

BARNEGAT BAY RESTORATION

USGS Contributions to the Science

New Jersey Water Monitoring Coordinating Council

May 25, 2011



RECENT ACTIVITIES

Barnegat Bay Partnership—State of the Bay Report and Conference

Governors Comprehensive Action Plan

Legislative initiatives

Ø New Jersey Fertilizer Law



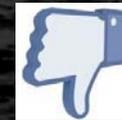
Ø Soil Health Law



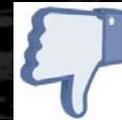
Ø NJDOT Stormwater Basin Law



Ø TMDL Bill



Ø Stormwater Management Planning Bill



NJDEP Comprehensive Action Plan Item #7:

Adopt More Rigorous Water Quality Standards

- ∅ Adopt narrative nutrient criteria for coastal waters
(12/21/10)
- ∅ Further assess and address water quality impairments
in the bay
- ∅ Establish linkage between pollutant loadings and
observed estuarine water quality
- ∅ Investigate feasibility of numeric targets or criteria



RECENT USGS ACTIVITY

- Ø **Updating Nutrient Load Estimates**
- Ø **Modeling Surface-Water Loads**
- Ø **Modeling Groundwater Transport**

Looking ahead—Topics For Consideration

- Ø Identifying Specific Nutrient Sources
- Ø Ocean/Estuary Fluxes
- Ø Estuarine Circulation
- Ø Sediment--Transport, Nutrient Cycling, Toxicity
- Ø Thermal Load and Temperature Distribution
- Ø Predicting Water Quality and Biological Responses



STUDIES IN OTHER MIDATLANTIC ESTUARIES

Long Island Sound
Jamaica Bay
South Shore Estuary
Delaware Inland Bays
Maryland Coastal Bays
Chesapeake Bay
Chincoteague Bay
Sinepuxent Bay
Albemarle Sound
Pamlico River
Neuse River



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