

Phase II.
Community-wide
CAP



## **AGENDA**

Project & Plan
Overview
Strategies

1
2
3
Wext Steps
Inventory





## 1. PROJECT & PLAN OVERVIEW

## 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.



## 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 Summer 2024
- 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

## **ADVISORY COMMITTEE**

## COUNTY INTERNAL WORKING GROUP

## CONSULTANT TEAM

Matthew O'Connor, Co-Chair, Citizen Appointment

Hon. Michael Yudelson, Co-Chair, Legislator Appointment

Hon. Richard B. Milne, Legislator Appointment

Hon. Sue Hughes-Smith, Vice Chair, 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\*

\*Ex Officio

Clement Chung, DES Deputy Director

Joseph Vankerkhove, DES

Patrick Gooch, Planning & Development

**Madison Quinn, Sustainability Coordinator** 

#### **BERGMANN (NOW COLLIERS)**

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

#### **SUSTAINABLE PLANNING & DESIGN**

Allison Harrington

## 2023 - 2024 TIMELINE

Jan – Mar 2023

**KICK-OFF** 

- Advisory Committee Meetings
- Public Workshop #1 & Ideas Wall
- Stakeholder Meetings



CASE STUDIES & COMMUNITY CONNECTIONS

- · Advisory Committee Meetings
- ·Stakeholder Meetings
- ·Virtual Community Engagement



**Project Website** 

www.MonroeCountyClimateAction.com



**GHG EMISSIONS REPORT** 

- Advisory Committee Meetings
- ·Public Workshop #2 & Online Survey



GOAL & STRATEGY DEVELOPMENT

- Advisory Committee Meetings
- ·Stakeholder Meetings



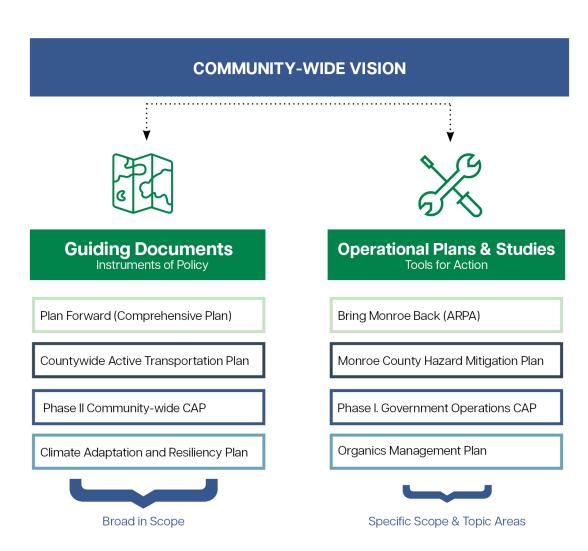
DRAFT & FINAL CAP

- · Advisory Committee Meetings
- Public Workshop #3
- ·Online Draft Review
- ·County Legislature Adoption

## ONE PIECE IN PLANNING FOR MONROE COUNTY'S FUTURE

Guiding documents are broad in scope but light in specific details, like a roadmap.

Operational Plans & Studies are centered more on a singular topic or project, like a blueprint for future actions.



## THE ROLE OF THE COMMUNITY-WIDE CAP

#### Focused on MITIGATION (GHG emissions reduction)

#### 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?

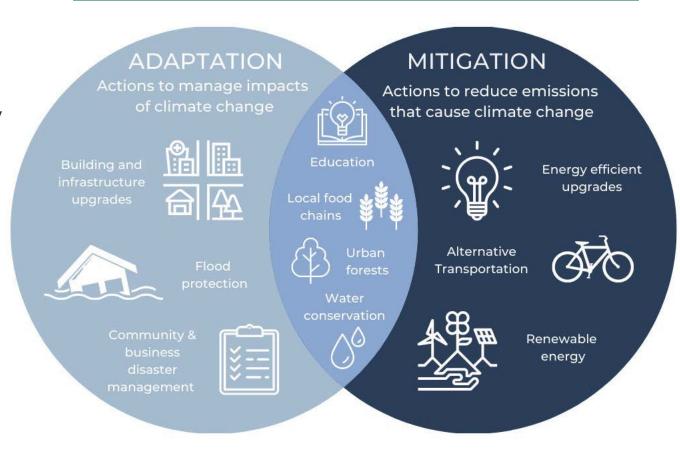
Serve as a mandate or law

#### What shouldn't it do?

"Sit on a shelf"

## This is a starting point!

We have had many lessons learned and connections made.



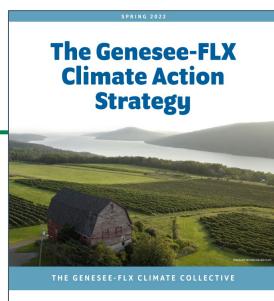
## LEVERAGING EXISTING EFFORTS & PARTNERS

#### **Existing Plans & Studies**

- Climate Solutions Accelerator Genesee-FLX
   Climate Action Strategy
- Town of Brighton CAP
- City of Rochester CAP
- Finger Lakes Regional Sustainability Plan
- Etc.

#### **Partners & Stakeholders**

- Municipalities
- State Departments & Agencies
- Economic Development Agencies
- Educational Institutions
- Color Your Community Green Groups
- Community & Nonprofit Organizations
- Industry & Employment Leaders
- Etc.





## PHASE II. COMMUNITY-WIDE CAP OUTLINE

Phase I & Phase II	
What is a Community-Wide Climate Action Plan?	
Why Do We Need a Community-Wide Plan?	
Phase II Focus Areas	
What are the Benefits of Taking Action?	
Planning Process	
Overview of Public Outreach	
Part 2	
EXISTING CLIMATE CONDITIONS & PROJECTIONS	1
Science of Climate Change	1
ClimAID Projections	1
NYS Disadvantaged Communities	1
Climate Change & Public Health	

Highlights of Key Topics & Case Studies Throughout!

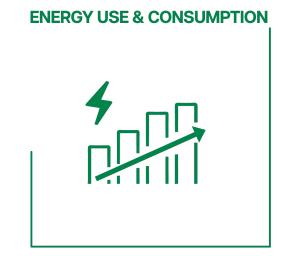
Part 3 OTHER COMMUNITY PLANS & INITIATIVES	19
County Plans & Initiatives Regional Planning Initiatives Municipal CAPs	20 22 23
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Purpose Methodology Emissions Sources Business as Usual (BAU) Forecast	28 29 30
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Goal Framework Overview Energy Use & Consumption Buildings & Housing Transportation Land & Water Resources Sustainable Materials Management Partnerships, Education, & Economy	47 52 56 60 66

## FOCUS AREAS PHASE II













## PRIORITY FOCUS AREAS (BASED ON PUBLIC INPUT)













Highest

Lowest

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%





## 2. GHG EMISSIONS INVENTORY

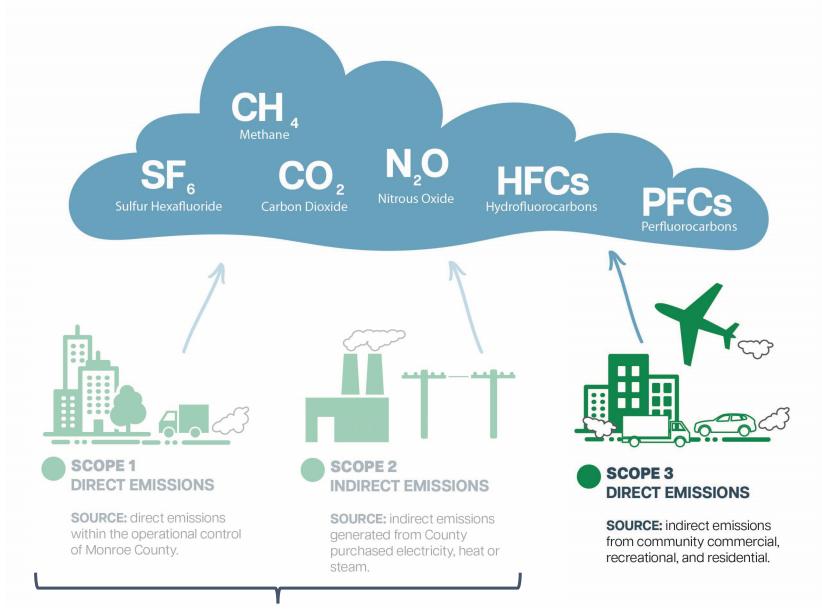
## SCOPE 3 - GHG EMISSIONS INVENTORY

#### **CONTEXT:**

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

#### **APPROACH:**

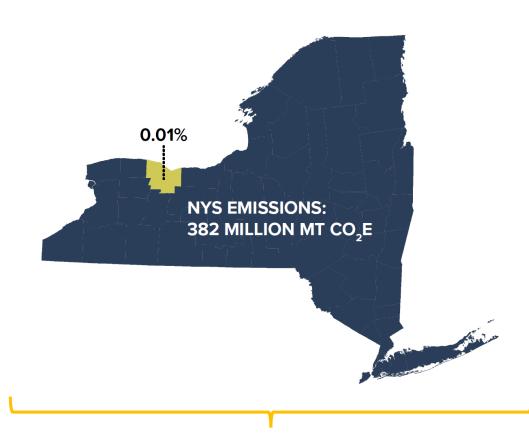
- Identify target areas
- Consistent with Phase 1
- 2019 Emissions Inventory
- ICLEI ClearPath Tool



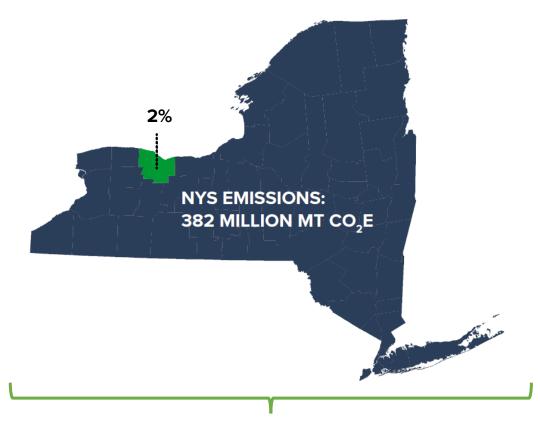
ADDRESSED IN PHASE I (GOVERNMENT OPERATIONS)

## COUNTY EMISSIONS IN CONTEXT OF NYS

Source: 2022 NYS Draft Scoping Plan



PHASE I (GOVERNMENT OPERATIONS)
Scope 1 & 2 Emissions
45,632 MT CO<sub>2</sub> E



PHASE II (COMMUNITY-WIDE) Scope 3 Emissions 8,174,961 MT CO<sub>2</sub> E

## SCOPE 3 INVENTORY MAJOR GHG SOURCES

## **Transportation**

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

## **Energy**

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

## **Process and Fugitive**

Natural Gas and Refrigerants Losses

### **Waste Generation**

- Landfill
- Compost and Recycling

## Water

- Wastewater
- Water supply

## **Agriculture, Forestry, and Land Use**

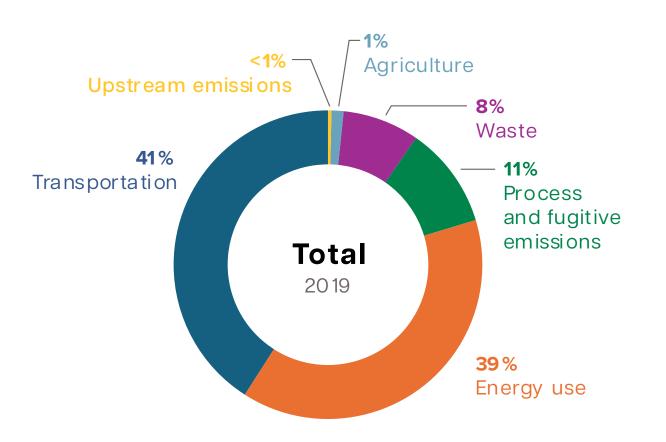
- Land Use Changes
- Agriculture: Livestock/Fertilizer

## **Upstream**

Transmission and distribution



## SCOPE 3 INVENTORY EMISSIONS BY SECTOR

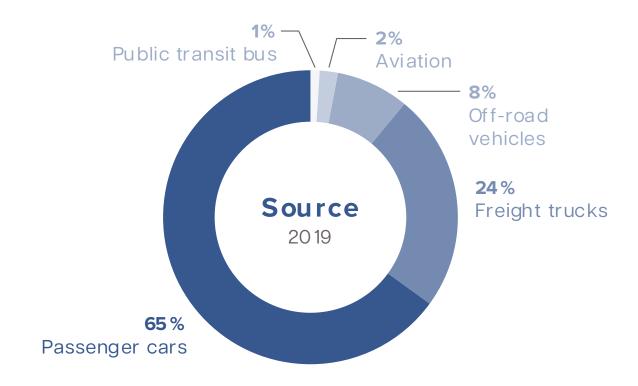


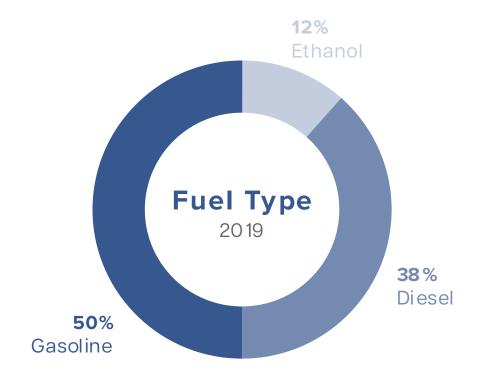
	(CO <sub>2</sub> e MT)
Transportation (41%)	3,347,100
Energy Use (39%)	3,166,408
Process and Fugitive Emissions (11%)	870,589
Waste Generation and Water Supply (8%)	658,199
Agriculture, Forestry, and Land Use (1%)	102,917
	29,748

Total:

2019 Emissions

8,174,961

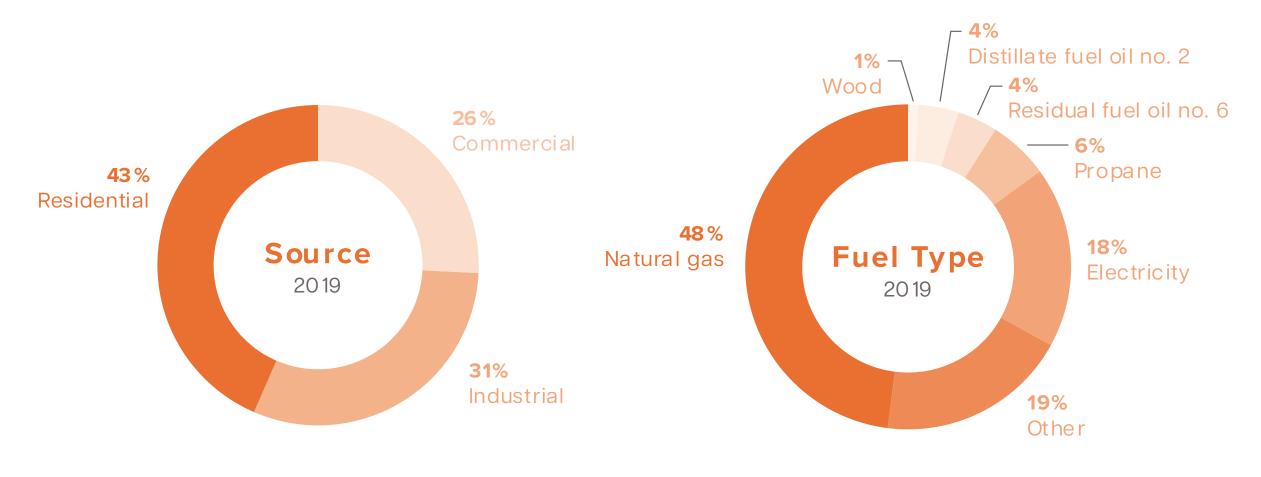




Most transportation emissions come from passenger cars (65%) and freight trucks (24%).

Most transportation emissions come from gasoline-powered vehicles (58%).

## 39% OF TOTAL



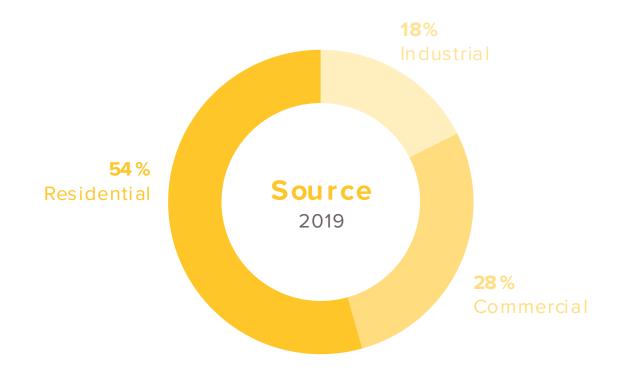
Most energy emissions come from **residential** energy use (43%).

Most energy emissions come from **natural gas- powered sources (48%).** 

## <1% OF TOTAL

Generally related to **Buildings & Housing / Energy Use & Consumption** 

**SOURCES**: Emissions from electric power transmission and distribution losses.

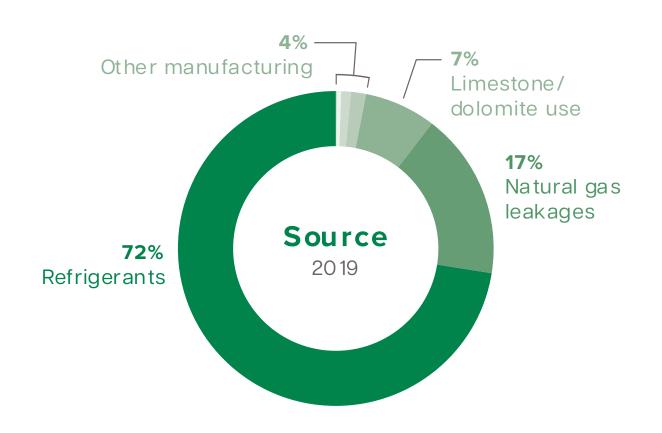


Upstream emissions from distribution to residential users account for the most emissions (54%).

## 11% OF TOTAL

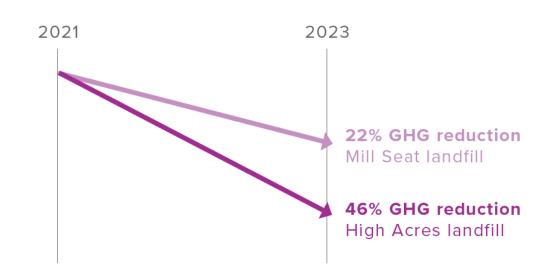
Generally related to **Buildings & Housing / Energy Use & Consumption** 

**SOURCES**: Emissions from HVAC and refrigerant use, natural gas leakages, and emissions from industrial processes

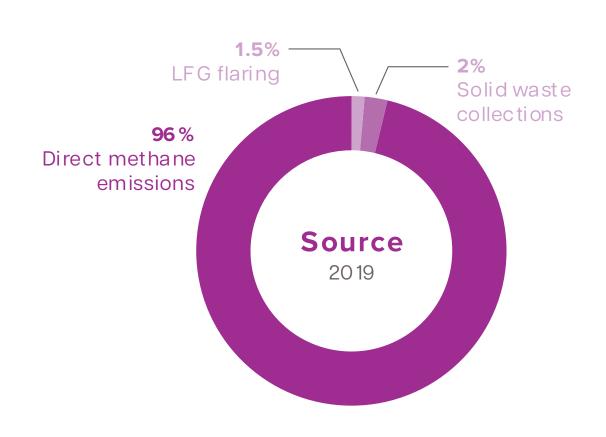


Most process and fugitive emissions come from refrigerants (72%) and natural gas leakages (17%).

99% of Sector Emissions from High Acres & Mill Seat Landfills



**WM** has recently achieved emissions reductions by upgrading its gas collection and control systems.



Most waste emissions come from **direct** methane emissions (96%).

## 1% OF TOTAL



#### MONROE COUNTY'S TREE CANOPY

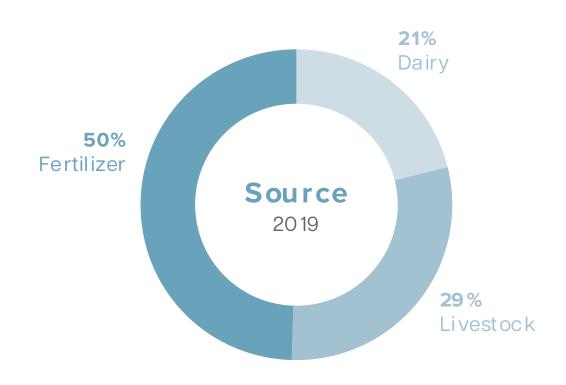
Almost one-third of Monroe County's land area is covered by trees – that's about 8 million trees! Every year, this tree canopy provides the following environmental benefits:











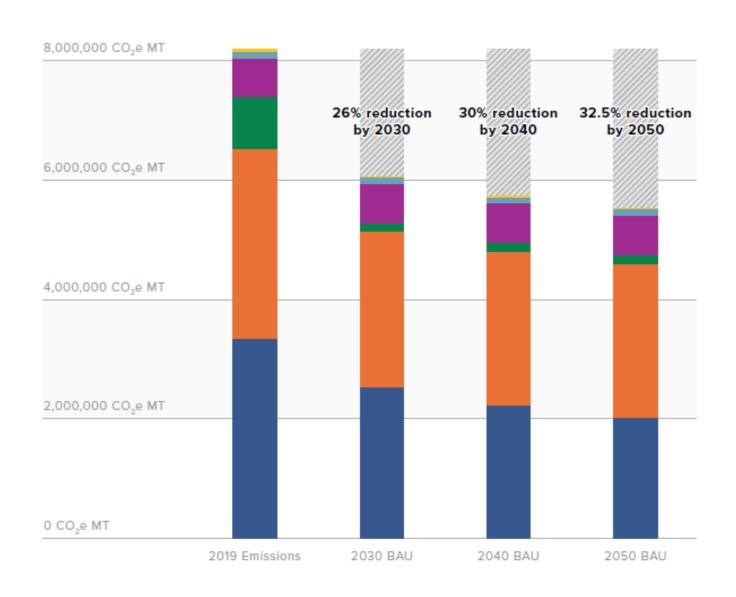
Most agricultural emissions come from fertilizer (50%), followed by livestock (29%), and dairy (21%).

## "BUSINESS AS USUAL" **BAU FORECAST**

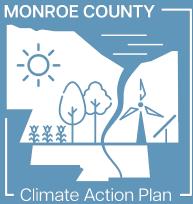
## **Assumptions:**

- Projected Population Growth (2050)
- NY Zero-Emission Vehicle Sales/Lease Goals (2035)
- NY 100% Zero-Emission Electricity Grid Goal (2040)
- Federal Zero-Emission Vehicle Transition Goals
- Increase in Vehicle Miles Traveled (VMT)

\*Follows Phase I assumptions



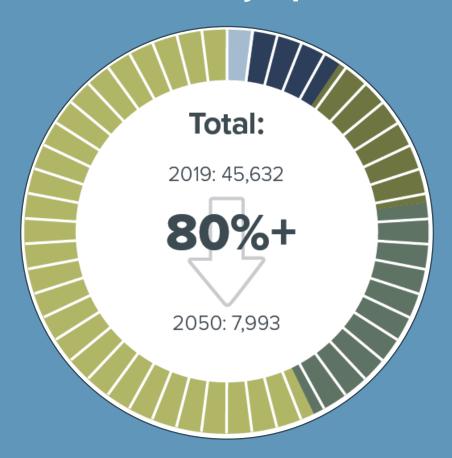




3. GOALS & STRATEGIES

## **EMISSIONS REDUCTION GOALS**

## **Phase 1. County Operations**



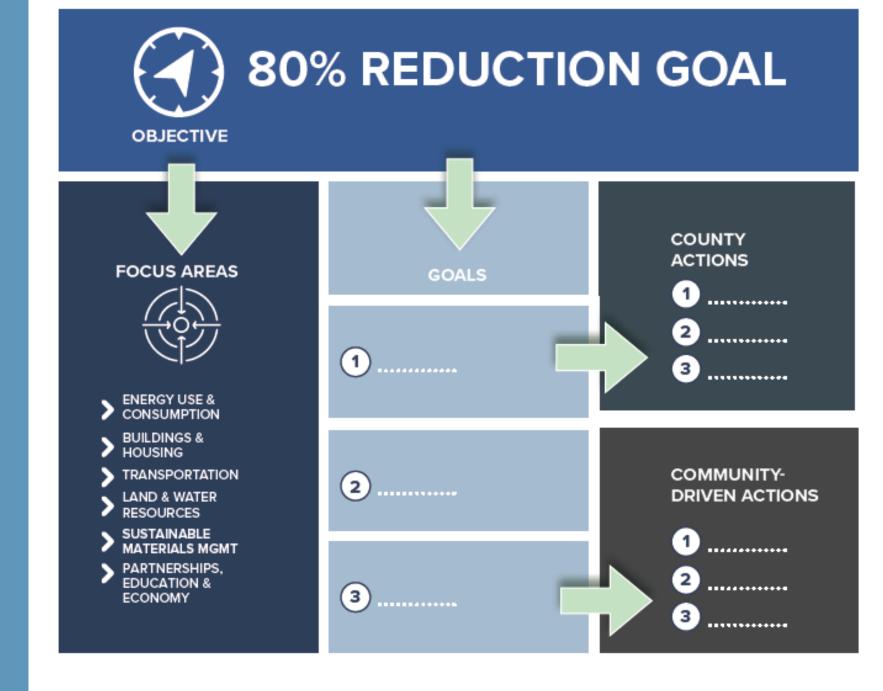
## Phase 2. Community-Wide

## 80% Overall Reduction

- Consistent with Phase I Goal
- Consistent with NYS Goal (85% based on 1990 levels)

- Cannot be achieved by County alone
- Partnerships & Education are key

# PHASE II. GOAL FRAMEWORK



## TYPES OF ACTIONS

- Possible County Actions: Actions that may be taken directly by Monroe County to help achieve the goals of a given focus area and reduce GHG emissions, where applicable.
- Community-Driven / County-Supported Actions: Potential
  actions that can be taken by municipalities, residents,
  businesses, and other organizations, at their discretion,
  which the County may support as a funder, coordinator,
  connector, and/or informational resource.

# Goals & Strategies EXAMPLE

## **FOCUS AREA**

## **COUNTY ACTION**

ENERGY USE & CONSUMPTION

#### 1. Solar Energy Initiatives

- Provide resources for zoning and planning boards to consider incentivizing a certain coverage of solar panels above parking areas.
- Incentivize the installation of solar panels above parking areas.
- Identify potential sites that may be suitable for incentivized renewable energy projects

#### 2. Education & Outreach

- Provide educational material on energy conservation, fuel switching, and reduction practices.
- Expand outreach for C-PACE financing and similar programs.
- Encourage the development of a county-wide toolkit that facilitates sustainable practices among local organizations through resources, training, networking, incentives and/or performance tracking tools.

# Goals & Strategies **EXAMPLE**

## **COMMUNITY-DRIVEN ACTION**

NOTE: The following is a summary of potential actions that may be initiated by County stakeholders with an interest in furthering the goals and strategies of this Community-wide Climate Action Plan. For some actions, the County may be a partner in implementation through supportive measures such as assistance securing funding, serving as a coordinator or connector of stakeholders, and/or providing informational resources and guidance, as appropriate.

#### 1. Education & Resources for Institutions

 Implement a toolkit to public schools (including example School District Sustainability Plans, suggestions for actions/areas of opportunity, available local/state/federal grants to fund energy audits and other activities).

#### 2. Planning & Policy

- Encourage zoning and planning boards to require a certain coverage of solar panels above parking areas.
- Identify targets for new development to connect with renewable energy sources, in line with New York State requirements for advancing zero emission construction in new buildings.

## **ENERGY USE & CONSUMPTION**



## FOCUS AREA CONTEXT & GOALS

# **Energy Use & Consumption OVERVIEW**

- The type and quantity of energy sources used have a direct impact on climate change due to their associated greenhouse gas emissions.
- Transitioning away from fossil fuels (gas, oil, coal) towards more sustainable energy alternatives like solar, wind, and geothermal will reduce climate impacts.
- The practical solution involves shifting to electricity-powered technologies while simultaneously decarbonizing the sources of electricity generation.

#### **ENERGY USE & CONSUMPTION**



## **Energy Use & Consumption GOALS**

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

## **County Actions**

- 1. Solar Energy Initiatives
- 2. Education & Outreach
- 3. Technical & Financial Assistance
- 4. Recognition Programs
- 5. Development & Assessment Tools
- 6. Environmental Restoration & Infrastructure

## **Community-Driven Actions**

- 1. Education & Resources for Institutions
- 2. Planning & Policy
- 3. Renewable Energy & Infrastructure
- 4. Consumer & Utility Engagement

# **BUILDINGS & HOUSING**

## FOCUS AREA CONTEXT & GOALS

# Buildings & Housing OVERVIEW \_\_\_\_\_

- Includes commercial, industrial, and residential buildings we live and work in.
- Buildings vary in appearance, footprint, and density across rural, suburban, and urban areas.
- The types of buildings, their construction methods, and daily usage patterns impact the environment, energy consumption, and microclimates.



# Buildings & Housing GOALS

- Consider existing development, redevelopment, and new development scenarios to reduce or 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 the retrofitting of existing and redevelopment.

#### **County Actions**

- 1. Urban Planning & Development
- 2. Workforce Development & Training
- 3. Educational Campaigns & Community Engagement

- 1. Land Use Regulations
- 2. Renewable Energy & Building Conversions
- 3. Energy Efficiency in Buildings

#### **TRANSPORTATION**



### **Transportation**

#### **OVERVIEW**

- The different modes of transportation (driving, public transit, bicycling, walking) connect us to homes, jobs, businesses, and the environment.
- Transportation networks and infrastructure are required to support these varying modes of transport.
- The modes of transportation used, the infrastructure to support them, and the travel distances between destinations directly impact our carbon footprint and greenhouse gas emissions.



# Transportation GOALS ———

- Increase connectivity surrounding high trip potential and population centers.
- Reduce vehicle miles traveled.
- Increase zero emission personal and fleet vehicles, equipment, and facilities.

#### **County Actions**

- 1. Education & Awareness Campaigns
- 2. Active Transportation & Infrastructure Development
- 3. Facilities & Amenities for Transportation Modes
- 4. Electric & Alternative Transportation Incentives
- 5. Transportation Planning & Policy Development

- 1. Land Use Regulations
- 2. Alternative Transportation & Reduction of Car Dependence
- 3. Public Transit & Active Transportation Infrastructure
- 4. Sustainable Development Features

#### LAND & WATER RESOURCES -



# Land & Water Resources OVERVIEW \_\_\_\_\_

- Monroe County has a wealth of open space and water resources (parks, streams, rivers, canals, Lake Ontario).
- There is a direct link between water quality in Monroe County and the Great Lakes water system.
- Water resources, open spaces, and trees help regulate stormwater, wastewater, and GHG emissions.
- These natural resources are vulnerable to impacts from development and human intervention.





# Land & Water Resources GOALS

- 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.

#### **County Actions**

- Policy Guidance & Support for Municipalities
- 2. Environmental Conservation & Land Management
- 3. Biodiversity & Habitat Restoration

- 1. Green Infrastructure & Land Use
- 2. Water Management & Conservation
- 3. Biodiversity & Habitat Connectivity
- 4. Community Engagement & Education

# **SUSTAINABLE MATERIALS MANAGEMENT**

# Sustainable Materials Management OVERVIEW

- 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.



# Sustainable Materials Management GOALS

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

#### **County Actions**

- 1. Waste Reduction & Diversion Programs
- 2. Recycling Enhancement & Education
- 3. Sustainable Procurement Policies
- 4. Community Engagement & Reuse Initiatives
- 5. Restaurant Waste Policies

- Business Practices & Corporate Responsibility
- 2. Infrastructure & Resource Efficiency
- 3. Community & Consumer Engagement

## PARTNERSHIPS, EDUCATION — & ECONOMY



### 

- Our quality of life has always been linked to nurturing existing partnerships and fostering new ones.
- Our success in reducing individual and collective climate impacts will be directly related to understanding what initiatives have or are taking place and opportunities for social, educational, and economic sector partnerships for implementation.



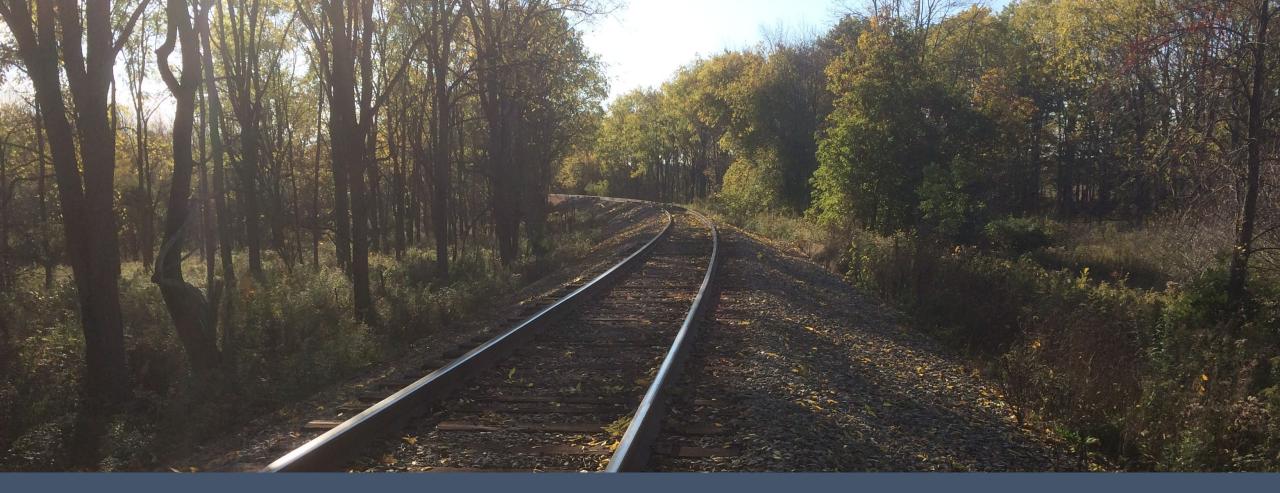
# Partnerships, Education & Economy GOALS

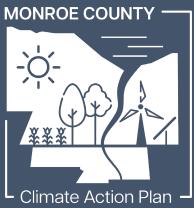
- Identify and foster connections between private and public organizations, local and county governments, and regional initiatives.
- Increase awareness and access to online platforms, tools, and networks to leverage partnerships between these groups.

#### **County Actions**

- 1. Community Engagement & Forums
- 2. Business Engagement & Support
- 3. Educational Development

- 1. Partnerships & Collaboration
- 2. Economic Development & Business Support
- 3. Community Engagement & Environmental Stewardship
- 4. Educational & Informational Resources





## 4. NEXT STEPS

#### HOW TO STAY INVOLVED:

- **1:** Submit a comment online!
- 2: Project Email
- **3:** Advisory Committee Meeting (June 3<sup>rd</sup>)
- 4: Legislature Meeting



### **REVIEW THE DRAFT PLAN!**

**OPEN THROUGH MAY 12TH** 

### Looking for feedback on:

- Content
- Priorities
- Suggestions to carry plan forward

SCAN THE QR CODE BELOW



Sustainability@monroecounty.gov

www.MonroeCountyClimateAction.com

#### HOW TO STAY INVOLVED:

- **1:** Submit a comment online!
- 2: Project Email
- **3:** Advisory Committee Meeting (June 3<sup>rd</sup>)
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# MONROE COUNTY Climate Action Plan

### **NEXT STEPS**

#### **Revised Plan**

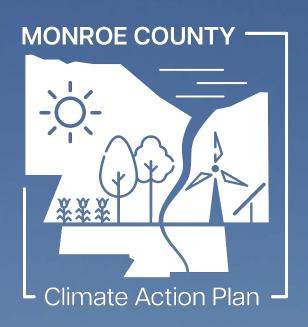
May 27<sup>th</sup> – Will be reposted!

#### **Advisory Committee**

June 3<sup>rd</sup> – Recommendation to County Legislature

#### **County Legislature**

June 11<sup>th</sup> – Referral to Legislature July 9<sup>th</sup> – Anticipated Adoption



# PUBLIC WORKSHOP #3

May 8, 2024



# OPEN HOUSE FEEDBACK

- Emissions Summary Boards
- Goals & Actions Boards



#### BUILDINGS & HOUSING / ENERGY USE & CONSUMPTION EMISSIONS

- Buildings & Housing: The built environment includes commercial, industrial, and residential structures where we
  work and live.
- · Building type, construction methods, operations, and daily usage impact our energy consumption and emissions.
- Energy Use & Consumption: The type and amount of energy we use has a direct impact on climate change because of the greenhouse gas emissions each energy source produces.
- The reduction and/or 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.





26% Commercial Residential Obstillate fuel oil no. 2

Wood

A%
Residual fuel oil no. 6

Propane

48%
Natural gas

Fuel Type

18%
Electricity

#### **HOW CAN WE REDUCE EMISSIONS?**

Most emissions in this sector come from natural gas-powered sources. This suggests that most emissions come from heating our homes and buildings. Mitigating heating demands will have the greatest impact on reducing emissions in this sector.



#### **BUILDINGS & HOUSING** *GOALS*

- Goal 1: Consider existing development, redevelopment, and new development scenarios to reduce or eliminate GHG emissions.
- Goal 2: Reduce energy use of buildings powered by fossil fuels, and transition to renewable energy sources where possible.
- Goal 3: Implement green building infrastructure and renewable energy generation policies on new development and encourage the retrofitting of existing and redevelopment.



Energy use from n most emissions in by industrial (31%)

Process and fugitive emissions

Key Takeaway
Process and fugit
total emissions in
happen in part du



#### COUNTY ACTIONS

#### **Urban Planning & Development**

Work with COMIDA (County of Monroe Industrial Development Agency) and MCIDC (Monroe County Industrial Development Corporation) to encourage redevelopment of areas targeted for infill that are within public transit or walkable neighborhoods.

Work with COMIDA to implement a scoring policy to encourage high density development/inflil.

Develop a target use of renewable energy sources in new development, retrofits, and rehabilitation projects for projects with COMIDA/IDC support.

#### Workforce Development & Training

Provide workforce development services to connect community members with jobs in energy efficiency fields (i.e., online job board, training services).

Expand workforce training and education in relevant fields such as vocational programs and apprenticeship programs in skilled trades like Electricians, HVAC/R industries.

Provide support for contractors to complete NYSERDA (New York State Energy Research and Development Authority) paperwork on projects.

Provide support to increase contractor workforce with Building Performance Institute (BPI) certification.

#### Educational Campaigns & Community Engagement

Provide community-wide education on rebates and incentives related to grant funding for climaterelated improvements. Partner with trusted contractors to educate customers on available rebates and incentives.

Consider supporting a county-wide educational campaign on the health benefits of housing upgrades and resources (i.e., Rochester Energy Efficiency and Weatherization program).

#### COMMUNITY-DRIVEN ACTIONS

#### Land Use Regulations

Explore the benefits to municipalities of modifying zoning policies to allow multi-family units to be built on single-family lots and increasing mixed-use development zoned areas to create more walkable areas. Assist and incentivise municipalities willing to modify zoning.

Provide resources for municipal zoning codes to increase development density in targeted areas by re-evaluating and reducing minimum lot sizes, required setbacks, and parking requirements.

#### Renewable Energy & Building Conversions

Increase renewable energy use in municipal buildings, including conversions to heat-pumps and aiming for net-zero municipal buildings.

Incentivize residential renewable energy use (e.g., solar, wind) and electrification of homes.

#### Energy Efficiency in Buildings

Encourage the accommodation of historic building adaptations in local building and zoning codes to allow for opportunities to increase energy efficiency in historic preservation districts and leverage related funding programs.

Encourage municipalities to increase inspection frequency, thoroughness, and performance requirements of insulation and weatherizing practices in residential homes and apartment buildings.

Consider supporting benchmarking and disclosure programs to help renters and buyers identify energy efficient properties.

Encourage municipalities to share information about state weatherization and energy efficiency programs with local residents, organizations, and businesses.

Support local organizations to educate municipalities and other eligible organizations for green energy grant-funding and assist with grant applications.



YOUR PRIORITIES —
Place a dot in the box next to your highest priority action.