

Susquehanna-Chemung Action Plan



February 2012

Prepared by Southern Tier Central Regional Planning and Development Board
in conjunction with Southern Tier East Planning Development Board

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in conjunction with Southern Tier East Planning Development Board
(STERPDB)

The Susquehanna-Chemung Action Plan is a watershed management plan encompassing the Susquehanna and Chemung Watersheds of New York. It was developed using an “ecosystem-based management” approach to promote sustainable water resource management that supports the needs of natural and human systems. Supporting data, plans, and resources are available on the project website:

www.susquehanna-chemung.org

Printed copies of this plan are available upon request from Southern Tier Central Regional Planning and Development Board: (607) 962-5092 or stcrpdb@stny.rr.com.

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Front cover: Near Waverly, NY; courtesy of Tioga County Tourism Office.

Back cover: Otsego Lake; courtesy of Otsego County Soil and Water Conservation District.

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SUSQUEHANNA-CHEMUNG ACTION PLAN

EXECUTIVE SUMMARY

The “Susquehanna-Chemung Action Plan” is a watershed management plan for the Susquehanna and Chemung River Watersheds in New York. It uses an “ecosystem-based management” approach that integrates human needs, economic issues, and environmental concerns. The objective is to provide a unified vision for the region and promote funding for projects that benefit the watershed’s residents.

The Action Plan is a watershed-wide plan that encompasses the missions and programs of numerous partners. It is not a work plan for any single organization. Instead it assimilates and builds on the plans, programs, and ideas of many partners and encourages continued coordination of efforts. The priorities and capabilities of these partners vary considerably across the region. Additional resources, both funding and personnel, will be needed to implement many recommendations. As a result, the Action Plan does not establish priorities and is often ambiguous about who is responsible for implementing the recommendations. Progress on implementation will be evaluated annually by Southern Tier Central Regional Planning and Development Board (STC) by contacting partner organizations and documenting accomplishments. It is anticipated that the plan will be reviewed and updated in approximately five years.

The Susquehanna-Chemung Action Plan lays the foundation for coordinated efforts to promote sustainable water stewardship throughout the watershed. It presents recommendations that support the following vision and goals.

WATERSHED VISION

Residents of the Chemung and Susquehanna Watersheds of New York recognize that water is essential to their quality of life and economic wellbeing. They embrace a sustainable approach to economic and community development that respects the natural functions of watersheds and minimizes flood risks.

WATER RESOURCE GOALS

Water Quality and Quantity: Keep the water clean and plentiful - It’s priceless.

- Protect and enhance local water quality, protect drinking water, and reduce pollution loads to the Chesapeake Bay by reducing the release of toxic substances, nutrients, and other pollutants.
- Promote groundwater recharge and water conservation.

Economic Development: Capitalize on water resources as economic assets.

- Promote economic development strategies that protect the region’s water resources and use them wisely because they are integral to the local economy.
- Foster regional collaboration to implement environmentally sensitive economic development strategies.

Land Use: Use the landscape in ways that support healthy water systems.

- Promote land use patterns that facilitate enjoyment and sustainable use of lakes, rivers, streams, and wetlands while preserving natural watershed functions.
- Promote development patterns that strike a balance between preventing sprawl, minimizing floodplain development, encouraging infill development and protecting steep slopes.

Streams and Rivers: Live in harmony with streams.

- Conserve, protect, and enhance stream and river systems so that the channels and floodplains provide beneficial functions for habitat, flood damage prevention, and water quality.
- Maintain and restore the connections between streams and their floodplains.
- Use science-based practices when stream systems are disturbed by roads, bridges, pipelines, post-flood stream work, or other projects.

Flood Hazards: Floods happen, so be prepared.

- Prevent loss of life and significantly reduce future damages from floods by mapping flood hazards, regulating use of high hazard areas, mitigating risks for existing development, restoring beneficial floodplain functions, maintaining flood control structures, and enhancing flood warning systems.

Runoff: Rainwater is good: Slow it down. Spread it out. Soak it in.

- Protect and re-establish the natural functions of floodplains, forests, wetlands, and groundwater recharge areas.
- Use better site design, green infrastructure, and standard stormwater management practices to reduce impacts from development.
- Keep clean water clean.

Roads: Navigate toward better roadway drainage.

- Recognizing the significant impacts that transportation systems have on the landscape and water resources, promote improved practices for designing new roads, managing road and railroad drainage, improving stream crossings, and preventing erosion.

Agriculture and Forestry: Support productive working lands that are part of a healthy landscape.

- Promote economically-viable agricultural practices that minimize soil loss, recycle nutrients, and protect water resources.
- Promote sustainable management of the watershed's forests in a manner that provides flood protection and water quality benefits.

Plants and Wildlife: Preserve the rich diversity of plant and animal life.

- Create, protect, and restore high quality lake, stream, and wetland habitats.
- Maintain the integrity of native ecosystems by protecting rare plants and animals, controlling invasive species, and protecting large blocks of dominant plant communities.

Outdoor Recreation: Connect people to nature.

- Enhance opportunities for watershed residents, children, and tourists to enjoy the region's rivers, lakes, and wetlands by protecting scenic vistas, revitalizing waterfronts, promoting outdoor recreation, and providing additional opportunities for water-based recreation.

Education and Research: Cultivate a watershed ethic.

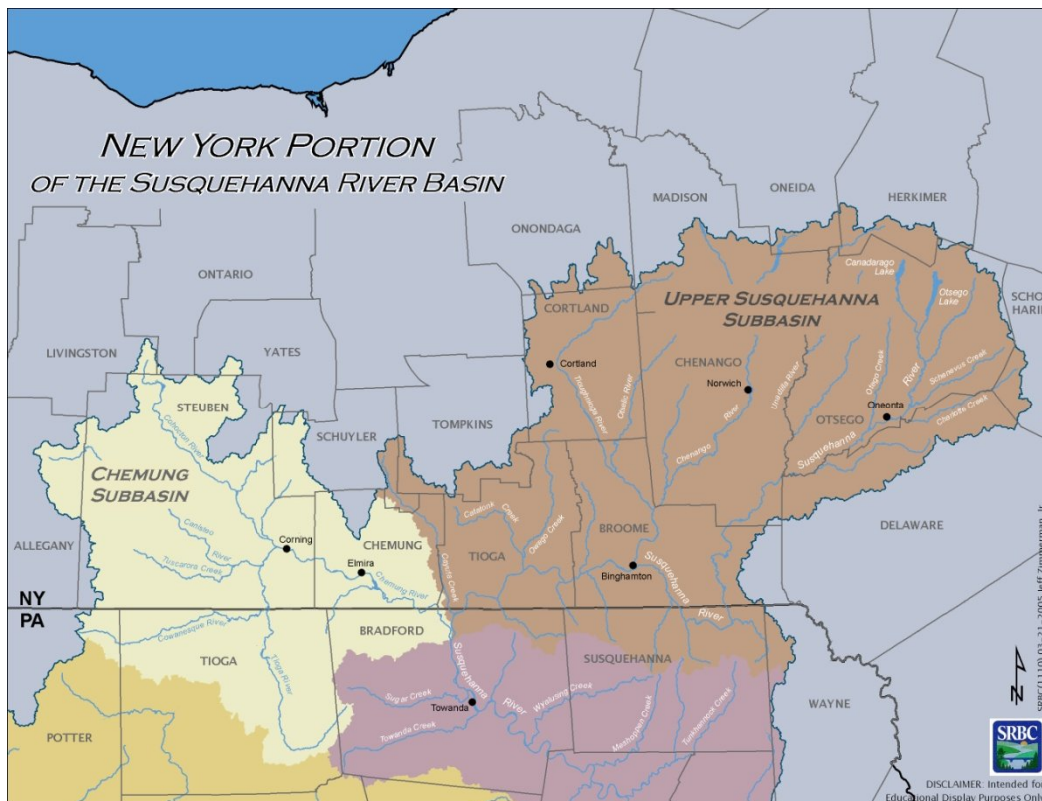
- Provide decision-makers, youth, and the public with an improved understanding of interconnected natural systems and strategies for building environmentally and economically sustainable communities.
- Support scientific research that facilitates "ecosystem-based management" of water resources in the Chemung and Susquehanna Watersheds.

INTRODUCTION

WATERSHED VISION

Residents of the Chemung and Susquehanna Watersheds of New York recognize that water is essential to their quality of life and economic wellbeing. They embrace a sustainable approach to economic and community development that respects the natural functions of watersheds and minimizes flood risks.

Water connects us all...



SUSQUEHANNA-CHEMUNG WATERSHED

The Susquehanna-Chemung Watershed comprises a 6,250 square mile area in south-central New York. The Susquehanna River flows over 440 miles from Otsego Lake (at Cooperstown, NY) to the Chesapeake Bay. The Chemung River joins the Susquehanna at Sayre, Pennsylvania. The Susquehanna and Chemung Watersheds in New York are the northern headwaters of the Chesapeake Bay. Although the quality of water leaving New York is relatively good, any improvements in the New York State portion of the watershed will benefit the Chesapeake Bay Estuary, as well as the local region.

The Susquehanna-Chemung region is in the Allegheny Plateau area, which is a plain of sedimentary rocks into which rivers and streams have cut valleys (a dissected plateau). The rivers and

What is a Watershed?

A watershed is the area of land from which water runs off into a common waterway. It includes both the network of rivers, streams, and lakes and the land surfaces from which the water drains. It is separated from adjacent watersheds by highpoints, such as hilltops and ridges. The watersheds for individual streams combine to form a larger watershed, or drainage basin, for the river that the streams flow into.

We all live in watersheds:

What we do upstream affects both the quality and quantity of water downstream.

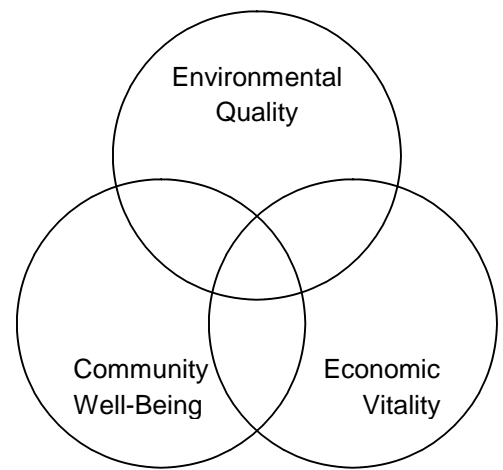
larger tributaries generally flow through wide open valleys underlain by productive valley fill aquifers. The valleys are bordered by steep hillsides through which smaller streams have eroded narrow, steep valleys (often called “hollows”). This topography, together with the region’s soils and weather patterns, make the watershed one of the most flood-prone in the nation. Glacial deposits have resulted in fertile, but highly erodible soil. Streams in the watershed are highly unstable (prone to bank erosion and channel migration), a natural condition that has been compounded by historic disturbances.

The watershed is largely rural, with hardwood forests covering about 71% of the land and about 22% used for agriculture. It contains an extensive network of roads, which have a significant impact on drainage patterns. It is home to about 650,000 people. Cities, villages, and other development tend to be concentrated in the valleys, where slopes are suitable for development. However, large portions of the valleys are prone to flooding and/or streambank erosion. In addition to the devastation caused by major river floods, such as that from Tropical Storm Lee in September 2011, the watershed frequently experiences localized washouts and flooding from flash floods.

The Susquehanna-Chemung Watershed is blessed with clean and abundant water supplies. This resource is essential to the region’s economy and quality of life. It supports residential use, agriculture, manufacturing, tourism, recreation, and healthy ecosystems. With the potential expansion of natural gas development using high volume hydraulic fracturing technologies (to develop shale resources), the region’s plentiful water is expected to also support this energy extraction industry. Protecting the quality and quantity of these water resources is of utmost importance. This is a shared responsibility that requires all watershed citizens to be good stewards of water resources.

ECOSYSTEM-BASED MANAGEMENT PLAN

The *Susquehanna-Chemung Action Plan* has been developed to support a sustainable water future for the Susquehanna and Chemung Watersheds. It uses an “ecosystem-based management” approach to conserving and protecting water resources. This approach integrates human needs, economic issues, and environmental concerns. The idea is to improve the way that natural and human systems work together. Although the project focuses on water resources, the *Susquehanna-Chemung Action Plan* differs from traditional watershed management plans by integrating a wider range of issues and perspectives. **The Action Plan provides a unified vision for the region and promotes funding for projects that benefit the watershed’s residents.**



This Action Plan is supported by an abundance of watershed information and site-specific recommendations. Existing reports, data, maps, and plans are available on the project’s website, www.susquehanna-chemung.org. An online Susquehanna-Chemung Data Atlas enables access to map-based information. A separate page for each of the key issues addressed by this plan provides links to existing data and plans, as well as additional resources.

The Action Plan has been prepared by Southern Tier Central Regional Planning and Development Board, with assistance from Southern Tier East Regional Planning Development Board. An ad hoc Advisory Committee and numerous other stakeholders have provided valuable input and suggestions. It presents goals and recommendations that can only be achieved through collaborative actions of numerous organizations. Many recommendations will require additional funding. Others require a shift in how things are done. Implementation of this Action Plan will create opportunities. Investing in water stewardship can create jobs, reduce pollution, improve human health, and promote economic growth. This plan lays the foundation for sustainable water stewardship by all of the watershed’s citizens.

The Susquehanna-Chemung Action Plan is a sustainable approach to economic and community development that respects the natural functions of watersheds and minimizes flood risks.