South Shore Estuary Reserve Coordinated Water Resources Monitoring Strategy Workshop

Discussion Panel Member
Dr. John T. Tanacredi
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Executive Director CERCOM
(Center for Environmental Research and Coastal Oceans Monitoring)
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Rockville Centre, New York
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I. Importance of Continuous Monitoring:
estuary  (ĕs’choo-ĕr’ ĕ) -noun, pl -aries

• An estuary is a body of water partly surrounded by land where fresh water from rivers and streams runs into and mixes with salt water from the ocean.

• Estuaries are among the most productive natural systems on earth, producing more food per acre than the richest Midwestern farmland.

• Estuaries go by many names such as bays, sounds, inlets, harbors or lagoons.

• “Where the River Meets the Sea”
Implications: 2/3 of the human population of 7.5 billion people live along coast lines. In the U.S. every man, woman, and child spends, on average, 10 days in some sort of coastal recreational activity. 80% of the U.S. population lives within an hours drive of a coastline. Less than 1/3 of the original coastal estuarine eco-systems remain on the east coast of the U.S. These estuaries are our nursery grounds for our shell and fin fisheries and for our first line of defense against coastal storms.
COMPLEXITY

**Figure 2.6** An example of a descriptive food web for the central Pacific Ocean. Direct interactions are shown, but the strength of interactions is not.


**Figure 2.8** An example of a true balance food web for the western Bering Sea. Unlike the previous example, relative biomass of a species is indicated by the size of the box, and the strength of each interaction is represented by the width of the connecting line.

*Source:* Regenerated from Ayre and Laughton 2003, using data of the National Oceanic and Atmospheric Administration.
Figure 19. The complex estuarine trophic (food) network.

Figure 5. An inverse relationship exists in coastal marshes between water salinity and the organic-matter content of soils (Chabreck 1970).

Figure 13. Species and groups of fish, shellfish, and birds have widely varying patterns of use of coastal marshes and estuaries. Some organisms are year-round residents but many use the habitat only seasonally (Gosz and Link 1984).
Thermodynamic interplay with air resources.

Atmosphere mostly nitrogen...
Ecological Health

Attachment G — Model of Jamaica Bay Saltmarsh Dynamics (1 page)

- Channelization and reduction in Sediment Availability
  - Enhanced wave action
- Sediment Starvation
- Accretion deficit
- Edge Erosion
- Global Sea-Level Rise
- Eutrophication: Nutrient and Organic Loading
- Marsh Flooding & Ponding
- Mussel Berms
- (Waterlogging and Sulphide Stress)
- Death of Spartina
- Peat Collapse; Loss of Elevation; Erosion
- Marsh Loss
- Sediment Export

Blue Ribbon Panel Workshop

From: JABERRT
John Teal
John Tanouedi

Model created by
Dr. David Franz
Some monitoring history...

"I've been dumping bodies here for years, and it seems to me that the sea level is rising."

THE NEW YORKER JUNE 30TH, 2014
Shotgun-toting feds killing sea gulls at JFK Airport

BYE, BYE, BIRDIE!

Officials say culling is needed because birds are a danger to jets. Page 6
ECOLOGICAL STRESS
AND THE NEW YORK BIGHT:
SCIENCE AND MANAGEMENT

Garry F. Mayer
Editor

"Mussel Watch"—Measurements of Chemical Pollutants in Bivalves as One Indicator of Coastal Environmental Quality

John W. Farrington,1 Alan C. Davis,1 Bruce W. Tripp,1 Donald K. Phelps,1 and Walter B. Galloway1


ABSTRACT: The utility of the bivalve sentinel organism approach to monitoring for some chemicals of environmental concern in coastal and estuarine areas has been evaluated by regional and national programs and by smaller scale research efforts during the past 15 years. The extent and severity of coastal contamination by chemicals such as polychlorinated biphenyls, chlordane pesticides, trace metals, and plutonium has been assessed in several coastal sentinel organism programs. Advantages and limitations of this approach are presented and discussed briefly within the context of both national and international efforts.

KEYWORDS: coastal pollution, monitoring, chemical pollution, bivalves, trace metals, polychlorinated biphenyls, monochlorophenol

A concern of modern society is the geographical extent and severity of pollution of coastal areas by chemicals mobilized or synthesized by modern man. In the 1960s and early 1970s, there were several documented cases of severe chemical pollution in coastal areas (1). Thus, the need for a systematic means of assessing the geographic extent, severity, and temporal trends of chemical pollutants in coastal areas has been demonstrated. Ideally, all cont...
MANAGING PCBs
IN THE HUDSON/RARITAN ESTUARY
AND THE NEW YORK BIGHT SYSTEM

The Negotiated Single Text of the
NEW YORK ACADEMY OF SCIENCES
New York Bight Initiative

Scott T. McCreary
Senior Editor and Principal Mediator
National Oceanic and Atmospheric Administration’s (NOAA) Oceans and Human Health Initiative (OHHI) is taking a new look at how the health of our ocean impacts our own health and well-being, and in turn how our actions affect the health of aquatic environments. The mission of the OHHI is to improve understanding and management of the ocean, coasts, and Great Lakes to enhance benefits to human health and reduce public health risks. The OHHI accomplishes its mission by catalyzing innovative and interdisciplinary OHHI research, fostering and facilitating strong partnerships, and developing and delivering useful tools, technologies, and environmental information to public health and natural resource managers, decision-makers, and the public.

Our oceans, coasts, and Great Lakes affect every person on the planet no matter where they live. We receive many benefits from the oceans: seafood, recreation, transportation industries, to mention just a few. But our oceans and coasts are under threat from a variety of factors, including climate change, pollution, and disease. The Great Lakes, one of the largest freshwater sources in the world, supply more than 40 million people with drinking water. Also, the Great Lakes and coasts provide habitat for marine and coastal species. The OHHI is working to protect these ecosystems and the health of the people who rely on them.

To tackle these issues, Congress authorized the OHHI Act of 2004, and directed NOAA to develop the OHHI and cooperate and coordinate with an Interagency OHHI effort comprised of the National Science Foundation, National Institute of Environmental Health Sciences, and other Federal agencies and departments.

The OHHI supports NOAA’s mission goals:

- To lead the development of early warning systems to forecast threats and predict long-term risks to human health throughout U.S. coastal and Great Lakes waters
- Investigate and optimize health benefits from the ocean
- Develop a robust ocean and human health community working across disciplines and institutions to improve public health

The OHHI activities include:

- Develop and transfer environmental and public health monitoring and assessment capabilities
- Produce biological and chemical sensors to rapidly measure public health threats and incorporate them into ocean observing systems
- Characterize impacts of coastal ecosystem change, in response to natural factors and environmental stressors such as climate change, land-use, and pollution, on ecosystem goods and services related to human health
- Use sentinel species and habitats as integrative indicators of ocean health threats to humans
- Develop and transfer early warning systems and forecasts for existing and emerging ocean and coastal health risks
- Leverage partnerships to discover and identify marine natural products and pharmaceuticals for human health benefit
- Assess and improve understanding of the comparative risk and benefit of seafood consumption
- Develop and transfer technology to enhance the healthful characteristics of seafood and minimize ocean-related contamination of seafood
- Develop biocultural models to assess human health risks
- Coordinate environmental sampling for emergency response to natural disasters
- Provide opportunities and institutional mechanisms to support interdisciplinary OHHI research such as Centers of Excellence, traineeships, early career and distinguished scholar awards, grants and research collaborations
Septic Systems and Ground-Water Protection
An Executive’s Guide
Collaborative Paradigm...
II. Jamaica Bay and Great South Bay... Comparable?
A Conference On Urban Ecosystem Revitalization

The National Park Service in 1972 added an entirely new dimension to its task of protecting the nation's natural, cultural and recreational resources. It has been described as the "urban experiment" and has focused on those surviving parcels of urban open space.

Jamaica Bay is a major remnant portion of the Hudson-Raritan estuarine ecosystem. Its significance as a recreational resource is exemplified by the increasing number of fishermen and boats using the Bay annually. The pressures on the Bay are many: housing development, dredging, wetlands filling, sewage effluents, oil pollution, noise pollution, and recreation, to name a few. The myriad of pollutants impinging this coastal area has wrought both surprise and frustration. Surprise — the seemingly unyielding productivity and diversity of a wide range of species to survive. Frustration — the inability to remove or even control the chronic disposal of synthetic and biological pollutants. A majority of Jamaica Bay is included within the boundaries of Jamaica Bay Wildlife Refuge within Gateway National Recreation Area. However, there are considerable areas within or surrounding the Bay that are not within the boundaries of Gateway. The management of these outside areas must keep the objectives of the Refuge in mind if an irreversible loss of portions of Jamaica Bay proper are to be prevented.

Therefore, the objectives of this Conference are to:
- Focus attention on the uniqueness of Jamaica Bay, not only as a significant portion of the Hudson-Raritan estuarine system but as an example of ecological revitalization in progress.
- Establish a continuous network of communication dedicated to ideas expressed by Dr. Rene Eshoo that man has embellished as well as despoiled nature. While acknowledging the destruction man has wrought, we can look with hope to the future, through our continuing to demonstrate the remarkable resiliency of the natural world, and our own ability to enrich the land and to ensure a harmonious interplay of mankind and earth. "Think Globally, Act Locally!"
- Foster a dialogue among various levels of government, the scientific community and those local communities most impacted, either positively or negatively, by activities in and around Jamaica Bay.
- Appreciate the 50th anniversary of the establishment of the Jamaica Bay Wildlife Refuge and to re-kindle a commitment to preservation and protection of wildlife.

Agenda

8:00 am  Registration, coffee & Danish
8:45 am  Welcome & Conference Overview
Robert M. Stimson, Jr., Superintendent, Gateway National Recreation Area
9:15 am  Jamaica Bay History
Dr. Raphael B. Hite, Historian
City College of the City University of New York
9:10 am  Jamaica Bay National Resources
John T. Tarnocki, Executive Director, Gateway National Recreation Area
9:30 am  Opening Remarks
Honorable Joseph P. Addabbo, Assembly Member, Queens
9:00 am  Coffee and Danish
10:00 am  Panel I: Jamaica Bay and the Urban Ecosystem
11:00 am  Panel II: Jamaica Bay — Planning for the Interrelationships of Nature & Society

Panelists:
- Dr. James D. Boggs, Executive Director, American Littoral Society
- Dr. John F. Luongo, Executive Director, New York Natural Resources
- Dr. Ralph C. S. Yen, Executive Director, New York Botanical Garden
- Dr. Ralph C. S. Yen, Executive Director, New York Botanical Garden
- Dr. William H. Murphy, Executive Director, New York Zoological Society
- Dr. Jack H. Cole, President, The Nature Conservancy

12:00 pm  Lunch and Break

Panel III: Jamaica Bay — The Urban Ecosystem

Panelists:
- Dr. James D. Boggs, Executive Director, American Littoral Society
- Dr. John F. Luongo, Executive Director, New York Natural Resources
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N.Y.C. Mayor’s Office, Office of the Mayor

Panel IV: Jamaica Bay — Planning for the Interrelationships of Nature & Society

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- Dr. William H. Murphy, Executive Director, New York Zoological Society
- Dr. Jack H. Cole, President, The Nature Conservancy

5:00 pm  Closing Remarks

Panelists:
- Dr. James D. Boggs, Executive Director, American Littoral Society
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- Dr. Ralph C. S. Yen, Executive Director, New York Botanical Garden
- Dr. William H. Murphy, Executive Director, New York Zoological Society
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6:00 pm  Social Hour

Panelists:
- Dr. James D. Boggs, Executive Director, American Littoral Society
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United States Department of the Interior  
NATIONAL PARK SERVICE  
Gateway National Recreation Area  
BLUE RIBBON PANEL ON THE  
SALT MARSH CHANGES IN JAMAICA BAY, NY  
1 – 3 MAY 2001  
DIVISION NATURAL RESOURCES, GATEWAY NRA

Twelve Panel Members

Dr. Jim Allen, US Geological Survey  
Dr. Henry Bokuniewicz, Marine Science Research Center, SUNY Stony Brook  
Dr. Paul Buckley, US Geological Survey, Patuxent Wildlife Research Center, Univ. R.I.  
Dr. David Burdick, University of New Hampshire  
Dr. George W. Frame, Division Natural Resources, Gateway N.R.A.  
Dr. Dave Franz, CUNY Brooklyn College  
Dr. Arnold Gordon, Lamont-Doherty Earth Observatory, Columbia University  
Dr. Denise Reed, University of New Orleans [presenter of the Panel’s Preliminary Report]  
Dr. Susan Peterson, Teal Ltd.  
Dr. Martin P. Schreibman, Aquatic Research and Environmental Assessment Center,  
CUNY Brooklyn College  
Dr. John T. Tancredi, Chief, Division Natural Resources, Gateway N.R.A. [chairperson  
and organizer of the Blue Ribbon Panel]  
Dr. John M. Teal, Teal Ltd.  

FINAL REPORT  
JULY 2001

REQUESTED BY CONGRESSMAN ANTHONY WEINER, DISTRICT B 9  
NATIONAL PARK SERVICE  
GATEWAY NATIONAL RECREATION AREA  
MARC KOENINGS, GENERAL SUPERINTENDENT  

Molloy College
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<td>Dr. John T. Tanacredi, PI</td>
<td>Chief Division Natural Resources NPS-GNRA</td>
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## Jamaica Bay JABERRRT Project Surface Sediments Data

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<td>18.0</td>
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<td>16.7</td>
<td>20.9</td>
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<td>0.14</td>
<td>0.16</td>
<td>1.65</td>
<td>0.56</td>
<td>&lt;0.13</td>
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<td>497</td>
<td>685</td>
<td>162</td>
<td>298</td>
<td>410</td>
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<td>317</td>
<td>150</td>
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<td>% Silt &amp; Clay</td>
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<td>1.1</td>
<td>1.1</td>
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**Notes:**
1. **Exceeds ERL** - effects range - low
2. **Exceeds ERM** - effects range - median
3. "<" signs designate concentrations in mg/g below the Method Limit of Quantification (MLQ).
4. "ND" indicates that the analyte was not detected.

(Long et al., Environmental Management 19, #1, pp.81-97 (1995))

(Quinn, James, URI- GSO (retired) redrawn from Tanacredi, J.T. and Schreibman, M. (2001) JABERRRT Final Report.)
Contamination Analysis Site Soil conditions Redrawn from J. Quinn in JABERRT, 2001

A.

B.

%Clay
%Silt
%Sand

%Sand
%Silt
%Clay

CERCOM
Center for Environmental Research and Coastal Oceans Monitoring

Molloy College
Unweighted Pair-Group Cluster Analysis of Jamaica Bay Macroinvertebrate by Site

Percent Similarity - Data log(e) transformed

Prefix E = Epibenthic samples
Prefix SUB = Subtidal samples
Prefix LI = Lower intertidal core samples
Prefix MW = Salt marsh samples

JABERRT - Total Species Captured by Beach Seine
May 2000 - May 2001

- Atlantic Silverside 61%
- Fundulus sp. 25%
- Winter Flounder 1%
- Striped Mullet 1%
- Atlantic Menhaden 4%
- Other 8%

JABERRT - Total Species Captured by Trawl
May 2000 - May 2001

- Winter Flounder 31%
- Windowpane Flounder 10%
- Spotted Hake 5%
- Tautog 5%
- Summer Flounder 10%
- Other 43%

(M. Schreibman, AREAC, part of JABERRT)

**Total Species**

- Sites: 2, 4, 8, 5s, 7, 3, 5n, 6, 9
- Species Number: 0-160

**Saltmarsh Obligate Species**

- Sites: 4, 3, 6, 9, 1, 7, 2, 5N, 8, 5s
- Species Number: 0-7

Molloy College
## JABERRT Vegetation Inventory

<table>
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<th>Site (Figure 1)</th>
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<td>Gerritsen Creek</td>
<td>136/112/24</td>
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<td>Paerdegat Basin</td>
<td>116/97/19</td>
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<td>Aster tenuifolius</td>
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<td>Fresh Creek</td>
<td>162/131/30 (1 Fern)</td>
<td>54.3%</td>
<td>Aster subulatus</td>
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<td>Spring Creek</td>
<td>143/119/23 (1 Pinophya)</td>
<td>58%</td>
<td>Tradescantia ohiensis</td>
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<td>Hawtree/Bergen Basin</td>
<td>170/138/31 (1 Pinophya)</td>
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<td>Bayswater</td>
<td>185/152/33 (1 Pinophya)</td>
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<td>Dubos Point</td>
<td>71/47/22 (1 Pine)</td>
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<td>Brant Point</td>
<td>50/38/12</td>
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<td>Broad Channel</td>
<td>68/58/10</td>
<td>54.4%</td>
<td>Solidago semperivirens Var. mexicana</td>
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<td>Ruffle Bar</td>
<td>106/88/16 (1 Fern)</td>
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Nitrogen Loading to Great South Bay: Land Use, Sources, Retention, and Transport from Land to Bay


The Ecosystems Center, Marine Biological Laboratory, 7 MBL Street, Woods Hole, MA 02543, U.S.A. ekinney@mbl.edu

Abstract

Biogeochemical couplings between land and coastal waters are increasingly altered by land cover changes forced by accumulation of human uses of watersheds. In particular, human activities increase nitrogen loads to receiving waters. Definitions of forcings require estimation of external nitrogen sources and evaluation of the effects on the roles of different land covers, retention within watersheds, and net exports to the sea. One powerful example of change in N loads is the effect of urban development on the watershed and concentrations of inorganic nitrogen in the water of Great South Bay (GSB), New York. We defined land uses, delimited subwatersheds emptying into GSB, and estimated nitrogen loads to subwatersheds and from these to receiving waters. Wastewater-derived nitrogen was the dominant source to watershed surfaces (55%), with lesser amounts added by atmospheric deposition to land (31%) and fertilizer use (15%). About 77% of nitrogen entering the watershed was retained within the watershed, so that despite land use changes, the watershed furnished a substantial water quality subsidy, preventing enrichment of GSB. This high within-watershed retention is similar to rates observed elsewhere and was to a significant degree linked to areas of natural vegetation. About 50% of total nitrogen that entered GSB was of wastewater origin; only 16% was contributed by atmospheric deposition on land, 26% by direct atmospheric deposition on GSB, and 7% by use of fertilizer on land. In addition, the direct atmospheric deposition onto GSB amounted to 44% of the land-derived load, within ranges affecting other estuaries.

GSB is low on the range of eutrophication of estuaries. Within-watershed retention is still high, but land cover changes manage to force enough throughput of land-derived nitrogen—particularly wastewater nitrogen—to enrich coastal receiving waters. As land cover further shifts away from natural vegetation, eutrophication of GSB, and coastal receiving waters in general, will increase.
Help protect your natural environment and the community you live in.

III. Ecosystem Health and Role of CERCOM...
Sea Anemone (1989)

Disposal Site

Revisit States of Monitoring at these Sites
Silent Seashores

By Deborah Cramer

GLOUCESTER, Mass. — The spring days lengthen, shorebirds have begun their hemispheric migrations from South America to nesting grounds in Canada’s northern prairie and pine forests and the icy Arctic.

They are among Earth’s longest long-distance fliers, travelling thousands of miles back and forth every year. I have watched them at various stops along their routes: calico-patterned rusty turnstones; flipping short-nests and seaweed to find periwinkles or mussels; a solitary whimbrel standing in the marsh grass, its long, curved neck poised to catch a crab, a garter snake passing on a mud flat, its plumage glowing in the afternoon sun.

I used to think that sandpipers flocking at the sea edge, scouring before the waves, were an immutable part of the beach. No longer. This year, as the birds come north, one of them, the red knot — Calidris canutus rubra — will have acquired a new status. It is now listed as threatened under the federal Endangered Species Act. It joins four other shorebirds on the government’s list of threatened and endangered species.

Sadly, it is unlikely to be the last.

As these birds make their long journeys, they face a host of threats. Willets navigating through tropical storms finally make landfall in the Caribbean, only to be shot by hunters. Willets’ powers lose their beach nesting sites to development, and their eggs and chicks to raccoons, dogs and cats, whose numbers swell as more people build along the shore. The tidal flats and inlets where knots, turnstones and other shorebirds feed are disappearing as storm surges and a rising sea eat away at the coastline.

Already the loss of shorebirds has been staggering. In the continental United States, more than half were listed on the 2014 State of the Birds Watch List, compiled by the North American Bird Conservation Initiative. Their inclusion means that their small or declining numbers put them in urgent need of additional protections. The number of North American long-distance migratory shorebirds that scientists have tracked has dropped by more than half since 1974, an alarming loss of 12 million birds.

Sightings of rusty turnstones, for instance, are down by 30 percent. Semipalmated sandpipers are down by 80 percent in their winter home in northern South America. And in Churchill, Manitoba, the nesting season for Hudsonian godwits has been abysmal.

These sturdy birds travel thousands of miles from the Straits of Magellan to reach the west shore of the Hudson Bay.

Migrating shorebirds are in steep decline.

But we can help them.

snowy Arctic tundra, looking for rusty turnstones that hadn’t shown up to rest, and through willow of montane where semipalmated sandpipers used to lay their eggs. On a quiet island off the coast of Georgia, I followed the delicate tracks of Wilson’s plovers, whose range is con-}

confirmed by physical evidence, was in 1983, when I was a young girl.

We have also seen aggressive dedication conservation return birds from the brink. The bald eagle, peregrine falcon and brown pelican were all rescued from the ravages of DDT after the pesticide was banned, though their recoveries took 30 to 40 years. Recently, 20 California condors were alive in the wild before a captive breeding program began in the early 1980s. It now has pushed the bird’s numbers in the wild to more than 300.

It is not easy to address the complex and myriad threats that these migrating shorebirds face along a flyway that spans the continent. But for shorebirds, habitat restoration is essential for recovery.

2015 – Bird Populations
Habitat Needs Migratory Species
SSER Coordinate Water-Resources Monitoring Strategy (CWRMS) Update Project Advisory Committee (PAC) Inaugural meeting

U.S. Geological Survey / NYS Department of State

Town of Babylon Department of Parks and Recreation Building
February 5, 2015
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Suffolk County Department of Environment and Energy
(In Cooperation with Health Services and Public Works)

Suffolk County
Wetlands Management Workgroup

- Stewardship Process and Workgroup Role
- Contractor Scope of Work (vs. Stewardship Strategy)
- Adaptive Management Approach
- Early Work Group Input

Update - November, 2007
S.C. Vector Control and Wetlands Management Long-Term Plan
Review Process for Wetlands Activity

MANAGEMENT ACTIVITIES USUALLY MORE LIKELY TO HAVE POTENTIAL SIGNIFICANT IMPACTS*

- BMP 5 – Upgrade or Install Culverts or Weirs
- BMP 6 – Naturalize Existing Ditches
- BMP 7 – Install Shallow Ditches
- BMP 8 – Back-Blading/Sidecasting Material
- BMP 9 – Small Fish Reservoirs (500-1,000 sq.ft.)

Stewardship Committee Receives Early Notice**

NYSDEC Permit Application***

SEQRA Required

* In former plan drafts, BMP’s 5-9 were designated "minor impacts" unless they affect 15 or more acres. In the final plan, all are deemed usually more likely to have "potential significant impacts," irrespective of size. Impacts may be beneficial not necessarily adverse.

** Stewardship Committee can submit comments to project sponsor and/or SEQRA lead agency prior to project approval. Stewardship Committee meetings can also occur, as needed.

*** Notice will also be sent to Town and Trustee jurisdictions.
DRAFT WETLAND STEWARDSHIP STRATEGY

Prepared for:

SUFFOLK COUNTY SEAL
NEW YORK

Suffolk County
Department of Environment and Energy
H. Lee Dennison Building, 2nd Floor
100 Veterans Memorial Highway

Prepared by:
Lockwood, Kessler & Bartlett, Inc
1 Aerial Way
Syosset, NY 11791
July 25, 2010
The Long Island Clean Water Partnership thanks its partner organizations and its 17,000 individual members!

- Accabonac Protection Committee
- All Natural Cleaning Service
- American Litoral Society, Northeast Chapter
- Saywee Creek Community Association
- Beneath the Sea
- Bummenfeld + Fleming
- Brookhaven Village Association
- Calmwater Long Island, LLC
- Children’s Museum of the East End
- Citizens’ Campaign for the Environment
- Coalition to Save Hempstead Harbor
- Coastal Research and Education Society of Long Island
- Concerned Citizens of Hampton Bays
- Concerned Citizens of Montauk
- Conservation and Natural Areas Planning
- East End Eco-Ventures
- East Hampton Property Owners Association
- East Quogue Citizen Advisory Committee
- East Quogue Civic Association
- Finkler Wellness, Inc.
- Flanders Riverside Northampton Community Association
- Friends of the Long Pond Greenbelt
- Garden of Eve Organic Farm
- Great South Bay Audubon Society
- Green Inside and Out
- Group for Cutchogue
- Group to Save Goldsmith inlet
- Group for the East End
- Hampton Bays Civic Association
- Hohomack Cove Group
- Hynd Electric Contractor, Inc.
- Holistic Mums of Suffolk County - Lake Grove Chapter
- Huntington-Oyster Bay Audubon Society
- Institute for Ocean Conservation Science
- Island Park Business and Residential Chamber
- Jamesport - South Jamesport Civic Association
- Ketchem Inn Foundation
- League of Women Voters of Brookhaven
- League of Women Voters of the Hamptons
- Little Fresh Pond Association
- Long Island Community Foundation
- Long Island Environmental Voters Forum
- Long Island Greenbelt Trail Conference
- Long Island Moms for Clean Water
- Long Island Nature Organization
- Long Island Pine Barrens Society
- Long Island Paddlers

- Long Island Progressive Coalition
- Monmouth Bay Civic Association
- Monmouth Bay Historical Society
- National Recreation Education Foundation
- New York League of Conservation Voters
- North Country Garden Club of Long Island
- North Fork Audubon Society
- North Fork Environmental Council
- North Fork Sea Salt Co.
- North Sea Citizens Advisory Committee
- North Shore Land Alliance
- Northwest Alliance
- Operation Splash
- Peconic Community Rowing Association
- Peconic Green Growth
- Perfect Earth Project
- Port Jefferson Station/Terryville Civic Association
- Quiet Skies Coalition
- Quogue Association
- Rauch Foundation
- Riverhead Neighborhood Preservation Coalition
- Sagamore Rowing Association
- Sag Harbor Citizen Advisory Committee
- Save Main Road
- Save the Sound
- Shinnecock Environmental Association
- Setauket Harbor Task Force
- Sedge Stoppers
- Southampton Citizen Advisory Committee West
- Southampton-Shinnecock Hills-Hallockville Citizens Advisory Committee
- Southampton Town Civic Coalition
- Southampton Town Sanitation Advisory Committee
- Southampton Trails Preservation Society
- Speonk Remsenburg Civic Association
- The Barefoot Gardener
- The Foggida Idea
- The Garden Club of East Hampton
- The Nature Conservancy
- The Waterfront Center
- Village Preservation Society of East Hampton
- Wading River Civic Association
- Wastewater Works Inc.
- Watermill CAC
- Waterways
- Women’s Initiatives for a Sustainable Earth
- Women Who Care, Women Who Dare

Website: LongIslandCleanWaterPartnership.org
Facebook: Facebook.com/CleanWaterPartnership
Twitter: @LICleanH2O

WATER WE GOING TO DO?

A Conference on Improving Water Quality on Long Island

Thursday, May 14, 2015
9:30 am — 1:00 pm
UPS/KEY Long Island Hotel

Presented By: long island clean water partnership
Sponsored By: RAUCH FOUNDATION

Molloy College
MOLLOY COLLEGE, an independent, Catholic college rooted in the Dominican tradition of study, spirituality, service, and community, is committed to academic excellence with respect for each person. Through transformative education, Molloy promotes a lifelong search for truth and the development of ethical leadership.

Contact:
Dr. John T. Tanacredi
jtanacredi@molloy.edu
516.323.3415
516.323.3591
Fax: 631.319.6195

Molloy College
1000 Hempstead Ave.
PO Box 5002
Rockville Centre, NY 11571

CERCOM
Center for Environmental Research and Coastal Oceans Monitoring
132 Clyde Street
West Sayville, NY 11796

Past and Present CERCOM Cooperators and Advisory Council Members:

- American Musuem of Natural History
- U.S. Fish & Wildlife Service
- National Park Service
- National Weather Service
- USGS
- NOAA
- AREAC
- SCIENCE
- American Alitlitoral Society
- Atlantic States Marine Fisheries Commission
- Town of Islip
- Cape Cod Incorporated
- CRESLI
- NYSMEA
- Great South Bay, Long Island, Restoration Working Group
- FORDHAM UNIVERSITY
- BROOKHAVEN NATIONAL LABORATORY
- PECOMIC
- BAYKEEPER
- Horseshoe Crab Research Center
- Lamont-Doherty Earth Observatory
- Columbia University / Earth Institute
- ICSU
- Sustainability Institute
- PSEG
- IUCN SSC
- horseshoe crab Specialist Group

Atlantis Marine World Aquarium
Stanley W. Watson Foundation
South Shore Estuary Reserve Council
NYS Department of State Division of Coastal Resources
Long Island Horseshoe Crab Network
104 sites

Fig. 2  Trend in number of spawning habitat sites with no horseshoe crabs detected

Fig. 3  Horseshoe Crab Inventory from 2013 to 2014
Move to Protect Horseshoe Crabs

Brookhaven supe wants DEC to restrict harvesting in town waters

By Deon J. Hampton

Brookhaven Town Supervisor Edward P. Romaine wants the New York State Department of Environmental Conservation to ban horseshoe crab harvesting within 500 feet of town-owned lands out of concern the species is in danger of collapse.

"We're trying to protect our natural world as a town should," said Romaine during a Tuesday morning news conference at Mount Sinai Harbor Stewardship Center at Cedar Beach.

Romaine said some people have illegally harvested hundreds, and in extreme cases, thousands of horseshoe crabs in town waters. New York State permits the harvesting of 200 horseshoe crabs per day, officials said.

The DEC wasn't immediately available for comment.

Kevin McAllister, a biologist and founder of nonprofit Defend H2O, a Sag Harbor-based environmental group, said a number of states on the East Coast allow horseshoe crabs to be sold for bait. He said those who fish are banned from harvesting horseshoe crabs in New Jersey.

"There's a greater demand here locally because they are exporting them," McAllister said.

Lawrence Swanson, associate dean of the School of Marine and Atmospheric Sciences at Stony Brook University, said he supports Romaine.

"Horseshoe crabs are severely threatened up and down the East Coast and we need to do everything we can to support them," he said.

Brookhaven Town has roughly 150 miles of shoreline, making it difficult to monitor illegal harvesting, especially at night, officials said. If the DEC agrees to the ban, Romaine said the town would help with enforcement.

Town officials said it takes a female horseshoe crab about nine years to reach sexual maturity and reproduce, and that they are one of the few species whose prime harvesting season coincides with their spawning activities.

Romaine said he would discuss the issue tomorrow when he meets with other Suffolk town supervisors. He said he expects the Brookhaven Town board to adopt a nonbinding resolution at its own meeting on Thursday.

Speaking of his proposed ban, Romaine said, "It will give horseshoe crabs a chance to survive. If we continue the way we are going, we're looking at a potential population collapse."

He said he is also asking the eight waterfront incorporated villages in Brookhaven Town to request a DEC ban as well. Those villages are Mastic Beach, Patchogue, Bellport, Quotquot, Old Field, Belle Terre, Port Jefferson and Shoreham.

Bellport Mayor Ray Fell said he hadn't heard from Romaine or about his proposal as of yesterday afternoon.

"I don't know anything about it," Fell said in a phone interview.

Town officials said the horseshoe crabs are in the midst of mating season, which normally lasts between May and June.

"One of our concerns has been poaching and there's a strong incentive to poach," said Anthony Graves, Brookhaven's chief environmental analyst.
5-year Trend Analysis, 2004-2008
of the Water Quality Monitoring Program for the
Great South Bay and Adjacent Waters, Fire Island
National Seashore (FINS) Patchogue, New York

John T. Tanacredi, PhD.
Chairman, Department of Earth and Marine Sciences
Director, Center for Estuarine, Environmental and Coastal Oceans Monitoring

Oakdale, New York 11769-1999
2004-2008
Recommendations:

- Ban Sewage Discharge in the South Shore Estuary

L.I. Newsday – April 2009

ON THE ISLAND

ISLANDWIDE
Ban sought on boat sewage discharge

In a bid to protect water quality in the South Shore Estuary, the state has asked the federal Environmental Protection Agency to prohibit boats from discharging sewage across a 110,000-acre stretch of water — from the Nassau-Queens border to eastern Shinnecock Bay.

The request stemmed from a petition that Peconic Baykeeper Kevin McAllister submitted to the state Department of Environmental Conservation on behalf of the town's Hempstead, Oyster Bay, Babylon, Islip, Brookhaven, Southampton and the Fire Island National Seashore.

Discharging treated and untreated sewage can increase nitrogen levels and deliver potentially harmful pathogens and toxins to local waters, the DEC said yesterday.

If the request is approved, the South Shore Estuary would become the seventh no-discharge area in Long Island waters and the 12th in New York State.

"The designation of a no-discharge zone in the open waters, harbors, bays and tributaries of the South Shore Estuary Reserve will strengthen the protection of important marine resources and help us restore critical habitat," DEC Commissioner Pete Grannis said in a statement yesterday.

— JENNIFER SMITH

SOUTHAMPTON
Forum on climate change, public health

The public health consequences of climate change will be discussed tonight at Stony Brook University's Southampton campus.

Scheduled speakers include Dr. Pai-Yi Whung, chief scientist of the U.S. Environmental Protection, as well as Stony Brook professors and environmental researchers from across the globe.
Long Term Monitoring

New Futures...

- Haplotype Characterization
- Atmospheric Contributions of Nutrients
- Sediment Benthic Microbiology
Reclaim Our Water Initiative Update

Suffolk County Seeks Applications for Onsite Wastewater Treatment System Technologies

Key Dates:
- Request for Expressions of Interest released on April 14th
- Required registration by April 20th
- Optional Conference Session on May 2nd
- Application Due May 16th at 12:00 noon

Background:
Suffolk County is seeking applications from manufacturers (hereafter "Applicant(s)"") from throughout the nation for the opportunity to showcase and demonstrate single family residential onsite wastewater treatment system technologies in Suffolk County at no cost to the County or participating homeowners—an effort to test these systems in local conditions. Suffolk County, with a population of 1.8 million, is Long Island's easternmost county, has in excess of 200,000 existing residential onsite wastewater disposal systems in environmentally sensitive areas which could potentially benefit from utilization of nitrogen reducing technologies.

This Request for Expressions of Interest (RFIE) is part one of a two-part process. The initial RFIE seeks from Applicants their qualifications for the manufacture, installation, and maintenance of innovative alternative onsite wastewater treatment systems (hereafter "I/A OSTS") for use on residential property or county property. The second part of the process is for Applicants to install, maintain and operate these I/A OSTS. Note that construction or installation of any OSTS requires site specific approvals (See M 8 (d) 7, IV (c) 5)

Downloaded a copy of RFIE Water Quality & Wastewater Systems Portal (coreplanning/general/RFIE-WQ-TAVGB.pdf)

A PHOTOGRAPHIC INVENTORY OF DIATOMS
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1992

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July 5, 1983

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