



2020 ANNUAL REPORT

WHAT IS CLIMATE SMART GARDINER?

Climate Smart Gardiner (CSG) is a member of the NYS Dept. of Environmental Conservation's (DEC) Climate Smart Communities Program, designed to help local municipalities reduce greenhouse gas emissions, promote a green economy, and adapt to climate change. Over 1/3 of New York State is participating in this program. The Town Board passed a resolution on 1/9/18 to make us a Climate Smart Community and we formed an official Taskforce. Currently, due to COVID-19, we meet virtually every first Wednesday of the month from 7-9PM.

More information about our monthly meetings, climate action plan, and community activities can be found on our Facebook page: <https://www.facebook.com/climatesmartgardiner/> and on the Town of Gardiner website: <https://www.townofgardiner.org/climate-smart-gardiner-taskforce>.

CLIMATE SMART GARDINER TASKFORCE

Our Climate Smart Gardiner Taskforce consists of the following members:

Franco Carucci, Gardiner Town Board Liaison

Rebecca Carucci

Misha Fredericks

Tara Hoey

Rick Irizarry

Jason Mayer, Coordinator

Kim Mayer

Suger Rowinski

Holly Shader

Aimee Spring-Cecil

Mark Varian

Stephen Weir

WHAT IS OUR MISSION?

Through education, community-building, and measurable actions, Climate Smart Gardiner seeks to empower our town to reduce greenhouse gases, adapt to a changing climate, conserve energy, support a local green economy, preserve natural resources, and promote renewable energy sources, so we can be environmentally sustainable for future generations.

WHAT “PRIORITY ACTIONS” HAVE WE ACCOMPLISHED?

The Climate Smart Communities Program has designated some climate smart actions as “priority actions.” (<https://climatesmart.ny.gov/actions-certification/getting-started/priority-actions/>). These actions are fundamental to facilitate the success of climate smart programs. They include assessments or policies that help communities plan for future climate action or establish municipalities as champions in emerging fields. Climate Smart Gardiner has completed the following priority actions:

- **Alternative-fuel Infrastructure**

After we obtained a grant of over \$15,000 through the NYS DEC to install an electric vehicle charging station, the charger was installed and operational in June, 2020. The charging station is located in the Gardiner Library parking lot, with access to the Hudson Valley Rail Trail. The public can charge their cars for free, as the electricity is sponsored through local businesses, including: Café Mio; Liquid Mercantile; Majestic’s Hardware; and Skydive, The Ranch. Sponsors are recognized with a sign highlighting their support. We had a socially distanced ribbon-cutting in July, 2020, patriotically themed, “Independence from Fossil Fuels.” Distinguished speakers included Supervisor Majestic, legislators Jen Metzger & Tracey Bartels, and Holly Shader.

- **Government Operations Greenhouse Gas Inventory & Climate Action Plan**

A government greenhouse gas inventory (GHG) accounts for the daily emissions of a municipality, including government buildings, water treatment, municipal vehicles, municipal outdoor lighting, and other sources. Through this accounting, a municipality can assess current GHG emissions and then plan relevant actions to reduce energy use, emissions, and costs.

Through participation in the Climate Action Plan Institute, offered through NYSERDA, we completed an inventory of Gardiner’s municipal greenhouse gas emissions in January, 2019. All municipal energy data was collected for the years 2015, 2016, and 2017, and the average of these three years was established as the baseline to compare with future GHG Emissions Inventories and measure progress toward the established emissions reduction targets. A revised government GHG inventory, including 2018, has been published on the Town of Gardiner website. (See *Gardiner Municipal GHG Inventory, 2015-2017, and 2018*, at <https://www.townofgardiner.org/climate-smart-gardiner-taskforce>).

Gardiner’s climate action plan, completed in 2019, synthesized the results of municipal and community GHG inventories to plan for local climate action. Through these inventories, we identified baselines to set emissions reduction targets, and outlined actions that can be taken to achieve these goals. (See *Climate Action Plan, 2019*, at <https://www.townofgardiner.org/climate-smart-gardiner-taskforce>).

The Town has adopted the goal of reducing government GHG emissions 20% by 2022 over the average of 2015/2016/2017 levels. Further, the Town’s longer-term emissions reduction targets in the Climate Action Plan, modeled after the New York State’s Reforming the Energy Vision’s goals, include a 40% reduction in GHG emissions by 2030 and 80% by 2050. (<https://energyplan.ny.gov/Plans/2015.aspx>).

Results of Gardiner’s Municipal GHG Inventory

1. The facilities with the three highest CO2 emissions were as follows, ranked from greatest to least: Highway Garage, Town Hall, and Street Lighting.

2. According to administrative function, the three highest CO2 emission areas, ranked from greatest to least, are as follows: Vehicle Fleet, Administration Facilities, and Streetlights/Traffic Signals.
3. GHG Emissions by energy type, ranked from greatest to least, were as follows: diesel, gasoline, electricity, fuel oil, and propane.
4. The average cost of fuel, ranked from greatest to least, was as follows: electricity, diesel, gasoline, fuel oil, and propane.

Gardiner's Municipal Climate Action Plan: Based on Gardiner's Municipal GHG Inventory, the Town prioritized the following municipal climate strategies and actions:

1. Electricity: Consider joining a CCA program. This will provide eligible municipal facilities with 100% renewable energy and GHG emissions produced by the Town's facilities will be reduced by 7%.
2. Energy Efficiency: Energy audits of buildings and subsequent energy conservation measures will result in cost and energy savings.
3. Fuel Oil: In future building construction and alterations, convert municipal building heat and air conditioning to ground and air source heat pumps.
4. LED Streetlight Conversion: This will result in significant cost savings as well as a 3% decrease in Government GHG emissions.
5. Solar: Consider local community distributed generation, such as community solar farms. Through solar farms, residential, commercial, and municipal customers can receive 100% renewable energy at a discounted cost.
6. Transportation: Consider transitioning to more efficient, including possibly hybrid and fully electric, equipment in the future. Currently, Town employees use their personal vehicles when they travel to conduct Town business. Purchase of a Town-owned hybrid or electric vehicle could save the Town money and reduce emissions from gas-driven vehicles.
7. Funding Sources: Consider NYSDEC and NYSERDA grant opportunities, such as Climate Smart Communities grants, Zero Emission Vehicle rebates, and Flextech cost share for municipal building energy audits.

Results of Gardiner's Community GHG Inventory: Although we have not yet completed a formal community GHG inventory for Gardiner, through reference data from the *2012 Mid-Hudson Regional GHG Emissions Inventory* (2010 baseline year), we found the following results:

1. According to sector, the three highest community CO2 emission areas, ranked from greatest to least, are as follows: Mobile Energy, Residential, and Commercial. Significant traffic through Gardiner contributes to the high level of mobile GHG emissions.

2. The Town's per capita GHG emissions are similar to Ulster County's emissions and significantly lower than the Mid-Hudson Region's emissions as a whole. This may be attributed to the Town's rural and residential character.

Gardiner's Community Climate Action Plan: Based on these community inventory results, Gardiner's Climate Action Plan prioritized the following community-based climate actions:

1. **Energy & Buildings:** Central Hudson currently supplies electrical energy to town residences, commercial establishments, and municipal facilities. Through Community Choice Aggregation, Gardiner could join with nearby communities to negotiate with third-party energy suppliers. These suppliers would provide electricity that is produced from 100% renewable energy sources.
2. **Transportation:** The Town has shown that it welcomes and promotes the use of electric vehicles by residents and visitors by providing a free EV charging station in the Gardiner Library parking lot. Other charging stations may be installed. Several charging stations are now available at local tourist and commercial facilities.

WHAT DID CLIMATE SMART GARDINER ACHIEVE IN 2020?

Our 2019 Climate Action Plan guided many of the climate smart actions we undertook in 2020. Our progress for these actions is listed in the section "Energy & Renewables" below. We also completed other significant Climate Smart Communities actions, detailed in subsequent sections.

- **Energy & Renewables**

1. *Community Choice Aggregation (In Progress):* Through Community Choice Aggregation (CCA), a municipality can source a clean energy supplier on behalf of their residents and aggregate their buying power, leading to discounted energy for residents. Residents can opt out anytime for free. In 2020, the Gardiner Town Board passed a CCA resolution, allowing the Town to consider a CCA administrator, who can help Gardiner broker a deal with clean energy suppliers and educate the public about the CCA process. The Town has chosen Joule Community Power as its administrator.
2. *Electric Vehicle Charging Station (Complete):* See above in "Alternative Fuel Infrastructure" section for more details about our 2020 EV charging station installation.
3. *LED Streetlight Conversion (In Progress):* We are currently completing an energy and billing audit of current streetlights to facilitate a conversion to LED fixtures. Through the audit we recognize the need for a standardized mechanism of municipal oversight for maintenance, billing, and streetlight design. We are consulting with an expert on Dark Skies standards to facilitate these goals. Through an application of Dark Skies concepts, we can safely reduce light pollution and increase energy efficiency for our LED project.
4. *Solar Array at Landfill (In Progress):* In 2017, the EPA produced a solar farm feasibility study with siting at the Gardiner landfill. Solar farms are a great way to generate local, renewable power. In 2020, our Taskforce connected with several potential developers to discuss next steps in the process.

5. *Fleet Inventory (Complete/Ongoing)*: In 2019, we completed a municipal fleet inventory. In 2020, we continued to maintain these records monthly to assess GHG emissions.

- **Education & Outreach**

1. *Join a National/Regional Climate Program (Complete)*: In 2020, Gardiner registered in the NYSERDA *Clean Energy Communities* program. Through this program, we can implement clean energy actions, save energy costs, create jobs, and improve the environment. This program provides tools, resources, and technical assistance. Once Gardiner completes requisite climate smart actions, we achieve a Clean Energy Community designation and can apply for grants.
2. *Local Climate-action Website (Complete/Ongoing)*: We continued to update Climate Smart Gardiner's section of the Town of Gardiner website: <https://www.townofgardiner.org/climate-smart-gardiner-taskforce>. We included educational and event-based information for the public.
3. *Social Media Website (Complete/Ongoing)*: We continued to update our Climate Smart Gardiner Facebook page: <https://www.facebook.com/climatesmartgardiner/>. We included educational and event-based information for the public.
4. *Geothermal Installation/Education (Complete)*: In 2006, a geothermal system was installed at the Gardiner Town Hall. In 2020, we created a poster at the Town Hall and on the Town website to publicize this ground source heat pump, an efficient heating and cooling system that results in reduced GHG emissions.
5. A Climate Smart Gardiner Taskforce member presented to the community on the benefits of a plant-based diet in January, 2020. She also presented another workshop, "A Beginner's Guide to a Plant-based Diet" in March, 2020. A plant-based diet reduces your carbon footprint.
6. We disseminated the Climate Smart Communities model to neighboring Ulster County municipalities, including Plattekill and Lloyd, and others. Several of these municipalities are on-track to take the Climate Smart Communities pledge in 2021.
7. We recruited two new members for our Climate Smart Gardiner Taskforce.
8. We collaborated with the Ulster County Climate Smart Community to disseminate CCA to other Ulster County municipalities.
9. We completed a letter of support for the Ulster County Resource and Recycling Agency's grant initiative, *Zero Waste Seminar Project*, designed to create and publicize seminars on the topic "Plastic Free July" in Ulster County.
10. We posted a presentation on gardening techniques from local Gardinerites, as growing your own food reduces your carbon footprint.
11. We partnered with Sustainable Hudson Valley to promote their *HeatSmart* Program. The *HeatSmart* Program works to obtain group discounted rates on energy efficient heating and cooling systems, such as heat pumps, for the public.

12. We advocated for the Town Board to oppose the proposed Danskammer power plant expansion in Newburgh and the Town Board passed a resolution against this project. We also joined the *Stop Danskammer Coalition* to further these advocacy efforts.
13. We partnered with a Gardiner resident, who led a virtual Climate Action Workshop for members of the Climate Smart Gardiner Taskforce in July, 2020, and then led a larger Climate Action Workshop for the general public in October, 2020, through the Gardiner Library. During this interactive presentation, participants learned effective ways to reduce global GHG emissions.
14. We completed annual progress reports for 2018 and 2019. These reports were shared with the Town Board and posted on the Town of Gardiner website.

- **Recycling & Land Use**

1. *Recycling Program for Public Places & Events (Complete/Ongoing)*: In 2018, we coordinated a recycling process for Gardiner's Majestic Park, where town residents donated garbage cans for the park, a local artist painted these cans, and a town resident picked up the bottles and cans; the proceeds from this current recycling project are donated to help children in need.
2. *Community Repair (Complete/Ongoing)*: We continue to promote and support the Gardiner Repair Café, held at the Gardiner Library. Through the Repair Café, local residents bring in their broken items to be mended, avoiding more garbage at the landfill.
3. *Natural Resource Inventory (In Progress)*: Gardiner's Environmental Conservation Commission and Open Space Commission are working on a Natural Resource Inventory (NRI). The NRI describes the Town of Gardiner's fresh water, parks, natural habitats and scenic spaces. These resources are essential to ensure continued prosperity, quality of life and responsible growth for our town. The completed Town of Gardiner NRI will be a series of maps, along with an accompanying report that contains narrative descriptions, supporting data tables, and recommendations. We are helping to promote this project.
4. We organized a Gardiner contingent for the annual Wallkill Riverkeeper Sweep in October, 2020. Local volunteers cleaned the Wallkill River by water and land, recycling some of the garbage we found. There were 23 adult volunteers and 17 youth volunteers. 25 large bags of garbage were collected. 35 tires were removed from the river and riverfront. There were many miscellaneous items including a cast iron sink, golf frisbee course sign, large wooden spool, chairs, farm equipment, rear view mirror, 2 charcoal grills, metal gear, huge metal culvert pipe, barbed wire, basketball, and shoes. Overall, 27,801 lbs. of debris were removed from 65 projects (Brooklyn to Capital Region).

- **Increase Resilience to Climate Change**

1. *Climate Vulnerability Assessment (In Progress)*: We are collaborating with the Cornell Cooperative Extension to complete a Climate Resiliency Tool, designed to help Gardiner adapt to climate change.
2. *Riparian Buffers (Complete/Ongoing)*: In 2019 we submitted and obtained a grant for the NYS DEC *Trees for Tribs Program*, designed to plant trees and shrubs along stream corridors to prevent erosion, increase flood water retention and protect water quality. We planted 70 trees and shrubs

along the stream by Farmers Turnpike in Gardiner. In 2020, local volunteers provided maintenance for this project.

- **Grants & Funding Sources**

1. We applied for the Lifeboats Hudson Valley *Local Champions* grant in December, 2020, designed to provide financial and technical support to help Climate Smart Communities achieve “Bronze Status,” which facilitates increased access to NYS DEC grants.
2. Through the Gardiner Town Board, we obtained funding to join ICLEI, a global network of governments focused on sustainability. ICLEI will provide us with the tools and technical assistance to complete our local community GHG emissions inventory.

2020 CHALLENGES

- **COVID-19**

Due to Coronavirus, in 2020, many community projects were canceled or postponed. We were also unable to update our municipal GHG emissions inventory due to COVID-19 challenges as well. However, we adapted and had our monthly CSG Taskforce meetings via teleconference after March. We also scheduled online presentations and events to help the public learn about climate change.

- **Expectations & Bylaws**

As we are a newly formed organization, there have been times when we have needed to consult the Gardiner Town Board regarding the scope of our activities. Through these experiences, we have continued to develop bylaws, orientation procedures, and an ethics code.

WHAT’S NEXT IN 2021?

- **Complete Gardiner’s Community GHG Emissions Inventory, a priority action**
- **Apply for Climate Smart Communities Bronze Status, facilitating increased access to NYS DEC grants**
- **Achieve Clean Energy Community status through NYSERDA *Clean Energy Communities Program***
- **Promote Gardiner’s Natural Resource Inventory when complete, a priority action**
- **Complete LED streetlight audit and convert streetlights to LEDs**
- **Implement CCA and bring renewable energy to Gardiner**
- **Work toward solar array at Gardiner landfill**
- **Complete bylaws, orientation process, and ethics code for Climate Smart Gardiner Taskforce**
- **Collaborate with Cornell Cooperative Extension to complete Climate Resiliency Tool**



