Village of Lansing

Government Operations Climate Action Plan

A strategic management tool for reducing greenhouse gas emissions and mitigating climate change within municipal governance in the Village of Lansing.

Compiled by
Cornell Cooperative Extension Tompkins County

Contribution and review by
Village of Lansing Climate Smart Communities Task Force

Executive Summary

The Village of Lansing has growing concerns with oncoming climate change and its potential impacts. To address the threats of climate change, the Village has created the following "Climate Action Plan." The burning of fossil fuels (e.g., coal, oil, and natural gas) and other human activities, have increased the level of carbon dioxide and other heat-trapping greenhouse gases (GHGs) in the atmosphere. These GHGs are majorly contributing to global climatic changes. Thus, this plan focuses on strategies that will reduce the Village's GHG emissions as well as actions that address local mitigation and adaption to climate change.

This plan begins with an introduction to the Village of Lansing and an overview on climate change. The introduction also includes a history of the Village's climate actions, the plan's development, and its public outreach. This is followed by a summary of the Village's GHG Emissions Inventory. Goals for GHG emissions reductions were set using the results of their GHG Inventory as a baseline. Action tables detail the implementation strategy the Village will take to reach their emission reduction goals. The Village has included its methods for tracking progress as well as potential partner organizations with their next steps. Following the completion of this planning document, on a yearly basis, the task force will report progress on climate actions/goals and review this action plan to evaluate its effectiveness. At the point of review, the task force may amend or update the document, with any changes needing final approval by the Village Trustees.

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Introduction

The Village of Lansing is located within the southern part of the greater Town of Lansing in Tompkins County, along the southeastern side of Cayuga Lake. The Village encompasses about three square miles and is significantly more urbanized than the rest of the larger township. The municipality is also in close proximity to the City of Ithaca and Cornell University. It has significantly changed over time with the development and expansion of the Ithaca Mall and continuous urbanization. The entire village lies within the Cayuga Lake Watershed and is traversed by more than a dozen minor streams. Seven Unique Natural Areas (UNAs) are located within the Village. With increasing extreme weather events, the Village has been susceptible to flash floods and other environmental hazards that have led to threatened natural resources in parts of the municipality. Through this climate action plan, the Village of Lansing strives to create a strategy that will guide the Village's efforts in addressing mitigation and adaption to climatic change.

Climate Change

Climate encompasses the fundamental meteorological characteristics defining where we live. These are the long-term trends in seasonal weather patterns that, in turn, determine the species composition of our natural landscapes, waterways, and agricultural practices. Climate can also dictate business and recreational opportunities. Weather, by contrast, describes the day-to-day changes in meteorological conditions for a location.

Historically, while weather varied, climate rarely exceeded the norms expected within the climatic region. However, since the mid-20th century, the planet's average temperature has been rising as warming increases unevenly across the world. In addition, drought and rainfall patterns are changing at an unprecedented pace. These climatic changes have been largely attributed to the burning of fossil fuels (e.g., coal, oil, and natural gas) and other human activities that have increased the level of carbon dioxide and other heat-trapping greenhouse gases in the atmosphere.

There is increasing evidence of climate change and its impacts are beginning to cause major damage and devastation to communities across the globe and locally within New York State. Regional climate is increasingly moving towards extremes and the "new normal" is undefined. No longer can governance rely on historical weather patterns of the past to inform management decisions.

Previous Climate Characteristics and Recent Climate Change Impacts

The climate of the Village of Lansing and its previous seasonable weather patterns are similar to Tompkins County and the larger Northeast United States. New York's Climate Aid report (2011, 2014) describes the average climate of the region, from 1900- 2012, as "Humid Continental" with the following attributes. The average annual precipitation for Tompkins County has been approximately 37 inches, most of which occurs between April and November. Historically, precipitation during the warm season, has been typically characterized by relatively short periods of intense precipitation that produce substantial surface runoff and little recharge.

Average summer temperatures have ranged from about 60 degrees Fahrenheit (°F) to 68°F, with average daily highs up to 80 degrees in July. The cool season (October through March) has had large, low-pressure weather systems that move northeastward along the Atlantic coast or up the eastern side of the Appalachian Mountains. Storms that formed in these conditions were normally characterized by prolonged periods of steady precipitation in the form of rain, snow, or ice. They tend to produce less surface runoff and more recharge than the summer storms because of their longer duration and occasionally result in snowmelt. Winter high temperatures have been between 31°F and 36°F, with minimum temperatures dipping to 15°F.

The paragraph above details the previously seen climate norms from New York's Climate Aid report, but their results, as well as those of other research groups, have seen evidence that indicated these climate norms are changing. This change is seen in the average annual temperature rise by 2.4°F in New York State since 1970. In addition, average winter temperatures have increased by over 4.4°F. Climatic change has also resulted in increased precipitation in the winter, and less in the summer. The Northeast region is expecting a ~20 to 30% increase in winter precipitation in upcoming years. This winter precipitation may consist of less snow and more rain due to increases in temperature. All of these climatic changes have direct effects on the health of humans, animals, and plants in New York State.

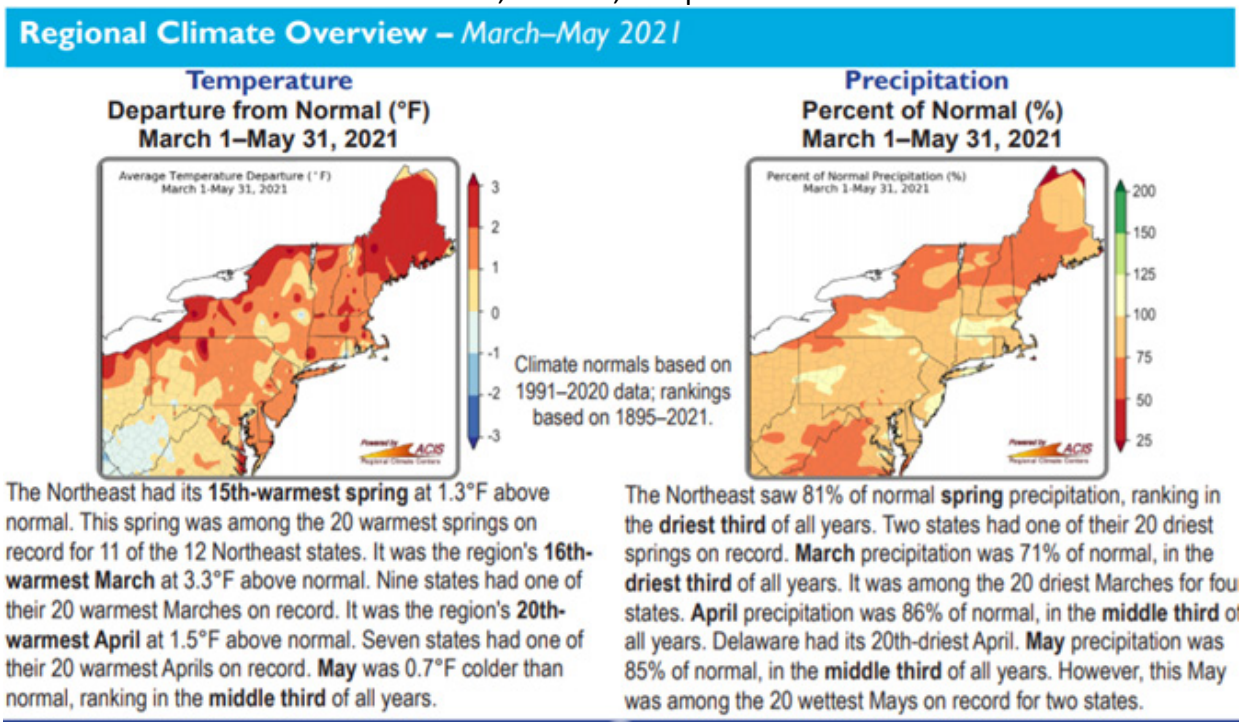


Figure 1: Regional Climate Overview March-May 2021

The above image is from the Northeast Regional Climate Center's report on Quarterly Climate Impacts and Outlook for the region from March-May 2021 (the most recent report available as of the writing of this plan). It shows that all regions are recording temperatures above the normal average for that location (on left) and that the northeast had an extremely dry spring with most areas receiving less precipitation than their location's normal average (on right).

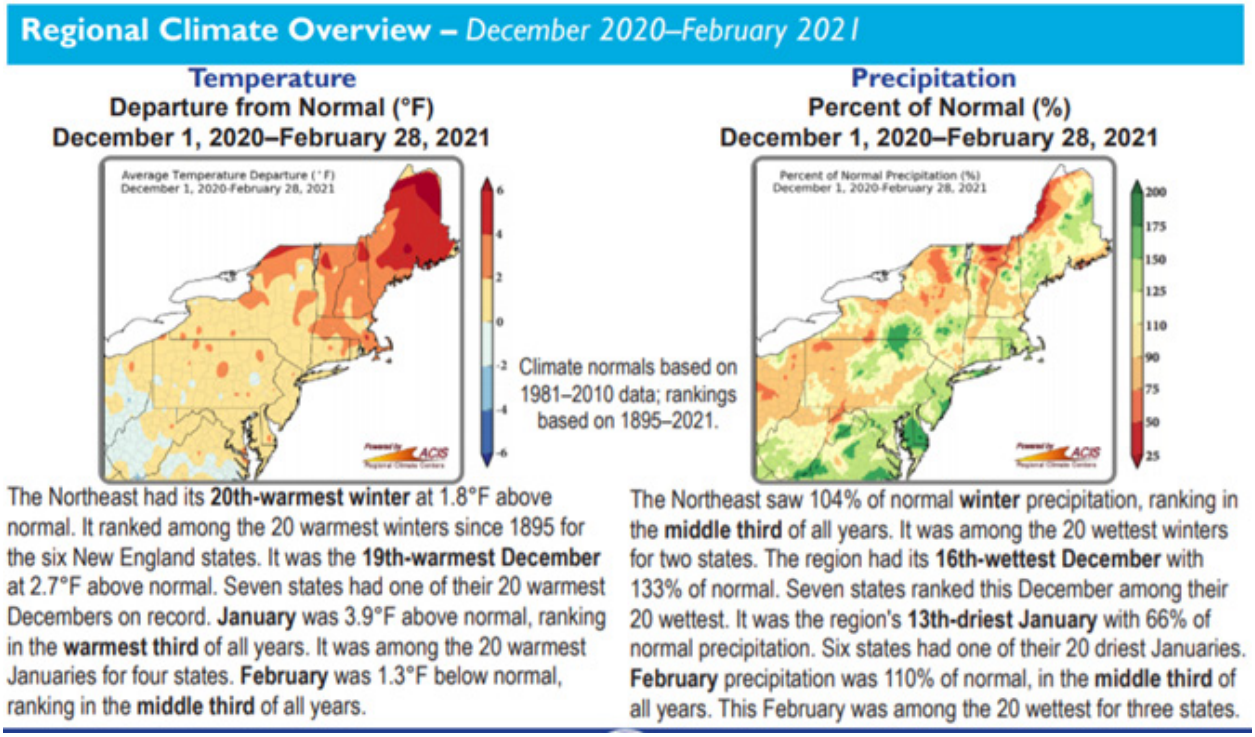


Figure 2: Regional Climate Overview December 2020-February 2021

The above image is from the Northeast Regional Climate Center's report on Quarterly Climate Impacts and Outlook for the region from December 2020 -February 2021. Again, it shows that most regions are recording temperatures above the normal average for that location (on left). There is some variance in the precipitation seen across the northeast. With rising temperatures, more of this precipitation may have formed in rain, rather than traditional snowfall.

Past and Ongoing Climate Initiatives, Climate Action Plan Development, and Public Outreach

The Village of Lansing has divided their previous and ongoing climate initiatives into 5 major categories: Energy Supply, Municipal Buildings, Fleet Emissions, Waste Management, and Miscellaneous.

Table 1 below details the Village of Lansing's previous and ongoing climate initiatives. It lists each initiative's title, a short description, and assigns each to its corresponding action category: Energy Supply, Municipal Buildings, Fleet Emissions, Waste Management, and Miscellaneous. These categories will be used again later when describing the future action strategies.

Table 1: Village of Lansing's previous and Ongoing Climate Initiatives

Past and/ or Ongoing Initiatives	Major Category	Strategy	Implementation Path
1	Energy Supply	Solarize Powered Signs	The Village of Lansing constructed and now uses a solar power speed radar sign on Craft Rd.
2	Municipal Buildings/ Infrastructure	Upgrade Streetlights and Powered Signs to LED	The Village has identified street lights for LED upgrades and completed the majority of the streetlight conversion. The Village has also upgraded to a LED traffic signal at Craft Rd. and North Triphammer Rd.
3		Follow Energy Efficiency Codes for New Building	The new Village Hall of Lansing was built to energy efficient codes.
4		Climate Smart Stormwater Management	This Annual Report has been prepared in compliance with the NYS Department of Environmental Conservation permitting requirements for small Municipal Separate Storm Sewer Systems. This Report documents the progress that the Village made toward compliance. The six Minimum Control Measures include: Public Education and Outreach on Stormwater Impacts, Public Involvement/Participation, Illicit Discharge Detection and Elimination, Construction Site Stormwater Runoff Control, Post-Construction Stormwater Management, Pollution Prevention/Good Housekeeping for Municipal Operations.
5	Fleet Emissions	Fleet Inventory	The Village has conducted and will maintain their fleet inventory. In addition, the Village has calculated Greenhouse Gas (GHG) emissions from fleet use and have incorporated the information into their GHG Inventory.
6	Waste Management	Community Organic Food Waste Reduction	The Village hosts a composting drop off site for food scraps as a part of Tompkins County food waste collection program.

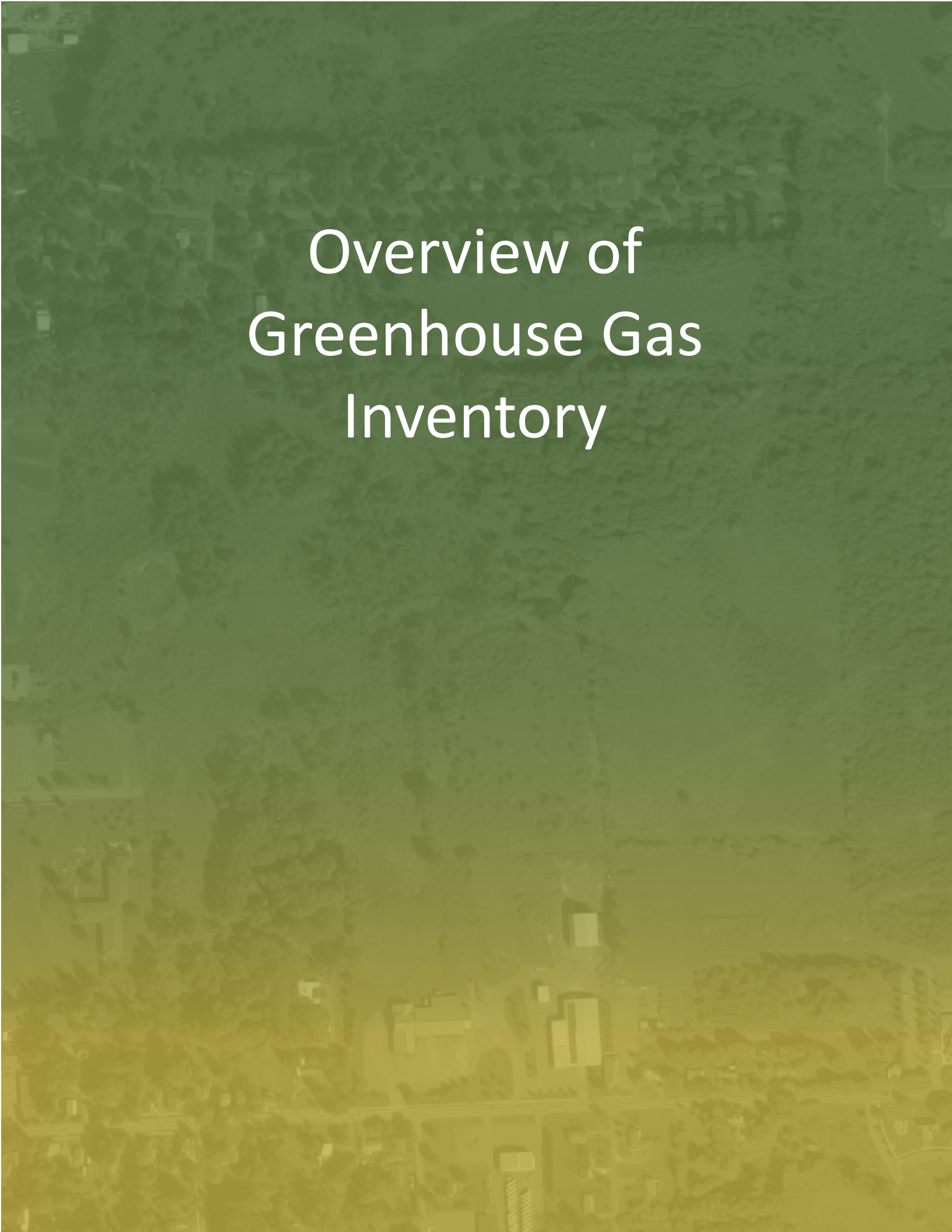
Past and/ or Ongoing Initiatives	Major Category	Strategy	Implementation Path
7	Miscella-neous	Participate in Climate Smart Communities (CSC) Program	The Village of Lansing has been a participating member of the CSC program since 12/18/2019. The CSC program guides communities in Climate Smart strategic planning. It encompasses a series of actions communities can take to mitigate and/ or adapt to the changing climate
8		Green Land-Use Decision Making	The Village recently purchased 19 acres of land and used 70% for a park and maintained the rest as open green space. In addition, the Village promotes their Greenway Plan on walkability, protecting green space and open space, provid-ing shade, etc.
9		Climate Inclusive Comprehensive Planning	The Village Comprehensive Plan was written in-cluding consideration of the Village's GHG emis-sions (i.e. green building policies, etc.)
10		Investment in Improving Village Natural Resourc-es	The Village created and maintains a street tree planting program.

History of Plan Development

This Climate Action Plan (CAP) is a strategy document that sets goals and outlines a set of initiatives that aim to reduce the Village of Lansing's greenhouse gas emissions to combat climate change. This plan was developed in partnership between the Village of Lansing and Cornell Cooperative Extension Tompkins County. Using the Village's Greenhouse Gas Inventory as the foundation, this plan outlines different strategies to mitigate and adapt to climate change. This action plan will be a tool enabling the Village to mitigate climate risks and implement actions to adapt to the effects of climate-related stresses on the community, thereby improving community health and well-being.

Public Outreach

The Village of Lansing will keep residents informed through news posts and web-accessible documentation on the Village website. Climate Action Plan status updates will be provided to residents in the semi-annual Village newsletters. All Village Climate Smart Communities Task Force meetings are open to the public and are reported on the Village website. The final plan was submitted to the Village Trustees for review and approval. During this review, the Village Trustees held a public meeting to discuss the proposed Climate Action Plan.



Overview of Greenhouse Gas Inventory

Greenhouse gases are gases that trap heat in the Earth's atmosphere when they accumulate in high concentrations. Common greenhouse gases include carbon dioxide, methane, nitrous oxide, and fluorinated gases, which are synthetic gases produced by industrial processes. These gases are released into the atmosphere in a number of ways, largely from human activity.

Human generated sources come from energy-related activities (e.g., combustion of fossil fuels in the electric utility and transportation sectors), agriculture, land-use change, waste management and treatment activities, and various industrial processes. These gas emissions combine and change climatic conditions by causing the atmosphere to retain more energy from the sun than it normally would.

The Village of Lansing's 2019 Greenhouse Gas (GHG) Inventory incorporates an emissions comparison from the baseline year of 2013. The comparison serves as a preliminary step in creating strategies to reduce GHG emissions. It is important for the Village to understand their emission levels and their impacts as it allows them to prioritize actions when creating a local Climate Action Plan to mitigate the effect of these emissions. A link to the full 2019 Greenhouse Gas Inventory for the Village of Lansing can be found in the sources section of this document.

Overall, greenhouse gas emissions from Village of Lansing government operations increased by 10.9%, or 9.35 $MTCO_2e$, from 2013 to 2019. In 2019, the Village of Lansing created 95 metric tons of carbon dioxide equivalent. Figure 3, from the Village's GHG Inventory, shows what percent of the Village of Lansing's emissions that each of their municipal sectors releases. Vehicle Fleet is the largest, followed by Buildings, and then Streetlights and Traffic Signals. Figure 4, from the Village's GHG Inventory, shows the changes in emissions from each sector, from 2013 to 2019. During this period, the Village updated many of their streetlights to LEDs and there was a greening of the upstate NY energy grid that resulted in lower emissions attributed to electricity in 2019 than in 2013. For these reasons, there was seen to be a reduction in emissions from Streetlights and Traffic Signals from 2013 – 2019.

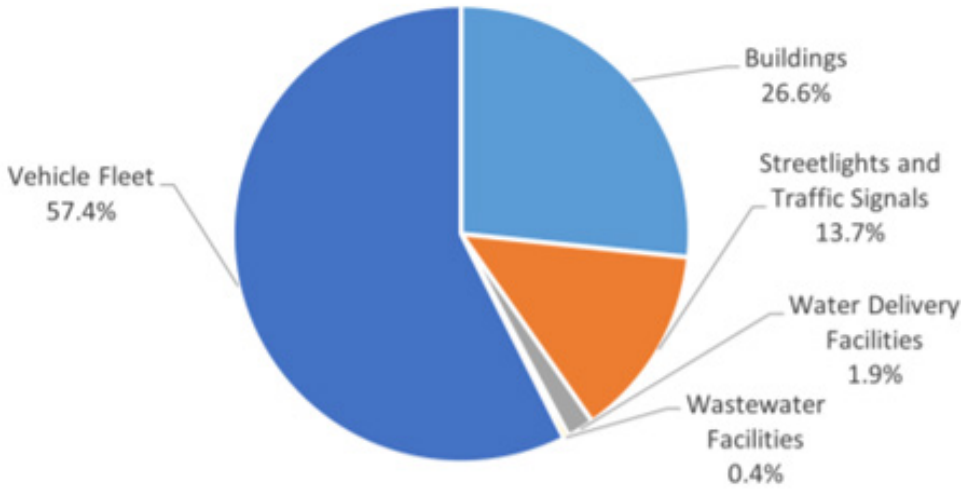


Figure 3: Percent of Total Emissions by Sector and Source (MT CO_2e) in 2019

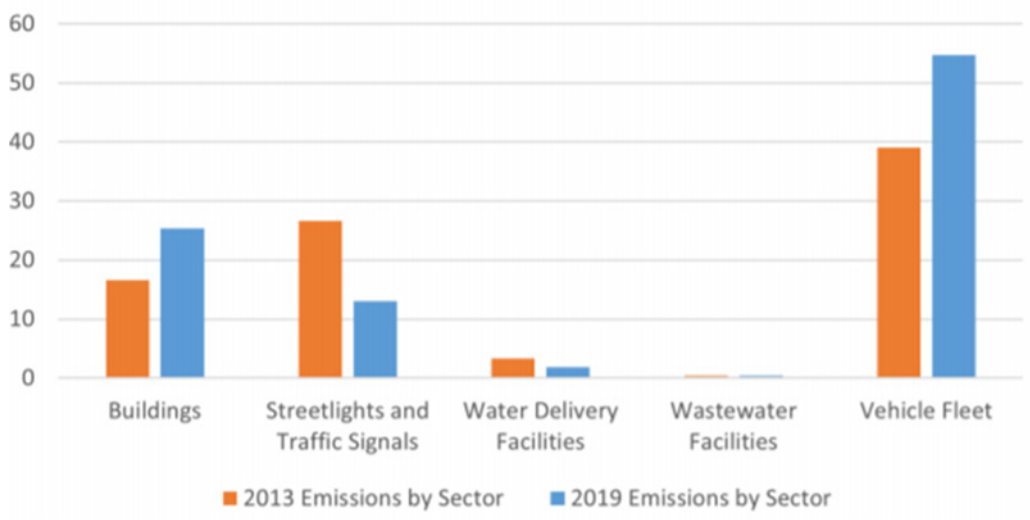


Figure 4: Emissions by Sector 2013 vs 2019 (MT CO_2e)

Natural Gas Energy Use and GHG Emissions

The Village of Lansing municipal fuel and energy consumption and their GHG emissions from natural gas increased from 2013 to 2019. The increase in natural gas usage led to a corresponding increase in GHG emissions from CO_2. In 2013, the Village emitted 12.3 MT CO_2e from natural gas, compared to 22.5 MT CO_2e in 2019. This is an increase of 10.2 MT CO_2e, or an 82.9% increase in emissions (See Tables 2 and 3 below). Table 2, from the Village's GHG Inventory, shows the municipal natural gas consumption by sector in 2013, 2019, and the difference between the year's totals. Table 3, from the Village's GHG Inventory, shows the emissions associated with municipal natural gas consumption by sector in 2013, 2019, and the difference between the year's totals. Please note, a new building was added in in 2014 which contributed to the increase in energy consumption between 2013 and 2019. In addition, weather conditions (like ice and snow) vary from year to year and can impact the amount of municipal GHG emissions from snow removal and heating.

Table 2: 2013 v 2019 Municipal Fuel and Energy Consumption by Sector (million BTU)

2013 v. 2019 Municipal Fuel and Energy Consumption by Sector (million BTU)				
Sector	2013 Natural Gas Energy Use	2019 Natural Gas Energy Use	2013 v. 2019 Natural Gas Use Difference	2013 v. 2019 Natural Gas Use Percent Change
Buildings	215	409	↑194	↑90.2%
Water Delivery Facilities	18	14	↓ 4	↓22.2%
Total Stationary Combustion Energy Use	**233**	**423**	**↑190**	**↑81.5%**

Table 3: 2013 v 2019 GHG Emissions from Natural Gas by Sector (MT CO_2e)

2013 v. 2019 GHG Emissions from Natural Gas by Sector (MT CO_2e)				
Building	2013 CO_2 Emissions	2019 CO_2 Emissions	2013 v. 2019 Emission Difference	2013 v. 2019 Emission Percent Change
Buildings	11.4	21.7	↑10.3	↑90%
Water Delivery Facilities	0.9	0.8	↓0.1	↓11.1%
Total Stationary Combustion Emissions	**12.3**	**22.5**	**↑10.2**	**↑82.9%**

Electrical Use and GHG Emissions

Electricity consumption in the Village of Lansing's buildings increased from 29,520 kilowatt-hours (kwh) in 2013 to 31,775 kwh in 2019 (see Table 4 below). Table 4, from the Village's GHG Inventory, shows the municipal energy consumption by sector in 2013, 2019, and the difference between the year's totals.

However, an increased mix of renewables in the upstate NY energy grid results in a lower emissions factor attributed to emissions from electricity in 2019 than in 2013. This is a possible explanation of why during 2013-2019, while electricity usage increased, GHG emissions from electricity decreased (see Table 5 below). Table 5, from the Village's GHG Inventory, shows the emissions associated with municipal energy consumption by sector in 2013, 2019, and the difference between the year's totals.

Table 4: 2013 v 2019 Electrical Consumption by Sector (kwh)

2013 v. 2019 Electrical Consumption by Sector (kwh)				
Sector	2013 Electrical Use	2019 Electrical Use	2013 v. 2019 Electrical Use Difference	2013 v. 2019 Electrical Use Percent Change
Buildings	29,520	31,775	↑2,255	↑7.6%
Streetlights and Traffic Signals	150,608	112,813	↓37,795	↓25.1%
Water Delivery Facilities	13,857	9,214	↓4,643	↓33.5%
Wastewater Facilities	2,248	3,140	↑892	↑40%
Total Electrical Consumption	**196,233**	**156,942**	**↓39,291**	**↓20%**

Table 5: 2013 v 2019 GHG Emissions from Electricity by Sector ($MTCO_2e$)

2013 v. 2019 GHG Emissions from Electricity by Sector (MT CO_2e)				
Sector	2013 CO_2 Emissions	2019 CO_2 Emissions	2013 v. 2019 Emission Difference	2013 v. 2019 Emission Percent Change
Buildings	5.21	3.66	↓1.55	↓29.8%
Streetlights and Traffic Signals	26.58	13.01	↓13.57	↓51.1%
Water Delivery Facilities	2.45	1.06	↓1.39	↓56.7%
Wastewater Facilities	0.40	0.36	↓0.04	↓10%
Total Emissions from Electricity	**34.63**	**18.09**	**↓16.54**	**↓47.7%**

Municipal Vehicle Fleet and GHG Emissions

During the period 2013-2019, the Village of Lansing acquired 2 additional vehicles, 5 additional pieces of equipment, and replaced older vehicles. In budget year 2019, the fleet consisted of 17 vehicles and pieces of equipment: 6 of which consumed gasoline, and 11 of which consumed diesel. In 2019, the fleet's fossil fuel consumption increased by 1,458 gallons from 2013 levels to 5,543 gallons of fossil fuel.

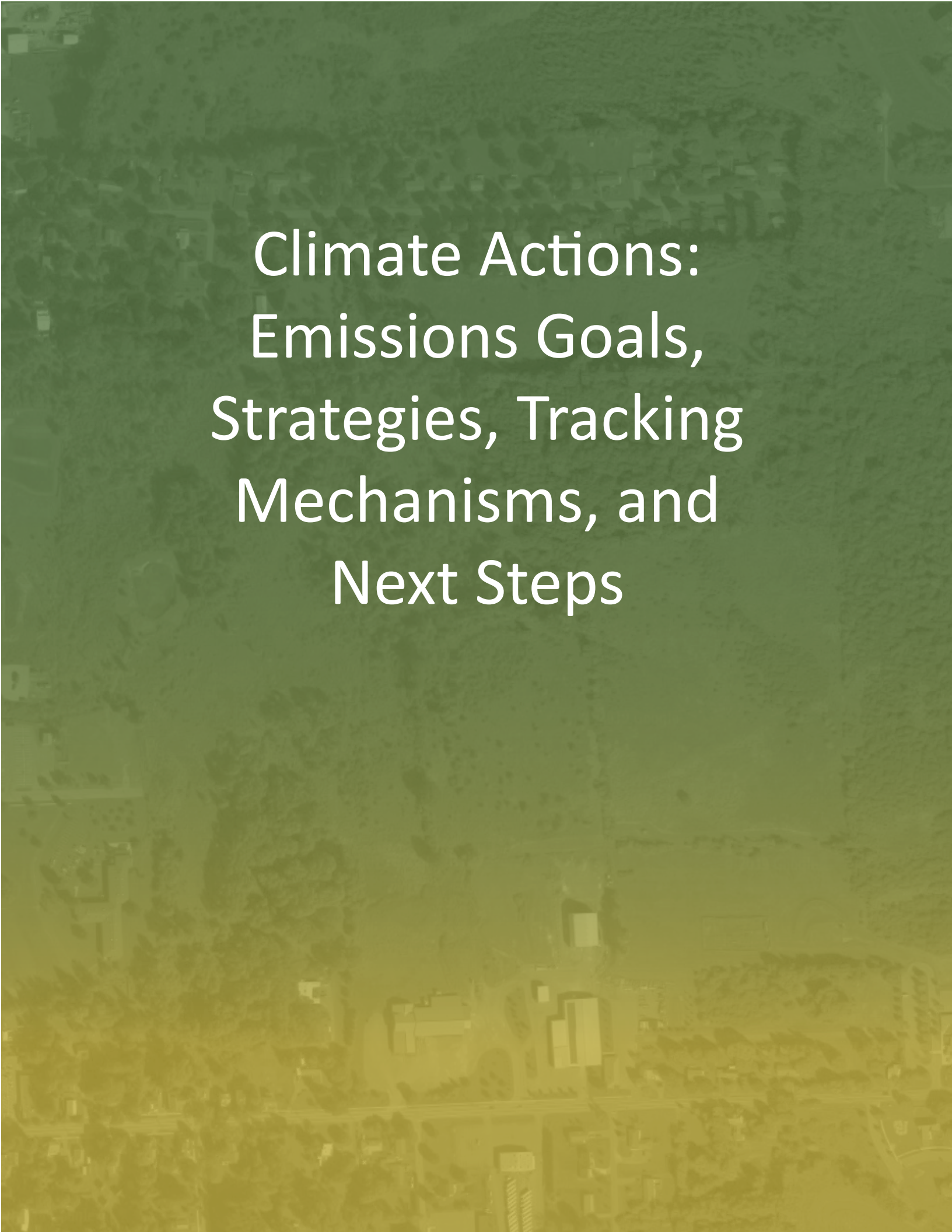
Table 6, from the Village's GHG Inventory, shows the vehicle fossil fuel use by fuel type in 2013, 2019, and the difference between the year's totals. The increase of fossil fuel use for the municipal vehicle fleet caused an increase in greenhouse gas emissions. Between 2013 and 2019, carbon dioxide emissions increased from 39 MT CO_2 e to 55 MT CO_2 e, a growth of 41.0%. Table 7, from the Village's GHG Inventory, shows the associated emissions from vehicle fossil fuel use in 2013, 2019, and the difference between the year's totals.

Table 6: 2013 v 2019 Vehicle Fossil Fuel Use by Type (MMBtu)

2013 v. 2019 Vehicle Fossil Fuel Use by Type (MMBtu)			
Year	Gasoline	Diesel	**Total**
2013	311	221	**532**
2019	218	524	**743**
2013 v. 2019 Fossil Fuel Use Difference	↓93	↑303	**↑211**
2013 v. 2019 Fossil Fuel Use Percent Change	↓29.9%	↑135.3%	**↑39.7%**

Table 7: 2013 v 2019 GHG Emissions from Municipal Vehicle Fleet (MT CO_2e)

2013 v. 2019 GHG Emissions from Municipal Vehicle Fleet (MT CO_2e)			
2013 CO_2 Emissions	2019 CO_2 Emissions	2013 v. 2019 Emission Difference	2013 v. 2019 Emission Percent Change
39	55	↑16	↑41.0%



Climate Actions: Emissions Goals, Strategies, Tracking Mechanisms, and Next Steps

Emissions Reduction Target Year and Goals

A Climate Action Plan Advisory Committee composed of municipal representatives and community leaders have discussed emission reduction goals and specific strategies for reaching them. By using information from the GHG inventory, the following emissions reductions goals have been set:

- Reduce emissions by 5% from 2019 levels by 2026.
- Reduce emissions by 15% from 2019 levels by 2031.
- Reduce emissions by 30% from 2019 levels by 2036.

This means (on average) the Village will reduce emissions:

- 1% per year until 2026
- 2% per year from 2026 – 2031
- 3% per year from 2031 – 2036

These are aggressive and will help move the Village of Lansing towards the State's GHG emission reduction goals. For reference NYS has set the goal of 85% GHG reduction by 2050* 1990. The Village will update this plan to go beyond 2036 in a five-year review.

Action Strategies

Given the results of the GHG inventory and areas available for climate smart improvement, the Village of Lansing has divided their action strategies into 5 major categories; Energy Supply, Municipal Buildings, Fleet Emissions, Waste Management, and Miscellaneous. Each table lists each strategy's title, our best estimates, based on previous results and planning, for the potential impact on greenhouse gas emissions (scaled low, medium and high), as well as potential action time frame (scaled current/ongoing, short-term, and long-term). **Please note that these will be our best estimates. The actual emissions impact and timing could vary greatly based on circumstances and Village decisions. **

Table 8 details the Village of Lansing's planned climate actions regarding Energy Supply. Table 9 details the Village of Lansing's planned climate actions regarding Municipal Buildings/ Infrastructure. Table 10 details the Village of Lansing's planned climate actions regarding Fleet Emissions. Table 11 details the Village of Lansing's planned climate actions regarding Waste Management. Table 12 details the Village of Lansing's planned climate actions regarding other Miscellaneous targets.

Table 8: Village of Lansing Energy Supply Planned Climate Actions

Major Category	Strategy	Implementation Path	Greenhouse Gas Emissions Impact Estimate	Time Frame Estimate	Notes
Energy Supply	Install renewable energy systems on municipal facilities	Village of Lansing is interested in installing solar charging panels on park pavilions (3 possible parks) and/or on the municipal garage. Village of Lansing could partner with a solar developer and lease/lease-to-own a solar array.	High	Long-Term	There is a great interest in participating in Net Metering 2.0 to receive monetary credits when producing more energy than needed.
Energy Supply	Purchase and Retire Renewable Energy Certificates (RECs).	The Village will buy NYS Tier 1 RECs which are derived from the energy production of megawatt-hour (MWh) by Renewable Energy Sources electric generation.	Low	Current/ Ongoing	
Energy Supply	Participate in a regional collaborative of governments, businesses, and utilities to drive clean energy transition.	When Possible, the Village of Lansing will strive to collaborate and cooperate with neighboring communities to implement complementary initiatives or collaborate on one cross-cutting issue that spans jurisdictional boundaries.	No direct impact on Village GHG emissions, but potential high impact in future	Current/ Ongoing	

Table 9: Village of Lansing Municipal Municipal Buildings and Infrastructure Planned Climate Actions

Major Category	Strategy	Implementation Path	Greenhouse Gas Emissions Impact Estimate	Time Frame Estimate	Notes
Municipal Buildings/Infrastructure	Install heat pumps or geothermal heating.	When it comes time to replace the current heating systems, the Village will replace with a temperature regulating system that uses these types of heat sources.	High	Long-Term	
Municipal Buildings/Infrastructure	Install water saving faucets and toilets.	All Village owned buildings will be checked for faucet and toilet status (including the Village Department of Public Works (DPW) building). When inefficient faucets and toilets are found, they will be upgraded.	Low	Short-Term	
Municipal Buildings/Infrastructure	Indoor lighting retrofits for municipal buildings.	All Village owned buildings will be checked for lighting and bulb status (including the Village DPW building). When incandescent bulbs are found, they will be upgraded to LEDs. In addition, where suitable, the Village will invest in motion activated lighting retrofits.	Medium	Short-Term	
Municipal Buildings/Infrastructure	Use EnergyStar Portfolio Manager to establish baseline water and energy use in municipal buildings and facilities.	The Village has already begun to log water and energy use in municipal buildings and facilities. This practice will be continued and updated on a yearly basis.	No direct impact on Village GHG emissions but good tool for benchmarking	Current/ Ongoing	

Table 10: Village of Lansing Fleet Emissions Planned Climate Actions

Major Category	Strategy	Implementation Path	GHG Emissions Impact Estimate	Time Frame	Notes
Fleet Emissions	Create EV charging stations at municipal building parking lots	The Village of Lansing will start organizing and implement a plan to create EV charging stations at municipal parking lots	Medium	Long-Term	
Fleet Emissions	Convert municipal fleet (or part of municipal fleet) to electric or hybrid vehicles.	As vehicles retire or are taken out of the fleet inventory, the Village will follow a green purchasing plan when replacing them.	High	Long-Term	
Fleet Emissions	Develop and implement a vehicle fleet management plan to track vehicle miles traveled and fuel usage.	Tracking mileage and fuel will be stored in a central location with the other climate action plan tracking information and data.	No direct impact on Village GHG emissions but good tool for tracking for future fleet improvements	Current/ Ongoing	
Fleet Emissions	Implement a policy requiring minimum fuel efficiency of fleet vehicles.	The Climate Smart Taskforce will propose a new minimum fuel efficiency of fleet vehicles to the Village board for adoption. This will apply only to new purchases by the Village.	High	Short-Term	
Fleet Emissions	Adopt an anti-idling policy for municipal fleet non-emergency vehicles.	The Climate Smart Taskforce will propose a new anti-idling policy for municipal fleet non-emergency vehicles to the Village board for adoption.	Low	Short-Term	The Climate Smart Taskforce hopes that a community policy might follow.
Fleet Emissions	Switch from gas lawn mowers to electric lawn mowers	The Village will investigate replacing their lawn mowers and other smaller DPW equipment with electric options.	Medium	Short-Term	The Village is interested in the zero-turn motor options, especially in models where you can switch out battery packs.

Table 11: Village of Lansing Waste Management Planned Climate Actions

Major Category	Strategy	Implementation Path	Greenhouse Gas Emissions Impact Estimate	Time Frame Estimate	Notes
Waste Management	Municipal government waste reduction policy	The Village of Lansing will develop a municipality government waste reduction policy.	Medium	Short- Term	

Table 12:Village of Lansing Fleet Emissions Planned Climate Actions

Major Category	Strategy	Implementation Path	Greenhouse Gas Emissions Impact Estimate	Time Frame Estimate	Notes
Miscellaneous	Plant trees on municipal properties for carbon storage	Trees will be planted in the Village parks and as Memorials. These trees will be upkept and maintained by the Village.	High	Short-Term	
Miscellaneous	Implement environmentally preferable purchasing policy.	The Village will work with their Climate Smart Taskforce to develop and implement an environmentally preferable purchasing policy.	Low	Short-Term	The Village plans to build from the Tompkins County PPP once it is finalized.
Miscellaneous	Use rain barrel collection systems for landscape watering in select Village facilities.	They will buy and distribute rain barrels within the Village.	Low	Short-Term	Potentially could be used to fill Village water truck

Tracking Mechanisms

Reporting is a fundamental component of this Climate Action Plan. Tracking focuses attention periodically and allows the Village to consider progress against clear benchmarks and towards their goals. In addition, tracking mechanisms will help the Climate Taskforce in routinely updating the Village Trustees. The Village is developing a centralized system to track all components of this Climate Action Plan (this will be where data is stored for the Village's account in EnergyStar Portfolio Manager that will be updated yearly). This storage location may also house evaluations for the cost and benefits associated with each action strategy. In addition, the Village will begin building a central Climate Action photo archive to be stored with the other climate action information and tracking. When tracking progresses, the Village will keep in consideration that there are benefits that can go beyond measurable targets.

Partner Organizations

The following list consists of partner organizations that the Village of Lansing may coordinate with to achieve their climate action goals.

- Cayuga Lake Watershed Intermunicipal Organization: http://cayugawatershed.org/
- Cornell Cooperative Extension Tompkins County: https://cals.cornell.edu/cornell-cooperative-extension
- Environmental Management Council: https://www2.tompkinscountyny.gov/emc
- HeatSmart Tompkins: https://www.solartompkins.org/
- Solar Farms NY: https://solarfarmsny.com/
- Susan Christopherson Center for Community Planning: www.christophersoncenter.org
- Tompkins County Council of Governments: https://www2.tompkinscountyny.gov/tccog
- Water Resources Council: https://www2.tompkinscountyny.gov/planning/committees-wrc

Next Steps

The Village of Lansing will create an optimal timeline for implementing their planned strategic actions. Based on the decided timeline, the Village will begin working on completing actions while maintaining their tracking mechanisms. The taskforce will routinely report progress on climate actions/goals to the Village Trustees. On a yearly basis, the task force will review this action plan and evaluate its effectiveness. At the point of review, the taskforce may amend or update the document, with any changes needing final approval by the Village Trustees.

Acknowledgments

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Sources and Further Information

2019 Greenhouse Gas Inventory for the Village of Lansing
https://www.vlansing.org/Reports/Village%20of%20Lansing%20GHG%20Inventory-2.pdf

Northeast Regional Climate Center
https://www.nrcc.cornell.edu/

New York's Climate Aid report
https://www.nyserda.ny.gov/-/media/Files/Publications/Research/Environmental/ClimAID/2014-ClimAid-Report.pdf

United States Environmental Protection Agency: Greenhouse Gas Overview
https://www.epa.gov/ghgemissions/overview-greenhouse-gases

New York State Department of Environmental Conservation: Impacts of Climate Change in New York
http://www.dec.ny.gov/energy/94702.html

New York State Department of Environmental Conservation: Mitigation of Climate Change
http://www.dec.ny.gov/energy/99223.html

New York State Department of Environmental Conservation: Climate Change and Health
http://www.dec.ny.gov/energy/68917.html

U.S. Department of Energy Office of Energy Efficiency and Renewable Energy
https://www.fueleconomy.gov/feg/evtech.shtml

University of Michigan Center for Sustainable Systems
http://css.umich.edu/factsheets/carbon-footprint-factsheet

United States Environmental Protection Agency: Basic Information of Air Emissions Factors and Quantification
www.epa.gov/air-emissions-factors-and-quantification/basic-information-air-emissions-factors-and-quantification