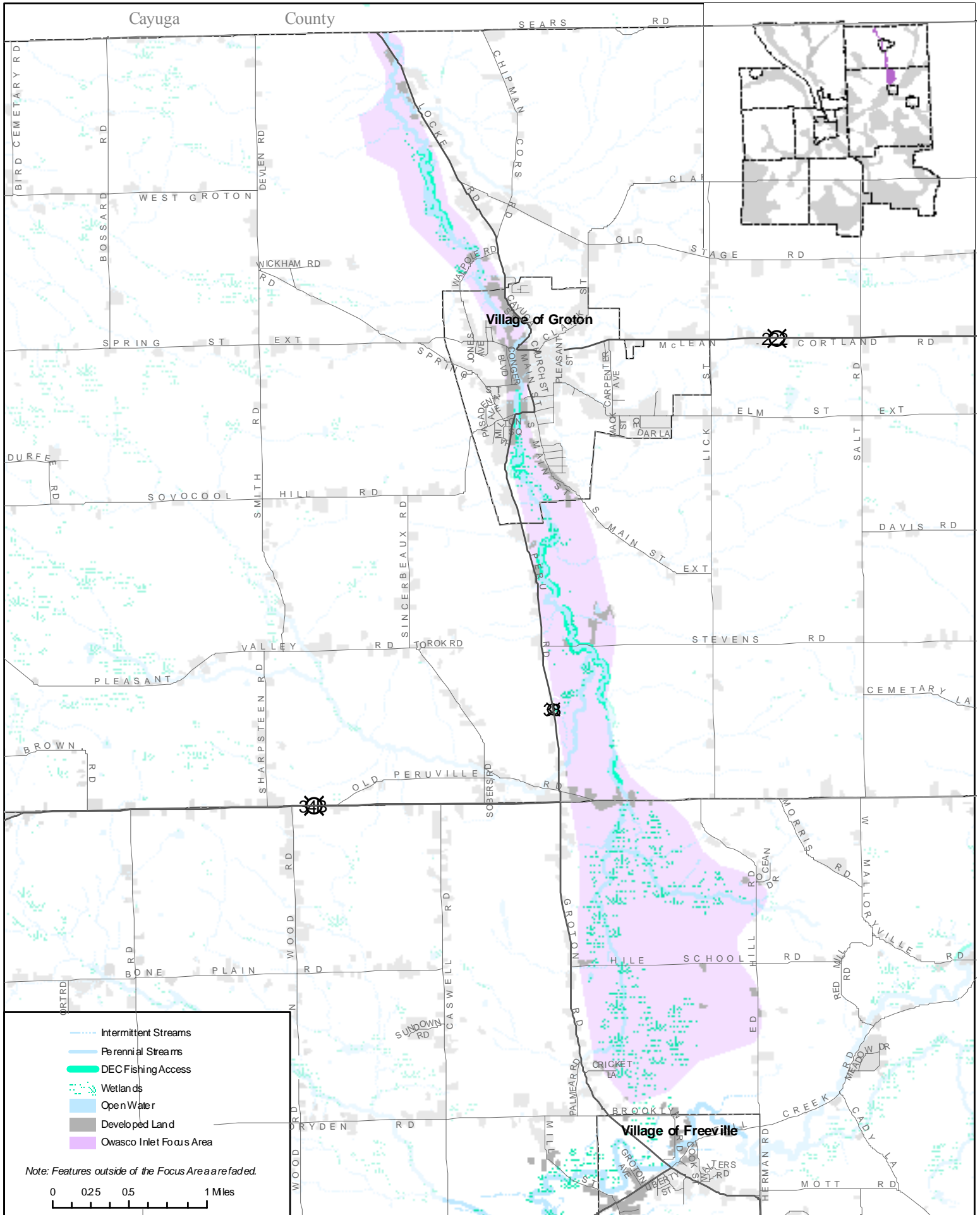


# Owasco Inlet





Village of Groton

Village of Freeville

- Intermittent Streams
- Perennial Streams
- DEC Fishing Access
- Wetlands
- Open Water
- Developed Land
- Owasco Inlet Focus Area

Note: Features outside of the Focus Area are faded.

0 0.25 0.5 1 Miles

## Description of Focus Area

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The Owasco Inlet Focus Area extends from the Village of Freeville north through the Village of Groton to the Tompkins County border. The Focus Area is characterized by its large wetlands and protected streams that support a variety of plant and animal communities.

Owasco Inlet is unique in Tompkins County, as it is the only major stream to flow north into Owasco Lake. Development in this Focus Area is concentrated in the Village of Groton, with the Inlet passing through the heart of the Village and providing Village residents with an aesthetic and recreational resource.

Groundwater provides the public drinking water source for the Village of Groton, and surface water resources in the Focus Area are the primary tributary for Owasco Lake, the source of public drinking water for the residents in Cayuga County. This Focus Area is dominated by wetlands, streams and ponds, but patches of early successional, forest, and grasslands habitat are spread throughout.

## Major Benefits

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The theme of this Focus Area is water. The wetlands, streams, and fens in this Focus Area create a particularly significant system that is notable for its ecology, high-quality plant communities, dynamic interaction between ground water and surface water resources, and abundant fishing opportunities. Key wetlands in the southern-most portion of the Village of Groton and an extensive wetlands complex near the Village of Freeville, are highly valued for their floodwater storage and filtering capacity and are also notable due to the presence of several locally and globally rare plant types. Residents of the Village of Groton, the City of Auburn and Town of Owasco (both of which are in Cayuga County) use groundwater and surface water resources for drinking water. An abandoned railroad bed that traverses the Focus Area is well-poised to enhance public access to and appreciation of the amenities included within this Focus Area.

### Drinking Water Quality and Flood Mitigation

The Owasco Inlet Focus Area is integral to the drinking water sources for residents of Tompkins County and Cayuga County (to the north). The municipal water supply for the Village of Groton originates from groundwater located beneath Owasco Inlet. The

protected streams and high-quality wetlands in the southern portion of the Focus Area form the headwaters of Owasco Inlet, which is the largest tributary to Owasco Lake, the drinking water supply for the City of Auburn and Town of Owasco (both in Cayuga County).

The peat swamps, fen, and large wetlands in this Focus Area highlight the interactions that occur between surface water and groundwater resources, and are critical to ensuring a high quality drinking water supply for these residents, as well as pure waters for local fish populations, and unique plant and ecological communities. The importance of these water resources are noted in the New York State Draft Open Space Plan, which calls for reducing the delivery of sediments and nutrients to Owasco Lake by increasing the amount of permanently preserved riparian buffer areas along the Lake and its tributaries.



*Large wetlands in this Focus Area are critical to ensuring high quality drinking water and habitat.*

Wetlands are uniquely able to absorb, hold, and filter water that would otherwise go cascading downstream during a heavy rainfall. The number and size of the wetlands in this Focus Area play a critical role in the natural storage of floodwaters, as well as purification of waters, that flow into Owasco Inlet. As a result, the magnitude and frequency of flooding in the Owasco Inlet valley, including downtown Groton, is reduced.

## Fishing

The Owasco Inlet Focus Area offers an array of public fishing opportunities that are easily accessible from within the Village of Groton as well as opportunities that are more remote and scenic in nature. The wetlands in this Focus Area help maintain the water quality and organic inputs necessary to support fish populations that include lake run brown trout, rainbow trout and bullhead. While introduced fish provide anglers with enhanced fishing opportunities, they also compete against existing native fish populations, suggesting a need to balance the benefits against the potential impacts on biodiversity.

## Critical Habitat and Biodiversity

This Focus Area is dominated by wetlands and pond habitat with smaller mosaic patches of early successional, forest, and grasslands habitat spread throughout the Focus Area. The largest tract of grasslands habitat is located in the southeastern portion of the Focus Area and is part of a larger grassland that extends to the border of The Fens Natural Features Focus Area. The Owasco Inlet Focus Area also supports rare and scarce animals and plants, old growth forest, a fen, and two ecologically rich peat swamps. Fens and peat swamps are particularly interesting components of this habitat, as they are characterized by distinctive plant species and fed by mineral-rich groundwater resources.

## Protection and Management Issues

### Drinking Water Quality and Flood Mitigation

- n Pollutants in the waters (such as sediment, pesticides and herbicides, fecal contamination and other inputs) can negatively impact human health and increase the costs of treating drinking water. Vegetated buffers along permanent and intermittently flowing watercourses, wetlands, and associated floodplains help filter pollutants from water, and are critical for sustaining water quality. Although specific buffer needs vary from site to site based on topography, vegetation, soils, and land uses, in general a 100-foot vegetated buffer is the minimum needed to provide nutrient and pollutant removal. A wider buffer width may be required for bank stabilization or additional water filtration, depending on local site characteristics.
- n Wetlands and riparian areas are sometimes filled or degraded, which negatively impacts the ability of those systems to slow the flow of stormwater and provide storage for floodwaters (reducing the amount of floodwater entering streams and ponds). Development in these areas can increase the volume and rates of stormwater runoff and increase the potential for flooding, property damage and erosion during storm events.
- n Excavation of gravel from streams, and other in-stream management activities, can cause changes in the natural course of streams and reduce the ability of the natural landscape to control flooding.
- n When land is developed and stormwater is not managed on-site to allow for controlled release, the stormwater runs quickly off the land at increased speeds, in greater volumes, and with more sediment and pollution than before development. Increased stormwater runoff can also cause streams to widen to accommodate the additional runoff during storm events. During low flow events, water flowing through these widened stream channels slows and deposits sediment making the stream shallower. These wider, shallower streams may, in turn, increase the frequency of flooding.
- n As water runs off the landscape and into streams below, it accumulates pollutants (such as sediment, bacteria, pesticides, and herbicides) that can negatively impact water quality. Steep slopes and shallow soils in some portions of this Focus Area reduce the ability of the landscape to absorb rainwater, and therefore increase the potential for runoff. Land management practices designed to minimize the amount of pollutants entering runoff are particularly critical in these areas.
- n Many key water resources in this Focus Area are affected by activities that occur in the upper portions of the watershed. As a result, water resource management efforts must address issues that extend beyond the boundaries of the Focus Area.

## Fishing

- While there are many publicly accessible fishing points in this Focus Area, additional parking areas would enhance fishing opportunities.
- Pollutants in the waters, such as sediment, pesticides and herbicides, and inputs from atmospheric deposition, can negatively impact fish populations and raise health concerns for fish consumption.
- When streambanks become eroded, vegetation can no longer filter out sediment and other pollutants, and water temperatures rise because there are no longer trees and tall grasses along the shore to provide shade. These effects negatively impact water quality and compromise the health of aquatic species. Although specific buffer needs vary from site to site based on topography, vegetation, soils, and land uses, in general a 100-foot vegetated buffer is the minimum needed to provide the filtration necessary for nutrient and pollutant removal and to prevent excessive temperature fluctuations. A wider buffer width may be required for bank stabilization or additional water filtration, depending on local site characteristics.
- Fallen trees in creeks can also provide important habitat for fish, and should not be removed unless there is the potential for causing significant flooding or damage to infrastructure.
- Wetlands absorb, store, and gradually release water over time. When it rains, wetlands absorb this water, and then gradually release it into nearby streams. In this way, wetlands play an important role in maintaining stream flow during dry periods.
- wetlands, ponds, and upland areas have a negative impact on water quality and reduce the viability of these habitat areas.
- When people try to control the location of streams and limit the natural flooding and channel meandering characteristics of streams, the streams are less adept at promoting the growth of native stream and wetland vegetation, which wetland and pond species need to thrive.
- Fens are particularly vulnerable to the impacts from invasive species and use of herbicides, pesticides, and fertilizers within the fens and on adjacent lands.
- Illegal collection of seeds, plants, and animals can have a negative impact on plant and animal populations that are critical to biodiversity in this region.
- Some pond species, such as snapping turtles, are vulnerable to high mortality on roads during the nesting season.
- Although specific habitat size requirements vary by habitat type and from species to species, contiguous open space of at least 135 acres is generally needed to support diversity and abundance in plant and animal communities, and to enhance species survival by providing habitat for larger populations of animals and allowing for species movement and migration. Many species; however, are more sensitive to habitat size and generally require a much larger contiguous area of at least >6,000 acres for suitable habitat.
- Wildlife corridors promote genetic diversity among species and help counter the negative effects of habitat fragmentation by connecting otherwise isolated patches of suitable habitat.
- The introduction of non-native species, pesticides, herbicides, and fertilizer can inhibit growth of native plants critical to biodiversity.
- Beavers physically alter habitats by cutting down trees, building dams, digging canals and building lodges. This activity affects the distribution of many other plant and animal species. In some situations beavers are desirable, whereas in other circumstances their presence may be detrimental to habitat management goals. As a result, areas inhabited by beaver may require active beaver management. The nature of the management depends on the particular conditions and resource priorities of the site.

## Critical Habitat and Biodiversity

- Wetlands and ponds are sometimes filled or degraded, which has a negative impact on the ability of those systems to support wetland and pond species. Large wetlands (>5 acres) provide critical habitat, and smaller wetlands serve as “stepping stones” to provide habitat connections. Wetlands and pond areas that are isolated and small in size cannot support certain wetland and pond species of greatest conservation need. Many wetland bird communities depend on their local habitat, as well as the wetlands within a two-mile radius.
- Species that live in and around wetlands, and ponds require clean water to thrive. Poorly managed

## Priority Actions for Owasco Inlet

The Natural Features Focus Area Project has identified 35 priority action items to be initiated over the next five years. The action items have been established to bolster and coordinate the region's many existing conservation efforts. They are not intended to replace or replicate those efforts. The action items reflect the broad range of unique uses in the identified Focus Areas. Below is a list of actions that are particularly relevant to Owasco Inlet Focus Area. For a complete list of actions and designation of principal agencies that will lead implementation efforts please see the *Implementation of Priority Actions* section of the complete county-wide plan.

### Fishing

- è Acquire and build additional parking areas for fishing access in Owasco Inlet and the Fens Focus Areas, as opportunities arise. Construct parking at least 100 feet from stream and use pervious paving materials where possible to limit the impact of new parking areas on water quality. Public access should be limited to less sensitive areas, particularly in the Fens.
- è Establish accessible fishing locations at publicly owned lakefront parks and creeks where fishing opportunities are already located, as opportunities arise.

### Water Quality

- è Encourage semi-pervious paving, bioretention, and infiltration practices.
- è Provide education about and access to hydrologically sensitive area data through the Natural Resources Inventory (NRI) on-line interactive mapping tool.
- è Educate highway departments about the impacts of roadside ditching on water quality and water quantity, as well as on the spread of invasive species, and provide highway departments with information about appropriate best management practices to address this issue.
- è Initiate inspection and maintenance requirements for individual on-site wastewater treatment systems, as also recommended in the Tompkins County Comprehensive Plan.

### Critical Habitat and Biodiversity

- è Work with municipalities to protect wetlands and vernal pools smaller than 12.4 acres in size and not regulated by the NYS Department of Environmental Conservation.

- è Map small wetlands and vernal pools using data on hydrologically sensitive areas.

### Invasive Species and Native Plants

- è Inventory and identify high priority areas for the control of invasive species.
- è Establish a coordinated approach for distributing invasive species information to landowners throughout identified high priority areas.
- è Develop and distribute a list of popular landscaping plants and appropriate native species substitutions.
- è Conduct a comprehensive “natural lawns and gardens” campaign to limit the use of pesticides, herbicides, and fertilizer, and increase the use of native plants in landscaping.
- è Provide a wide selection of native plants as part of annual plant sale, and eliminate all invasive species from the sale.

### Rural Landowner Outreach and Education

- è Enhance existing rural landowner education efforts with an emphasis on sustainable forestry practices, impacts of ATV use, invasive species, wetlands management, grassland habitat, and targeted outreach to new rural landowners.
- è Identify and coordinate the dissemination of information about grants available to private landowners for habitat management and enhancement.

### Technical Assistance for Municipalities

- è Provide technical assistance to municipalities working on projects that implement the recommendations of the plan.

- è Provide training and information to municipalities on the full-range of conservation tools available, the Plan and the Natural Resources Inventory, flood plain management strategies, and vernal pool and small wetland habitat conservation.

## Coordination

- è Convene a group of partners (Tompkins County Conservation Partners) involved in local conservation efforts twice a year. Meetings will facilitate regular information sharing as well as coordinated educational efforts such as periodic field trips for municipal officials to key sites in the Focus Areas.

## Land Protection in Priority Areas

- è Protect open space system through partnerships with area agencies and municipalities by purchasing land and acquiring conservation easements.
- è Educate landowners about tax incentives available for conservation efforts through various formats including town/village newsletters with special emphasis on landowners within the open space system.
- è Develop or identify a model conservation zoning ordinance for use in key portions of the Focus Areas.
- è Engage key land protection stakeholders to assess the financial resources available for land conservation and work to establish additional funding as needed.