Peconic Estuary Program Habitat Restoration Plan



November 2009

Prepared by: Peconic Estuary Program Natural Resources Subcommittee

Laura Stephenson, NYS Department of Environmental Conservation, Co-Chair Wayne Grothe, The Nature Conservancy, Co-Chair



Peconic Estuary Program Suffolk County Department of Health Services, Office of Ecology 360 Yaphank Avenue, Suite 2B, Yaphank, NY 11980, 631.852.5750 www.peconicestuary.org

The Peconic Estuary Program (PEP) is a unique partnership of governments, environmental groups, businesses, industries, academic institutions and citizens. It is the mission of the Peconic Estuary Program to protect and restore the Peconic Estuary system.

ACKNOWLEDGEMENTS

The preparation of the 2009 Peconic Estuary Program Habitat Restoration Plan was possible due to the collaborative efforts of many committed organizations and individuals. The Peconic Estuary Program would like to thank the following for their contributions and guidance:

Program Director

Vito Minei, P.E., Suffolk County Department of Health Services

Deputy Program Director

Walter Dawydiak, P.E., J.D., Suffolk County Department of Health Services

Coordinators

Federal: Richard Balla, United States Environmental Protection Agency State: Laura Stephenson, New York State Department of Environmental Conservation County: Kimberly Paulsen, Suffolk County Department of Health Services Technical Outreach: Emily Fogarty, Suffolk County Department of Health Services Marine Conservation Planner: Wayne Grothe, The Nature Conservancy Public Outreach: Jennifer Skilbred, Group for the East End

Other Key Participants:

Seth Ausubel, United States Environmental Protection Agency, PEP Management Committee Chair Karen Chytalo, New York State Department of Environmental Conservation Martin Trent, Suffolk County Department of Health Services Kim Shaw, Suffolk County Department of Health Services East End Town and Village Supervisors, Mayors, Boards, Trustees, and Staff

Peconic Estuary Program Natural Resources Subcommittee

Laura Stephenson, Co-Chair Wayne Grothe, Co-Chair Please see the following page for additional acknowledgements.



The preparation of this document was supported in part by the United States Environmental Protection Agency, with funding provided to the Peconic Estuary Program, under assistance agreement nos. CE992002 and CE992066, to the Suffolk County Department of Health Services and the New York State Department of Environmental Conservation, respectively.

Peconic Estuary Program Natural Resources Subcommittee

Laura Stephenson and Wayne Grothe, Co-Chairs

The PEP Natural Resources Subcommittee would like to thank its many active and dedicated members and participants, local municipalities, and private citizens who helped guide the development of the 2009 Peconic Estuary Program Habitat Restoration Plan. Without their input, assistance, cooperation and support, the completion of this Habitat Restoration Plan would not have been possible. Special thanks are given to the following individuals:

Lynn Mendleman, East Hampton Town Trustee Norm Edwards, East Hampton Town Trustee Diane McNally, East Hampton Town Trustee Clerk Larry Penny, East Hampton Town Department of Natural Resources Mark Abramson, East Hampton Town Department of Natural Resources Jon Aldred, East Hampton Town Hatchery Jennifer Gaites, East Hampton Town Hatchery Lisa D'Andrea, East Hampton Town Planning Department Tyler Borsack, East Hampton Town Planning Department

Barbara Blass, Riverhead Town Board James Wooten, Riverhead Town Board Chris Kempner, Riverhead Town Community Development Department Joe Hall, Riverhead Town Planning Department Karin Gluth, Riverhead Town Planning Department

Jim Dougherty, Shelter Island Town Supervisor Peter Reich, Shelter Island Town Board Chris Lewis, Shelter Island Town Board Ed Brown, Shelter Island Town Board John Needham, Shelter Island Town Waterways Management Advisory Committee Emory Breiner, Shelter Island Town Planning Board Edward Bausman, Shelter Island Town Conservation Advisory Council Pat Hunt, Taylor's Island Preservation and Management Committee

Marty Shea, Southampton Town Department of Land Management, Environmental Division Ed Warner, Southampton Town Trustee Jon Semlear, Southampton Town Trustee Fred Havemeyer, Southampton Town Trustee Eric Shultz, Southampton Town Trustee Dawn Ver Hague, Southampton Town Trustees, Environmental Analyst

Mark Terry, Southold Town Planning Department John Sepenoski, Southold Town Department of Land Management Coordination

Camilo Salazar, Suffolk County Department of Environment and Energy Elyse O'Brien, Suffolk County Department of Environment and Energy Susan Filipowich, Suffolk County Department of Planning

Tom Halavik, United States Fish and Wildlife Service

Mike Osinski, Village of Greenport Trustee Chris Kempner, Village of Greenport Trustee

Chris Pickerell, Cornell Cooperative Extension of Suffolk County, Marine Program Gregg Rivara, Cornell Cooperative Extension of Suffolk County, Marine Program

Jean Held, Priscilla Ciccariello, and Ken Dorph, Friends of the Long Pond Greenbelt

Joan Tripp, Sag Harbor Historical Society President

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I. EXECUTIVE SUMMARY

The Peconic Estuary is home to many valuable and rare habitats, some of which have been severely degraded. With the vision to restore degraded habitats throughout the Peconic Estuary watershed, the Habitat Restoration Workgroup (HRWG) of the Peconic Estuary Program (PEP) and the 5 East End Towns developed a comprehensive "Habitat Restoration Plan for the Peconic Estuary" dated December 15, 2000.

In 2009, the Peconic Estuary Program Natural Resources Subcommittee (NRS), with significant support and involvement of the 5 East End Towns, set forth to assess the status and remaining restoration needs at sites included in the 2000 Plan, and to identify new candidate sites for restoration. Open public meetings were held in each Town, and a new Habitat Restoration Site Nomination Form was distributed. All materials were circulated and posted on the Peconic Estuary Program website.

In summary, the 2000 Plan listed 72 potential restoration sites.

15 Have Been Completed (20.8%)
10 Are In-Progress (13.9%)
4 Have Been Partially Completed (5.6%)
9 Have Been Attempted (12.5%)
34 Have Not Been Initiated (47.2%)

Of the 72 restoration sites in the 2000 Plan, physical on-the-ground restoration construction has commenced on approximately 52.8% of the listed sites. 58.3% or 42 sites will be re-listed because they have not yet been completed and still remain viable restoration projects. Extensive planning has occurred for some of these re-listed sites.

The 42 re-listed sites will be joined by 29 of 32 new restoration sites which were nominated, reviewed and approved by the PEP Natural Resources Subcommittee. 3 of the 32 new restoration sites were tabled. Consequently, a total of 71 restoration sites are listed in this Plan.

Southold:	5 Re-listed	+	10 New =	15 Sites (21.1%)
Southampton:	2 Re-listed	+	4 New =	6 Sites (8.5%)
East Hampton:	19 Re-listed	+	7 New =	26 Sites (36.6%)
Shelter Island:	0 Re-listed	+	3 New =	3 Sites (4.2%)
Riverhead:	16 Re-listed	+	5 New =	21 Sites (29.6%)

The 71 restoration sites include 9 different types of estuarine habitat.

Diadromous Fish Passage:	10 Sites (14.1%)	Phragmites Control:	33 Sites (46.5%)
Beach/Dune:	1 Site (1.4%)	Riverine:	1 Site (1.4%)
Eelgrass:	5 Sites (7%)	Shellfish:	7 Sites (10%)
Flushing/Circulation:	2 Sites (2.8%)	Wetland:	10 Sites (14.1%)
Grassland:	2 Sites (2.8%)		

Brief project descriptions are provided for all 71 listed restoration sites. This new revised list of restoration sites provides a better framework to track and initiate listed projects. This process and new Plan will allow the PEP Natural Resources Subcommittee to take a more active role in coordinating and advancing habitat restoration with municipalities and other stakeholders within the Peconic Estuary watershed. The estimated cost of these 71 projects is over \$51 million dollars.

II. INTRODUCTION

In 1997 the Peconic Estuary Program Habitat Restoration Workgroup was formed and charged with identifying important Peconic natural habitats with enhancement or restoration potential, developing overall habitat restoration goals, and identifying and prioritizing potential restoration projects. The Habitat Restoration Workgroup (HRWG) developed a public restoration site nomination process and subsequent ranking/scoring system. The ranking evaluation methodology used by the workgroup assessed several ecological, logistical, and public/economic parameters. The end product was the "Habitat Restoration Plan for the Peconic Estuary" dated December 2000. This Plan, available electronically on the Peconic Estuary Program website (www.peconicestuary.org), provided a prioritized ranking of tidal wetland, beach and dune, coastal grassland, estuarine water quality, Phragmites control, migratory fish, and eelgrass restoration projects in the Peconic Estuary watershed.

In 2008, the Peconic Estuary Program Natural Resources Subcommittee (NRS) acknowledged the need to revisit and update the 2000 "Habitat Restoration Plan for the Peconic Estuary". The NRS and the 5 East End Town Boards, Trustees and staff set aside significant resources to undertake this effort, and utilized a process similar to that used by the HRWG. The process, described in more detail below, commenced in early 2009 and concluded in late 2009. The end result is the 2009 "Peconic Estuary Program Habitat Restoration Plan".

It is the goal of the NRS to work with appropriate project leads to implement at least one (1) new project within each Town before January 1, 2011. This goal does not pertain to re-listed sites that are in-progress, partially completed, or have been attempted. It refers to either re-listed sites where restoration activities have not yet been initiated or newly nominated sites. Some sites/projects may be easier than others to complete, and implementation readiness and ability may be greatly affected by the availability of resources, permitting obstacles, planning needed, and project size and scope. In order to make these projects more "shovel-ready" and more appealing to habitat restoration funding entities, the Peconic Estuary Program set aside \$80,000 in its FY09 National Estuary Program budget to assist in the planning and development of conceptual habitat restoration designs for one project in each Town. The five (5) projects identified jointly by the NRS and Towns represent those projects most in need of specialized engineering and planning assistance, and those with tremendous community and local support. The selected projects include:

Southold:	Silver Lake/Moore's Drain Alewife Access
Southampton:	Ligonee Brook Diadromous Fish Passage Restoration
East Hampton:	Napeague Harbor Circulation Enhancement
Shelter Island:	Shell Beach Revegetation
Riverhead:	Forge Road/Peconic Lake Diadromous Fish Passage Restoration (Peconic River, Phase III)

III. PROCESS DESCRIPTION

The PEP Natural Resources Subcommittee (NRS) formally announced the intent and process to update the 2000 "Habitat Restoration Plan for the Peconic Estuary" on February 11, 2009. A memo, consisting of a description of the process, public meeting dates and locations, a list of sites in the 2000 Plan, and a new restoration site nomination form, was circulated to approximately 400 people via email. Members of the NRS were asked to circulate within their respective agencies, organizations and/or municipalities. Brief presentations were also made to all active PEP committees, subcommittees, and workgroups. That memo and all related materials were posted to the Peconic Estuary Program website, and can be found in Appendix A.

Five (5) open public meetings were held; one in each of the five East End Towns within the Peconic Estuary watershed. Each meeting was dedicated to discussing both previous and new prospective projects within that respective Town. After each meeting, meeting participants were sent town–specific status tables for

previously listed sites to ensure that the PEP NRS co-chairs accurately captured meeting discussions and the status of all prior listed sites.

Meeting Locations and Dates:

East Hampton: March 19, 2009, 3-5pm- E.H. Trustees Conf. Room, 267 Bluff Road, Amagansett Riverhead: March 31, 2009, 3-5pm- Riverhead Town Hall Board Room, 200 Howell Ave, Riverhead Southampton: April 6, 2009, 5-7pm- Trustees Room-Town Hall, 116 Hampton Road, Southampton Southold: April 16, 2009, 4-6pm- Southold Town Hall Board Room, 53095 Route 25, Southold Shelter Island: April 23, 2009, 3-5pm- Shelter Island Town Hall, 38 North Ferry Road, Shelter Island

A deadline of May 22, 2009 was established for submission of nomination forms for new projects. This allowed sufficient time for the PEP NRS to adequately review and discuss each new project before and at their June 11, 2009 meeting. Approximately two weeks prior to the meeting, the NRS was sent a summary memo (Appendix B), initial status tables for all previously listed sites in every Town, as well as all submitted nomination forms. At the June 11th meeting, NRS members came to a consensus on what sites to include in the new 2009 Plan (adjusted status tables which identify which previous sites to re-list can be found in Appendix C). The NRS supported the inclusion of project summaries for each of the listed sites to provide additional details on the proposed projects, as was not done back in 2000.

Additionally, in 2000, the PEP Habitat Restoration Workgroup did score and rank sites listed the 2000 Habitat Restoration Plan based on ecological, logistical, and public/economic benefit considerations. The NRS elected not to score and rank the 2009 projects because the group acknowledges that habitat restoration projects move forward for a multitude of reasons: funding opportunities for select/special habitat types, substantial community support/willingness, or political will and drive. Scoring one project higher than another would suggest that that one project may be more important to initiate or complete than another. Sites cannot be compared against one another. All projects in the 2009 Plan are important and should move forward regardless of scores and ranks, and entities should take advantage of any ecological, logistical or political window or opportunity which may be open or available.

On July 11th, the NRS also discussed the one project in each Town it would nominate to the PEP Management Committee on October 27, 2009 for PEP funded conceptual habitat restoration designs (Appendix D), which would expedite planning stages.

The PEP NRS will evaluate the progress made in implementing the 2009 Plan on an annual basis and, at that time, will consider any new site recommendations for listing.

IV. SUMMARY OF FINDINGS

Habitat restoration efforts discussed in this document only accurately describe the status of sites listed in the 2000 Peconic Estuary Program Habitat Restoration Plan and provide additional details on new sites nominated for the 2009 Peconic Estuary Program Habitat Restoration Plan. The previous and current plans do not capture all habitat restoration programs, initiatives, needs and efforts undertaken by New York State, Suffolk County, the East End Towns and Villages, and other non-profits or private individuals or entities to acquire, protect, preserve, restore and enhance habitats within the Peconic Estuary watershed. For example, \$736 million has been spent to acquire 6643 acres of land in the PEP watershed from 2001-2006. The Community Preservation Fund alone has raised more than \$526 million for land preservation in the past decade; approximately half of these funds have been spent preserving lands in the Peconic Estuary watershed. The act of acquiring land for preservation purposes does not necessarily mean that the landscape in whole or in part is pristine or does not need any sort of restoration. Acquisition is often an important first step in a process of setting open spaces aside and preventing development or redevelopment, and in order to perhaps ultimately restore ecological services and benefits.

A. PREVIOUSLY LISTED SITES

<u>Overall</u>

In summary, the 2000 Plan listed 72 potential restoration sites. Their status is noted in Table 1 and Figure 1.

Habitat restoration projects can take years to plan, implement, and monitor. Thus, it is should be of no surprise that the majority of the projects have not been completed. Over half of the projects have been initiated in some fashion. It appears as though habitat restoration projects have advanced in Towns where more resources (staff and funding) are available, more wetland restoration projects have been completed than any other habitat type, and permitting delays have halted the progress of many restoration projects. More so, a few sites restored themselves naturally (i.e. re-vegetated naturally) and did/do not require human intervention.

TABLE 1: Status of 2000 PEP Habitat Restoration Plan

Status of 2000 PEP Habitat Restoration Plan Sites	Number	Percent
Completed	15	20.8%
In-progress	10	13.9%
Partially Completed	4	5.6%
Attempted	9	12.5%
Not Initiated	34	47.2%
Total	72	100%

Status of 2000 PEP Habitat Restoration Plan



FIGURE 1: Status of 2000 PEP Habitat Restoration Plan

<u>STATUS</u> CLASSIFICATIONS:

"Completed":

Physical on-the-ground construction/restoration is complete and restoration has been successful.

"In-Progress":

Physical on-the-ground construction/restoration is currently occurring.

"Partially Completed":

Physical on-the-ground construction/restoration has been partially done, but not entirely completed. No work is currently occurring. This may be due to lack of sufficient resources to complete.

"Attempted":

Physical on-the-ground construction/restoration has been attempted, but has not been successful. This corresponds specifically to eelgrass restoration projects in which restoration testplots have been initiated and failed. Full scale restoration is not warranted.

"Not Initiated":

Physical on-the ground construction/restoration has not begun. Extensive planning may have been done, permits may have been secured or may have been applied for, and partial/all funding may have been secured or may have been applied for. Of the 72 restoration sites in the 2000 Plan, 42 sites must be re-listed (58.3%). Some of these sites (14 of 42 sites or 33.3%) have had on-the-ground restoration work initiated. Re-listed sites include:



10 of 10 In-Progress 3 of 4 Partially Completed 1 of 9 Attempted 28 of 34 Not Initiated

FIGURE 2: 2000 PEP Habitat Restoration Plan: Sites to be Re-Listed in 2009

Re-listed sites reflect those sites where on-the-ground construction/restoration must continue, be completed or initiated. Sites not re-listed reflect those which have been completed, sites which have restored themselves naturally, and sites where restoration is no longer possible or viable. This includes unsuccessful eelgrass restoration test plots, sites which still serve as active dredge material placement sites, stormwater/runoff improvement projects, and sites where the intended scope of work may have changed.

<u>Southold</u>

Southold had 6 potential restoration sites previously listed.

0 have been Completed (0%) 1 is In-Progress (16.7%) 1 has been Attempted (16.7%) 4 have Not Been Initiated (66.7%)

Of the 6 restoration sites, 5 sites need to be re-listed (83.3%). The re-listed sites include:

1 of 1 In-Progress

4 of 4 Not Initiated

<u>Southampton</u>

Southampton had 16 potential restoration sites previously listed.

7 have been Completed (43.8%)

1 has been Partially Completed (6.3%)

- 5 have been Attempted (31.25%)
- 3 have Not Been Initiated (18.8%)

Of the 16 restoration sites, 2 sites need to be re-listed (12.5%). The re-listed sites include: 1 of 1 Partially Completed 1 of 3 Not Initiated

<u>East Hampton</u>

East Hampton had 31 potential restoration sites previously listed. 7 have been Completed (22.6%) 9 are In-Progress (29%) 3 have been Partially Completed (9.7%) 3 have been Attempted (9.7%) 9 have Not Been Initiated (29%)

Of the 31 restoration sites, 19 sites need to be re-listed (61.3%). The re-listed sites include: 9 of 9 In-Progress 2 of 3 Partially Completed 1 of 3 Attempted 7 of 9 Not Initiated

<u>Shelter Island</u>

Shelter Island had 3 potential restoration sites previously listed. 1 has been Completed (33.3%) 2 have Not Been Initiated (66.7%)

Of the 3 restoration sites, 0 sites need to be re-listed (0%).

<u>Riverhead</u>

Riverhead had 16 potential restoration sites previously listed. 16 have not Been Initiated (100%)

Of the 16 restoration, 16 sites need to be re-listed (100%). The re-listed sites include: 16 of 16 Not Initiated

B. NEW NOMINATED SITES

<u>Overall</u>

A total of 32 new sites were nominated; 29 were accepted for listing and 3 were tabled. A new eligible habitat category, shellfish, which includes shellfish restoration efforts, was established. Of the new site nominations diadromous fish passage and shellfish were the two most popular nominations.

<u>Southold</u>

11 nominations were made. 10 were accepted for listing. 1 was tabled.

Accepted:

- Silver Lake/Moore's Drain
- Arshamomaque Pond Preserve Phragmites Eradication
- Southold Shellfish Spawner Sanctuary Network
- Arshamomaque Preserve Phragmites Eradication
- Budds Pond Wetland Restoration
- Downs Farm Preserve and Downs Creek Phragmites Eradication
- Hallock's Bay Eelgrass Sanctuary
- Narrow River Phragmites Eradication

- Pipes Cove Phragmites Eradication

- Husing Pond Phragmites Eradication

Tabled:

- Southold/Greenport Abandoned Power Line/Tower Removal and Restoration. Long Island Power Authority (LIPA) was contacted and has future long range plans in that power corridor. The power lines cannot be removed at this time.

<u>Southampton</u>

5 nominations were made. 4 were accepted for listing. 1 was tabled.

Accepted:

- Iron Point Wetland Restoration
- Ligonee Brook Diadromous Fish Passage Restoration
- North Sea/Alewife Creek Diadromous Fish Passage Enhancement
- Woodhulls Pond/Wildwood Lake Diadromous Fish Passage Restoration

Tabled:

- Sag Harbor Cove and Cold Springs Pond Winter Flounder Enhancement. This project resembled a stock enhancement project and included little, if any components of a habitat restoration project.

<u>East Hampton</u>

7 nominations were made. 7 were accepted for listing.

Accepted:

- Three Mile Harbor Bay Scallop Restoration
- Three Mile Harbor Hard Clam/American Oyster Enhancement/Restoration
- Napeague Harbor Bay Scallop Restoration
- Napeague Harbor Hard Clam/American Oyster Enhancement/Restoration
- Accabonac Creek Hard Clam/American Oyster Enhancement/Restoration
- Lake Montauk Hard Clam/American Oyster Enhancement/Restoration
- Napeague Harbor Circulation Enhancement

<u>Shelter Island</u>

4 nominations were made. 3 were accepted for listing. 1 was tabled.

Accepted:

- Coecles Harbor Eelgrass Revegetation
- Sposato Property- Phragmites Removal
- Shell Beach Revegetation

Tabled:

- Fresh Pond Water Quality. This project primarily focused on conducting water quality monitoring.

<u>Riverhead</u>

5 nominations were made. 5 were accepted for listing.

Accepted:

- Grangebel Park Diadromous Fish Passage Restoration (Peconic River, Phase I)
- Upper Mills Diadromous Fish Passage Restoration (Peconic River, Phase II)
- Forge Rd/Peconic Lake Diadromous Fish Passage Restoration (Peconic River, Phase III)
- Edwards Ave Diadromous Fish Passage Restoration (Peconic River, Phase IV)
- Indian Island Tidal Wetland Restoration

V. FUNDING OPPORTUNITIES FOR HABITAT RESTORATION

Below is a brief, though not comprehensive, list of potential funding opportunities for habitat restoration project planning, design and implementation. Each opportunity varies on eligible applicants, sources and amounts of match required, funding ceilings and floors, and types of habitat. As opportunities become available, they are immediately posted to the Funding Opportunities webpage on the Peconic Estuary Program website (<u>www.peconicestuary.org</u>). It is advised that interested parties check funding opportunity postings regularly, carefully review Request for Proposals, and contact grant program contacts.

United States Environmental Protection Agency (USEPA): Five-Star Restoration Grant Program, http://www.epa.gov/wetlands/restore/5star/

United States Environmental Protection Agency (USEPA): Wetland Program Development Grants (National and Region 2), http://www.epa.gov/owow/wetlands/grantguidelines/

United States Fish and Wildlife Service (USFWS): National Coastal Wetlands Conservation Grant Program, http://www.fws.gov/coastal/CoastalGrants/

United States Fish and Wildlife Service (USFWS): North American Wetlands Conservation Act Grants Program, http://www.fws.gov/birdhabitat/Grants/NAWCA/index.shtm

United States Fish and Wildlife Service (USFWS): National Fish Passage Program, http://www.fws.gov/fisheries/fwco/fishpassage/

National Oceanic and Atmospheric Administration (NOAA) Restoration Center: Open Rivers Initiative, http://www.nmfs.noaa.gov/habitat/restoration/projects_programs/crp/partners_funding/callforprojects3.html

National Oceanic and Atmospheric Administration (NOAA) Restoration Center Community Based Habitat Restoration Partnership Grants, http://www.nmfs.noaa.gov/habitat/restoration/funding_opportunities/funding.html

National Oceanic and Atmospheric Administration (NOAA) Restoration Center: National and Regional Partnership Grants, http://www.nmfs.noaa.gov/habitat/restoration/projects_programs/crp/partners_funding/natregpart.html

National Oceanic and Atmospheric Administration (NOAA) Restoration Center: Marine Debris Removal Grants, http://www.nmfs.noaa.gov/habitat/restoration/projects_programs/crp/partners_funding/callforprojects2.html

National Association of Counties/ NOAA Restoration Center Coastal Counties Restoration Initiative, http://www.nmfs.noaa.gov/habitat/restoration/projects_programs/crp/partners/naco.html

FishAmerica Foundation/NOAA Restoration Center: Marine and Anadromous Fish Habitat Restoration Grants, http://www.fishamerica.org/grants/ American Rivers/NOAA Restoration Center: Stream Barrier Removal Grants (Diadromous fish)/River Restoration Grants, http://www.nmfs.noaa.gov/habitat/restoration/projects_programs/crp/partners/americanrivers.html

United States Army Corps of Engineers (ACOE): Estuary Habitat Restoration Act Program, http://www.usace.army.mil/CECW/ERA/Pages/pps.aspx

United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS): Wildlife Habitat Incentive Program, http://www.nrcs.usda.gov/programs/whip/

New York State Department of Environmental Conservation (NYSDEC): Water Quality Improvement Projects Program/Aquatic Habitat Restoration, http://www.dec.ny.gov/pubs/56080.html

New York State Department of Environmental Conservation (NYSDEC): Habitat/Access Stamp Grant Program, http://www.dec.ny.gov/permits/329.html

New York State Department of Environmental Conservation (NYSDEC): Landowner Incentive Program, http://www.dec.ny.gov/animals/32722.html

New York State Department of Environmental Conservation (NYSDEC): Aquatic Invasive Species Eradication Grant Program, http://www.dec.ny.gov/animals/32861.html

New York State Department of Environmental Conservation (NYSDEC): Terrestrial Invasive Species Eradication Grant Program, http://www.dec.ny.gov/animals/33358.html

New York State Department of State (NYSDOS): Environmental Protection Fund- Local Waterfront Revitalization Program Grants, http://www.nyswaterfronts.com/grantopps_EPF.asp

New York State Office of Parks, Recreation and Historic Preservation: Environmental Protection Fund, http://www.nysparks.state.ny.us/grants/

VI. HABITAT RESTORATION SITE LISTING AND DESCRIPTIONS

Below are brief project descriptions for all 71 restoration sites included in the new plan. These descriptions have been taken from both the original nomination forms for re-listed sites, and new nomination forms for new débuting sites. These project descriptions do not detail the exact restoration worked needed, as planning and conceptual designs may not have been completed. These brief descriptions are intended to provide snap shots of these sites and work to be accomplished as planning and implementation commences. A breakdown of sites per respective Town is provided in Table 2 and Figure 3. The 71 listed restoration sites represent 9 different estuarine habitat types as noted in Table 3 and Figure 4; Phragmites control, diadromous fish passage, and wetlands restoration projects are the three most common. Four additional tables are also presented which list the sites in a variety of ways: sites listed alphabetically by Town complete with coordinates (Table 4), sites listed alphabetically by habitat type (Table 5), sites listed alphabetically by Town habitat type (Table 6), and sites listed with estimated project costs (Table 7).

TABLE 2:

2009 PEP Habitat Restoration Plan: Number of Sites per Town

Town	Re-listed 2000 Sites	New Sites	Total 2009 Sites	Percentage
Southold	5	10	15	(21.1%)
Southampton	2	4	6	(8.5%)
East Hampton	19	7	26	(36.6%)
Shelter Island	0	3	3	(4.2%)
Riverhead	16	5	21	(29.9%)
Total	42	29	71	(100%)

2009 PEP Habitat Restoration Plan: Sites by Town



FIGURE 3: 2009 PEP Habitat Restoration Plan: Sites by Town

TABLE 3:

2009 PEP Habitat Restoration Plan: Habitat Types

Habitat Type	2009 Sites
Beach/Dune	1 (1.4%)
Diadromous Fish Passage	10 (14.1%)
Eelgrass	5 (7%)
Flushing/Circulation	2 (2.8%)
Grassland	2 (2.8%)
Phragmites Control	33 (46.5%)
Riverine	1 (1.4%)
Shellfish	7 (10%)
Wetland	10 (14.1%)
Total	71 (100%)

2009 PEP Habitat Restoration Plan: Habitat Types



- Beach/Dune: 1.4%
- Diadromous Fish Passage: 14.1%
- Eelgrass: 7%
- Flushing/Circulation: 2.8%
- Grassland (2.8%)
- Phragmites Control: 46.5%
- Riverine: 1.4%
- Shellfish: 10%
- Wetland: 14.1%

FIGURE 4: 2009 Habitat Restoration Plan: Habitat Types

A. Southold

Arshamomaque Pond Preserve Phragmites Eradication

Arshamomaque Pond Preserve is a Southold Town owned 52 acre nature preserve on the west side of Arshamomaque Pond with an adjacent 7 acre Suffolk County preserve. Several areas along the shoreline have pockets of invasive Phragmites. Interior areas are choked with Phragmites resulting in low quality wetlands. This project involves approximately 6 acres of Phragmites. Project would include removal of the Phragmites and restoration to native vegetation. The project may involve some changes to the drainage infrastructure that would make conditions less suitable for Phragmites. The removal of Phragmites will promote the re-establishment of native vegetation and important waterfowl and wading bird habitat.

Arshamomaque Preserve Phragmites Eradication

Arshamomague Preserve is a 132 acre preserve owned jointly by Southold Town and Suffolk County. Southold Town and Suffolk County are currently moving forward on expanding this preserve by 28 acres. The preserve features an extensive cattail swamp where invasive Phragmites is expanding and taking over the natural habitat. The approximate area of the Phragmites is 20 acres. Project would be to remove the invasive Phragmites and restore the habitat to its natural state. The removal of Phragmites coupled with the long term control of Phragmites will promote the re-establishment of native vegetation and important waterfowl and wading bird habitat.

Budds Pond Wetland Restoration

Suffolk County owns an open space parcel on Route 25 and Budd's Pond in Southold adjacent to the Willow Point subdivision off Bay Home Road and an open space parcel within the Willow Point subdivision where the Town has drainage issues. A portion of the County parcel on Route 25 was filled with dredge materials in the past. This project would be to restore the elevations and marsh areas to historic or surrounding marsh elevations.

Cedar Beach Phragmites Eradication

Cedar Beach County Park behind the Suffolk County Marine Environmental Learning Center. Excavate Phragmites stands and re-plant with native salt marsh vegetation.

Downs Farm Preserve and Downs Creek Phragmites Eradication

These properties consist of a 50 acre Southold Town nature preserve and an adjacent 18 acre Town owned creek. The northern section of Downs Creek and adjacent areas on Downs Farm Preserve are choked with invasive Phragmites. The approximate area of the Phragmites infestation on the Town properties is 5 acres. Project would entail removal of the Phragmites and restoration to native vegetation. The removal coupled with the long term control of Phragmites will promote the re-establishment of native vegetation and important waterfowl and wading bird habitat. There are additional privately owned areas along Downs Creek that also have some Phragmites issues. One of these properties is covered by a Peconic Land Trust easement. It may be possible to involve these private land owners in the project.

Fleets Neck Wetland Restoration

Located at the end of East Road and owned by Southold Town the site is approximately a half acre. The project would remove prior placed dredge material, and require excavation and re-grading to historic or surrounding marsh elevations. The site will be revegetated with native salt marsh vegetation.

Hallock's Bay Eelgrass Sanctuary

Hallock's Bay is a Town owned bay located in Orient and historically featured an extensive eelgrass meadow that provided excellent habitat for scallops. Based on Cornell Cooperative Extension of Suffolk County (CCE) research, conditions in Hallock's Bay are still ideal for eelgrass to thrive. However all of the eelgrass (about 60 acres) in Hallock's Bay was destroyed between 2001 and 2007 by human activities, mainly shellfishing disturbances, and the bay has been closed to scalloping the past two seasons. This

project would be to establish an eelgrass sanctuary so that CCE can attempt restoration of the eelgrass habitat that formerly existed. The sanctuary would involve formal legal delineations of the sanctuary, physical delineations in the bay, public education and outreach as well as the creation and enforcement of rules designed to protect the eelgrass in order to restore and maintain the original habitat of this area.

Husing Pond Phragmites Eradication

Husing Pond Preserve is a 21 acre preserve owned by The Nature Conservancy consisting mostly of a fresh water pond and surrounding marsh area. Most of the perimeter of the pond and a section of the marsh area are choked with invasive Phragmites. The approximate area of the Phragmites infestation on the preserve is 4 acres. There is an additional 1 acre area of Phragmites on adjacent privately owned properties and a small Town of Southold owned property that could also be included in the project. Project would be removal of the Phragmites and restoration to native vegetation. The removal coupled with the long term control of Phragmites will promote the re-establishment of native vegetation and important waterfowl and wading bird habitat.

Lake Marion Phragmites Eradication

25 shoreline acres are lined with Phragmites. Remove/eradicate invasive and replant shoreline with native salt marsh vegetation. Management of road runoff and sediment at Bay Avenue bridge may be necessary.

Narrow River Phragmites Eradication

Much of the area near the intersection of Narrow River Road and Route 25 in Orient is choked with invasive Phragmites resulting in low quality wetlands. Most of the properties are owned by the State but one property is a privately owned farm (the Town owns the development rights). This project would be to remove Phragmites from these areas and would possibly include repairs and/or updates to drainage infrastructure in this area that would make conditions less suitable for Phragmites. The removal coupled with the long term control of Phragmites will promote the re-establishment of native vegetation and important waterfowl and wading bird habitat.

Nassau Point Wetland Restoration

Nassau Point Causeway, owned by the Cutchogue-New Suffolk Park District, is a filled historic wetland. The proposed project will remove prior placed dredge material/fill, excavate, re-grade to historic/surrounding marsh elevations, and re-plant with native salt marsh vegetation.

Pipe's Cove Phragmites Eradication

The Town and County own several parcels in the Pipes Cove area that are impacted by invasive Phragmites. These include Skipper Horton Park and the open space holdings known as Reese, Stackler, Milazzo, Rendel, Waldron and Caroll. The Town and County are pursuing additional preservation opportunities in the area and any future holdings would be part of this project. The Town received a DEC grant for Phragmites eradication for the Reese and Stackler properties and work is scheduled to begin on these properties in 2009. The area of the Phragmites on the Reese and Stackler properties is approximately 4 acres. The area of Phragmites on the other holdings is approximately 3 acres and the area of Phragmites eradication work on the Reese and Stackler properties if necessary after the current project is completed and conduct similar work on the other properties in the area listed above by removing invasive Phragmites and restoring habitats to their natural state. The removal coupled with the long term control of Phragmites will promote the re-establishment of native vegetation and important waterfowl and wading bird habitat. North Fork Audubon Society has been providing volunteers to assist in the control of Phragmites at Skipper Horton Park and would be willing to assist the Town with similar work as part of this project.

Silver Lake/Moore's Drain Alewife Access

Silver Lake in the Village of Greenport was an historic spawning habitat for alewives, salt water fish that migrate to fresh water ponds via streams to spawn. Silver Lake is connected to Pipes Cove via Moore's

Drain and Pipes Neck Creek. Water runs from Silver Lake through Village property, under Moore's Lane to an unnamed pond which is also potential spawning habitat, through the Village's Moore's Woods to the Town's Skipper Horton Park, under Route 25 to the Town's open space property known as Reese, under the Long Island Rail Road to Pipes Neck Creek and finally out to Pipes Cove. The length of this route is approximately 2 miles and the area of Silver Lake and the unnamed pond is approximately 3 acres. Alewives cannot navigate some areas of this route due to blockages in the stream. This project would be to restore the route from Pipes Cove to Silver Lake to a condition suitable for alewives and would involve cleaning up certain sections of the route and repairing or modifying certain infrastructure to allow passage of the alewives. The Silver Lake area was historically a municipal dump. There is an effort underway to clean up this area as part of the Bay to SoundTrails project. This project involves the Village of Greenport, Town of Southold, Suffolk County, Group for the East End, North Fork Audubon Society and volunteers.

*Recommended to receive PEP funded Conceptual Designs.

Southold Shellfish Spawner Sanctuary Network

This project would be to establish a Town-wide spawner sanctuary program and would involve various Town owned creeks and bays that are suitable for spawning shellfish such as clams, scallops and oysters. Areas within these creeks and bays would be designated as spawner sanctuaries and seeded with shellfish. These sanctuaries would involve formal legal delineations, physical delineations in the water bodies, public education and the creation and enforcement of rules designed to protect these areas and allow the seeded shellfish to spawn without being harvested. As they spawn some shellfish will migrate out of the sanctuaries to other areas and provide additional shellfishing opportunities for the public. This project is based on past projects in Southampton and Shelter Island that have proven successful in restoring shellfish and would include the Town partnering with other organizations such as The Nature Conservancy and Cornell Cooperative Extension.

TGA (Terry, Gillispie & Alford) Easement Wetland Restoration

This 8 acre parcel located on Rt. 25 in Orient is owned by the Peconic Land Trust. Ditched tidal wetland could be remediated by "plugging" or filling ditches. Freshwater wetlands are being invaded by Phragmites which needs to be removed.

B. Southampton

Davis Creek Wetland Restoration

Significant assessment and conceptual design for this project was outlined in "Ecological Restoration and Enhancement Potential of Southampton Town-Owned Tidal Wetlands", Pickerell 1995, completed for the Town of Southampton. Significant volumes of dredge material filled in historic wetlands. Dredged material needs to be excavated and removed off-site; site must be re-graded and re-planted. Will re-create historic tidal marsh (high and low marsh) and open water areas.

Iron Point Wetland Restoration

The overall purpose of this project would be to restore tidal flow and historical tidal wetlands landward of earthen dikes located on 141 acres of town owned preserved land along the Peconic River and Reeves Bay. This would require excavating at least two cuts within the dike to allow for tidal flow and flooding to the inland wetlands. Multiple species would benefit from the restoration of the intertidal estuarine ponds and high marsh including black ducks, wading birds, fin fish and shellfish. Owned by the Town of Southampton.

Ligonee Brook Diadromous Fish Passage Restoration

The overall purpose of this project would be to restore water flow, freshwater wetlands, a historic alewife run and American eel passage within Ligonee Brook, which runs from Long Pond to Paynes Creek and Sag Harbor Cove. Proposed restoration activities include the removal of obstructions and other debris, as well as restoring the brook elevations for enhanced water flow. The installation of water control structures, such as fish ladders or a weir, may also be included. Prior to any work being conducted, a detailed engineering report must be prepared to ensure the maintenance of sufficient pond elevations, as well as the hydrological balance of the Long Pond Greenbelt watershed. This project would benefit the alewife and American eel. This project has strong local community support via the Friends of the Long Pond Greenbelt and the Lakes and Ponds Association. The not-for-profit Friends of the Long Pond Greenbelt have asked the Trustees and the Town in the past to restore this area, and have also worked as volunteers and stewards.

*Recommended to receive PEP funded Conceptual Designs.

North Sea/Alewife Creek Diadromous Fish Passage Restoration

The overall purpose of this project would be to maintain and enhance a significant Alewife run. Proposed enhancement activities include the removal of obstructions to water flow and associated debris, as well as continued protection and enhancement of freshwater wetlands and adjacent areas. The river otter would also benefit from this project. Owned by the Town of Southampton.

Shinnecock Grassland Restoration

Primary work would consist of mowing and cutting of woody vegetation and weedy species. Annual maintenance, possibly including prescribed burns, may be required in the future. Owned by the Nature Conservancy.

Woodhulls Pond/Wildwood Lake Diadromous Fish Passage Restoration

The overall purpose of this project would be to restore alewife and American eel passage. Proposed restoration activities include restoring water flow and installing fish ladders, along the Little River, from Woodhulls Pond to Wildwood Lake.

C. East Hampton

Accabonac Creek Hard Clam/American Oyster Enhancement/Restoration

This popular shellfishing creek covers approximately 320 acres. Hard clams and oysters are the two shellfish species most regularly harvested commercially and recreationally in East Hampton Town. Local baymen partially depend on income derived from these species. In addition, their availability as a recreational take is important to the town's traditions of gathering for sustenance and its related envirocentric seasonal economy. Consequently there is significant stress on self sustaining populations of both species. Shellfish enhancement can act as a buffer against excessive depletion. Several million seed of each species would be grown through a season by staff of the East Hampton Town Shellfish Hatchery. Spawns and larval/early juvenile rearing would begin in late winter in the hatchery, followed by additional grow-out phases in Three Mile Harbor nursery and Napeague Harbor field grow out systems. In the fall, seed would be apportioned by harbor and seeded to natural beds. A portion of the clam crop would be held over the winter and seeded to the wild the following fall after an additional season of growth. Plentiful and available shellfish have been defining goals of the Peconic Estuary Program. A three year project would be expected to cost in the neighborhood of fifty thousand dollars a year per harbor in combined grant and matching funds. This is a component of a large, comprehensive town-wide shellfish restoration project encompassing Accabonac Creek, Three Mile Harbor, Napeague Harbor and Lake Montauk.

Accabonac Harbor Phragmites Eradication

This site contains approximately 20 acres of Phragmites. Most of the work is needed on the southern edge of the Harbor which once supported an expansive tidal marsh, and some smaller infestations on the northern side. Multiple years of cutting is required for natural marsh vegetation to replace Phragmites.

Accabonac Harbor Wetland Restoration

Several tidal wetland pockets (approximately 2.5 acres) need to be cleared of debris, have Phragmites removed, and replanted with native salt marsh vegetation. A portion of this work has been completed.

Alewife Brook Alewife Access and Habitat Enhancement

Alewife Brook, Alewife Pond and Scoy Pond (freshwater) are linked to Northwest Harbor. Proposed project is to clean out the corridor, remove obstructions, and replace a dilapidated culvert under Alewife Brook Road to support historic alewife run. Significant planning and site work has been completed. Phragmites invasion is choking the connection to Scoy Pond and prohibiting alewife access. This project combines two previously listed sites; Alewife Brook Alewife Access and Alewife Brook Phragmites.

Barnes Meadow Phragmites Eradication

This site contains approximately 5 acres of Phragmites. New York State owned tidal wetland systems served by inlet to Northwest Harbor. The site is immediately southeast of Mile Hill Road.

Culloden Grassland Restoration

Culloden Point was once livestock land and completely covered with Montauk Prairie species. However, only small remnants of the grassland remain. The restoration site is a town owned "reserve area" in a 25 acres subdivision. Portions of this site served as a local dump in the 1940s and 1950s. Partial restoration work was completed in 2000.

Fort Pond Phragmites Eradication

Land locked groundwater Pond historically opened to Fort Pond Bay. Approximately 5 acres of Phragmites have infiltrated the wetland pockets surrounding the Pond. Phragmites persists by the corner of Second House Road and Industrial Road. Purple Loosestrife is also present.

Fort Pond Wetland Restoration

Land locked groundwater fed pond historically opened to Fort Pond Bay. Several freshwater wetland pockets (totaling approximately 10 acres) on north and south shores need to be regraded and re-planted; debris removal may also be necessary.

Fresh Pond Circulation Enhancement

A small shallow inlet connects Fresh Pond to Napeague Bay. The Pond supports significant fish and bird resources, though Phragmites has moved in. The Pond has also been closed to shellfishing, due to high pathogen concentrations. Increased tidal exchange, achieve through dredging of this pond, is proposed. This Pond is not used by boaters and maintenance navigational dredging is not proposed.

Fresh Pond Phragmites Eradication

A small shallow inlet connects Fresh Pond to Napeague Bay. Approximately 5 acres of Phragmites is present near the inlet and Alberts Landing Road. Some stands are so dense that re-planting certain sections is likely needed. This project should be done in concert with the "Fresh Pond Circulation Enhancement" to increase the inflow of saline waters to control Phragmites.

Lake Montauk Alewife Access and Habitat Enhancement

Restore access to Stepping Stones Pond (southern end of the Pond) by replacing an undersized impassable culvert from Big Reed Pond (northeast top of Pond by Montauk airport) by replacing and clearing out the connection.

Lake Montauk Eelgrass Restoration

Lake Montauk, once completely freshwater is now tidal, and connected to Block Island Sound by a federally maintained jetty-stabilized channel. Lake Montauk historically supported a vast eelgrass bed encompassing much of the entire waterbody.

Lake Montauk Hard Clam/American Oyster Enhancement/Restoration

This popular shellfishing harbor covers approximately 1000 acres. Hard clams and oysters are the two shellfish species most regularly harvested commercially and recreationally in East Hampton Town. Local baymen partially depend on income derived from these species. In addition, their availability as a recreational take is important to the town's traditions of gathering for sustenance and its related envirocentric seasonal economy. Consequently there is significant stress on self sustaining populations of both species. Shellfish enhancement can act as a buffer against excessive depletion. Several million seed of each species would be grown through a season by staff of the East Hampton Town Shellfish Hatchery. Spawns and larval/early juvenile rearing would begin in late winter in the hatchery, followed by additional grow-out phases in Three Mile Harbor nursery and Napeague Harbor field grow out systems. In the fall, seed would be apportioned by harbor and seeded to natural beds. A portion of the clam crop would be held over the winter and seeded to the wild the following fall after an additional season of growth. Plentiful and available shellfish have been defining goals of the Peconic Estuary Program. A three year project would be expected to cost in the neighborhood of fifty thousand dollars a year per harbor in combined grant and matching funds. This project is a component of a large, comprehensive town-wide shellfish restoration project encompassing Accabonac Creek, Three Mile Harbor, Napeague Harbor and Lake Montauk.

Lake Montauk Phragmites Eradication

Lake Montauk, once completely freshwater is now tidal, and connected to Block Island Sound by a federally maintained jetty-stabilized channel. Phragmites has begun to invade several of the wetland fringe marshes around the Lake. Project involves removing approximately 3 acres of Phragmites.

Lake Montauk Wetland Restoration

Lake Montauk, once completely freshwater is now tidal, and connected to Block Island Sound by a federally maintained jetty-stabilized channel. Approximately 4 acres of disturbed fringe marsh, at various locations around the waterbody needs to be restored. These disturbed and filled wetlands must be replanted with native wetland species.

Little Northwest Creek Phragmites Eradication

The small creek, which supports significant habitat, is surrounded by tidal wetlands; some of which are grid ditched. Approximately 15 acres of Phragmites are targeted for removal.

Napeague Eelgrass Restoration

Napeague Harbor currently supports eelgrass. The Town of East Hampton has established a clearly marked "eelgrass sanctuary" to limit physical disturbance. Restoration, via seeding, at another site in the Harbor is probable.

Napeague Harbor Bay Scallop Restoration

This harbor of almost 1000 acres has been virtually devoid of bay scallops since the brown tides of the mid 1980s to mid 1990s. Recent work carried out in the Peconic Estuary by the NYSDEC, Long Island University, Cornell Cooperative Extension, The Nature Conservancy and the East Hampton Town Shellfish Hatchery has provided background data on techniques used to establish bay scallop spawner sanctuaries in an effort to provide dense concentrations of reproductively mature adult scallops with the goal of reestablishing self sustaining populations. Using these techniques, the Shellfish Hatchery and the Town Trustees are currently engaged in a *Three Year Bay Scallop Restoration Project (2008-2010)* in this and another harbor, partially funded by Suffolk County. This project continues this work beyond 2010. 300,000 scallops are grown each year, held overwinter and seeded into three sanctuary sites in the spring. Evaluations of scallop survival and gonad index within the sanctuaries and spatfall throughout the harbors have been carried out in the current project and will continue to be carried out in any follow-up work, tracking progress over several years. By using identical methods, evaluation results have been and will continue to be comparable to that being documented by Cornell and LIU in scallop restoration work elsewhere in the Estuary. Macroalgae and seagrass habitat quality and quantity is evaluated in consultation

with Cornell Cooperative Extension. Return of viable bay scallop populations to local waters as the expected benefit is one that is universally desired and a major goal of the Peconic Estuary Program. A three year project would be expected to cost in the neighborhood of fifty thousand dollars a year per harbor in combined grant and matching funds. Component of a large, comprehensive town-wide shellfish restoration project encompassing Accabonac Creek, Three Mile Harbor, Napeague Harbor and Lake Montauk.

Napeague Harbor Circulation Enhancement

Napeague Harbor is 938 acres in size. It is one of two Peconic Estuary tidal embayments that have healthy eelgrass beds in East Hampton. It has a mostly sandy bottom and two inlets, east and west, that connect to the Napeague Bay portion of the Estuary. The east inlet was opened in 2006 and again in 2008, after which an eelgrass bed sprang back on the eastern shore. The east inlet was historically the most important inlet and in earlier days, the only inlet connecting to the Estuary. It needs to be maintained to its former status, otherwise the historical circulation patterns within the Harbor will be lost and critical eelgrass habitat will degrade, again. The Harbor was formerly the largest winter founder rookery in East Hampton Township. In 2008, the Town Trustees marked one of the surviving eelgrass bed with buoys and declared it an eelgrass sanctuary for species restoration efforts, including winter founder and bay scallops. The Town is currently engaged in an intensive effort to restore bay scallops and winter flounder as breeders in the Harbor because Napeague Harbor is recognized to be the Town's most suitable habitat. Additionally, the Town's shellfish grow-out rafts are situated on the edge of the east channel and when it closed, growth of multiple species of shellfish seed that were housed in the racks, including scallops, ovsters, and hard clams, almost came to a halt. For all these reasons, the Town concluded that the continued restoration and protection of critically stressed species, such as eelgrass, flounder and bay scallops requires enhanced water circulation in Napeague Harbor via the east channel. Sand will be used to rebuild beaches and dunes which serve as piping plover and tern breeding grounds. *Recommended to receive PEP funded Conceptual Designs.

Napeague Harbor Hard Clam/American Oyster Enhancement/Restoration

This popular shellfishing harbor covers approximately 1000 acres. Hard clams and oysters are the two shellfish species most regularly harvested commercially and recreationally in East Hampton Town. Local baymen partially depend on income derived from these species. In addition, their availability as a recreational take is important to the town's traditions of gathering for sustenance and its related envirocentric seasonal economy. Consequently there is significant stress on self sustaining populations of both species. Shellfish enhancement can act as a buffer against excessive depletion. Several million seed of each species would be grown through a season by staff of the East Hampton Town Shellfish Hatchery. Spawns and larval/early juvenile rearing would begin in late winter in the hatchery, followed by additional grow-out phases in Three Mile Harbor nursery and Napeague Harbor field grow out systems. In the fall, seed would be apportioned by harbor and seeded to natural beds. A portion of the clam crop would be held over the winter and seeded to the wild the following fall after an additional season of growth. Plentiful and available shellfish have been defining goals of the Peconic Estuary Program. A three year project would be expected to cost in the neighborhood of fifty thousand dollars a year per harbor in combined grant and matching funds. This project is a component of a large, comprehensive town-wide shellfish restoration project encompassing Accabonac Creek, Three Mile Harbor, Napeague Harbor and Lake Montauk.

Napaegue Phragmites Eradication

This site is one of the largest wetlands in the Town of East Hampton with many scattered strands of Phragmites. Controlling the small strands will prevent spreading. Approximately 3 acres of Phragmites should be removed.

Northwest Creek Phragmites Eradication

Extensively ditched tidal wetlands line the majority of the Creek. The ditches drain salt water from the marsh after flood tides, allowing Phragmites to move-in. It is estimated at 10 aces in size. Some of the ditched have been plugged.

Three Mile Harbor Bay Scallop Restoration

This harbor of almost 1000 acres has been virtually devoid of bay scallops since the brown tides of the mid 1980s to mid 1990s. Recent work carried out in the Peconic Estuary by the NYSDEC, Long Island University, Cornell Cooperative Extension, The Nature Conservancy and the East Hampton Town Shellfish Hatchery has provided background data on techniques used to establish bay scallop spawner sanctuaries in an effort to provide dense concentrations of reproductively mature adult scallops with the goal of reestablishing self sustaining populations. Using these techniques, the Shellfish Hatchery and the Town Trustees are currently engaged in a Three Year Bay Scallop Restoration Project (2008-2010) in this and another harbor, partially funded by Suffolk County. This project continues this work beyond 2010. 300,000 scallops are grown each year, held overwinter and seeded into three sanctuary sites in the spring. Evaluations of scallop survival and gonad index within the sanctuaries and spatfall throughout the harbors have been carried out in the current project and will continue to be carried out in any follow up work, tracking progress over several years. By using identical methods, evaluation results have been and will continue to be comparable to that being documented by Cornell and LIU in scallop restoration work elsewhere in the estuary. Macroalgae and seagrass habitat quality and quantity is evaluated in consultation with Cornell Cooperative Extension. Return of viable bay scallop populations to local waters as the expected benefit is one that is universally desired and a major goal of the Peconic Estuary Program. A three year project would be expected to cost in the neighborhood of fifty thousand dollars a year per harbor in combined grant and matching funds. Component of a large, comprehensive town-wide shellfish restoration project encompassing Accabonac Creek, Three Mile Harbor, Napeague Harbor and Lake Montauk.

Three Mile Harbor Eelgrass Restoration

This harbor is the largest tidal embayment in the Town of East Hampton and connected to Gardiners Bay. Three Mile Harbor once supported a significant eelgrass population. Direct and indirect human disturbance from boating, in conjunction with other multiple stressors, has affected the health and extent of this beds. Restoration is necessary.

Three Mile Harbor Hard Clam/American Oyster Enhancement/Restoration

This popular shellfishing harbor covers approximately 1000 acres. Hard clams and oysters are the two shellfish species most regularly harvested commercially and recreationally in East Hampton Town. Local baymen partially depend on income derived from these species. In addition, their availability as a recreational take is important to the town's traditions of gathering for sustenance and its related envirocentric seasonal economy. Consequently there is significant stress on self sustaining populations of both species. Shellfish enhancement can act as a buffer against excessive depletion. Several million seed of each species would be grown through a season by staff of the East Hampton Town Shellfish Hatchery. Spawns and larval/early juvenile rearing would begin in late winter in the hatchery, followed by additional grow-out phases in Three Mile Harbor nursery and Napeague Harbor field grow out systems. In the fall, seed would be apportioned by harbor and seeded to natural beds. A portion of the clam crop would be held over the winter and seeded to the wild the following fall after an additional season of growth. Plentiful and available shellfish have been defining goals of the Peconic Estuary Program. A three year project would be expected to cost in the neighborhood of fifty thousand dollars a year per harbor in combined grant and matching funds. This project is a component of a large, comprehensive town-wide shellfish restoration project encompassing Accabonac Creek, Three Mile Harbor, Napeague Harbor and Lake Montauk.

Three Mile Harbor Phragmites Eradication

Largest tidal embayment in the Town of East Hampton and connected to Gardiners Bay. Wetlands are threatened by Phragmites, particularly in association with freshwater feeds. Phragmites must be controlled, and native species are expected to re-vegetate. Most intense infestations are located near Tanbark Creek and Hands Creek.

D. Shelter Island

Coecles Harbor Eelgrass Revegetation

This project involves working in cooperation with Cornell Cooperative Extension in expanding eelgrass beds. Coecles Harbor has some of the last remaining beds on the East End and it seems like a logical location to expand. The eelgrass is vital to the Town's shellfish populations.

Shell Beach Revegetation

The Town obtained a DEC permit to repair Shell Beach after severe damage in a 2006 storm. FEMA and SEMO work is complete and ribbon cutting was held on 5/18/09. Revegetation is critical to maintaining this beach and vital to comply with the DEC recommendations. *Recommended to receive PEP funded Conceptual Designs.

Sposato Property- Phragmites Eradication

This 6 acre parcel was purchased by the Town and County with Community Preservation (2%) Funds. It has several hundred feet on Fresh Pond and is directly across Midway Road from Dickerson Creek. This important property has significant invasive Phragmites and the Town is seeking assistance with removal.

E. Riverhead

Bay Woods Phragmites Eradication

This site lies south of Peconic Bay Blvd. off of Leafy Way. A large tidal pond connection to the Bay has shoaled over. The Pond is stagnant and becoming a Phragmites patch. Opening the connection and restoring tidal flow should naturally control the situation and remove nuisance Phragmites. Less than approximately 3 acres of Phragmites. Privately owned.

Broad Cove Phragmites Eradication

Project site is south of Hubbard Avenue and east of Route 105 north of Terrys Creek. 10 acres of this 95 acre parcel needs to be restored. Various sections were diked and bermed with culverts as part of an former duck farm operation. One culvert is no longer providing tidal flushing. Several stagnant pools have resulted in heavy Phragmites growth. Flow/flushing must be restored.

Browns Point Phragmites Eradication

This proposed project is approximately 15-20 acres and is located both north and south of Peconic Bay Blvd., about 1500ft west of Laurel Lane. While the southern wetland is in good shape, Phragmites has invaded the upland edges. The seaward end has higher edges (possibly dredged material) and is drained by an inlet stream with shoaling history. The north side is solid Phragmites. The culvert under the road has collapsed and needs to be replaced to restore flow. Privately owned.

East Creek Phragmites Eradication

This site is located on Peconic Bay Blvd at Town Beach boat ramp area. Entire open space parcel is about 38 acres, 1-2 is freshwater wetlands. Culvert under Peconic Bay Blvd appears to have collapsed. Phragmites has invaded the freshwater areas to the north and some of the tidal areas. Drainage improvement (culverts) would yield considerable flushing capacity.

Edwards Ave Diadromous Fish Passage Restoration (Peconic River, Phase IV)

Several dams were installed along the Peconic River during the Industrial Revolution; thereby cutting off historically known and strong diadromous fish usage of the Peconic River. Alewife and eel utilized the Peconic River as feeding, spawning, and maturation habitat. Dramatic declines in diadromous species population have been witnessed along the Atlantic coast, mainly due to insufficient habitat. A permanent fish passage structure is needed at the Edwards Avenue Dam during the planned reconstruction of the dam. Funding has been appropriated by NYSDEC and the project has gone through planning and design phases, and is currently in permitting. An additional 2 miles of river and 35 acres of habitat will permanently be restored. When combined with "Grangebel Park Diadromous Fish Passage Restoration (Peconic River, Phase I)", "Upper Mills Diadromous Fish Passage Restoration (Peconic River, Phase II)", and "Forge Road/Peconic Lake Diadromous Fish Passage Restoration (Peconic River, Phase III)", 7 miles of river and 206 acres of habitat will permanently be restored. Owned by NYSDEC.

Forge Rd/Peconic Lake Diadromous Fish Passage Restoration (Peconic River, Phase III)

Several dams were installed along the Peconic River during the Industrial Revolution; thereby cutting off historically known and strong diadromous fish usage of the Peconic River. Alewife and eel utilized the Peconic River as feeding, spawning, and maturation habitat. Dramatic declines in diadromous species population have been witnessed along the Atlantic coast, mainly due to insufficient habitat. A permanent fish passage structure is needed at the Forge Road Dam. This project will re-open the expansive Peconic Lake to diadromous fish species. No funding has been secured to support design or final construction (approx \$75,000 needed to support final design and \$600,000 needed to support construction). An additional 2 miles of river and 107 acres of habitat will permanently be restored. When combined with "Grangebel Park Diadromous Fish Passage Restoration (Peconic River, Phase I)" and "Upper Mills Diadromous Fish Passage Restoration (Peconic River, Phase II)", 5 miles of river and 171 acres of habitat will permanently be restored. Owned by the Town of Riverhead.

*Recommended to receive PEP funded Conceptual Designs.

Grangebel Park Diadromous Fish Passage Restoration (Peconic River, Phase I)

Several dams were installed along the Peconic River during the Industrial Revolution; thereby cutting off historically known and strong diadromous fish usage of the Peconic River. Alewife and eel utilized the Peconic River as feeding, spawning, and maturation habitat. Dramatic declines in diadromous species population have been witnessed along the Atlantic coast, mainly due to insufficient habitat. A temporary Alaskan Steep Pass ladder has been installed in the Grangebel Park North Spillway since 2000, but a permanent fish passage structure (able to pass eels and less maintenance required), is needed in the Grangebel Park South Spillway. Approximately 1.5 miles of river and 24 acres of habitat will permanently be restored. Nearly \$1million of funding has been awarded and secured to support this project. Installation of a permanent rock ramp/rock riffle is expected in the Summer of 2009. Owned by the Town of Riverhead.

Gravel Pit (Dog Ponds) Phragmites Eradication

This project is located on the west side of Wading River-Manorville Road, about 1500 feet south of Shultz Rd. The parcel is owned by the NYSDEC. Sedimentation problems and invasive species, Phragmites, taking over. Approximately 3-4 acres. Publicly owned.

Grumman Phragmites Eradication

Southeast corner of 25 and Wading River Manorville Road. The site is over 3,000 acres, and approximately 3 acres could be restored. Freshwater wetland is extensively covered by Phragmites. Riverhead Town owned.

Indian Island Tidal Wetland Restoration

Dredging of nearby creeks in the 1940s-1970s accounted for nearly 1 million cubic yards of dredge material being placed over 54 acres at Indian Island County Park- wiping out an entire tidal wetland ecosystem. The site provides little if any ecological benefit- much of it is completely un-vegetated.

Restoration work needed to: re-introduce tidal flow; re-grade to proper tidal wetland elevations; create a series of ponds and creeks to provide a mix of habitat; re-plant with native vegetation; and, remove and dispose of all dredge material off-site. Several restoration sites should be considered: one site re-connecting tidal flow to Terry's Creek (approx 7 acres); one site in the middle of the Park (approx 7 acres), and one site re-connecting tidal flow to Sawmill Creek (approx 7 acres). Approximately 21 acres of tidal wetland habitat could be restored. Approximate cost: \$10 million (Terry's Creek is estimate at approx \$1.5 million)

Linns Pond Phragmites Eradication

Located north of the intersection of Manorville Road and Line Road. North and south ends of the freshwater pond are infested with Phragmites. Removal and replacement of native vegetation is necessary. Surrounding area is mostly publicly held open space. Whole pond is about 10-15 acres, 3-5 acres of restoration needed.

Peconic Edwards Phragmites Eradication

Approximately 4-5 acres of Phragmites and Japanese knotweed lines the river's edge. Located at or near the NYSDEC Edwards Ave. boat launch site.

Peconic Seep Phragmites Eradication

Located on the north side of West Main Street about 2000 feet west of Raynor Avenue. A freshwater stream and wetlands, which lead to the Peconic River are the site of a former duck farm (between Main Street and Long Island Railroad tracks). A Suffolk County Department of Public Works drainage basin at the northern portion may suggest some role of urban runoff the invasion. Heavy, 30 acre, Phragmites infestation.

Peconic Upper Mills Riverine Restoration

Near the NYSDEC Upper Mills access site. Dam owned by and access road leads to Long Island Power Authority substation. Shoreline infested with invasive species, mainly Japanese knotweed. Removal and control necessary. About 1 acre.

Reeves Creek Phragmites Eradication

Creek drainage to the north above Peconic Bay Blvd. supports a few patches of Phragmites. Area on east side of creek was a former dredge material placement site and is solid Phragmites. Removal of Phragmites and dredge material. 2-3 acres. Private and publicly owned underwater lands.

Terry Creek Phragmites Eradication

Generally the area upstream of Broad Cove beginning at Long Island Railroad tracks to the intersection of Rte. 58 and Rte. 25. The culvert under LIRR/Hubbard Ave must be repaired

Tidal Peconic Phragmites Eradication

The north shore of the tidal Peconic River is lined with Phragmites, especially the southern edge of Suffolk County Indian Island County Park and Indian Island County Golf Course. Removal and replanting may be necessary. Original disturbance may be due to the placement of dredged material and freshwater inputs.

Tidal Sawmill Creek Phragmites Eradication

Tidal section of Sawmill Creek is lined extensively with Phragmites. Removal and possible re-planting needed. Both the north and south shores of the Creek, east and west of the Route 105 bridge need to be restored.

Upper Mills Diadromous Fish Passage Restoration (Peconic River, Phase II)

Several dams were installed along the Peconic River during the Industrial Revolution; thereby cutting off historically known and strong diadromous fish usage of the Peconic River. Alewife and eel utilized the

Peconic River as feeding, spawning, and maturation habitat. Dramatic declines in diadromous species population have been witnessed along the Atlantic coast, mainly due to insufficient habitat. A permanent fish passage structure is needed at the Upper Mills Dam and USGS Gauge; likely a bypass channel and step pool. Conceptual designs have been secured by the Town of Riverhead. Limited funding has been secured to support design and final construction (additional \$40,000 needed to support final design and an additional \$400,000 is needed to support construction). An additional 2 miles of river and 40 acres of habitat will permanently be restored. When combined with "Grangebel Park Diadromous Fish Passage Restoration (Peconic River, Phase I)", 3 miles of river and 64 acres of habitat will permanently be restored. LIPA/National Grid owns the dam where installation of a fish passage structure is required.

Upper Sawmill Creek Phragmites Eradication

Sawmill Creek supports a large freshwater wetland/stream system, largely surrounded by commercial development along Route 58 and 43. Whole area is in excess of 100 acres.

Warner Duck Farm Phragmites Eradication

This former duck farm (30 acres) is located at 1965 River Road. Development rights have been sold to the Pine Barrens Commission. The site contains former duck lagoons and freshwater wetlands, which likely at one point may have drained into Forge Pond/Peconic Lake. The lagoons are very densely overgrown with Phragmites. Former duck waste may need to be removed. 9-10 acres need to be restored.

Table 4: Peconic Estuary Program Habitat Restoration Plan Sites

Alphabetical by Town with Coordinates

			1.0110		RE	-LISTING		
SITE NAME	HABITAT TYPE	LAI	LONG	Not Initiated	In-Progress	Partially Completed	Attempted	NEW
	•							
Soutbold								
Arshamomaque Pond Preserve Phragmites Eradication	Phragmites Control	41.0794	-72.4015					х
Arshamomaque Preserve Phragmites Eradication	Phragmites Control	41.0926	-72.394					x
Budds Pond Wetland Restoration	Wetland	41.0753	-72.4054					х
Cedar Beach Phragmites Eradication	Phragmites Control	41.0352	-72.3899	х				
Downs Farm Preserve and Downs Creek Phragmites Eradication	Phragmites Control	40.9976	-72.4946					x
Fleet's Neck Wetland Restoration	Wetland	41.0081	-72.4618	x				
Hallock's Bay Eelgrass Sanctuary	Eelgrass	41.1357	-72.2742					x
Husing Pond Phragmites Eradication	Phragmites Control	40,9764	-72.539					x
Lake Marion Phraemites Eradication	Phragmites Control	41.1239	-72.3348		х			
Narrow River Phraemites Eradication	Phraemites Control	41.1504	-72.2778					x
Nassau Point Wetland Restoration	Wetland	41.0157	-72,4496	x				
Pipes Cove Phraemites Eradication	Phraemites Control	41.0918	-72 381					v
Silver Lake/Moore's Drain Alewife Access*	Diadromous Fish Passage	41 1063	-72 3698					v
Southold Shallfish Spawner Sanctuary Network	Shallfieh	41 1329	-72 3143					v
TGA Easement Wetland Restoration	Wetland	41 1462	-72.2551	x				~
TOT Experient wetand Restonation	Wething	11.11102	/112001	a				
Court and the								
Devic Creat Watland Restoration	Watland	40.0462	72 41 20		1	1	1	
Davis Creek wenand Restoration	weiland	40.9462	-/2.4139	X				
Fon Point wedatid Restoration	Disdeen Fish Deserve	40.9160	-/2.0140					x
Ligonee Brook Diadromous Fish Passage Restoration*	Diadromous Fish Passage	40.9865	-72.2985	-				x
North Sea/Alewife Creek Diadromous Fish Passage Enhancement	Diadromous Fish Passage	40.9287	-/2.4154					x
Shinnecock Grassland Restoration	Grassland	40.8914	-/2.4501			X		
Woodhulls Pond/Wildwood Lake Diadromous Fish Passage Restoration	Diadromous Fish Passage	40.912	-72.6675					х
East Hampton	1		1	1	1	1		
Accabonac Creek Hard Clam/American Oyster Enhancement/Restoration	Shellfish	41.0283	-72.1413					х
Accabonac Harbor Phragmites Eradication	Phragmites Control	41.0184	-72.1394		x			
Accabonac Harbor Wetland Restoration	Wetland	41.0215	-72.1486		x			
Alewife Brook Alewife Access and Habitat Enhancement	Diadromous Fish Passage	41.0288	-72.2298	х				
Barnes Meadow Phragmites Eradication	Phragmites Control	41.0122	-72.2437	x				
Culloden Grassland Restoration	Grassland	41.0668	-71.9541			x		
Fort Pond Phragmites Eradication	Phragmites Control	41.0406	-71.9609		х			
Fort Pond Wetland Restoration	Wetland	41.0443	-71.9575		х			
Fresh Pond Circulation Enhancement	Flushing/Circulation	40,9956	-72.1129	х				
Fresh Pond Phraemites Eradication	Phraemites Control	40.9962	.72.1205	x				
Lake Montauk Alewife Access and Habitat Enhancement	Diadromous Fish Passage	41.0718	-71 9199	x				
Lake Montauk Fielorase Restoration	Falames	41.06	-71.92		v			
Lake Montauk Hard Clam/American Ovster Enhancement/Restoration	Shellfich	41.0528	-71.924		A			v
Lake Montauk Plane Giani/ American Oyster Emilancement/Restoration	Phenomitos Control	41.0563	71.0276		v			^
Lake Montauk Finaginites Enadication	Wotland	41.0505	-/1.92/0	1	x			
Lake Mohlauk Welahu Restoration	Wettand	41.0002	-/1.9559		X			
Little Northwest Creek Phragmites Eradication	Phragmites Control	41.0013	-/2.26/4	-	x			
Napeague Eelgrass Restoration	Eelgrass	41.0071	-72.0482			X		
Napeague Harbor Bay Scallop Restoration	Shellfish	41.0044	-72.0647					x
Napeague Harbor Circulation Enhancement*	Flushing/Circulation	41.0177	-72.0554					х
Napeague Harbor Hard Clam/American Oyster Enhancement/Restoration	Shellfish	41.0206	-72.0515					х
Napaegue Phragmites Eradication	Phragmites Control	41.0037	-72.0373	x				
Northwest Creek Phragmites Eradication	Phragmites Control	41.0014	-72.2523	х				
Three Mile Harbor Bay Scallop Restoration	Shellfish	41.0062	.72.1878					х
Three Mile Harbor Eelgrass Restoration	Eelgrass	41.0165	-72.1898				x	
Three Mile Harbor Hard Clam/American Oyster Enhancement/Restoration	Shellfish	41.0274	-72.1839					х
Three Mile Harbor Phragmites Eradication	Phragmites Control	41.0171	-72.2025		x			
Shelter Island								
Coecles Harbor Eelgrass Revegetation	Eelgrass	41.081	-72.314					x
Shell Beach Revegetation*	Beach/Dune	41.0428	-72.343					х
Sposato Property- Phragmites Removal	Phragmites Control	41.05528	-72.33738					x
Riverhead								
Bay Woods Phragmites Eradication	Phragmites Control	40.9338	-72.6044	x				
Broad Cove Phraemites Eradication	Phragmites Control	40.932	-72.6233	x				
Browns Point Phraemites Eradication	Phragmites Control	40.9495	-72.5601	x				
East Creek Phraemites Eradication	Phraemites Control	40.9456	-72.5697	x				
Edwards Ave Diadromous Fish Passage Restoration (Peconic River Phase IV)	Diadromous Fish Passage	40.9055	-72 7431					v
Easter Bd/Passeria Laba Diadromous Eish Passage Restoration (Passeria Pirror, Phase III)*	Diadromous Fish Passage	40.0127	72.7132					n v
Connected Parts Diadromous Fish Passage Restoration (Peconic River, Phase II)	Diadromous Fish Passage	40.9127	-72.7132	1				A V
Craugeber Fark Diatronhous Fish Fassage Restoration (Peconic River, Phase 1)	Disauromous risii rassage	40.2132	-72.0032	+				x
Gravel Pit (Dog Ponds) Phragmites Eradication	Phragmites Control	40.892/	-72.8235	x				
Grumman Prinagmites Eradication	Phragmites Control	40.9141	-/2.8326	x				
Indian Island Lidal Wetland Restoration	wetland	40.9281	-/2.6253	 				х
Linns Pond Phragmites Eradication	Phragmites Control	40.8896	-72.8138	x				
Peconic Edwards Phragmites Eradication	Phragmites Control	40.905	.72.7934	x				ļ
Peconic Seep Phragmites Eradication	Phragmites Control	40.9175	-72.6816	x				
Peconic Upper Mills Riverine Restoration	Riverine	40.9142	-72.6874	x				
Reeves Creek Phragmites Eradication	Phragmites Control	40.9379	-72.6086	x				
Terry Creek Phragmites Eradication	Phragmites Control	40.9319	-72.6318	x				
Tidal Peconic Phragmites Eradication	Phragmites Control	40.922	-72.6232	x				
Tidal Sawmill Creek Phragmites Eradication	Phragmites Control	40.9243	-72.6333	x				
Upper Mills Diadromous Fish Passage Restoration (Peconic River, Phase II)	Diadromous Fish Passage	40.9139	-72.6878	1				x
Upper Sawmill Creek Phragmites Eradication	Phragmites Control	40.9324	-72.6586	x				
Warner Duck Farm Phragmites Eradication	Phragmites Control	40.9167	-72.6586	x				

*Recommended to receive PEP funded Conceptual Designs.

Table 5: Peconic Estuary Program Habitat Restoration Plan Sites

Alphabetical by Habitat Type

SITE NAME	TOWN	RE-LISTING		NEW		
STERNE	TOWIN	Not Initiated	In-Progress	Partially Completed	Attempted	TYL:W
D //D			_		_	
Beach Linne Shell Beach Revegetation*	Shelter Island	1	1	r		v
onen benen revegennon	offerter Island					
Diadromous Fish Passage						
Alewife Brook Alewife Access and Habitat Enhancement	East Hampton	х				
Edwards Ave Diadromous Fish Passage Restoration (Peconic River, Phase IV)	Riverhead					x
Forge Rd/Peconic Lake Diadromous Fish Passage Restoration (Peconic River, Phase III)*	Riverhead					x
Lake Montauk Alewife Access and Habitat Enhancement	East Hampton	x				
Ligonee Brook Diadromous Fish Passage Restoration*	Southampton					x
North Sea/Alewife Creek Diadromous Fish Passage Enhancement	Southampton					х
Silver Lake/Moore's Drain Alewife Access*	Southold					х
Upper Mills Diadromous Fish Passage Restoration (Peconic River, Phase II)	Riverhead					x
woodnuus Pond/ wiidwood Lake Diadromous Fish Passage Restoration	Southampton					X
Eelgrass						
Coecles Harbor Eelgrass Revegetation	Shelter Island					х
Hallock's Bay Eelgrass Sanctuary	Southold					х
Lake Montauk Eelgrass Restoration	East Hampton		х			
Napeague Eelgrass Restoration	East Hampton			X	v	
Three blie Harbor Leigrass Restoration	East Hampton				λ	
Flushing/Circulation						
Fresh Pond Circulation Enhancement	East Hampton	х				
Napeague Harbor Circulation Enhancement*	East Hampton					х
Grassland Colleder Conselered Besternier	East Hamatan	1	1		- T	
Culloden Grassland Restoration	East Hampton			x		
Similecock Grassiand Restoration	Southampton			А		
Phragmites Control						
Accabonac Harbor Phragmites Eradication	East Hampton		х			
Arshamomaque Pond Preserve Phragmites Eradication	Southold					х
Arshamomaque Preserve Phragmites Eradication	Southold					х
Barnes Meadow Phragmites Eradication	East Hampton	X				
Broad Cove Phragmites Eradication	Riverhead	x				
Browns Point Phragmites Eradication	Riverhead	x				
Cedar Beach Phragmites Eradication	Southold	х				
Downs Farm Preserve and Downs Creek Phragmites Eradication	Southold					х
East Creek Phragmites Eradication	Riverhead	х				
Fort Pond Phragmites Eradication	East Hampton		x			
Gravel Pit (Dog Ponds) Phragmites Eradication	Riverhead	x				
Grumman Phragmites Eradication	Riverhead	x				
Husing Pond Phragmites Eradication	Southold					х
Lake Marion Phragmites Eradication	Southold		х			
Lake Montauk Phragmites Eradication	East Hampton		х			
Linns Pond Phragmites Eradication	Riverhead	х				
Nanaemue Phraomitee Fradication	East Hampton	v	X			
Narrow River Phragmites Eradication	Southold	~				х
Northwest Creek Phragmites Eradication	East Hampton	х				
Pipes Cove Phragmites Eradication	Southold					x
Sposato Property- Phragmites Removal	Shelter Island					х
Peconic Edwards Phragmites Eradication	Riverhead	x				
Peconic Seep Phragmites Eradication	Riverhead	X				
Terry Creek Phraemites Eradication	Riverhead	x				
Three Mile Harbor Phragmites Eradication	East Hampton	~	х			
Tidal Peconic Phragmites Eradication	Riverhead	х				
Tidal Sawmill Creek Phragmites Eradication	Riverhead	х				
Upper Sawmill Creek Phragmites Eradication	Riverhead	х				
Warner Duck Farm Phragmites Eradication	Riverhead	х				
Riverine						
Peconic Upper Mills Riverine Restoration	Riverhead	x	1			
Shellfish			-			
Accabonac Creek Hard Clam/American Oyster Enhancement/Restoration	East Hampton					x
Lake Montauk Hard Clam/American Oyster Enhancement/Restoration	East Hampton					x
Napeague Harbor Bay Scallop Restoration	East Hampton					x
Southold Shellfish Spawner Sanctuary Network	Southold	1	1			x
Three Mile Harbor Bay Scallop Restoration	East Hampton					x
Three Mile Harbor Hard Clam/American Oyster Enhancement/Restoration	East Hampton					x
Wetland						
Accabonac Harbor Wetland Restoration	East Hampton		x			v
Dudus Fond Wetland Restoration	Southampton	v				x
Fleet's Neck Wetland Restoration	Southold	X				
Fort Pond Wetland Restoration	East Hampton		x			
Indian Island Tidal Wetland Restoration	Riverhead					x
Iron Point Wetland Restoration	Southampton					x
Lake Montauk Wetland Restoration	East Hampton		х			
rvassau Foint Wetland Restoration	Southold	X				

*Recommended to receive PEP funded Conceptual Designs.

Table 6: Peconic Estuary Program Habitat Restoration Plan Sites

Alphabetical by Town Habitat Types

HABITAT TYPE	SITE NAME	RE-LISTING				NEW
		Not Initiated	In-Progress	Partially Completed	Attempted	
Soutbold						
Diadromous Fish Passage	Silver Lake/Moore's Drain Alewife Access*					x
Eelgrass	Hallock's Bay Eelgrass Sanctuary					х
Phragmites Control	Arshamomaque Pond Preserve Phragmites Eradication					х
Phragmites Control	Arshamomaque Preserve Phragmites Eradication					х
Phragmites Control Phragmites Control	Cedar Beach Phragmites Eradication Downs Farm Preserve and Downs Creek Phragmites Eradication	x				x
Phragmites Control	Husing Pond Phragmites Eradication					x
Phragmites Control	Lake Marion Phragmites Eradication		х			
Phragmites Control	Narrow River Phragmites Eradication					x
Phragmites Control	Pipes Cove Phragmites Eradication					х
Shellfish	Southold Shelltish Spawner Sanctuary Network					х
Wetland	Fleet's Neck Wetland Restoration	x				X
Wetland	Nassau Point Wetland Restoration	x				
Wetland	TGA Easement Wetland Restoration	x				
Southampton		1	1	[]		1
Diadromous Fish Passage	Ligonee Brook Diadromous Fish Passage Restoration*	-				х
Diadromous Fish Passage	North Sea/Alewite Creek Diadromous Fish Passage Enhancement	-				x
Grassland	Shinnecock Grassland Restoration			x		л
Wetland	Davis Creek Wetland Restoration	x				
Wetland	Iron Point Wetland Restoration					х
East Hampton			1			
Diadromous Fish Passage	Alewite Brook Alewite Access and Habitat Enhancement	х				
Diadromous Fish Passage	Lake Montauk Alewife Access and Habitat Enhancement	x	v			
Eelgrass	Napeague Eelgrass Restoration	1	~	x		
Eelgrass	Three Mile Harbor Eelgrass Restoration				х	
Flushing/Circulation	Fresh Pond Circulation Enhancement	х				
Flushing/Circulation	Napeague Harbor Circulation Enhancement*					х
Grassland	Culloden Grassland Restoration			x		
Phragmites Control	Accabonac Harbor Phragmites Eradication		х			
Phragmites Control	Earnes Meadow Phragmites Eradication	x	x			
Phragmites Control	Fresh Pond Phragmites Eradication	x	~			
Phragmites Control	Lake Montauk Phragmites Eradication		х			
Phragmites Control	Little Northwest Creek Phragmites Eradication		x			
Phragmites Control	Napaegue Phragmites Eradication	x				
Phragmites Control	Northwest Creek Phragmites Eradication	x				
Phragmites Control Shallfish	Three Mile Harbor Phragmites Eradication		X			N.
Shellfish	Accabonac Creek Hard Clam/American Oyster Enhancement/Restoration					x
Shellfish	Napeague Harbor Bay Scallop Restoration					x
Shellfish	Napeague Harbor Hard Clam/American Oyster Enhancement/Restoration					х
Shellfish	Three Mile Harbor Bay Scallop Restoration					х
Shellfish	Three Mile Harbor Hard Clam/American Oyster Enhancement/Restoration					х
Wetland	Accabonac Harbor Wetland Restoration		x			
Wetland	Fort Pond Wetland Restoration		x			
Wethind	i of i one weather restolation		A			
Shelter Island						
Beach/Dune	Shell Beach Revegetation*					х
Eelgrass	Coecles Harbor Eelgrass Revegetation					х
Phragmites Control	Sposato Property- Phragmites Removal					х
Riverhead						
Diadromous Fish Passage	Edwards Ave Diadromous Fish Passage Restoration (Peconic River, Phase IV)		[x
Diadromous Fish Passage	Forge Rd/Peconic Lake Diadromous Fish Passage Restoration (Peconic River, Phase III)*					x
Diadromous Fish Passage	Grangebel Park Diadromous Fish Passage Restoration (Peconic River, Phase I)					х
Diadromous Fish Passage	Upper Mills Diadromous Fish Passage Restoration (Peconic River, Phase II)					x
Phragmites Control	Bay Woods Phragmites Eradication	x				
Phragmites Control	Broad Cove Phragmites Eradication	x				
Phragmites Control	East Creek Phragmites Eradication	x				
Phragmites Control	Gravel Pit (Dog Ponds) Phragmites Eradication	x				
Phragmites Control	Grumman Phragmites Eradication	x				
Phragmites Control	Linns Pond Phragmites Eradication	х				
Phragmites Control	Peconic Edwards Phragmites Eradication	х				
Phragmites Control	Peconic Seep Phragmites Eradication	x				
Phragmites Control	Reeves Greek Phragmites Eradication	x				
Phragmites Control	Tidal Peconic Phragmites Eradication	x				
Phragmites Control	Tidal Sawmill Creek Phragmites Eradication	x				
Phragmites Control	Upper Sawmill Creek Phragmites Eradication	x				
Phragmites Control	Warner Duck Farm Phragmites Eradication	x				
Riverine	Peconic Upper Mills Riverine Restoration	x				

*Recommended to receive PEP funded Conceptual Designs.

Table 7: Peconic Estuary Program Habitat Restoration Plan Sites

Estimated Project Costs

SITE NAME	HABITAT TYPE	ESTIMATED COST
Southold		
Arshamomaque Pond Preserve Phragmites Eradication	Phragmites Control	\$700,000
Arshamomaque Preserve Phragmites Eradication Budds Pond Wetland Restoration	Phragmites Control Wetland	\$2,000,000
Cedar Beach Phragmites Eradication	Phragmites Control	\$100,000
Downs Farm Preserve and Downs Creek Phragmites Eradication	Phragmites Control	\$500,000
Fleet's Neck Wetland Restoration	Wetland	\$200,000
Hallock's Bay Eelgrass Sanctuary	Eelgrass	TBD
Husing Pond Phragmites Eradication	Phragmites Control	\$400,000
Lake Marion Phragmites Eradication	Phragmites Control	\$2,500,000
Narrow River Phragmites Eradication	Phragmites Control	\$200,000
Nassau Point Wetland Restoration	Wetland	\$300,000
Pipes Cove Phragmites Eradication	Phragmites Control	\$400,000
Southold Shallfish Segurger Sansturger Network	Shallfich	\$130,000 TBD
TGA Easement Wetland Restoration	Wetland	\$500.000
		\$8,350,000
Southampton		
Davis Creek Wetland Restoration	Wetland	\$600,000
Iron Point Wetland Restoration	Wetland	\$500,000
Ligonee Brook Diadromous Fish Passage Restoration*	Diadromous Fish Passage	\$150,000
North Sea/Alewife Creek Diadromous Fish Passage Enhancement	Diadromous Fish Passage	\$20,000
Shinnecock Grassland Restoration	Grassland	\$300,000
Woodhulls Pond/Wildwood Lake Diadromous Fish Passage Restoration	Diadromous Fish Passage	\$2,000,000
East Hamblen		\$3,570,000
Accabonac Creek Hard Clam/American Ovster Enhancement/Restoration	Shellfish	\$50.000
Accabonac Harbor Phraemites Eradication	Phragmites Control	\$2,000,000
Accabonac Harbor Vetland Restoration	Wetland	\$250.000
Alewife Brook Alewife Access and Habitat Enhancement	Diadromous Fish Passage	\$200,000
Barnes Meadow Phragmites Eradication	Phragmites Control	\$500,000
Culloden Grassland Restoration	Grassland	\$54,000
Fort Pond Phragmites Eradication	Phragmites Control	\$1,000,000
Fort Pond Wetland Restoration	Wetland	\$1,000,000
Fresh Pond Circulation Enhancement	Flushing/Circulation	TBD
Fresh Pond Phragmites Eradication	Phragmites Control	\$500,000
Lake Montauk Alewife Access and Habitat Enhancement	Diadromous Fish Passage	\$200,000
Lake Montauk Eelgrass Restoration	Eelgrass	\$30,000
Lake Montauk Hard Clam/American Oyster Enhancement/Restoration	Shellfish	\$50,000
Lake Montauk Phragmites Eradication	Phragmites Control	\$300,000
Lake Montauk Wetland Restoration	Wetland	\$500,000
Little Northwest Creek Phragmites Eradication	Phragmites Control	\$1,500,000
Napeague Eeigrass Restoration	Eeigrass	\$50,000
Napeague Harbor Circulation Enhancement*	Shellinsh Flushing/Circulation	\$50,000 TBD
Napeague Harbor Hard Clam/American Ovster Enhancement/Restoration	Shollfish	\$50,000
Napegue Phraomites Eradication	Phragmites Control	\$300.000
Northwest Creek Phragmites Eradication	Phragmites Control	\$1,000,000
Three Mile Harbor Bay Scallop Restoration	Shellfish	\$50,000
Three Mile Harbor Eelgrass Restoration	Eelgrass	\$30,000
Three Mile Harbor Hard Clam/American Oyster Enhancement/Restoration	Shellfish	\$50,000
Three Mile Harbor Phragmites Eradication	Phragmites Control	\$500,000
		\$10,194,000
Shelter Island	.	r
Coecles Harbor Eelgrass Revegetation	Eelgrass	\$30,000
Shell Beach Revegetation*	Beach/Dune	\$40,000
Sposato Property- Phragmites Removal	Phragmites Control	\$100,000
Riverhead		\$170,000
Bay Woods Phragmites Eradication	Phragmites Control	\$300,000
Broad Cove Phragmites Eradication	Phragmites Control	\$1,000,000
Browns Point Phragmites Eradication	Phragmites Control	\$1,500,000
East Creek Phragmites Eradication	Phragmites Control	\$1,500,000
Edwards Ave Diadromous Fish Passage Restoration (Peconic River, Phase IV)	Diadromous Fish Passage	\$50,000
Forge Rd/Peconic Lake Diadromous Fish Passage Restoration (Peconic River, Phase III)*	Diadromous Fish Passage	\$1,000,000
Grangebel Park Diadromous Fish Passage Restoration (Peconic River, Phase I)	Diadromous Fish Passage	\$1,000,000
Gravel Pit (Dog Ponds) Phragmites Eradication	Phragmites Control	\$500,000
Grumman Phragmites Eradication	Phragmites Control	\$300,000
Indian Island Tidal Wetland Restoration	Wetland	\$10,000,000
Linns Pond Phragmites Eradication	Phragmites Control	\$400,000
Peconic Edwards Phragmites Eradication	Phragmites Control	\$500,000
Peconic Seep Phragmites Eradication	Phragmites Control	\$1,500,000
Reeves Creek Phramites Endication	Phraemites Control	\$200,000
Torey Creak Discourter Englication	Phenomitos Control	\$200,000
Tidal Peconic Phragmites Fradication	Phragmites Control	\$500,000
Tidal Sawmill Creek Phragmites Eradication	Phragmites Control	\$500,000
Upper Mills Diadromous Fish Passage Restoration (Peconic River, Phase II)	Diadromous Fish Passage	\$600.000
Upper Sawmill Creek Phragmites Eradication	Phragmites Control	\$5,000.000
Warner Duck Farm Phragmites Eradication	Phragmites Control	\$1,000,000
		\$29,150,000
Total Cost Estimate for 20	99 PEP Habitat Restoration Plan	\$51,434,000

 Total Cost Estimate for 2009 PEP Habitat Restoration Plan
 \$51,434,000

 *Recommended to receive PEP funded Conceptual Designs.
 Cost estimates are based on updated estimates provided in the 2000 Habitat Restoration Plan and/or knowledge or planning conducted. Generally,
 \$100,000/Wetland acre; \$100,000/Pelgrass acre; \$18,000/Grassland acre; \$12,500/beach/dune acre.

 Cost estimates may or may not include project planning and design costs, and may only include estimated construction/implementation costs.
 Cost estimates may vary based on level of restoration needed at the site and may need adjustment once additional planning and design is completed.

Peconic Estuary Program 2009 PEP Habitat Restoration Plan Site Locations



Appendix A: Update Process Memo



Peconic Estuary Program

SCDHS - Office of Ecology, PEP Program Office, 360 Yaphank Avenue, Suite 2B, Yaphank, NY 11980

- To: Peconic Estuary Habitat Restoration Stakeholders
- Re: Revisiting and Updating the 2000 PEP Habitat Restoration Plan

Date: February 11, 2009

The Peconic Estuary System is home to many valuable and rare habitats, some of which have been severely degraded. Several years ago, with the vision to restore degraded habitats throughout the Peconic Estuary watershed, the Peconic Estuary Program and its Habitat Restoration Workgroup (HRWG) developed a comprehensive "Habitat Restoration Plan for the Peconic Estuary" dated December 15, 2000 (available at: http://peconice.ipower.com/PEPHRP.pdf).

The Peconic Estuary Program Natural Resources Subcommittee (NRS) is requesting your assistance in assessing the status and remaining restoration needs at sites included in the 2000 Plan, and to identify new candidate sites for restoration. Sites may include upland, intertidal, freshwater, or underwater habitats within the Peconic Estuary Program Study Area. It is the goal of the NRS to work with appropriate project leads to implement at least one (1) of these projects within each Town before January 1, 2011.

The NRS will be holding open public meetings in each of the five East End Towns; each meeting dedicated to discussing both previous and newly identified projects within that respective Town.

Meeting Locations and Dates:

East Hampton: Thurs March 19, 2009, 3-5pm- East Hampton Trustees Conf. Room, 267 Bluff Road, Amagansett Riverhead: Tues March 31, 2009, 3-5pm- Riverhead Town Hall Board Room, 200 Howell Ave, Riverhead Southampton: Monday April 6, 2009, 5-7pm- Trustees Room-Town Hall, 116 Hampton Road, Southampton Southold: Thurs April 16, 2009, 4-6pm- Southold Town Hall Board Room, 53095 Route 25, Southold Shelter Island: Thurs April 23, 2009, 3-5pm- Shelter Island Town Hall, 38 North Ferry Road, Shelter Island

Attached is a list of restoration sites included in the 2000 Habitat Restoration Plan, and a new Habitat Restoration Nomination Form (also available at <u>www.peconicestuary.org</u> as a Word document). A separate form should be completed and submitted for each site. If at all possible, completed nomination forms should be submitted before or at the public meetings in the town in which the site is located, and project nominators will be able to present and discuss such sites. Additionally, forms may be submitted for 1 month after the final meeting or by May 22, 2009. The NRS will review all new proposed sites for inclusion in the "2009 Update to the Habitat Restoration Plan for the Peconic Estuary". All hard or electronic copies should be submitted by May 22, 2009 to:

Laura Stephenson Peconic Estuary Program Coordinator NYS Department of Environmental Protection Bureau of Marine Resources 205 N Belle Mead Road, Suite 1 East Setauket, NY 11733 <u>Ibstephe@gw.dec.state.ny.us</u> Fax: 631.444.0474

No dedicated project funding is available at this time for implementing the current or updated plan. However, by selecting at least one (1) site to advance to the conceptual design phase in each of the towns, the NRS and project leads expect to be in a better position to take advantage of future funding opportunities that do arise.

If you have any questions about the process, project description form or other habitat restoration issues, please contact either Laura Stephenson at 631.444.0871 or Wayne Grothe at 631.329.7689 x25.

We look forward to seeing you at these meetings and thank you for your time and effort in support of the Peconic Estuary Program's restoration initiatives.

Sincerely,

Co-chair, PEP Natural Resources Subcommittee

Wayne Grothe

Wayne Grothe Co-chair, PEP Natural Resources Subcommittee

Attachments

Laura Stephenson

Restoration Sites in the Habitat Restoration Plan for the Peconic Estuary, December 15, 2000

(available at: http://peconice.ipower.com/PEPHRP.pdf)

East Hampton Sites:

Habitat Type	Site Name	Keywords
Beach	Sammi's Beach	grade, plant
Shorebird	Hicks Island Plover/Tern	veg_rmv
Alewife	Alewife Brook Alewife Access	dbrs_rmv, inv_rmv
Wetland	Accabonac Harbor Wetlands	dbrs_rmv, grade, plant
Wetland	Fort Pond Wetlands	excav, grade, plant
Alewife	Lake Montauk Alewife Access	dredge, dbr_rmv, inv_rmv
Eelgrass	Northwest Creek Eelgrass	transpl
Grassland	Culloden Grassland	inv_rmv, burn, plant
WQ	Lake Montauk Water Quality	technol
Phrag	Alewife Brook Phragmites	inv_rmv
WQ	Accabonac Harbor Road End	excav, grade, inv_rmv, plant
Phrag	Accabonac Harbor Phragmites	inv_rmv
Eelgrass	Napeauge Eelgrass	transpl
Phrag	Northwest Creek Phragmites	inv_rmv
WQ	Oyster Pond Water Quality	omwm
Eelgrass	Lake Montauk Eelgrass	transpl
WQ	Accabonac Harbor Flushing	technol, dredge
Eelgrass	Accabonac Harbor Eelgrass	transpl
Wetland	Three Mile Harbor Wetlands	grade, plant
Grassland	Fort Hill Cemetery Grassland	inv_rmv, burn
WQ	Fresh Pond Flow	dredge
Phrag	Little NW Creek Phragmites	inv_rmv
Phrag	Fresh Pond Phragmites	inv_rmv, plant, dredge
Phrag	Napeague Phragmites	inv_rmv
Phrag	Barnes Meadow Phragmites	inv_rmv, plant
Phrag	Fort Pond Phragmites	inv_rmv
Wetland	Lake Montauk Wetlands	excav, grade, plant
Eelgrass	Three Mile Harbor Eelgrass	transpl
Phrag	Three Mile Harbor Phragmites	inv_rmv
Phrag	Lake Montauk Phragmites	inv_rmv
Phrag	Hog Creek Phragmites	inv_rmv

Shelter Island Sites:

Habitat Type	Site Name	Keywords	
Wetland	Cedar/Taylor Island Revegetation	hrd_rmv, plant	
Beach	Reel Point	other	
Beach	Wades Beach	fill, plant, excav, dredge	

Southold Sites:

Habitat Type Wetland Wetland Phrag Eelgrass* Wetland Phrag Site Name Nassau Point Fleets Neck Cedar Beach Phragmites Cutchogue TGA Easement Lake Marion

Keywords

excav, grade, plant excav, grade, plant excav, inv_rmv, plant other omwm, inv_rmv dredge, inv_rmv, plant

Riverhead Sites:

Site Name
Tidal Sawmill Creek
East Creek
Peconic Edwards
Gravel Pit (Dog Ponds)
Browns Point
Tidal Peconic
Linns Pond
Peconic Upper Mills
Broad Cove
Bay Woods
Warner Duck Farm
Reeves Creek
Peconic Seep
Grumman
Upper Sawmill Creek
Terry Creek

Keywords

inv_rmv, excav, plant, technol technol, inv_rmv inv_rmv, plant inv_rmv, technol, plant inv_rmv, technol, dbrs_rmv inv_rmv, plant, technol inv_rmv, plant inv_rmv, plant technol, inv_rmv dredge, inv_rmv inv_rmv, excav, plant, dbrs_rmv inv_rmv, technol inv_rmv, excav, technol inv_rmv, technol inv_rmv, excav technol

Southampton Sites:

Habitat Type	Site Name	Keywords
Wetland	Davis Creek Wetlands	grade, omwm, plant
Wetland	Noyack Creek Wetlands	excav, grade
Wetland	Sag Harbor Cove/Paynes Creek	grade, fill, plant
Grassland	Shinnecock Grassland	inv_rmv, burn
Shorebird	Mill Creek Enhancement Project	fill, veg_rmv, plant
Eelgrass	Noyack Creek Eelgrass	transpl
Wetland	Cold Spring Pond Wetlands	excav, dbrs_rmv
Wetland	Upper Sag Harbor Cove Wetlands	fill
Eelgrass	Paynes Creek Eelgrass	transpl
Eelgrass	Upper Sag Harbor Cove Eelgrass	transpl
Eelgrass	Bullhead Bay Eelgrass	transpl
Eelgrass	Sag Harbor Cove Eelgrass	transpl
Wetland	Paynes Creek Enhancement Project	plant
Wetland	North Sea Wetlands	grade, plant
Wetland	Fish Cove Wetland Enhancement	dbrs_rmv
Wetland	North Sea/Alewife Creek Wetlands	omwm

<u>Key:</u>

Keyword	Definition
Burn	controlled burning, designed to enhance ecological conditions, e.g. in fire-dependent communities
dbrs_rmv	debris removal
dredge	removal of material from the aquatic environment, usually to enhance water circulation
excav	fill, stands of Phragmites, or other material will be removed from the area
fill	material will be added to area, usually to achieve appropriate elevations and grades
grade	grading of area to appropriate elevations, usually designed to enhance tidal flushing
hrd_rmv	removal of shoreline hardening structures
inv_rmv	invasive species removal, usually manual (i.e., cutting or mowing)
omwm	manipulations of existing ditches to enhance site hydrology
other	non-restoration activities, including public education, land acquisition, and research
plant	restoration site will be planted rather than revegetated naturally
technol	application of water quality improvement technology, such as catchment basins or culverts
transpl	transplantation; taking vegetation from one site for use in restoration of another site
veg_rmv	vegetation removal; usually to enhance shorebird nesting habitat by setting back succession

Peconic Estuary Program 2009 Habitat Restoration Site Description/Nomination Form

Please provide as much information as possible for each site but PLEASE KEEP TO ONE (1) PAGE. A contact person MUST be identified on each nomination form. List only one (1) site per form. If you have questions about filling out this form, please call or email: Laura Stephenson @ 631.444.0871 <u>lbstephe@gw.dec.state.ny.us</u> or Wayne Grothe @ 631.329.7689 x25 or <u>wgrothe@tnc.org</u>.

Please return completed forms by **May 22, 2009** to: Laura Stephenson, Peconic Estuary Program Coordinator, NYS Department of Environmental Protection, Bureau of Marine Resources, 205 N Belle Mead Road, Suite 1, East Setauket, NY 11733, <u>lbstephe@gw.dec.state.ny.us</u>, Fax: 631.444.0474

SITE NAME: LOCATION/ADDRESS:

SITE INFO

PROJECT DESCRIPTION (general description of restoration work needed, approx. size in acres, level of disturbance, justification, benefits, costs, etc.):

HABITAT TYPE (tidal wetland, freshwater wetland, eelgrass, beach/dunes, intertidal flats, coastal forest, coastal grassland, riverine habitat/migratory corridors, shellfish/shellfish habitat):

OWNERSHIP (public, private, utility, other):

ADDITIONAL INFO:

CONTRIBUTABLE RESOURCES (planning, design, funding, labor, equipment, technical assistance/oversight, etc.):

Appendix B: Initial Summary Memo



To: Peconic Estuary Program Natural Resources Subcommittee (NRS)

From: Laura Stephenson & Wayne Grothe, Co-chairs, PEP NRS

Re: Revisiting and Updating the 2000 PEP Habitat Restoration Plan

Date: May 26, 2009

Below and attached, please find materials capturing the results of our meetings to review currently listed restoration sites and to solicit new restoration site nominations. Please review these results and nominations for discussion at our **next NRS meeting** on Thursday **June 11th**, **2009** from 9:30am to 12 noon at the CCE Extension Education Center, 1st Floor Conference Room, 432 Griffing Avenue, Suite 100, Riverhead, NY 11901-3071 (Directions: <u>http://counties.cce.cornell.edu/suffolk/General/Sites.htm</u>). In support of this effort, the Peconic Estuary Program allocated \$80,000 in its approved FY09 Budget to fund and advance 5 conceptual designs; 1 project in each of the 5 Towns. These projects will be identified jointly by the PEP NRS, Towns, and site nominators, and will be discussed on June 11th. **Your attendance and participation at this meeting is crucial and extremely important!**

PREVIOUSLY LISTED SITE

Prior Listed Sites:	72		
Total Completed:	9 (12.5%)		
Total No Longer Viab	le: 19 (26.4%)		
Unknown:	1 (1.4%)		
*Total Still Viable:	43 (59.7%)		
<u>Southold</u>	<u>6</u>	East Hampton	31
Completed:	0 (0%)	Completed:	3 (9.7%)
No Longer Viable:	1 (16.7%)	No Longer Viable:	8 (25.8%)
*Still Viable:	5 (83.3%)	*Still Viable:	20 (64.5%)
Southampton	<u>16</u>	Shelter Island	3
Completed:	5 (31.3%)	Completed:	1 (33.3%)
No Longer Viable:	8 (50%)	No Longer Viable:	2 (66.7%)
*Still Viable:	2 (12.5%)	*Still Viable:	0 (0%)
Unknown:	1 (6.3%)		
		<u>Riverhead</u>	16
		Completed:	0 (0%)
		No Longer Viable:	0 (0%)
		*Still Viable:	16 (100%)

(*Sites include those currently in-progress, those in which partial work has been completed w/ additional work likely needed, and those not yet initiated but still necessary. These sites are recommended for re-listing in the 2009 Update.)

NEWLY NOMINATED SITES: Total 31

Southold: 10 nominations

- Silver Lake/Moore's Drain (S-1)
- Arshamomaque Pond Preserve Phragmites Eradication (S-2)
- Southold Shellfish Spawner Sanctuary Network (S-3)
- Arshamomaque Preserve Phragmites Eradication (S-4)
- Budds Pond Wetland Restoration (S-5)
- Downs Farm Preserve and Downs Creek Phragmites Eradication (S-6)
- Hallock's Bay Eelgrass Sanctuary (S-7)
- Southold/Greenport Abandoned Power Line/Tower Removal and Restoration (S-8)
- Narrow River Phragmites Eradication (S-9)
- Pipes Cove Phragmites Eradication (S-10)

Southampton: 5 nominations

- Iron Point Wetland Restoration (SH-1)
- Ligonee Brook Diadromous Fish Passage Restoration (SH-2)
- North Sea/Alewife Creek Diadromous Fish Passage Enhancement (SH-3)
- Woodhulls Pond/Wildwood Lake Diadromous Fish Passage Restoration (SH-4)
- Sag Harbor Cove and Cold Springs Pond Winter Flounder Enhancement (SH-5)

East Hampton: 7 nominations

- Three Mile Harbor Bay Scallop Restoration (EH-1)
- Three Mile Harbor Hard Clam/American Oyster Enhancement/Restoration (EH-2)
- Napeague Harbor Bay Scallop Restoration (EH-3)
- Napeague Harbor Hard Clam/American Oyster Enhancement/Restoration (EH-4)
- Accabonac Creek Hard Clam/American Oyster Enhancement/Restoration (EH-5)
- Lake Montauk Hard Clam/American Oyster Enhancement/Restoration (EH-6)
- Napeague Harbor Inlet Dredging (EH-7)

Shelter Island: 4 nominations

- Coecles Harbor Eelgrass Revegetation (SI-1)
- Spasato Property- Phragmites Removal (SI-2)
- Fresh Pond Water Quality (SI-3)
- Shell Beach Revegetation (SI-4)

Riverhead: 5 nominations

- Grangebel Park Diadromous Fish Passage Restoration (Peconic River, Phase I) (R-1)
- Upper Mills Diadromous Fish Passage Restoration (Peconic River, Phase II) (R-2)
- Forge Rd/Peconic Lake Diadromous Fish Passage Restoration (Peconic River, Phase III) (R-3)
- Edwards Ave Diadromous Fish Passage Restoration (Peconic River, Phase IV) (R-4)
- Indian Island Tidal Wetland Restoration (R-5)

Attachments

Appendix C: Status Tables of Former Sites and Public Meeting Participants

2009 STATUS OF EAST HAMPTON RESTORATION SITES AS LISTED IN THE "HABITAT RESTORATION PLAN FOR THE PECONIC ESTUARY", DECEMBER 2000

						PRO	JECT STA	ATUS				
					Restoration	Work Initiated			Not Yet Initiated	Relisti	ng Viability	
HABITAT TYPE	SITE NAME	KEYWORDS	Completed	In-progress	Partially Completed	Work Still Needed	Attempted	Naturally	Not Initiated	Still Viable	No Longer Viable	ADDITIONAL DETAILS
Beach	Sammi's Beach	grade, plant	X								X	
Shorebird	Hicks Island Plover/Tern	veg_rmv	Х								Х	
Alewife	Alewife Brook Alewife Access	dbrs_rmv, inv_rmv							Х	Х		
Wetland	Accabonac Harbor Wetlands	dbrs_rmv, grade, plant		Х		Х				Х		
Wetland	Fort Pond Wetlands	excav, grade, plant		Х		Х				Х		Permit secured, work planned?
Alewife	Lake Montauk Alewife Access	dredge, dbr_rmv, inv_rmv							Х	Х		SCDPW to provide culvert
Eelgrass	Northwest Creek Eelgrass	transpl					Х				Х	Test plots failed. Site not suitable to support eelgra
Grassland	Culloden Grassland	inv_rmv, burn, plant			Х	Х				Х		
WQ	Lake Montauk Water Quality	technol			Х						Х	Stormwater project
Phrag	Alewife Brook Phragmites	inv_rmv							Х	Х		To be addressed In Alewife Brook Alewife project
WQ	Accabonac Harbor Road End	excav, grade, inv_rmv, plant							Х		Х	Stormwater redmediation necessary.
Phrag	Accabonac Harbor Phragmites	inv_rmv		Х		Х				Х		
Eelgrass	Napeauge Eelgrass	transpl			Х	Х				Х		Seeding potential. Eelgrass sanctuary different area
Phrag	Northwest Creek Phragmites	inv_rmv							Х	Х		Suffolk County property
WQ	Oyster Pond Water Quality	omwm	Х					Х			Х	Completed Naturally
Eelgrass	Lake Montauk Eelgrass	transpl		Х						Х		
WQ	Accabonac Harbor Flushing	technol, dredge	Х								Х	Culvert cleaned out and maintained
Eelgrass	Accabonac Harbor Eelgrass	transpl					Х				Х	Test plots failed. Site not suitable to support eelgra
Wetland	Three Mile Harbor Wetlands	grade, plant	Х								Х	
Grassland	Fort Hill Cemetery Grassland	inv_rmv, burn	Х								Х	
WQ	Fresh Pond Flow	dredge							Х	Х		
Phrag	Little NW Creek Phragmites	inv_rmv		Х		Х				Х		On NYS property.
Phrag	Fresh Pond Phragmites	inv_rmv, plant, dredge							Х	Х		
Phrag	Napeague Phragmites	inv_rmv							Х	Х		May be a component of new comprehensive Nape
Phrag	Barnes Meadow Phragmites	inv_rmv, plant							Х	Х		NYS Wetland?
Phrag	Fort Pond Phragmites	inv_rmv		Х		Х				Х		Yearly cutting is completed.
Wetland	Lake Montauk Wetlands	excav, grade, plant		Х		Х				Х		, , ,
Eelgrass	Three Mile Harbor Eelgrass	transpl					Х			Х		
Phrag	Three Mile Harbor Phragmites	inv_rmv		Х						Х		
Phrag	Lake Montauk Phragmites	inv_rmv		Х		Х				Х		
Phrag	Hog Creek Phragmites	inv_rmv	Х								Х	

Meeting Tarucipa	
Laura Stephenson	PEP NRS Co-chair, NYSDEC/PEP
Wayne Grothe	PEP NRS Co-chair, TNC
Jennifer Gaites	East Hampton Town Hatchery
John Aldred	East Hampton Town Hatchery
Larry Penny	East Hampton Town Natural Resources
Mark Abramson	East Hampton Town Natural Resources
Lisa D'Andrea	East Hampton Town Planning
Tyler Borsack	East Hampton Town Planning
Diane McNally	East Hampton Town Trustees- Clerk

2009 STATUS OF SOUTHAMPTON RESTORATION SITES AS LISTED IN THE "HABITAT RESTORATION PLAN FOR THE PECONIC ESTUARY", DECEMBER 2000

PROJECT STATUS												
					Restoration V	Work Initiated			Not Yet Initiated	Relisti	ng Viability	
HABITAT TYPE	SITE NAME	KEYWORDS	Completed	In-progress	Partially Completed	Work Still Needed	Attempted	Naturally	Not Initiated	Still Viable	No Longer Viable	ADDITIONAL DETAILS
Wetland	Davis Creek Wetlands	grade, omwm, plant							Х	Х		Partial planning completed.
Wetland	Noyack Creek Wetlands	excav, grade							Х		Х	Active disposal site.
Wetland	Sag Harbor Cove/Paynes Creek	grade, fill, plant	Х								X	Plantings completed.
Grassland	Shinnecock Grassland	inv_rmv, burn			Х	Х				Х		TNC. Burning low priority. Inv maintenace required.
Shorebird	Mill Creek Enhancement Project	fill, veg_rmv, plant	Х								X	Plantings completed.
Eelgrass	Noyack Creek Eelgrass	transpl					Х				X	Site not suitable to support eelgrass.
Wetland	Cold Spring Pond Wetlands	excav, dbrs_rmv							Х		X	
Wetland	Upper Sag Harbor Cove Wetlands	fill	Х								X	
Eelgrass	Paynes Creek Eelgrass	transpl					Х				X	Site not suitable to support eelgrass.
Eelgrass	Upper Sag Harbor Cove Eelgrass	transpl					Х				X	Site not suitable to support eelgrass.
Eelgrass	Bullhead Bay Eelgrass	transpl					Х				X	Supports annual eelgrass population.
Eelgrass	Sag Harbor Cove Eelgrass	transpl					Х				X	Site not suitable to support eelgrass.
Wetland	Paynes Creek Enhancement Project	plant	Х					Х			X	
Wetland	North Sea Wetlands	grade, plant	Х								X	
Wetland	Fish Cove Wetland Enhancement	dbrs_rmv	Х								X	May need future maintenance.
Wetland	North Sea/Alewife Creek Wetlands	omwm	Х								Х	

Laura Stephenson	PEP NRS Co-chair, NYSDEC/PEP
Wayne Grothe	PEP NRS Co-chair, TNC
Jon Semlear	Southampton Town Trustee
Fred Havemeyer	Southampton Town Trustee
Eric Shultz	Southampton Town Trustee
Ed Warner	Southampton Town Trustee
Dawn Ver Hague	Southampton Town Trustees- Env Analyst
Marty Shea	Southampton Town Staff

2009 STATUS OF SHELTER ISLAND RESTORATION SITES AS LISTED IN THE "HABITAT RESTORATION PLAN FOR THE PECONIC ESTUARY", DECEMBER 2000

	PROJECT STATUS									
					Restoration	Work Initiated		Not Yet Initiated	Relisting Viability	
HABITAT TYPE	SITE NAME	KEYWORDS	Completed	In-progress	Partially Completed	Work Still Needed	Attempted Natrually	Not Initiated	Still Viable No Longer Viable	ADDITIONAL DETAILS
Wetland	Cedar/Taylor Island Revegetation	hrd_rmv, plant						Х	Х	Scope of work changed to keep and repair bulkhead.
Beach	Reel Point	other	Х						Х	Peconic Land Trust- completed beach grass plantings and installed fencing
Beach	Wades Beach	fill, plant, excav, dredge						X	Х	

Laura Stephenson	PEP NRS Co-chair, NYSDEC/PEP
Wayne Grothe	PEP NRS Co-chair, TNC
Jim Dougherty	Shelter Island Town Supervisor
Peter Reich	Shelter Island Town Board
Chris Lewis	Shelter Island Town Board
Ed Brown	Shelter Island Town Board
John Needham	Shelter Island Town Waterways Mgmt Advisory Committee
Emory Breiner	Shelter Island Town Planning Board
Mike Laspia	The Nature Conservancy- Mashomack
Pat Hunt	Taylor's Island Preservation and Mgmt Committee
Edward Bausman	Shelter Island Conservation Advisory Council

2009 STATUS OF SOUTHOLD RESTORATION SITES AS LISTED IN THE "HABITAT RESTORATION PLAN FOR THE PECONIC ESTUARY", DECEMBER 2000

		PROJECT STATUS									
				Restoration	Work Initiated			Not Yet Initiated	Relisti	ng Viability	
HABITAT TYPE	SITE NAME	KEYWORDS	Completed In-progress	Partially Completed	Work Still Needed	Attempted	Naturally	Not Initiated	Still Viable	No Longer Viable	ADDITIONAL DETAILS
Wetland	Nassau Point	excav, grade, plant						X	X		
Wetland	Fleets Neck	excav, grade, plant						Х	Х		
Phrag	Cedar Beach Phragmites	excav, inv_rmv, plant						Х	Х		
Eelgrass	Cutchogue	other				X				Х	
Wetland	TGA Easement	omwm, inv_rmv						Х	Х		
Phrag	Lake Marion	dredge, inv_rmv, plant	Х		Х				Х		

PEP NRS Co-chair, NYSDEC/PEP
PEP NRS Co-chair, TNC
Southold Town Planner- LWRP Coordinator
Southold Town GIS Technician

2009 STATUS OF RIVERHEAD RESTORATION SITES AS LISTED IN THE "HABITAT RESTORATION PLAN FOR THE PECONIC ESTUARY", DECEMBER 2000

						PRO	JECT STATUS			
					Restoration W	ork Initiated	-	Not Yet Initiated	Relisting Viability	
HABITAT TYPE	SITE NAME	KEYWORDS	Completed	In-progress	Partially Completed	Work Still Needed	Attempted Natrual	ly Not Initiated	Still Viable No Longer Viable	ADDITIONAL DETAILS
Phrag	Tidal Sawmill Creek	inv_rmv, excav, plant, technol	-				_	Х	X	
Phrag	East Creek	technol, inv_rmv						Х	X	
Phrag	Peconic Edwards	inv_rmv, plant						Х	X	
Phrag	Gravel Pit (Dog Ponds)	inv_rmv, technol, plant						Х	X	
Phrag	Browns Point	inv_rmv, technol, dbrs_rmv						Х	X	
Phrag	Tidal Peconic	inv_rmv, plant, technol						Х	X	
Phrag	Linns Pond	inv_rmv, plant						Х	X	
Riverine	Peconic Upper Mills	inv_rmv, plant						Х	X	
Phrag	Broad Cove	technol, inv_rmv						Х	X	
Phrag	Bay Woods	dredge, inv_rmv						Х	X	
Phrag	Warner Duck Farm	inv_rmv, excav, plant, dbrs_rmv						Х	X	
Phrag	Reeves Creek	inv_rmv, technol						Х	X	
Phrag	Peconic Seep	inv_rmv, excav, technol						Х	X	
Phrag	Grumman	inv_rmv, technol						Х	X	
Phrag	Upper Sawmill Creek	inv_rmv, excav						Х	X	
Phrag	Terry Creek	technol						Х	X	

Laura Stephenson	PEP NRS Co-chair, NYSDEC/PEP
Barbara Blass	Riverhead Town Board
James Wooten	Riverhead Town Board
Chris Kempner	Riverhead Town Community Development
Joe Hall	Riverhead Town Planning
Karen Gluth	Riverhead Town Planning

KEYS TO TABLES

Keyword	Definition
burn	controlled burning, designed to enhance ecological conditions, e.g, in fire-dependent communities
dbrs_rmv	debris removal
dredge	removal of material from the aquatic environment, usually to enhance water circulation
excav	fill, stands of Phragmites, or other material will be removed from the area
fill	material will be added to area, usually to achieve appropriate elevations and grades
grade	grading of area to appropriate elevations, usually designed to enhance tidal flushing
hrd_rmv	removal of shoreline hardening structures
inv_rmv	invasive species removal, usually manual (i.e., cutting or mowing)
omwm	manipulations of existing ditches to enhance site hydrology
other	non-restoration activities, including public education, land acquisition, and research
plant	restoration site will be planted rather than revegetated naturally
technol	application of water quality improvement technology, such as catchment basins or culverts
transpl	transplantation; taking vegetation from one site for use in restoration of another site
veg_rmv	vegetation removal; usually to enhance shorebird nesting habitat by setting back succession

Appendix D: Conceptual Design Recommendation Memo



- To: Peconic Estuary Program Management Committee
- From: Laura Stephenson & Wayne Grothe, Co-chairs, PEP Natural Resources Subcommittee
- Re: FY09 Habitat Restoration Conceptual Design Project Recommendations

Date: September 22, 2009

In February 2009, the Peconic Estuary Program (PEP) Natural Resources Subcommittee (NRS) initiated efforts to update the "Habitat Restoration Plan for the Peconic Estuary" dated December 2000. Several public meetings were held to assess the remaining restoration needs of sites listed in Dec. 2000 Plan, and to solicit nominations for new potential restoration sites. The results are presented in the "DRAFT Peconic Estuary Program Habitat Restoration Plan".

In support of this effort, and to increase the quantity and quality of habitat restoration initiatives in the Peconic Estuary watershed, the Peconic Estuary Program allocated \$80,000 in its approved FY09 Budget to fund and advance 5 conceptual designs; 1 project in each of the 5 Towns. Pre-developed conceptual designs will allow entities to apply for grant funds when opportunities arise and will increase the likelihood of securing funds for project implementation.

We, on behalf of the Peconic Estuary Program Natural Resources Subcommittee, formally recommend and nominate the five sites listed and described below to receive conceptual designs. These single projects are those most in need of conceptual design and planning assistance. They also represent the projects with strong local and community support. They were selected jointly by the NRS, Towns, and site nominators.

Southold: Silver Lake/Moore's Drain Alewife Access

Silver Lake in the Village of Greenport was an historic spawning habitat for alewives, salt water fish that migrate to fresh water ponds via streams to spawn. Silver Lake is connected to Pipes Cove via Moore's Drain and Pipes Neck Creek. Water runs from Silver Lake through Village property, under Moore's Lane to an unnamed pond which is also potential spawning habitat, through the Village's Moore's Woods to the Town's Skipper Horton Park, under Route 25 to the Town's open space property known as Reese, under the Long Island Rail Road to Pipes Neck Creek and finally out to Pipes Cove. The length of this route is approximately 2 miles and the area of Silver Lake and the unnamed pond is approximately 3 acres. Alewives cannot navigate some areas of this route due to blockages in the stream. This project would be to restore the route from Pipes Cove to Silver Lake to a condition suitable for alewives and would involve cleaning up certain sections of the route and repairing or modifying certain infrastructure to allow passage of the alewives. The Silver Lake area was historically a municipal dump. There is an effort underway to clean up this area as part of the Bay to Sound Trails project. This project involves the Village of Greenport, Town of Southold, Suffolk County, Group for the East End, North Fork Audubon Society and volunteers.

Southampton: Ligonee Brook Diadromous Fish Passage Restoration

The overall purpose of this project would be to restore drainage water flow, freshwater wetlands, a historic alewife run and the American eel within Ligonee Brook, which runs from Long Pond to Paynes Creek and Sag Harbor Cove. Proposed restoration activities include the removal of obstructions and other debris, as well as restoring the brook elevations for enhanced water flow. The installation of water control structures, such as fish ladders or a weir, may also be included. Prior to any work being conducted, a detailed engineering report must be prepared to ensure the maintenance of sufficient pond elevations, as well as the hydrological balance of the Long Pond Greenbelt watershed. This project would benefit the alewife and American eel. This project has strong local community support via the Friends of the Long Pond Greenbelt and the Lakes and Ponds Association. The not-for-profit Friends of the Long Pond Greenbelt have lobbied the Trustees and the Town in the past to restore this area, and have also worked as volunteers and stewards.

East Hampton: Napeague Harbor Circulation Enhancement

Napeague Harbor is 938 acres in size. It is one of two Peconic Estuary tidal embayments that have healthy eelgrass beds in East Hampton. It has a mostly sandy bottom and two inlets, east and west, that connect to the Napeague Bay portion of the Estuary. The east inlet was opened in 2006 and again in 2008, after which an eelgrass bed sprang back on the eastern shore. The east inlet was historically the most important inlet and in earlier days, the only inlet connecting to the Estuary. It needs to be maintained to its former status, otherwise the historical circulation patterns within the Harbor will be lost and critical eelgrass habitat will degrade, again. The Harbor was formerly the largest winter founder rookery in East Hampton Township. In 2008, the Town Trustees marked one of the surviving eelgrass bed with buoys and declared it an eelgrass sanctuary for species restoration efforts, including winter founder and bay scallops. The Town is currently engaged in an intensive effort to restore bay scallops and winter flounder as breeders in the Harbor because Napeague Harbor is recognized to be the Town's most suitable habitat. Additionally, the Town's shellfish grow-out rafts are situated on the edge of the east channel and when it closed, growth of multiple species of shellfish seed that were housed in the racks, including scallops, oysters, and hard clams, almost came to a halt. For all these reasons, the Town concluded that the continued restoration and protection of critically stressed species, such as eelgrass, flounder and bay scallops requires enhanced water circulation in Napeague Harbor via the east channel. Sand will be used to rebuild beaches and dunes which serve as piping plover and tern breeding grounds.

Shelter Island: Shell Beach Revegetation

The Town obtained a DEC permit to repair Shell Beach after severe damage in a 2006 storm. FEMA and SEMO work is complete and ribbon cutting was held on 5/18/09. Revegetation is critical to maintaining this beach and vital to comply with the DEC recommendations.

<u>Riverhead: Forge Road/Peconic Lake Diadromous Fish Passage Restoration (Peconic River, Phase III)</u> Several dams were installed along the Peconic River during the Industrial Revolution; thereby cutting off historically known and strong diadromous fish usage of the Peconic River; alewife and eel utilized the Peconic River as feeding, spawning, and maturation habitat. Dramatic declines in diadromous species population have been witnessed along the Atlantic coast; one reason is due to insufficient habitat. A permanent fish passage structure is needed at the Forge Road Dam. This project will re-open the expansive Peconic Lake to diadromous fish species. No funding has been secured to support design or final construction (approx \$75,000 needed to support final design and \$600,000 needed to support construction). An additional 2 miles of river and 107 acres of habitat will permanently be restored. When combined with "Grangebel Park Diadromous Fish Passage Restoration (Peconic River, Phase I)" and "Upper Mills Diadromous Fish Passage Restoration (Peconic River, Phase II)", 5 miles of river and 171 acres of habitat will permanently be restored. Appendix E: Completed Habitat Restoration Project Inventory

Habitat Type	Site	Action	Maintenance	Size (acres)	Cost/ Funding	Year Initiated	Status (end date)	Contact Person
Beach/Dunes	Gerard Drive, East Hampton	Bare-root beach grass planting into sand adjacent to existing growth on upper beach. Transplants dug from local stock. Success based on plant establishment. Establishment successful	String fence through first summer	0.25	<\$500 Town	Spring 1996	Ongoing	Larry Penny, East Hampton Town Natural Resources Dept. (EHTNRD) (631) 324-0496 Accabonac Harbor Protection Committee Tim Sullivan (631) 324-3627
Beach/Dunes	Louse Point, East Hampton	Bare-root beach grass planting into sand adjacent to existing growth on upper beach. Transplants dug from local stock. Success based on plant establishment. Establishment successful.	String fence through first summer	0.25	<\$500 Town	1996	Ongoing	Larry Penny, EHTNRD (631) 324-0496
Beach/Dunes	Gin Beach, East Hampton	Bare-root beach grass planting into sand adjacent to existing growth on upper beach. Transplants dug from local stock. Success based on plant establishment. Establishment successful.	String fence through first summer	0.10	<\$500 Town	1997	Complete	Larry Penny, EHTNRD (631) 324-0496
Beach/Dunes	New Suffolk, Southold	Bare-root beach grass planting into sand adjacent to existing growth on upper beach. Transplants from nursery stock. Success based on plant establishment. Establishment mostly successful.	String fence through first summer	0.10	<\$500 PEP	1997	Complete	Chris Pickerell, Cornell Cooperative Extension, Marine Program (CCE) (631) 852-8660
Beach/Dunes	Mattituck Park District, Southold	Bare-root beach grass planting into sand adjacent to existing growth on upper beach. Transplants from nursery stock. Success based on plant establishment. Establishment only partially successful.	None	0.10	<\$500 PEP	Spring 1997	Complete	Chris Pickerell, CCE (631) 852-8660
Beach/Dunes	Robins Island Landing, Southold	Bare-root beach grass planting into newly deposited sand on upper beach in and around large stone. Transplants from nursery stock. Success based on plant establishment. Establishment mostly successful.	Permanent snow fence	0.50	? Private	1997	Complete	Peter Trexler, Belvedere Property Management (BPM) (631) 734-5134
Beach/Dunes	Second Causeway, Shelter Island	Bare-root beach grass planting into newly deposited sand (over large rocks) on upper beach. Transplants from nursery stock. Success based on plant establishment. Establishment successful.	String fence through first summer	1.0	Ş	1999	Complete	Town of Shelter Island
Beach/Dunes	Sammi's Beach, East Hampton 41.0310, -72.1922	This barrier beach peninsula, previously a dredge material site, was graded down and replanted with beach grasses. Road was removed and replanted. Generally successful as least terns and piping plovers returned.		?	\$300,000 (State, Town, County)	1999	2003 (planting complete)	Larry Penny, EHTNRD (631) 324-0496
Beach/Dunes	Reel Point, Shelter Island	Eroding beach affected by vehicle use was replanted with beach grass. Snow fencing installed. Owned by Peconic Land Trust.	?	8	Private	5	Complete	Pam Greene, Peconic Land Trust (631) 283-3195

Habitat Type	Site	Action	Maintenance	Size (acres)	Cost/ Funding	Year Initiated	Status (end date)	Contact Person
Eelgrass	Three Mile Harbor*, East Hampton	Bundled bare-root shoots attached to metal staples and wooden stakes. Transplants collected from Northwest Harbor and Lake Montauk. Planted into unvegetated coarse and fine sediments. Success based on eelgrass presence the following year. Partially successful (~30%).	Regular observation, Marked with PVC tubes	0.1	<\$2,000 PEP	June 1994	Complete	Larry Penny, EHTNRD (631) 324-0496 Chris Pickerell, CCE (631) 852-8660 Emerson Hasbrouck, CCE (631) 727-3910
Eelgrass	Accabonac Harbor, East Hampton	Bundled bare-root shoots attached to metal staples and wooden stakes. Transplants collected from Northwest Harbor and Lake Montauk. Planted into unvegetated coarse and fine sediments.Unsuccessful	Regular observation, Marked with PVC tubes	0.1	<\$2,000 PEP	June 1994	Complete	Larry Penny, EHTNRD (631) 324-0496 Chris Pickerell, CCE (631) 852-8660 Emerson Hasbrouck, CCE (631) 727-3910
Eelgrass	Little Northwest Creek, East Hampton	Bundled bare-root shoots attached to metal staples and wooden stakes. Transplants collected from Northwest Harbor. Planted into unvegetated coarse and fine sediments. Unsuccessful.	Observation,M arked with PVC tubes	0.1	<\$2,000 PEP	June 1995	Complete	Larry Penny, EHTNRD (631) 324-0496 Chris Pickerell, CCE (631) 852-8660 Emerson Hasbrouck, CCE (631) 727-3910
Eelgrass	Napeague Harbor, East Hampton	20 cm diameter intact sods transplanted to the perimeter and open areas in the center of an existing bed along the eastern shoreline and an open sandy flat near the south end of the Harbor. All transplants from Napeague. Success based on eelgrass presence the following year. Mostly successful (~75%) (eastern shore). Unsuccessful (sandy flat).	Regular observation, Mapped with GPS, Perimeter of bed and planting sites marked with PVC tubes	0.1	<\$2,000 PEP	June and Sept. '97- '98	Complete	Larry Penny, EHTNRD (631) 324-0496 Chris Pickerell, CCE (631) 852-8660 Emerson Hasbrouck, CCE (631) 727-3910
Eelgrass	Three Mile Harbor, East Hampton	20 cm diameter intact sods transferred to the perimeter of an existing bed. Transplants from Napeague.	Observation of sod establishment	0.1	<\$2,000 PEP	October 1999	Complete Monitoring 2000	Larry Penny, EHTNRD (516) 324-0496 Chris Pickerell. CCE (516) 852-8660
Eelgrass	Northwest Creek, East Hampton	Unsuccessful.	5	0.1	5	5	Not successful	Chris Pickerell, CCE (631) 852-8660
Eelgrass	Noyak Creek, Southampton	Unsuccessful.	;	0.1	Ş	Ş	Not successful	Chris Pickerell, CCE (631) 852-8660
Eelgrass	Paynes Creek, Southampton	Unsuccessful.	5	0.1	;	;	Not successful	Chris Pickerell, CCE (631) 852-8660
Eelgrass	Upper Sag Harbor Cove, Southampton	Unsuccessful.	5	0.1	5	;	Not successful	Chris Pickerell, CCE (631) 852-8660
Eelgrass	Bullhead Bay, Southampton	Unsuccessful. Small annual population exists.	5	0.1	5	?	Not successful	Chris Pickerell, CCE (631) 852-8660
Eelgrass	Sage Harbor Cove, Southampton	Unsuccessful.	5	0.1	5	?	Not successful	Chris Pickerell, CCE (631) 852-8660
Eelgrass	Cutchogue, Southold	Unsuccessful.	5	0.1	;	?	Not successful	Chris Pickerell, CCE (631) 852-8660

Peconic Estuary Program Completed Habitat Restoration Project Inventory- Updated November 2009

Habitat Type	Site	Action	Maintenance	Size	Cost/	Year	Status	Contact Person
				(acres)	Funding	Initiated	(end date)	
Flushing/	Accabonac Harbor	A large box culvert was installed to replace an	Maintenance	50 acres	Over	2004	Complete	Larry Penny, EHTNRD
Circulation	Flushing, East Hampton	existing smaller culvert under Gerard Dive at	dredging of		\$500,000		(2005)	(631) 324-0496
	41.0364, -72.1364	a causeway. The disturbed area was re-	the channel					Partners: East Hampton
		planted with native vegetation. The larger	is performed					Dept. of Natural Resources
		culvert is believed to increased tidal						& Dept. of Engineering
		circulation which has benefited the nearby						
		tidal wetland vegetation.						

Habitat Type	Site	Action	Maintenance	Size	Cost/	Year	Status	Contact Person
				(acres)	Funding	Initiated	(end date)	
Freshmater Wetlands	Robins Island, Southold	A groundwater-fed freshwater pond completely filled with Phragmites was excavated to original depth and diameter. Fill including Phragmites biomass was buried nearby in a lined pit. Following excavation, native emergent species (nursery stock) were planted throughout the shoreline. Success based on establishment of proper hydrology	Checked regularly for new Phragmites growth. New growth removed	1	3	Summer 1996	Complete (Fall 1996)	Peter Trexler, BPM (631) 734-5134
		and shoreline vegetation and elimination of common reed. Successful.						

Habitat Type	Site	Action	Maintenance	Size (acres)	Cost/ Funding	Year Initiated	Status (end date)	Contact Person
Grassland	Orient Point County Park, Southold	Clearing or woody overgrowth in a former farm field using a bulldozer, discing with a tractor, followed by seeding with native warm season grasses. Seed from nursery stock. Success based seeding success of warm season grasses and control of forbes and woody growth. Mostly successful.	Annual mowing plus removal of forbes and new woody growth	50	\$53,700 USEPA + inkind	Spring & Summer 1998 1999 2000	Ongoing	Lisa Holst, New York State Department of Environmental Conservation (NYSDEC) (631) 444-0469
Grassland	Maratooka Grassland, Mattituck, Southold	Clearing of woody overgrowth with a bulldozer, land preparation including discing and seeding with switchgrass. Hand seeded. Organ grinder. Seed from nursery stock. Success based seeding success of warm season grasses and control of forbes and woody growth. Mostly successful.	first mowing Sept.(high) after July 15 Every 3yrs.	1	\$4,720 seed \$450 mowing \$25/yr Wildlife Habitat Incentive Program (WHIP)	June 1999	Ongoing 1999-2008	Allan Connell, USDA, Natural Resources Conservation Service (NRCS) (631) 727-2315
Grassland	Fort Hill Cemetery Grassland, East Hampton 41.0458, -71.9497	Replanting of native grassland grasses in disturbed part of historic cemetery. Re- vegetation successful.	Maintained by East Hampton Parks Dept.	;	Town	1991	Complete	Larry Penny, EHTNRD (631) 324-0496

Peconic Estuary Program Completed Habitat Restoration Project Inventory- Updated November 2009

Habitat Type	Site	Action	Maintenance	Size	Cost/	Year	Status	Contact Person
				(acres)	Funding	Initiated	(end date)	
Phragmites	Hog Creek Phragmites,	Small patches of invasive Phragmites were	;	<1	;	1998	Complete	Larry Penny, EHTNRD
	East Hampton 41.0494, -72.1652	cut. Native species have returned. Successful.						(651) 524-0496

Habitat Type	Site	Action	Maintenance	Size	Cost/	Year	Status	Contact Person
				(acres)	Funding	Initiated	(end date)	
Shorebird	Mill Creek Enhancement Project, Southampton	Located on Pine Neck Lane in Noyac. This relatively small project expanded shorebird breeding habitat by removing vegetation and filling ruts caused by vehicle traffic on the beach. Native beach grasses were planted. Driving on the beach is now prohibited and is considered a successful project	5	<1	5	5	Complete	Jon Semlear-President of Southampton Town Trustees (631) 287-5717
Shorebird	Hick's Island, East Hampton 41.0165, -72.0605	Material from dredging the mouth of Napeague Harbor was placed on Hick's Island. Vegetation was as cut and removed. Successful in restoring roseate tern and piping plover breeding habitat.	Ş	10	\$20,000 (re-veg) \$600,000 (dredge)	?	Complete	Larry Penny, EHTNRD (631) 324-0496

Habitat Type	Site	Action	Maintenance	Size	Cost/	Year	Status	Contact Person
				(acres)	Funding	Initiated	(end date)	
Tidal Wetlands	Pussy's Pond, Springs, East Hampton	Phase 1 - Partial excavation of Phragmites- dominated soils on the shore of a brackish tidal pond. The shoreline was re-graded to intertidal elevation and planted with native transplants of Cordgrass and Salt hay grass. Phase II - Complete excavation of Phragmites-dominated soils and backfilled with clean fill. Seeded with local native seeds. Success based on establishment of native vegetation and elimination of common reed. Partially successful.	Seasonal removal of Phragmites shoots originating from buried rhizome fragments	0.50	\$5,000 Waterfowl USA	1994	Complete	Bob Miller Waterfowl USA Chris Pickerell. CCE (631) 852-8660
Tidal Wetlands	Accabonac Harbor, East Hampton	Removal of asphalt and concrete debris from an intertidal shoreline. Success based on establishment of native vegetation- TBA.	None	0.10	<\$500 Town	1997	Complete	Larry Penny, EHTNRD (631) 324-0496
Tidal Wetlands	Accabonac Harbor OMWM*, East Hampton	Open marsh water management (OMWM) for restoration of natural hydrology and Coliform bacteria reduction. Selected mosquito ditches were plugged using plywood and sandbags. Ditch selection based size and Coliform levels in repeated water samples. Success based dam stability, reduction in Coliform loading to the Harbor and conditional opening of the area to shellfishing. Successful.	Replace sandbags where necessary 53	50	Accabonac Harbor Protection Committee, East Hampton Trustees, USFWS	1994	Ongoing	Larry Penny, EHTNRD (631) 324-0496 Emerson Hasbrouck, CCE (631) 727-3910

Habitat Type	Site	Action	Maintenance	Size (acres)	Cost/ Funding	Year Initiated	Status (end date)	Contact Person
Tidal Wetlands	Northwest Creek OMWM, East Hampton	OMWM for restoration of natural hydrology and Coliform bacteria reduction. Selected mosquito ditches were plugged using combination of plywood and sandbags. Ditch selection based size and Coliform levels in repeated water samples. Success based dam stability, reduction in Coliform loading to the Harbor and conditional opening of the area to shellfishing. Partially successful.	Replace sandbags where necessary	50	EH Trustees, USFWS	1994	Ongoing	Larry Penny, EHTNRD (631) 324-0496 Emerson Hasbrouck, CCE (631) 727-3910
Tidal Wetlands	Three Mile Harbor Drive, East Hampton	Planting bare-root cordgrass into a highly disturbed roadway cut into the marsh. Transplants gleaned from local stock in Three Mile Harbor. Success based on plant establishment. Very successful.	Permanently fenced to vehicular traffic	0.25	<\$500	April 1996	Complete	Larry Penny, EHTNRD (631) 324-0496
Tidal Wetlands	Gerard Point, East Hampton	Planting nursery propagated cordgrass into open areas in and adjacent to the existing marsh. Success based on plant establishment. Successful.	Fenced	0.25	\$750 East End Institute	July 1999	Complete	Larry Penny, EHTNRD (631) 324-0496 Chris Pickerell, CCE (631) 852-8660
Tidal Wetlands	Cassidy Preserve, Hashamomuck Pond, Southold	Excavation and re-grading of hydraulic dredge spoil, creation of intertidal pools and replacement of common reed with smooth cordgrass. Success based on proper elevations, maintenance of water in pools and elimination of common reed. Successful.	Following creation of an "as-built" plan, portions of the site were re-graded to inhibit common reed re- colonization	5 of 23	~\$30,000 USEPA	June 1999	Phase I Complete Additional work (Phase II) planned for the future.	Chris Pickerell, CCE (631) 852-8660 John Halsey, President Peconic Land Trust (631) 283-3195
Tidal Wetlands	Downs Creek, Cutchogue	Removal of concrete and other debris within an intertidal marsh to allow for natural re- vegetation and prevent future dumping Success based on natural re-vegetation of the site by cordgrass. Successful.	Signage	0.10	Private	1996	Complete	Russ McCall
Tidal Wetlands	Long Beach Bay, Orient Southold	Culvert replacement and enlargement to increase salinity behind a dike at multiple points. OMWM for water quality improvement. Reductions in storm water inputs to surface waters. Success based on increased salinity behind dike and reduction in Coliform bacteria counts in adjacent open waters- TBD.	Salinity and tidal elevation monitoring. Repair of leaky dams	200+	\$253,000 USFWS	1999	Ongoing	Chris Pickerell, CCE (631) 852-8660 Emerson Hasbrouck, CCE (631) 727-3910

Habitat Type	Site	Action	Maintenance	Size (acres)	Cost/ Funding	Year Initiated	Status (end date)	Contact Person
Tidal Wetlands	Fish Cover Bridge, North Sea Harbor, Southampton	Planting of cordgrass to mitigate new bridge construction. Plantings included nursery propagated peat pots. Success based on establishment of cordgrass. Successful.	Ş	0.10	5	1995	Complete	Gary Gentile, New York State Department of Transportation. (631) 952-6219
Tidal Wetlands	Otter Pond, Sag Harbor	Planting of native marsh grasses to prevent erosion and improve aesthetics. Propagules included nursery stock. Success based on establishment of grasses. Partially successful.	5	0.10	Private	1997	Complete	Village of Sag Harbor
Tidal Wetlands	Broad Cove, Aquabogue, Riverhead	Restoration of intertidal marsh through cordgrass plantings, restoration of a tidal creek and opening of manmade tidal salt ponds to tidal flow. Success based on establishment of grasses, stability of new creek and increased flushing of tidal ponds. Sandbar plantings mostly unsuccessful, creek restoration successful, flushing successful	Minimal fencing, regular photographs	5.0	Private	1994	Complete	Chris Pickerell, CCE (631) 852-8660
Tidal Wetlands	Chase Creek, Shelter Island	Planting of cordgrass to mitigate bridge improvements. Plants included nursery propagated peat pots. Success based on establishment of cordgrass. Successful.	5	0.10	5	1996	Complete	Gary Gentile, New York State Department of Transportation. (631) 952-6219
Tidal Wetlands	Sag Harbor Cove/Paynes Creek, Southampton	Located on Long Beach Road in Noyac. A dike was breached at this historic dredged material disposal site to re-introduce tidal flow. Dredged materials were removed off- site and plantings of native wetland vegetation completed. Project is considered a success as a native wetland was re-established and is now actively utilized by shore birds.	5	>5	5	5	Complete	Marty Shea, Southampton Town (631) 287-5710 Partners: Southampton Town Board, Southampton Town Trustees
Tidal Wetlands	Upper Sag Harbor Cove Wetlands, Southampton	An area of this wetland which was damaged by vehicles was re-vegetated with <i>Spartina</i> . Re-vegetation was successful.	5	<1	5	?	Complete	Jon Semlear, President Southampton Town Trustees (631) 287-5717
Tidal Wetlands	Paynes Creek Enhancement Project, Southampton	Re-vegetation occurred naturally and human induced efforts were not necessary.	5	5	No Cost	?	Complete (Naturally)	Marty Shea, Southampton Town (631) 287-5710
Tidal Wetlands	North Sea Wetlands, Southampton	An impervious paved walk at the Conscience Point Complex was removed and replaced with crushed shell. Native plants were planted and vehicle access restricted. Signage was installed.	?	<5	5	5	Complete	Marty Shea, Southampton Town (631) 287-5710 Partners: Southampton Historical Society, Southampton Town Board, Southampton Town Trustees
Tidal Wetlands	Fish Cove Wetland Enhancement, Southampton	Several years of washed up marine debris has accumulated on the marsh. The Southampton Barmen's Association and other volunteers removed an enormous amount of flotsam which was transported by boat to Southampton Town Highway vehicles and trucked to the recycling center. Successful.	Future maintenance /debris removal may be required 56 very 3 vears)	5	Volunteer time	5	Complete	Jon Semlear, President Southampton Town Trustees (631) 287-5717 Partners: Southampton Town Board, Southampton Town Trustees

Peconic Estuary Program Completed Habitat Restoration Project Inventory- Updated November 2009

Habitat Type	Site	Action	Maintenance	Size (acres)	Cost/ Funding	Year Initiated	Status (end date)	Contact Person
Tidal Wetlands	North Sea/Alewife Creek Wetlands, Southampton	Abutting landowner was required by Southampton Town to undertake restoration and re-planting efforts.	5	5	;	?	Complete	Marty Shea, Southampton Town (631) 287-5710
Tidal Wetlands	Three Mile Harbor Wetlands, East Hampton 41.0299, -72.2043	Disturbed/trampled areas were re-planted with native salt marsh vegetation. Success based on establishment of vegetation. Successful.	5	<2	\$150,000	1997	Complete	Larry Penny, EHTNRD (631) 324-0496

Habitat Type	Site	Action	Maintenance	Size	Cost/	Year	Status	Contact Person
				(acres)	Funding	Initiated	(end date)	
Water Quality	Oyster Pond Water	Leaking oil tank was replaced and sewage	?	;	\$100,000	1990	1991	Larry Penny, EHTNRD
	Quality, East Hampton	pump station installed. Both were successful			+			(631) 324-0496
	41.0719, -71.8919	in removing source of contamination						