

Skaneateles Lake Watershed Protection Program

Submission Summary

Skaneateles Lake is located in the eastern Finger Lakes region approximately 20 miles southwest of the City of Syracuse. The lake is the primary source of drinking water for over 200,000 residents in the City of Syracuse and surrounding communities. The lake water is so pure that it is minimally treated between the time water is drawn from the lake and when it is used by homes and businesses in Syracuse and nearby communities.



The Skaneateles Lake Watershed Protection Program is a comprehensive initiative to protect a drinking water source for residents in the Syracuse area.

In recent years, however, increased development along Skaneateles Lake, combined with resource intensive farming techniques on the surrounding farm lands, has led to the increased possibility of contamination of the drinking water from Skaneateles Lake. Because of new federal mandates, the City of Syracuse has undertaken efforts to mitigate impacts to Skaneateles Lake. The primary result is a comprehensive initiative for the Skaneateles Lake watershed that consists of three program elements, along with the city's continuing monitoring of the lake and its tributaries. These program elements are:

1. The **Skaneateles Lake Watershed Agricultural Program (SLWAP)**, an agricultural non-point source pollution control program that served as a pilot project for the New York State Agricultural Environmental Management program;
2. The **Skaneateles Lake Watershed Land Protection Program (SLWLPP)**, focused on preserving high-priority watershed protection lands; and
3. An ongoing **education and public outreach program** overseen by Cornell Cooperative Extension and the City of Syracuse within the watershed and the city.

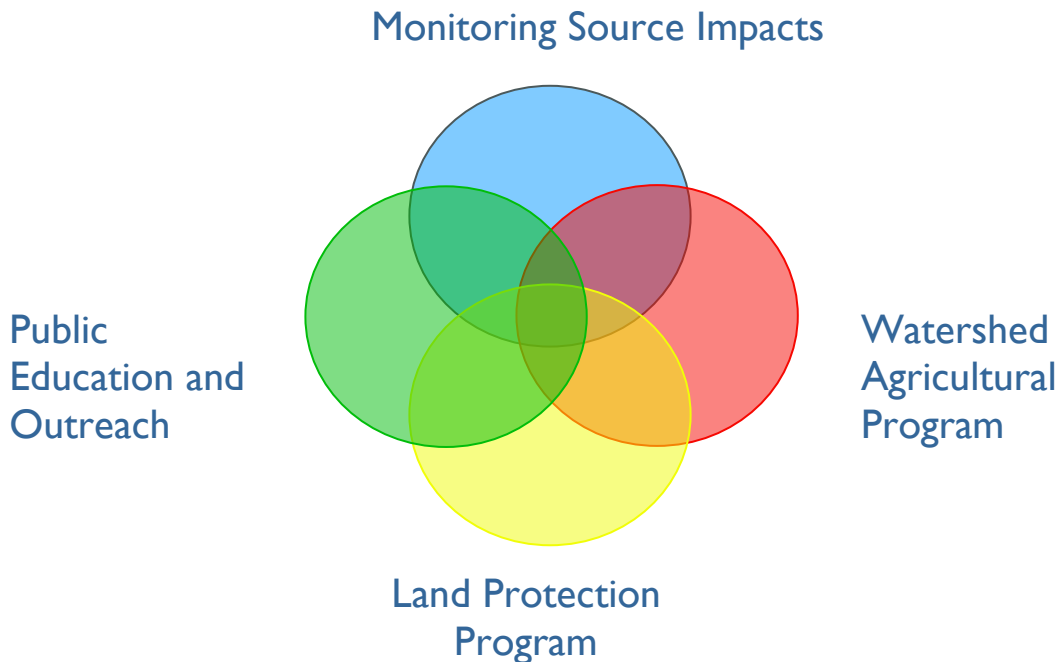
There are several integral components in the effort to protect the Skaneateles Lake watershed. First, farm owners on lands representing 95% of the total agricultural acreage in the watershed voluntarily participate in the Whole Farm Planning process with Skaneateles Lake Watershed Agricultural Program, as shown in Attachment A (Whole Farm Plan Implementation Progress map). A Whole Farm Plan is a comprehensive process that is dedicated to helping farmers adopt environmentally sound farming practices to protect water and soil quality, funded entirely by the City of Syracuse through its water department. Best Management Practices identified in the Whole Farm Plan are implemented on the farm at no cost to the farmer, according to USDA Natural Resource Conservation Service standards. Principal funding for Whole Farm Plans and Best Management Practices is provided by the City of Syracuse. Local municipalities, as part of their land use codes, also require strict guidelines for the usage of septic tanks and other wastewater mechanisms in the watershed.

Through the land protection program, local governments and land trusts work closely with landowners to preserve existing farmland and open space within the watershed. This is accomplished through the purchase of development rights and by creating conservation easements on key properties, which are shown in Attachment B (Protected Parcel map). The land protection program has helped to limit the growth of residential development in areas of the watershed not served by public sewer facilities while protecting agricultural activities and prime farmlands for future generations.

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The Water Quality Educational Program, conducted through the Cornell Cooperative Extension of Onondaga County, complements the land protection and whole farm programs with educational programs on sustainable practices for residential landowners. In 2008, the Cornell Cooperative Extension implemented a rain barrel demonstration project where 5 rain barrel models were placed on participating residential properties to determine the features of a good rain barrel, how people use them, and how much rain could potentially be captured over the course of a growing season. Cornell Cooperative Extension also sponsors the Skaneateles Lake Watershed Agricultural Program annual meeting, which draws 40 to 60 residents that are interested in learning more about watershed protection and best practices for agriculture and sustainability.

This comprehensive watershed protection program has allowed the City of Syracuse to continue to maintain Skaneateles Lake as a safe, cost effective source of high-quality drinking water for its residents and for communities that purchase Skaneateles Lake water from the city. The program allows the city to refrain from investing in a \$70 million water filtration facility that, once built, will require an estimated minimum of \$7 million in annual operating costs. At the same time, the quality of life for the residents, visitors, and recreation users of Skaneateles Lake is protected; farming remains a viable business in the watershed; and recreational activities continue to take place both in the lake and on the surrounding lands. In summary, the Skaneateles Lake Watershed Protection Program is a model program for the sustainable management of a region's drinking water and farmlands; it also helps to sustain the health of the environment and the economic vitality of the region.



The Watershed Protection Program consists of several overlapping program elements that interact to create a sustainable, long-term initiative.

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Criteria Summary

Planning and Innovation

The **Skaneateles Lake Watershed Protection Program** sponsored by the City of Syracuse is a model for the sustainable management of our most basic of resources - food and water. The program is a three-pronged effort that ensures the long-term health of Skaneateles Lake. Through a **whole farm planning program**, sustainable farming practices are learned and carried out by farmers; the result is improved water quality and healthy, sustained soils. The **land protection program** provides an option for local farmers to capture some of their equity value in their farmland without selling the farm, thus maintaining the local food supply. The **outreach and education component** helps to ensure that current and future generations understand the importance of watershed protection, as well as their personal role in maintaining the watershed's health. The comprehensive program guides growth in a way that protects water quality. By protecting the water quality of Skaneateles Lake, the recreational uses and outdoor activities such as fishing, boating, hunting, and swimming are sustained as a vital component of the **regional economy**. In summary, the Skaneateles Lake Watershed Protection Program is a model for the sustainable management of a region's drinking water and farmlands. It also helps to sustain the health of the environment and the economic vitality of the region.

The efforts of planners are integral to the creation and implementation of the comprehensive watershed protection program for Skaneateles Lake. Members of the planning team developed the program and work to educate residents about the need to protect Skaneateles Lake as a source of drinking water for the region. Planners work directly with farm owners, government agencies, and the City of Syracuse to administer the numerous underlying programs that are part of the watershed protection program. Finally, members of the planning team are responsible for identifying funding sources for the city to continue its efforts to implement aspects of the watershed protection program, including the creation of supporting documentation and manuals to ensure the continued monitoring and stewardship by the city.

The watershed protection program positively benefits a variety of underserved populations. Through the sale of a conservation easement, agricultural landowners now have an option to gain economic value from their land while keeping title to their land. This is especially important because Skaneateles Lake is a desirable area for second homes and commuters from the Syracuse area and rising land values make it challenging to maintain agriculture without economic intervention. By protecting the primary water source for the City of Syracuse and nearby communities, all residents receiving water from Skaneateles Lake, including minorities, seniors, and low-income residents have access to an affordable, clean, and plentiful water supply.

Plan Compatibility

The sustainability of the Skaneateles Lake watershed and the protection of its water quality is a key component of local comprehensive plans and land use regulations for communities within the watershed and the City of Syracuse, which by NYS law has the right to control water quality within the watershed. For example, the 2005 *Town and Village of Skaneateles Joint Comprehensive Plan* provides a series of goals and strategies related to the protection of the quality of drinking water derived from Skaneateles Lake, and the support of agricultural activities for residents of Skaneateles. As part of these efforts, the town and village jointly created a Skaneateles Lake Watershed Overzone that helps to protect Skaneateles Lake by controlling land uses that may negatively influence water quality.

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The City of Syracuse's 2025 Comprehensive Plan also identifies the protection of the Skaneateles Lake watershed as a goal, specifically mentioning the need to continue to support the watershed protection program. Finally, a series of NYS Department of Health rules and regulations (Section 131.1 of Chapter 131, Title 10 of the Official Codes, Compilations, and Regulations) provide underlying guidance regarding the protection of Skaneateles Lake by the city and other municipalities, providing the legal impetus for the protection of the lake.

Citizen Participation

The participation of citizens is an essential element to the success of the Watershed Protection Program. Key to this effort are programs spearheaded by Cornell Cooperative Extension which provide guidance to residents about the necessity of protecting Skaneateles Lake and its tributary streams and identify ways that residents can make this happen. Through a series of education seminars and workshops managed by Cornell Cooperative Extension, residents of the watershed are able to learn about innovative methods to protect water quality and reduce runoff from residential and farm properties into the lake. Watershed residents also receive an annual newsletter that contains information related to ongoing efforts to protect the watershed and ways that residents can help to accomplish these goals.

Partnerships

The City of Syracuse relies on a diversity of partners to make the watershed protection efforts a success. Early on in the project, the city invited representatives from the scientific community to look at the ecology of the lake, resulting in the *Skaneateles Lake Watershed Management Plan*. Since the creation of the plan, the city has continued to collaborate with organizations such as the American Farmland Trust, Finger Lakes Land Trust, and Cornell Cooperative Extension, as well as various state and federal agencies, and private consulting firms to assist with implementation of the watershed protection program. State and federal agencies, in particular the U.S. Department of Agriculture's Natural Resources Conservation Service (NRCS), have assisted the city in funding the acquisition of development rights for several agricultural properties within the watershed. By creating and implementing local laws and supporting the program elements, the municipalities in the watershed are also partners in the protection of the watershed. Finally, the Watershed Protection Program has worked closely with the New York State Department of Environmental Conservation and the New York State Office of Parks, Recreation and Historical Resources.

The Watershed Protection Program has successfully engaged many local leaders over time. This has been shown both by the legislation created to protect the watershed and by the funds invested by communities to protect the watershed. One primary means of engagement is via a city-hosted biannual intermunicipal watershed conference, last held in 2007. The conference acts as a region-wide forum where local leaders can learn more about how their communities can protect Skaneateles Lake.

Transferability

The watershed protection program developed for the Skaneateles Lake watershed is readily transferable to other municipalities. The city has a long-standing annual exchange program with the South Nation River Conservation Authority in southeastern Ontario consisting of multiple tours of each of the watersheds by the staff of each of the watershed management organizations. These tours and subsequent discussions about programs and procedures have benefitted each of the watersheds over the last decade. One of the results of the exchange program is that many of the components of the Skaneateles Lake Comprehensive Watershed Protection Program are being incorporated into the South Nation River watershed initiatives. Other communities in New York State have cited Syracuse's program as a model that they have consulted in developing their own watershed protection efforts. The Skaneateles Lake Watershed Agricultural Program also served as a pilot project for New York State's

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Agricultural Environmental Management Program. Finally, the methods that Skaneateles Lake Watershed Land Protection Program used to identify priority watershed properties for permanent conservation through a rigorous rating system, as well as techniques for monitoring and stewardship of properties, can be transferred to other communities or land trusts interested in the protection of key agricultural properties or watershed areas (see the enclosed Stewardship Manual).

Measurability

The success of the Skaneateles Lake Watershed Protection Program can be measured in many ways. One can look at the amount of farmland that is enrolled in whole farm plans (95% of the total farm acreage in the watershed, as of 2008) or at the number of farms that are enrolled in the whole farm program in relation to the total number of farms in the watershed (43 of 48, as of 2008). The amount of sensitive watershed land protected by the Skaneateles Lake Watershed Land Protection Program (over 850 acres, as of July 2009) is also a measure of success. More important than acreage is the influence this land has on the water quality. The most important metric related to this program, however, is that because of the efforts to protect Skaneateles Lake the City of Syracuse has been able to maintain the high water quality of Skaneateles Lake without costly improvements such as a filtration plant. In fact, in its last waiver (2004), the NYS Department of Health gave the City of Syracuse an indefinite waiver based on the continuation of the watershed protection program. Water quality monitoring conducted by SUNY College of Environmental Science and Forestry did not find a significant measurable difference between the water quality at the mouths of streams in forested subwatersheds versus agricultural subwatersheds. The most recent annual report for the watershed protection program highlights many additional measurables (see enclosed annual report).



Because of the success of the watershed protection program, long-time residents such as Frank Pitman (above) have been able to continue to farm their lands.

Social and Economic Concerns

The implementation of the comprehensive watershed protection program for Skaneateles Lake addresses a variety of social and economic concerns. Because the city is not required to construct a water filtration plant for water derived from Skaneateles Lake, **residents save an estimated \$70 million in capital costs, and an estimated \$7 million in annual operating costs.** In comparison, the city spent just over \$4.1 million to acquire the development rights to 858 acres of land within the Skaneateles Lake Watershed. Of this amount, just over \$3 million was money from the city and the remaining \$1 million was obtained from the US Department of Agriculture's Natural Resource Conservation Service. Through the watershed protection program, agriculture continues to remain viable on properties that may have otherwise been converted to residential uses, protecting areas of prime farmland soils for future agricultural use. The placement of conservation easements on these properties protects viable farmland from extensive development that can negatively affect the Skaneateles Lake watershed while allowing long-time farm owners to remain on their properties. The implementation of whole farm planning encourages agricultural practices that are sustainable for the land and watershed, protecting the soils and waters of the area and helping to instill sound practices for a new generation of farmers. Because of the efforts undertaken as part of the watershed protection program, recreational uses such as fishing and swimming in the lake and hunting on the surrounding hillsides are protected. The result of these efforts is an enhancement of the economy, quality of life, and personal well-being of residents of the region.