

South Shore Estuary Water Quality



The purpose of this presentation is to provide a brief overview of Reserve Council members' efforts to improve and protect water quality in Long Island's South Shore Estuary Reserve and to outline a path toward a South Shore Estuary amendment to New York's coastal management program.

SSER CMP Implementation Actions

- **Implementation of MS₄ programs**
- **Completion of municipal nonpoint assessments**
- **Development of watershed plans and construction of capital improvement projects.**

The South Shore Estuary Reserve Comprehensive Management Plan identifies numerous implementation actions needed to address gaps in the management of water quality in Long Island's South Shore Estuary. Those actions include the construction of storm water infrastructure projects; the implementation of best management practices to prevent and control nonpoint source pollution; the completion of municipal nonpoint assessments; and comprehensive watershed planning.

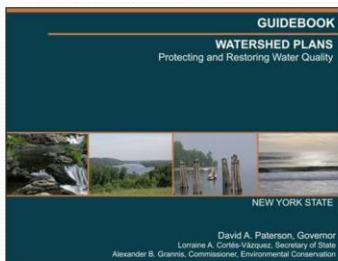
Watershed Management

- **SSER CMP recommends comprehensive watershed management to protect and restore:**
 - **human health**
 - **bathing beaches**
 - **hard clam beds**



Watershed management plans provide a comprehensive look at water resource impairments and threats within a watershed and are considered one of the most viable management tools to protect and restore water quality in the South Shore Estuary.

Watershed Management Plans: Protecting and Restoring Water Quality



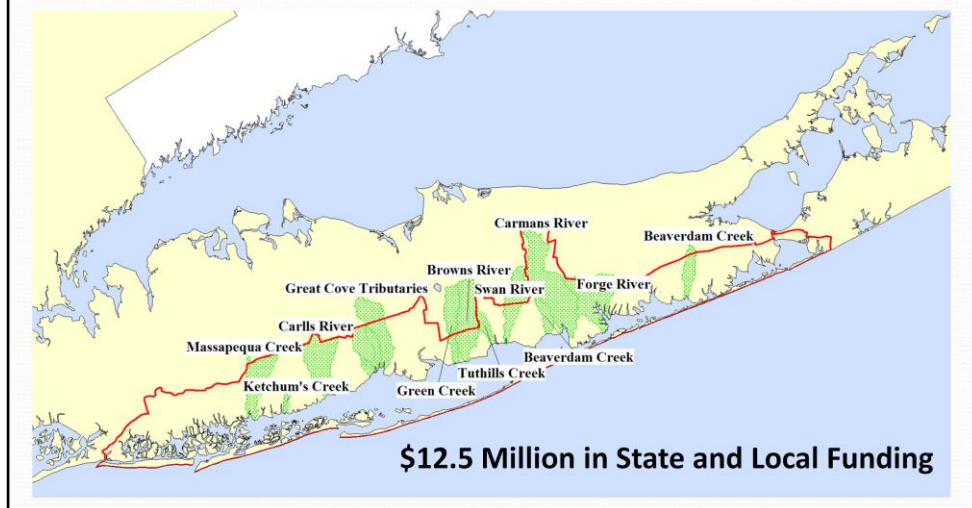
Watershed plans typically follow a framework developed by the NYS DOS and NYS DEC that includes:

- A characterization of the watershed
- Recommended preventive and corrective implementation actions
- A strategy for prioritized implementation
- Monitoring and tracking strategy

Watershed plans have evolved to include four components: a characterization of the watershed that describes water resources and associated impacts, storm water management infrastructure, and local institutional authority to manage the resource; a preventive component that identifies management actions that could be implemented to protect water quality; a corrective component that identifies capital projects to improve storm water management infrastructure; and an implementation component that establishes a strategy for addressing recommended actions and prioritizes their implementation.

The development of watershed plans is often done under EPF LWRP grants to a municipality with technical assistance provided by Department of State and SSER Office staff. Plan development is guided by a watershed advisory committee comprised of local stakeholders and representatives of municipal departments, county, state, and federal agencies, and non-governmental and community-based organizations. Public participation through public meetings and outreach events is an important element in the planning effort and the subsequent implementation of the plan.

SSER Watershed Management Plans Completed or Underway



Since completion of the SSER CMP in 2001, watershed plans have been developed for Massapequa Creek, Ketchams Creek, Green Creek, Browns River, the Swan River and Beaver Dam Creek. The Massapequa Creek watershed plan also includes a tributary corridor restoration plan.

Watershed plans are currently under development for the Carlls River, tributaries to Great Cove, and for Tuthills Creek and the Carmans and Forge rivers. The Forge River effort also includes development of a TMDL for nitrogen.

To date, approximately \$12.5 million in state and local funds have been dedicated to watershed planning and implementation in the SSER.

Continued Implementation of the SSER CMP

- **Develop additional watershed plans.**
- **Evaluate onsite wastewater treatment system management.**
- **Development of Total Maximum Daily Loads for waters in the South Shore Estuary.**

There are numerous activities which need to continue within the SSER:

1. Watershed management plans can and should be developed for those watersheds on the south shore that currently do not have them. Municipalities are encouraged to apply to the Department's EPF LWRP grants program for matching funds to develop these plans.
2. Onsite waste water treatment management needs a special focus for those areas not serviced by centralized wastewater treatment facilities. This should involve a comprehensive inventory of the location, functioning and maintenance of septic systems within the reserve. The program should include the updating of existing laws to include an onsite wastewater system ordinance and the development of public education and outreach materials related to proper use and maintenance of these systems.
3. With the inclusion South Shore Estuary waters in New York's recently approved Section 303(d) list of impaired water, moving forward should include the development of TMDLs for the south shore. A TMDL for the Forge River is being developed as part of the planning process for management of the Forge River watershed. A TMDL is also being developed for the western bays. We look forward to DEC's guidance on moving forward with TMDLs for the South Shore Estuary.

Steps in the SSE Amendment for Water Quality

- **Update the municipal nonpoint source pollution control assessments.**
- **Conduct literature search and review.**
- **Review water quality resource related policies in New York's Coastal Management Program.**
- **Update and implement the Coordinated Water Resources Monitoring Strategy for the South Shore Estuary Reserve (2000).**

There continue to be many gaps in our understanding and management of water quality within the south shore estuary.

Addressing these gaps will further implementation of the SSER CMP and help inform and shape the development of an SSE amendment:

1. Updating the municipal nonpoint source pollution control assessments, which were originally completed between 1997 and 2000, will identify gaps in the legal authority of municipalities in the Reserve to control land and water use. Completed assessments could lead to new or revised local laws and ordinances that protect water quality.
2. As part of the development of the SSE amendment, a thorough literature search and review will be conducted in light of the significant research that has been undertaken since completion of the SSER CMP, in an effort to inform the development of an SSE amendment. For example, the USGS has been engaged in two relevant studies – an analysis of shallow groundwater flow at the Fire Island National Seashore, and an examination of trends in nitrogen concentrations and loads entering the South Shore Estuary from the Patchogue River. Such a review will provide a better understanding of the current and continuing factors responsible for degraded water quality in the South Shore Estuary.
3. There also needs to be a comprehensive review of water resource oriented State laws and the relevant coastal policies articulated in the State's Coastal Management Program in an effort to refine and tailor those water resource related coastal policies to specifically address the water quality issues prevalent in the South Shore Estuary.
3. Finally, the Coordinated Water Resources Monitoring Strategy for the SSER needs to be updated and implemented. This strategy, completed in 2000 in support of development of the Reserve's comprehensive management plan, compiled and summarized existing monitoring programs on the south shore and included a gap analysis that pointed the way toward aligning water quality issues and an expanded water quality monitoring effort. A comprehensive and coordinated water quality monitoring program for the south shore would establish a critical baseline for measuring our efforts to improve and protect water quality on the south shore.