

## Chapter 2

### **SINCE 2004 - *SUSTAINABLE GARDINER***

Since 2004 when the prior Comprehensive Plan was adopted, the Town of Gardiner has completed significant research, organizing and planning focused on open space, resource protection, and climate adaptation. Together this work is the focus of Sustainable Gardiner.

Also referred to as “smart growth” for the Town of Gardiner, sustainability is seen as a principle basis for decision making that seeks to meet certain goals. These goals are:

- ✓ To protect, preserve and enhance the Town’s resources.
- ✓ To advance actions that make best use of the Town’s existing infrastructure and services.
- ✓ To advance actions that enhance the Town’s center, the Hamlet of Gardiner, and other smaller centers at cross-roads, and at historic mixed use locations.
- ✓ To support equity and diversity in land use, housing, and public services.
- ✓ To improve mobility of residents through transportation choices including alternatives to automobile dependency.
- ✓ To pursue actions to adapt to or mitigate the effects of climate change.
- ✓ To coordinate with all levels of government including neighboring communities.
- ✓ To foster citizen resident involvement and collaboration.
- ✓ To promote redevelopment and new development that meets these goals.

As outlined below, this Sustainable Gardiner chapter explains this work and incorporates three (3) lead elements of this larger set of work as a part of this adopted Comprehensive Plan. Specifically the Town of Gardiner Open Space Plan (2007), the Town of Gardiner Natural Resources Inventory (2021), and the Town of Gardiner Climate Action Plan (2019) are now elements of the Town Comprehensive Plan. Full copies of these documents are supplemental elements to this Comprehensive Plan.

### **Town of Gardiner Open Space Plan**

In 2007 the Town adopted a new Open Space Plan. Prepared through the leadership of the Town Open Space Commission working with Behan Planning Associates, this Open Space Plan is an important foundation for the Gardiner Comprehensive Plan Update. The 2007 Open Space Plan supplements this Update and should be referenced as an element of the Adopted Comprehensive Plan Update.

Provided here is a summary of that Open Space Plan, using some text and maps from that Plan with updated information from the Town Open Space Commission and other sources.

Described as a comprehensive inventory and analysis of the Town of Gardiner’s open space resources, the 2007 Open Space Plan outlines recommendations for action. As stated “Whether it is the Town’s water resources, its farmland, its wildlife habitats, its rural road, or the Shawangunk Ridge, Gardiner

residents have great appreciation for the Town’s resources. They provide clean drinking water. They help to bolster the local economy. They provide habitat for wildlife. They contribute to the Town’s scenic and rural character.”

The goal of the Open Space Plan element is to establish a framework for the town to provide tools to maintain this conservation network in Gardiner. In addition to permanent conservation, this might include incentives to ensure that the economic value of farming is competitive with the value of the land for development. Or it might include thoughtful placement of new development in a way that does not fragment the town’s conservation network. With the willing participation of landowners, an interconnected conservation network can be created in Gardiner to preserve the extraordinary landscape of this community, our home.

The Open Space Plan is an action recommended from the town’s 2004 Comprehensive Plan. That 2004 Plan included recommendations on open space protection. These remain valid and supported in this Comprehensive Plan Update. These recommendations include:

- Develop local policies to improve protection of the major aquifers in town
- Improve protection of the Shawangunk Ridge
- Improve protection of the Shawangunk Kill, the Wallkill River, and other waterways in the town
- Develop and implement a formal open space preservation plan
- Improve opportunities for public access to recreation-related open space and waterways, to enhance recreation opportunities and reduce trespassing on private lands
- Continue cooperative efforts with the Mohonk Preserve, the Nature Conservancy, the Palisades Interstate Park Commission, Open Space Institute, Wallkill Valley Land Trust and other land stewardship organizations on the Shawangunk Ridge to manage visitor impacts
- Build partnerships with the appropriate land stewardship organizations to manage protected open space in the community, particularly on the Shawangunk Ridge
- Complete an inventory of important biodiversity features in Gardiner

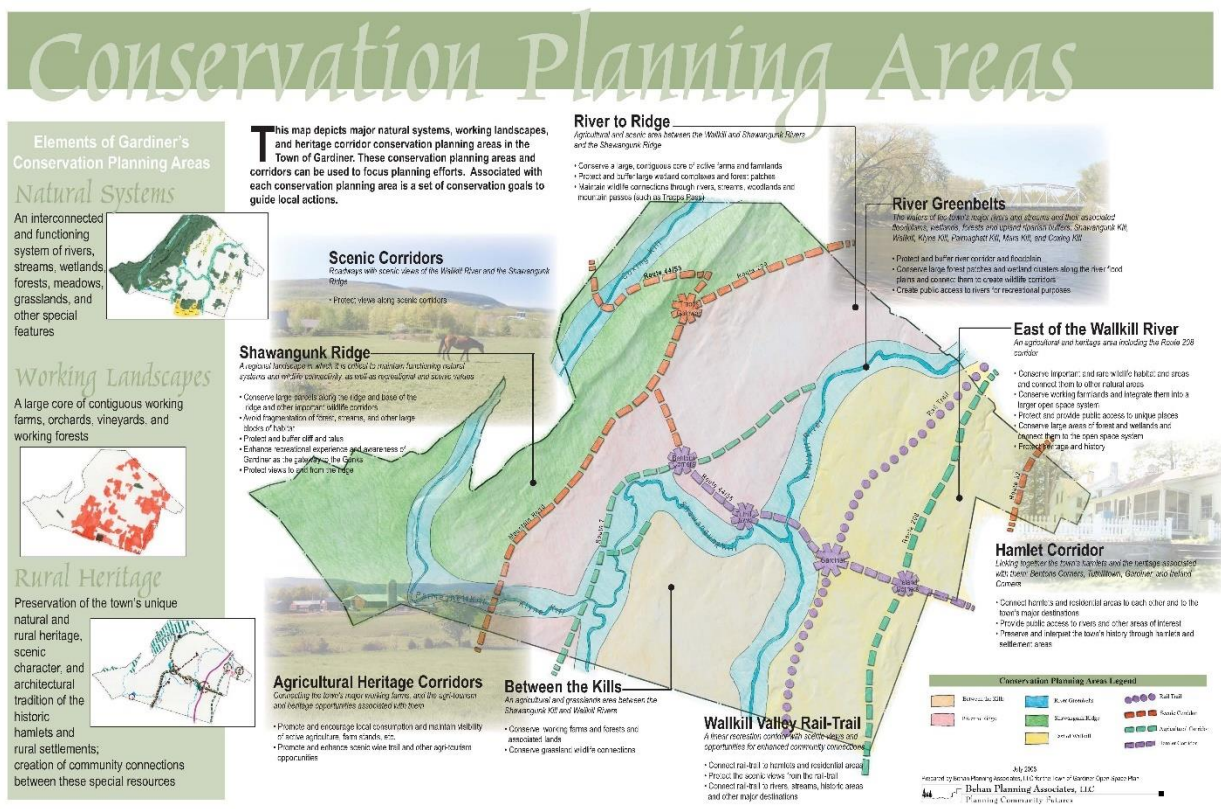
This Comprehensive Plan Update Plan also maintains support for the 2004 and 2007 recommendations prioritizing agricultural preservation and protection of historic resources, as well as recommendations on managing future growth and development in the Town as noted in the resource protection/open space goals and recommendations stated earlier.

These Plans also recognize that the fiscal health of the Town is directly associated with open space, resource protection, and smart growth. For example, produce may travel 1,500 miles on average before reaching citizen tables. In Gardiner successful farming can maintain Gardiner citizens’ ability to buy in Town fresh products “from every food group”, as one farmer noted during a July 2021 discussion.

Also, outdoor recreation and tourism – notably agri-tourism - are major sectors of the Town and regional economy that are dependent on open spaces, parks and preserves, and active agricultural businesses.

Important land use planning measures included in the 2007 Open Space Plan remain valid today and are supported in this Comprehensive Plan Update.

- Conservation Planning Areas Map and summary, which identifies important landscape “character areas” of the town and the resources within them (see attached).
- Priority Conservation Network Map, which identifies the most important conservation hubs and corridors in the Town.
- A Strategic Plan of Action for achieving the conservation goals of the community.
- A Summary of Recommended Tools to be considered in the town’s future open space conservation program.
- Open Space Priority Area Rating Criteria developed to help identify the priority conservation network. This criteria has been further researched and should be updated by the Town Open Space Commission and the Town Board.



Graphic from the 2007 Town of Gardiner Open Space, prepared by Behan Planning Associates.

The Conservation Network consists of eight conservation hubs and six conservation corridors. The resources associated with each of these hubs and corridors are discussed in more detail in Chapter 4 of the Open Space Plan, and the Conservation Network Map illustrates these areas geographically. Conservation “Hubs”:

- Shawangunk Ridge
- Shawangunk Kill South
- Shawangunk Kill/Walkkill Confluence

## FINAL Town of Gardiner Comprehensive Plan Update Chapter 2

- Galeville Grasslands
- Wallkill North
- Rt. 208 North Farmlands
- Plattekill Gorge
- Rt. 208 South Farmlands Conservation Corridors:
  - River to Ridge Corridor
  - Palmaghatt Kill Corridor
  - Mara Kill Corridor
  - Wallkill River Corridor
  - Shawangunk Kill Corridor
  - Route 208 Wetland Corridor

The Town's intention is not to require landowners to conserve their lands, but rather to provide options and financing tools so that the Town can work with landowners that choose to do so.

The 2007 Open Space Plan includes a set of recommendations that remain in this Comprehensive Plan Update. These call for a comprehensive approach to conservation that is balanced with land use and settlement patterns that support the Town's open space resources. It also calls for a conservation financing plan that is appropriate to Gardiner's fiscal setting. The three major recommendations of the plan are as follows:

1. Create a Land Conservation Program. The town would work with willing landowners, conservation organizations, and other partners to conserve lands within the priority conservation network through conservation easements, donations, purchases and other tools.
2. Develop a Comprehensive Approach to Conservation and Development. An integrated approach for future planning in the Town of Gardiner would help to achieve land use patterns that respect and build upon the Town's water resources, farmlands, and natural habitats. Future planning efforts should consider open space conservation and settlement patterns jointly, to respect the community's major needs and concerns regarding future growth, such as aquifer resources, water availability, wastewater treatment, housing affordability, traffic, schools, and overall fiscal health of the town.
3. Create a Fiscally-Responsible Land Conservation Strategy. A strategic and comprehensive financing program is essential to open space program implementation. A financing program for Gardiner should be backed by a local commitment that can leverage matching funds from various sources. The financing strategy should take into consideration the costs of conservation of the priority conservation network in a fiscally-responsible manner.

For immediate action, the Town of Gardiner should continue to:

- USE THE PLAN DATA AND MAPS IN CURRENT PLANNING AND DEVELOPMENT EFFORTS
- CONTINUE TO SUPPORT COMMITTEES TO OVERSEE RESPECTIVE CONSERVATION EFFORTS: OPEN SPACE COMMISSION and ENVIRONMENTAL CONSERVATION COMMISSION.
- CONDUCT PILOT PROJECTS TO BUILD MOMENTUM FOR THE LAND CONSERVATION PROGRAM

Indeed, since 2007 the Town has implemented some of the 2004 and 2007 recommendations, including creation of an Open Space Commission. That Commission continues to actively research and advocate for actions recommended in the Open Space Plan as well as to provide ongoing public education and outreach. That Commission is also working on a structured conservation easement and financing program, and on land acquisition parcel scoring criteria. They have released a short list of high-priority conservation areas including:

- Parcels adjacent to the Shawangunk Ridge, along the base of the talus slope
- Unfragmented habitat for wildlife and forests connecting the Shawangunk Ridge to the Shawangunk Kill & Wallkill River valley
- Areas along waterways including the Palmaghatt Kill, Wallkill, Shawangunk Kill, Coxing Kill, Mara Kill and Klyne Kill
- Scenic view preservation

## **Natural Resources Inventory (NRI)**

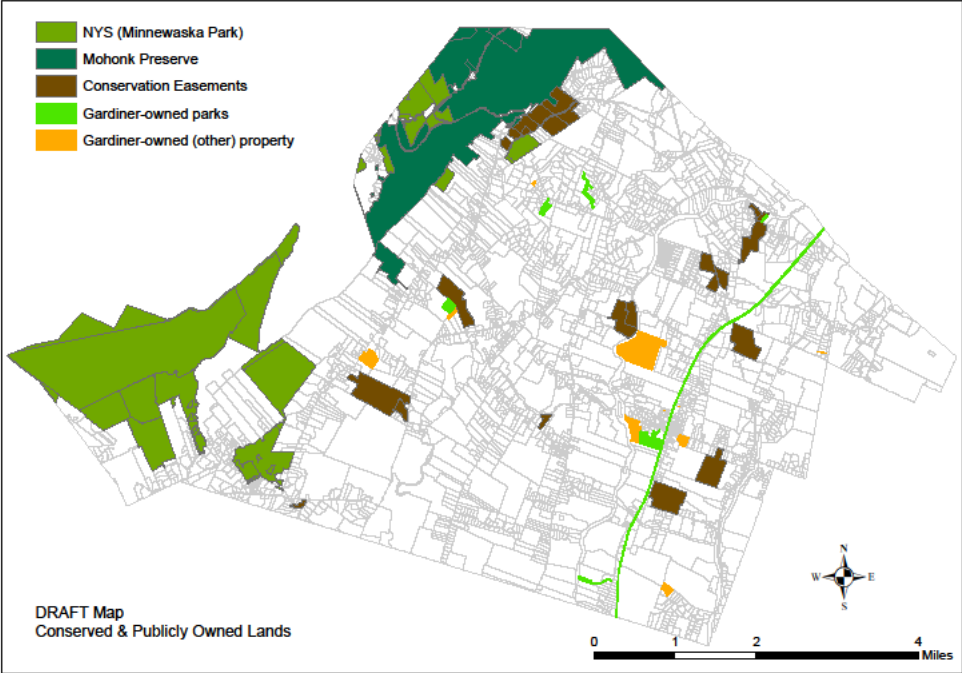
This Natural Resources Inventory (NRI) was prepared in 2020 and 2021 in a collaboration between the Town and the New York State Department of Environmental Conservation, Hudson River Estuary Program. Through the leadership of the Town Environmental Conservation Commission, Open Space Commission, and Planning Board, the NRI was prepared and identifies and describes the important resources located in Gardiner, including topography, geology and soils, water resources, and habitat, as well as recreational and cultural areas, land uses, and climate conditions and projections. This document also serves to aggregate the numerous local natural resource studies, reports and plans that contribute to a detailed understanding of the unique qualities of the Town. By bringing this information together in one place, the NRI provides a better understanding and appreciation of the community's resources and sets the stage for a wide range of planning and conservation applications. The NRI provides a foundation for comprehensive and open space planning, zoning updates, identifying critical environmental areas, climate adaptation strategies, and other municipal plans and policies for the Town of Gardiner. The NRI can also inform land stewardship and conservation in the Town.

The NRI is a valuable land use planning tool as well as an educational resource. The inventory provides an essential tool for the local Building Department by officially identifying sensitive land, water and cultural/historical resources. The report discusses development considerations for the Planning Board and Zoning Board of Appeals, laying a foundation for evaluating land use planning and decision-making and zoning considerations. It offers municipal policy guidance, as well as helping to inform environmental conservation efforts. In addition, the NRI provides property owners, developers and their consultants with information they may need in considering the impact their project may have on the Town's resources. It can be used to identify natural resources during project planning and design and to help expedite review and approval of their endeavors. It can also be used as a general reference for landowners to understand resources that may occur on their property and to inform stewardship, or care for the land. It is important to keep in mind that the NRI is best suited for municipal-scale planning but may be used as a screening tool at the site-scale to raise questions or identify the need for additional site assessment. Most of the maps are not intended to provide site-specific accuracy.

## FINAL Town of Gardiner Comprehensive Plan Update Chapter 2

Resource maps as part of the NRI include:

- Topography (elevations in 20 foot contours)
- Steep Slopes (change in elevation in 4 classes - <8%, 8-15%, 15-25%, +25%)
- Bedrock Geology (aerial extent of 3 primary rock formations)
- Surficial Geology and Glacial Deposits (aerial extent of 6 types of unconsolidated sediments)
- Soils (soil types as well as aerial extent of 5 drainage classes)
- Aquifer Recharge Areas (aerial extent of primary and seasonal areas)
- Streams and Watersheds (locations of 5 main watersheds, perennial streams and conservation buffers to those streams recommended in the 2007 Town Open Space Plan)
- Water Quality Classifications (NYS DEC protection of water classifications for surface waters)
- Floodplains and Riparian Areas (FEMA mapped floodways and flood hazard zones w/ NYS Natural Heritage Program mapped riparian areas)
- Stream Habitats (showing riparian areas plus areas important for American Eels, trout, and trout-spawning, and culvert and dam infrastructure)
- Wetlands & Wetland Soils (aerial extent of NYS DEC & National Wetland Inventory mapped wetlands w/ soils classified as very poorly, poorly or somewhat poorly drained)
- Wetland Habitats (from the 2014 Town of Gardiner Habitat Map & Report)
- Ecological Context (aerial extent of larger significant biodiversity areas, forest matrix and linkages, and Audubon Important Bird Areas)
- Habitats (from the 2014 Town Habitat Map and Report)
- Unique Upland Habitats (aerial extent of cliff and talus slopes, Dwarf Pine Ridge, Chestnut Oak Forest and other forest types and meadows)
- Important Biodiversity Areas (general locations for rare plants or animals w/ coverage of 10 communities from the NYS Natural Heritage Program)
- Large Forests (aerial coverage of 8 forest classes from the Hudson Valley Forest Condition Index)
- Intact Habitat Cores (map from the Green Infrastructure Center showing and ranking intact habitat)
- Climate Resilience for Biodiversity (aerial extent of values from the Nature Conservancy modeling for climate resilience)
- Agricultural Resources (showing coverage of USDA prime farmland soils, County Agricultural District, and tax parcels receiving agricultural tax exemptions or protected by easements)
- Preserved Land (lands as identified by the Town Open Space Commission)
- Cultural Resources (showing parks, historic sites, wine trail, and scenic byway with conservation buffer)



*NOTE – this map will be updated from data provided by the Town of Gardiner Open Space Commission.*

## Climate Smart Gardiner and Climate Action Plan

Consistent with the New York State Climate Smart Communities program, in 2018 the Town of Gardiner has officially taken and begun acting on the *Climate Smart Communities Pledge*. That Pledge is:

- 1) Build a climate-smart community.
- 2) Inventory emissions, set goals, plan for climate action.
- 3) Decrease energy use.
- 4) Shift to clean, renewable energy.
- 5) Use climate-smart materials management.
- 6) Implement climate-smart land use.
- 7) Enhance community resilience to climate change.
- 8) Support a green innovation economy.
- 9) Inform and inspire the public.
- 10) Engage in an evolving process of climate action.

In September 2021 the Town was also certified by New York State as a Climate Smart Community (Bronze-level). The Town is clearly committed to environmental sustainability through pursuit of climate change adaptation and mitigation strategies. Climate change is affecting the town in many ways, such as increased annual rainfall, more intense storm activity, flooding and extreme temperatures.

According to the report by the Intergovernmental Panel on Climate Change, our region is already seeing the consequences of 1°C of global warming through more extreme weather, rising sea levels and diminishing Arctic sea ice. United Nations Secretary General Antonio Guterres has stated: “There has never been a more important time to listen to science. Failure to heed these warnings and take drastic action to reverse emissions means we will continue to witness deadly and catastrophic heat waves, storms and pollution.” Adaptation planning is crucial to ensure that the Town will be resilient to the impacts of a changing climate, not only for tomorrow or next year but for generations.

In 2019, with leadership from the new, volunteer Climate Smart Gardiner Task Force, the Town completed a Community Greenhouse Gas Emissions Inventory and a Climate Action Plan. This Task Force continues to advance recommendations from that Plan. A key component of the Climate Action Plan included assessing current sources of GHG emissions from both government operations and the broader community by conducting GHG emissions inventories, using these baselines to set emissions reduction targets, and finally outlining and quantifying various actions that can be taken to achieve these goals.

The Town’s emissions reduction targets in this Climate Action Plan are modeled after New York State’s Reforming the Energy Vision’s goals, which are outlined in the 2015 NYS Energy Plan (<https://energyplan.ny.gov/Plans/2015.aspx>). New York State’s goals include a 40% reduction in GHGs by 2030 (from 1990 levels), 80% by 2050. The Climate Leadership and Community Protection Act <https://www.nysenate.gov/legislation/bills/2019/s6599>, passed in 2019, sets an even more aggressive goal of reduction of GHGs by 85% by 2050, with 70% of all electrical energy generation to come from renewable energy sources by 2030.



Town leadership with the Climate Smart Gardiner Task Force will collaborate to support various initiatives to advance these priorities, both for government operations and for the broader community. Actions recommended include periodic updating of the Community GHG Emissions Inventory and the Scorecard. Additional recommendations are to track the Town's progress towards its emissions reduction targets as stated in the Climate Action Plan. Also, the Town should establish priorities and goals for use of the Town's vehicle fleet and the purchase of new equipment with the goal of reducing the fleet's greenhouse gas emissions. The Town should quantify energy and cost benefits of Town projects and facility upgrades. Also the Town should view climate adaptation and mitigation as a guide for the Town's planning and prioritization of future projects, and should pursue supportive funding opportunities.