

CHAPTER ONE: INTRODUCTION



Montauk, Long Island



Hudson River, Beacon

Protecting and restoring water quality

Communities and individuals across New York State have a strong connection to the water. New York's landscape holds a diverse array of water resources, ranging from salt marshes, estuaries, and coastal beaches to freshwater lakes, streams, and wetlands. New Yorkers take pride in their water resources, for they help shape communities and provide us with drinking water, economic activity, wildlife habitat, recreational opportunities, and a place to just relax and enjoy the scenery.

With all these benefits, it is no wonder that communities throughout New York are searching for ways to protect and restore these resources while balancing the need for economic growth and development. Many communities are recognizing that a comprehensive watershed planning approach can help them to protect and restore their water resources.

Communities throughout the State are already implementing local watershed plans with great results. They have found that it takes a clear vision, broad public involvement, creative partnerships, patience, persistence, and a step-by-step strategy to create a successful watershed plan. Helping you achieve similar success is the goal of this guidebook.

What is watershed planning?

Imagine a drop of rain falling to the ground atop a high peak. Where does it go? Downstream. Once that drop falls to the surface of the land it will bond to other drops of rain, penetrate the soil or move as overland flow to the nearest body of water. The paths that this water will travel are varied. It will flow through a wide network of drainage pathways, either as surface or ground water, to the lowest point where it collects in a stream, pond or wetland. From there it may continue to flow on to another waterbody. A watershed is the land that drains, or *sheds*, this water to a single waterbody, such as a wetland, river, lake, coastal embayment or ocean.

Watersheds are geographic features; they do not reflect local political boundaries. More often than not a watershed will cover several counties and many towns and villages. Working together, these communities can plan for the future of the watershed.

Watershed planning focuses on the relationship between land use and land cover, the movement and storage of water, and water quality. It allows you to manage the land and how it is used in a way that will recognize the relationships between economic, social, and natural processes and keep drainage pathways functional and the water that flows through them clean.

Watershed planning allows communities to integrate water resource protection and restoration with growth management at the local level, balancing environmental and economic factors.

Watershed planning provides an opportunity for a community to reach out to its residents and businesses, building support for water quality improvements while planning for economic and community growth.

Watershed planning is an ongoing and flexible process that is successful when there is collaboration between all who live in the watershed. It cannot be done well without broad public participation.

A successful watershed plan will answer a series of questions as it guides the protection and restoration of a community's water resources. From the plan you should be able to identify why, where, what, when, who, and how much. That is - **why** the watershed plan is needed; **where** the existing problems, threats, and opportunities are located; **what** actions and projects are recommended to address the problems and threats and to take advantage of the opportunities; **when** the recommendations will be advanced; **who** will take the lead in making it happen; and **how much** it will cost to implement the plan.

A successful watershed plan will be informed by available data and driven by consensus. It will characterize the physical aspects of the watershed and assess municipal controls in place to ensure future water quality. Recommendations will cover corrective and preventive actions to restore and protect water quality.

As more and more people realize the importance of water in their communities, watershed planning will become the catalyst for improving water quality and overall watershed health. By developing and implementing watershed planning, these communities are protecting and restoring their watersheds:

- The Town of Southampton has been working to protect the coastal waters of Shinnecock Bay through a host of watershed planning

efforts geared towards re-opening shellfish beds and enhancing recreational use of the estuary.

- Management of the Cayuga Lake watershed is a successful model in which the 40+ members of the Watershed Intermunicipal Organization work together in partnership with a volunteer-based nonprofit and other local groups to implement the watershed plan.
- Protection and restoration of urban watersheds takes effective partnerships and creative water quality improvement projects. Westchester County, New York City, and the Bronx River Alliance are three groups working to protect the Bronx River by bringing people to the river and the broader watershed to evaluate watershed conditions.
- Watershed planning efforts in the Upper Susquehanna River have helped address both local and interstate management needs by implementing a successful wetland creation and restoration program that has improved water quality by storing flood waters and creating wildlife habitat.
- *Lake George - Planning for the Future* was developed for the Lake George watershed through a structured process using sub-committees to focus on specific tasks. Today, implementation of priority nonpoint source projects is resulting in improved water quality of the lake.

- The Wappinger Creek Watershed Intermunicipal Council and the Dutchess County Environmental Management Council, along with various local partners, have been successful in identifying and implementing local streambank restoration projects along Wappinger Creek to reduce sedimentation and improve habitat.

Learning from these successes will help you form your own ideas and strategies regarding watershed planning, water quality improvement, partnership building, and project implementation.

Who should read this guidebook

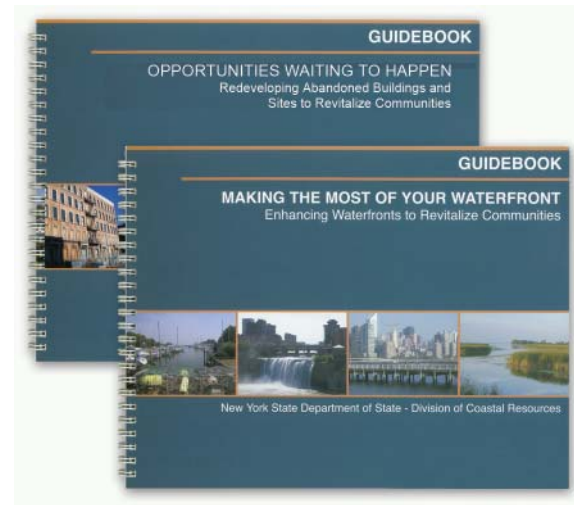
This guidebook provides a step-by-step watershed planning process for communities to create a plan that will improve water quality. Whether you are a municipal official, nonprofit or community organization, watershed protection group, or an individual interested in water quality, this guidebook will assist you in working with others to prepare your watershed plan.

About this guidebook

This guidebook is the print component of a multi-media package that provides information and resources on how to develop effective local watershed plans. Other components include a video and a website - www.nyswaterfronts.com. This package will provide readily accessible information on how to improve water quality

within your community. As you continue through this guidebook and website you will see examples of how people are striving to protect and improve their watersheds, be provided with additional sources of information, and hopefully be inspired to create a healthy watershed for your community.

This multi-media package is one in a series of guidance packages that address community issues. Other guidebooks include *Making the Most of Your Waterfront: Enhancing Waterfronts to Revitalize Communities* and *Opportunities Waiting to Happen: Redeveloping Abandoned Buildings and Sites to Revitalize Communities*.



How this book is organized

This guidebook lays out a step-by-step process for developing a comprehensive watershed management plan. These steps include:

- Laying the foundation - identifying the importance of community involvement showing how partnerships can strengthen the process of watershed planning and implementation
- Understanding your watershed - identifying and understanding your watershed and developing a vision and goals for its future
- Identifying opportunities for improvement - describing how to use field assessments to evaluate watershed conditions and identify specific recommendations to protect and improve water quality
- Crafting the watershed plan - showing how to pull it all together in a watershed plan
- Putting your plan into action - providing guidance on how to implement your plan, show early success through on-the-ground projects, sustain momentum, track progress, and make necessary updates to the plan



Great Sacandaga Lake, Mayfield



Southampton, Long Island

These steps are appropriate whether the watershed is large or small; whether there is one concern or a whole range of issues; or whether the watershed lies within one municipality or multiple jurisdictions. Within each watershed, local circumstances will dictate which elements of the planning process are emphasized. For example, in a highly urbanized watershed you may focus on restoration planning, while in a rural watershed you may focus your efforts on protection activities.

While these steps represent a broad outline of how many communities have developed their watershed plans, they are by no means rigid. The sequence of steps can vary to meet the needs of individual communities. Some communities might never have thought about a watershed approach, while some may already be well into the planning process. There is no reason that these steps cannot be carried out in a different order to suit the needs of the community. The critical message is that all of these steps are important in creating a successful watershed plan that has broad support from the community.

New York State Department of State - Division of Coastal Resources

The New York State Department of State (NYS DOS) Division of Coastal Resources works with communities throughout New York to help them make the most of what their waterfronts and watersheds have to offer. The Division works

in partnership with community groups, nonprofit organizations, and all levels of government to strengthen local economies, protect the environment, and improve the quality of life.

Since 1982, the Division has worked with local governments and communities to prepare Local Waterfront Revitalization Programs that define a local vision for the waterfront. The Division has provided technical and financial assistance to communities for plans and projects that have expanded public access, reinvigorated urban waterfronts, restored habitats, and strengthened local economies. In recent years, the Division has focused on helping communities protect and restore their natural resources through watershed planning.

If you are a coastal community, in other words, if your community is on Long Island Sound, the Atlantic Ocean, New York Harbor and the waters surrounding New York City, the Hudson River, one of New York's Great Lakes, the Niagara River or the St. Lawrence River, or if your community is located on an inland waterbody - a major lake, river or the State canal - that has been designated by the State Legislature under Article 42, you are eligible to participate with the Division of Coastal Resources. Whether you live in a rural town or a New York City neighborhood, the Division can assist you in your watershed planning efforts.

If you are interested in partnering with the Division of Coastal Resources, please call 518-474-6000 or visit www.nyswaterfronts.com.

New York State Department of Environmental Conservation

The mission of the New York State Department of Environmental Conservation (NYS DEC) is to: *“conserve, improve, and protect New York State’s natural resources and environment, and control water, land and air pollution, in order to enhance the health, safety and welfare of the people of the state and their overall economic and social well being.”* Many of the agency’s divisions play a role in watershed planning. Notably, the Division of Water has adopted a watershed approach toward assessment and management, integrating multiple programs to protect and improve water quality. The Division works with other governmental agencies, non-governmental organizations, and the public and private sectors to successfully manage and monitor water resources.

An example of these partnerships followed the passage of the 1996 Clean Water/Clean Air Bond Act. NYS DEC worked in partnership with the Division of Coastal Resources, the New York State Department of Agriculture and Markets, the New York State Environmental Facilities Corporation, and municipalities to restore, preserve, and protect New York’s valuable water and air resources. These agencies continue to partner in the selection of projects that help municipalities address water quality goals through the Water Quality Improvement Projects grants program. This

funding provides assistance to municipalities for wastewater treatment improvement, nonpoint source abatement, aquatic habitat restoration, and implementation of stormwater management programs required under the Phase II stormwater program.

Under the Phase II stormwater program, communities with municipal separate storm sewer systems (MS4s) must develop a stormwater management program to control stormwater runoff from both construction and post-construction activities. This joint state and federal stormwater management program requires municipalities to address six minimum control measures: public education and outreach; public involvement/participation; illicit discharge detection and elimination; construction site stormwater runoff control; post-construction stormwater management; and pollution prevention/good housekeeping. Communities can then integrate their stormwater management programs into broader watershed management plans. More information about the SPDES Phase II Program, including a copy of the General Permit, a description of the criteria used to designate “urbanized areas”, and a link to an “MS4 Toolbox” can be found on the NYS DEC website.

If you are interested in partnering with the Division of Water, please call 518-402-8179 or visit www.dec.ny.gov.



Watershed planning workshop



Chemung County

LOOKING AHEAD

You can protect and restore your water resources when...

- You understand your watershed and recognize the importance of water quality
- You recognize the relationship among economic, social and natural processes
- You create a clearly defined vision for the future of your watershed
- You establish creative partnerships and gain community support
- You set realistic goals and lay out a detailed strategy for implementation
- You base your plan on real on-the-ground priorities and make specific recommendations to improve water quality
- You take advantage of all your resources, assets, and opportunities
- You generate a sense of community ownership of the watershed
- You sustain improvements and continue momentum into the future
- You understand that watershed planning is a dynamic process, requiring careful monitoring and timely adjustments
- You have the patience and persistence to get through the many phases of watershed planning - one step at a time



Lake Ontario



Lake George



Orient



Fishkill Creek