Erie County Environmental Management Council
Annual Recomendations Report 2024

- Photos by John Whitney

Table of Contents

Executive Summary

The Erie County Environmental Management Council (EMC) is made up of representatives from many of the cities, towns, and villages within Erie County, as well as 12 at-large members from throughout the County. The EMC's mission is to advise County government on addressing local environmental concerns, as well as serving as a liaison between the community and County government.

To that end, the EMC prepares an Annual Recommendations Report to advise and inform strategic planning and set priorities for the allocation of resources that address environmental issues facing Erie County. It is important to note that many of the EMC's recommendations have been implemented, and the EMC would like to congratulate County leadership and staff for their work in improving the environmental quality of Erie County.

In particular, the EMC wants to recognize the County's recent achievements furthering priorities that focus on environmental stewardship and improved quality of life, such as:

- Releasing and adopting an equity-focused Community Climate Action Plan (CCAP)
- Supporting sustainable transportation options including the installing the County's first Level 3 EV charger at Akron Falls Park
- Securing three major grants: $3M for a green roof on the Central Library, $1M for rooftop solar projects at the Central Library and the Botanical Gardens, and $5M for a Community Forestry project, and
- Statewide leadership in NYSERDA's Clean Energy Communities programs – where Erie County was the first large community in the state to achieve 5-star status.

Over the past year, the EMC has also overseen some of its own programming:

- The EMC's Environmental Excellence awards are designed to bring attention to municipal and not-for-profit projects that have a positive environmental impact. This year's awardees were recognized through an Earth Day awards ceremony at Johnnie B. Wiley Amateur Athletic Sports Pavilion. **(www.erie.gov/emc)**
- The EMC continues to advocate for chemical-free lawns through its healthy lawns campaign, called "A Safe Home for the Gnomes" **(www.erie.gov/healthylawns)**.
- The Climate Change Task Force, a committee of the EMC, continues to work with County staff and County-wide stakeholders on implementation of the equity-focused Community Climate Action Plan **(www.erie.gov/climateaction)**, which it helped to create.

While the report contains many separate recommendations, the EMC would like to bring attention to their interconnected nature. The EMC recognizes that environmental issues are also connected to social justice issues. For example, transitioning to electric vehicles can improve air quality in historically underserved communities. Thus, the EMC would like to stress the importance of the recommendations made in the Environmental Justice chapter as fundamental and supportive of the recommendations in other chapters.

Executive Summary

First and foremost, the County should work to address climate change by reducing greenhouse gas emissions and preparing for the effects of climate change at the same time. This work must be done with climate and environmental justice in the forefront of decision-making so that the mistakes of the past are not repeated.

1. **Improve our transportation system:** Work with regional partners to develop an equitable, zero-emission, multi-modal transportation system. Transportation is the largest part of our greenhouse gas inventory, and we need a multi-pronged approach – not business as usual.

2. **Use less energy and support renewables:** Ramp up local energy conservation and renewable energy use by sharing the County's experience with Energy Performance Contracts, Direct Pay incentives, and Community Solar with other municipalities, as well as promoting NYSERDA's commercial and residential programs. Work to encourage renewable energy development especially on brownfields, parking lots, and on rooftops.

3. **Protecting land/stop sprawl:** Rural land serves as a source of food production, a carbon sink and wildlife habitat. Preventing sprawl in a strategic way and in coordination with community partners has multiple benefits and the County should use all available planning tools to encourage densification of development.

4. **Waste not, want not:** Support significant expansion of food composting through technical assistance, education, advocacy, and the pursuit of grants. By composting food, we reduce particularly potent greenhouse gas emissions and produce a valuable soil amendment.

5. **Prepare for a changing climate:** Our current infrastructure needs to be reassessed for its ability to withstand the impacts of climate change. For example, increasing the use of green infrastructure can help mitigate the effects of intense rain events, and heat pumps can reduce greenhouse gas emissions while also providing air condition during extreme heat events.

The EMC urges County leaders to continue to invest in the protection and restoration of our people and environment. Prioritizing this work is an opportunity to improve our environment and to foster economic prosperity and quality of life for current and future generations of Erie County residents.

Introduction

The Erie County Environmental Management Council (EMC) writes a yearly recommendation report for the County, which is shared with the County Executive, Legislature, County departments, local municipalities, and the general public.

Background

The EMC is made up of representatives from many of the cities, towns, and villages within Erie County, as well as 12 at-large members from throughout the County. Their terms run for two years. A list of EMC members serving the current term is included in the sidebar.

The EMC's mission is to advise County government on addressing local environmental concerns, as well as serving as a liaison between the community and County government. To that end, the EMC prepares an Annual Recommendations Report to advise and inform strategic planning and set priorities for the allocation of resources that address environmental issues facing Erie County. It is important to note that many of the EMC's recommendations have been implemented, and the EMC would like to congratulate County leadership and staff for their work in improving the environmental quality of Erie County.

In particular, the EMC wants to recognize the County's commitment to further advance priorities that focus on improved quality of life and environmental stewardship such as:

- Releasing and adopting an equity-focused Community Climate Action Plan (CCAP)
- Supporting sustainable transportation options including the installation of the County's first Level 3 EV charger at Akron Falls Park
- Securing three major grants: $3M for a green roof on the Central Library, $1M for rooftop solar projects at the Central Library and the Botanical Gardens, and $5M for a Community Forestry project, and
- Statewide leadership in NYSERDA's Clean Energy Communities programs – where Erie County was the first large community in the state to achieve 5-star status.

MEMBERS OF THE ENVIRONMENTAL MANAGEMENT COUNCIL 2025

At-Large Representatives:

Marcus Rosten, Chair
Sharon Bachman
Jeanne Beiter
Amun Ra
Tendaji Ya'Ukuu
Athena Clabeaux
Josh McClain
Anne McCooey
Dr. Susan McCartney
Jenny Mogavero
Andrea Ó Súilleabháin, J.D.
Dr. Noemi Waight

Municipal Representatives:

Aurora (T) - Don Owens
Boston - Mitch Tucker, Ph.D.
Clarence - Brenda Young, Vice Chair
Depew - Mayor Kevin Peterson
Evans - William Smith
Grand Island - Sam Akinbami
Hamburg (T) - Leona Rockwood, Secretary
Hamburg (V) - Village Trustee, Holly Park
Holland Councilmember, Daniel F. C. Lotito
Lancaster (T) - Julius McCann
Lancaster (V) - Mayor Lynne Ruda
Newstead (T) - Lewis Tandy
Orchard Park (T) - Richard Schechter
Tonawanda (T) - Cathy Stearns
West Seneca - Leane Schultz
Williamsville (V) - Jane Vohwinkel

EMC Members June 1, 2024 through May 31, 2025

Introduction

Major national events have highlighted the need for the EMC to uplift environmental justice in a more direct way. Therefore, since 2022, the EMC's Recommendations Report has begun with an environmental justice chapter. The chapter discusses how decisions related to the environment add to the burden of neighborhoods that have historically been the target of disinvestment. We cannot rectify these wrongs without recognizing the systems and patterns that caused these outcomes. Thus, we recommend that environmental justice be the lens through which all the County's projects are completed moving forward, and the EMC has focused on environmental justice considerations in crafting the recommendations contained in this report. To that end, the Climate Change Task Force, a committee of the EMC, continues to work with County staff and County-wide stake-holders on implementation of the equity-focused Community Climate Action Plan (www.erie.gov/climate-action), which it helped to create.

In addition to its work with the Climate Change Task Force, the EMC has two other major initiatives:

- The EMC Environmental Excellence Awards (www.erie.gov/emc) are designed to bring attention to municipal and not-for-profit projects that have a positive environmental impact. This year's awardees were recognized through an Earth Day awards ceremony at Johnnie B. Wiley Amateur Athletic Sports Pavilion.

- The EMC continues to advocate for chemical-free lawns through its healthy lawns campaign, called "A Safe Home for the Gnomes" (www.erie.gov/healthylawns).

The EMC welcomes discussion about this report with County officials, department heads, and staff. We encourage leadership to share priorities outlined in this report with local officials and encourage departments and staff to provide feedback about implementing actions outlined in it. We also welcome discussion with local governments and the community.

- Members of the EMC

Introduction | 2024 EMC Award Winners

- MLK Day of Service Volunteers

The Annual MLK Day of Service, a local project organized by the Monarch of Infinite Possibilities LLC, the Michigan Street African American Heritage Corridor, and the NAACP Buffalo Branch, focuses on improving the environment. Over the past four years these organizations have grown the event from a handful of volunteers to hundreds of volunteers. They have also increased partnerships, as well as expanded the number of sites and types of projects. Not only has this project improved the environment, but it has also brought together the environmental organizations and groups on the East Side of Buffalo, strengthening relationships and building community.

- Frontier High School Tree Planting Project

The Frontier High School Elementary School Tree Project has been an annual program delivered for seventeen years by the school's Ecology Club to teach the importance of trees through classroom-based presentations and a tree seedling distribution. The project is sustained by fundraisers and with coaching from Cornell Cooperative Extension of Erie County Master Gardener volunteers. The Club's students prepare an education plan for teaching all classroom levels of elementary students about the benefits of trees and tree-planting and care, including hands-on experience by using skits, props, activity booklets, a seedling planting demonstration, and a coloring contest. Annually, Ecology Club students seek feedback to improve the program and to incorporate current environmental issues.

- Omega Mentoring Program volunteering with Buffalo Freedom Gardens

Climate Connections for Buffalo's East Side Youth Project led by the Omega Mentoring Program at Jonny B. Wiley Center builds relationships with organizations so that the students, as well as the mentors, can learn about opportunities to take climate action - both preparing for and working to reduce the impact of climate change. In turn, the mentors and Just Buffalo Literary Center work with the students to synthesize this information and share it with the broader community. Sessions are held every other Monday evening during the school year to engage in programming, volunteer opportunities, writing projects, and tours that correlate to Erie County's Community Climate Action Plan.

Community Climate Action Plan Task Force Members:

Dr. Susan Clark, Chair – State University of New York (SUNY) University at Buffalo

Jason Kulaszewski, Secretary – EMC, UB Regional Institute

George Besch – Designing to Live Sustainably (D2LS)

Justin Booth – GObike

Joy Testa Cinquino – Buffalo & Erie County Public Library – Central Library

Amelia Cooke - State University of New York (SUNY) University at Buffalo

Kelly Dixon – GBNRTC

Emily Dyett – Buffalo Niagara Waterkeeper

Nadya Elhalawany – WNY Youth Climate Council

Doug Funke – Citizens for Regional Transit

Clarke Gocker – PUSH Buffalo

Darren Kempner – NFTA

Faustenia Morrow – EMC

Jon Nickerson – National Grid

Jason Paananen – City of Buffalo

Kelley St. John – City of Buffalo

Kyle Semmel – Western New York Land Conservancy

Holly Schreiber - Buffalo Museum of Science

Whitney Skeans – National Grid

Matthew Sutton – Town of Tonawanda

Kelly Tyler – NYSERDA

Blossom Vance – Seneca Nation

Ignacio Villa - American Farmland Trust

John Whitney – Cornell Cooperative Extension

Sarah Wooton – Partnership for the Public Good

Brenda Young – EMC, Daemen University

Athena Clabeaux – WNY Youth Climate Council

Commissioner Dan Castle – Erie County Environment & Planning

Deputy Commissioner Bonnie Lawrence – Erie County Environment & Planning

Tuona Batchelor – Erie County Office of Economic Development

Monica Boutin – County Executive's Office/Erie County Department of Environment and Planning

Sarah Gatti – Erie County Office of Agriculture

Andrew McLaren – EEO

Sarah Sanford - Erie County Environment & Planning

Tracy Skalski – Erie County Environment & Planning

Deputy County Executive Lisa Chimera – County Executive's Office

P. Josh Wilson – Erie County Environment & Planning

- Freddie at a community event on Grand Island

A Safe Home for the Gnomes Info:

The EMC continues to advance its Healthy Lawns Campaign, "A Safe Home for the Gnomes" with the spokesgnome Frederick Lawn Gnomested, aka "Freddie," who was named during a contest last year. Residents pledge to not use chemicals on their lawn and then receive a lawn sign to post on their property. Pictures of the gnome at various environmental and community sites from around the region are posted to social media and community websites. The project has many partners, including the Cornell Cooperative Extension (CCE). Assistance through the CCE's Master Gardeners Program has proved to be vital. The EMC pursued this project because reducing the use of lawn care chemicals and increasing native plantings is something all homeowners can do. Moreover, these actions directly protect water quality, pollinators, and human health. For example, preventing excess lawn fertilizer from entering storm sewers can reduce the likelihood of a harmful algal bloom occurring in Lake Erie. Freddie can be found at public events and is popular with kids and adults alike!

Environmental Justice

Environmental justice is defined by the United States Environmental Protection Agency as the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. This can only be achieved when everyone enjoys the same degree of protection from environmental and health hazards and has equitable access to the decision-making process to have a healthy environment in which to live, learn, and work.[1]

In Erie County, as in the rest of the nation, frontline communities such as Black, Indigenous, and People of Color (BIPOC), as well as low-income communities, bear the largest burden of climate change impacts and associated pollution. These frontline communities have historically been systemically excluded from the environmental decision-making process and have had significantly limited opportunities for participation, while facing much greater risks of health complications imposed by environmental hazards.[2]

For example, Erie County residents living in older housing stock are more likely to be exposed to the dangers of lead-based paints and from lead plumbing.[3] Lead has been shown to affect the development of fetuses and have behavioral and health impacts on both adults and children. Children are at particular risk of suffering long-term cognitive development effects from lead poisoning. Historical policies, system inequities, and racially biased income disparities in Erie County put people of color at particular risk of health threats related from lead exposure, due to concentrated poverty and aging infrastructure in predominantly BIPOC neighborhoods.[4]

Additionally, these households bear a greater energy burden related to climate change. As the region sees more high heat days, those older homes allow more of that heat inside the house. Older, inefficient homes, often prevalent in low-income and BIPOC communities due to historical disinvestment, require more air conditioning to address the higher heat, and increased usage of air conditioning drives up electric costs for residents who are already experiencing financial burdens. Pair this high heat issue with a respiratory issue, such as asthma, and you add on unexpected healthcare costs. Thus, the burden of climate change becomes even greater on low-income and BIPOC households. The outcomes of these inequities are evidenced by what are known as social determinants of health (SDOH).[5]

What are social determinants of health?
Social determinants of health (SDOH) are the conditions in the environments where people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks. SDOH have a major impact on people's health, well-being, and quality of life, and environmental injustices, such as pollution and lack of green space, are deeply tied to these determinants.

Examples of SDOH include:

- Safe housing, transportation, and neighborhoods
- Racism, discrimination, and violence
- Education, job opportunities, and income
- Access to nutritious foods and physical activity opportunities
- Clean air and water
- Language and literacy skills.

Environmental Justice

SDOH also are likely indicators of wide health disparities and inequities. For example, people who don't have access to grocery stores with healthy foods are less likely to have good nutrition. That raises their risk of health conditions such as heart disease and diabetes and even lowers life expectancy relative to people who have access to healthy foods.[6]

Another example would be environmental hazard exposures in communities with functioning industrial sites, as well as remediation sites. The local communities facing the greatest risks from current and former industry are Buffalo, Lackawanna, and the Tonawandas as they each have long histories of industrial activity. Within these communities, environmental hazards are often clustered. People who live adjacent to, nearby, or downwind from these sites face an increased risk of adverse health impacts. Research on toxic hazards shows that people who live near these sites are more likely to experience higher rates of various health problems including low birth weights, birth defects, immune system disorders (such as Lupus), cancers of various types, and respiratory illnesses.

Environmental hazards in Erie County not only threaten public health and environmental quality, but they also present environmental and racial justice situations that impose disproportionate impacts across the social and geographic landscape. Because the County is a major provider of social services to BIPOC and low-and moderate-income (LMI) residents, it is imperative that Erie County use the SDOH framework to identify communities and ensure environmental justice efforts are inclusive of those populations in the decision-making process related to addressing environmental hazards in the County.

Similar to the County's approach with the CCAP, all of the report chapters and recommendations have been reviewed by the EMC through an Environmental Justice lens to make sure these considerations are woven into the recommendations and adequately addressed throughout the report.

- Planting a Butterfly Garden at Johnnie B. Wiley Stadium

- Omega Mentoring Program at Tifft Nature Preserve

Just Transition

Just Transition is a principle, a process, and a practice. The principle of just transition is that a healthy economy and a clean environment can and should co-exist. The process for achieving this vision should be a fair one that should not cost workers or community residents their health, environment, jobs, or economic assets. Any losses should be fairly compensated. And the practice of just transition means that the people who are most affected by pollution - the frontline workers and the fenceline communities - should be in the leadership of crafting policy solutions.

Environmental Justice

Recommendations:

1. **Build upon the work of the Office of Health Equity to extend the use of the Racial Equity Impact Analysis tool, which was part of the County Climate Action Planning process, to incorporate an environmental justice lens on County projects.**
    Using the example created by the Live Well Erie and the climate action planning process, use the SDOH and direct interaction with impacted populations to ensure quality-of-life issues are being considered when allocating dollars for residential programming, and continue to provide racial equity training for all County employees and elected officials as part of the on-boarding process.

2. **Prioritize the safety and health of historically underserved communities, control potential regressive impacts of future climate change mitigation and adaptation policies on these communities and prioritize the allocation of public investments in these areas.**
    This work should rectify the way that climate change especially heightens the vulnerability of under-served communities, which bear environmental and socioeconomic burdens as well as legacies of racial and ethnic discrimination. The Climate Act requires all State agencies and authorities to prioritize reductions of greenhouse gas (GHG) emissions and co-pollutants in communities historically impacted by environmental injustice. The County should do the same.

    As part of the Community Climate Action Plan, the County had conducted a Climate Vulnerability Assessment that identified extreme heat as an increasing threat to our community that is especially threatening to vulnerable residents and disadvantaged communities. To help to address these issues the County has successfully pursued two grants. The first, is a New York State grant to work with University at Buffalo to create an Extreme Temperature Emergency Plan that will improve the County's response to extreme heat and cold events. Second, the US Department of Agriculture Community Forestry grant is a 5-year initiative to improve tree canopy in its most vulnerable communities.

    Expanding tree canopy coverage is an important strategy in mitigating the impacts of climate change, such as heat waves, flooding, and air pollution. However, it also serves to correct the historical inequities in green space distribution, particularly in low-income and BIPOC neighborhoods, which have disproportionately less access to trees and green infrastructure. Increasing the tree cover in these areas will help reduce the urban heat island effect, improve air quality, and contribute to overall public health, while addressing the long-standing disparities in access to environmental benefits.

- Volunteering at Juneteenth

3. **Provide pathways and programs for residents to increase energy efficiency and reduce their climate footprint.**

    The County, across many of its operational areas, has deep interactions with the community – especially vulnerable populations. The County should ensure equitable engagement and distribution of resources for vulnerable populations in coordination with Live Well Erie[7] as the New York State Climate Act[8] is implemented. We recommend that the County implement the Erie County Low-Income Program for Sustainable Energy (ECLIPSE) and United States Department of Housing and Urban Development (HUD)/Community Development Block Grant (CDBG) programs that support BIPOC and low and moderate - income (LMI) residents to help address sustainable housing, energy efficiency, renewable energy, electrification of transportation and building heating, food access, public transportation access, broad-band, and agricultural programs. The County should also continue to work with the WNY Regional Clean Energy Hub to improve access to NYS clean energy programs for LMI residents. All of this work should complement and support existing work being done through local community-based organizations.

4. **Support training opportunities to ensure that current and formerly employed power plant,natural gas, and carbon-based businesses' workers benefit from the transition to clean energy.**

    As the dominant human services provider in the community, Erie County has a unique understanding and capacity to ensure that our transition to a low-carbon community is a "just transition," done equitably and in a way that lifts disadvantaged communities, people of color, and limits harm to workers impacted by economic change. Engaging and supporting displaced workers early on is imperative, and these efforts involve partnerships with community organizations to ensure that training programs reflect the needs and aspirations of BIPOC workers and historically underserved communities. This means establishing continuing education, registered apprenticeships, certifications, and licensing in trades and professions for current workers and supporting companies in transitioning their workforce to building operations and maintenance, design, construction, and other clean energy jobs. Consideration should be given to businesses and jobs in installation, manufacturing, and the entire supply chain.

What are social determinants of health?

Social determinants of health (SDOH) are the conditions in the environments where people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks. SDOH have a major impact on people's health, well-being, and quality of life. and environmental injustices, such as pollution and lack of green space, are deeply tied to these determinants. Examples of SDOH include:

-   Safe housing, transportation, and neighborhoods
-   Racism, discrimination, and violence
-   Education, job opportunities, and income
-   Access to nutritious foods and physical activity opportunities
-   Access to clean air and water
-   Language and literacy skills

SDOH also contribute to wide health disparities and inequities. For example, people who don't have access to grocery stores with healthy foods are less likely to have good nutrition. That raises their risk of health conditions like heart disease, diabetes, and obesity – and even lowers life expectancy relative to people who do have access to healthy foods.[9]

Climate Change

Climate change is an urgent threat affecting all aspects of our economy, our well-being, and the natural world. For example, the local growing season has lengthened because of climate change, but with increased periods of drought, more irrigation infrastructure may be needed. Moreover, while it is anticipated that the region will experience more extreme heat waves, many of our most vulnerable residents cannot afford air conditioners or the cost to operate air conditioning. Thus, climate change demands swift, decisive action.

The EMC is grateful for the County's leadership on climate change, and we applaud the actions the County is taking to prioritize climate change as a guiding principle for its operations and service delivery.

In late 2023, the County Executive released Erie County's Community Climate Action Plan which was then adopted unanimously by the Erie County Legislature on February 1, 2024. The EMC's Climate Change Task Force helped lead the development of this plan, and more than 100 volunteers helped were involved. The CCAP also involved extensive community engagement in the planning process with the County holding over 75 presentations on the CCAP and participating in over 100 community events. Approximately 10,000 community members have signed up for more information about Climate Action through our monthly newsletter (individuals can sign up at www.erie.gov/climateaction). The County is working to implement the recommendations in the plan, in part through state and federal grants.

For its internal operations, Erie County developed a Climate Action & Sustainability Plan,[10] which was also adopted unanimously by the Erie County Legislature in 2019. The plan contains aggressive greenhouse gas reduction goals and outlines a series of actions to achieve those goals. The County's Green Team is implementing actions in the plan, such as running a compost facility at the Erie County Correctional Facility and advancing major energy conservation projects. A status report on this work is released annually and shared publicly on the County's sustainability website: www.erie.gov/sustainability. The report released at the end of the last year highlighted that the County achieved 34.2% reduction of greenhouse gas emissions since its baseline year of 2005.

Erie County works with partners across the region, New York State and the nation on this issue. For example, Erie County is partnering with the Greater Buffalo Niagara Regional Transportation Council and UB Regional Institute on a federally funded regional climate action plan called "One Region for Climate Action." That planning process will result in updated community greenhouse gas inventories for both Erie

- Members of the Erie County Community Climate Change Task Force

and Niagara Counties, as well as all the municipalities in the two counties. Erie County also holds a leadership role on the NYS Association of Counties Climate Action Committee and helps convene a monthly meeting of NYS municipal sustainability managers. On the national

Climate Change

level, the County is a member of the Urban Sustainability Directors Network – a great resource for governments addressing climate change.

The County's efforts and accomplishments have been acknowledged by statewide programs. Through its many energy conservation and renewable energy projects, in 2024 Erie County was the first large community in New York State to achieve five stars, the highest level, recognition in New York State Energy Research and Development Authority (NYSERDA) Clean Energy Communities[11] program. As a result, the County has been awarded an almost $1 million prize in the form of a grant to implement additional clean energy projects. The New York State Department of Environmental Conservation (DEC) has also recognized Erie County's achievements, designating Erie County as a Silver Certified Climate Smart Community.[12] Silver is currently the highest level in the Climate Smart Community program and Erie County is one of only six counties to achieve this designation.

Climate Change Mitigation

While the County has made measurable progress reducing greenhouse gas emissions from its internal operations, in the past the County has not emphasized climate mitigation programing at the community level. The EMC recognizes that the County has worked with stakeholders and the community on an equity-centered Community Climate Action Plan and is doing more to assist local governments and residents. To that end, the EMC recommends that the County pursue the following climate mitigation initiatives:

1. **Work with the community to implement the adopted, comprehensive equity-focused Community Climate Action Plan (CCAP).**
   To help reduce climate warming, protect our community and help meet the goals of the New York State Climate Act, the County needs to implement the action items outlined in the CCAP. These actions include greening our transportation systems, protection of natural carbon sinks, and renewable energy. Finally, as the dominant human services provider in the community, the County has a unique understanding and capacity to ensure that our transition to a low-carbon community is a "just transition," done equitably, and in a way that lifts up historically underserved communities and people of color, and limits harm to workers impacted by economic change (see sidebar in Environmental Justice Chapter). www.erie.gov/climateaction.

2. **Provide direct support, assistance and coordination for local governments.**
   The County serves a convening and leadership role for local governments. Many local governments lack the resources or expertise to address climate change, and there may be opportunities for the County to efficiently address these capacity gaps. The County can also provide template legislation for municipalities looking to develop local laws, helping to align County and local planning efforts. The County is currently contracting for community solar for its internal operations, and this was structured so that local governments can use this procurement to negotiate their own contracts. Finally, the County should continue to find opportunities to support local governments, as they did with the Clean Energy Academy workshops held in 2022.

3. **Provide pathways and programs for residents to increase energy efficiency and reduce their climate footprint.**
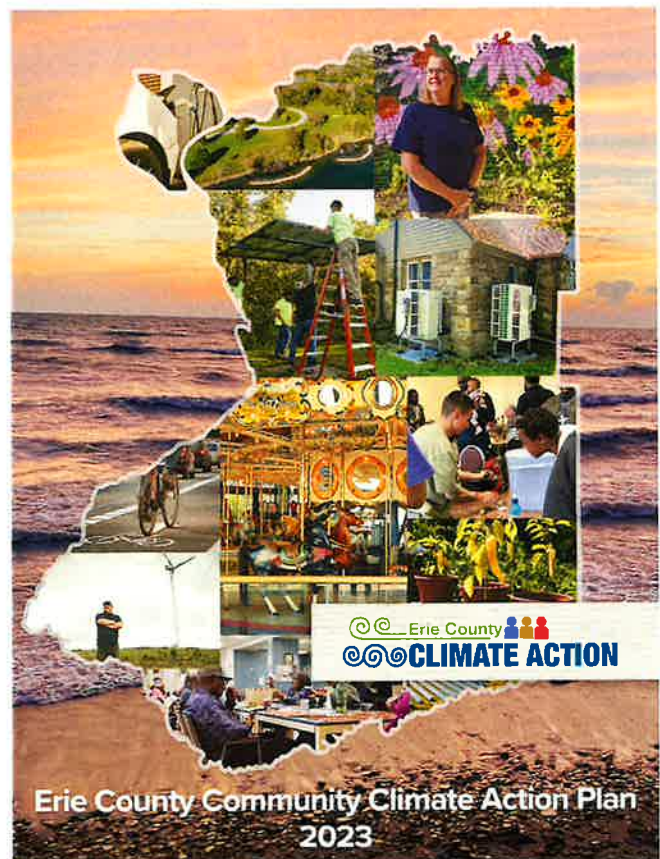
    The County, across many of its operational areas, has deep interactions with the community – especially vulnerable populations. The County should ensure equitable distribution of resources when implementing the CCAP for vulnerable populations in coordination with the Live Well Erie[13] framework, and social determinants of health. We recommend that the County create and uplift programs to assist residents to address sustainable housing, energy efficiency, renewable energy, electrification of transportation and building heating, food access, public transportation access, broadband, and agricultural programs by building on existing work of the Food Policy Council, the Office of Agriculture, Greater Buffalo Niagara Transportation Council, and numerous community-based organizations.

Climate Change Adaptation

While the County will continue to work to mitigate the impacts of climate change, it should plan and respond to the inevitable impacts of climate change at the same time. Our recent Blizzard of 2022 demonstrates how extreme events can have large and unintended consequences and how planning and preparation, informed by the best science available, are key to protecting the community. Some things the EMC has recommended in the past to reduce greenhouse gas emissions, like adding bicycle infrastructure and localizing our supply chain, also make us more resilient to extreme weather resulting from climate change.

The County is experiencing impacts from climate change, including several tornados and heat waves just this year. As extreme weather events increase, the occurrences of flooding, severe erosion, seiche events, as well as sedimentation and debris accumulation in stream corridors, will also increase across all communities of Erie County. This results in escalating costs for repair, remediation and replacement of public and private infrastructure and the loss of habitat. The need to adapt to climate change and build a resilient Erie County is urgent.

County climate adaptation efforts must have a community focus, as well as leverage the County's primary role and significant expertise serving vulnerable populations. Many of the anticipated climate impacts, including extreme temperature events, disproportionately impact low-income people and people of color. The County's efforts should explicitly support racially equitable climate adaptation. The effort should also address concerns that, due to our ample supply of fresh water, the region may deal with an influx of "climate refugees" from other areas.

Erie County Community Climate Action Plan 2023

Climate Change

In 2022, through a grant from the New York State Department of Environmental Conservation's Climate Smart Communities program, the County completed a Climate Vulnerability Assessment (CVA). The CVA has helped the County better understand climate threats to our community and its capacity to respond to those threats. It identified extreme heat, extreme precipitation and wind events, and biological threats like vector borne diseases as posing the greatest threat to the community as the climate warms. The results of the CVA were used in the CCAP planning process, and climate adaptation actions are woven through all the CCAP's sector-based chapters.
Regarding climate change adaptation, the EMC recommends that the County:

1. **Conduct comprehensive adaptation planning for the community, with a focus on protecting vulnerable communities.**
   The CVA identified climate threats and the County's capacity to address these threats. Per the recommendation from the EMC that the County build on the recommendations of the CVA by creating climate-threat-specific plans to address the identified threats, Erie County will develop an Extreme Temperature Emergency Plan funded by the NYSDEC Office of Climate Change. It is important that the Extreme Temperature Emergency Plan, and other plans as they are created, include a focus on health and other impacts to vulnerable populations, especially people of color who will be disproportionately impacted by climate change, and should be informed by the County's experience with the Christmas Blizzard of 2022. There should also be a focus on localizing supply chains to make the County more economically resilient. Adaptation planning should be conducted in close coordination with the County's public health and human services efforts, especially around the areas of thermal vulnerability and vector-borne disease.

- Climate Action Outreach at Bidwell Farmers Market

2. **Assure climate resilience of Erie County-owned infrastructure.**
   The County maintains significant critical infrastructure, including roadways, wastewater collection and treatment, correctional facilities, buildings housing the County's staff, as well as numerous parks and forest lands. The County self-enforces a building code for its infrastructure. For new building projects, anticipating climate change and building infrastructure that is resilient will be much less expensive than rebuilding existing infrastructure later. It is recommended that the County update planning guidelines and procedures to reflect anticipated or potential impacts from climate change to lower future risks and costs.

T R E E BENEFITS

"TREASURE OUR TREES"
YOUR STREET TREE IS STUPENDOUS!

IMPROVE MENTAL HEALTH

Studies show being near trees can reduce stress levels by decreasing your blood pressure and slowing your heart rate.

PROTECT WILDLIFE

Trees provide a home and protection to animals

HELP US BREATHE

Through photosynthesis, trees produce oxygen

COMBAT CLIMATE CHANGE

Trees absorb carbon-dioxide and convert it to oxygen

PROVIDE SHADE

Trees provide shade and keep your home and car cooler

PREVENT FLOODING

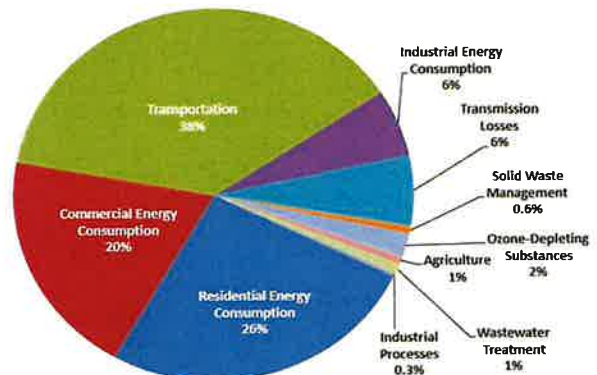Trees help soak up excess water and keep soil in place

SOURCE OF FOOD

Many parts of a tree are a source of food for people and animals: roots, leaves, flowers, fruits, seeds, nuts, pollens and sap.

Thermal Vulnerability and a Heat Emergency Plan

Heat and cold waves claim more lives than any other weather-related event, and despite living in a relatively cool-climate region, residents of Erie County experience vulnerability to both extreme cold and heat. Research has shown that cool-climate communities like ours are even more vulnerable to high heat events than warm-climate communities. This is largely because many homes in our community lack air conditioning. In low-income neighborhoods, there is an abundance of older, less insulated housing, and there are many residents who have health problems that make them sensitive to heat. Urban residents in "heat islands" are especially affected, along with rural residents in low-quality manufactured housing. Through its roles in emergency response and health, the County currently has some programs in place to address extreme temperature events, including coordinating availability and outreach for cooling centers. The Climate Vulnerability Assessment (CVA) evaluated the increasing threat of high-temperature events, mapped areas that are especially vulnerable, and assessed the County's ability to respond. To make our community more climate resilient, the County will need to plan and build out programs and interventions to address thermal vulnerability. The County can use its information about temperature-vulnerable households developed through its health and human services roles, and work with existing federal and state weatherization programs to target vulnerable households for insulation and weather sealing projects. Other programs might include guidelines to incorporate shading into the design of public spaces, such as bus stops and sidewalks and incorporating more trees and other green infrastructure into urban spaces.

Transportation 38%

Industrial Energy Consumption 6%

Transmission Losses 6%

Solid Waste Management 0.6%

Ozone-Depleting Substances 2%

Agriculture 1%

Commercial Energy Consumption 20%

Residential Energy Consumption 26%

Industrial Processes 0.3%

Wastewater Treatment 1%

- Erie County Community Greenhouse Gas Inventory

Ecosystem Health

- Bluebird at Knox Farm State Park by John Whitney

Erie County has been actively involved in efforts to protect living infrastructure and enhance ecosystem health. These efforts include developing management tools such as the county-wide Natural Resource Inventory (NRI), which provides land use managers with tools for early warning and detection of biological stressors so corrective measures can be achieved in a timely and cost-efficient manner. The County works with the Lake Erie Watershed Protection Alliance (LEWPA)[14] and other partners to identify opportunities for enhancing natural habitats, including floodplains, woodlands, and wetlands along Lake Erie. The County has also helped the EMC to promote its Healthy Lawns Campaign called "A Safe Home for the Gnomes," which encourages reduction in lawn chemicals. Additional County initiatives include habitat restoration projects along the Buffalo River, stormwater pollution prevention education, and invasive nuisance species outreach and education.

The implementation of nature-based climate change solutions will strengthen our living infrastructure (see sidebar) and build resilience into the Western New York region. Some strategies in County projects include stabilizing shorelines, improving habitat, and increasing canopy cover.

A Safe Home for the Gnomes

Overuse and misuse of garden chemicals can be harmful to humans, pets, wildlife, and waterbodies. Collectively, residents control about 900,000 acres of lawn in New York alone – 75% of the managed turf in the state. The good news is there are many ways to care for your lawn that avoid putting family and neighbors at risk.

In 2017, the Erie County Environmental Management Council, with assistance from the Cornell Cooperative Extension, began "A Safe Home for The Gnomes" campaign to reduce the amount of chemicals used on area lawns and improve community health (www.erie.gov/healthylawns). Pledge to protect your family, pets, wildlife, and waterbodies by having a pesticide-free lawn when you eliminate insecticides, herbicides (weed-killers, "weed and feed"), fungicides, and other chemical pesticides and receive a free lawn sign to let your neighbors know that your lawn is healthy and safe: http://erie.cce.cornell.edu/gardening/-erie-county-healthy-lawns-campaign.

- Sumac by John Whitney

Ecosystem Health

The Department of Parks, Recreation & Forestry is working on a feasibility study to stabilize the dunes at Wendt Beach and protect the unique habitat of the dunes and wetlands. In addition, as part of the $5 million Community Forestry Partnership Project, the Department will develop a tree nursery using seeds and saplings collected from county parkland to address the expected shortages in supply stock. These trees will be available for community tree plantings to increase canopy cover in federally designated Justice40[15] communities. Tree planting locations will be informed by a robust planning effort being undertaken by the Department of Environment and Planning resulting in a Community Forest Management Plan. This plan will include shared services recommendations to increase and maintain canopy cover. The project partners - the Black Rock Riverside Alliance, Buffalo Freedom Gardens, Cornell Cooperative Extension, Monarch of Infinite Possibilities and the Town of Tonawanda - are also funded by the grant for an array of innovate projects to develop nurseries, urban orchards, and conduct educational and community engagement activities.

- Dragonfly by John Whitney

- Monarch Butterfly by John Whitney

Regarding Ecosystem Health, the EMC recommends that the County:

1. Pursue funding for long term maintenance of tree planting

The EMC recognizes that maintenance of trees is one of the most challenging aspects of planting efforts. Thus, the EMC recommends working with partners to establish a community endowment for this purpose. This has been accomplished in other communities across the nation and is needed here.

2. Update the drafted 2003 County Forest Management Plan

This plan, which is currently in the process of being updated, will guide proper forest management practices through sound ecological, economic, recreational, educational, and public safety considerations in anticipation of predicted climate changes.

Living Infrastructure

Living infrastructure refers to the network of natural systems and engineered systems, such as storm and wastewater practices, that affect ecological processes including the hydrological and nutrient cycles. Creating a robust living infrastructure strengthens a region's resilience to climate change.

Robust living infrastructure fulfills the following conditions:

- Harbors and supports indigenous flora, fauna, migratory species, and pollinators
- Conserves and replenishes fresh water and protects and restores fertile soils
- Connects people to nature
- Employs strategies to eliminate or regulate impacts to climate, water cycles, nutrient flows, natural hazards, and pests.

Ecosystem Health

3. Improve natural habitat for native species and pollinators

Continue to work with community partners to grow native plant species for transplant throughout the region at the Alden Correctional Facility. The County should also consider working with partners to develop a pollinator corridor to increase pollinator densities and educate the public on the importance of pollinators for our food production, native plants, and invasive species.

4. Support regional habitat connectivity

There are several ways the County could support this work, which often has other cost-saving benefits. First, in their own operations, the County should implement culvert design guidelines that preserve ecological function and maximize fish and wildlife passage on county bridges and culverts as they are routinely maintained and replaced, and leverage funding available through the Federal Bipartisan Infrastructure Law to construct wildlife crossings in priority locations. Such wildlife crossings have the added benefit of reducing animal-vehicle collisions, resulting in safer roads. The County could also integrate habitat connectivity into their planning process and ensure that land use decisions prioritize the protection and connection of large, intact habitats essential for wildlife movement, particularly as the climate changes. Integrate habitat connectivity into county-wide conservation and land use planning processthat land use decisions prioritize the protection and connection of large, intact habitats essential for wildlife movement, particularly as the climate changes.

The County could also with local municipalities to enact policies and regulations, such as site plan reviews, zoning, conservation subdivisions, and setbacks, that support sustainable land use and natural resource protection and discourage unfettered suburban sprawl. Collaboration with municipalities can help ensure that large-scale developments and renewable energy projects are sited in ways that protect environmental integrity, natural resources, and wildlife connectivity.

Finally, the County should support regional initiatives such as the Western New York Wildway, a landscape-scale conservation plan aimed at creating a wildlife corridor of protected lands from the Allegheny Mountains to the Great Lakes, connecting to the continental-scale Eastern Wildway. The WNY Wild way focuses on conserving core habitats and linking them with wildlife corridors to ensure ecological resilience and wildlife mobility as the climate shifts.

- Bullfrog by John Whitney

Natural Resources Inventory

A Natural Resource Inventory (NRI) identifies and describes important naturally occurring resources within a community, watershed, or region. It provides the basis for land conservation planning, allows natural resource information to be included in local planning and zoning, and provides communities with a strong foundation for informed decision-making.

For communities considering techniques for protecting natural resources, a NRI is a necessary tool for developing priorities.
Explore this tool at www.erie.gov/nri

Energy

The EMC commends the County's leadership on energy conservation and development of renewable energy resources. In particular, the County's commitment to utilize 100% renewable energy for its electric operations by 2030 stands out as an ambitious and important goal, demonstrating the County's willingness to lead by example. Also deserving of recognition is Erie County's designation as a 5-Star Clean Energy Community in 2024 (the first large community in NYS), and implementation of an energy performance contract that included about $12 million of energy-efficiency projects at almost all County-owned buildings. These projects reduced greenhouse gas (GHG) emissions by more than 15% across the County's building stock. The addition of renewable solar energy on County property also reduced GHG emissions by nearly 220 metric tons, or what 465 acres of mature forest sequester in a year. The County is also currently contracting for community solar for its internal operations (a procurement that can be used by other governments).

Renewable Energy Goals

Goal	Scope	Source
100% renewable energy in County buildings by 2030	Internal Operations	Erie County
NYS Goal: 70% renewable energy by 2030	Community-wide	NYS Climate Act
NYS Goal: 100% clean energy by 2040	Community-wide	NYS Climate Act

Even with this progress, for the County to meet its goals[16] and the renewable energy requirements of the New York State Climate Act,[17] there will need to be an increased focus on improving energy efficiency and supply for the community. Poor quality housing, high utility bills, and energy burden afflict many low-income residents. Moreover, addressing low-income community energy needs supports the County's anti-poverty and health goals. Currently, the County has programs that address community energy for some populations, including those administered by the Home Energy Assistance Program and the Community Development Block Grant program, but the County's Community Climate Action Plan (CCAP) requires a broader approach. For this reason, the EMC is very excited to see the County embark on the Erie County Low-Income Program for Sustainable Energy project (ECLIPSE; see sidebar), and we encourage the County to push forward with strong community energy programs.

- Climate Action Showcase

Energy

1. **Support local municipalities and their residents to ensure responsible renewable energy development that includes input from vulnerable populations and protects regional agricultural and natural resources in light of an accelerated renewable energy siting process.**
It is important that the County assertively advocate for renewable energy (solar, wind, hydroelectric, geothermal, and biofuels) developments. Advocacy should prioritize the interest low-income and minority County residents, whose voices are almost never heard in of discussions about renewable energy projects, although these groups are most impacted by climate change. Outreach and advocacy should also include residents of rural communities (including low-income and minority residents), as renewable energy projects are often built in rural settings. The County should engage these residents in renewable energy siting discussions and work to dispel misinformation about renewable energy development. The County should also work within its state-wide and national organizations to advocate for incentives for solar developments in parking lots.

2. **Leverage contracting capacity and first-hand experience/expertise to support municipal energy efforts**
The County has gained significant energy-related experience through its work with energy performance contracts, electric vehicle infrastructure, LED lighting, green procurement, and renewable energy development. It is recommended that the County share its expertise and experience about green energy and energy efficiency opportunities with local governments. Additionally, we recommend that the County uplift and support organizations already doing work in this arena such as the University at Buffalo Regional Institute (UBRI),[18] People United for Sustainable Housing (PUSH) Buffalo,[19] and others.

- International Brotherhood of Electrical Workers installing Solar Panels

- Heat Pumps on the Erie County Board of Election Building

3. **Develop community programs to address energy efficiency, renewable energy, and energy burden.**
Historically, the County has had a limited but important role in addressing community energy use. To address CCAP's strategies, it is critical the County have a focused effort on community energy at a broad level, coordinated with existing New York State programs. The EMC strongly

supports the ECLIPSE program's focus on developing a community energy program (see side bar) and also the County's new grant-funded staff position supporting the WNY Regional Clean Energy Hub, which conducts connects small businesses and residents to NYS clean energy programs and incentives. Public education should leverage existing contact with the community through the County's human services work, Climate Action efforts, and should uplift existing community networks to facilitate information dissemination. Where applicable, the County should provide information and materials to help residents and business owners navigate this somewhat complicated landscape.

- Windmills by Athena Clabeaux

Erie County Low-Income Program for Sustainable Energy Project (ECLIPSE)

Erie County's Departments of Environment and Planning, Social Services, and Public Works are working on a NYSERDA-funded project to create a community-scale energy program to spur local energy-related economic development, increase use of green energy in the community, and reduce energy cost burden and improve access to renewable energy for moderate and low-income households. ECLIPSE researched several models, including Community Choice Aggregation and Community Distributed Generation, to achieve these goals. The feasibility study recommended a community solar model. As a result, the County requested proposals for Community Solar Services. That contractor has been selected and approved by the legislature. This community energy program will roll out at the end of 2024 season.

Clean Energy Communities Program

Local governments in New York State can use the Clean Energy Communities program to implement clean energy actions, save energy costs, create jobs, and improve the environment. In addition to providing tools, resources, and technical assistance, the program recognizes and rewards leadership for the completion of clean energy projects through grants to support ongoing clean energy projects. The program is competitive and is currently in its third round. Through the current round of the program, municipalities in Erie and Niagara Counites have earned over $1.9 million in grants for clean energy projects. For more information, visit: https://www.nyserda.ny.gov/All-Programs/Programs/Clean-Energy-Communities/How-It-Works

Land Use and Erie County Land

Land use decisions have both an immediate and long-term impact on the quality of the air we breathe, the water we drink, and the way in which we live, work, commute, and recreate. As a home rule state, local municipalities in New York have control and authority in their jurisdictions to make rules and decisions concerning a wide range of land use issues. These decisions affect the total health of the entire Western New York bioregion. Despite this, there are opportunities for Erie County to advance land use practices that will lead to greater stability and resiliency for our communities. For example, the County reviews local planning/zoning actions and often provides recommendations to the local municipality.

Erie County also manages approximately 11,000 acres of land that are in the cities, towns, and villages throughout Erie County. With its far-reaching land portfolio, the County not only has the duty to administer responsible land use decisions that support and enhance good stewardship practices, but it also has a powerful opportunity to demonstrate how land use practices can further enhance ecosystem health, which will lead to greater resiliency for the Western New York region from both the effects of climate change and crisis-level events.

The EMC applauds the County's recent work with the Erie County Industrial Development Agency (ECIDA) to redevelop the former Bethlehem Steel site into a shovel-ready business park renamed Renaissance Commerce Park. This project has brought a brownfield back to productive use as an employment center at the urban core of the region. The redevelopment of urban brownfield sites prevents sprawling commercial development in the region and creates employment opportunities, which are easily accessible to urban residents.

Regarding Land Use and Erie County Land, the EMC recommends that the County:

1. **Invest in and use Erie County's land portfolio for developing and implementing natural solutions and sustainable land use decisions to address the growing impact of climate change, habitat fragmentation, and the extinction crisis**

Erie County maintains a large portfolio of properties across diverse landscapes, including agricultural, forest, beach, waterfront, high elevation, suburban, and urban settings.

This biodiversity places Erie County in a prime position to demonstrate best land use practices such as:

- Increasing no-mow or low-mow areas
- Utilizing meadows and forests instead of lawns for large, unused County properties
- Greenspace set-asides
- Riparian buffers
- Hedgerows
- Sustainable forestry management

Introduce nature-based solutions to climate change, such as:

- Tree and pollinator plantings
- Permeable surfaces
- Wetland creation for developing green infrastructure
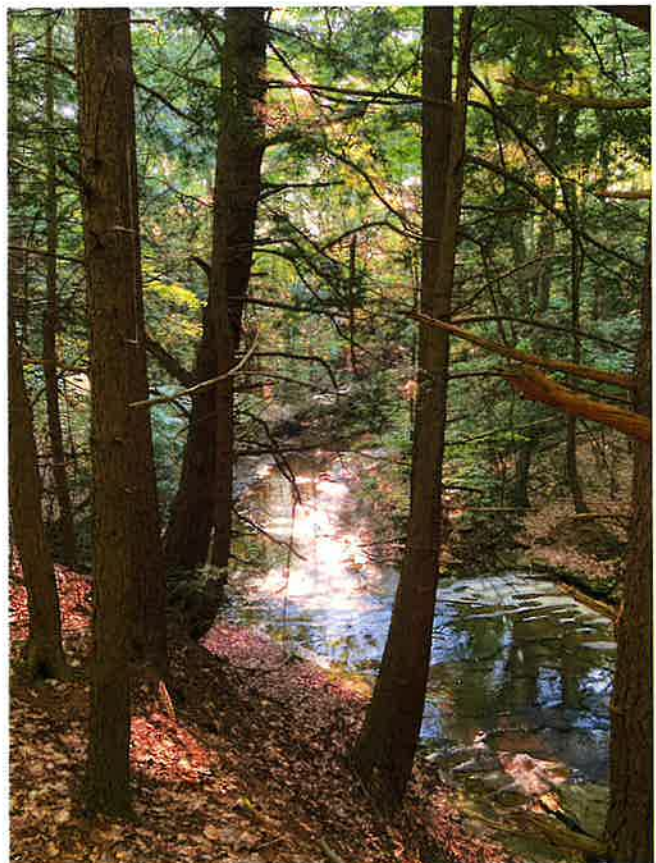

- Farmland

2. Use Erie County's land portfolio to develop and implement a regional approach to sustainability

With its land portfolio, Erie County has an excellent opportunity to lead the sustainability movement in Western New York. The County is encouraged to explore and develop a regional approach to sustainability. For example, by creating an agribusiness park in the Town of Evans, Erie County can model sustainable approaches to growing, manufacturing, and production; demonstrate how to secure and protect agricultural, natural, and sensitive lands from development; work with municipalities to ensure the proper location of large-scale utility-grade energy generating systems; and improve and protect water quality by working with municipalities to ensure the entirety of our waterways are monitored and protected. This includes testing of retention and detention ponds, monitoring invasive species growth in the ponds, testing and treatment of over-flows, and evaluating regional sprawling development's effect on local watersheds.

3. Strengthen Erie County's Resilience through Strategic Land Conservation and Connectivity Initiatives

With less than 5% of Erie County's land currently protected, the conservation of natural resources is essential for ensuring clean air and water, fertile soils, and biodiversity, all of which are critical for climate resilience, economic stability, and community health. The pressures of climate change, population growth, and development underscore the urgency of expanding these protected areas. New York State's commitment to the 30x30 initiative, which aims to conserve 30% of the State's lands and waters by 2030, and funding from the Environmental Bond Act, provide a significant opportunity to increase the amount of protected land in Erie County. These initiatives align with federal and international goals to combat biodiversity loss and climate change, with an emphasis on projects that enhance climate resilience, protect water quality, and restore natural habitats. A key opportunity to advance this goal is the Western New York Wildway, a landscape-scale conservation initiative that aims to create a wildlife corridor of protected lands stretching from the Allegheny Mountains to the Great Lakes. The WNY Wildway is essential to protecting and connecting Erie County's largest remaining intact habitats and ensuring wildlife can move freely as the climate changes, while contributing to New York State's 30x30 goals by addressing habitat fragmentation, one of the leading causes of biodiversity loss. Erie County should actively pursue and partner on state and federal grants within this framework to protect, connect, and restore critical habitats.

- Franklin Gulf

Land Use and Erie County Land

- Omega Mentoring Program at Tifft Nature Preserve

Nature-based Solutions

Nature-based solutions to climate change, sometimes called "natural climate solutions," involve conserving, restoring, or better managing ecosystems to remove carbon dioxide (CO_2) from the atmosphere. Examples include allowing forests to regrow, restoring coastal wetlands, and switching to restorative agricultural practices, such as cover crop rotation, which support healthy soils. These ecosystems reduce climate change by capturing CO_2 from the air and sequestering it in plants, soils, and sediments. They also provide a wide range of other important benefits, such as cleaner air and water, healthier economy, and increased biodiversity.[20]

- Reinstein Woods by Athena Clabeaux

Important Partners and Resources

There are many excellent area organizations, entities and plans that support sustainable land use. The County already works with them on a regular basis, and they play an important role in land use projects.

- **Buffalo Niagara Waterkeeper:** https://bnwaterkeeper.org/
- **Erie County Soil and Water Conservation District:** https://www.ecswcd.org/
- **Lake Erie Watershed Protection Alliance:** www.erie.gov/lewpa
- **Agricultural and Farmland Protection Plan:** www.erie.gov/agriculture
- **Cornell Cooperative Extension of Erie County:** http://erie.cce.cornell.edu/
- **WNY Land Conservancy:** https://www.wnylc.org/wnywildway
- **WNY Regional Sustainability Plan:**
  http://www.regionalcouncils.ny.gov/sites/default/files/2018-04/Western-NY-CGC-Plan-Report.pdf
- **One Region Forward:** http://www.oneregionforward.org/

Transportation

Transportation is the largest source of greenhouse gas emissions in Erie County. Fortunately, with control of 1,200 miles of roadway, the County exerts more control over transportation than any other source of emissions. Over the past few years, the County has made significant progress on transportation, and the EMC commends Erie County for its role in:

- Membership in the GO Buffalo Niagara Transportation Management Association,[21] which encourages Erie County employees to utilize low-emission transportation options

- Offering Reddy Bike membership to its employees through the efforts of the Green Team. Additionally, a free bicycle helmet has also been given to employees who sign up for that membership. The County's Labor Management Healthcare Fund has paid for a Reddy Bikeshare rack to be installed in the front of the Rath building, giving employees easy access to this benefit. Installation of 14 public electric vehicle charging stations in County parks and at SUNY Erie and three chargers for County fleet vehicles

- Modernization of the County fleet, including lease of eleven battery electric vehicles and twenty hybrid vehicles for both the Parks Department and the Sheriff Office, which replaced gas-powered vehicles, and

- Support of Niagara Frontier Transportation Authority (NFTA)'s bus electrification efforts.

The traditional model for transportation greenhouse gas reductions is to reduce the number of vehicle miles travelled, increase fuel efficiency, and power transportation with renewable energy. Often, vehicle electrification is held up as the dominant approach. Electric vehicles fueled by green energy certainly address climate change, and electric cars, trucks, and buses play an important role in the transition to a low carbon economy. But fundamentally, the EMC believes that the County should emphasize creating Complete Streets (see sidebar p. 30) that serve pedestrians, bicycles, buses, and more. Moreover, the EMC sees that it needs to build out a robust system of public transportation, and that we will have missed an opportunity if we focus on electrifying our existing transportation system without creating communities that are less centered around cars. Thus, we commend the County for their work to include alternative work options such as telework, tax-free metro passes, and bike programs and amenities.

We need a more effective and reliable multimodal public transportation system that provides equitable access to jobs, housing, and an improved quality of life for all our residents, including low-income residents, people of color, and the other-abled. Furthermore, valuable public space is devoted to roadways and parking because cars require much more space than other transportation modes.

- Erie County EV being charged at Level 3 Charger at Akron Falls Park

- Electric Vehicles at Earth Day Event

Transportation

As we update our transportation systems, reducing use of cars will allow us to reclaim this public space. Development must also be oriented around all modes of transportation, including pedestrian, bicycle, and public transit. To this end, we urge the County to be a leader in the community by siting its operations to facilitate low-impact modes of transportation.

Finally, our transportation infrastructure must be green infrastructure, designed to contribute to our resilience to climate change and designed to protect our waterways from stormwater impacts. Green roadways with trees and plantings can help absorb the impact of storm events, reduce urban heat, and protect biodiversity. Roadways with permeable (porous) pavement and features like bioswales absorb stormwater, reduce impacts on waterways, and help address the County's watershed management goals.

Regarding Transportation, the EMC recommends that the County:

6. **Work with regional partners to develop an equitable, zero-emission, multi-modal transportation system**

   The County should work with the Niagara Frontier Transportation Authority (NFTA), the Greater Buffalo Niagara Transportation Council, electric utilities, and other community partners to expand metro services through zero-emission regional light rail services and other enhanced public transportation options like bus rapid transit. We support continuing to add electric vehicle infrastructure at County facilities and public libraries, including rural locations, to encourage the adoption of electric vehicle use. Finally, County transportation investments should have an emphasis on infrastructure for bicycling, walking, and other low-impact modes of transportation. To this end, the County should work with municipalities to honor local Complete Streets policies when implementing County roadway projects and adhere to Complete Streets methods on all County roadway projects including implementation of the Greater Buffalo Niagara Transportation Council's Regional Bicycle Master Plan.[22]

What Are Complete Streets?

Complete Streets are streets for everyone. They are designed and operated to prioritize safety, comfort, and access to destinations for all people who use the street, especially people who have experienced systemic underinvestment or whose needs have not been met through a traditional transportation approach. Complete Streets make it easy to cross the street, walk to shops, jobs and schools, bicycle to work, and move actively with assistive devices. They also allow buses to run on time and make it safe for people to walk or move actively to and from train stations.

There is no singular design prescription for Complete Streets; each one is unique and responds to its community context. A Complete Street may include: sidewalks, bike lanes (or wide paved shoulders), special bus lanes, comfortable and accessible public transportation stops, frequent and safe crossing opportunities, median islands, accessible pedestrian signals, curb extensions, narrower travel lanes, roundabouts, and more.

A Complete Street in a rural area will look quite different from a Complete Street in a highly urban area, but both are designed to balance safety and convenience for everyone using the road.[23]

Transportation

7. **Support local communities as they transition to a green, low-carbon transportation system**
Many roadways in Erie County are controlled by local governments. The County should support local governments, share design, policy and implementation guidance for green measures, such as implementation of Complete Streets, guidelines and model legislation for LED street lighting, Smart Cities technology, electric vehicle infrastructure, and equitable access to transportation. The County should work with local governments to locate jobs and services in locations that are accessible to public transit, and other alternative transportation modes. The County should also continue to work with Greater Buffalo Niagara Regional Transportation Council, NFTA, New York State, local governments, and community stakeholders to assure that transportation investments are coordinated and emphasize accessibility, equity, public transit, and Complete Streets goals. Finally, the County should work with local communities to promote sustainable work arrangements for their staff that reduce commuting travel.

8. **Continue to reduce transportation emissions from County operations.**
Although the County has leased and purchased several electric and hybrid vehicles, we encourage the County to set goals and create policy to replace the County's fleet of gas-powered vehicles with electric-powered, and to lead the community on this issue. This will greatly reduce County greenhouse gas emissions and may also reduce fuel and maintenance costs. Some existing heavy-duty vehicles might be suitable for electric retrofits, and new heavy-duty electric vehicles are becoming more available and economical. Sheriff's patrol cars may be a particularly good opportunity because of their high idling rates, and leading manufacturers are now providing purpose-made patrol cars with hybrid electric drivetrains. Although there are currently supply chain issues with electric vehicles, the County should prepare for the transition by continuing to install electric vehicle charging stations. Finally, many County employees are reimbursed for extensive use of personal vehicles for their work, at a cost of more than $1 million per year. The EMC recommends that the County reduce emissions from reimbursed personal vehicle travel. Solutions could include providing electric vehicle (EV) chargers in staff parking areas, increased reimbursement for EV drivers, and offering EV fleet vehicles for staff use.

- Reddy Bikes at the Rath Building

Waste

The waste produced from people's everyday choices, otherwise known as Municipal Solid Waste (MSW), can result in a number of negative environmental and health impacts. Organic waste, such as food and yard waste, which is sent to a landfill, creates methane which is a much more potent greenhouse gas than carbon dioxide. Single-use plastics that end up in litter can become microplastics in our drinking water. Household hazardous waste (HHW), which includes products with warning labels such as "flammable," "toxic," or "corrosive," and includes pesticides, solvents and fuel, are often disposed of in an unsafe manner. This includes pouring them down the drain, on the ground, into storm sewers, or in some cases, putting them out with the regular trash. Improper disposal of HHW pollutes the environment and poses threats to human health, including water contamination or even physical injury to sanitation workers.

Erie County is actively working to address waste both in its own operations and in the community. For example, the County is composting food waste at the Alden Correctional Facility and has expanded that compost program to receive food waste from other County buildings. The County is also working with municipalities through the Erie County Solid Waste Management Board to promote waste reduction, reuse, recycling, and composting to residents.

Even with outreach and education, reducing solid waste through municipal collection and disposal services is an ongoing challenge for local municipalities due to resident confusion about how to manage household waste streams, and the lack of composting facilities for yard and food waste. Changing markets have interrupted the U.S. recycling system resulting in less materials being accepted for recycling and instead going into landfills. Erie County has supported Extended Producer Responsibility legislation to shift cost for recycling from the municipalities to the producer of the products. While it has yet to pass, it would require clear, consistent consumer education on the proper end-of-life management of consumer packaging to reduce confusion and contamination.

- Buffalo Recycling Enterprises Tour with Omega Mentoring Program

Waste

Erie County also works to address household hazardous waste (HHW). Erie County's HHW Program provides for safe disposal of hazardous chemicals and materials. In recent years, this program was expanded and now includes both single-day events and a voucher program that allows residents to dispose of these materials year-round at a facility in Tonawanda. The County has also added "paint only" collections to its events. Due to a NYS law regarding paint recycling, these events are much less expensive to hold than the HHW events.

Electronic waste, or e-waste, is not considered household hazardous waste. However, e-waste contains hazardous material that is stable while in use but can become a risk when the product reaches end-of-life and is not disposed of properly. NYS consumers are required to recycle many electronic waste items, such as computers, computer peripherals, televisions, small-scale servers, and small electronic equipment, through a municipal or private e-waste recycler. Though the County does not hold e-waste recycling events in general, it continues to provide education and outreach to consumers on how to dispose of e-waste properly.

- Recycling at Juneteenth 2024

Municipal Solid Waste (MSW)

More commonly known as trash or garbage — consists of everyday items we use and then throw away, such as product packaging, grass clippings, furniture, clothing, bottles, food scraps, newspapers, appliances, paint, and batteries. Food waste is the single most common material landfilled and incinerated in the United States, comprising 24 and 22 percent of landfilled and combusted municipal solid waste, respectively.

Waste

Regarding this issue, EMC recommends that the County:

1. Work to support composting

Composting food waste has multiple benefits, from reducing greenhouse gas emissions to creating a soil amendment. Thus, the County should prioritize support of composting in the commercial and residential sectors. For example, the County could explore allowing municipal use and/or commercial use of its composting site at the Alden Correctional Facility. The County could also provide technical assistance to municipalities on starting their own programs. Finally, the County should work with the New York State to provide guidance documents on the development of compost sites.

2. Support laws and policies that reduce single-use waste and promote materials recovery

Support for legislative action on Extended Producer Responsibility (EPR) for packaging and paper products (PPP). This proposal provides sustainable funding from producers to relieve municipalities of the financial burdens they currently face in operating recycling programs. We support the legislation to require clear, consistent consumer education on the proper end-of-life management of consumer packaging to reduce confusion and contamination. This change is necessary for New York state, where the recycling rate is just 18%. See sidebar for further information on EPR.

3. Support materials recovery by adding glass wine and liquor bottles to the New York State Bottle Bill

The bill has successfully reduced roadside litter by 70 percent. Adding wine and liquor bottles to the Bottle Bill should have a great impact on the entire recycling industry. When glass is collected as part of the "single stream" recycling programs used by most municipalities, it mostly gets broken and contaminates the plastic and paper that can be recycled and also damages the machinery that sorts the collected recyclables.

4. Expand education and outreach programs

Addressing the need to reduce food waste and to compost food scraps should be promoted in County outreach. We continue to encourage creating chemical disposal/reduction education for existing County programs and use existing County methods of communication, such as electronic newsletters, the website, social media, emails, and press releases to educate the public on how to reduce their chemical use. Topics could include proper storage and disposal, reducing pesticide use, label reading, and safe alternatives. The county could also promote existing programs and sponsor repair cafes where household items are fixed for reuse.

Extended Producer Responsibility (EPR)

Is a mandatory type of product stewardship that includes, at a minimum, the requirement that the manufacturer's responsibility for its product extends to post-consumer management of that product and its packaging. There are two related features of EPR policy: (1) shifting financial and management responsibility, with government oversight, upstream to the manufacturer and away from the public sector; and (2) providing incentives to manufacturers to incorporate environmental considerations into the design of their products and packaging. Source: NYS Product Stewardship Council.

- Climate Action Showcase March 2023

Water

Available clean water is necessary for all life including biological processes, industrial production, home life and landscapes, navigation, and recreation. It is a driver of sustainability and economic prosperity. In Erie County, we live on a Great Lake and water is plentiful, but it should not be taken for granted.

Impacts to water quantity and quality make it a resource that requires conservation and protection to sustain its availability for use. Water is connected and integral to land use, transportation, and ecosystem management, which makes it particularly susceptible to impacts from how we plan, operate, and manage our developed/built and natural environments. Water is affected by a variety of residential, recreational, and commercial practices – and by both point source and non-point source pollution. Some examples include undersized wastewater facilities, combined sanitary sewer overflows, failing septic systems, contaminated stormwater runoff, industrial production through discharges of chemicals and heated water from manufacturing, pesticides, excess nutrients, and pathogens from agricultural runoff and more. There are numerous pollution sources to consider throughout our watershed. As we begin to learn more about the ever-expanding impacts of PFAS (Per- and polyfluoroalkyl substances) to our communities it will be important to address as well.

Septic systems (or on-site waste treatment systems) have not received their due attention as sources of nonpoint source pollution. While specific testing has not been completed at the system level, water quality testing has shown that nutrient and pathogen levels impairing New York streams and waterbodies are found in areas where there are septic systems and especially clusters of septic systems. For this reason, Erie County is working on education and outreach to septic system owners to reduce nonpoint source pollution to regional waterbodies. The education program seeks to reduce pollution at the source and prolong the useful life of septic systems by promoting proper maintenance of septic systems. In addition, the Erie County Health Department is beginning a program to pump out septic systems and test wells for low-income households, as well as assist with repair/replacement. The collaboration of these two programs is an example of working toward a common goal to protect both public health and environmental health.

Climate change is compounding impacts to water quality and quantity.[25] For example, there has been a significant increase in seiche events, which cause coastal flooding, erosion along the shoreline, and dangerous rip currents along the coastline, leading to significant economic loss and posing threats to human life. Moreover, frequent and more intense storms are causing extreme heavy

- Lake Erie

rainfall events that increase soil erosion and movement of pollutants. Weather patterns are predicted to become more variable, which could include periods of drought followed by wet weather.[26] Heavy rainfall after a period of drought can reduce water infiltration and increase runoff, flushing accumulated pollutants and sediments, which lead to increased turbidity and contaminant concentrations in waterbodies.[26] These extreme pollution events coupled with warmer water temperatures may result in water fouling events such as harmful algal blooms, which are becoming more prevalent throughout our waterways each summer.

Water

Climate change is also expected to cause periods of drought.[27] In Erie County, there are both residences and agriculture operations that depend on groundwater supplies, not Lake Erie. Drought and lack of aquifer recharge can leave rural landowners without an adequate water supply. It is important that communities, particularly rural communities, adapt and plan for resiliency to ensure a clean and steady supply of water in a changing climate.

Appropriate use of land and understanding upstream and downstream connections to natural ecosystems is critical to conserving and protecting water resources. Best practices should be incorporated into land use for green infrastructure, riparian buffers, and conserving forests near water sources. Improving absorption and water filtration will help to prevent devastating downstream flooding and erosion.

Promoting a cultural shift in thinking about how we manage our lives for the protection and sustaining of our water resources is paramount. Education is key to making change. Several organizations are hard at work in Erie County to educate the public, private business, and government on water issues; and they are assisting with programs and projects to implement best water protection and conservation practices to ensure clean available water. It is important that they continue their work and receive County support.
Regarding water, the EMC recommends that the County:

1. **Continue to support the Lake Erie Watershed Protection Alliance (LEWPA) in preparing a Nine-Element Watershed Management Plan for the Lake Erie and Niagara River watershed region.**
   A Nine Element Watershed Management (9E) plan is a type of clean water plan that details a community's water quality concerns and a strategy to address these concerns. The 9E plans are developed by people who live and work within the watershed with support from local and state agencies. The nine minimum elements are intended to ensure that the contributing causes and sources of nonpoint source pollution are identified, that key stakeholders are involved in the planning process, and that restoration and protection strategies are identified that will address the water quality concerns.

   LEWPA 9E planning will assess approximately 10 percent of regional streams to see where direct issues are located. Projects to be identified in the waterways or the watershed could include green infrastructure, living shorelines, stabilizations, buffer planting, agricultural best management practices, land protection, or testing for and repairing failing septic systems.

- Tift Nature Preserve

The 9E plan is required by some grant funding programs and having the plan will also potentially provide more project funding opportunity for Erie County and LEWPA.

Green Infrastructure
Green infrastructure is a group of stormwater management and treatment practices designed to infiltrate and/or reuse stormwater using soils and vegetation, rather than pipes and storage structures. Common green infrastructure approaches include porous pavement, green roofs, trees, tree boxes and infiltration planters, rain gardens, vegetated swales, pocket wetlands, vegetated median strips, cisterns, reforestation, and protection and enhancement of riparian buffers and floodplains.

Water

2. Leverage State and Federal Funding to Prioritize Water Quality Investments
There are several potential funding sources that may be advancing in the next 12 months, including the approved State Environmental Bond Act and the Federal Infrastructure Investment and Jobs Act. County projects utilizing these programs should prioritize water quality investments where eligible and focus on holistic approaches to meeting the needs of the watershed.

3. Promote the concept of Living Infrastructure in comprehensive planning and decision-making
Partner with other organizations, such as UB Regional Institute, Buffalo Niagara Waterkeeper, and One Region Forward, to promote the municipal use of the concept of Living Infrastructure in comprehensive planning and decision-making to mitigate the impacts of increased stormwater runoff through trainings and workshops. Appropriate planning for stormwater attenuation can mitigate impacts from flooding, capture stormwater pollutants, and build the resilience of water supply and availability by enhancing recharge to the hydrologic system.

- Sunset by Sailboat

Riparian Buffers

Riparian buffers are strips of vegetation (trees, shrubs or grass) located next to streams or other waterbodies. By planting vegetation along streams, space is created between the water and upland land uses, which helps protect the water quality and stream habitat. Riparian buffers provide the benefit of:

- stabilizing streambanks,
- erosion and sediment control,
- habitat and food for wildlife and pollinators,
- shade for streams, filtration of nutrients and other pollutants in runoff, and reducing the impact from floods by **increasing water infiltration**.[25]

List of Water Quality Organizations

Local partner and environmental groups include:

- **Buffalo Niagara Waterkeeper:** https://bnwaterkeeper.org
- **Buffalo Sewer Authority:** https://buffalosewer.org
- **Erie County Cornell Cooperative Extension:** http://erie.cce.cornell.edu/
- **Erie County Soil and Water Conservation District:** https://www.ecswcd.org
- **Erie County Division of Sewerage Management:** https://www.erie.gov/dsm
- **Erie County Water Quality Committee:** http://ecswcd.org/html/ecwqc.html
- **Lake Erie Watershed Protection Alliance:** www.erie.gov/lewpa
- **Tonawanda Creek Watershed Committee:** https://www.facebook.com/pages/Tonawanda-Creek-Watershed- Committee/139510572866742
- **WNY Stormwater Coalition:** https://www2.erie.gov/environment/index.php?q=western-new-york-stormwater-coalition

Water

4. Promote and implement green infrastructure practices

Erie County should continue to seek green infrastructure opportunities at its facilities and continue to assist Municipal Separate Storm Sewer communities in implementing green infrastructure projects. Outreach field day events and/or presentations should be organized to showcase such projects to municipalities, stakeholders, and the public.

5. Use best management practices on County road ditches

Revamp the Erie County Highway Department's procedures for cleaning, reshaping, and vegetating road ditches to meet the municipal stormwater maintenance requirements for reducing soil erosion, improving visibility and safety, and reducing future maintenance. This effort should build upon Erie County Soil and Water Conservation District's hydroseeding initiative, which partners with Erie County Highway to vegetate cleaned road ditches.

- Lake Erie

Seiche Events: Lake Erie, the shallowest of the Great Lakes, is known for its seiche events. Seiches are created by standing waves oscillating through an enclosed body of water. When low pressure systems and associated winds progress over Lake Erie from the west-southwest, they blow along Lake Erie's longest axis, from Toledo towards Buffalo, which causes the lake to dip in the west and pile up water on the east. These events are most pronounced in the fall and winter months. When storms subside, and wind force decreases, the water piled along the coastline of the Eastern Basin of Lake Erie flows back into the lake, creating an oscillating wave motion as the water rocks back and forth for hours to days after the peak of the event. Several recent seiche-driven flood events, and expected impacts of climate change, have underscored the need for proactive flood resilience planning along the Lake Erie waterfront.

Conclusion

While the report contains many separate recommendations, the EMC would like to bring attention to their interconnected nature. The EMC recognizes that environmental issues are also connected to social justice issues. For example, transitioning to electric vehicles can improve air quality in historically underserved communities. Thus, the EMC would like to stress those recommendations which are the most fundamental to support all the others.

First and foremost, the County should work to address climate change, by reducing greenhouse gas emissions and preparing for climate change at the same time. This work must be done with climate and environmental justice in the forefront of decision-making so that the mistakes of the past are not repeated. The adopted equity-focused Community Climate Action Plan provides an excellent roadmap. Thus, the EMC's priority recommendations are:

1. **Improve our transportation system:** Work with regional partners to develop an equitable, zero-emission, multi-modal transportation system. Transportation is the largest part of our greenhouse gas inventory, and we need a multi-pronged approach – not business as usual.

2. **Use less energy and support renewables:** Ramp up local energy conservation and renewable energy use by sharing the County's experience with Energy Performance Contracts, Direct Pay incentives, and Community Solar with other municipalities, as well as promoting NYSERDA's commercial and residential programs. Work to encourage renewable energy development especially on brownfields, parking lots, and on rooftops.

3. **Protecting land/stop sprawl:** Rural land serves as a source of food, a carbon sink and wildlife habitat. Preventing sprawl in a strategic way and in coordination with community partners has multiple benefits and the County should use all available planning tools to encourage densification of development.

4. **Waste not, want not:** Support significant expansion of food composting through technical assistance, education, advocacy, and the pursuit of grants. By composting food, we reduce particularly potent greenhouse gas emissions and produce a valuable soil amendment.

5. **Prepare for a changing climate:** Our current infrastructure needs to be reassessed for its ability to withstand the impacts of climate change. For example, increasing the use of green infrastructure can help mitigate the effects of intense rain events, and heat pumps can reduce greenhouse gas emissions while also providing air condition during extreme heat events.

The EMC urges County leaders to continue to invest in the protection and restoration of our people and environment. Prioritizing this work is an opportunity to improve our environment for current and future generations and improve economic prosperity and quality of life to foster a place where people want to grow their future.

Endnotes

[1] www.epa.gov/environmentaljustice

[2] Poverty in Buffalo: Causes, Impacts, Solutions, Partnership for the Public Good 2018, p. 16 https://ppgbuffalo.org/files/documents/poverty_low_wage_work_income_inequality/truth_commission_report__poverty_in_buffalo_causes__impacts__solutions.pdf

[3] Erie County New York Community Health Assessment 2014 – 2017, page 32 and 33 http://www2.erie.gov/health/sites/www2.erie.gov.health/files/uploads/pdfs/CHA.pdf

[4] Erie County New York Community Health Assessment 2014 – 2017, page 32 and 33

[5] https://www.cdc.gov/socialdeterminants/index.htm

[6] https://health.gov/healthypeople/objectives-and-data/social-determinants-health

[7] www.erie.gov/livewellerie

[8] https://climate.ny.gov/

[9] https://health.gov/healthypeople/objectives-and-data/social-determinants-health

[10] www.erie.gov/casp

[11] www.nyserda.ny.gov/all-programs/programs/clean-energy-communities

[12] www.climatesmart.ny.gov

[13] www.erie.gov/livewellerie

[14] www.erie.gov/lewpa

[15] https://screeningtool.geoplatform.gov/en/#3/33.47/-97.5

[16] www.erie.gov/paris

[17] https://climate.ny.gov/

[18] http://regional-institute.buffalo.edu/

[19] www.pushbuffalo.org/

[20] https://www.american.edu/sis/centers/carbon-removal/fact-sheet-nature-based-solutions-to-climate-change.cfm

[21] https://www.gobuffaloniagara.org/

[22] https://www.gbnrtc.org/bikebuffaloniagara

[23] https://smartgrowthamerica.org/program/national-complete-streets-coalition/publications/what-are-complete-streets/

[24] Resilient Buffalo Niagara Climate Change Action Strategy Document - Strategies to Respond to Climate Change Resilient Buffalo Niagara was prepared by Dr. Himanshu Grover, University at Buffalo School of Architecture and Planning December 2014. http://uploads.oneregionforward.org/content/uploads/2015/01/Resilient-Buffalo-Niagara.pdf

[25] USGCRP, 2018: Impacts, Risks, and Adaptation in the United States: Fourth National Climate Assessment, Volume II Reidmiller, D.R., C.W. Avery, D.R. Easterling, K.E. Kunkel, K.L.M. Lewis, T.K. Maycock, and B.C. Stewart (eds.)]. U.S. Global Change Research Program, Washington, DC, USA, 1515 pp. doi: 10.7930/NCA4.2018. https://nca2018.globalchange.gov/chapter/front-matter-about/

[26] https://www.noaa.gov/education/resource-collections/freshwater/watersheds-flooding-and-pollution

[27] USGCRP, 2018: Impacts, Risks, and Adaptation in the United States: Fourth National Climate Assessment, Volume II [Reidmiller, D.R., C.W. Avery, D.R. Easterling, K.E. Kunkel, K.L.M. Lewis, T.K. Maycock, and B.C. Stewart (eds.)]. U.S. Global Change Research Program, Washington, DC, USA, 1515 pp. doi: 10.7930/NCA4.2018. https://nca2018.globalchange.gov/chapter/front-matter-about/https://nca2018.globalchange.gov/chapter/front-matter-about/