

**SUFFOLK COUNTY  
COUNCIL ON ENVIRONMENTAL QUALITY  
MINUTES**

DATE: April 20, 2011

TIME: 9:45 to 12:45

LOCATION: Blydenburgh County Park  
Weld House, Smithtown, New York

**PRESENT:**

Larry Swanson, Chair; Gloria Russo, Vice-Chair; Vivian Vilorio-Fisher; James Bagg;  
Eva Growney; Michael Kaufman; Mary Ann Spencer

**ABSENT:**

Thomas Gulbransen; Richard Machtay; Daniel Pichney

**CAC REPRESENTATIVES:**

None

**STAFF:**

Michael Mulé, Environmental Projects Coordinator  
Christine DeSalvo, Senior Clerk Typist

**DEPARTMENTAL STAFF:**

Richard Martin, Director, Historic Services  
Suffolk County Department of Parks, Recreation & Conservation  
Lauretta Fischer, Chief Environmental Analyst  
Suffolk County Department of Planning  
Erik Bergey, Senior Civil Engineer  
Suffolk County Department of Environment and Energy  
Dominick Ninivaggi, Superintendent, Division of Vector Control  
Suffolk County Department of Public Works  
Mary Dempsey, Biologist  
Suffolk County Department of Environment and Energy

**GUESTS:**

Lance Reinheimer, Interim Director  
Suffolk County Vanderbilt Museum

**MINUTES:**

March 16<sup>th</sup>, 2011 minutes approved.

A motion was made by Ms. Russo  
The motion was seconded by Mr. Bagg and passed unanimously.

Mr. Swanson thanked Allan Drost the caretaker of the Weld House for letting us use the room. He also thanked Richard Martin, Michael Mulé and Christine DeSalvo for their efforts in making the meeting come together at the Weld House. He also thanked the members of CEQ for their appearance at the Public Hearing that was held on April 12, 2011 for the DGEIS. He noted that it was the very well attended by staff; unfortunately it wasn't well attended by the public.

#### CORRESPONDENCE:

Mr. Swanson drew attention to a letter dated April 12, 2011 from Lance Reinheimer, Interim Director of the Suffolk County Vanderbilt Museum, indicating that the Vanderbilt Museum is considering using the Normandy Manor as a Design Show House. Would be explained and discussed under the Historic Trust section of the meeting.

Legislator Vivian Vilorio-Fisher had a question for Dominick Ninivaggi regarding an email correspondence from Mr. Palmer regarding her understanding of the larvacide or adulticide and asked Dominick to address it when he made his presentation.

#### HISTORIC TRUST DOCKET:

Richard Martin, Director, Historic Services, Suffolk County Department of Parks, Recreation & Conservation updated the Council on the following:

The Office of Historic Services has two vacancies at West Hills. They had a rent reduction but there has been no interest. The county is planning to have a mailing regarding the vacancies but it hasn't been completed yet. These are also the only vacancies the county currently has.

Mr. Martin introduced Lance Reinheimer the Interim Director of the Suffolk County Vanderbilt Museum to discuss the plans and purpose of using the Normandy Manor as a Designer Show Home. Mr. Martin reminded the members that Deepwells was used twice as a Designer Show Home and Deepwells received a lot of repairs it needed and had visitation increase. Mr. Reinheimer discussed how they've spoken with Claudia Dowling, owner of Claudia Dowling Interiors regarding bringing in designers to show case the home and their work and how they can utilize Normandy Manor for fundraising purposes at a potential financial benefit to the county.

A motion was made by Mr. Kaufman to approve the use of the Normandy Manor as a Designer Show Home. The motion was seconded by Ms. Russo and passed unanimously.

PROJCT REVIEW:

1. Recommended Type I Actions

None

2. Recommended Type II Actions

Ratification of Recommendations for Legislative Resolutions Laid on the Table March 22, 2011

Mike Kaufman abstained on IR 1284.

A motion was made by Ms. Growney to accept the staff recommendations. The motion was seconded by Mr. Bagg and passed unanimously.

3. Recommended Unlisted Actions

Proposed Acquisition of Land for Open Space Preservation Purposes Known as the Beaverdam Creek County Wetlands Addition – Brookhaven Vacant Land, LLC Property, Town of Brookhaven

A presentation was given by Ms. Laretta R. Fischer, Chief Environmental Analyst with the Suffolk County Department of Planning, concerning the acquisition of five (5) lots consisting of 1.2 acres total. We have significant holdings currently in this area.

A motion was made by Mr. Kaufman to classify the project as an Unlisted Action with a Negative Declaration. The motion was seconded by Ms. Russo and was passed unanimously.

OTHER BUSINESS:

Suffolk County Stormwater Management Program Annual Report 2011: A presentation was given by Emerson Hasbrouck regarding the Stormwater Management Program, see attached report.

Vector Control, Integrated Marsh Management at Wertheim 2003-2010: A presentation was given by Dominick Ninivaggi on Integrated Marsh Management at Wertheim, see attached.

A motion was made by Mr. Swanson to adjourn. The motion was seconded by Mr. Kaufman.



## Cornell University Cooperative Extension of Suffolk County

### Extension Education Center

423 Griffing Avenue, Suite 100  
Riverhead, New York 11901-3071  
t. 631.727.7850  
f. 631.727.7130

#### Public Education and Outreach

- 128 youth classes (3,111 children) and 6 civic association meetings (193 adults) were conducted in 2010-2011 permit year.
- The stormwater website had 3,066 visitors. A new page on wetlands was added and the following links were added to the home page: Added a link to the Marine Moment on lawn care, added a link to the brochure for the Long Island Native Grass Symposium, and added information about the Long Island Native Grass Initiative Plant Sale prior to the plant sale.
- An additional 6,312 copies of the brochure "Where Does the Rain Go" were distributed to Suffolk County residents through mailings to Suffolk County libraries, legislator's offices, and municipal buildings. Brochures were also handed out at fairs/festivals. Both Spanish and English versions of the brochures were distributed.
- As part of an on-going green roof project, CCE staff assisted Cutchogue East Elementary School in adding additional plants to their green roof. 52 fifth grade students worked with their teacher and CCE to plant donated plants from a local nursery in metal 12 foot by 4 foot trays (192 square feet). This is the second year of the program. The teacher hopes to continue the program in the spring of 2011 and add more plants to current trays and add more trays to cover a larger portion of the roof.
- A new PSA was created and aired on WBAB. The PSA focused on lawn care and fertilizer use.

#### Public Participation and Involvement

- A rain garden project was completed at Sweetbriar Nature Center, near their education building. The public participated in the creation of the rain garden with help from Master Gardeners. The rain garden was completed in June and showcased at a festival at the nature center on June 12<sup>th</sup>. CCE staff, as well as master gardeners, were available to answer questions about the rain garden.
- Curb marking was completed with Rock Point Middle Elementary School, 10 storm drains in their school parking lot were marked with markers.
- 112 adults and 220 children were directly interacted with at fairs/festivals.
- As part of the Peconic Estuary Program, a total of 10 beach clean-up events were held. A total of 3,435 pounds of debris was collected by 146 volunteers. An additional 9 clean-up events were held at County Parks, with 441 volunteers.

#### Illicit Discharge Detection and Elimination

- 2 outfalls were monitored for dry weather flow, completing dry weather flow monitoring for all 288 outfalls. Each outfall was visited 3 times to check for dry weather flow. Information such as

flow volume, color, odor, floatables, deposits, turbidity, and vegetative growth were obtained at all dry weather flow outfalls.

- 55 outfalls with dry weather flow were tested for illicit discharges/connection. Water samples collected at these pipes were tested for salinity, pH, temperature, surfactants, nitrogen, turbidity, potassium, chlorine, and fecal coliforms.
- Stormwater conveyance system mapping for all 288 outfalls was completed. A total of 1711 conveyance structures (catch basins, culverts, leaching basins, man holes, swales, and sluiceways) and 1682 pipe connections were mapped and entered into GIS.
- Completed “storm sewershed” delineation using ArcGIS and ArcHydro. The NYSDEC defines a storm sewershed as “the catchment area that drains into the storm sewer system based on the surface topography in the area served by the storm sewer.” In order to delineate the storm sewersheds, the subwatersheds were first delineated. A methodology has been developed and implemented to delineate subwatersheds and storm sewersheds. All storm sewersheds where a stormwater outfall pipe exists have been delineated.

#### Construction/Post-Construction Site Runoff Control

- 4 Erosion and Sediment Control Training Workshops were given; 30 County employees and 166 contractors were trained.
- SC DPW invests extensive resources in implementing a stormwater remediation program. As of the end of the reporting period, 54 projects were completed (since the remediation program began); 24 projects were funded and in the design phase; 3 projects are currently being constructed; and approximately 16 additional projects are planned for future funding.
- Multiple draft documents were developed to incorporate enforceable mechanisms for construction runoff requirements and post-construction runoff control from new development and re-development projects. The three documents created included a directive to DPW Engineers, a letter to contractors, and language to be included with DPW Project Manuals and Request for Proposals.

#### Pollution Prevention/Good Housekeeping

- County maintained roads, bridges, and parking lots were swept according to the annual rotating shift schedule. Approximately 1,500 miles of road was swept and 3,000 cubic yards of debris was removed.
- 2140 catch basins were inspected and cleaned, approximately 1875 cubic yards of debris was removed from these structures.
- CCE assisted County Parks in developing a draft local law to prohibit feeding of waterfowl and pet waste on County property. The draft law was reviewed by CCE and sent back to Parks for submission and approval by the County legislature.
- CCE worked with Suffolk County Soil and Water Conservation District to organize a Goose Management Committee tasked with managing goose populations on County property. Relevant County employees were invited to participate in the committee with CCE and Soil and Water leading the effort. The committee reviewed the draft local law to prohibit feeding of waterfowl and pet waste on County property. Meetings were also set up with each committee member to discuss and map out municipal properties where geese are a problem (waste, aggressiveness, nesting near public buildings). Egg oiling has begun on 7 County properties.



### Integrated Marsh Management (IMM) at Wertheim 2003-2010

Dominick Ninivaggi, Thomas Iwanejko, Ilia Rochlin and Mary Dempsey

### Is the Wertheim Project “Working”

- Were mosquitoes controlled?
- Was invasive Phragmites controlled?
- Was native high marsh vegetation protected and enhanced?
- Did the project provide improved habitat for native high marsh and estuarine fishes?
- Did bird use, as an indicator of wildlife habitat, improve?

### OMWM vs. IMM

- OMWM: Open Marsh Water Management Biological/physical control of mosquitoes using techniques more compatible with resource values than ditching.
- IMM: Integrated Marsh Management Designed for multiple benefits and resources, such as wildlife use and invasive control. May include OMWM techniques where mosquitoes are a concern.

### Design, documentation and permits are a big part of the process

- USFWS
- DU
- NYSDEC
- Corps of Engineers
- NYSDOS
- National Marine Fisheries Service



### The Wertheim NWR Demonstration Project

- Proof of concept for IMM techniques in Suffolk’s microtidal environment
- Rehabilitating ditched marshes is a USFWS concern, along with reducing pesticide use
- Assess benefits, impacts.
- Develop technical capabilities in design
- Develop permitting capabilities
- Develop construction skills, techniques
- Demonstrate **cooperative design** with a USFWS for **multiple objectives**; mosquitoes, migratory birds, other resources

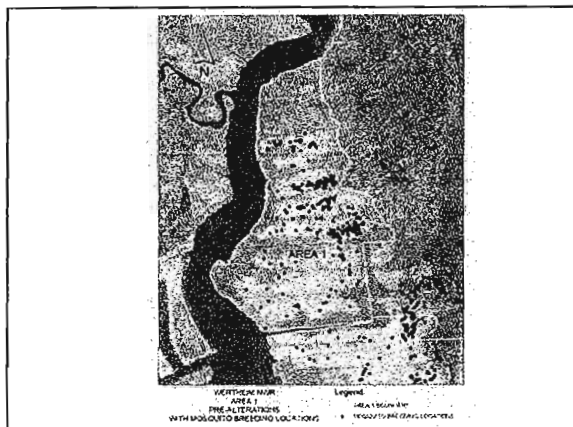
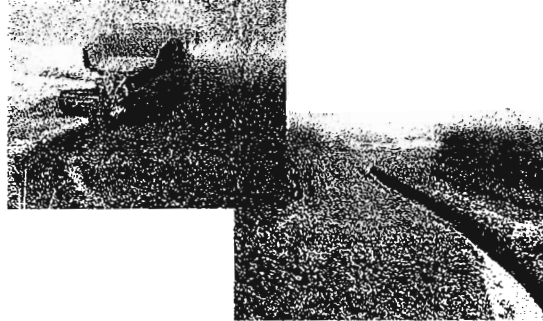
### Major Features of the Project

- Tidal Creeks
- Ponds
- Filling Select Ditches
- Back-blading and smoothing material

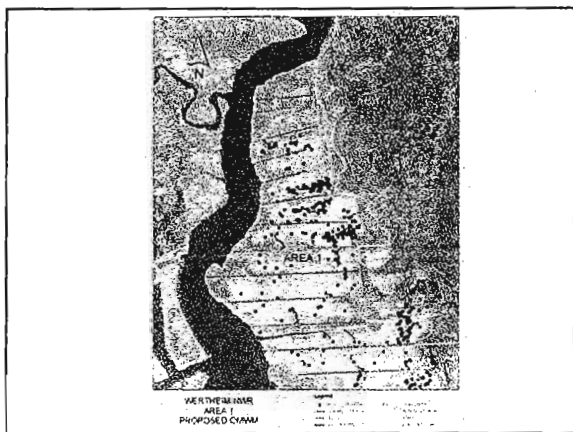
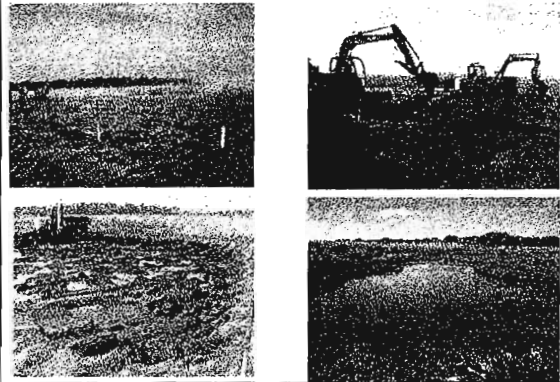
### Design Concepts

- Restore habitat by replacing grid ditches with features designed to emulate natural tidal creeks and shallow ponds
- Achieve mosquito control by placing new open water features among mapped larval habitats
- "Back channel" in Area 1 to cut off *Phragmites* from fresh water input

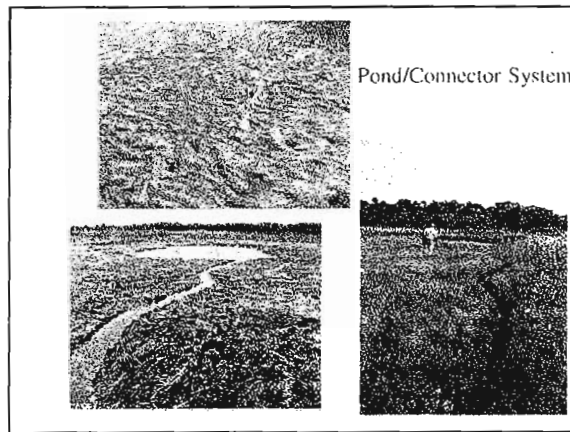
### Tidal Creek Construction



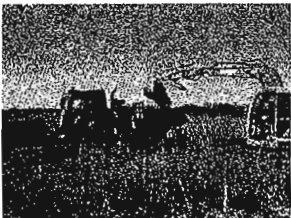
### Pond Construction - 23 Ponds, 3 acres



### Pond/Connector System



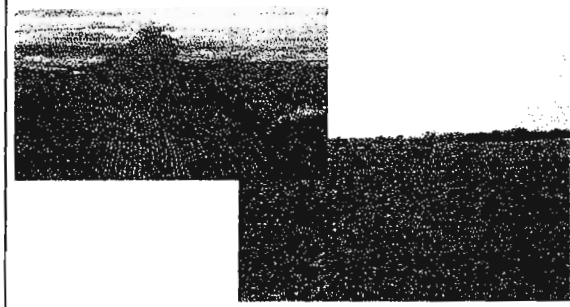
### Filling of Select Ditches



- Material removed from pond construction used to fill select ditches
- Transported by 2 dump bodies
- 5293 Feet of Ditches filled: 19 of 22



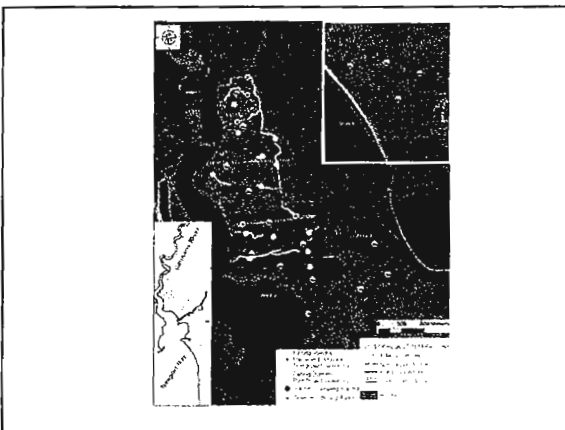
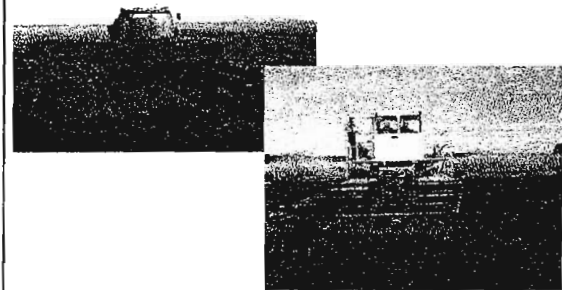
### A Filled Ditch



### BACI Design

- Before-After-Control-Impact statistical design. Similar to USFWS and other impact studies
- 4 Areas: 1&2 – managed, 3&4, reference
- Transect, geostatistical or fixed station sampling, depending on the parameter measured.

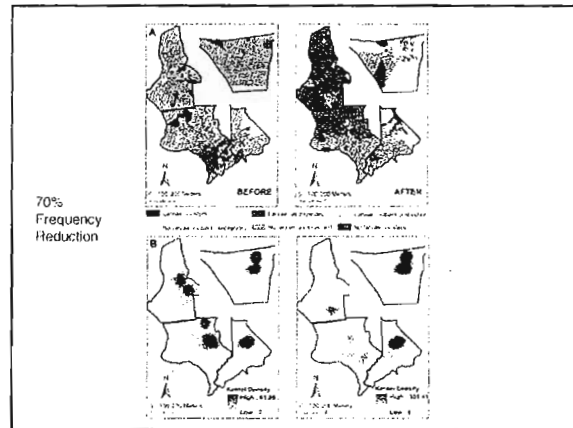
### Final Smoothing/Blading





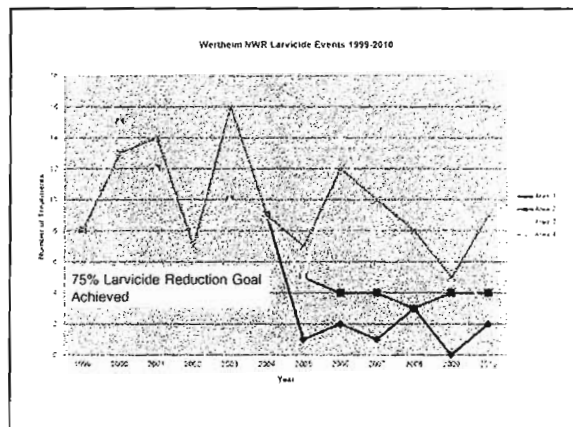
### Key Measures of Success

- Many parameters were measured at Wertheim, based on USFWS and NYDEC guidance
- Mosquito larvae, vegetation response, nekton and birds could be analyzed statistically and showed significance.



Suffolk County improved upon previous studies of wetlands projects. So far at Wertheim, we have 2-3 seasons pre-manipulation monitoring, and 4-5 seasons on-going post-project monitoring.

- Mosquito larvae/applications
- Vegetation
- Nekton – finfish and crustaceans
- Birds

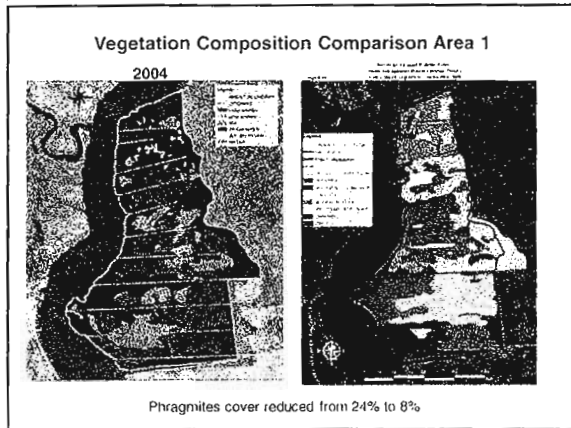


### Mosquito Larvae

- Larvae are hard to sample - patchy, variable distribution, subject to bias
- Larvae/dip is particularly difficult to evaluate statistically.
- Frequency of breeding is of great interest, robust and objective
- Area of marsh with larvae is also robust and of great interest. Can be mapped with GPS/GIS for geostatistical analysis.

### Vegetation

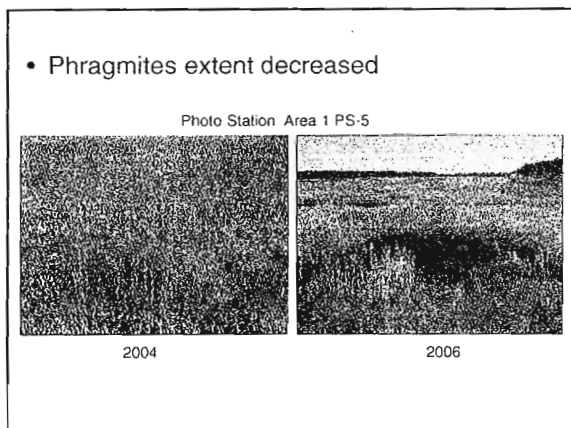
- Major vegetation classes were mapped using aerial photography and ground GPS
- Phragmites was of particular concern
- Biomass, species and other factors were measured on transects
- Mapping and photography contain most of the relevant information and are robust and easy to comprehend



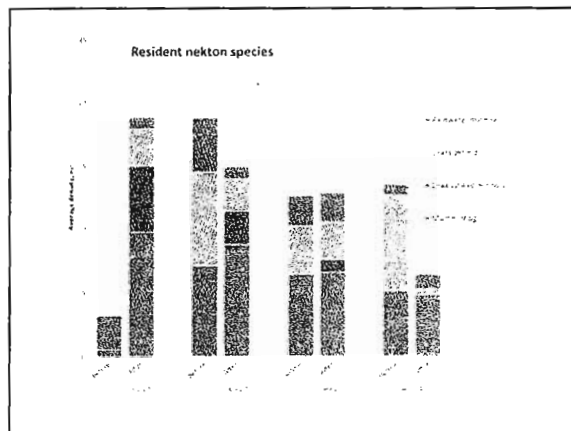
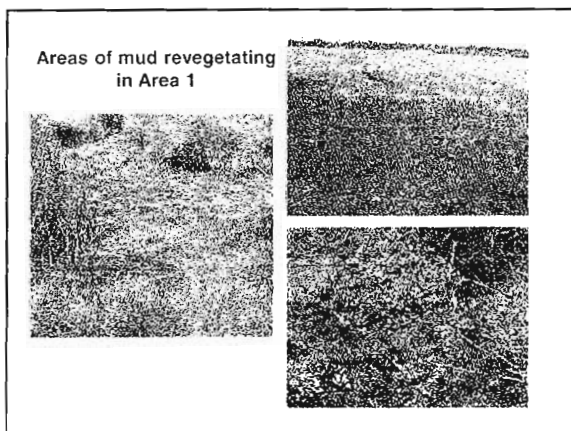
### Surface Water Area

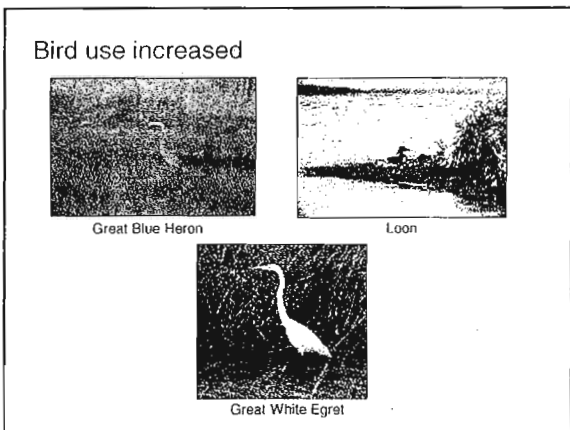
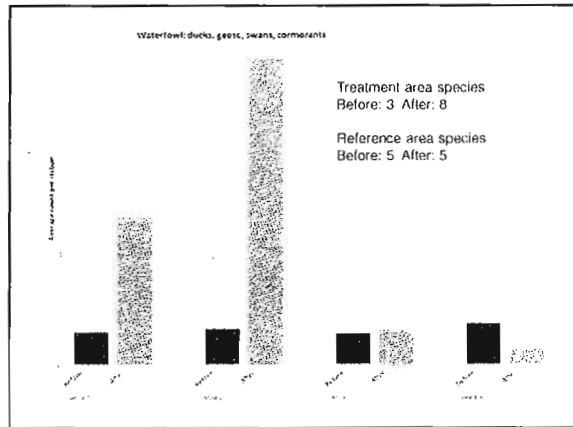
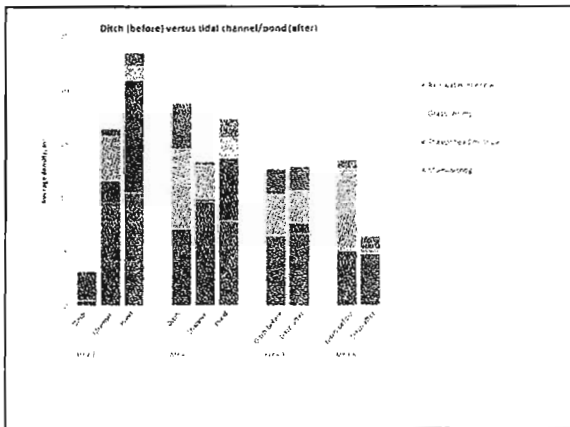
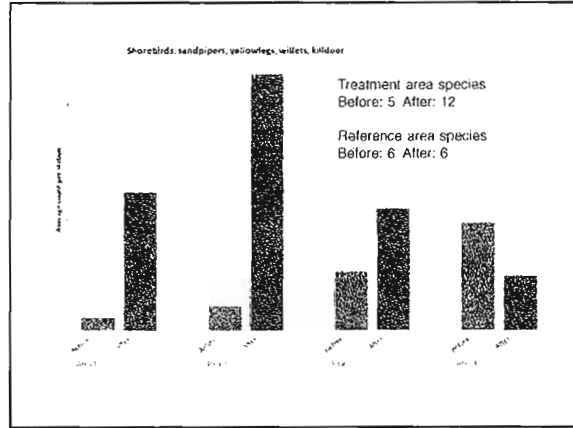
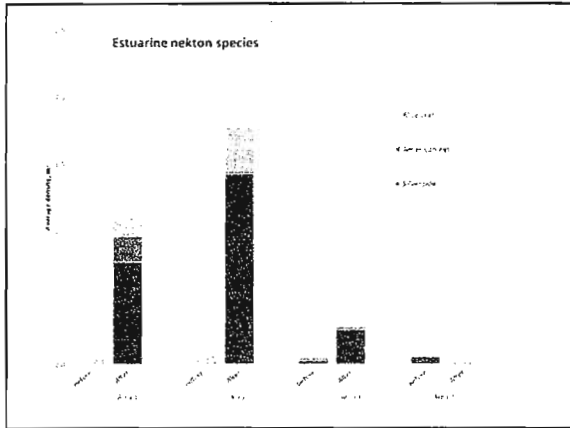
Area	Pre-project (acres)	Post-project (acres)
1	0.6 1.6%	1.6 3.9%
2	0.9 1.9%	1.8 3.8%

NE US unditched marshes mean ~ 10%



- ### Nekton in ponds and channels
- Mummichogs
  - Rainwater killifish
  - Sheepshead minnow
  - Atlantic silversides
  - American Eel
  - Grass shrimp
  - Blue crab
- 



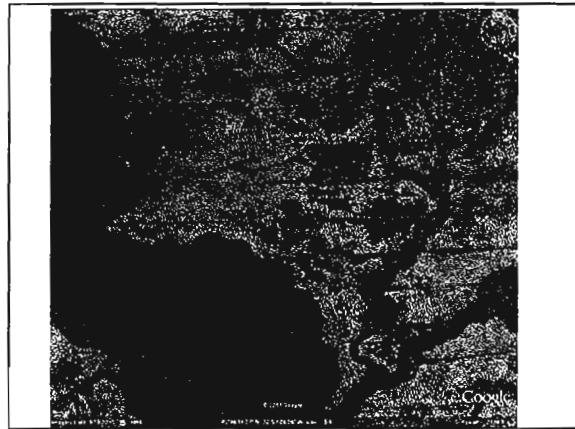


**Conclusions**

- Mosquito goals were achieved
- Phragmites was reduced in Area 1, as planned, and replaced by native HM vegetation
- Vegetation in Area 2 was already reasonably intact, and was not significantly changed
- The restored marshes support healthy populations of typical marsh and estuarine fish and crustaceans
- Replacing ditches with tidal channels and ponds resulted in desirable nekton changes
- The restored marshes support larger and more diverse bird communities as a result of the planned changes to the habitat

### Management Lessons

- The design process resulted in a viable plan that was implemented with the type of staffing and equipment available
- The changes to the marsh vegetation unfolded largely as planned
- Marine species responded as intended, as a result of replacing ditches with channels and ponds
- Bird populations responded positively to the provision of habitats designed specifically to attract them
- IMM is a viable option for Suffolk salt marshes



### Future Plans

- Continue monitoring until at least 2014 with annual reports
- Presentation of results at New England Estuarine Research Society meeting, May 7 in Port Jefferson
- Manuscript in preparation for peer-reviewed publication in collaboration with URI and USFWS

### Rehabilitating a Wetland – So Easy, A Cave Man Can Do it

But only along with:

- SC Dept. of Health
- SC Dept. of Environment and Energy
- USFWS
- NYDEC
- DU
- Cashin Associates
- The crack team of modern humans at Suffolk County Vector Control

