

Chapter 2: Gardiner's Open Space Resources

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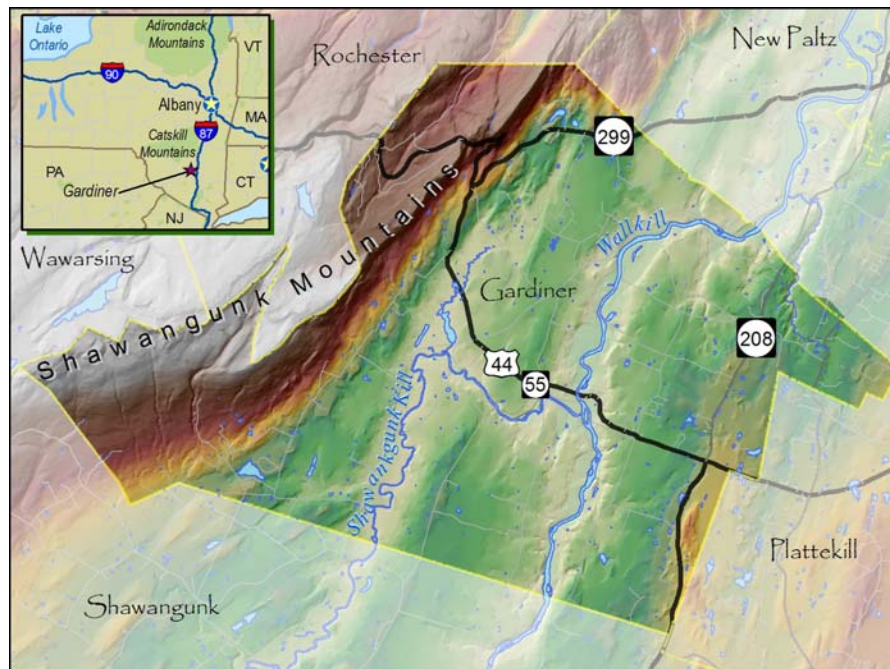
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Introduction

This chapter provides an overview of Gardiner’s existing conservation patterns and resources, including a summary of existing protected lands and land ownership patterns in the town. This is followed by a brief introduction to the town’s major open space resources. These resources are discussed in themed categories: natural systems, working landscapes, and cultural and recreational resources. The resources discussed in this section are illustrated in the maps located in Appendix A.

Gardiner’s Setting

The Town of Gardiner is a rural community with a natural and agricultural setting located in southern Ulster County. The eastern and central portions of Gardiner are within the Wallkill Valley, which makes way to the steep cliffs of the Shawangunk Mountains in the western part of town. According to U.S. Census data, the town’s 2000 population was 5,238. Gardiner’s land area is approximately 28,600 acres. The town’s major population center is the Gardiner Hamlet, which is situated on the east bank of the Wallkill River in the center of the town. Gardiner is bordered on the north by the Town of New Paltz, on the east by the Towns of Lloyd and Plattekill, on the south by the Town of Shawangunk, and on the west by the Towns of Rochester and Wawarsing.



Regional Location Map: Highlighting Gardiner’s location in New York State (top left) and in the region.

Existing Open Space in Gardiner

The Town of Gardiner has a tremendous network of protected open spaces already. **Approximately 5,200 acres, or 18%, of the town’s 28,600 acres are considered protected to-date.** The vast majority of this acreage protects the Shawangunk Ridge area, and is held by two large landowners: the State of New York (Minnewaska State Park) and the Mohonk Preserve. **Map I** depicts existing protected open space in Gardiner, which is detailed in the table below.

Table I: Existing Open Space Ownership Patterns in Gardiner

OWNERSHIP	ACRES
State of New York (Minnewaska State Park)	702
State of New York (Awosting Reserve)	2,276
Town of Gardiner	88
Mohonk Preserve	1,908
Wallkill Valley Land Trust (owns conservation easement)	221
Open Space Institute	27
Huguenot Historical Society	19
Total	5,241

Approximately 700 acres of the 16,500-acre Minnewaska State Park are located in Gardiner. The park is managed by the Palisades Interstate Park Commission, and extends beyond Gardiner into the Towns of Rochester, Wawarsing and Shawangunk. In March 2006, an additional 2,500 acres, mostly in Gardiner, were added to Minnewaska State Park. This additional acreage, known locally as the Awosting Reserve closes a key gap in conservation of ecologically-significant ridge lands.

The Town of Gardiner owns several open space parcels, including Majestic Park, which is situated along the banks of the Wallkill River and within walking distance from the Gardiner Hamlet. Majestic Park includes ball fields, playgrounds, a skateboarding park, and passive recreation and picnic access areas. The town also owns a recreational boat launch and fishing access area along the Wallkill River near the Gardiner Hamlet. A Gardiner Hamlet Pedestrian Network is currently being planned and will ultimately connect the Wallkill River boat launch to Majestic Park, Town Hall and other destinations in the hamlet.

The Mohonk Preserve is another major landowner in the town, with approximately 1,900 acres along the Shawangunk Ridge in Gardiner. The Mohonk Preserve includes over 6,500 acres, and extends beyond Gardiner into the Towns of Rochester, New Paltz, Rosendale and Marbletown. The Mohonk Preserve was established in 1963 as the first land trust to protect the Shawangunk Ridge and has since grown to become one of the region’s most respected land stewards and educators.

Other land trusts and conservation organizations are active in the Gardiner area, and help to fill important local gaps in conservation of both the ridge ecosystem and the valley landscape. The Huguenot Historical Society owns a small but significant acreage of land in the northeastern part of town, which is known locally as hosting a diversity of bird species as well as historic

resources. The Wallkill Valley Land Trust holds easements on several significant ecological and agricultural open space lands in the valley, and also at the ridge’s edge. The land trust also owns the Wallkill Valley Rail Trail, a linear trail corridor that extends for 5.6 miles through Gardiner’s center and continues north into the Town of New Paltz. Wallkill Valley Land Trust easements in Gardiner are summarized in the table below.

Table 2: Wallkill Valley Land Trust Easements

Easement Name	Location	Acres
Greene Easement	Wallkill River	7
Finn Easement	Shawangunk Kill	9
Katz-Hollander Easement	Heddens Lake	65
Phillies Bridge Farm*	Phillies Bridge Road	65
Osborne Easement	Wallkill River	72
Wallkill Valley Rail-Trail	East of Wallkill River	3
TOTAL		221

*co-owned with the Open Space Institute (OSI)

Private Land Ownership Patterns

While a good percentage of the town’s lands are conserved, the vast majority (approximately 80%) are in private ownership. Some of these lands are already developed. However, many lands remain open and provide ecological value and contribute to the rural character of the town. Based on tax parcel data provided by Ulster County Real Property, large-acreage landowners (those holding 50 or more acres) control approximately 56% of the town’s land area, or about 70% of the privately-owned land in the town. Many of these large-acreage parcels are being used for agricultural purposes.

The town’s current settlement pattern consists mainly of large farms and farmsteads, “rural residential” homes and estates, large vacant parcels, concentrated hamlet populations and some, although limited, suburban-style residential development. There are currently 4,600 acres (16% of town land area) of this “rural residential” type of settlement pattern dispersed throughout the town. There are an additional 3,600 acres (13% of town land area) of large, vacant parcels throughout the town. Many of these large parcels of land provide important open space benefits. **Map 2** illustrates the large acreage land ownership patterns in the town.

Natural Systems

Gardiner’s natural systems are important building blocks of the open space system. Natural systems benefit wildlife and people. For wildlife, natural systems provide food, water and shelter – the basic units of survival. For people, natural systems provide countless benefits, including maintenance of drinking water quality, protection from flooding, and reduction of erosion. Natural systems also provide many economic benefits, including those from the direct

management of the land (for example in forestry or recreation) and indirectly through increased property values associated with open space resources.

Natural systems provide us with their many benefits when they are allowed to remain interconnected. A healthy, functioning system includes critical “building blocks” or “hubs” such as large, unfragmented wildlife habitat areas to sustain viable populations; smaller “stepping stones” for local connectivity; and regional wildlife corridors. All too often, our local development patterns do not consider these building blocks as the foundation of a healthy community for people and wildlife. This lack of consideration results in habitat fragmentation, or breaking up of large habitat areas into smaller pieces.

Gardiner’s network of natural systems includes water resources such as streams, rivers, wetlands, aquifer recharge areas and floodplains. It also includes wildlife habitat and important natural areas, as well as areas of steep slopes and topography. Map 3 illustrates the town’s major natural systems.

Rivers and Streams

Gardiner’s two major rivers are the Wallkill River and the Shawangunk Kill. The Wallkill River traverses the town from north to south for approximately 7 miles. The Shawangunk Kill traverses the western portion of town, close to the edge of the Shawangunk Ridge, and flows into the Wallkill near the Gardiner Hamlet. Other rivers and streams in Gardiner include the Coxing Kill, Mara Kill, Klyne Kill, and Palmaghatt Kill. Gardiner’s rivers are discussed in more detail in Chapter 3.

Wetlands, Lakes and Other Water Bodies

Wetlands are identified and regulated by the New York State Department of Environmental Conservation (DEC) and by the National Wetland Inventory (NWI) program of the US Fish and Wildlife Service (USFWS). Local habitat mapping completed in the town has also helped to identify wetlands.

Most of the DEC-regulated wetlands in the town overlap with NWI wetlands. In total, there are approximately 1,450 acres of NWI and DEC wetlands in Gardiner. The largest complex in the town extends from the intersection of Guilford and Bruynswick Roads north for nearly two miles, and is only interrupted by the crossing of Guilford Schoolhouse Road. Another significant wetland complex includes the Heddens Lake area, which extends north along the Mara Kill and its tributaries.

Local wetlands have been identified by the Gardiner Biodiversity Assessment Group and include important kettle shrub pools along the Route 208 corridor. Other vernal pools and seasonal wetland have been identified throughout the town.

The town’s two major water bodies include Heddens Lake and Tillson Lake, both located in the foothills of the Shawangunk Ridge. Heddens Lake was created in the 1930s by the damming of the Mara Kill by the then owner of the Benton’s Corners Hotel. Likewise, Tillson Lake was created in 1929 by the damming of the Palmaghatt Kill. Smaller ponds and seasonal wetlands are found throughout town.

Aquifer Recharge Areas

An aquifer recharge area is the location where water can infiltrate the soil to replenish the aquifer. According to a 2004 report by Allan Randall, and mapping done in 1995 (revised in

1998) there are three primary aquifer recharge areas in the town. One primary aquifer recharge area is in the eastern part of town, and follows the Route 208 corridor, where much of the town's farmlands currently exist. This area is currently under the most extensive development pressure in town. Another recharge area is located near the bend in the Shawangunk Kill, south of Heddens Lake. The third primary recharge area is at the foot of the Shawangunk Ridge slope, along South Mountain Road and Tillson Lake. There are other isolated areas of primary recharge including a thin strip along the Wallkill, an area south of Jenkins-Lueken Orchard, and in the easternmost part of town east of the Jenkinstown Hamlet.

Population center recharge areas are also important for recharge of the aquifer in the town's most densely populated areas such as the hamlets. Additionally there are seasonal recharge areas which correspond to large wetland complexes, and the remainder of the town is considered to be within a secondary aquifer recharge area. **Map 4** depicts the approximate locations of each of the aquifer recharge areas within the town.

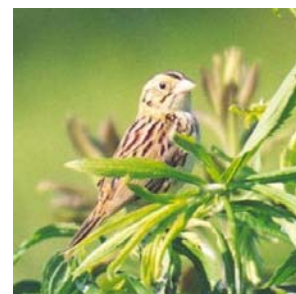
Floodplains

Floodplains are land areas next to a river, stream or creek, that are subject to recurring flooding and other geological (land forming) and hydrologic (water flow) processes. Flooding is a natural process that helps to sustain land fertility, maintains healthy ecosystems for wildlife, and protects human infrastructure when planned for appropriately. Development within the floodplain, including construction of buildings and the clearing of trees for agriculture, can alter the natural patterns of flow and increase runoff and flooding effects, in particular downstream of the altered floodplain.

For land-use planning purposes, the regulated floodplain is typically the 100-year floodplain, or the area which has a 1% chance of a certain flood size being equaled or exceeded each year. The 100-year floodplain in Gardiner extends along the banks of the Shawangunk Kill and Wallkill River and includes approximately 1,587 acres of land and water area. A typical cross-section would reveal a 400 to 2,800 foot floodplain across the Wallkill, and a 200 to 1,600 foot floodplain across the Shawangunk Kill. Other areas of town within the 100-year floodplain include the Heddens Lake area, the Mara Kill, and the main tributary to the Mara Kill.

Wildlife Habitat and Important Natural Areas

Fortunately, Gardiner's biodiversity resources have been the subject of several timely studies. Two separate but complementary habitat mapping and analysis efforts are underway in the town. The first of these is a regional effort being conducted by the Green Assets Program of the Shawangunk Ridge Biodiversity Partnership to help local communities plan for biodiversity. Through the Green Assets program, the natural communities of the northern Shawangunks have been mapped and analyzed to identify conservation targets. In Gardiner, these data are available for the western portion of town that is within the Shawangunk Ridge and its foothills. More detail on the Green Assets program maps and biodiversity resources of the Shawangunks is provided in *Green Assets: Planning for People and Nature Along the Shawangunk Mountains*.



Henslow's Sparrow – Threatened Species with habitat in Gardiner. Source: NY Natural Heritage Program, photo by Patricia L. Nelson

Another study being conducted by the Gardiner Biodiversity Assessment Group is mapping and analyzing non-ridge habitat in the town. Currently, this group has completed detailed mapping of habitats in the area east of the Wallkill River (see Appendix B, Biodiversity Resources), which

also includes a detailed report summarizing the characteristics of each habitat area. This *Draft Biodiversity Assessment Study* (November 2005) was prepared by a group of researchers who were trained by Hudsonia, Ltd. The group is currently mapping the area west of the Wallkill River.

Additionally, the Hudson River Estuary Program of the State Department of Environmental Conservation has also mapped “high-quality habitats” as interpreted from their extensive collection of data on rare animals, plants and natural communities. This map and an accompanying report are included in Appendix B, Biodiversity Resources.

All of these separate but complementary efforts to map and assess biodiversity have helped to create a “snapshot” of the town’s most important resources. These biological resources are summarized in **Map 5**, however more detailed mapping is provided by each of the individual initiatives. These mapping studies and reports were used to help develop the rating criteria that were established to identify the priority conservation areas (see Chapter 4). A focus group meeting was also held on April 17, 2006 to review the draft criteria and their results with respect to biodiversity and natural systems. Representatives from all three above-mentioned studies participated in this event as well as many other local, regional and state experts in biodiversity and resource management.

Important habitat areas at the town-wide scale are discussed in much more detail in Chapter 4. However, there are many other important habitat areas and wildlife connections that will need to be identified at the local level. Many of the priority conservation areas identified in Chapter 4 should be considered major habitat “hubs” which should be supported locally with habitat buffers, wildlife connections and smaller habitat patches (often called “stepping stones”).

Working Landscapes

Approximately one-fifth of the Town of Gardiner is classified as a working landscape – agriculture or timber, as depicted in **Map 6**. There are 101 parcels, totaling approximately 5,900 acres, identified as active agricultural parcels through assessment classifications and/or local knowledge, and over a quarter of the town, 7,730 acres, is listed as being within the 2005 Agricultural District. Agricultural use varies from small family farms, to several-hundred acre beef farms. The three most prominent types of farming in Gardiner, by number of acres, are orchards, livestock grazing, and horse pastures. This does not count the general category of “field crops” which account for nearly 2,000 acres of land.



One of the many farm stands in Gardiner.

Below the ridge, agricultural operations are spread throughout the Town of Gardiner. However, there are two “core” farming areas within the town – the Route 208 corridor, and the Shawangunk Kill valley, up to the base of the ridge. Driving down the Route 208 corridor (which is also the Shawangunk Mountains Scenic Byway), the orchards and row crops of some of the town’s most prominent farms are visible. In the Shawangunk Kill Valley, farmland is more likely to be used for cattle grazing or horse pasture. Gardiner also has some unique agriculture, in

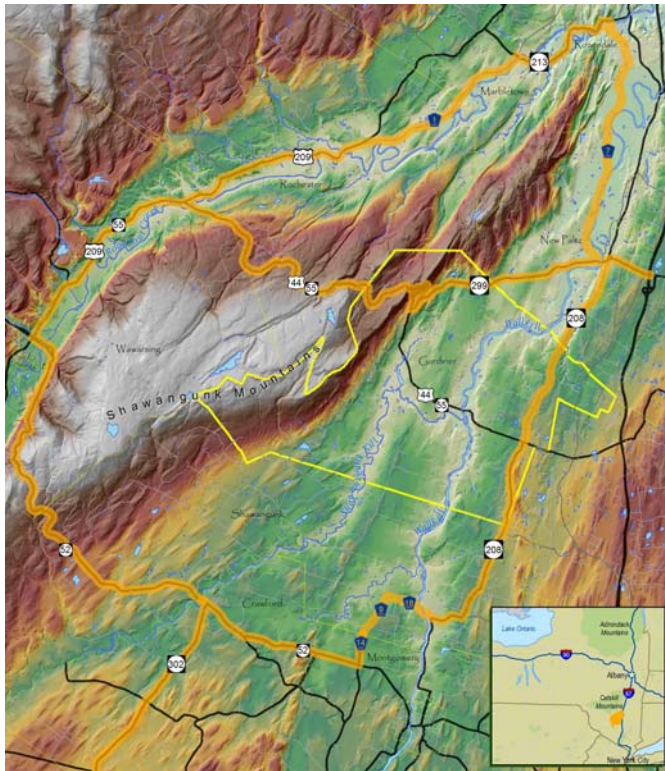
particular are the two vineyards in the town and two Community Supported Agriculture (CSA) farms. The town's two vineyards are part of the Shawangunk Wine Trail which provides an excellent source of agritourism for the area.

Cultural & Recreational Resources

The Town of Gardiner has a multitude of cultural and recreational resources as **Map 7** clearly illustrates. Included in these resources are both public and privately held lands. Cultural resources within the town exhibit the town's history and heritage. There are 13 sites listed on the National Register of Historic Places (and also identified by the New York State Historic Preservation Office) in the Town of Gardiner ranging in size from individual buildings like the Gardiner School (currently the Town Hall) to



The Tuthilltown Grist Mill is one of Gardiner's many historic resources.



Shawangunk Mountains Scenic Byway.

the Gardiner School (currently the Town Hall) to historic areas and districts like the Trapps Mountain Hamlet Historic District and the Lake Mohonk Mountain House Complex, which is not only in Gardiner, but the Towns of Rochester, New Paltz, and Marletown as well. The farmlands and wine trail within Gardiner contribute to the cultural heritage of the area.

Gardiner is well known for recreation, as the Trapps Gateway is located within the town. Every year, tens of thousands of people come to Gardiner to rock climb on the white cliffs of the Shawangunk Ridge. The "Gunks" is the premier climbing destination east of the Mississippi. In addition to climbing, there are numerous hiking trails within Mohonk Preserve and Minnewaska State Park, the latter recently has grown in size, thanks to the Trust for Public Land purchasing the adjacent 2,500-acre Awosting Reserve to be added to the

Minnewaska State Park. Other recreational opportunities in Gardiner include skydiving, paddling, camping, horseback riding, fishing, and of course traversing the Wallkill Valley Rail Trail. The rail trail is 12.2 miles long and runs from the southern border of Gardiner to the northern border of New Paltz. The trail is accessible to all non-motorized travel, including jogging, biking, cross-country skiing, and horseback riding.

All of the cultural and recreational resources of the town contribute to the overall scenic quality of the town. Most people would argue that views of the Shawangunk Ridge are among the most important scenic resources in Gardiner, in fact the Shawangunk Mountains Scenic Byway passes through Gardiner on Routes 208 and 299. Gardiner's abundant open farm fields and orchards also have a very important impact on the scenic quality of the town. These open lands help to frame views of the ridge in a way that provides contrast and drama to the viewer.

In addition to the regional byway, there are approximately 49 miles of locally-designated scenic roads in Gardiner. Scenic roads were identified through by windshield survey conducted by an open space committee member and a volunteer with expertise in scenic resources. The roads were ranked on a 3-point scale, with Class I being the most scenic. Characteristics which contribute to the scenic nature of a roadway that were evaluated include agricultural landscapes; topographic features such as the Shawangunk Ridge and other hills and valleys; natural features such as streams, rivers, creeks, undeveloped woodlands or open meadows; and historical buildings or landscapes.



Views of the ridge and the Shawangunk Kill from Marabac Road.

An example of a Class I road is Route 7/Bruynswick Road, from which there are exceptional views of open farmlands surrounded by the cliffs of the Shawangunk Ridge. Another example is Marabac Road in the eastern part of town from which the Wallkill River and the Shawangunk Ridge provide the background for farms and woods. The following table identifies all scenic roads in Gardiner.

The town's scenic roads provide first-hand views of open farmlands and a diverse composition of many different elements that extend well beyond the road corridor. Scenic roads are identified and "buffered" in the rating of resources (which has helped to identify the priority conservation network) as a way to identify linear corridors with scenic resources worthy of protection. However, in order to truly preserve the town's scenic resources at the town scale, a more comprehensive "landscape-based" approach is required. The recommendations section of this plan (Chapter 5) suggests creating design guidelines for development to help protect the scenic character of roads, corridors and whole landscapes.

Town of Gardiner Open Space Plan

Table 3: Scenic Roads in Gardiner

Class 1 Roads	Class 2 Roads	Class 3 Roads
<ul style="list-style-type: none"> ➤ County Route 7- from Bruynswick Road south to Route 44/55. The “Beef Belt” ➤ McKinstry Rd. from County Route 7 to Burnt Meadow Road ➤ Shaft Road ➤ Albany Post Road (County Route 9), from Gardiner Town Houses to County Route 7 ➤ Marabac Road ➤ Sand Hill Road ➤ Phillies Bridge Road ➤ Route 44/55 from Wallkill bridge to western town line ➤ Clove Road ➤ Guilford Road-Vista Point to Route 44/55 	<ul style="list-style-type: none"> ➤ Route 208 – from south border north to Wright’s farm stand. ➤ Burnt Meadow Road – from south boundary to Stella Drive ➤ Route 208 – from Mountain View Road to north boundary ➤ Route 299 – from eastern town boundary to Route 44/55 ➤ Hasbrouck Rd. ➤ Guilford-Schoolhouse Road ➤ Route 32 – from south to north border ➤ North and South Mountain Road ➤ Yankee Folly Road ➤ County Route 7- from Route 44/55 to north boundary 	<ul style="list-style-type: none"> ➤ Forest Glen Road ➤ Crispell Lane ➤ Old Ford Road ➤ Tuthill Town Road

Related Plans and Policies

Open space conservation and the maintenance of rural character is a topic of significance throughout much of the Shawangunk region. Several efforts in the region are completed or underway. The *Shawangunk Mountains Scenic Byway Corridor Management Plan* was completed in October 2005 and serves as a framework for management of the diverse resources within the 115,000-acre region that encircles the northern Shawangunks region. The 82-mile scenic byway passes through 11 municipalities, which are all members of the Shawangunk Mountains Regional Partnership. An implementation item of this plan, the Shawangunk Mountains Regional Open Space Plan, is currently underway in the region. This plan will outline a community-based regional strategy for conservation of the unique open space and natural resources of the byway region. Additionally, Ulster County is currently working on an open space plan. This plan will provide a policy and implementation framework for open space conservation and stewardship at the county level.

At the local level, the Town of New Paltz completed and adopted an open space plan in May 2006 and is currently conducting a build-out and fiscal analysis to help guide future land use and conservation finance decisions. The Town of Rochester has explored rural character, costs of community services and other areas related to open space and has conducted an inventory of open space resources. The Town of Lloyd recently completed a comprehensive plan. The neighboring Town of Shawangunk completed an Open Space Inventory and Analysis in 2004, which identifies many landscapes and resources similar to those in Gardiner.

There are a number of other plans and policies related to the Gardiner Open Space Plan, including but not limited to: federal and state wetland policies, federal biodiversity policies, the *New York State Open Space Conservation Plan*, the *New York Statewide Comprehensive Outdoor Recreation Plan*, the Hudson River Greenway plans, the *Ulster County Long-range Transportation Plan*, the *Ulster County Priority Housing Strategies*, Ulster County Intermunicipal Watershed Agreements, the *Wallkill River Watershed Management Plan*, and the Palisades International Park Commission's 21st Century Plan.