

CHAPTER 11



When Stefan Hay Co. founder Michael Stefan was approached by a friend about building a windmill on his farm in North Collins, he considered it a no-brainer. Not only would it produce low-cost electricity for 10 electricity meters in the town, it took away very minimal space on his 3,200 acres of land. Years later, the energy savings allow Stefan to continue investing in a fifth-generation family business, which now includes his three sons.

“If the windmill even helps us become a little more profitable, that helps my children,” Stefan says. “I’m a supporter of green energy, so it’s been a win-win situation.”



Agriculture and Food Systems



GOAL: Promote agriculture and food system solutions that advance farmland and environmental protection; strengthen ecosystem health; improve equitable access to healthy, local food; mitigate the impacts of climate change; and increase climate resiliency.

Agriculture is necessary for our civilization's survival and is an important contributor to Erie County's economy, contributing about 2.6% to our gross domestic product.¹²⁹ Of course, the history of agriculture in our County long predates these economic metrics, spanning thousands of years into the past to when the region's Indigenous peoples, the Haudenosaunee, first recognized the value and importance of Erie County's fertile soils and microclimate along the shores of Lake Erie.

Today, Erie County's agricultural resources are threatened by a variety of environmental and economic factors, and these threats are exacerbated by climate change.¹³⁰ Generations of unchecked development have resulted in a massive loss of farmland, which has contributed to the fragmentation of agricultural and natural lands, resulting in degraded habitat and land management challenges. Climate change is already impacting agriculture through increases in temperatures, changes in precipitation patterns, and more

frequent and extreme weather events.

The future of Erie County's agricultural land is uncertain. Our region's farmers are aging and most of the farmland will transfer into new hands in the coming years.¹³¹ As we look to the future, farming will need to be more inclusive to serve our whole community. Erie County will need to provide access and support to new and beginning farmers, especially farmers from Indigenous, immigrant, and refugee communities for their cultural farming practices.

Through the implementation of targeted actions, the County will be able to mitigate the impacts of climate change, strengthen our farms and food systems, increase climate resiliency, and improve access to locally grown, nutritious food for residents. As the impacts of climate change become more pronounced, the ways in which farmers farm and the County government supports the food system will be paramount in determining how resilient Erie County will be.

DEFINITIONS

FOR ACTIONS
SPECIFICATIONS

Short-term:

By or before 2030

Medium-term:

By 2040

Long-term:

By 2050

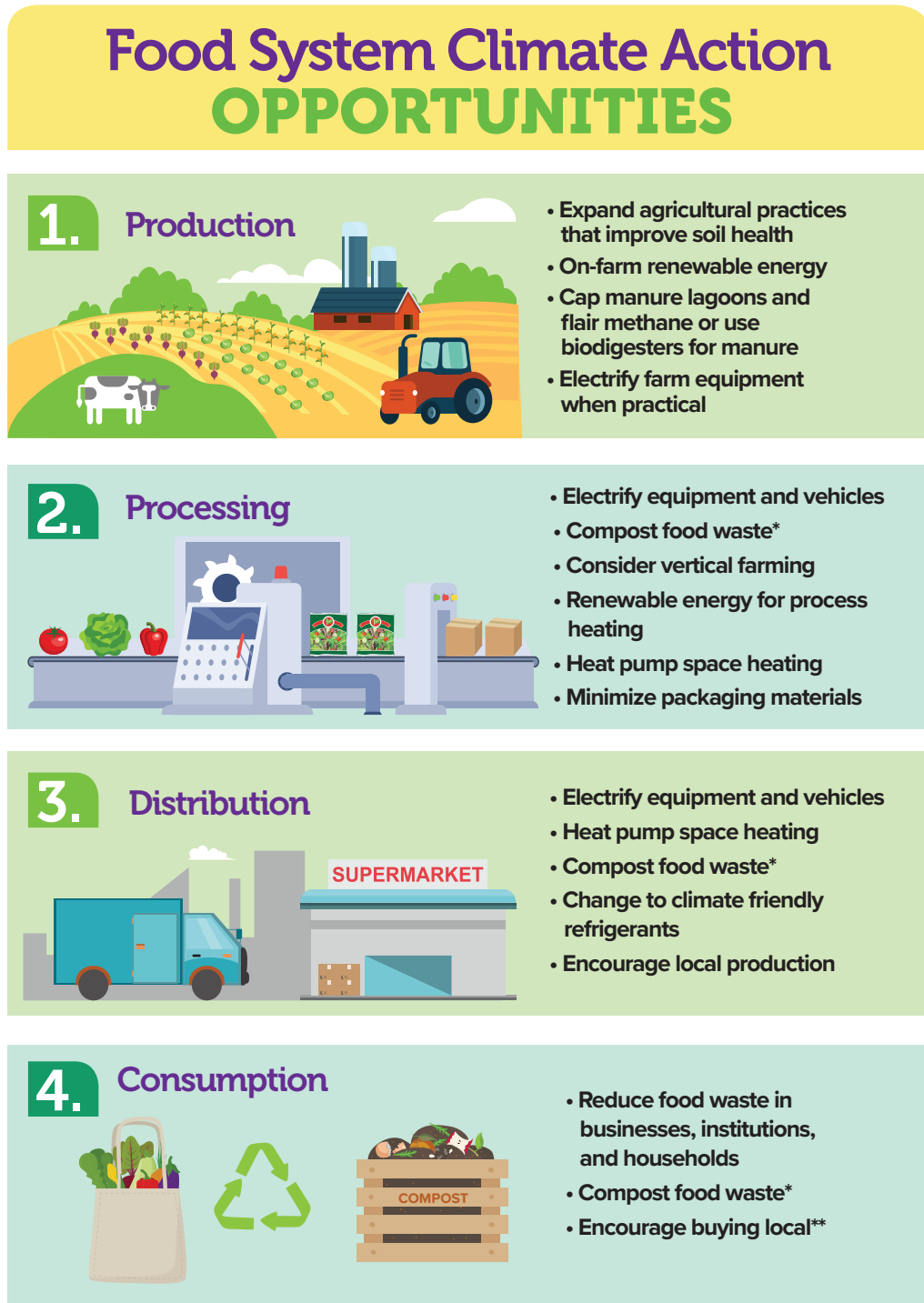
Direct:

County government can directly control the action - relating to County government operations and infrastructure

Indirect:

Regional agencies and municipalities have control and/or County government can support/influence

Figure 35 Food System Climate Action Opportunities



*Read more about food waste in the Consumption and Waste chapter

**Visit www.erie.gov/eriegrown for resources

Food systems are complex networks that include all the inputs and outputs associated with food production, processing, transport, and consumption. The inputs and outputs of the food system play a part in climate change, including equity and food security.

STRATEGY 1: Promote & Protect Agriculture

Our ability to slow climate change and withstand its predicted and potentially unanticipated effects is tied to the health of Erie County's ecosystem and our ability to produce the food we need within our region. Erie County

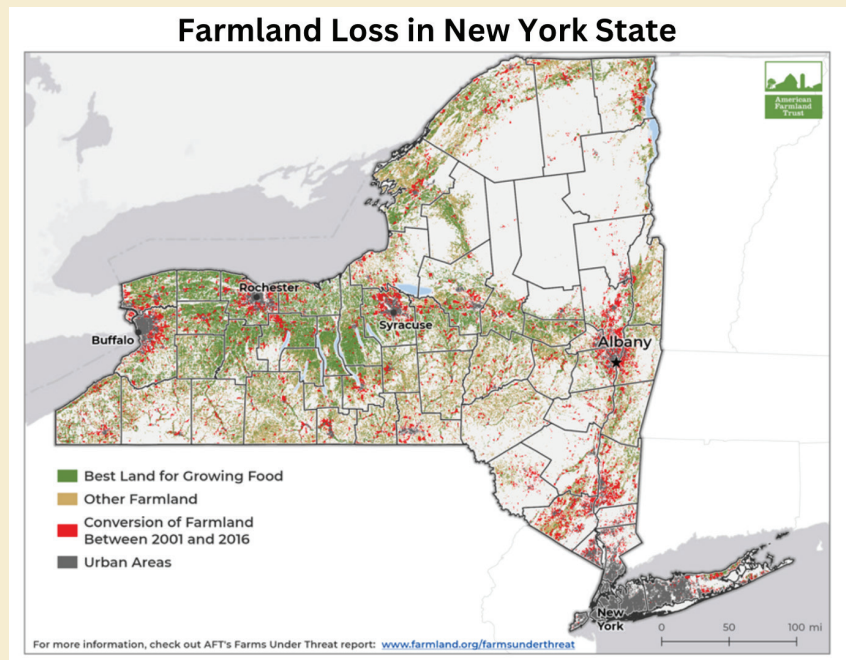
needs actions and policies to keep people farming, advance urban and rural farmland protection, discourage sprawl, support the viability of the agricultural economy while promoting agricultural education, and encourage

agricultural practices that protect the soil and ecosystem health, including providing opportunities for increasing carbon sequestration and GHG reduction.

Balancing Agriculture and Development

New York State has one of the highest levels of farmland conversion threat across the nation, with Erie County alone losing 79,134 acres of farmland since 1969.¹ Sprawling development patterns, a majority of which are residential, have resulted in a ring of agricultural land located on the fringes of Erie County.² As New York State works to achieve the Clean Energy Standard, competing interests for agricultural land must be balanced against farmland protection efforts and the climate and economic benefits of solar energy development. The County should encourage development of solar on marginal lands and rooftops, while protecting prime farmland, and encouraging the use of robust agrivoltaics where practicable.

Figure 36 Farmland Loss in New York State



American Farmland Trust, Farmland Loss in New York State, 2022, map, https://farmlandinfo.org/wp-content/uploads/sites/2/2022/01/NY-Smart-Solar-Siting-on-Farmland_FINAL-REPORT_1.31.22.pdf

Sources and Notes:

1 USDA, "Farms, Land, Value," 1969, https://agcensus.library.cornell.edu/wp-content/uploads/1969-New_York-Chapter_2_-_County_Summary_Data_For_Selected_Items_1969-483-Table-01.pdf; USDA National Agricultural Statistics Service, "County Summary Highlights: 2017," 2017, https://www.nass.usda.gov/Publications/AgCensus/2017/Full_Report/Volume_1_Chapter_2_County_Level/New_York/st36_2_0001_0001.pdf.

2 To learn more about urban sprawl, go to the Urban Sprawl call-out in the Housing and Neighborhood Resiliency chapter.

AGRICULTURE AND FOOD SYSTEMS GOAL: Promote agriculture and food system solutions that advance farmland and environmental protection; strengthen ecosystem health; improve equitable access to healthy, local food; mitigate the impacts of climate change; and increase climate resiliency.

STRATEGY 1: Promote & Protect Agriculture	HORIZON	SPHERE OF INFLUENCE	LEAD COUNTY ENTITY	PARTNERS
ACTION ITEM 11.1.1:	Support the development of the Evans Agribusiness Park and encourage the use of locally farmed products in its operations.			
	Short-Term	Direct	DEP	ECIDA, Town of Evans, Food Policy Council (FPC), Invest Buffalo Niagara
ACTION ITEM 11.1.2:	Use the General Municipal Law Section 239-M process to encourage the appropriate siting of developments (e.g., solar, residential) so that agricultural land is not negatively impacted.			
	Ongoing	Direct	DEP	Local municipalities
ACTION ITEM 11.1.3:	Support municipalities' enforcement of New York State's Agriculture and Markets (AGM) construction and mitigation guidelines for solar on farmland.			
	Ongoing	Indirect	DEP	Municipal code enforcement officers, AGM, Agriculture and Farmland Protection Board (AFPB)
ACTION ITEM 11.1.4:	Advocate for expanded impact mitigation payments to farmers for smaller renewable energy projects on smaller acreages of farmland.			
	Short-Term	Direct	DEP	AGM, FPC
ACTION ITEM 11.1.5:	Conduct outreach and education to municipal officials for farmland protection.			
	Ongoing	Direct	DEP	Local municipalities, UBRI, Natural Resource Conservation Service (NRCS), Erie County SWCD, WNY Soil Health Alliance, CCE, EC Farm Bureau, LEWPA
ACTION ITEM 11.1.6:	Support the protection of productive farmland with conservation easements.			
	Ongoing	Indirect	DEP	WNYLC, AFPB
ACTION ITEM 11.1.7:	Promote the use of enforceable soil safety and integrity regulations and testing to protect consumers.			
	Short-Term	Indirect	ECDOH	Greater Buffalo Urban Growers (GBUG), FPC, CCE, Erie County Farm Bureau, NY Farm Bureau (NYFB), Northeast Organic Farming Association (NOFA)
ACTION ITEM 11.1.8:	Maintain the geography of the Planning Policy Areas as identified in the Erie-Niagara Framework for Regional Growth through zoning, comprehensive planning, and preservation of farmland in rural areas.			
	Ongoing	Direct	DEP	Local municipalities

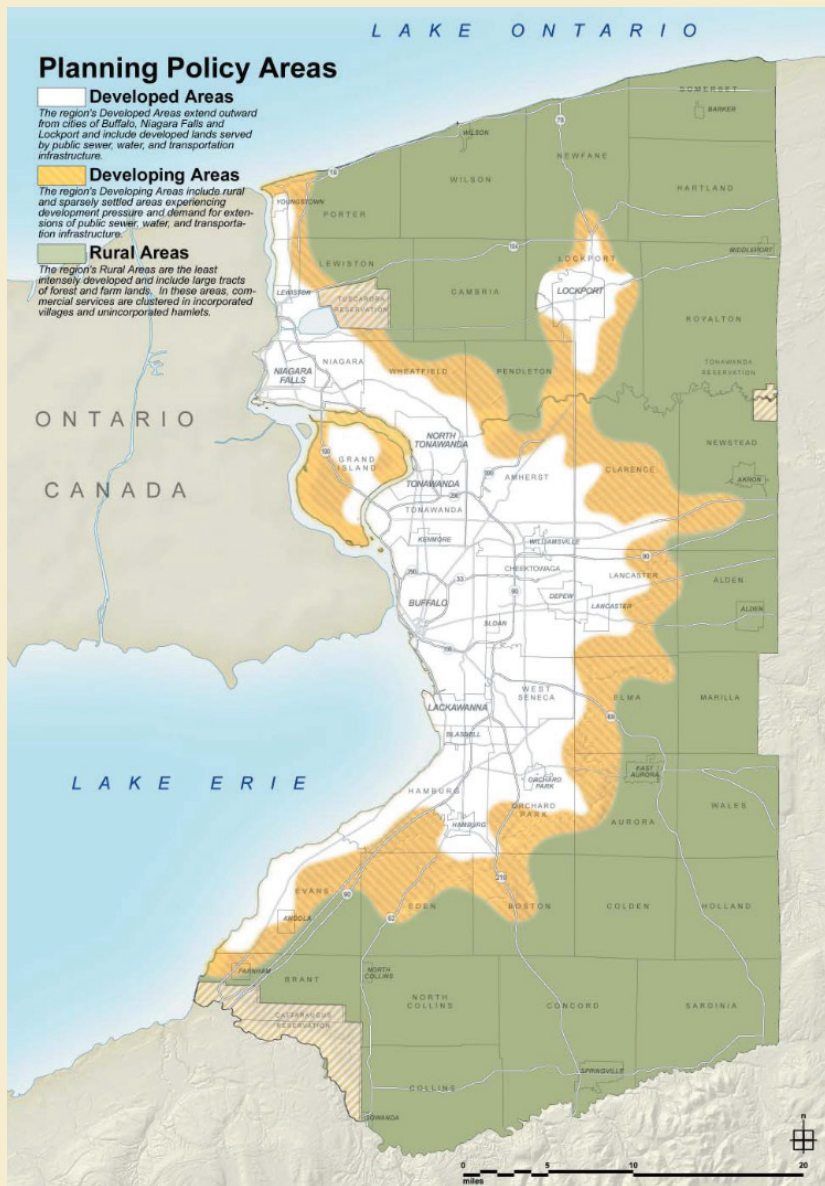
Erie-Niagara Framework for Regional Growth Planning Policy Areas

Erie and Niagara Counties partnered with one another to develop the Framework for Regional Growth, which establishes basic policies and principles to guide the future growth and development of the region.¹ The Framework generally discourages the expansion of water, sewer, and transportation infrastructure in rural areas as a means to prevent urban sprawl and thus protect farmland.

Note:

¹ To access the Erie-Niagara Framework for Regional Growth online, go to Erie County's website at <https://www4.erie.gov/regionalframework/framework-regional-growth-final-plan>

Figure 37 Erie County Planning Policy Areas



Erie County, Planning Policy Areas, map, https://www4.erie.gov/regionalframework/sites/www4.erie.gov/regionalframework/files/2021-06/Framework_Chapter_3.pdf

STRATEGY 2: Protect & Restore Ecosystems

To restore ecosystems, the County must discourage urban sprawl, promote sustainable nutrient management and integrated pest management practices, and encourage agricultural and forestry practices that promote healthy ecology with clean

water, clean air, and robust biodiversity. This Plan advocates for policies that promote carbon sequestration on farm and forest land, create training and capacity building opportunities for community members and stakeholders, minimize the consumption of fossil

fuels, and promote the use of renewable energy captured locally.

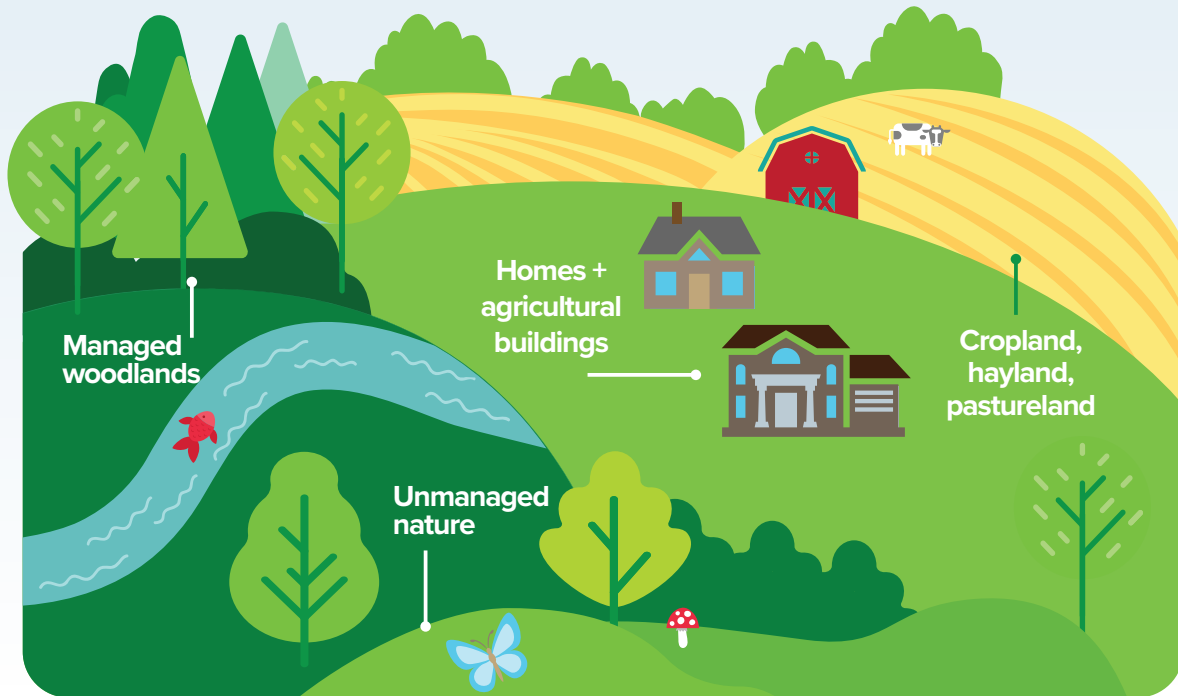
To learn more about restoring ecosystems, check out the Nature-based Solutions chapter.

STRATEGY 2: Protect & Restore Ecosystems	HORIZON	SPHERE OF INFLUENCE	LEAD COUNTY ENTITY	PARTNERS
ACTION ITEM 11.2.1:	Promote the reduced use of pesticides and synthetic fertilizer while advocating for alternatives that regenerate soil biology as a key to improving soil health.			
	Ongoing	Direct	DEP	ECDOH, Erie County SWCD, NYSDEC
ACTION ITEM 11.2.2:	Provide regular training to municipal officials and the community at large on the proper use of the State Environmental Quality Review Act (SEQRA) and project review tools, with consideration of a proposed project's ecological and climate impacts.			
	Ongoing	Direct	DEP	NYSDEC, NYSDOS, local municipalities
ACTION ITEM 11.2.3:	Provide stable and enhanced support for agencies and organizations with missions and functions that help reinforce agroecosystem restoration, protection, and enhancement.			
	Ongoing	Indirect	DEP	CCE, FPC, Erie County SWCD
ACTION ITEM 11.2.4:	Promote sustainable forest management to increase carbon sequestration and climate resiliency while protecting forest ecosystems.			
	Ongoing	Direct	Parks	Erie County SWCD, NYSDEC, NRCS, CCE, private sector businesses

Figure 38 Agroecosystems

What is an Agroecosystem?

Agroecosystems are the communities of plants and animals interacting with their physical and chemical environments that have been modified by people to produce food, fiber, fuel, and other products for human consumption and processing.



Rural agroecosystems
are typically large commercial farms



Urban/suburban agroecosystems
bring local economic & biodiversity benefits



Potential positive ecological impacts of Agroecosystems



Habitat & biodiversity



Air quality



Water quality



GHG reduction

STRATEGY 3: Access to Healthy Food

Food insecurity and food injustice are issues for many Erie County residents. The historical inequity of the food system fails to serve our most vulnerable populations and is particularly challenging for disadvantaged communities. This Plan supports the many ongoing initiatives focused on

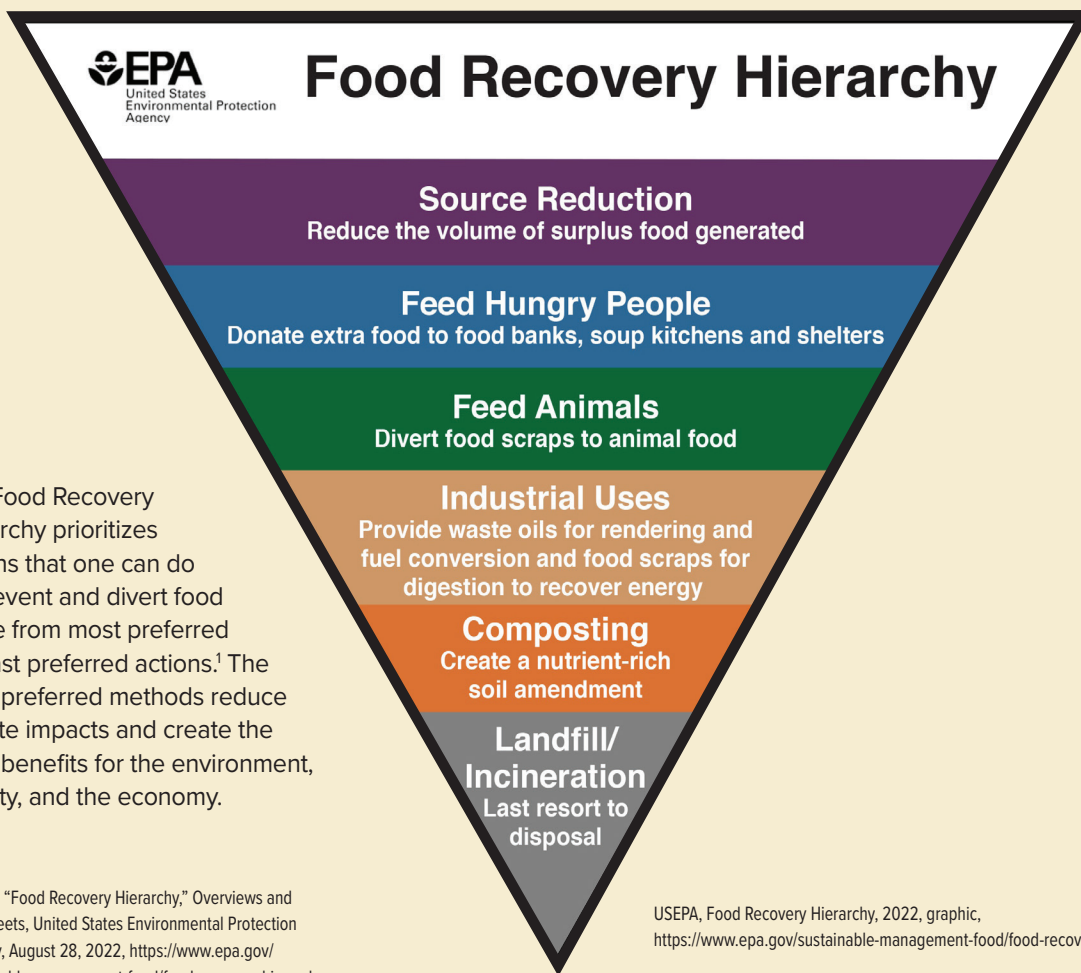
creating an equitable food system that benefits all by encouraging greater participation in the growing, processing, and distribution of food throughout all areas of Erie County. This Plan also supports the ethical treatment of front-line farm laborers.

Note that food injustice is addressed

in several existing documents, including:

- The Buffalo and Erie County Local Food Action Plan¹³²
- The UB Food Systems Planning and Healthy Communities Lab¹³³
- One Region Forward - Growing Together Report¹³⁴

Figure 39 USEPA Food Recovery Hierarchy



STRATEGY 3:
Access to
Healthy Food

	HORIZON	SPHERE OF INFLUENCE	LEAD COUNTY ENTITY	PARTNERS
ACTION ITEM 11.3.1:	Support the sale and consumption of locally produced foods by supporting relevant legislation and programming, such as value-based procurement and the Good Food Purchasing Program.			
	Ongoing	Indirect	DEP, ECDOH	FPC, AFPB, NYFB, GBUG, NYS Senate, Good Food Buffalo, Erie Grown, PPG
ACTION ITEM 11.3.2:	Promote the Healthy Community Store Initiative¹³⁵ to provide healthy options at corner stores, especially those in food insecure neighborhoods.			
	Ongoing	Indirect	ECDOH	CCE, FPC
ACTION ITEM 11.3.3:	Promote incentives for food retailers in food insecure, disadvantaged communities who provide fresh produce, locally sourced meats, and culturally appropriate food.			
	Ongoing	Indirect	ECDOH	NYSDOH, AGM, USDA, NRCS, Field & Fork, FPC, American Heart Association
ACTION ITEM 11.3.4:	Improve the existing food donation network and increase food security by incorporating surplus prepared foods.			
	Long-Term	Indirect	ECDOH	FeedMore WNY, AGM, FPC
ACTION ITEM 11.3.5:	Encourage regulatory authorities to prioritize helping small-scale food producers overcome food safety regulation hurdles.			
	Medium-Term	Indirect	ECDOH	FPC, UB Food Lab, USDA, Food Safety and Inspection Service (FSIS), CCE, AGM
ACTION ITEM 11.3.6:	Enhance educational campaigns to educate consumers on the impacts that their food choices have on nutrition and waste.			
	Short-Term	Direct	ECDOH	NRCS, Erie County SWCD, CCE, Urban Fruits and Veggies, West Side Promise Neighborhood, African Heritage Food Cooperative, MAP
ACTION ITEM 11.3.7:	Support expanded educational programming on at-home canning and other food preservation techniques, as well as eating seasonally to increase the shelf life of local foods and incentivize local purchasing.			
	Short-Term	Indirect	ECDOH	FPC, CCE
ACTION ITEM 11.3.8:	Explore participation in the Good Food Purchasing Program.¹³⁶			
	Short-Term	Direct	Purchasing	Local municipalities, school districts
ACTION ITEM 11.3.9:	Build support for and recommend changes to policies and health codes that support and encourage food waste recovery infrastructure and diversion.			
	Short-Term	Indirect	ECDOH	FPC, NYSDEC, local municipalities

STRATEGY 4: Mitigate the Impacts of Climate Change

As explained throughout this Plan, the impacts of climate change are already being experienced by Erie County residents, which includes farmers and other workers that contribute to the food supply chain. As climate change impacts such as weather extremes increase, food systems must

adapt if they are to remain productive. Climate-friendly farming practices,

Visit the Consumption and Waste Chapter to learn about how food systems and food waste go together.

such as regenerative and sustainable agriculture, have the potential to alle-

viate continued trends toward climate change and can build up the resiliency of our local food system. This Plan advocates for the continued support of regionally-specific practices that align with climate-smart programs and initiatives at the local, state, national, and global levels.

STRATEGY 4: Mitigate the Impacts of Climate Change	HORIZON	SPHERE OF INFLUENCE	LEAD COUNTY ENTITY	PARTNERS
ACTION ITEM 11.4.1:	Establish a renewable energy siting policy (e.g., PILOT or community benefit agreement) that protects farmland while supporting renewable energy development.			
	Short-Term	Direct	DEP	Real Property Tax Services (RPTS), Law Department
ACTION ITEM 11.4.2:	Conduct outreach and education to farmers about the importance of adapting to climate change.			
	Ongoing	Direct	DEP	NRCS, Erie County SWCD, CCE
ACTION ITEM 11.4.3:	Update the Erie County Agricultural and Farmland Protection Plan to include climate resiliency, mitigation, and adaptation initiatives.			
	Short-Term	Direct	DEP	AFPB

Further Reading

Promote & Protect Agriculture Strategy

General Municipal Law §239-M/Integrated Review Process – NYS General Municipal Law, Sections 239-l, m and n, provide for the referral and coordination of certain Town, City, and/or Village proposed land use actions that may have more of a regional or inter-community impact. This law requires local municipalities to refer actions that meet a certain threshold to the County Planning Department for review and comment.

<https://www3.erie.gov/environment/municipal-referrals>

Access to Healthy Food Strategy

Healthy Community Service Initiative –

A collaborative partnership and coalition to address increasing access to fresh, healthy foods in the City of Buffalo.

<https://erie.cce.cornell.edu/healthy-community-store-initiative>

STRATEGY 5: Coordination

Lack of collaboration between governance systems, including Erie County, is an issue across the United States that has resulted in fragmented policy responses to the ongoing climate crisis. Recognizing that we are all facing rapidly changing climate impacts

together, we must learn to collaborate for the benefit of our communities, including those within the agricultural and food system sectors. Acknowledging that a history of past mistakes has resulted in government mistrust, this Plan encourages and promotes the

coordination and collaboration among government agencies, Tribes and Nations, private entities, BIPOC individuals, and all Erie County residents to work towards taking regionally-coordinated climate action that supports the County’s agriculture and food systems.

STRATEGY 5: Coordination	HORIZON	SPHERE OF INFLUENCE	LEAD COUNTY ENTITY	PARTNERS
ACTION ITEM 11.5.1:	Work with existing food hubs to expand opportunities and connections between farmers, restaurants, and retailers.			
	Ongoing	Indirect	DEP	Buffalo Go Green, African Heritage Food Cooperative, MAP, PFC, Feed Buffalo, Alliance Butchery, FPC, CCE
ACTION ITEM 11.5.2:	Create an Erie County one-stop-shop of agriculture and food system programs and resources.			
	Short-Term	Direct	DEP, ECDOH	Erie County SWCD, NRCS, FPC
ACTION ITEM 11.5.3:	Promote and share examples of regenerative agriculture practices being conducted in our region.			
	Ongoing	Direct	DEP	Erie County SWCD, CCE, MAP

FOOTNOTES: Agriculture and Food Systems

- 129 USDA, “2017 Census of Agriculture: County Profile,” 2017, https://www.nass.usda.gov/Publications/AgCensus/2017/Online_Resources/County_Profiles/New_York/cp36029.pdf
- 130 Clark et al., “Climate Vulnerability Assessment.”
- 131 Samantha Levy, Mikaela Ruiz-Ramón, and Ethan Winter, “Smart Solar Siting on Farmland: Achieving Climate Goals While Strengthening the Future for Farming in New York” (American Farmland Trust, February 2022), https://farmlandinfo.org/wp-content/uploads/sites/2/2022/01/NY-Smart-Solar-Siting-on-Farmland_FINAL-REPORT_1.31.22.pdf
- 132 To read the Food Policy Council of Buffalo and Erie County’s Local Food Action Plan 2020 – 2024, go to <https://www3.erie.gov/fpc/sites/www3.erie.gov/fpc/files/2021-09/beclfp-9.14.21.pdf>
- 133 To learn about UB Food Systems Planning and Healthy Communities Lab, go to UB’s website at <http://foodsystemsplanning.ap.buffalo.edu/>
- 134 To read the One Region Forward Growing Together Report from UBRI, go to https://foodsystemsplanning.ap.buffalo.edu/wp-content/uploads/sites/68/2017/06/GrowingTogether_Final-2.pdf
- 135 To learn more about CCE’s Healthy Community Store Initiative, go to CCE’s website at <https://erie.cce.cornell.edu/healthy-community-store-initiative>
- 136 To learn more about the Good Food Purchasing Program, go to the Good Food Purchasing website at <https://goodfoodpurchasing.org/>