MONROE COUNTY -



Phase II. Community-wide CAP

PUBLIC WORKSHOP #2

July 25, 2023











1. PROJECT & PROCESS REVIEW

PROJECT INTRODUCTION

The Climate Action Plan will develop effective actions for **community-wide** climate mitigation, climate adaptation initiatives, and alignment towards the Climate Smart Communities Program. The Plan will aim to minimize emissions of Greenhouse Gases (GHGs), advance NYS policy goals, such as energy efficiency and conservation, renewable energy, waste reduction and recycling, and support smart and sustainable economic growth. This Plan will be completed in 2 Phases.



ADVISORY COMMITTEE

Matthew O'Connor, Co-Chair, Citizen Appointment Hon. Michael Yudelson, Co-Chair, Legislator Appointment Hon. Richard B. Milne, Legislator Appointment Hon. Sean M. Delehanty, Legislator Appointment John Botelho, Citizen Appointment Akilah Skerrette-Banister, Citizen Appointment Kathryn Walker, Citizen Appointment Alden Smith, Student Appointment Anna Yatteau, Student Appointment Lola D'Ascentiis, Student Appointment Madison Quinn, Secretary Michael Garland, DES Director

COUNTY INTERNAL WORKING GROUP

Clement Chung, DES Deputy Director Joseph Vankerkhove, DES Patrick Gooch, Planning & Development Madison Quinn, Sustainability Coordinator

CONSULTANT TEAM

BERGMANN

Molly Gaudioso, Project Manager John Steinmetz, Planning Principal Tom Robinson, Landscape Architect Hanna Quigley, Landscape Designer Kiernan Playford, Planner

ANCHOR QEA

Lena DeSantis, Senior Managing Environmental Planner Emily Manuel, Environmental Database Analyst Josh Bartlett, Air Quality & GHG Specialist

PHASE 1 TO PHASE 2

Phase 1. County Operations

- Started May 2020; Adopted Sept 2022
- Focus is on GHG emissions from County-owned facilities, infrastructure, and operations
- Includes goals and actions county has direct control over
- First step for County to be a leader and example for climate action in our region

Phase 2. Community-Wide

- Anticipate adoption by end of 2023
- Focus broadened to GHG emission sources throughout the county – housing, private industry operations, transportation infrastructure, etc.
- Includes more community outreach and engagement with implementation partners
- Intended to serve as a community guide and resource

2023 TIMELINE



OUTREACH TO DATE...

- Public Workshop #1 (March)
- Ideas Wall
- 10+ pop-up events
- 40+ stakeholder group connections
- 235+ email subscribers
- 10+ email comments



Monroe County Climate Action Plan

IDEAS WALL ACTIVITY (MARCH – JUNE)

Engagement Summary ()



Offer composting opportunities along with trash pick up for citizens.

Start a discussion Waste & Recycling | 3 days ago

Like 👍+3 👘 Dislike 🖓

Identify (map) and incentivize suitable (potential) sites for renewable energy projects, especially solar projects, on brown fields, industrial sites, rooftops and parking lots instead of on prime agricultural lands, open space and parkland which are vital for resiliency. The County could review available degraded or already built spaces within the "existing human footprint" for such projects.

💬 Start a discussion

Discourage the widespread use of manicured lawns and encourage the planting of native plants in yards and parks. Discourage the watering of those manicured lawns and save water by planting native plants that our pollinators depend upon.

💬 Start a discussion

🗱 Land & Water Resources | 3 days ago 🛛 Like 🍁+2 🔹 Dislike 🖓

Preserve and improve the natural and native ecosystem in the Monroe County Park system and the significant plant collections contained within the arboretums, as well as the Frederick Law Olmsted designed areas that are part of the rich horticultural legacy of Highland, Durand Eastman, Genesee Valley and Seneca Parks. The natural environment of the county parks is an important part of the health and quality of life here. Encourage large retailers (like Wegmans) to install charging stations for EVs Support School districts with financial support needed in their effort to convert to Electric school busses.

Start a discussion Transportation | 3 days ago

Like 🖒 👘 Dislike 🖓

Partner with local educational institutions and industries to come up with creative technologies and siting for renewable energy generation projects that resist sprawling into agricultural, rural, tourist and open space areas.

🗭 Start a discussion	
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All new projects or rehabilitation projects that receive government money (e.g. like COMIDA) must be all electric. The county will not support additional fossil fuel infrastructure.

PRIORITY FOCUS AREAS



Highest



Rank	Transportation	Buildings & Housing	Energy Use & Consumption	Land & Water Resources	Partnerships, Education & Economy	Waste & Recycling
1	26%	15%	21%	23%	6%	9%
2	21%	30%	11%	11%	13%	15%
3	13%	15%	30%	26%	6%	11%
4	17%	11%	19%	21%	19%	13%
5	11%	15%	15%	15%	28%	17%
6	13%	15%	4%	4%	28%	36%



MONROE COUNTY

2. GHG INVENTORY SNAPSHOT

SCOPE 3 - GHG EMISSIONS INVENTORY

CONTEXT:

 Scope 3 are all GHG emissions that occur inside the County boundary but outside of the County's control

APPROACH:

- Identify target areas
- Consistent with Phase 1
- 2019 Emissions Inventory
- ICLEI ClearPath Tool



Figure 12 from Monroe County Phase I - Government Operations CAP



SCOPE 3 INVENTORY ______

Potential GHG emissions sources and activities identified by ICLEI include:

- Built Environment
- Transportation
- Solid Waste
- Water & Wastewater
- Agriculture
- Forest & Lands













COUNTY'S FOCUS AREAS



SCOPE 3 INVENTORY MAJOR GHG SOURCES

Transportation

- Cars and Trucks, Employee Commutes
- Rail, Air, Marine (verifying)
- Off-road Equipment

Energy

- Electricity Use, by sector
- Fuel Combustion, by sector

Process and Fugitive

- HVAC and Refrigeration
- Industrial Process Emissions (verifying)

Waste

- Landfill (verifying)
- Recycling/Compost

Water

- Wastewater (verifying)
- Water supply

Agriculture, Forestry, and Land Use

- Land Use Changes
- Agriculture: Livestock/Fertilizer

Consumption

• Food, services, construction materials, other goods

Upstream

Transmission and distribution



PRELIMINARY RESULTS

DRAFT STAGE:

- Several sources are going through QA/QC (waste and wastewater, industrial energy)
- Source data will be supplemented (freight)

HIGHLIGHTS:

- Transportation & Mobile Sources - 42% (3M mty)
- Total Energy 37% (2.5M mty)
- Residential 50% of total energy
- Process and Fugitive Emissions - 10%



TOTAL: 7M mty

Transportation & Mobile Sources

- Residential Energy
- Commercial Energy
- Industrial Energy
- Process & Fugitive Emissions
- Solid Waste
- Water & Wastewater
- Agriculture Farming and Land Use
- Upstream Impacts of Activities





TRANSPORTATION SECTOR

Source Data

- Vehicle Miles Traveled (VMT)
- Fuel Type

Emissions

- Gasoline 85%
- Diesel 14%
- Ethanol + CNG <1%

Fuel Type	VMTs	
Gasoline	5,273,526,573	90%
Diesel	537,982,104	9%
CNG	3,067,578	<1%
Ethanol	8,987,271	<1%







ENERGY SECTOR

Source Data

- Utilities Data
- Number of Residents

Emissions

- Residential 50%
- Commercial 32%
- Industrial 28%







ENERGY SECTOR

Natural Gas

- 59% of total emissions
- 70% of Residential

Electricity

• 23% of total emissions

Fuel Oil

• 10% of total emissions

Propane/LPG

• 7% of total emissions





SCOPE 3 INVENTORY **DATA SOURCES**

- Scope 3 inventories by design include some double counting
- Emission sources and deviations tracked to identify discrepancies

Sector	NY Statewide GHG Inventory	Climate Accelerator Genesee-Finger Lakes GHG Inventory	Monroe County Phase II GHG Inventory (Scope 3)
Electricity	 Includes Emissions from combustion of fuel for electricity generation Transmission and distribution losses Emissions from imported electricity Emissions from fossil fuel imports for electricity generation 	 Includes Transmission and distribution losses Deviation from Statewide Inventory Emissions from combustion of fuel for electricity generation attributed to the economic sector where electricity is consumed Currently not included Emissions from imported electricity to region is not known Emissions from fossil fuel imports for electricity generation not known 	 Includes Emissions from combustion of fuel for electricity generation attributed to the economic sector where electricity is consumed Deviation from Genesee-Finger Lakes Inventory Transmission and distribution losses included with Upstream Impacts emissions Currently not included Emissions from imported electricity to county is not known Emissions from fossil fuel imports for electricity generation not known
Buildings	 Includes Emissions from fuel combustion separated by residential and commercial buildings Emissions from product use (including use of refrigerants in vehicle with HVAC or refrigeration) Emissions from fossil fuel imports 	 Includes Emissions from fuel combustion separated by residential and commercial buildings Emissions from fossil fuel imports Deviation from Statewide Inventory Emissions from product use is under Industrial sector. Insufficient data to separate by sector. 	 Includes Emissions from fuel combustion separated by residential, commercial, and industrial buildings Deviation from Genesee-Finger Lakes Inventory Emissions from fossil fuel imports not known Refrigerant emissions are included in Process and Fugitive Emissions sector.





3. PRELIMINARY PLAN FRAMEWORK

ONE PIECE IN PLANNING FOR MONROE COUNTY'S FUTURE

Completed/Underway

- Comprehensive Plan (Plan Forward)
- County Active Transportation Plan
- Bring Back Monroe
- Hazard Mitigation Plan
- Organics Waste Management Plan

Upcoming

- Climate Adaptation & Resiliency Plan
- Agricultural & Farmland Protection Plan
- Parks & Open Space Plan Update
- ** And many more!



BUILDING THE CLIMATE ACTION PLAN

Phase I. Government Operations

Part 1

INTRO TO CLIMATE ACTION PLANNING

Part 2

EXISTING CLIMATE CONDITIONS & PROJECTIONS

Part 3

CURRENT CLIMATE INITIATIVES

Part 4

GREENHOUSE GAS (GHG) INVENTORY

Part 5

COUNTY GOALS & TARGETS

Part 6

EXPANSION OF CLIMATE ACTION PLANNING

Phase II. Community-wide

Part 1

INTRO TO COMMUNITY-WIDE CAPs

Part 2

PHASE I

Part 3

CASE STUDIES

Part 4

COMMUNITY-WIDE GHG INVENTORY

Part 5

COMMUNITY-WIDE GOALS & TARGETS

Part 6

ACTION PLAN & RESOURCES

THE ROLE OF THE COMMUNITY-WIDE CAP

What will it do?

- Include a refined picture of GHG emissions in Monroe County
- Tie into existing plans & initiatives
- · Identify specific actions the County can take
- Serve as a resource for residents and stakeholders

What won't it do?

• Serve as a mandate or law

What shouldn't it do?

• "Sit on a shelf"



THE GENESEE-FLX CLIMATE COLLECTIVE



PROPOSED GOAL FRAMEWORK

- Follow guidance of Phase I
- Identify County-specific actions at various levels

ALSO...

- Highlight success stories
- Provide guidance to other municipalities / agencies
- Identify partners & funding opportunities

Goal

A general statement that describes the aspiration of the County to reduce Monroe County's GHG emissions and local contribution to climate change.

Target

The quantification of a goal, specifying the potential reduction in emissions based on an aggressive implementation scenario modeled using the ICLEI ClearPath tool.

Action

Aspecific initiative which may be undertaken by the County to accomplish a goal. It can take the form of a plan, project, policy, or program. For the purposes of this Plan, actions are categorized into one of three tiers:

- Tier 1: A direct, measurable action
- Tier 2: A step to prepare for and/or support a Tier 1 action
- Tier 3: A broader policy or program providing guidance for a series of actions



GOALS ______ TRANSPORTATION

- Increase connectivity surrounding high trip potential and population centers.
- Reduce vehicle miles traveled. Increase zero emission personal and fleet vehicles, equipment, and facilities.
- Mitigate and reduce stormwater runoff associated with transportation infrastructure.



Driving, public transit, bicycling, and walking networks connect us to our homes, our jobs, local businesses, and our environment.

These modes of transportation, the infrastructure needed to support them, and the travel distance between our destinations is directly related to the magnitude of the carbon footprint and greenhouse gas emissions we produce.



ASSESSING IMPACT OF TRANSPORTATION NETWORK

- Florida Department of Transportation (FDOT) "Conserve by Bicycling and Walking Study"
 - Includes reliable methodology to quantify green energy benefit from increase in bicycle commuters due to network improvements
- Town of Henrietta Active Transportation Plan Used methodology to calculate potential:
 - Increase in bicycle commutes
 - Gallons of fuel saved by reduction of auto-trips
 - Pounds of annual carbon dioxide emissions reduced annually

COUNTY ACTIVE TRANSPORTATION PLAN



- Protect and conserve existing open spaces, agricultural lands, and natural areas.
- Improve access to and awareness of local natural resources at both a micro and macro scale to build environmental stewardship community-wide.
- Mitigate and reduce heat island impacts from the built environment.



Our County has a wealth of **open space and** water resources including parks, streams, rivers, canals, and Lake Ontario. There is a direct link between water quality and the great lakes water system.

Our water resources, open spaces, and trees serve to help regulate stormwater, wastewater, and greenhouse gas emissions, but are vulnerable to impacts from development and human intervention.

I-TREE | CANOPY ASSESSMENT TOOL

Monroe County:

- Land Area 657 sq mi
- Water Area 710 sq mi
- Tree Cover 202 sq mi
 31% of Land Area
 - $\,\circ\,$ 15% of Total Area



Every year, Monroe County's tree canopy has the following benefits:

\$41 million in annual savings from CO₂ sequestration, air pollution removal, and avoided runoff









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800 million gallons of avoided runoff ¹ \$7 million annual savings



15 billion gallons of transpiration ²



1 Avoided runoff is calculated in i-Tree Eco as the amount of surface runoff without any trees minus the amount of surface runoff with the current tree cover

2 1 billion gallons = 1,500 Olympic swimming pools

Data Source: USDA Forest Service iTree

CARBON SEQUESTRATION OPPORTUNITIES



If 1 out of 2 households plant a tree, Monroe County could see the following benefits over the next 5 years:



3,100 tons of CO₂ sequestered \$144,300 annual savings



\$408,100 in annual savings from CO₂ sequestration, air pollution removal, and avoided runoff



8 tons of air pollutants removed

\$115,000 annual savings



16 million gallons of avoided runoff \$148,800 annual savings



1.8 million kwh of electricity saved



124 million gallons of rainfall interception

GOALS _________BUILDINGS & HOUSING

- Consider existing development, redevelopment, and new development scenarios to eliminate GHG emissions.
- Reduce energy use of buildings powered by fossil fuels, and transition to renewable energy sources where possible.
- Implement green building infrastructure and renewable energy generation policies on new development and encourage retrofit on existing and redevelopment.



Commercial, industrial, and residential structures we live and work in. Our building stock varies between rural, suburban, and urbanized areas, in terms of appearance, footprint, and density.

Building type, construction methods, and daily usage impact our surrounding environment, energy consumption, and microclimates.

GOALS ______ ENERGY USE & CONSUMPTION

- Identify opportunities to reduce energy use in both major and minor contributors and convert to renewable energy sources.
- Support municipalities and connect individuals to potential resources and programs for transitioning from fossil fuels to renewable energy.

ENERGY USE & CONSUMPTION



The type and amount of energy we use has a direct impact on climate change because of the greenhouse gas emissions they each produce.

The conversion of our **energy sources and consumption from gas, oil, and coal, to more sustainable alternatives including solar, wind, geothermal, and electric** will reduce our climate impacts.

- Support, connect, and enhance access and awareness of diverting waste from landfills by reuse, recycling, or composting and organics recycling programs.
- Increase innovative re-purposing of waste byproducts and consider opportunities to harvest waste products for energy.



Products have a life cycle that consists of production, transportation, use and ultimately disposal. The impacts associated with each phase of this system may vary from the amount of resources used to produce it, emissions that we create during production, transportation and use, and the amount of waste created upon disposal.

Activities that lessen our impact include reducing, reusing, recycling, and composting materials.

GOALS – PARTNERSHIPS, EDUCATION & ECONOMY

- Identify and foster connections between private and public organizations, local and county governments, and regional initiatives.
- Increase awareness and access to online platforms, tools, and networks to leverage partnerships between these groups.



Our quality of life has always been linked to nurturing existing partnerships and fostering new ones.

Our success in reducing our individual and collective climate impacts will be directly related to understanding what initiatives have taken place and what opportunities exist for social, educational, and economic sectors to partner for implementation of the plan.





4. NEXT STEPS

HOW TO STAY INVOLVED:

- **1:** Visit the Website
- **2:** Participate in Online Engagement
- **3:** Attend an Advisory Committee Meeting
- 4: Attend the 3rd Public Workshop
- Contact us any time! •

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NEXT STEPS

GHG Inventory Report

To be prepared.

Goals & Action Plan

Compile feedback and prepare draft.

Finalize Goals & Targets

Work with staff, Committee, and stakeholders.

Public Workshop #3

Review & Comment on Draft Plan.

HOW TO STAY INVOLVED:

- 1: Visit the Website
- 2: Participate in Online Engagement
- **3:** Attend an Advisory Committee Meeting
- **4:** Attend the 3rd Public Workshop
- Contact us any time!

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HELP US PLAN FOR ACTION!

OPEN UNTIL AUGUST 31st

take the goals & strategies survey! <u>https://arcg.is/</u> <u>1PmbeT</u>

SCAN THE QR CODE BELOW



www.MonroeCountyClimateAction.com

5. OPEN HOUSE ACTIVITY STATIONS

WASTE & RECYCLING

CONTEXT

Products have a life cycle consisting of production, transportation, use, and ultimately disposal. The impact of each phase of this cycle may vary from the amount of resources used to produce it, emissions created during production, transportation and use, and the amount of waste created upon disposal.

Activities that lessen impacts include reducing, reusing, recycling, and composting materials.

GHG HIGHLIGHTS

The Scope 3 emissions associated with waste and recycling include landfill, recycling, and compositing facilities that are not currently owned and operated by the County.

NOTE: These numbers are undergoing verification with data sources.



ADAM J. BELLO

EMISSIONS BY SECTOR



PRIORITY RANKING:

TOP COMMENTS FR

2



GOAL STATEMENT

Support, connect, and enhance access and awareness of diverting waste from landfills by reuse, recycling, or composting and organics recycling programs. Increase innovative re-purposing of waste byproducts and consider opportunities to harvest waste products for energy.

PHASE 1 CAP ACTIONS

Each year, Hennepin County, Minnesota waste reduction

and recycling specialists work with households to craft a

households have had success reducing their waste by

increasing composting and recycling, eliminating disposables,

preventing waste upfront, and sharing their success with

other community members. On average, households reduce

waste by about one-quarter to one-third. By the end of the

challenge, they recycle or compost 60% to 70% of their

waste, which is above the county average of about 45%.

CASE STUDY

 Reduce waste generation and increase recycling at County facilities •Expand current recycling/trash policy and procedures. Investigate feasibility of an organic waste/composting program for County buildings/facilities •Develop and implement a paper use reduction policy and procedures . Establish a Green Office Challenge that includes a reduction in office waste

PHASE I CO

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136

The emissions captured in Pha County, Gloria I however, a 205 action being th

Buildings & Facilities Pure Waters Infrastru Solid Waste & Materia Transportation Fleets Expressway Lights & Total Monroe County Baseline P

PHASE II MONROE C



How to live a lower waste lifestyle: insights from Zero Waste Challenge participants. https://www.hennepin.us climate-action/what-we-can-do/low-waste-lifestyle

ACTIONS & STRATEGIES Based on your feedback from the Ideas Wall!

 Develop composting programs with a robust public education campaign

 Educational campaign on recycling and County's recycling process, and the benefits of waste reduction and diverting food waste from landfills

Make recycling and composting easier for households

Place a dot by any recommendation you agree with or believe should be a priority for the Plan!

YOUR THOUGHTS?

PHASE II MONROE COUNTY CLIMATE ACTION PLAN **WASTE & RECYCLING**



37%

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PUBLIC WORKSHOP #2

July 25, 2023

THANK YOU FOR ATTENDING ③

Climate Action