



## New York District RSM

### Description

In the past, the U.S. Army Corps of Engineer's (USACE) New York District has undertaken a Regional Sediment Management (RSM) Project for the south shore of Long Island, NY, encompassing 120 miles of shoreline from Coney Island in the west to Montauk Point in the east. The purpose of the Long Island Coastal Planning Project (LICPP) was to undertake studies to institutionalize RSM, and make more effective use of sediment from inlets, interior navigation channels and harbors, and other sources, enhance environmental habitat, improve the collection and dissemination of data about the movement of sediment, facilitate cooperation among federal and non-federal interests, and assure the most effective use of taxpayer funds. The Project, which would have lead to a regional sediment management strategy for Long Island, developed by the USACE along with the communities and state agencies was originally scoped to span five years, but was ended after three years (FY08-FY10) due to inadequate funding.



In FY11, the New York District developed a sediment budget for East Rockaway Inlet which allowed the District to examine inlet navigation channel disposal procedures in the vicinity of the Federal Navigation channel at the Inlet, in relationship with potential downdrift flood risk management alternatives as a part of the East Rockaway Inlet to Rockaway Inlet Reformulation Study. Implementation of the recommendations is contingent upon future funding for the East Rockaway Inlet to Rockaway Inlet Reformulation Study.

For FY12, the New York District will take the knowledge and information gained from LICPP and other past RSM studies to better coordinate actions to optimize and move sediments in FY13. The District will develop a strategy which outlines the solution, coordination, and schedule for implementation/construction in FY13, within funding constraints.

### Issue/Challenges

Natural sediment transport processes, significant weather events, and human activities have resulted in the following sediment-related problems for the coastal watersheds and shore of the coastal areas of the New York District: (1) Sand dredged from inlet and harbor channels is, in many instances, placed in locations that do not optimize the beneficial use of the material. (2) Challenges exist for disposing of dredge material that is not suitable for beach placement. (3) Sediment supply to the coast has been altered by human activities and natural processes, often with adverse consequences. (4) Some beaches experience accelerated erosion, increasing the risk of storm damage along the coast, contributing to loss of habitat and reduction in recreational opportunities. (5) Coastal wetlands and ponds experience either accelerated erosion or sedimentation.

Coordination and collaboration to address these issues sometimes lacks a regional, system-based approach. Managing sediment to benefit a region potentially saves money, allows use of natural processes to solve engineering problems, and improves the environment. Additionally, in times of



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reduced funding, leveraging other District projects to implement regional sediment management best practices has become very difficult.

### Successes Lessons Learned

Past regional sediment management efforts have demonstrated that thorough planning studies help improve the planning and coordination necessary for successful implementation of regional sediment management practices. Successes of the Long Island Coastal Planning Project included the Long Island Sediment Needs Assessment database, the compilation of historical regional federal navigation channel information and a navigation channel data gap analysis, the compilation of regional sediment budgets for the Atlantic Coast of Long Island, assessment of submerged aquatic vegetation in the vicinity of federal bay navigation channels, a workshop and white paper on the relationship of offshore and onshore sediments, and a backbay shoreline sediment budget analysis. Each product of LICPP enriched the New York District's understanding of the relationship between the federal navigation channels and the coastal landscape and watersheds surrounding those channels.

### Expected Products

In order to continue to improve the operations and maintenance of Federal navigation projects and design, construction, and maintenance of Federal coastal risk reduction projects, the New York District plans to develop a strategy which outlines the solution, coordination, and schedule for implementation/construction in FY13, within Navigation Operations and Maintenance funding constraints.

### Potential Users

The U.S. Army Corps of Engineers, States of New York and New Jersey, City of New York, Counties of Nassau and Suffolk (along with municipalities within the Counties), and numerous non-governmental agencies and academia.

### Projected Benefits

The ultimate goal of improved regional sediment management is to increase the efficiency of maintaining navigation channels, optimize the beneficial use of material dredged from inlets, ports, harbors, and other sediment sources, reduce shoreline erosion and coastal storm damages, provide for environmental restoration and protection, restore and preserve beaches, improve collection and dissemination of data related to the movement of sediment, and facilitate cooperation among federal and non-federal interests. Ongoing activities throughout the New York District could benefit from this project, if funding allows. It is expected that improvements to the management of existing inlets, channels, harbors, beaches, borrow areas, and related coastal environmental resources would result from successful regional sediment management.

Using regional sediment management concepts will significantly improve the Corps' ability to accomplish its missions in navigation, coastal risk reduction and coastal ecosystem restoration. The USACE's engineers and scientists develop new technologies through research to make management decisions more accurate and efficient. Simultaneously, projects like the Long Island Coastal Planning Project would enable the USACE and its partners to evaluate RSM concepts through projects that highlight and improve sediment management activities.

### Leveraging Opportunities

New York District will leverage potential regional sediment management opportunities among the projects in the multiple business lines that encompass the District's coastal projects: Navigation, Flood Risk Management, and Ecosystem Restoration.

### Points of Contact

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#### **Participating Partners**

**Current:** USACE – NY District and ERDC Coastal & Hydraulics Laboratory; **Past:** United States Geological Service; Bureau of Ocean Energy Management, Regulation and Enforcement; New York Department of Environmental Conservation; New York Department of State; State University of New York – Stony Brook; New York Sea Grant; Nassau County; Suffolk County