 Stormwater Management	2
5-19	Require long term sedimentation control & maintenance.	**Regulation:** §112.28 Stormwater Management	2

Section 5. Roads and Bridges: All Roads & Bridges (Existing & New)

5-20	Target existing public holdings, such as parks, for removing unecessary impervious surfaces	Practice: Village is activly restoring right-of-way to green infrastructure.	2
5-21	Incorporate NYSDOT design and guidance documents, standard specifications, and procedural manuals (Highway Design Manual, Environmental Procedures Manual, Maintenance Guidelines, etc) into local laws and operating procedures	**Practice**: Village follows NYS DOT Highway Design Manuals & Guidelines. Neither are incorporated into local laws or operating procedures.	1
5-22	Ensure application of appropriate solid and hazardous waste generation and disposal practices including source controls and recycling	**Practice:** All hazmat materials are recycled or returned.	2
5-23	Ensure proper operation and maintenance of runoff management facilities	Practice: Village properly maintains MS4 infrastructure	2
5-24	Participate in Cornell Local Roads Program activities and training	**Practice:** Town staff regularly attends trainings.	2
5-25	Target training programs at highway officials, contractors, construction workers, inspectors, zoning and planning officials	**Practice:** Town staff regularly attends trainings.	2
5-26	Target training and outreach programs about the proper handling of materials, leakage and spill prevention and spill response procedures at maintenance staff and workers	**Practice:** Town staff is trained on Hazardous Waste Operations and Emergency Response (HAZWOPER).	2

Section 6: Onsite Wastewater Treatment Systems

	Best Management Practices (BMPs)	Existing Means of Implementation (Law, Regulation, Practice, etc.)	
6-01	Conduct regular inspections of OWTS at a frequency adequate to determine failure and undertake required maintenance	Practice: There are occasional inspections.	1
6-02	Institute setback guidelines	n/a	
6-03	Promulgate plumbing codes that require practices that are compatible with OWTS	n/a	
6-04	Target outreach programs at homeowners, contractors and developers		0
6-05	Inspection of all OWTS at property transfer or within 1 year prior to transfer	Practice: This is according to Erie County Health Codes	2
6-06	Require all properties within 500' of municipal service to connect.	Regulation: §81.5 Public Sewers require properties within 150' to conne	2
6-07	Set goals for effluent limits (nitrogen, phosphorous, BOD, etc)		0
			144

Final Score: 144 out of 156 Total Possible Points = 91%

Only a handful of properties within a small subdivision are connected to a septic system.

PHASE 2

Village of Springville

Town of Concord

Town of Holland

Town of Westfield

Town of Yorkshire

Village of Springville
Erie County, New York

BMP § - #	Best Management Practices (BMP)	Existing Means of Implementation (law, regulation, practice, etc)	Degree of Implementation (2-fully, 1-partially, 0-not at all, n/a-not applicable)
1: Development			
1-a: Existing Development			
1-01	Identify retrofit opportunities	Opportunities are identified for reducing illicit connections, but not for stormwater retrofit opportunities. Not sure if they retorfit buildings.	1
1-02	Identify habitat and natural conveyance system restoration opportunities	P: Rain gardens are used when possible.	2
1-03	Establish retention/detention areas	P: Stormwater regulations and Village law	2
1-04	Acquire additional land for locating treatment facilities	P: Anything bought by the Village will have rain gardens or GI in future. Sewer system at capacity	2
1-05	Encourage homeowners to place cornpost piles away from waterbodies and roadways	R: Illegal dumping laws on the books, but no mention of composting.	1
1-06	Encourage proper use and disposal of lawn and other household chemicals	R: Illegal dumping laws on the books, but no extra encouragement of attending HHW event for example.	1
1-07	Institute turf management practices on golf courses and parks and recreation areas	P: No chemicals in parks	2
1-08	Undertake storm drain stenciling	Mapped, but not labeled. No practice in place for stenciling.	0
1-09	Encourage volunteer programs, such as adopt-a-highways and adopt-a-stream, etc.	P: H.S. Seniors and Scouts clean up litter.	1
1-10	Include high percentage of indigenous plants in new landscaping on privately-owned properties (excluding arboretums, horticultural gardens, and sites requiring turf grasses)	Natural landscaping code needs work	0
1-11	Encourage water conservation	R: Nothing above New York Environmental Conservation Law § 15-0314	1
1-12	Develop outreach programs targeted at specific problems related to water quality management & resource conservation		0
1-13	Encourage proper control of pet wastes	Code §193-23 signs at parks	2
1-14	Encourage continued operation of private storm water runoff control structures	Code §205-3 (ch. 8 205-3 parking lots)	2

1-15	Discourage feeding of waterfowl		0
1-16	Discourage the introduction of exotic aquatic species (Eurasion water milfoil, zebra mussels, water chestnut, etc		0
1-17	Encourage continued (periodic) operation and maintenance of private septic disposal systems	Code §193-55	2
1-18	Effective and consistent application and enforcement of stormwater requlations & requirements	Code §205-3	2
1-19	Require certification of existing on site septic systems for property transfers or builing expansions.	Erie County Health Department handles this.	2
1-20	Require entire property (existing as well as proposed) to be included in stormwater analysis/calculation.	Code §205-3 If greater than 1 acre, NYS regs. followed. For under 1 acre, 10 % requirement for something?	2
	1-b: New Development and Substantial Redevelopment		
1-21	Minimize the amount of land disturbed and the duration of disturbance	There is a Planning Board practice to require buffers.	2
1-22	Preserve natural features and conform substantially with the natural boundaries and alignment of waterbodies	Village is already built up.	NA
1-23	Retain and protect trees and other natural vegetation on and near disturbed sites	NYS standards followed	2
1-24	Account for topography and soil type in efforts to minimize erosion potential	NYS standards followed	2
1-25	Maintain runoff rates similar to pre-construction levels	NYS standards followed	2
1-26	Minimize the creation of impervious areas	No restrictions on parking lot size. This could be recommendation to reduce paved areas. There is a restriction that buildings must be 30% of lot size or less.	0
1-27	Control increased runoff caused by changed surface conditions to minimize the danger of flooding, erosion, sedimentation and pollutants entering waterbodies prior to, during and after construction	NYS standards followed	2

1-28	Use temporary vegetation and mulching to protect exposed and critical areas during development	NYS standards followed	2
1-29	Redistribute topsoil within the boundaries of the disturbed land for seeding and planting	NYS standards followed, but they allow selling/shipping soil offsite.	2
1-30	Stabilize disturbed soils as soon as possible	NYS standards followed	2
1-31	Minimize the use of cut and fill operations. Conform such operations to topography and soils to minimize erosion potential and adequately accommodate runoff		NA
1-32	Use appropriate solid and hazardous waste generation and disposal practices including source controls and recycling	Code §193-52	2
1-33	Encourage construction site management techniques which include the proper handling and disposal of pesticides and petroleum products and containers	P:	2
1-34	Ensure proper operation and maintenance of runoff management facilities	P:	2
1-35	Target training for contractors, inspectors and zoning and planning officials.	P: Promote county and state trainings. Friday trainings with DPW workers.	2
1-36	Require tree surveys and/or cutting plans.	Recommend they conduct a tree survey and complete a tree maintenance plan. May use in practice depeding on site.	0
1-37	Develop priority list for BMP's - use of vegetative low areas for retention/infiltration.		0
1-38	Encourage cluster development.	P; 14 units become 20 on same land	2
1-39	Require connection to and/or extension of existing water & sewer if project is within 500 feet of existing infrastructure	Code §193-26, 27, 30	2
1-40	Enact limits on driveway grades.	P: Possibly in ch. 8, 205-3; L: NYS	2

1-41	For redevelopment, employ regulations that provide for technologically advanced (on and off) site wastewater treatment systems to optimize effeciencies and address "challenging" sites		0
1-42	Implement Federal/State Stormwater (SPDES) Phase II requirements	NYS standards	2
	Final Score: 57 out of 80 Total Possible Points		**57**
	Number of BMPs addressed (either fully or partially): 32 out of 40 BMPs (80%)		**31**

2: Forestry and Agriculture			
2-a: Forestry			
2-01	Consider potential water quality impacts when selecting silviculture system (yarding system, site preparation, pesticides employment, etc)	Tree Ordinance recommended in Comprehensive Plan. They discourage trees in the right-of-way. Only offer 3 choices from NYPA and will replant from right-of-way to private property in many cases.	1
2-02	Consider harvesting practices	N/A	NA
2-03	Seasonal preference for logging operations	N/A	NA
2-04	Have specialists (geologist, soil scientist, geotechnical engineer, wildland hydrologist) review plans in high erosion hazard areas	N/A	NA
2-05	Preplan harvest areas, skid trails, and access so as to be on stable soils, avoiding steep gradients, multiple stream crossings, poor drainage areas, etc.	N/A	NA
2-06	Limit grades of access roads.	N/A	NA
2-07	Require stabilization of roads/drives to forestry site.	N/A	NA
2-08	Employ natural topography and contour for design of road network	N/A	NA
2-09	Require stormwater controls for increased runoff from ground cover modification	N/A	NA
2-10	Consider site restoration	N/A	NA
2-b: Agriculture			

2-11	Use Agricultural Environmental Management (AEM)	No Ag. Districts. Only a hobby horse farm and Belscher Farm. Recommned requiring plan for farms within village limits	0
2-12	Require farms seeking agricultural value assessment to participate in AEM	They do not.	0
	Final Score: 1 out of 2 Total Possible Points		**1**
	Number of BMPs addressed (either fully or partially): 1 out of 1 BMPs (100%)		**1**

3: Waterways and Wetlands			
3-a: Modified Waterways- Code §200-6(d)			
3-01	Develop an operation and maintenance program for existing modified streams that includes identification of opportunities and actions to restore habitat and the physical and chemical characteristics of these streams.	P: Moving forward they will restore habitat as shown in Factory Street Park project	2
3-02	Improve stream quality by controlling instream sedimentation and selectively clearing debris	P:	2
3-03	Establish or reestablish riparian buffers	P:	2
3-04	Prevent animal wastes from entering waterbodies	Code §193-24 See pet waste question 1-13	2
3-05	Attempt vegetative stablization before undertaking structural measures		0
3-06	Design and construct shore erosion control facilities, in accordance with an erosion and sedimentation control plan, in areas where marsh creation and soil bioengineering are ineffective or where existing protection methods are being flanked or are falling	NA	NA
3-07	Schedule the periodic maintenance of sediment control measures, and inspect and repair them as needed in conformance with established schedule.	P:	2

3-08	Protect streambanks through direct nonstructural means, such as new vegetation or protection of existing vegetation; direct structural means, such as revetments and bulkheads; indirect nonstructural means, such as regulating irrigation near streambanks or	P:	2
3-09	Use setbacks to minimize disturbance of land adjacent to streambanks and shorelines	Only floodplain setbacks exist and refer only to sheds, etc.	0
3-10	Prevent discharges to waterbodies in amounts that would adversely affect the taste, color or odor of the waters, or would impair the waters for their best usages	Code §193-24	2
	3-b: Wetlands and Riparian Area Management and Restoration		
3-11	Consider wetlands and riparian areas and their non-point source (nps) control potential on a watershed scale	This would be a good recommendation to enact riparian areas along streams within the Village where possible.	0
3-12	Identify existing functions of those wetland and riparian areas with significant nps control potential when implementing nps management practices. Do not alter wetlands or riparian areas to improve their water quality at the expense of their other functi		0
3-13	Conduct permitting, licensing, certification and nonregulatory nps pollution activities in a manner that protects wetland functions		0
3-14	Special zoning considerations to protect wetland areas		0

3-15	Use appropriate pretreatment practices such as vegetated systems or detention or retention basins to prevent adverse impacts to wetland functions that affect nps pollution abatement from hydrologic changes, sedimentation, or contaminants		0
3-16	All projects should require wetlands cerfitication.		0
	Final Score: 14 out of 30 Total Possible Points		**14**
	Number of BMPs addressed (either fully or partially): 7 out of 16 BMPs (47%)		**7**

4: Marinas			
	4-a: Existing Marinas		
4-01	Clean maintenance areas regularly preferably by vacuuming to remove trash, sandings, paint chips, etc.	N/A	N/A
4-02	Prevent residue from being carried into surface waters by performing abrasive blasting within plastic tarp enclosures on windless days or within spray booths	N/A	N/A
4-03	Provide proper disposal/recycling facilities to marina patrons, preferably covered receptacles	N/A	N/A
4-04	Establish fish cleaning areas, and implement rules governing the conduct of fish cleaning operations	N/A	N/A
4-05	Educate boaters on the importance of proper fish cleaning practices	N/A	N/A
4-06	Implement fish composting where appropriate	N/A	N/A
4-07	Store materials in areas impervious to the type of material stored. Build curbs, berms, or other barriers around the areas to contain spills	N/A	N/A
4-08	Use separate, clearly labeled containers for the disposal of oil, gasoline, antifreeze, diesel, kerosene, and mineral spirits	N/A	N/A

4-09	Target outreach programs about proper disposal at marina patrons through the use of signs, mailings, and other means	N/A	N/A
4-10	Promote the use in bilges of oil-absorbing materials, and replace them as necessary, preferably recycling, or disposing of them in accordance with petroleum disposal regulation	N/A	N/A
4-11	Use a container under the air vent while refueling inboard tanks if the tank vents are not equipped with a fuel/air separator	N/A	N/A
4-12	Prohibit in-water hull scraping or any underwater process to remove paint from boat hulls	N/A	N/A
4-13	Wash the boat hull above the waterline by hand, using only necessary amounts of detergents and cleaning compounds that are phosphate-free and biodegradable	N/A	N/A
4-14	Prohibit the use of detergents and cleaning compounds containing ammonia, sodium hypochloride, chlorinated solvents, petroleum distillates, alcohol, or lye	N/A	N/A
4-15	Educate individuals about the importance of trash reduction and recycling through: interpretive and instructional signs placed at marinas and boat-launching sites, pamphlets or flyers, newsletters, inserts in billings, meetings and presentations, workshop	N/A	N/A
4-16	Inspect pumpout facilities regularly, and repair them, if practical, under a maintenance contract with a competent contractor	N/A	N/A

4-17	Add language to slip lease agreements mandating the use of pumpout facilities and specifying penalties for failure to comply	N/A	N/A
4-18	Place dye tablets in holding tanks to identify and discourage illegal disposal	N/A	N/A
4-19	Prohibit motorized vessels from areas (define areas) that contain important shallow-water habitats	N/A	N/A
4-20	Establish and enforce no-wake zones to decrease turbidity and reduce erosion potential from boat wakes	N/A	N/A
	4-b: New Marinas		
4-21	Design and site marinas to maximize exchange of marina basin water. Limit basins and channels with square corners that tend to trap flotsam, and place dock structures in a manner that promotes circulation	N/A	N/A
4-22	Perform a preconstruction assessment, which includes a water quality monitoring and modeling methodology, to predict post-construction water quality conditions	N/A	N/A
4-23	Monitor water quality during construction to protect ambient water quality to the maximum practicable extent	N/A	N/A
4-24	Develop a marina siting policy to discourge development in areas containing important habitat designated by local, State, or federal agencies	N/A	N/A
4-25	Conduct surveys and employ rapid bioassessment techniques to assess historic habitat function (e.g. spawning, nursery, and migration pathways) and potential impacts to these and other biological functions and resources	N/A	N/A

4-26	Encourage the redevelopment or expansion of existing marina facilities that have demonstrated minimal environmental impacts instead of developing new marina facilities	N/A	N/A
4-27	Consider alternative sites with minimal potential environmental impacts when the use of previously disturbed sites is not feasible	N/A	N/A
4-28	Minimize disturbance of indigenous vegetation in the riparian area	N/A	N/A
4-29	Use soil bioengineering or plants, wherever conditions allow, to restore damaged habitat along shorelines and streambanks	N/A	N/A
4-30	Use properly designed and constructed engineering practices that minimize shoreline disturbance in areas where soil bioengineering and plants are ineffective	N/A	N/A
4-31	Use appropriate shore erosion control methods, such as returns or return walls, in areas where existing protection methods are being flanked or are falling	N/A	N/A
4-32	Plan and design all steambank, shoreline, and navigation structures so that they do not transfer erosion energy to or otherwise cause visible loss of surrounding streambanks or shorelines	N/A	N/A
4-33	Locate and design fuel stations so that spills can be contained in a limited area	N/A	N/A
4-34	Design and install underground fuel storage tanks according to State regulations, including the provision of detection systems and automatic fuel tank and pump leak shut-offs	N/A	N/A

4-35	Provide aboveground fuel tanks and fueling areas with a curbed or diked storage area to handle containment volumes meeting State (and local) codes and inspect regularly	N/A	N/A
4-36	Use preferred pumpout systems: fixed-point, portable, dedicated slipside, and pumpout boats	N/A	N/A
4-37	Design onsite wastewater treatment systems to specifically handle waste from vessels	N/A	N/A
4-38	Post pumpout facility location and regulations at the marina. Charge fees that encourage rather than discourage facility use. Consider offsetting the cost of maintaining pumpout facilities by fuel sales where these facilities are conveniently located in	N/A	N/A
	4-c: Marinas, Existing and New		
4-39	Restrict boat repair and maintenance activities to clearly marked designated areas to prevent debris from falling into the water and preventing invasive species	N/A	N/A
4-40	Secure all fueling facilities and storage areas with appropraite shut-off devices and security locks and inspect regularly	N/A	N/A
4-41	Design fueling stations with spill containment equipment that is stored in a clearly marked location, accessible to work and storage areas. Post emergency phone numbers in a prominent location	N/A	N/A
4-42	Design a spill contingency plan	N/A	N/A

4-43	Inspect and maintain all containment berms or devices in accordance with State regulations. Investigate immediately signs of leakage or spillage, and undertake cleanup in accordance with applicable best management practices	N/A	N/A
4-44	Have a trained operator present and prepared to respond to accidental spills	N/A	N/A
4-45	Maintain daily inventory records to identify abnormal loss or gain of liquid	N/A	N/A
4-46	Prohibit the cleaning of hoses, fittings, pumps, and other accessory equipment on piers, docks or adjacent upland to prevent runoff into the marina basin or other surface or groundwater	N/A	N/A
4-47	Create and/or maintain a dedicated fund for maintenance in the case of government-owned facilities	N/A	N/A
4-48	Restrict the operation of pumpout facilities to trained marina personnel only	N/A	N/A
	Final Score: 0 out of 0 Total Possible Points		**0**
	Number of BMPs addressed (either fully or partially): 0 out of 0 BMPs (0%)		**0**

5: Roads and Bridges			
	5-a: New Roads and Bridges		
5-01	Conduct road and bridge maintenance (de-icing material usage and storage, pot-hole repair, bridge washing, scraping and painting, etc) according to best management practices	P; Regular training	2
5-02	Conduct right-of-way activities (mowing, brush removal, pesticide and fertilizer use, etc) - according to best management practices	P: Regular training	2

5-03	Include high percentage of indigenous plants in new landscaping on public-owned properties (excluding arboretums, horticultural gardens, and site requiring turf grasses)	This could be a recommendation	0
5-04	Implement a regular inspection and maintenance plan of existing structures	P: Storm sewers cleaned twice/year	2
5-05	Develop and identify erosion/sediment control areas (examples include steep slopes, easily erodible soils, and nearby sensitive areas) and retrofit opportunities	P:	2
5-06	Require percentage of roads to be tested with non-salt and non-sand de-icing.		0
	5-b: Existing Roads and Bridges		
5-07	Minimize the amount of land disturbed and the duration of disturbance	P:	2
5-08	Preserve natural features and conform substantially with the natural boundaries and alignment of waterbodies	Village already built up along waterways	NA
5-09	Retain and protect trees and other natural vegetation on and near disturbed sites	P: They take out right-of way trees, but follow NYS standards	0
5-10	Retain additional runoff sites	NYS Standards	2
5-11	Minimize the creation of impervious areas	No restrictions on parking lot size. This could be recommendation to reduce paved areas. There is a restriction that buildings must be 30% of lot size or less.	0
5-12	Treat increased runoff caused by changed surface conditions to minimize the danger of flooding, erosion and pollutants entering waterbodies prior to, during and after construction	NYS standards followed	2
5-13	Use temporary vegetation and mulching to protect exposed and critical areas during development	NYS standards followed	2

5-14	Redistribute topsoil within the boundaries of the disturbed land for seeding and planting	NYS standards followed, but they allow selling/shipping soil offsite.	2
5-15	Stabilize disturbed soils as soon as possible	NYS standards followed	2
5-16	Minimize the use of cut and fill operations. Conform such operations to topography and soils to minimize erosion potential and adequately accommodate runoff		NA
5-17	Control erosion and sedimentation prior to, during and after site preparation and construction	P	1
5-18	Require long term stormwater management plan.	P	1
5-19	Require long term sedimentation control & maintenance.	P	1
	5-c: Existing and New Roads and Bridges		
5-20	Target existing public holdings, such as parks, for removing unecessary impervious surfaces	P: Factory Street Park is example and Zoning code encourages shared driveways to reduce impervious surface.	2
5-21	Incorporate New York State Department of Transportation design and guidance documents, standard specifications, and procedural manuals (Highway Design Manual, Environmental Procedures Manual, Maintenance Guidelines, etc) into local laws and operating proc	P; Ch 200	2
5-22	Ensure application of appropriate solid and hazardous waste generation and disposal practices including source controls and recycling	NYS standards followed	2
5-23	Ensure proper operation and maintenance of runoff management facilities	P:	2
5-24	Participate in Cornell Local Roads Program activities and training	P:	2

5-25	Target training programs at highway officials, contractors, construction workers, inspectors, zoning and planning officials	P:	1
5-26	Target training and outreach programs about the proper handling of materials, leakage and spill prevention and spill response procedures at maintenance staff and workers	P: Watch videos on Fridays; PESH	2
	Final Score: 36 out of 48 Total Possible Points		**36**
	Number of BMPs addressed (either fully or partially): 20 out of 24 BMPs (83%)		**20**

6: Onsite Wastewater Treatment Systems			
6-01	Conduct regular inspections of OWTS at a frequency adequate to determine failure and undertake required maintenance	NYS standards as regulated by DEC	2
6-02	Institute setback guidelines	NYS standards as regulated by DEC	2
6-03	Promulgate plumbing codes that require practices that are compatible with OWTS	NYS standards as regulated by DEC	2
6-04	Target outreach programs at homeowners, contractors and developers	NYS standards as regulated by DEC	2
6-05	Inspection of all OWTS at property transfer or within 1 year prior to transfer	NYS standards as regulated by DEC	2
6-06	Require all properties within 500' of municipal service to connect.	Code §193-26,27,30 NYS standards as regulated by DEC	2
6-07	Set goals for effluent limits (nitrogen, phosphorous, BOD, etc)	NYS standards as regulated by DEC	2
	Final Score: 14 out of 14 Total Possible Points		**14**
	Number of BMPs addressed (either fully or partially): 7 out of 7 BMPs (100%)		**7**

	Overall Assessment Score: 122 out of 178 Total Possible Points	**122**
	Number of BMPs addressed (either fully or partially): 66 out of 87 BMPs (76%)	**66**

Town of Concord
Erie County, New York

BMP § - #	Best Management Practices (BMP)	Existing Means of Implementation (law, regulation, practice, etc)	Degree of Implementation (2-fully, 1-partially, 0-not at all, n/a-not applicable)
1: Development			
1-a: Existing Development			
1-01	Identify retrofit opportunities	P: 1999 Joint Comprehensive Plan encourages and identifies potential retrofitting options.	2
1-02	Identify habitat and natural conveyance system restoration opportunities		0
1-03	Establish retention/detention areas	P: Required on commercial property	1
1-04	Acquire additional land for locating treatment facilities	JCP: Sewer systems appear to be at capacity; expansion planned. 2 small areas: Kissing Bridge & Crane Ridge Subdivision. Only for new subdivisions; most of the town uses septic systems	1
1-05	Encourage homeowners to place compost piles away from waterbodies and roadways		0
1-06	Encourage proper use and disposal of lawn and other household chemicals	P; Advocate for southtowns HHW events by county.	1
1-07	Institute turf management practices on golf courses and parks and recreation areas	private courses only	0
1-08	Undertake storm drain stenciling	N/A	
1-09	Encourage volunteer programs, such as adopt-a-highways and adopt-a-stream, etc.	Some state and private programs operate in the Town, but the Town does not directly manage any	0
1-10	Include high percentage of indigenous plants in new landscaping on privately-owned properties (excluding arboretums, horticultural gardens, and sites requiring turf grasses)		0
1-11	Encourage water conservation		0
1-12	Develop outreach programs targeted at specific problems related to water quality management & resource conservation		0
1-13	Encourage proper control of pet wastes		0
1-14	Encourage continued operation of private storm water runoff control structures		0
1-15	Discourage feeding of waterfowl		0
1-16	Discourage the introduction of exotic aquatic species (Eurasion water milfoil, zebra mussels, water chestnut, etc		0
1-17	Encourage continued (periodic) operation and maintenance of private septic disposal systems	L: ECDOH, §114-21	2

1-18	Effective and consistent application and enforcement of stormwater requlations & requirements	R: §114-9 Prohibits sewer to stormwater connections	2	
1-19	Require certification of existing on site septic systems for property transfers or builing expansions.	L: Erie County Health Department	2	
1-20	Require entire property (existing as well as proposed) to be included in stormwater analysis/calculation.	R: DEC regulation (for developments affecting more than 1 acre)	2	
1-b: New Development and Substantial Redevelopment				
1-21	Minimize the amount of land disturbed and the duration of disturbance	No	0	
1-22	Preserve natural features and conform substantially with the natural boundaries and alignment of waterbodies	R: §129-12 B(5)(c)	2	
1-23	Retain and protect trees and other natural vegetation on and near disturbed sites	R: §129-12 B(5)(b); §129-13; JCP p.35 mentions maintaining street trees	2	
1-24	Account for topography and soil type in efforts to minimize erosion potential	JCP: p. 17; P	1	
1-25	Maintain runoff rates similar to pre-construction levels		0	
1-26	Minimize the creation of impervious areas	P: parking	1	
1-27	Control increased runoff caused by changed surface conditions to minimize the danger of flooding, erosion, sedimentation and pollutants entering waterbodies prior to, during and after construction	L: NYS	1	
1-28	Use temporary vegetation and mulching to protect exposed and critical areas during development	L: NYS	1	
1-29	Redistribute topsoil within the boundaries of the disturbed land for seeding and planting	§129-12B(5)(a)	1	
1-30	Stabilize disturbed soils as soon as possible	L: NYS	1	
1-31	Minimize the use of cut and fill operations. Conform such operations to topography and soils to minimize erosion potential and adequately accommodate runoff	L: NYS	1	
1-32	Use appropriate solid and hazardous waste generation and disposal practices including source controls and recycling	§109-2: recycling mandatory	2	
1-33	Encourage construction site management techniques which include the proper handling and disposal of pesticides and petroleum products and containers	L: NYS	1	
1-34	Ensure proper operation and maintenance of runoff management facilities	L: NYS	2	
1-35	Target training for contractors, inspectors and zoning and planning officials.	DOS/EC Local Government Training for municipal officials, but not contractors working in the town.	2	
1-36	Require tree surveys and/or cutting plans.	P; Not required in the past.	1	Recommend as part of site plan review

1-37	Develop priority list for BMP's - use of vegetative low areas for retention/infiltration.		0
1-38	Encourage cluster development.	§150-61 (allowed, not necessarily encouraged)	1
1-39	Require connection to and/or extension of existing water & sewer if project is within 500 feet of existing infrastructure	L: Erie County, if system capacity allows. Required within 100' of property if there are sewers	2
1-40	Enact limits on driveway grades.	L: NYS for state roads	1
1-41	For redevelopment, employ regulations that provide for technologically advanced (on and off) site wastewater treatment systems to optimize effeciencies and address "challenging" sites	§114-23	1
1-42	Implement Federal/State Stormwater (SPDES) Phase II requirements		2
	Final Score: 39 out of 82 Total Possible Points		**39**
	Number of BMPs addressed (either fully or partially): 27 out of 41 BMPs (66%)		**27**

2: Forestry and Agriculture				
2-a: Forestry				
2-01	Consider potential water quality impacts when selecting silviculture system (yarding system, site preparation, pesticides employment, etc)		0	
2-02	Consider harvesting practices		0	
2-03	Seasonal preference for logging operations		0	
2-04	Have specialists (geologist, soil scientist, geotechnical engineer, wildland hydrologist) review plans in high erosion hazard areas		0	
2-05	Preplan harvest areas, skid trails, and access so as to be on stable soils, avoiding steep gradients, multiple stream crossings, poor drainage areas, etc.		0	
2-06	Limit grades of access roads.		0	
2-07	Require stabilization of roads/drives to forestry site.		0	
2-08	Employ natural topography and contour for design of road network		0	
2-09	Require stormwater controls for increased runoff from ground cover modification		0	Stormwater channeling is required in developments
2-10	Consider site restoration		0	Restoring disturbed sites is limited to grading, loaming and seeding (grass fields)
2-b: Agriculture				
2-11	Use Agricultural Environmental Management (AEM)	No	0	

2-12	Require farms seeking agricultural value assessment to participate in AEM	No	0	RECOMMEND
	Final Score: 0 out of 4 Total Possible Points		**0**	
	Number of BMPs addressed (either fully or partially): 0 out of 2 BMPs (0%)		**0**	

3: Waterways and Wetlands				
3-a: Modified Waterways- None				
3-01	Develop an operation and maintenance program for existing modified streams that includes identification of opportunities and actions to restore habitat and the physical and chemical characteristics of these streams.	N/A	N/A	
3-02	Improve stream quality by controlling instream sedimentation and selectively clearing debris	Town clears streams only when necessary. No sedimentation control	1	
3-03	Establish or reestablish riparian buffers	No	0	
3-04	Prevent animal wastes from entering waterbodies	No	0	
3-05	Attempt vegetative stablization before undertaking structural measures	No	0	
3-06	Design and construct shore erosion control facilities, in accordance with an erosion and sedimentation control plan, in areas where marsh creation and soil bioengineering are ineffective or where existing protection methods are being flanked or are falling	Town engineer or Soil & Water Conservation District assists with this when needed.	2	
3-07	Schedule the periodic maintenance of sediment control measures, and inspect and repair them as needed in conformance with established schedule.	P: Ditches	1	Could recommend that ditches are vegetated to reduce flow velocity and erosion
3-08	Protect streambanks through direct nonstructural means, such as new vegetation or protection of existing vegetation; direct structural means, such as revetments and bulkheads; indirect nonstructural means, such as regulating irrigation near streambanks.	No	0	
3-09	Use setbacks to minimize disturbance of land adjacent to streambanks and shorelines	P: Site Plan review by Planning Board	1	Recommend requiring 100' setback from stream and riparian buffer.
3-10	Prevent discharges to waterbodies in amounts that would adversely affect the taste, color or odor of the waters, or would impair the waters for their best usages	§114-11	2	
3-b: Wetlands and Riparian Area Management and Restoration				
3-11	Consider wetlands and riparian areas and their non-point source (nps) control potential on a watershed scale	L: NYS; P: Such as headwaters of Spring Brook	1	

3-12	Identify existing functions of those wetland and riparian areas with significant nps control potential when implementing nps management practices. Do not alter wetlands or riparian areas to improve their water quality at the expense of their other function	No	0
3-13	Conduct permitting, licensing, certification and nonregulatory nps pollution activities in a manner that protects wetland functions	L: NYS, DEC	2
3-14	Special zoning considerations to protect wetland areas	No	0
3-15	Use appropriate pretreatment practices such as vegetated systems or detention or retention basins to prevent adverse impacts to wetland functions that affect nps pollution abatement from hydrologic changes, sedimentation, or contaminants	No	0
3-16	All projects should require wetlands cerfitication.	No	0
	Final Score: 9 out of 30 Total Possible Points		**10**
	Number of BMPs addressed (either fully or partially): 7 out of 15 BMPs (47%)		**7**

4: Marinas			
	4-a: Existing Marinas		
4-01	Clean maintenance areas regularly preferably by vacuuming to remove trash, sandings, paint chips, etc.	N/A	N/A
4-02	Prevent residue from being carried into surface waters by performing abrasive blasting within plastic tarp enclosures on windless days or within spray booths	N/A	N/A
4-03	Provide proper disposal/recycling facilities to marina patrons, preferably covered receptacles	N/A	N/A
4-04	Establish fish cleaning areas, and implement rules governing the conduct of fish cleaning operations	N/A	N/A
4-05	Educate boaters on the importance of proper fish cleaning practices	N/A	N/A
4-06	Implement fish composting where appropriate	N/A	N/A
4-07	Store materials in areas impervious to the type of material stored. Build curbs, berms, or other barriers around the areas to contain spills	N/A	N/A
4-08	Use separate, clearly labeled containers for the disposal of oil, gasoline, antifreeze, diesel, kerosene, and mineral spirits	N/A	N/A

4-09	Target outreach programs about proper disposal at marina patrons through the use of signs, mailings, and other means	N/A	N/A
4-10	Promote the use in bilges of oil-absorbing materials, and replace them as necessary, preferably recycling, or disposing of them in accordance with petroleum disposal regulation	N/A	N/A
4-11	Use a container under the air vent while refueling inboard tanks if the tank vents are not equipped with a fuel/air separator	N/A	N/A
4-12	Prohibit in-water hull scraping or any underwater process to remove paint from boat hulls	N/A	N/A
4-13	Wash the boat hull above the waterline by hand, using only necessary amounts of detergents and cleaning compounds that are phosphate-free and biodegradable	N/A	N/A
4-14	Prohibit the use of detergents and cleaning compounds containing ammonia, sodium hypochloride, chlorinated solvents, petroleum distillates, alcohol, or lye	N/A	N/A
4-15	Educate individuals about the importance of trash reduction and recycling through: interpretive and instructional signs placed at marinas and boat-launching sites, pamphlets or flyers, newsletters, inserts in billings, meetings and presentations, workshop	N/A	N/A
4-16	Inspect pumpout facilities regularly, and repair them, if practical, under a maintenance contract with a competent contractor	N/A	N/A
4-17	Add language to slip lease agreements mandating the use of pumpout facilities and specifying penalties for failure to comply	N/A	N/A
4-18	Place dye tablets in holding tanks to identify and discourage illegal disposal	N/A	N/A
4-19	Prohibit motorized vessels from areas (define areas) that contain important shallow-water habitats	N/A	N/A
4-20	Establish and enforce no-wake zones to decrease turbidity and reduce erosion potential from boat wakes	N/A	N/A
4-b: New Marinas			

4-21	Design and site marinas to maximize exchange of marina basin water. Limit basins and channels with square corners that tend to trap flotsam, and place dock structures in a manner that promotes circulation	N/A	N/A
4-22	Perform a preconstruction assessment, which includes a water quality monitoring and modeling methodology, to predict post-construction water quality conditions	N/A	N/A
4-23	Monitor water quality during construction to protect ambient water quality to the maximum practicable extent	N/A	N/A
4-24	Develop a marina siting policy to discourge development in areas containing important habitat designated by local, State, or federal agencies	N/A	N/A
4-25	Conduct surveys and employ rapid bioassessment techniques to assess historic habitat function (e.g. spawning, nursery, and migration pathways) and potential impacts to these and other biological functions and resources	N/A	N/A
4-26	Encourage the redevelopment or expansion of existing marina facilities that have demonstrated minimal environmental impacts instead of developing new marina facilities	N/A	N/A
4-27	Consider alternative sites with minimal potential environmental impacts when the use of previously disturbed sites is not feasible	N/A	N/A
4-28	Minimize disturbance of indigenous vegetation in the riparian area	N/A	N/A
4-29	Use soil bioengineering or plants, wherever conditions allow, to restore damaged habitat along shorelines and streambanks	N/A	N/A
4-30	Use properly designed and constructed engineering practices that minimize shoreline disturbance in areas where soil bioengineering and plants are ineffective	N/A	N/A
4-31	Use appropriate shore erosion control methods, such as returns or return walls, in areas where existing protection methods are being flanked or are falling	N/A	N/A
4-32	Plan and design all steambank, shoreline, and navigation structures so that they do not transfer erosion energy to or otherwise cause visible loss of surrounding streambanks or shorelines	N/A	N/A
4-33	Locate and design fuel stations so that spills can be contained in a limited area	N/A	N/A

4-34	Design and install underground fuel storage tanks according to State regulations, including the provision of detection systems and automatic fuel tank and pump leak shut-offs	N/A	N/A
4-35	Provide aboveground fuel tanks and fueling areas with a curbed or diked storage area to handle containment volumes meeting State (and local) codes and inspect regularly	N/A	N/A
4-36	Use preferred pumpout systems: fixed-point, portable, dedicated slipside, and pumpout boats	N/A	N/A
4-37	Design onsite wastewater treatment systems to specifically handle waste from vessels	N/A	N/A
4-38	Post pumpout facility location and regulations at the marina. Charge fees that encourage rather than discourage facility use. Consider offsetting the cost of maintaining pumpout facilities by fuel sales where these facilities are conveniently located in	N/A	N/A
4-c: Marinas, Existing and New			
4-39	Restrict boat repair and maintenance activities to clearly marked designated areas to prevent debris from falling into the water and preventing invasive species	N/A	N/A
4-40	Secure all fueling facilities and storage areas with appropraite shut-off devices and security locks and inspect regularly	N/A	N/A
4-41	Design fueling stations with spill containment equipment that is stored in a clearly marked location, accessible to work and storage areas. Post emergency phone numbers in a prominent location	N/A	N/A
4-42	Design a spill contingency plan	N/A	N/A
4-43	Inspect and maintain all containment berms or devices in accordance with State regulations. Investigate immediately signs of leakage or spillage, and undertake cleanup in accordance with applicable best management practices	N/A	N/A
4-44	Have a trained operator present and prepared to respond to accidental spills	N/A	N/A
4-45	Maintain daily inventory records to identify abnormal loss or gain of liquid	N/A	N/A

4-46	Prohibit the cleaning of hoses, fittings, pumps, and other accessory equipment on piers, docks or adjacent upland to prevent runoff into the marina basin or other surface or groundwater	N/A	N/A
4-47	Create and/or maintain a dedicated fund for maintenance in the case of government-owned facilities	N/A	N/A
4-48	Restrict the operation of pumpout facilities to trained marina personnel only	N/A	N/A
	Final Score: 0 out of 0 Total Possible Points		**0**
	Number of BMPs addressed (either fully or partially): # out of # BMPs (#%)		**0**

5: Roads and Bridges			
5-a: New Roads and Bridges			
5-01	Conduct road and bridge maintenance (de-icing material usage and storage, pot-hole repair, bridge washing, scraping and painting, etc) according to best management practices	P	2
5-02	Conduct right-of-way activities (mowing, brush removal, pesticide and fertilizer use, etc) - according to best management practices	P	2
5-03	Include high percentage of indigenous plants in new landscaping on public-owned properties (excluding arboretums, horticultural gardens, and site requiring turf grasses)	No	0
5-04	Implement a regular inspection and maintenance plan of existing structures	P	2
5-05	Develop and identify erosion/sediment control areas (examples include steep slopes, easily erodible soils, and nearby sensitive areas) and retrofit opportunities	P	2
5-06	Require percentage of roads to be tested with non-salt and non-sand de-icing.	No, not feasible in climate	0
5-b: Existing Roads and Bridges			
5-07	Minimize the amount of land disturbed and the duration of disturbance	P	2
5-08	Preserve natural features and conform substantially with the natural boundaries and alignment of waterbodies	P	2
5-09	Retain and protect trees and other natural vegetation on and near disturbed sites	JCP: p.35 mentions maintaining street trees. P	2
5-10	Retain additional runoff sites	P	2

5-11	Minimize the creation of impervious areas	P	2
5-12	Treat increased runoff caused by changed surface conditions to minimize the danger of flooding, erosion and pollutants entering waterbodies prior to, during and after construction	No	0
5-13	Use temporary vegetation and mulching to protect exposed and critical areas during development	P	2
5-14	Redistribute topsoil within the boundaries of the disturbed land for seeding and planting	P	2
5-15	Stabilize disturbed soils as soon as possible	P	2
5-16	Minimize the use of cut and fill operations. Conform such operations to topography and soils to minimize erosion potential and adequately accommodate runoff	P	2
5-17	Control erosion and sedimentation prior to, during and after site preparation and construction	P	2
5-18	Require long term stormwater management plan.	No	0
5-19	Require long term sedimentation control & maintenance.	P: Daily log sheet	1
	5-c: Existing and New Roads and Bridges		
5-20	Target existing public holdings, such as parks, for removing unecessary impervious surfaces	P	2
5-21	Incorporate New York State Department of Transportation design and guidance documents, standard specifications, and procedural manuals (Highway Design Manual, Environmental Procedures Manual, Maintenance Guidelines, etc) into local laws and operating proc	CH 125; HWY	2
5-22	Ensure application of appropriate solid and hazardous waste generation and disposal practices including source controls and recycling	P	2
5-23	Ensure proper operation and maintenance of runoff management facilities	P	2
5-24	Participate in Cornell Local Roads Program activities and training	P	2
5-25	Target training programs at highway officials, contractors, construction workers, inspectors, zoning and planning officials	P	2
5-26	Target training and outreach programs about the proper handling of materials, leakage and spill prevention and spill response procedures at maintenance staff and workers	L: PESH	2
	Final Score: 43 out of 52 Total Possible Points		**43**
	Number of BMPs addressed (either fully or partially): 22 out of 26 BMPs (85%)		**22**

6: Onsite Wastewater Treatment Systems			
6-01	Conduct regular inspections of OWTS at a frequency adequate to determine failure and undertake required maintenance	P: for Town-owned facilities	2
6-02	Institute setback guidelines	R: EC	2
6-03	Promulgate plumbing codes that require practices that are compatible with OWTS	No	0
6-04	Target outreach programs at homeowners, contractors and developers	No	0
6-05	Inspection of all OWTS at property transfer or within 1 year prior to transfer	R:EC	2
6-06	Require all properties within 500' of municipal service to connect.	R: ECDOH	2
6-07	Set goals for effluent limits (nitrogen, phosphorous, BOD, etc)	R: EC	2
	Final Score: 10 out of 14 Total Possible Points		**10**
	Number of BMPs addressed (either fully or partially): 6 out of 7 BMPs (85.7%)		**6**

	Overall Assessment Score: 102 out of 182 Total Possible Points	**102**
	Number of BMPs addressed (either fully or partially): 61 out of 91 BMPs (67%)	**61**

Town of Holland
Erie County, New York

BMP § - #	Best Management Practices (BMP)	Existing Means of Implementation (law, regulation, practice, etc)	Degree of Implementation (2-fully, 1-partially, 0-not at all, n/a-not applicable)	
1: Development				
1-a: Existing Development				
1-01	Identify retrofit opportunities	P:	2	
1-02	Identify habitat and natural conveyance system restoration opportunities	P:	2	
1-03	Establish retention/detention areas	P:	2	
1-04	Acquire additional land for locating treatment facilities	No; Sewer district in place, septic systems used in new development	1	
1-05	Encourage homeowners to place compost piles away from waterbodies and roadways	Compost piles require a Special Use Permit	0	build into the code
1-06	Encourage proper use and disposal of lawn and other household chemicals	High participation in Hazardous Waste Recycling events	1	
1-07	Institute turf management practices on golf courses and parks and recreation areas	P: on parks and recreational land (no public golf courses)	2	
1-08	Undertake storm drain stenciling	No	0	
1-09	Encourage volunteer programs, such as adopt-a-highways and adopt-a-stream, etc.	No	0	
1-10	Include high percentage of indigenous plants in new landscaping on privately-owned properties (excluding arboretums, horticultural gardens, and sites requiring turf grasses)	P: reviewed during Special Use Permit process	1	build into the code
1-11	Encourage water conservation	P: reactionary	1	
1-12	Develop outreach programs targeted at specific problems related to water quality management & resource conservation	No	0	Could suggest rain barrel projects to reduce water consumption in summer. And for number 1-14.
1-13	Encourage proper control of pet wastes	§64-15 (only dog wastes specified); based on DEC and Special Use Permits	2	
1-14	Encourage continued operation of private storm water runoff control structures	§104-8; stormwater runoff system required for new developments. §83: Mobile Homes also required	1	add for significant redevelopment
1-15	Discourage feeding of waterfowl	No	N/A	
1-16	Discourage the introduction of exotic aquatic species (Eurasion water milfoil, zebra mussels, water chestnut, etc	No	0	
1-17	Encourage continued (periodic) operation and maintenance of private septic disposal systems	R: ECDOH	2	recommend outreach on proper septic tank maintenance. ECDOH only inspects on tranfer of property.
1-18	Effective and consistent application and enforcement of stormwater requlations & requirements	No	0	
1-19	Require certification of existing on site septic systems for property transfers or building expansions.	R: ECDOH	2	

1-20	Require entire property (existing as well as proposed) to be included in stormwater analysis/calculation.	R: §104: Subdivision Law; §83-21: Mobile Homes, Stormwater Drainage. §69-13: Flood Damage Prevention, General Construction Standards. §77-9 ODA, Drainage plan required. Specifying entire property in analysis	2	adding to new code
	1-b: New Development and Substantial Redevelopment			
1-21	Minimize the amount of land disturbed and the duration of disturbance	No	0	May consider spelling this out in ordinance or regulation.
1-22	Preserve natural features and conform substantially with the natural boundaries and alignment of waterbodies	§120-12: Preservation of top soil and other natural features; §104.13: Subdivision Law, Development standards	2	
1-23	Retain and protect trees and other natural vegetation on and near disturbed sites	§120-12: Preservation of top soil and other natural features; §111-9: Standards for Tree Preservation Plan	2	Only ones with this
1-24	Account for topography and soil type in efforts to minimize erosion potential	P:Board of Appeals makes considerations based on slope of topography.	1	
1-25	Maintain runoff rates similar to pre-construction levels	§69: Flood Damage Prevention	2	
1-26	Minimize the creation of impervious areas	max lot coverage: 120: Zoning - 5 to 35 (?)%	2	Only ones with this
1-27	Control increased runoff caused by changed surface conditions to minimize the danger of flooding, erosion, sedimentation and pollutants entering waterbodies prior to, during and after construction	§111-9 - Tree Preservation	1	not in subdivision law and could be included there as a recommendation.
1-28	Use temporary vegetation and mulching to protect exposed and critical areas during development	§104-8 Subdivision Law, Required Improvements and agreements	2	Could recommend requiring erosion control on sites smaller than 1 acre (which is current state regulation)
1-29	Redistribute topsoil within the boundaries of the disturbed land for seeding and planting	§104-13 Subdivision Law	2	
1-30	Stabilize disturbed soils as soon as possible	§104-13 Subdivision Law	2	
1-31	Minimize the use of cut and fill operations. Conform such operations to topography and soils to minimize erosion potential and adequately accommodate runoff	No	0	
1-32	Use appropriate solid and hazardous waste generation and disposal practices including source controls and recycling	§100; P: HHW/Electronics recylcing	2	improving totes in coming years; all munis should specify construction waste/haz waste is to comply with standards
1-33	Encourage construction site management techniques which include the proper handling and disposal of pesticides and petroleum products and containers	Handled through Special Use permit. DEC.	2	build into construction standards along with waste removal
1-34	Ensure proper operation and maintenance of runoff management facilities	No	0	

1-35	Target training for contractors, inspectors and zoning and planning officials.	EC/DOS	2	towns not aware of their own regs
1-36	Require tree surveys and/or cutting plans.	§120-77: Zoning, Enforcement and Administration, Application information	2	few do this
1-37	Develop priority list for BMP's - use of vegetative low areas for retention/infiltration.	No	0	
1-38	Encourage cluster development.	§120-45 Cluster Residential developments	2	(updated since regional plan?)
1-39	Require connection to and/or extension of existing water & sewer if project is within 500 feet of existing infrastructure	County Sewers. They survey people in the area of request in case of extension, but it's not a requirement.	2	Feasible with limited public water/sewer infrastructure?
1-40	Enact limits on driveway grades.	L: NYS for state roads	1	grades limited for streets and sidewalks
1-41	For redevelopment, employ regulations that provide for technologically advanced (on and off) site wastewater treatment systems to optimize effeciencies and address "challenging" sites	No	0	
1-42	Implement Federal/State Stormwater (SPDES) Phase II requirements	N/A	N/A	
	Final Score: 50 out of 84 Total Possible Points		**50**	
	Number of BMPs addressed (either fully or partially): 29 out of 42 BMPs (69%)		**29**	

2: Forestry and Agriculture				
2-a: Forestry				
2-01	Consider potential water quality impacts when selecting silviculture system (yarding system, site preparation, pesticides employment, etc)	No	0	
2-02	Consider harvesting practices	No	0	
2-03	Seasonal preference for logging operations	No	0	
2-04	Have specialists (geologist, soil scientist, geotechnical engineer, wildland hydrologist) review plans in high erosion hazard areas	No	0	
2-05	Preplan harvest areas, skid trails, and access so as to be on stable soils, avoiding steep gradients, multiple stream crossings, poor drainage areas, etc.	No	0	
2-06	Limit grades of access roads.	§101-14	2	
2-07	Require stabilization of roads/drives to forestry site.	No	0	
2-08	Employ natural topography and contour for design of road network	No	0	
2-09	Require stormwater controls for increased runoff from ground cover modification	No	0	
2-10	Consider site restoration	No	0	
2-b: Agriculture				

2-11	Use Agricultural Environmental Management (AEM)	No	0	
2-12	Require farms seeking agricultural value assessment to participate in AEM	No	0	
	Final Score: 2 out of 24 Total Possible Points		**2**	
	Number of BMPs addressed (either fully or partially): 1 out of 12 BMPs (8%)		**1**	

3: Waterways and Wetlands				
3-a: Modified Waterways				
3-01	Develop an operation and maintenance program for existing modified streams that includes identification of opportunities and actions to restore habitat and the physical and chemical characteristics of these streams.	No. All waterways are natural.	0	
3-02	Improve stream quality by controlling instream sedimentation and selectively clearing debris	Do not control sedimentation, but have cleared debris with a permit when necessary.	1	
3-03	Establish or reestablish riparian buffers	No	0	recommend
3-04	Prevent animal wastes from entering waterbodies	§64-15 (only dog wastes specified)	1	recommend fences for livestock
3-05	Attempt vegetative stablization before undertaking structural measures	No	0	
3-06	Design and construct shore erosion control facilities, in accordance with an erosion and sedimentation control plan, in areas where marsh creation and soil bioengineering are ineffective or where existing protection methods are being flanked or are fallin	No	0	
3-07	Schedule the periodic maintenance of sediment control measures, and inspect and repair them as needed in conformance with established schedule.	No	0	
3-08	Protect streambanks through direct nonstructural means, such as new vegetation or protection of existing vegetation; direct structural means, such as revetments and bulkheads; indirect nonstructural means, such as regulating irrigation near streambanks or	No	0	
3-09	Use setbacks to minimize disturbance of land adjacent to streambanks and shorelines	No	0	Only have floodplain setbacks. Could consider waterway setbacks for buffers.
3-10	Prevent discharges to waterbodies in amounts that would adversely affect the taste, color or odor of the waters, or would impair the waters for their best usages	§120-56	2	

3-b: Wetlands and Riparian Area Management and Restoration			
3-11	Consider wetlands and riparian areas and their non-point source (nps) control potential on a watershed scale	§120-77(B)(9)	2
3-12	Identify existing functions of those wetland and riparian areas with significant nps control potential when implementing nps management practices. Do not alter wetlands or riparian areas to improve their water quality at the expense of their other function	No	0
3-13	Conduct permitting, licensing, certification and nonregulatory nps pollution activities in a manner that protects wetland functions	L: NYS, DEC	2
3-14	Special zoning considerations to protect wetland areas	P:	1
3-15	Use appropriate pretreatment practices such as vegetated systems or detention or retention basins to prevent adverse impacts to wetland functions that affect nps pollution abatement from hydrologic changes, sedimentation, or contaminants	No	0
3-16	All projects should require wetlands cerfitication.	No	0
	Final Score: 9 out of 32 Total Possible Points		**9**
	Number of BMPs addressed (either fully or partially): 5 out of 16 BMPs (31%)		**6**

4: Marinas			
4-a: Existing Marinas			
4-01	Clean maintenance areas regularly preferably by vacuuming to remove trash, sandings, paint chips, etc.	N/A	N/A
4-02	Prevent residue from being carried into surface waters by performing abrasive blasting within plastic tarp enclosures on windless days or within spray booths	N/A	N/A
4-03	Provide proper disposal/recycling facilities to marina patrons, preferably covered receptacles	N/A	N/A
4-04	Establish fish cleaning areas, and implement rules governing the conduct of fish cleaning operations	N/A	N/A
4-05	Educate boaters on the importance of proper fish cleaning practices	N/A	N/A
4-06	Implement fish composting where appropriate	N/A	N/A

4-07	Store materials in areas impervious to the type of material stored. Build curbs, berms, or other barriers around the areas to contain spills	N/A	N/A
4-08	Use separate, clearly labeled containers for the disposal of oil, gasoline, antifreeze, diesel, kerosene, and mineral spirits	N/A	N/A
4-09	Target outreach programs about proper disposal at marina patrons through the use of signs, mailings, and other means	N/A	N/A
4-10	Promote the use in bilges of oil-absorbing materials, and replace them as necessary, preferably recycling, or disposing of them in accordance with petroleum disposal regulation	N/A	N/A
4-11	Use a container under the air vent while refueling inboard tanks if the tank vents are not equipped with a fuel/air separator	N/A	N/A
4-12	Prohibit in-water hull scraping or any underwater process to remove paint from boat hulls	N/A	N/A
4-13	Wash the boat hull above the waterline by hand, using only necessary amounts of detergents and cleaning compounds that are phosphate-free and biodegradable	N/A	N/A
4-14	Prohibit the use of detergents and cleaning compounds containing ammonia, sodium hypochloride, chlorinated solvents, petroleum distillates, alcohol, or lye	N/A	N/A
4-15	Educate individuals about the importance of trash reduction and recycling through: interpretive and instructional signs placed at marinas and boat-launching sites, pamphlets or flyers, newsletters, inserts in billings, meetings and presentations, workshop	N/A	N/A
4-16	Inspect pumpout facilities regularly, and repair them, if practical, under a maintenance contract with a competent contractor	N/A	N/A
4-17	Add language to slip lease agreements mandating the use of pumpout facilities and specifying penalties for failure to comply	N/A	N/A
4-18	Place dye tablets in holding tanks to identify and discourage illegal disposal	N/A	N/A
4-19	Prohibit motorized vessels from areas (define areas) that contain important shallow-water habitats	N/A	N/A

4-20	Establish and enforce no-wake zones to decrease turbidity and reduce erosion potential from boat wakes	N/A	N/A
	4-b: New Marinas		
4-21	Design and site marinas to maximize exchange of marina basin water. Limit basins and channels with square corners that tend to trap flotsam, and place dock structures in a manner that promotes circulation	N/A	N/A
4-22	Perform a preconstruction assessment, which includes a water quality monitoring and modeling methodology, to predict post-construction water quality conditions	N/A	N/A
4-23	Monitor water quality during construction to protect ambient water quality to the maximum practicable extent	N/A	N/A
4-24	Develop a marina siting policy to discourge development in areas containing important habitat designated by local, State, or federal agencies	N/A	N/A
4-25	Conduct surveys and employ rapid bioassessment techniques to assess historic habitat function (e.g. spawning, nursery, and migration pathways) and potential impacts to these and other biological functions and resources	N/A	N/A
4-26	Encourage the redevelopment or expansion of existing marina facilities that have demonstrated minimal environmental impacts instead of developing new marina facilities	N/A	N/A
4-27	Consider alternative sites with minimal potential environmental impacts when the use of previously disturbed sites is not feasible	N/A	N/A
4-28	Minimize disturbance of indigenous vegetation in the riparian area	N/A	N/A
4-29	Use soil bioengineering or plants, wherever conditions allow, to restore damaged habitat along shorelines and streambanks	N/A	N/A
4-30	Use properly designed and constructed engineering practices that minimize shoreline disturbance in areas where soil bioengineering and plants are ineffective	N/A	N/A

4-31	Use appropriate shore erosion control methods, such as returns or return walls, in areas where existing protection methods are being flanked or are falling	N/A	N/A
4-32	Plan and design all steambank, shoreline, and navigation structures so that they do not transfer erosion energy to or otherwise cause visible loss of surrounding streambanks or shorelines	N/A	N/A
4-33	Locate and design fuel stations so that spills can be contained in a limited area	N/A	N/A
4-34	Design and install underground fuel storage tanks according to State regulations, including the provision of detection systems and automatic fuel tank and pump leak shut-offs	N/A	N/A
4-35	Provide aboveground fuel tanks and fueling areas with a curbed or diked storage area to handle containment volumes meeting State (and local) codes and inspect regularly	N/A	N/A
4-36	Use preferred pumpout systems: fixed-point, portable, dedicated slipside, and pumpout boats	N/A	N/A
4-37	Design onsite wastewater treatment systems to specifically handle waste from vessels	N/A	N/A
4-38	Post pumpout facility location and regulations at the marina. Charge fees that encourage rather than discourage facility use. Consider offsetting the cost of maintaining pumpout facilities by fuel sales where these facilities are conveniently located in	N/A	N/A
	4-c: Marinas, Existing and New		
4-39	Restrict boat repair and maintenance activities to clearly marked designated areas to prevent debris from falling into the water and preventing invasive species	N/A	N/A
4-40	Secure all fueling facilities and storage areas with appropraite shut-off devices and security locks and inspect regularly	N/A	N/A
4-41	Design fueling stations with spill containment equipment that is stored in a clearly marked location, accessible to work and storage areas. Post emergency phone numbers in a prominent location	N/A	N/A
4-42	Design a spill contingency plan	N/A	N/A

4-43	Inspect and maintain all containment berms or devices in accordance with State regulations. Investigate immediately signs of leakage or spillage, and undertake cleanup in accordance with applicable best management practices	N/A	N/A
4-44	Have a trained operator present and prepared to respond to accidental spills	N/A	N/A
4-45	Maintain daily inventory records to identify abnormal loss or gain of liquid	N/A	N/A
4-46	Prohibit the cleaning of hoses, fittings, pumps, and other accessory equipment on piers, docks or adjacent upland to prevent runoff into the marina basin or other surface or groundwater	N/A	N/A
4-47	Create and/or maintain a dedicated fund for maintenance in the case of government-owned facilities	N/A	N/A
4-48	Restrict the operation of pumpout facilities to trained marina personnel only	N/A	N/A
	Final Score: 0 out of 0 Total Possible Points		**0**
	Number of BMPs addressed (either fully or partially): 0 out of 0 BMPs		**0**

5: Roads and Bridges			
	5-a: New Roads and Bridges		
5-01	Conduct road and bridge maintenance (de-icing material usage and storage, pot-hole repair, bridge washing, scraping and painting, etc) according to best management practices	P	2
5-02	Conduct right-of-way activities (mowing, brush removal, pesticide and fertilizer use, etc) - according to best management practices	P	2
5-03	Include high percentage of indigenous plants in new landscaping on public-owned properties (excluding arboretums, horticultural gardens, and site requiring turf grasses)	No	0
5-04	Implement a regular inspection and maintenance plan of existing structures	P	2
5-05	Develop and identify erosion/sediment control areas (examples include steep slopes, easily erodible soils, and nearby sensitive areas) and retrofit opportunities	No	0
5-06	Require percentage of roads to be tested with non-salt and non-sand de-icing.	No, due to climate	0

5-b: Existing Roads and Bridges			
5-07	Minimize the amount of land disturbed and the duration of disturbance	P	2
5-08	Preserve natural features and conform substantially with the natural boundaries and alignment of waterbodies	P	2
5-09	Retain and protect trees and other natural vegetation on and near disturbed sites	§120-12	2
5-10	Retain additional runoff sites	P	2
5-11	Minimize the creation of impervious areas	P	2
5-12	Treat increased runoff caused by changed surface conditions to minimize the danger of flooding, erosion and pollutants entering waterbodies prior to, during and after construction	P	2
5-13	Use temporary vegetation and mulching to protect exposed and critical areas during development	P	2
5-14	Redistribute topsoil within the boundaries of the disturbed land for seeding and planting	P	2
5-15	Stabilize disturbed soils as soon as possible	P	2
5-16	Minimize the use of cut and fill operations. Conform such operations to topography and soils to minimize erosion potential and adequately accommodate runoff	P	2
5-17	Control erosion and sedimentation prior to, during and after site preparation and construction	P	2
5-18	Require long term stormwater management plan.	No. except over 1 acre according to State law.	1
5-19	Require long term sedimentation control & maintenance.	§118-5C(1)(d): Application for utility scale systems; not related to roads	0
5-c: Existing and New Roads and Bridges			
5-20	Target existing public holdings, such as parks, for removing unecessary impervious surfaces	P	2
5-21	Incorporate New York State Department of Transportation design and guidance documents, standard specifications, and procedural manuals (Highway Design Manual, Environmental Procedures Manual, Maintenance Guidelines, etc) into local laws and operating procedures	No	0

apply to code throughout

5-22	Ensure application of appropriate solid and hazardous waste generation and disposal practices including source controls and recycling	P	2
5-23	Ensure proper operation and maintenance of runoff management facilities	P	2
5-24	Participate in Cornell Local Roads Program activities and training	P	2
5-25	Target training programs at highway officials, contractors, construction workers, inspectors, zoning and planning officials	No	0
5-26	Target training and outreach programs about the proper handling of materials, leakage and spill prevention and spill response procedures at maintenance staff and workers	DEC stormwater program	1
	Final Score: 38 out of 52 Total Possible Points		**38**
	Number of BMPs addressed (either fully or partially): 20 out of 26 BMPs (77%)		**20**

	6: Onsite Wastewater Treatment Systems		
6-01	Conduct regular inspections of OWTS at a frequency adequate to determine failure and undertake required maintenance	No	0
6-02	Institute setback guidelines	P	1
6-03	Promulgate plumbing codes that require practices that are compatible with OWTS	P	2
6-04	Target outreach programs at homeowners, contractors and developers	No	0
6-05	Inspection of all OWTS at property transfer or within 1 year prior to transfer	ECDOH	2
6-06	Require all properties within 500' of municipal service to connect.	EC	2
6-07	Set goals for effluent limits (nitrogen, phosphorous, BOD, etc)	EC	2
	Final Score: 9 out of 14 Total Possible Points		**9**
	Number of BMPs addressed (either fully or partially): 5 out of 7 BMPs (71%)		**5**

recommend

	Overall Assessment Score: 108 out of 206 Total Possible Points	**108**
	Number of BMPs addressed (either fully or partially): 61 out of 103 BMPs (59%)	**61**

Town of Westfield
Chautauqua County, New York

BMP § - #	Best Management Practices (BMP)	Existing Means of Implementation (law, regulation, practice, etc)	Degree of Implementation (2-fully, 1-partially, 0-not at all, n/a-not applicable)	
1: Development				
1-a: Existing Development				
1-01	Identify retrofit opportunities	P: Westfield Dev. Corp., private individual, county IDA, Chatauqua Landmark Society	2	
1-02	Identify habitat and natural conveyance system restoration opportunities	P: Chatauqua greenway trail, Chatauqua Lake to Lake Erie; Retain trees; greenway/trail development	2	
1-03	Establish retention/detention areas	L: DEC rules open ditches	0	
1-04	Acquire additional land for locating treatment facilities	no	0	
1-05	Encourage homeowners to place compost piles away from water bodies and roadways	132-7 Waste disposal unlawful. Code does not address compost specifically	1	Suggestion
1-06	Encourage proper use and disposal of lawn and other household chemicals	P: Information provided through County program. 132-8 Wastewater disposal unlawful. Comp plan, Chap.2.3, Goal #4.5: Encourages proper disposal of Household waste	2	
1-07	Institute turf management practices on golf courses and parks and recreation areas	P: new parcel (park) town properties	1	
1-08	Undertake storm drain stenciling	N/A: Storm drains in Village only	n/a	
1-09	Encourage volunteer programs, such as adopt-a-highways and adopt-a-stream, etc.	Chautauqua Cnty Greenway Plan Chapter 1: Community surveys were conducted and proper care of trails, natural, and recreational environments was a top priority. Survey concluded that participants would be willing to volunteer up to 9hrs a month. P: RT 394 State adoption and encouragement of cleanup efforts. Encourage shoreline and highway cleanups.	2	
1-10	Include high percentage of indigenous plants in new landscaping on privately-owned properties (excluding arboretums, horticultural gardens, and sites requiring turf grasses)	Not done	0	
1-11	Encourage water conservation	P: (Village systems), information materials	1	
1-12	Develop outreach programs targeted at specific problems related to water quality management & resource conservation	Comp. plan list various recreational / educational iniatives relating to civic history, but is limited when it comes to environmental awareness. Environmental education programs are not instilled in town law. P: Chatauqua County Soil and Water district	0	

1-13	Encourage proper control of pet wastes	P: signage 132-7 & 56-5 (c)	2	suggestion: additional measures must be taken for owners to realize the impacts of letting pet wastes enter water bodies, signage along waterwys and educational to homeowners with wells may go a long way, since few will read the code
1-14	Encourage continued operation of private storm water runoff control structures	drainage stream, not specific	0	
1-15	Discourage feeding of waterfowl	not an issue	0	Suggest proactive signage/practices
1-16	Discourage the introduction of exotic aquatic species (Eurasion water milfoil, zebra mussels, water chestnut, etc	P: County; Lake Erie Management Commission, Chautauqua Management Commission	2	
1-17	Encourage continued (periodic) operation and maintenance of private septic disposal systems	R: §132 - 22: Inspection of private septic systems completed by the Superintendent, but is not a scheduled on-going process. §132-23: Septage removal	1	
1-18	Effective and consistent application and enforcement of stormwater requlations & requirements	R: §132-16: Prohibits the the connection of private sewage into stormwater drain. DEC Regs.	2	suggest information
1-19	Require certification of existing on site septic systems for property transfers or builing expansions.	R: §132-18,19, & 20: Certification of existing on site septic systems are required and are subject to the inspection of the superintendent. Regulated by Chatauqua County DOH	2	
1-20	Require entire property (existing as well as proposed) to be included in stormwater analysis/calculation.	No. P: follow SEQR	1	suggest specifying since otherwise developer may us eonly distrubed area or only impervious surfaces
1-b: New Development andSubstantial Redevelopment				
1-21	Minimize the amount of land disturbed and the duration of disturbance	P:	1	

1-22	Preserve natural features and conform substantially with the natural boundaries and alignment of waterbodies	R: 132-32(B) retain trees (listed in sewer pipe installation regulation); §151-13(g) redrawing of lines due to natural features; §151-13B(3) easement for natural drainage channel, stream.	2	suggest use similar language throughout code
1-23	Retain and protect trees and other natural vegetation on and near disturbed sites	R: 151-13B(5)(c); §132-32(B) sewer pipe installation; §151-13B(4)(b)	2	
1-24	Account for topography and soil type in efforts to minimize erosion potential	R: 151-13B(5)(d): Preserved if possible. Issue along the bluff; coastal management	0	suggest: add language explicitly addressing soil typoes and typography (not just interesting rock outcroppings)
1-25	Maintain runoff rates similar to pre-construction levels	P: not explicit	0	suggest: make explicit; consider collective/compuonding development impact
1-26	Minimize the creation of impervious areas	P: gravel	1	
1-27	Control increased runoff caused by changed surface conditions to minimize the danger of flooding, erosion, sedimentation and pollutants entering waterbodies prior to, during and after construction	R: §132-32E: Erosion control during sewer pipe instalation. Use throughout. Condition on permits -> practice. Stricter requirments in coastal areas.	1	suggestion: use language throughout
1-28	Use temporary vegetation and mulching to protect exposed and critical areas during development	P: Condition on permits, with stricter requirements in coastal areas	2	suggestion: include language regarding protecting exposed and critical areas during development
1-29	Redistribute topsoil within the boundaries of the disturbed land for seeding and planting	§151-13(B)(5)(a)	2	
1-30	Stabilize disturbed soils as soon as possible	§151-13B(5)(f): surfaces shall be restored within six months of the time of the completion to the pertinent section of the subdivision.	1	suggest use this language throughout
1-31	Minimize the use of cut and fill operations. Conform such operations to topography and soils to minimize erosion potential and adequately accommodate runoff	P: used for safety to prevent erosion.	1	suggest use this language throughout

1-32	Use appropriate solid and hazardous waste generation and disposal practices including source controls and recycling	R: §132-32B-Debris hauled not burrned; §143 - Solid waste recycling mandatory. Collection station transfer for glass, cardboard, plastic, tins	2	
1-33	Encourage construction site management techniques which include the proper handling and disposal of pesticides and petroleum products and containers	L: DEC	2	
1-34	Ensure proper operation and maintenance of runoff management facilities	R: §151-13(B)(3)- Maintenance easement for natural drainage way. Ditch Program; Hydroseeding from Chautauqua County	2	
1-35	Target training for contractors, inspectors and zoning and planning officials.	P: DOS, Southern Tier West; new code training for employees	2	
1-36	Require tree surveys and/or cutting plans.	§151-16A(5): Trees over 8" diameter	2	requires survey but no cutting plan
1-37	Develop priority list for BMP's - use of vegetative low areas for retention/infiltration.	not explicit	0	
1-38	Encourage cluster development.	§ 151-10: the Planning Board may approve a cluster development simultaneously with the approval of a plat or plats. (the subdivider shall (in addition to any sketch plan submitted for a regular subdivision) submit a sketch plan for a cluster development, which shall include the information required in § 151-16 but otherwise comply with the design standards for cluster developments found in § 151-13C. After review of the sketch plan, the Planning Board may require the subdivider to pursue a cluster development if, in the Board's judgment, such a development would be in the public interest as compared to a regular subdivision.)	2	
1-39	Require connection to and/or extension of existing water & sewer if project is within 500 feet of existing infrastructure	R: §132-11- Connection required within 100' of property line;	2	
1-40	Enact limits on driveway grades.	L: NYS DOT	1	

1-41	For redevelopment, employ regulations that provide for technologically advanced (on and off) site wastewater treatment systems to optimize effeciencies and address "challenging" sites	R: CCDOT	2	
1-42	Implement Federal/State Stormwater (SPDES) Phase II requirements	P:	1	recommended but not actually required?
	Final Score: 52 out of 82 Total Possible Points		**52**	
	Number of BMPs addressed (either fully or partially): 32 out of 41 BMPs (78%)		**32**	

2: Forestry and Agriculture				
2-a: Forestry				
2-01	Consider potential water quality impacts when selecting silviculture system (yarding system, site preparation, pesticides employment, etc)	P:	1	
2-02	Consider harvesting practices	P:	1	
2-03	Seasonal preference for logging operations	P:	1	
2-04	Have specialists (geologist, soil scientist, geotechnical engineer, wildland hydrologist) review plans in high erosion hazard areas	P:	1	
2-05	Preplan harvest areas, skid trails, and access so as to be on stable soils, avoiding steep gradients, multiple stream crossings, poor drainage areas, etc.	P:	1	While this may be put into practice, it may be beneficial for long term success to require these
2-06	Limit grades of access roads.	R: §148-6G: Roadway grade less than or equal to 10%	1	
2-07	Require stabilization of roads/drives to forestry site.	P:	1	
2-08	Employ natural topography and contour for design of road network	P:	1	
2-09	Require stormwater controls for increased runoff from ground cover modification	P:	1	
2-10	Consider site restoration	P:	1	

	2-b: Agriculture		
2-11	Use Agricultural Environmental Management (AEM)	Not required	0
2-12	Require farms seeking agricultural value assessment to participate in AEM		0
	Final Score: 10 out of 24 Total Possible Points		**10**
	Number of BMPs addressed (either fully or partially): 10 out of 12 BMPs (83%)		**10**

	3: Waterways and Wetlands		
	3-a: Modified Waterways		
3-01	Develop an operation and maintenance program for existing modified streams that includes identification of opportunities and actions to restore habitat and the physical and chemical characteristics of these streams.	P: Work with Soil & Water Conservation district and USACOE on Fish ladder and stabilized stream bank maintenance.	1
3-02	Improve stream quality by controlling instream sedimentation and selectively clearing debris	P: Selctively clear debris	1
3-03	Establish or reestablish riparian buffers	§151-13B(3) maintenance easement state buffers / DEC along Chautauqua Creek.	2
3-04	Prevent animal wastes from entering waterbodies	§132-7 & §56-5(c)	2
3-05	Attempt vegetative stablization before undertaking structural measures	no	0
3-06	Design and construct shore erosion control facilities, in accordance with an erosion and sedimentation control plan, in areas where marsh creation and soil bioengineering are ineffective or where existing protection methods are being flanked or are falling	P; Work with Soil & Water Conservation District.	1
3-07	Schedule the periodic maintenance of sediment control measures, and inspect and repair them as needed in conformance with established schedule.	no	0

responsibility of the flood admin

3-08	Protect streambanks through direct nonstructural means, such as new vegetation or protection of existing vegetation; direct structural means, such as revetments and bulkheads; indirect nonstructural means, such as regulating irrigation near streambanks	no	0
3-09	Use setbacks to minimize disturbance of land adjacent to streambanks and shorelines	Comp. Plan Chapter 4.4 section 2: State regulations require a 100ft setback be maintained to protect areas from adverse impacts of development. Some grandfathered locations	2
3-10	Prevent discharges to waterbodies in amounts that would adversely affect the taste, color or odor of the waters, or would impair the waters for their best usages	R: §132-8. P: from comp town and village purchases land to protect.	2
3-b: Wetlands and Riparian Area Management and Restoration			
3-11	Consider wetlands and riparian areas and their non-point source (nps) control potential on a watershed scale	Required federal conservation easements to protect.	1
3-12	Identify existing functions of those wetland and riparian areas with significant nps control potential when implementing nps management practices. Do not alter wetlands or riparian areas to improve their water quality at the expense of their other functions		0
3-13	Conduct permitting, licensing, certification and nonregulatory nps pollution activities in a manner that protects wetland functions	practice as needed	0
3-14	Special zoning considerations to protect wetland areas	Chautaqua Greenway Plan Chapter 3, Fig. 27, CNR-4 Emphasize the use of conservation easements to landowners.	0

3-15	Use appropriate pretreatment practices such as vegetated systems or detention or retention basins to prevent adverse impacts to wetland functions that affect nps pollution abatement from hydrologic changes, sedimentation, or contaminants		0	recommend regulated setbacts and vegatated buffers, especially near solar arrays and creeks.
3-16	All projects should require wetlands cerfitication.	No (only larger projects, and wind turbines)	0	
	Final Score: 12 out of 32 Total Possible Points		**12**	
	Number of BMPs addressed (either fully or partially): 8 out of 16 BMPs (50%)		**8**	

4: Marinas				
4-a: Existing Marinas -Privately owned, but Town has beach and pier				
4-01	Clean maintenance areas regularly preferably by vacuuming to remove trash, sandings, paint chips, etc.	P: Beach cleaned with machine, and not with a vaccum.	1	
4-02	Prevent residue from being carried into surface waters by performing abrasive blasting within plastic tarp enclosures on windless days or within spray booths	N/A		
4-03	Provide proper disposal/recycling facilities to marina patrons, preferably covered receptacles	P: Town provides receptacles in Town-operated areas.	2	
4-04	Establish fish cleaning areas, and implement rules governing the conduct of fish cleaning operations	§121-6: specifies no fish parts to be disposed	1	recommend addition of fish cleaning facilities
4-05	Educate boaters on the importance of proper fish cleaning practices		0	recommend education as well
4-06	Implement fish composting where appropriate		0	consider
4-07	Store materials in areas impervious to the type of material stored. Build curbs, berms, or other barriers around the areas to contain spills	N/A		

4-08	Use separate, clearly labeled containers for the disposal of oil, gasoline, antifreeze, diesel, kerosene, and mineral spirits	N/A	
4-09	Target outreach programs about proper disposal at marina patrons through the use of signs, mailings, and other means	Signage regarding pet wastes at beach and parking	1
4-10	Promote the use in bilges of oil-absorbing materials, and replace them as necessary, preferably recycling, or disposing of them in accordance with petroleum disposal regulation	N/A	
4-11	Use a container under the air vent while refueling inboard tanks if the tank vents are not equipped with a fuel/air separator	N/A	
4-12	Prohibit in-water hull scraping or any underwater process to remove paint from boat hulls	N/A	
4-13	Wash the boat hull above the waterline by hand, using only necessary amounts of detergents and cleaning compounds that are phosphate-free and biodegradable	N/A	
4-14	Prohibit the use of detergents and cleaning compounds containing ammonia, sodium hypochloride, chlorinated solvents, petroleum distillates, alcohol, or lye	N/A	
4-15	Educate individuals about the importance of trash reduction and recycling through: interpretive and instructional signs placed at marinas and boat-launching sites, pamphlets or flyers, newsletters, inserts in billings, meetings and presentations, workshop	Signage regarding pet wastes and invasive species at beach and parking	1

4-16	Inspect pumpout facilities regularly, and repair them, if practical, under a maintenance contract with a competent contractor	N/A		
4-17	Add language to slip lease agreements mandating the use of pumpout facilities and specifying penalties for failure to comply	N/A		
4-18	Place dye tablets in holding tanks to identify and discourage illegal disposal	N/A		
4-19	Prohibit motorized vessels from areas (define areas) that contain important shallow-water habitats	entire area too shallow allready for motor vehicles, but not prohibited.	0	
4-20	Establish and enforce no-wake zones to decrease turbidity and reduce erosion potential from boat wakes	P: Low speed limit	1	POSTED?
		4-b: New Marinas		
4-21	Design and site marinas to maximize exchange of marina basin water. Limit basins and channels with square corners that tend to trap flotsam, and place dock structures in a manner that promotes circulation	N/A		
4-22	Perform a preconstruction assessment, which includes a water quality monitoring and modeling methodology, to predict post-construction water quality conditions	N/A		
4-23	Monitor water quality during construction to protect ambient water quality to the maximum practicable extent	N/A		
4-24	Develop a marina siting policy to discourge development in areas containing important habitat designated by local, State, or federal agencies	N/A		

4-25	Conduct surveys and employ rapid bioassessment techniques to assess historic habitat function (e.g. spawning, nursery, and migration pathways) and potential impacts to these and other biological functions and resources	N/A	
4-26	Encourage the redevelopment or expansion of existing marina facilities that have demonstrated minimal environmental impacts instead of developing new marina facilities	N/A	
4-27	Consider alternative sites with minimal potential environmental impacts when the use of previously disturbed sites is not feasible	N/A	
4-28	Minimize disturbance of indigenous vegetation in the riparian area	N/A	
4-29	Use soil bioengineering or plants, wherever conditions allow, to restore damaged habitat along shorelines and streambanks	N/A	
4-30	Use properly designed and constructed engineering practices that minimize shoreline disturbance in areas where soil bioengineering and plants are ineffective	N/A	
4-31	Use appropriate shore erosion control methods, such as returns or return walls, in areas where existing protection methods are being flanked or are falling	N/A	
4-32	Plan and design all steambank, shoreline, and navigation structures so that they do not transfer erosion energy to or otherwise cause visible loss of surrounding streambanks or shorelines	N/A	

4-33	Locate and design fuel stations so that spills can be contained in a limited area	N/A		
4-34	Design and install underground fuel storage tanks according to State regulations, including the provision of detection systems and automatic fuel tank and pump leak shut-offs	N/A		
4-35	Provide aboveground fuel tanks and fueling areas with a curbed or diked storage area to handle containment volumes meeting State (and local) codes and inspect regularly	N/A		
4-36	Use preferred pumpout systems: fixed-point, portable, dedicated slipside, and pumpout boats	N/A		
4-37	Design onsite wastewater treatment systems to specifically handle waste from vessels	N/A		
4-38	Post pumpout facility location and regulations at the marina. Charge fees that encourage rather than discourage facility use. Consider offsetting the cost of maintaining pumpout facilities by fuel sales where these facilities are conveniently located in	N/A		
4-c: Marinas, Existing and New				
4-39	Restrict boat repair and maintenance activities to clearly marked designated areas to prevent debris from falling into the water and preventing invasive species	N/A		Recommend standards and signage
4-40	Secure all fueling facilities and storage areas with appropraite shut-off devices and security locks and inspect regularly	N/A. No fueling.		

4-41	Design fueling stations with spill containment equipment that is stored in a clearly marked location, accessible to work and storage areas. Post emergency phone numbers in a prominent location	N/A. No fueling.		
4-42	Design a spill contingency plan	Do not have one	0	recommend that private marina have one in place as well.
4-43	Inspect and maintain all containment berms or devices in accordance with State regulations. Investigate immediately signs of leakage or spillage, and undertake cleanup in accordance with applicable best management practices	N/A. No containement berms or devices		? Recommend?
4-44	Have a trained operator present and prepared to respond to accidental spills	Harbormaster	1	
4-45	Maintain daily inventory records to identify abnormal loss or gain of liquid	N/A. No fuel storage		
4-46	Prohibit the cleaning of hoses, fittings, pumps, and other accessory equipment on piers, docks or adjacent upland to prevent runoff into the marina basin or other surface or groundwater	doesn't happen	0	Recommend standards and signage
4-47	Create and/or maintain a dedicated fund for maintenance in the case of government-owned facilities	P: Harbor and Pier maintenance fund	2	
4-48	Restrict the operation of pumpout facilities to trained marina personnel only	N/A. No pumping facilities		
	Final Score: 10 out of 26 Total Possible Points		**10**	
	Number of BMPs addressed (either fully or partially): 8 out of 13 BMPs (62%)		**8**	

5: Roads and Bridges

5-a: New Roads and Bridges

5-01	Conduct road and bridge maintenance (de-icing material usage and storage, pot-hole repair, bridge washing, scraping and painting, etc) according to best management practices	P:	2	
5-02	Conduct right-of-way activities (mowing, brush removal, pesticide and fertilizer use, etc) - according to best management practices	P: Yearly / Monthly	2	
5-03	Include high percentage of indigenous plants in new landscaping on public-owned properties (excluding arboretums, horticultural gardens, and site requiring turf grasses)	P: Planning Board considers	1	add to code. Recommend planting native plants along harbor improvements.
5-04	Implement a regular inspection and maintenance plan of existing structures	P: Board Approved	2	
5-05	Develop and identify erosion/sediment control areas (examples include steep slopes, easily erodible soils, and nearby sensitive areas) and retrofit opportunities	P: working to identify and eliminate danger areas as part of the Hazard Mitigation Plan.	2	
5-06	Require percentage of roads to be tested with non-salt and non-sand de-icing.	P: Minimize salt use. Combination 7:1 Salt & Sand. Need to combat public fear of beet juice or other alternatives.	1	
	5-b: Existing Roads and Bridges			
5-07	Minimize the amount of land disturbed and the duration of disturbance	P: Only maintain existing blacktop	2	
5-08	Preserve natural features and conform substantially with the natural boundaries and alignment of waterbodies	P: No widening of roads	2	have wording added to standards
5-09	Retain and protect trees and other natural vegetation on and near disturbed sites	P: Only remove dead trees	2	
5-10	Retain additional runoff sites	P: ditches	2	

5-11	Minimize the creation of impervious areas	P: Need written policy	1	INCLUDE FOR FUTURE
5-12	Treat increased runoff caused by changed surface conditions to minimize the danger of flooding, erosion and pollutants entering waterbodies prior to, during and after construction	P: only ditches. No additional green infrastructure	0	
5-13	Use temporary vegetation and mulching to protect exposed and critical areas during development	P: hydroseeding	2	
5-14	Redistribute topsoil within the boundaries of the disturbed land for seeding and planting	P:	2	
5-15	Stabilize disturbed soils as soon as possible	P:	2	
5-16	Minimize the use of cut and fill operations. Conform such operations to topography and soils to minimize erosion potential and adequately accommodate runoff	P: already minimized	2	
5-17	Control erosion and sedimentation prior to, during and after site preparation and construction	P:	2	
5-18	Require long term stormwater management plan.	No plan	0	
5-19	Require long term sedimentation control & maintenance.	P: Yes. Ditches are stepped to slow water and are maintained.	2	
5-c: Existing and New Roads and Bridges				
5-20	Target existing public holdings, such as parks, for removing unecessary impervious surfaces	P: Harbor Parking most recent example	2	

5-21	Incorporate New York State Department of Transportation design and guidance documents, standard specifications, and procedural manuals (Highway Design Manual, Environmental Procedures Manual, Maintenance Guidelines, etc) into local laws and operating proc	§148: AASHTO standards included	2
5-22	Ensure application of appropriate solid and hazardous waste generation and disposal practices including source controls and recycling	P: Salt building, oil spearator	2
5-23	Ensure proper operation and maintenance of runoff management facilities	§148-6	2
5-24	Participate in Cornell Local Roads Program activities and training	P: Yes	2
5-25	Target training programs at highway officials, contractors, construction workers, inspectors, zoning and planning officials	P: Yes for employees	2
5-26	Target training and outreach programs about the proper handling of materials, leakage and spill prevention and spill response procedures at maintenance staff and workers	P: Yes	2
	Final Score: 45 out of 52 Total Possible Points		**45**
	Number of BMPs addressed (either fully or partially): 24 out of 26 BMPs (92%)		**24**

6: Onsite Wastewater Treatment Systems			
6-01	Conduct regular inspections of OWTS at a frequency adequate to determine failure and undertake required maintenance	§132-23 & CCDOH	2
6-02	Institute setback guidelines	P: & R: CCDOH	2

6-03	Promulgate plumbing codes that require practices that are compatible with OWTS	L; NYS Building Code	2
6-04	Target outreach programs at homeowners, contractors and developers	P: Chautauqua County DOH conduct outreach to homewoners along Lake Erie shoreline	2
6-05	Inspection of all OWTS at property transfer or within 1 year prior to transfer	R: CCDOH	2
6-06	Require all properties within 500' of municipal service to connect.	§151-10D	2
6-07	Set goals for effluent limits (nitrogen, phosphorous, BOD, etc)	R: CCDOH	2
	Final Score: 14 out of 14 Total Possible Points		**14**
	Number of BMPs addressed (either fully or partially): 7 out of 7 BMPs (100%)		**7**

	Overall Assessment Score: 143 out of 230 Total Possible Points	**143**
	Number of BMPs addressed (either fully or partially): 89 out of 115 BMPs (77%)	**89**

Town of Yorkshire
Cattaraugus County, New York

BMP § - #	Best Management Practices (BMP)	Existing Means of Implementation (law, regulation, practice, etc)	Degree of Implementation (2-fully, 1-partially, 0-not at all, n/a-not applicable)
1: Development			
1-a: Existing Development			
1-01	Identify retrofit opportunities		
1-02	Identify habitat and natural conveyance system restoration opportunities		
1-03	Establish retention/detention areas		
1-04	Acquire additional land for locating treatment facilities		
1-05	Encourage homeowners to place compost piles away from water bodies and roadways	Zoning Law: animals in hamlet: Manure, hay or other products can not be stored closer than 75 feet from any adjacent property line. Manure piles must be completely disposed of each spring by April 15th.	1
1-06	Encourage proper use and disposal of lawn and other household chemicals	§3-5(C) : Solid Waste Law; Hazardous Waste Prohibition Law §3: Minor quantities of five (5) pounds or less of hazardous wastes resulting from local agricultural, commercial or residential sources are excluded from this Law, provided these wastes are managed in an environmentally safe manner, consietent with Federal and state Regulations dealing with hazardous wastes.	2
1-07	Institute turf management practices on golf courses and parks and recreation areas		
1-08	Undertake storm drain stenciling		
1-09	Encourage volunteer programs, such as adopt-a-highways and adopt-a-stream, etc.		
1-10	Include high percentage of indigenous plants in new landscaping on privately-owned properties (excluding arboretums, horticultural gardens, and sites requiring turf grasses)		
1-11	Encourage water conservation		
1-12	Develop outreach programs targeted at specific problems related to water quality management & resource conservation		

1-13	Encourage proper control of pet wastes	§ 77-10 (C)	2
1-14	Encourage continued operation of private storm water runoff control structures		
1-15	Discourage feeding of waterfowl		
1-16	Discourage the introduction of exotic aquatic species (Eurasion water milfoil, zebra mussels, water chestnut, etc		
1-17	Encourage continued (periodic) operation and maintenance of private septic disposal systems		
1-18	Effective and consistent application and enforcement of stormwater requlations & requirements		
1-19	Require certification of existing on site septic systems for property transfers or builing expansions.		
1-20	Require entire property (existing as well as proposed) to be included in stormwater analysis/calculation.		
1-b: New Development and Substantial Redevelopment			
1-21	Minimize the amount of land disturbed and the duration of disturbance		
1-22	Preserve natural features and conform substantially with the natural boundaries and alignment of waterbodies	Subdivision Law: 3.1A(1)Land subject to flooding cannot be platted for subdivision. Zoning Law-Site Plan review: Compatibility of the proposed development with the natural features of the site.	2
1-23	Retain and protect trees and other natural vegetation on and near disturbed sites	MPD: utilize topography and site features to best advantage, protects resident uses, inhabitants, employees and adjacent properties from the harmful effects of its own land use operations, and encourages the maintenance of high environmental quality throughout the MPD District. (a) - Area may be reduced by 25% if a public water supply is available and by 50% if both a public water supply and a public sewage disposal system are available.	2
1-24	Account for topography and soil type in efforts to minimize erosion potential		

1-25	Maintain runoff rates similar to pre-construction levels	Zoning Law-Stormwater Management Erosion Control: The design shall assure that the runoff after development does not exceed that existing at the time of plan submission.	2
1-26	Minimize the creation of impervious areas		
1-27	Control increased runoff caused by changed surface conditions to minimize the danger of flooding, erosion, sedimentation and pollutants entering waterbodies prior to, during and after construction		
1-28	Use temporary vegetation and mulching to protect exposed and critical areas during development		
1-29	Redistribute topsoil within the boundaries of the disturbed land for seeding and planting		
1-30	Stabilize disturbed soils as soon as possible	Zoning Law-Stormwater Management Erosion Control:	1
1-31	Minimize the use of cut and fill operations. Conform such operations to topography and soils to minimize erosion potential and adequately accommodate runoff		
1-32	Use appropriate solid and hazardous waste generation and disposal practices including source controls and recycling	Solid Waste Law. Hazardous Waste Law: No person shall construct, operate and/or establish a facility for the internment, storage, temporary storage, recycling and/or processing of hazardous waste within the Town of Yorkshire.	1
1-33	Encourage construction site management techniques which include the proper handling and disposal of pesticides and petroleum products and containers		
1-34	Ensure proper operation and maintenance of runoff management facilities		

1-35	Target training for contractors, inspectors and zoning and planning officials.		
1-36	Require tree surveys and/or cutting plans.		
1-37	Develop priority list for BMP's - use of vegetative low areas for retention/infiltration.		
1-38	Encourage cluster development.	Zoning Law : Master Planned District	2
1-39	Require connection to and/or extension of existing water & sewer if project is within 500 feet of existing infrastructure		
1-40	Enact limits on driveway grades.	Subdivision Law: 3.1A(10) 13%	2
1-41	For redevelopment, employ regulations that provide for technologically advanced (on and off) site wastewater treatment systems to optimize effeciencies and address "challenging" sites		
1-42	Implement Federal/State Stormwater (SPDES) Phase II requirements		
	Final Score: 17 out of 82 Total Possible Points		**17**
	Number of BMPs addressed (either fully or partially): 10 out of 41 BMPs (24%)		**10**

2: Forestry and Agriculture			
	2-a: Forestry		
2-01	Consider potential water quality impacts when selecting silviculture system (yarding system, site preparation, pesticides employment, etc)		
2-02	Consider harvesting practices		
2-03	Seasonal preference for logging operations		
2-04	Have specialists (geologist, soil scientist, geotechnical engineer, wildland hydrologist) review plans in high erosion hazard areas		

2-05	Preplan harvest areas, skid trails, and access so as to be on stable soils, avoiding steep gradients, multiple stream crossings, poor drainage areas, etc.		
2-06	Limit grades of access roads.		
2-07	Require stabilization of roads/drives to forestry site.		
2-08	Employ natural topography and contour for design of road network		
2-09	Require stormwater controls for increased runoff from ground cover modification		
2-10	Consider site restoration		
	2-b: Agriculture		
2-11	Use Agricultural Environmental Management (AEM)		
2-12	Require farms seeking agricultural value assessment to participate in AEM		
	Final Score: 0 out of 24 Total Possible Points		**0**
	Number of BMPs addressed (either fully or partially): 0 out of 12 BMPs (0%)		**0**

	3: Waterways and Wetlands		
	3-a: Modified Waterways		
3-01	Develop an operation and maintenance program for existing modified streams that includes identification of opportunities and actions to restore habitat and the physical and chemical characteristics of these streams.		
3-02	Improve stream quality by controlling instream sedimentation and selectively clearing debris	Flood Damage Prevention Law-4.3-4(2): Require that maintenance is provided whithin the altered or relocated portion of said watercourse so that the flood carrying capacity is not diminished	2
3-03	Establish or reestablish riparian buffers		

3-04	Prevent animal wastes from entering waterbodies		
3-05	Attempt vegetative stablization before undertaking structural measures		
3-06	Design and construct shore erosion control facilities, in accordance with an erosion and sedimentation control plan, in areas where marsh creation and soil bioengineering are ineffective or where existing protection methods are being flanked or are falling		
3-07	Schedule the periodic maintenance of sediment control measures, and inspect and repair them as needed in conformance with established schedule.		
3-08	Protect streambanks through direct nonstructural means, such as new vegetation or protection of existing vegetation; direct structural means, such as revetments and bulkheads; indirect nonstructural means, such as regulating irrigation near streambanks		
3-09	Use setbacks to minimize disturbance of land adjacent to streambanks and shorelines		
3-10	Prevent discharges to waterbodies in amounts that would adversely affect the taste, color or odor of the waters, or would impair the waters for their best usages	Solid Waste Law (not specific)	1
3-b: Wetlands and Riparian Area Management and Restoration			
3-11	Consider wetlands and riparian areas and their non-point source (nps) control potential on a watershed scale		

3-12	Identify existing functions of those wetland and riparian areas with significant nps control potential when implementing nps management practices. Do not alter wetlands or riparian areas to improve their water quality at the expense of their other functions		
3-13	Conduct permitting, licensing, certification and nonregulatory nps pollution activities in a manner that protects wetland functions		
3-14	Special zoning considerations to protect wetland areas		
3-15	Use appropriate pretreatment practices such as vegetated systems or detention or retention basins to prevent adverse impacts to wetland functions that affect nps pollution abatement from hydrologic changes, sedimentation, or contaminants		
3-16	All projects should require wetlands cerfitication.		
	Final Score: 3 out of 32 Total Possible Points		**3**
	Number of BMPs addressed (either fully or partially): 2 out of 16 BMPs (12.5%)		**2**

4: Marinas			
4-a: Existing Marinas -Privately owned, but Town has beach and pier			
4-01	Clean maintenance areas regularly preferably by vacuuming to remove trash, sandings, paint chips, etc.	N/A	
4-02	Prevent residue from being carried into surface waters by performing abrasive blasting within plastic tarp enclosures on windless days or within spray booths	N/A	
4-03	Provide proper disposal/recycling facilities to marina patrons, preferably covered receptacles	N/A	

4-04	Establish fish cleaning areas, and implement rules governing the conduct of fish cleaning operations	N/A	
4-05	Educate boaters on the importance of proper fish cleaning practices	N/A	
4-06	Implement fish composting where appropriate	N/A	
4-07	Store materials in areas impervious to the type of material stored. Build curbs, berms, or other barriers around the areas to contain spills	N/A	
4-08	Use separate, clearly labeled containers for the disposal of oil, gasoline, antifreeze, diesel, kerosene, and mineral spirits	N/A	
4-09	Target outreach programs about proper disposal at marina patrons through the use of signs, mailings, and other means	N/A	
4-10	Promote the use in bilges of oil-absorbing materials, and replace them as necessary, preferably recycling, or disposing of them in accordance with petroleum disposal regulation	N/A	
4-11	Use a container under the air vent while refueling inboard tanks if the tank vents are not equipped with a fuel/air separator	N/A	
4-12	Prohibit in-water hull scraping or any underwater process to remove paint from boat hulls	N/A	
4-13	Wash the boat hull above the waterline by hand, using only necessary amounts of detergents and cleaning compounds that are phosphate-free and biodegradable	N/A	

4-14	Prohibit the use of detergents and cleaning compounds containing ammonia, sodium hypochloride, chlorinated solvents, petroleum distillates, alcohol, or lye	N/A	
4-15	Educate individuals about the importance of trash reduction and recycling through: interpretive and instructional signs placed at marinas and boat-launching sites, pamphlets or flyers, newsletters, inserts in billings, meetings and presentations, workshop	N/A	
4-16	Inspect pumpout facilities regularly, and repair them, if practical, under a maintenance contract with a competent contractor	N/A	
4-17	Add language to slip lease agreements mandating the use of pumpout facilities and specifying penalties for failure to comply	N/A	
4-18	Place dye tablets in holding tanks to identify and discourage illegal disposal	N/A	
4-19	Prohibit motorized vessels from areas (define areas) that contain important shallow-water habitats	N/A	
4-20	Establish and enforce no-wake zones to decrease turbidity and reduce erosion potential from boat wakes	N/A	
4-b: New Marinas			
4-21	Design and site marinas to maximize exchange of marina basin water. Limit basins and channels with square corners that tend to trap flotsam, and place dock structures in a manner that promotes circulation	N/A	

4-22	Perform a preconstruction assessment, which includes a water quality monitoring and modeling methodology, to predict post-construction water quality conditions	N/A	
4-23	Monitor water quality during construction to protect ambient water quality to the maximum practicable extent	N/A	
4-24	Develop a marina siting policy to discourge development in areas containing important habitat designated by local, State, or federal agencies	N/A	
4-25	Conduct surveys and employ rapid bioassessment techniques to assess historic habitat function (e.g. spawning, nursery, and migration pathways) and potential impacts to these and other biological functions and resources	N/A	
4-26	Encourage the redevelopment or expansion of existing marina facilities that have demonstrated minimal environmental impacts instead of developing new marina facilities	N/A	
4-27	Consider alternative sites with minimal potential environmental impacts when the use of previously disturbed sites is not feasible	N/A	
4-28	Minimize disturbance of indigenous vegetation in the riparian area	N/A	
4-29	Use soil bioengineering or plants, wherever conditions allow, to restore damaged habitat along shorelines and streambanks	N/A	

4-30	Use properly designed and constructed engineering practices that minimize shoreline disturbance in areas where soil bioengineering and plants are ineffective	N/A	
4-31	Use appropriate shore erosion control methods, such as returns or return walls, in areas where existing protection methods are being flanked or are falling	N/A	
4-32	Plan and design all steambank, shoreline, and navigation structures so that they do not transfer erosion energy to or otherwise cause visible loss of surrounding streambanks or shorelines	N/A	
4-33	Locate and design fuel stations so that spills can be contained in a limited area	N/A	
4-34	Design and install underground fuel storage tanks according to State regulations, including the provision of detection systems and automatic fuel tank and pump leak shut-offs	N/A	
4-35	Provide aboveground fuel tanks and fueling areas with a curbed or diked storage area to handle containment volumes meeting State (and local) codes and inspect regularly	N/A	
4-36	Use preferred pumpout systems: fixed-point, portable, dedicated slipside, and pumpout boats	N/A	
4-37	Design onsite wastewater treatment systems to specifically handle waste from vessels	N/A	

4-38	Post pumpout facility location and regulations at the marina. Charge fees that encourage rather than discourage facility use. Consider offsetting the cost of maintaining pumpout facilities by fuel sales where these facilities are conveniently located in	N/A	
4-c: Marinas, Existing and New			
4-39	Restrict boat repair and maintenance activities to clearly marked designated areas to prevent debris from falling into the water and preventing invasive species	N/A	
4-40	Secure all fueling facilities and storage areas with appropraite shut-off devices and security locks and inspect regularly	N/A	
4-41	Design fueling stations with spill containment equipment that is stored in a clearly marked location, accessible to work and storage areas. Post emergency phone numbers in a prominent location	N/A	
4-42	Design a spill contingency plan	N/A	
4-43	Inspect and maintain all containment berms or devices in accordance with State regulations. Investigate immediately signs of leakage or spillage, and undertake cleanup in accordance with applicable best management practices	N/A	
4-44	Have a trained operator present and prepared to respond to accidental spills	N/A	
4-45	Maintain daily inventory records to identify abnormal loss or gain of liquid	N/A	

4-46	Prohibit the cleaning of hoses, fittings, pumps, and other accessory equipment on piers, docks or adjacent upland to prevent runoff into the marina basin or other surface or groundwater	N/A	
4-47	Create and/or maintain a dedicated fund for maintenance in the case of government-owned facilities	N/A	
4-48	Restrict the operation of pumpout facilities to trained marina personnel only	N/A	
	Final Score: 0 out of 0 Total Possible Points		**0**
	Number of BMPs addressed (either fully or partially): 0 out of 0 BMPs (0%)		**0**

5: Roads and Bridges			
5-a: New Roads and Bridges			
5-01	Conduct road and bridge maintenance (de-icing material usage and storage, pot-hole repair, bridge washing, scraping and painting, etc) according to best management practices		
5-02	Conduct right-of-way activities (mowing, brush removal, pesticide and fertilizer use, etc) - according to best management practices		
5-03	Include high percentage of indigenous plants in new landscaping on public-owned properties (excluding arboretums, horticultural gardens, and site requiring turf grasses)		
5-04	Implement a regular inspection and maintenance plan of existing structures		
5-05	Develop and identify erosion/sediment control areas (examples include steep slopes, easily erodible soils, and nearby sensitive areas) and retrofit opportunities		

5-06	Require percentage of roads to be tested with non-salt and non-sand de-icing.		
5-b: Existing Roads and Bridges			
5-07	Minimize the amount of land disturbed and the duration of disturbance		
5-08	Preserve natural features and conform substantially with the natural boundaries and alignment of waterbodies		
5-09	Retain and protect trees and other natural vegetation on and near disturbed sites		
5-10	Retain additional runoff sites		
5-11	Minimize the creation of impervious areas		
5-12	Treat increased runoff caused by changed surface conditions to minimize the danger of flooding, erosion and pollutants entering waterbodies prior to, during and after construction		
5-13	Use temporary vegetation and mulching to protect exposed and critical areas during development		
5-14	Redistribute topsoil within the boundaries of the disturbed land for seeding and planting		
5-15	Stabilize disturbed soils as soon as possible		
5-16	Minimize the use of cut and fill operations. Conform such operations to topography and soils to minimize erosion potential and adequately accommodate runoff		
5-17	Control erosion and sedimentation prior to, during and after site preparation and construction		

5-18	Require long term stormwater management plan.		
5-19	Require long term sedimentation control & maintenance.		
	5-c: Existing and New Roads and Bridges		
5-20	Target existing public holdings, such as parks, for removing unecessary impervious surfaces		
5-21	Incorporate New York State Department of Transportation design and guidance documents, standard specifications, and procedural manuals (Highway Design Manual, Environmental Procedures Manual, Maintenance Guidelines, etc) into local laws and operating proc		
5-22	Ensure application of appropriate solid and hazardous waste generation and disposal practices including source controls and recycling		
5-23	Ensure proper operation and maintenance of runoff management facilities		
5-24	Participate in Cornell Local Roads Program activities and training		
5-25	Target training programs at highway officials, contractors, construction workers, inspectors, zoning and planning officials		
5-26	Target training and outreach programs about the proper handling of materials, leakage and spill prevention and spill response procedures at maintenance staff and workers		
	Final Score: 0 out of 52 Total Possible Points		**0**
	Number of BMPs addressed (either fully or partially): 0 out of 26 BMPs (0%)		**0**

6: Onsite Wastewater Treatment Systems			
6-01	Conduct regular inspections of OWTS at a frequency adequate to determine failure and undertake required maintenance		
6-02	Institute setback guidelines		
6-03	Promulgate plumbing codes that require practices that are compatible with OWTS		
6-04	Target outreach programs at homeowners, contractors and developers		
6-05	Inspection of all OWTS at property transfer or within 1 year prior to transfer		
6-06	Require all properties within 500' of municipal service to connect.	N/A	
6-07	Set goals for effluent limits (nitrogen, phosphorous, BOD, etc)		
	Final Score: 0 out of 12 Total Possible Points		**0**
	Number of BMPs addressed (either fully or partially): 0 out of 6 BMPs (0%)		**0**

	Overall Assessment Score: 20 out of 202 Total Possible Points	**20**
	Number of BMPs addressed (either fully or partially): 12 out of 101 BMPs (12%)	**12**