

APPENDIX A

Suffolk County Department of Economic Development and Planning proposal for the Hurricane Sandy Coastal Resiliency Competitive Grants, submitted to the National Fish and Wildlife Foundation, Federal Financial Assistance Grant Number: 43006. [Note: The format of the original proposal has been modified for this appendix.]

FULL PROPOSAL PROJECT NARRATIVE

Title: Coastal resiliency via integrated salt marsh management.

Applicant: Suffolk County, New York
Point of Contact: Frank Castelli, Environmental Projects Coordinator, SCDEDP
Phone: 631-583-5943 **Email:** Frank.Castelli@suffolkcountyny.gov

Project Narrative:

On January 24, 2014, Suffolk County Executive Steve Bellone declared, “Nitrogen is public water enemy #1... This nitrogen has been systematically undermining our coastal wetlands. After the barrier beaches our critical second line of defense against storms like Sandy is our wetlands.... If we are going to protect ourselves from future storms we have to rebuild our coastal wetland defenses.”

A. Geographic Context: Impacted by Sandy, the scope of the proposed project evaluates approx. 1,500 acres of degraded and/or threatened salt marsh habitat on the south shore of Suffolk County, Long Island, New York for coastal resiliency enhancement. Refer to the Supplemental Fig. S1 and the attached Google Earth file: NFWF_Suffolk_County_Proposed_Sites. This project will benefit the Long Island South Shore Estuary Reserve, a unique 326 sq. mile NYS designated estuary, as well as the adjacent coastal communities in the towns of Babylon, Brookhaven and Islip which were heavily impacted by Hurricane Sandy. This project will complement other restoration and resiliency enhancement efforts that have been completed, are underway, or are proposed within the Reserve (Figure 1).

Figure 1. Inter-related restoration and coastal resiliency assessment/enhancement projects within the Long Island South Shore Estuary Reserve

<p>Wertheim NWR demonstration project <ul style="list-style-type: none"> •Scope: ~80 acres •Status: 2004 - Completed </p>	<p>Salt Marsh Restoration and Enhancement at Seatuck, Wertheim and Lido Beach NWRs <ul style="list-style-type: none"> •Scope: ~432 acres •Status: USFWS-funded to commence 2014 </p>	<p>Evaluate ecological impacts of breaching on estuarine habitats <ul style="list-style-type: none"> •Scope: Fire Island National Seashore •Status: NPS – funded to commence 2014 </p>	<p>USGS monitoring and modeling <ul style="list-style-type: none"> •Scope: Long Island watersheds •Status: USGS - partially funded for NY Partners for submitted applications </p>	<p>Shinnecock Indian Nation Salt Marsh Assessment and Restoration <ul style="list-style-type: none"> •Scope: TBD •Status: Submitted for NFWF funding </p>	<p>Enhancing coastal resiliency with integrated salt marsh management along the south shore of Long Island, New York <ul style="list-style-type: none"> •Scope: ~1,500 acres •Status: This application </p>
---	--	--	--	---	---

B. Project Narrative

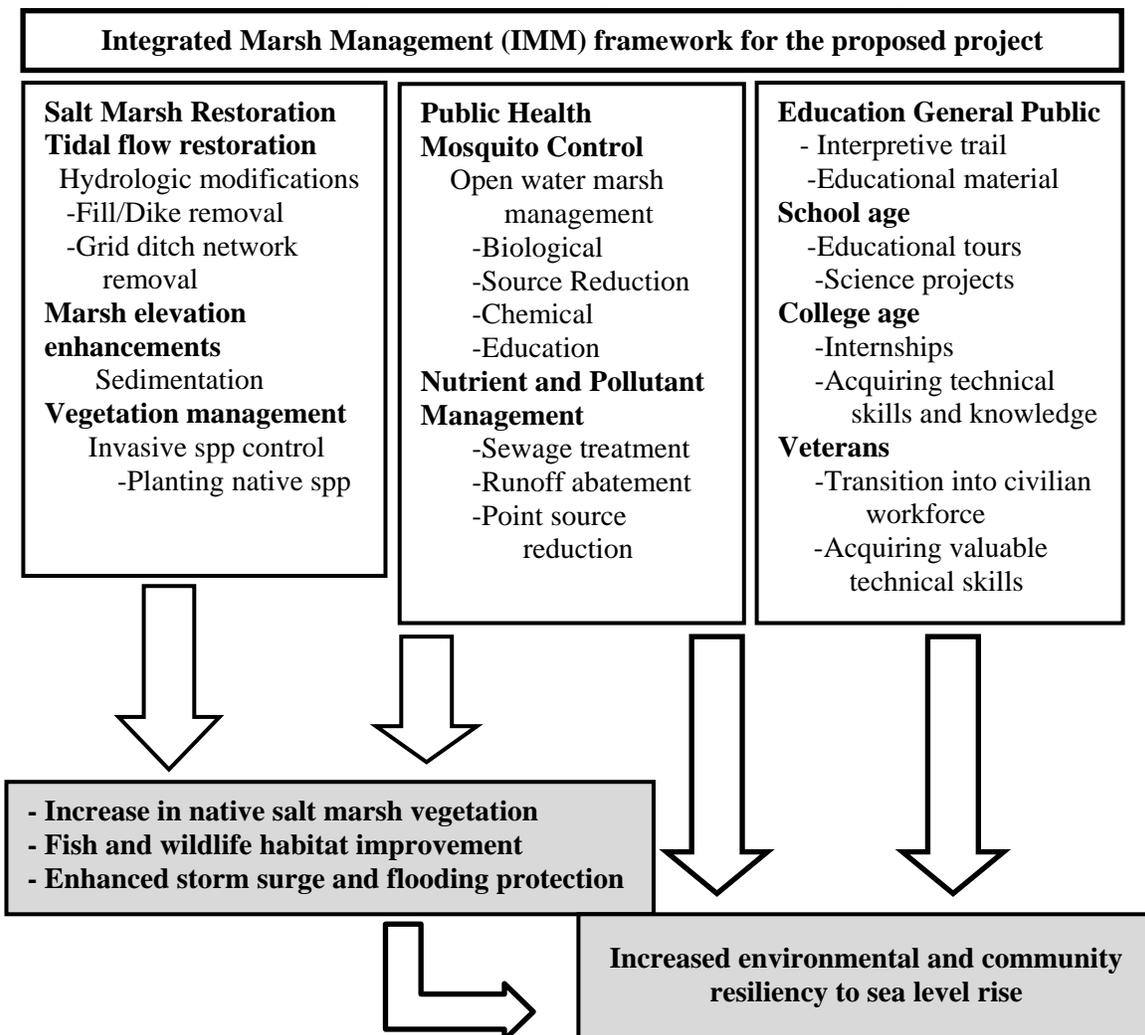
a. Project Goals and Objectives: The primary goal of this project is to develop and implement sustainable salt marsh rehabilitation methodologies. Such on-going stewardship of the tidal wetlands will enhance resiliency of coastal ecosystems and communities in the face of rising sea levels and extreme storm events (Deegan et al 2012). Approximately 1,500 acres of tidal wetlands will be evaluated and 200-400 acres will be rehabilitated during the 2 years of the project. The diverse components of this project will coalesce under the conceptual umbrella of Integrated Marsh Management (IMM) (Rochlin et al. 2012b; Fig. 2). IMM has been field tested by the core team of Suffolk County applicants at Wertheim National Wildlife Refuge (NWR) and recently adopted by US Fish & Wildlife Service (FWS) as part of their approach for expanding salt marsh habitat restoration on the remainder of their refuges on Long Island (funded through DOI grant). The project’s primary goal can be realized by extending the use of IMM techniques to wider swathes of County marshes in a sustainable manner.

**Hurricane Sandy Coastal Resiliency Competitive Grants Program Mitigation Funds
Department of the Interior - National Fish and Wildlife Foundation**

IMM is an approach to tidal wetlands management that seeks to maximize multiple benefits and reconcile competing management goals. The IMM approach to project design involves convening strategic stakeholders into an interagency team that will plan the project based on the site-specific considerations and stakeholder goals and mandates. Marsh management techniques are then chosen and tailored to the needs of that site. The primary management techniques already in use at Wertheim and proposed for this project include: 1) Restoring tidal flow by creating tidal channels that closely resemble natural tidal creeks. (Existing mosquito ditches are sometimes converted for this purpose); 2) Creating small ponds that closely resemble natural salt marsh ponds to create habitat for fish and wildlife; 3) Creating shallow connecting channels to prevent waterlogging of the marsh, allow access to ponds by estuarine fish and allow access to the marsh surface for native killifish that will control mosquito larvae; 4) Using excavated material to fill obsolete grid ditches; and 5) Spreading excavated material on the marsh surface to provide the proper elevation for desirable vegetation and eliminate habitats for mosquito larvae.

Results published by the core team on the pilot project at Wertheim NWR demonstrate that the techniques deployed, promoted growth of desirable vegetation while improving fish and wildlife habitat. In addition, production of mosquito larvae was reduced to levels where the need for pesticide application was dramatically reduced and could be eliminated with some minor, additional work. The IMM framework can also include additional marsh management techniques, such as vegetation control or planting where indicated. The cooperative, interagency management approach effectively lends itself to partnerships while incorporating educational and training goals into the overall management scheme (IMM Figure 2).

Figure 2. *Integrated marsh management (IMM) conceptual framework for this project*



**Hurricane Sandy Coastal Resiliency Competitive Grants Program Mitigation Funds
Department of the Interior - National Fish and Wildlife Foundation**

The resilience of large areas of Long Island tidal marshes is threatened by tidal restrictions, waterlogging, extensive mudflat and panne formation and invasive plants. Moreover, many of these wetlands produce mosquitoes in large enough numbers to require regular pesticide application. The preponderance of these challenges can be redressed using the IMM approach. Rehabilitating these wetlands to a level of resilience engendered by healthy native vegetation is key to keeping pace with sea level rise. Additionally, reducing, then reversing wetland loss, will improve fish and wildlife habitat, while mitigating vulnerability by buffering adjacent coastal communities to impacts of storms and sea-level rise. Rehabilitated wetlands also allay public health concerns engendered by mosquito proliferation, even as they showcase recreational opportunities that underscore the socioeconomic and ecosystem value of salt marshes.

Regional Technical Workgroup

A significant aspect of coastal resiliency is the application of cost-effective techniques that can contribute to long lasting, self-sustaining systems and management efforts well beyond an infusion of DOI funding. To that end, a key component of this proposal is the Regional Technical Workgroup (RTW) to be led by The Nature Conservancy. It will be composed of restoration practitioners from across the region (DE, NJ, CT, NY, and RI). The RTW will be an unprecedented collaboration of regional experts. It will bring to bear the best available restoration methods for individual on-the-ground projects, as well as providing a forum for creation and application of new methods, thereby advancing restoration science to future circumstances. The RTW will evaluate and compare the results of projects conducted throughout the multi-state region in order to determine the most effective restoration techniques.

Measures of Success

This project will be deemed successful when the sites subjected to IMM become productive self-sustaining salt marsh ecosystems that, [a] keep pace with sea level rise, [b] are populated by native vegetation and estuarine species typical of healthy mid-Atlantic salt marshes, [c] provide evident community protective benefits, and [d] limit excessive salt marsh mosquito production that impacts public health.

Objective 1: Conduct assessments and produce action plans for rehabilitation of ~1,500 acres of salt marsh habitat.

Measures of success: Timely delivery of the work plans for the identified project sites, which are to be completed within the 2 year timeframe, as well as templates for future projects in the multi-state region.

Outcome: Provide a foundation for restoration activities to strengthen the salt marshes and reduce coastal vulnerabilities to storms and sea level rise throughout Suffolk County.

Outputs: Detailed work plans for each marsh unit under the project's scope.

Objective 2: Physical restoration and enhancement of ~200 to 400 acres of salt marsh habitat.

Measures of success: Completion of the required measures, i.e. improvements in salt marsh vegetation, surrogate species, and abiotic parameters.

Outcome: 200-400 acres of restored tidal wetlands that will provide [a] improved habitat for native vegetation and animal species, [b] long-term self-sustained buffers against storms and flooding for adjacent communities [c] recreational and educational opportunities, [d] mitigation of public health risks associated with salt marsh mosquito production.

Outputs: Pre and post project monitoring reports.

Objective 3: Build a steady impetus towards a comprehensive approach to salt marsh restoration and coastal resiliency, laying groundwork for future projects within regional framework

Measures of success: Formation of a Regional Technical Workgroup (RTW)

Outcome: Assembling and convening a regional technical workgroup (RTW) of restoration experts to guide and assess the success of wetland restoration projects across the Sandy-impacted region and provide the information needed to promote policies that lead to additional projects in the future.

Outputs: A preliminary marsh assessment report summarizing the early responses of marsh restoration projects across the region. Moreover, the report will summarize management recommendations and lessons learned in order to inform restoration strategies and improved coastal resilience into the future.

**Hurricane Sandy Coastal Resiliency Competitive Grants Program Mitigation Funds
Department of the Interior - National Fish and Wildlife Foundation**

RTW will be the well-spring of continuing dialog among restoration practitioners across the region, tracking the long term progression of these projects conducted with Sandy Resiliency funds.

Objective 4: Acquire sufficient technical material and construction equipment while developing the requisite expertise for Phase 2 (and beyond). Provide long term maintenance of the restored salt marshes using local resources.

Measures of success: Elemental IMM equipment guided by trained personnel.

Outcome: [a] personnel skilled in support of local restoration projects, [b] acquisition of specialized equipment for on-going monitoring and construction on salt marsh restoration projects.

Outputs: Qualified practitioners and suitable equipment.

Objective 5: Provide formative field experience (i.e. student interns) for future workforce, while gaining local buy-in for restoration projects.

Measures of success: Uptake of training opportunities and dissemination of information.

Outcome: An increased pool of qualified workforce for restoration and monitoring activities, increased public awareness and support for restoration activities.

Outputs: 8-10 trained student interns, veterans, and an educational trail at restored salt marshes in one of the County parks, accessed through an instructive kiosk.

Objective 6: Catalyze proposals for future projects

Measure of success: Funding amount

Outcome: Continuation of IMM projects beyond the scope of the grant

Outputs: Funding secured for various IMM projects beyond the scope of the grant

Additional anticipated outputs and outcomes:

- Improve tidal regime and hydraulic exchange between the bay, estuary, and marsh
- Improve tidal exchange in the marsh interior
- Higher quality habitat for salt marsh biota including harvestable resource species such as crabs, clams and fish
- Reduce production of larval salt marsh mosquitoes simultaneously reducing the need for chemical control
- Enhance marsh accretion and resilience to sea level rise
- Improve ecosystem health and connectivity through the replacement of invasive vegetation with native species
- Maintain and enhance shoreline integrity
- Increase protection against storm surges and flooding.
- Improve nutrient fluxes into the estuary
- Engage students and general public via instructive marsh interactions

Assessment of the results: The monitoring plan, data collection, sampling protocols, and field processing of data will be predicated upon the Wertheim NWR restoration demonstration project (Rochlin et al. 2009, 2012b), NOAA's recommendations for coastal restoration monitoring (Thayer et al. 2005), and USFWS SMI (rapid assessment) protocols for salt marshes. The habitat restoration monitoring plan will be designed to measure progress and evaluate the long-term results based on before-after-control-impact (BACI) approach using selected measurable attributes indicated in Supplemental Table S1.

b. Priority: The south shore of Long Island, the Estuary Reserve, and the coastal communities were all substantially impacted by Hurricane Sandy in late October 2012. Storm surge surpassed the FEMA 100 year flood level mark (Supplemental Fig. S2). The impacts of this event included sediment over-wash, beach, dune, and marsh erosion, breach openings, deposition of diverse debris over salt marshes, significant infrastructure damage, and loss of human lives. The magnitude of extreme storm events and sea-level rise poses a growing threat to its 1.5 million human inhabitants.

**Hurricane Sandy Coastal Resiliency Competitive Grants Program Mitigation Funds
Department of the Interior - National Fish and Wildlife Foundation**

Modeling simulations using the Marsh Equilibrium Model (MEM) (Morris et al. 2002) applied to one of the proposed sites, Gardiner County Park, suggested an ever increasing rate of Mean Sea Level (MSL) rise will significantly reduce mean marsh elevation above sea level (Supplemental Fig. S3). Eventually, the marsh will drown, or migrate inland, unless tidal exchange is improved and sediments captured by more robust native vegetation. Although the IMM model has been applied just to one site of our project areas, comparable conditions elsewhere in the Great South Bay indicates that techniques can be extrapolated and applied to the other proposed sites. In line with this assertion, preliminary analysis by TNC identified other marshes with significant (20-60%) loss of vegetated areas that are included as restoration candidates. Trends of decreasing native vegetation cover, expanding mudflats, excessive panne formation, and invasive common reed expansion must, necessarily, be reversed, before degradation becomes irrevocable.

c. Sustained Benefits: Ecosystem resiliency will optimize coastal security and economic vibrancy. Simultaneous reduction of local nutrient pulses and nonpoint source pollution, as proposed in the County Executive's water quality initiative, will invigorate native vegetation, providing cover for enhanced estuarine fish, crabs, and shrimp habitat. Restored tidal flow will enable marshes to drain more quickly during storm events. Restored native vegetation will contribute to marsh elevation and increase sediment capture, mitigating impact from sea-level rise by providing storm buffering. This can all be realized even as mosquito-borne threats are reduced.

Another sustained benefit is property value protection and enhancement. In the July 2013 issue of *Nature*, Climate Change research by Katie Arkema suggests that, "variation among counties in the value of property now protected by coastal habitats is substantial, ranging from US\$0 to more than US\$20 billion in *Suffolk* and Kings, New York." (Arkema, Katie K, et al, "Coastal habitats shield people and property from sea-level rise and storms," *Nature Climate Change*, July, 14, 2013)

Expectations of positive long-term outcomes are supported by the data collected during the Wertheim demonstration project, where the core team applied comparable techniques (Rochlin et al 2009, 2012a, b). The results of these IMM modifications indicated minimal maintenance and sustained performance, requiring no further intervention. This project's sites will be closely monitored by participating agencies beyond the allocated two year time frame for the project. Long term benefits will be assessed and measured using established methodology, and outcomes evaluated on an on-going basis.

Completed projects will serve as exemplars of what can be accomplished, driving the science and policy of wetland restoration and management moving forward. Enhanced capacity and personnel expertise will lead to further implementation of tried and tested techniques, buttressed by regional collaborations and reports from the RTW.

d. Leveraging: This project will be part of a string of coastal marsh restoration projects within the Long Island South Shore Estuary Reserve (Fig.1). Many of the candidate wetlands are located within the NY Rising Community Reconstruction Zones and this project has the support of the community leaders who have been developing resiliency plans for those communities. Specifically, our proposal will build off the restoration at Wertheim NWR (Rochlin et al 2012a, b). It will complement currently funded projects through the Department of Interior's Hurricane Sandy Mitigation Funds. The RTW will make tangible, long-lasting interconnections with similar wetland restoration projects underway across the Sandy-impacted region.

Complementary ongoing projects that involve Suffolk County include:

- I. Within the Long Island South Shore Estuary Reserve
 - a) USFWS "*Salt Marsh Restoration and Enhancement at Seatuck, Wertheim, and Lido Beach National Wildlife Refuges, Long Island, New York*"
 - b) NPS "*Evaluate ecological impacts of breaching on estuarine habitats*"
 - c) USGS "*Linking Coastal Processes and Vulnerability – Fire Island Regional Study*"

**Hurricane Sandy Coastal Resiliency Competitive Grants Program Mitigation Funds
Department of the Interior - National Fish and Wildlife Foundation**

II. Multistate including coastal New York: 14 different projects on coastal resiliency and storm impacts spearheaded by USGS (<http://www.nfwf.org/hurricanesandy/Documents/doi-projects.pdf>)

III. Shinnecock Indian Nation within Suffolk County, Salt Marsh Assessment and Restoration

For this project, Suffolk County will be implementing wetland restoration techniques and monitoring activities developed and employed by USFWS and USGS. Moreover, the County has partnered with USFWS on their current Hurricane Sandy Mitigation project, providing funding leveraged through in-kind services by Suffolk County Vector Control (SCVC) personnel for marsh modifications, equipment use, personnel, and technical expertise. Therefore, the proposed project will be integral to the federal, state, and local efforts to increase coastal resiliency within the Long Island South Shore Estuary Reserve while significantly expanding the scope of the currently funded federal projects.

e. Speed to Functionality: Pursuant to results of the Wertheim demonstration project (Rochlin et al 2012b), benefits will be realized shortly after the completion of physical and hydrologic modifications. Within a period of 1-3 years, drainage and flood attenuation capabilities will increase, improving over time as native vegetation proliferates. An increase in Federal Trust resource species such as migratory birds and estuarine fish species is also anticipated. Mosquito-borne threats to human health are expected to decrease in short order. Improved hydrology, habitat, vegetation, and accretion will strengthen tidal wetlands in the face of sea level rise. Moreover, spreading of dredge spoil across the marsh and along the shoreline will notably contribute to coastline stabilization.

C. Youth and Veteran Engagement: This project will provide substantive opportunities for youth and veterans. Youth involvement will be drawn largely from undergraduate student internships, working closely with technical staff, acquiring hands-on experience in field work, scientific instrument operations, data collection, and data analysis. Such experience will contribute both to educational pursuits and future professional opportunities in wetlands management.

Youth: Between 8 and 10 student interns are expected to be employed through the project. The School for Marine and Atmospheric Sciences at SUNY Stony Brook University will be participating in the monitoring studies. The Corps Network (TCN) has offered assistance. TCN's Conservation Corps programs mobilize young people (typically aged 18-25) and veterans (up to age 35) with trained crew leaders, as self-contained units to complete ecological and restoration work, enhancing natural systems and restoring wildlife habitat along Sandy-impacted coastal landscape. Student interns will also be retained by the towns (Babylon and Islip), and Suffolk County.

Veterans: Suffolk County is home to the largest population of veterans in New York State, and one of the largest veteran populations of any county in the United States. This project has the potential to educate and provide meaningful training for veterans in TCN's Conservation Corps. It is particularly notable, that these veterans will be bolstering our defense against one of the greatest existential threats facing this country. The knowledge and skills gained can drive future employment opportunities in related fields. Student and veteran participants will be provided with safety training, equipment, and appropriate gear to ensure safety throughout the project. They will also be closely supervised by experienced technical staff.

D. Collaboration and Partnerships: This project is a partnership of numerous agencies and organizations. It will be administered by Suffolk County through the Department of Economic Development and Planning (SCDEDP), including the divisions of Water Quality and Community Development; the Department of Public Works, including the division of Vector Control (SCVC); and the Department of Parks. Suffolk County will take the lead in administering contracts and overseeing the full implementation of the project. Staff time will also be integral to project design, construction and monitoring. The New York State Department of Environmental Conservation (NYS DEC) will provide staff time for processing project permits. TNC will play a lead role in the RTW. The US Geological Survey, USFWS, TNC, Town of Babylon, Town of Islip, The Corps Network (TCN), and the School of Marine and Atmospheric Sciences (SOMAS), at the State University (SUNY) at Stony Brook will provide

**Hurricane Sandy Coastal Resiliency Competitive Grants Program Mitigation Funds
Department of the Interior - National Fish and Wildlife Foundation**

expertise and experience in salt marsh restoration and monitoring, whether in field work or advice. The proposed Shinnecock Indian Nation NFWF grant will provide an added opportunity for collaboration.

E. Work Plan & Logistics:

a. Project Team: The success of this project will stem from the close working relationships with the partnerships that Suffolk County has established over many years in wetlands management and restoration activities. The team has extensive expertise designing, conducting, and analyzing large scale marsh restoration projects. SCVC worked closely with USFWS on the demonstration IMM project at the Wertheim National Wildlife Refuge since 2004 (Rochlin et al 2012b), and has been selected as a partner for a larger scale restoration project on the balance of Long Island USFWS refuge network already funded by DOI. Other key members of the team include experts from The Nature Conservancy (TNC), New York State Dept. of Environmental Conservation, USGS, Town of Babylon, and Town of Islip (Supplemental Table S2).

Engineering and assessment will be conducted by Suffolk County and other team members, through and funded by in-kind services. For construction, qualified labor and equipment will be provided mostly by SCVC and select contactors (if necessary). Pre and post modification project monitoring will be conducted by Suffolk County, TNC, Towns of Babylon and Islip, with student and veteran interns through direct hiring, Stony Brook University, and The Corps Network.

b. Work Plan: This project will have three phases:

Phase 1 will implement rapid assessments using established methodologies (i.e. EPA, USFWS), on sites listed under the Geographic Context gathering the baseline data. Based on this data, site specific restoration designs will be developed by Suffolk County personnel with input from partner organizations. The necessary permits will then be secured. The overall process will be driven by the Suffolk County Wetlands Stewardship Strategy established under the Wetland Stewardship Program with input from the Regional Technical Workgroup (RTW). The scope of assessments includes approximately 1,500 acres of degraded salt marsh habitat.

Phase 2 will commence with on-site restoration activities supported by engineering designs. Specific restoration techniques will be selected based on site-specific needs, and may include restoring tidal connectivity, naturalizing or eliminating mosquito ditches, construction of fish reservoirs, creating shallow tidal channels, applying a thin sediment layer to contour the marsh, or reduction of spoil piles in accordance with the IMM framework (see Fig. 2). The goal is to restore between 200-400 acres, contingent on the amount of work identified during Phase 1 of the project.

Phase 3 begins with post-restoration monitoring. Lessons learned will encompass the final year of the grant, and will be continued using local resources and knowledge acquired during the project. Based on the results and outcomes, the RTW will provide recommendations for adaptive management and extension of the restoration activities to the remaining marshes within the 1,500 acre scope of the project.

c. Monitoring and Measuring Performance: Project success will be evaluated using before-after-control-impact (BACI). Pre-project monitoring will be conducted during Phase 1 for one year. Post project monitoring will be conducted during Phase 3 for one year. The monitoring plan, data collection, record, sampling protocols, and field processing of data will follow the established methodology previously applied by the project participants within the same watershed (Rochlin et al. 2009, 2012a, b). It will also adhere to NOAA's recommendations for coastal restoration monitoring (Thayer et al. 2005) and the New York State Salt Marsh Restoration and Monitoring Guidelines (Niedowski, 2000). The RTW will ensure that standardized metrics for evaluating success are collected from similar projects across the region so that a regional assessment can be conducted. This monitoring is designed to evaluate and measure the progress, goals and long-term assessments resulting from the project as it applies to coastal habitat restoration and resiliency to sea level rise. Continued monitoring will be conducted at the project area(s) for at least four years after restoration activities or Phase 3. Post-restoration monitoring will be coordinated by project partners, land owners and regulatory agencies.

**Hurricane Sandy Coastal Resiliency Competitive Grants Program Mitigation Funds
Department of the Interior - National Fish and Wildlife Foundation**

Measuring outcomes is a primary task of pre-implementation and post-implementation phases in order to determine whether the marsh modifications are in accordance with projections. Sampling will generally occur along transects with randomly selected origination points extending from the upland to the bay edge of the marsh. Structural and functional parameters will be measured in line with the main goals of the projects. Measurements included in the assessment, are listed in Supplemental Table S1 in the Project Narrative under measurable activities.

d. Return on Investment: Projected ROI for completed projects is significant (refer to Figure 1 for similar projects). Salt marshes have value for coastal hazard mitigation and climate change adaptation. By employing natural systems to maximize the benefits and ecosystem services provided by salt marshes, the storm damage and flooding will be mitigated for the adjoining communities. IMM techniques resulted in substantial reduction in mosquito production which meant reduced pesticide use. Reduced costs to the County diminution of health threats (West Nile Virus) are multiplier results. The estimated value of an acre of marsh per year is \$7860 (Barbier et al. 2011, their Table 3). This includes hurricane protection, water quality, fisheries, carbon sequestration, and birds. This project at \$22,500 per acre will show a net profit after 3 years. Finally, a healthy marsh produces more resource species for harvest by recreational sportsman and commercial fisherman.

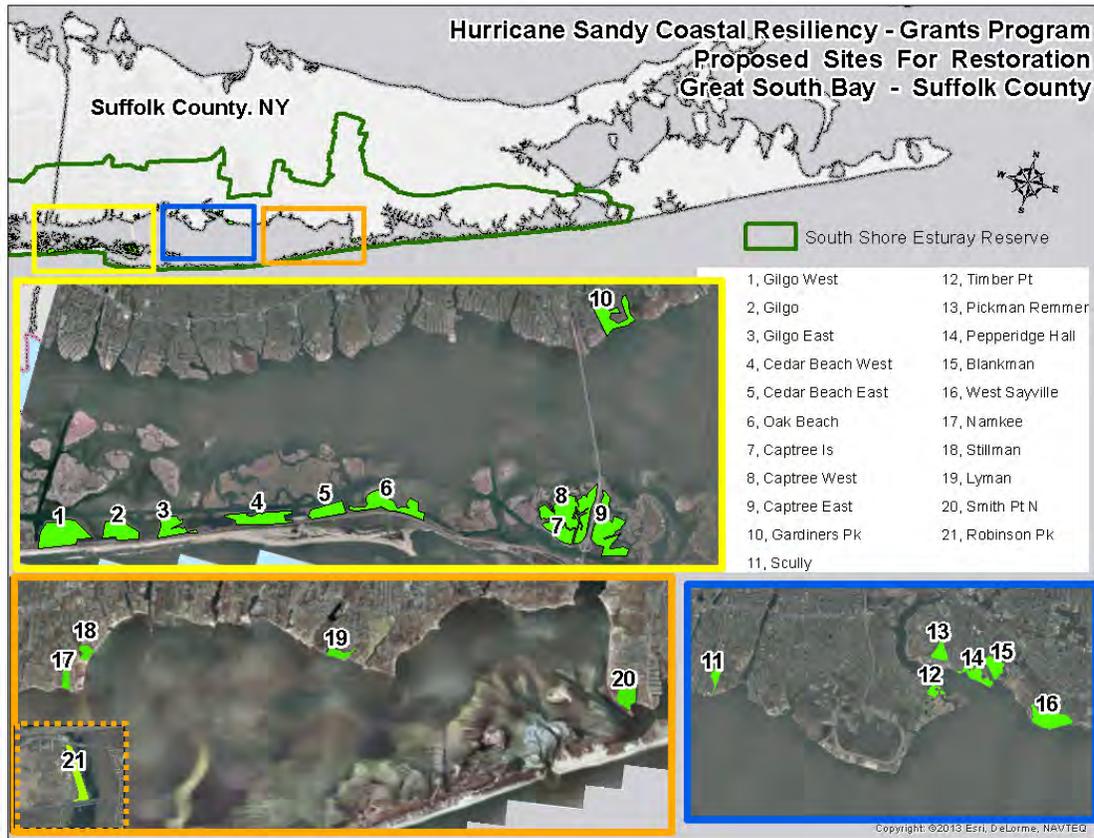
e. Risk: During Phase 1 of the project, each site will be assessed to ascertain best practices. Since the core project methodology has been subjected to testing and monitoring over the last ten years through the Wertheim Marsh Restoration Demonstration Project, the probability of failure and negative impacts are minimal. To further reduce risk, the sites considered for restoration will be selected for success potential. Changes to marsh will be mostly reversible, in the unlikely event that damage is caused.

f. Permits and Approvals: SCVC's successful procurement in obtaining the necessary permits and approval to conduct wetlands restoration at Wertheim and smaller projects in other marshes within the Long Island South Shore Estuary Reserve serves as precedent. These permits include the Nationwide General Permit for wetlands restoration issued by the US Army Corp of Engineers and reviewed by EPA, USFWS and NMFS and a variety of permits issued by NYS DEC: Protection of Waters Program, Article 15; Tidal Wetlands Permit Program, Article 25; Freshwater Wetlands Permit Program, Article 24; and 6NYCRR 608 Water Quality Certification. NYDEC is the landowner of some of the properties included in this project and is a partner on this project.

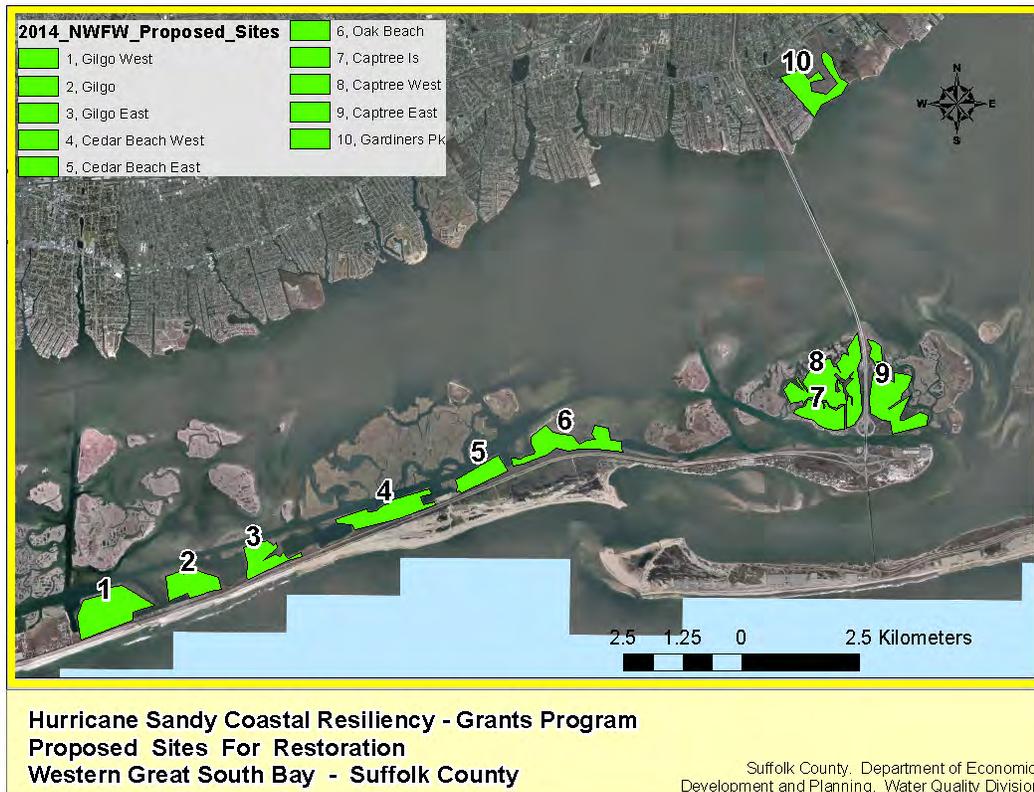
g. Safety: Suffolk County and its project team shall be responsible for strict compliance with all provisions of Occupational Safety and Health Administration (OSHA) requirements 29 CFR 1910 and 29CFR 1926. All partners on site will use best management practices to minimize erosion, spread of invasive species, and negative impacts to water quality. Following these standard practices will also ensure worker safety by maintaining a high standard worksite. Suffolk County will continue such safety practices when working on the other projects listed in Figure 1.

Supplemental Information

Supplemental Figure S1.A. Proposed Sites for Assessment and Restoration.



Supplemental Figure S1.B. Proposed Sites for Assessment and Restoration. Western area.



Supplemental Figure S1.C. Proposed Sites for Assessment and Restoration. Middle area.



Hurricane Sandy Coastal Resiliency - Grants Program
Proposed Sites For Restoration
Middle section Great South Bay - Suffolk County

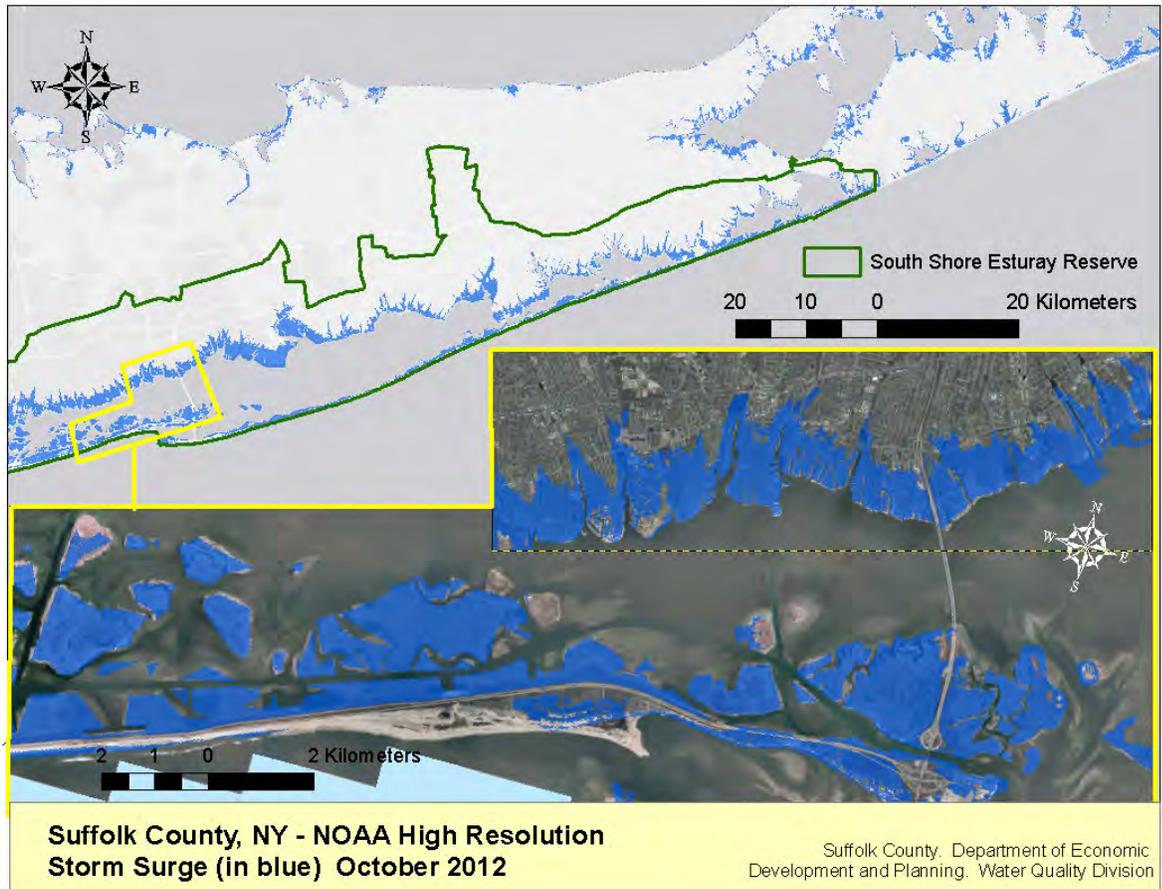
Suffolk County, Department of Economic
 Development and Planning, Water Quality Division

Supplemental Figure S1.D. Proposed Sites for Assessment and Restoration. Eastern area.

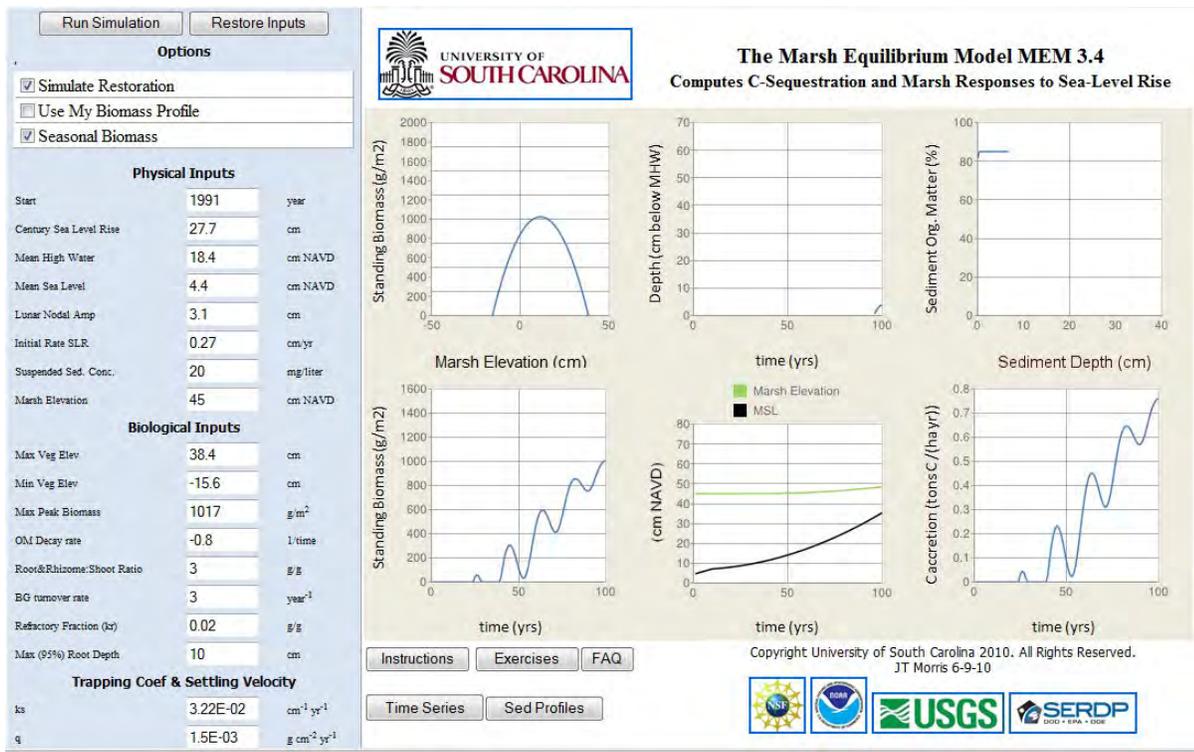


Hurricane Sandy Coastal Resiliency - Grants Program
Proposed Sites For Restoration
East Great South Bay - Suffolk County

Supplemental Figure S2. Hurricane Sandy flooded areas in Suffolk County, New York.



Supplemental Figure S3. Marsh elevation modeling. Under current conditions marsh elevation has a lower rate than sea level rise (chart on middle-bottom of figure).



Title: Coastal resiliency via integrated salt marsh management

Applicant: Suffolk County, New York

Supplemental Table S1. Measurable outputs and outcomes of the monitoring activities

Output and Outcomes	Measurable activities: pre and post implementation
Improvement of flood buffering and storm surge damage mitigation: restoration of salt marsh surface, habitat connectivity, flux between estuary and marsh, and tidal regime	Total land/open water area Marsh elevation & geomorphology Tidal amplitude and duration Percent naturalized hydrologic features Percent unmodified mosquito ditches Porewater salinity
Restore and maintain nutrient delivery / cycling / and export.	Porewater chemistry (concentrations of constituents) Aboveground plant biomass Plant decomposition rates
Improve water quality	Dissolved oxygen, nitrate, phosphate, etc.
Reduction of panne total area and prevention of new panne formation	Construction and maintenance of shallow connecting channels and tidal connectors Field surveys and GIS tools to determine panne reduction
Improving long-term salt marsh resilience in the face of sea level rise	Sediment characteristics and accretion Biogeochemical processes Vegetation biomass Stem density of <i>Spartina alterniflora</i> and <i>S. patens</i>
Control of the invasive <i>Phragmites australis</i>	Percent cover and vigor Pore and groundwater salinity through marsh area Data collection for sulfides on marsh sediment and rhizomes
Preservation or enhancement of native salt marsh biota	Percent cover native vegetation Stem density of <i>Spartina alterniflora</i> and <i>S. patens</i> Vertebrate (nekton) abundance and species composition Invertebrate (spider) abundance and species composition
Biological and physical control of salt marsh mosquitoes	Larvivorous killifish abundance Larval mosquito production (frequency and intensity) Extent of larval mosquito habitat Numbers of adult mosquitoes in monitoring traps in adjacent uplands
Increase public awareness of the estuarine environmental issues	Creation of an interpretive environmental education trail Integrating graduate and undergraduate students to pre and post monitoring surveys and data collection Integrating veterans and volunteers to monitoring surveys and data collection

Supplemental Table S2: Key project personnel

Name	Affiliation	Role	Qualifications and strengths
Dominick Ninivaggi	Suffolk Co	Supervision	> 30 years of experience with salt marsh restoration
Dorian Dale	Suffolk Co	Policy Direction	Sustainability project management
Dawn McReynolds	NYS DEC	Regulatory	Section Head, Marine Habitat, Bureau of Marine Resources
Camilo Salazar, M.Sc.	Suffolk Co	Technical staff	Analytical methods, salt marsh biogeochemistry

Title: Coastal resiliency via integrated salt marsh management

Applicant: Suffolk County, New York

Tom Iwanejko	Suffolk Co	Technical staff	GIS/GPS, engineering designs
Dr. Iliia Rochlin, PhD	Suffolk Co	Technical staff	Study design and data analysis
Mary Dempsey	Suffolk Co	Technical staff	Field work, field crew supervision
Frank Castelli	Suffolk Co	Coordination	Environmental project management
Rich Groh	Town of Babylon	Project monitoring	Field work, field crew supervision
Brian Zitani	Town of Babylon	Project monitoring	Field work, field crew supervision
Tom Marquardt	Town of Islip	Project monitoring	Field work, field crew supervision

Title: Coastal resiliency via integrated salt marsh management
Applicant: Suffolk County, New York

Category	Hourly Rate	Total Hours for 2 years	Function	Organization	In-kind, 2 years (Match)	DOI Requested funds
1. Personnel						
A. Suffolk County						
i. Staff (13 people)						
Chief Recovery Officer/Director of Sustainability	\$89.03	200	Policy Direction	EDP, Administration	\$17,806	None
Vector Control Superintendent	\$64.86	728	Operation, oversight and monitoring	DPW, Vector Control	\$47,218	None
Environmental Projects Coordinator	\$30.30	300	Operation, oversight	EDP, Water Quality	\$9,090	None
Principal Env. Analyst	\$52.01	400	Operation and monitoring	DPW, Vector Control	\$20,804	None
Entomologist	\$30.29	300	Operation and monitoring	DPW, Vector Control	\$9,087	None
Biologist	\$25.56	400	Operation and monitoring	DPW, Vector Control	\$10,224	None
Senior Env. Analyst	\$23.00	300	Operation and monitoring	EDP, Water Quality	\$6,900	None
Environmental Analyst	\$20.72	400	Operation and monitoring	EDP, Water Quality	\$8,288	None
Environmental Analyst	\$20.72	400	Operation and monitoring	EDP, Water Quality	\$8,288	None
Clerk, typist	\$20.00	200	Operation	EDP, Water Quality	\$4,000	None
Interns x 3	\$9.00	840	Monitoring, Sampling, Analysis	DPW, Vector Control	\$7,560	None
TOTAL					\$149,265	
ii. Construction Crew (21 people)						
Foreman x 3	\$31.03	1,560	Construction	DPW, Vector Control	\$9,682	\$38,724 *
Construction equipment operator (CEO) x 12	\$24.82	6,240	Construction	DPW, Vector Control	\$30,975	\$123,900 *
Auto equipment operator (AEO) x 6	\$21.72	3,120	Construction	DPW, Vector Control	\$13,553	\$54,212*
TOTAL					\$54,210	\$216,836 *
B. Town of Babylon (11 people)						
Waterways Management Supervisor	\$41.67	312	Operation, oversight and monitoring	Environmental Control	\$13,001	None
Chief Environmental Analyst	\$44.48	104	Operation and monitoring	Environmental Control	\$4,625	None
Principal Environmental Analyst	\$44.39	104	Operation and monitoring	Environmental Control	\$4,616	None
Bay Management Specialist I	\$25.01	312	Operation and monitoring	Environmental Control	\$7,802	None

Title: Coastal resiliency via integrated salt marsh management

Applicant: Suffolk County, New York

Category	Hourly Rate	Total Hours for 2 years	Function	Organization	In-kind, 2 years (Match)	DOI Requested funds
Program Aide I x 2	\$11.16	144	Operation and monitoring	Environmental Control	\$1,606	None
Program Aide II x 2	\$13.74	144	Operation and monitoring	Environmental Control	\$1,978	None
Program Aide III x 2	\$17.54	144	Operation and monitoring	Environmental Control	\$2,526	None
Red Hill Contracted Services	\$12.65	104	Operation and monitoring	Environmental Control (administrators)	\$1,315	None
TOTAL					\$37,470	
C. Town of Islip (8 people)						
Town Engineer	\$43.96	160	Operation	Planning and Development	\$7,034	None
Geographic Information Technologist 1	\$35.71	110	GIS	Planning and Development	\$3,928	None
Senior Engineering Aide	\$30.04	220	Operation and monitoring	Planning and Development	\$6,609	None
Waterways Management Supervisor	\$38.46	318	Operation, oversight and monitoring	Planning and Development	\$12,230	None
Principal Planner	\$44.00	318	Operation	Planning and Development	\$13,992	None
Itec Intern	\$15.00	168	Operation	Planning and Development	\$2,520	None
Summer Intern	\$9.00	78	Operation and monitoring	Planning and Development	\$702	None
Summer Intern	\$10.00	78	Operation and monitoring	Planning and Development	\$780	None
TOTAL					\$47,795	
D. The Nature Conservancy (2 people)						
Senior Coastal Scientist			Regional Technical Workgroup (RTW)	The Nature Conservancy		\$17,420*
Conservation Program Assistant			RTW	The Nature Conservancy		\$1,000*
E. The Corps Network (4 people)						
Veteran x 3			Monitoring, Sampling, Analysis	Conservation Corps		\$100,000
Crew Leader			Supervisor	Conservation Corps		
F. Youth						
Undergraduate: approx. 12			Monitoring, Sampling, Analysis	N/A		\$85,000
Graduate: approx. 8				N/A		
Lab technician	\$20.51	1950	Analysis	Suffolk County		\$120,000**
Total Personnel					\$288,740	\$540,259

Title: Coastal resiliency via integrated salt marsh management

Applicant: Suffolk County, New York

*: Requested DOI funds: Personnel costs for The Nature Conservancy and under Youth, the Lab technician, personnel costs include salary and fringe. For construction crew is totalized including fringe benefits (51.64% Fringe Benefits). Requested DOI funds for Construction crew are 80% of total costs. Suffolk County matching this item with 20% of costs

** : Interns: regular pay rate between \$10 to \$15/hour. 20 interns expected through the project monitoring and data collection. Approximately 47 hours per intern per year.

Category	In-kind goods and services	DOI Requested Funds
2. Equipment		
a. Construction/Restoration		
Marsh Construction Machines: Maintenance and Repair of Marsh Machines – Fuel, Parts & Service	\$400,000***	\$100,000
Purchase of Amphibious Machines: Long Reach Excavator		\$350,000
Multi-Purpose Dump Carrier		\$300,000
b. Data Collection and Analysis		
Multiparameter reader YSI x 8		\$8,000
Aqua troll/onsite data loggers x : salinity/tide height x 12		\$60,000
Computer laptop x 4		\$8,000
Field Data Computer (Trimble Juno wGPS and software) x10		\$28,000
Books/Id Manuals		\$2,000
Miscellaneous sampling equipment and supplies (nets, traps, reagents, dippers, aspirators)		\$28,000
Data management software/Statistic software/GIS field equipment		\$35,000
3. Non-equipment services		
Travel, conference attendance, publications		\$28,000
4. Contractual		
Regional Technical Workgroup (RTW)- TNC		\$66,000
Educational trail		\$30,000
Isotopes collection, analysis		\$40,000
Engineering and Design		\$100,000
Taxonomical services		\$20,000
Total	\$400,000	\$1,203,000

***: **Construction Equipment: As in-kind matching**, Suffolk County will use its own equipment and machines for the construction phase as in-house goods and services. Under FEMA estimates the cost/rate of machines is \$1000/day.

Title: Coastal resiliency via integrated salt marsh management
Applicant: Suffolk County, New York

Summary Expenditure Categories	In-kind Match	Total Cost	DOI Requested Funds
1. Personnel			
Suffolk County Staff	\$149,265	\$149,265	
Suffolk County Construction Crew	\$54,210	\$271,049	\$216,839
Town of Babylon	\$37,470	\$37,470	
Town of Islip	\$47,795	\$47,795	
The Nature Conservancy		\$18,420	\$18,420
The Corps Network (Veterans)		\$100,000	\$100,000
Interns: Graduate/Undergraduate		\$205,000	\$205,000
2. Equipment			
a. Construction/Restoration	\$400,000	\$1,150,000	\$750,000
b. Data Collection and Analysis		\$169,000	\$169,000
3. Non-equipment services		\$28,000	\$28,000
4. Contractual		\$256,000	\$256,000
Total	\$688,740	\$2,431,999	\$1,743,259

Suffolk County's List of Reference Documents

1. Arkema, et al 2013: Coastal habitats shield people and property from sea-level rise and storms (Page 2 of this PDF Document)
2. Barbier, et al 2011: The value of estuarine and coastal ecosystem services (Page 9 of this PDF Document)
3. Deegan, et al 2012: Coastal eutrophication as a driver of salt marsh loss (Page 34 of this PDF Document)
4. Rochlin, et al 2009: Geostatistical evaluation of integrated marsh management impact on mosquito vectors using before-after-control-impact (BACI) design (Page 41 of this PDF Document)
5. Rochlin, et al 2011: Aquatic insects of New York salt marsh associated with mosquito larval habitat and their potential utility as bioindicators (Page 61 of this PDF Document)
6. Rochlin, et al 2012: Integrated Marsh Management (IMM): a new perspective on mosquito control and best management practices for salt marsh restoration (Page 78 of this PDF Document)
7. Rochlin, et al 2012: The Effects of Integrated Marsh Management (IMM) on Salt Marsh Vegetation, Nekton, and Birds (Page 93 of this PDF Document)
8. Thayer et al 2005: Science-based Restoration Monitoring of Coastal Habitats, Volume Two: Tools for Monitoring Coastal Habitats (Page 109 of this PDF Document)
9. Niedowski et al 2000: NYS Department of State: New York State Salt Marsh Restoration and Monitoring Guidelines (Page 117 of this PDF Document)
10. The Suffolk County Wetlands Stewardship Strategy (Page 264 of this PDF Document)

Hurricane Sandy Coastal Resiliency Competitive Grants Program Mitigation Funds
Department of the Interior – National Fish and Wildlife Foundation

January 31, 2014

Suffolk County New York Application for:

“Coastal resiliency via integrated salt marsh management”

Support Letters have been received from the U.S. Congress, several Federal and State agencies as well as from conservation groups within New York State, and surrounding states. In addition support letters have also been received from all eight (8) of the New York Rising Communities and from a veterans/volunteers group that will be working with us if we are awarded the grant. The support letters were combined into a single file for your review and this file contains letters from the following:

1. U.S. Congress
2. U.S. Department of the Interior – U.S. Fish and Wildlife Service
3. U.S. Department of the Interior – U.S. Geological Survey (USGS)
4. New York State Department of Environmental Conservation (NYS DEC)
5. South Shore Estuary Reserve (NYS DOS)
6. New York Rising Community Reconstruction Planning Committee for the West Gilgo/Captree communities
7. New York Rising Community Reconstruction Planning Committee for the Babylon/ West Babylon communities
8. New York Rising Community Reconstruction Planning Committee for the Fire Island communities
9. New York Rising Community Reconstruction Planning Committee for the Shirley/Mastic communities
10. New York Rising Community Reconstruction Planning Committee for the Amityville/Copiague communities
11. New York Rising Community Reconstruction Planning Committee for the Oakdale/West Sayville communities
12. New York Rising Community Reconstruction Planning Committee for the Lindenhurst community.
13. New York Rising Community Reconstruction Planning Committee for the West Islip community – Letter 1 (DeCarlo)

14. New York Rising Community Reconstruction Planning Committee for the West Islip community – Letter 2 (Donohue)
15. Town of Brookhaven
16. Cornell Cooperative Extension of Suffolk County
17. The Nature Conservancy (TNC)
18. Connecticut Department of Energy & Environmental Protection
19. Barnegat Bay Partnership – New Jersey
20. Seatuck
21. Stony Brook University – School of Marine and Atmospheric Sciences (SoMAS)
22. Save the Bay – Narragansett Bay - Rhode Island
23. Proposed Town of Babylon Supporting Resolution – to be voted on February 18, 2014
24. Rhode Island Coastal Resources Management Council
25. The Corps Network (TCN) - Volunteers

Please note that Islip and Babylon Towns are also providing in-kind services as project partners.

Congress of the United States
Washington, DC 20515

January 31, 2014

Mr. Jeff Trandahl
Executive Director & CEO
National Fish and Wildlife Foundation
1133 Fifteenth St. NW, Suite 1100
Washington, D.C. 20005

Dear Mr. Trandahl:

We write in support of Suffolk County's application for funding from the 2013 Hurricane Sandy Coastal Resiliency Competitive Grant through the National Fish and Wildlife Foundation. This funding will assist the county in restoring and improving the management of approximately 400 acres of estuarine-salt marsh coastal habitat to enhance resiliency of coastal ecosystems, maintain and improve fish and wildlife habitat, and reduce inland communities' vulnerability against risks related to storm surges, flooding, wave energy, erosion, and long-term sea level rise.

The south shore of Suffolk County was significantly impacted by Hurricane Sandy in late October, 2012. Storm surge floods easily surpassed the FEMA 100 year flood level marks, leaving lasting damage to thousands of properties on and near the coastline in addition to the barrier islands. In addition to the immediate damage caused by Sandy, salt marshes in this area are now more vulnerable than ever to the threat of rising sea level. According to the county, this vulnerability is causing a loss of marsh vegetation and thus threatening the long-term viability of these important ecosystems in the face of future storm events.

If this funding is granted, Suffolk County plans to address restoration needs identified by the New York State South Shore Estuary Reserve Comprehensive Management Plan. This proposed plan includes efforts to improve water quality and natural living resources. Further, this project will restore and enhance environmental and socioeconomic services from currently degraded salt marsh areas affected by large areas of invasive common reed, waterlogging, extensive mudflat and panne formation, and shoreline erosion. Besides providing buffer areas to prevent the loss of property, these wetlands are valuable open space areas that provide opportunities for outdoor recreation and education. The proposed areas for restoration include conserved sites and land owned by in the Towns of Babylon, Islip and Brookhaven, Suffolk County, and the State of New York. Although Suffolk County has continually worked to address storm resiliency on Long Island, they cannot completely restore this area without funding from the National Fish and Wildlife Foundation.

We ask that you please give this application your full consideration. If you have any questions, or desire further information, please do not hesitate to contact us.

Sincerely,



KIRSTEN GILLIBRAND
United States Senator



CHARLES E. SCHUMER
United States Senator



STEVE ISRAEL
Member of Congress



TIMOTHY H. BISHOP
Member of Congress



PETER T. KING
Member of Congress



Town of
Brookhaven
Long Island

Edward P. Romaine, Supervisor

January 27, 2014

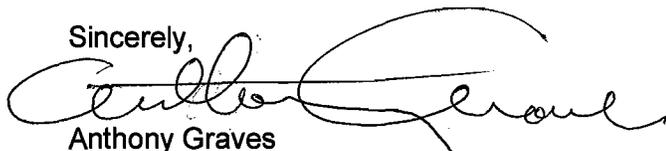
Mr. Martin McHugh
Program Coordinator
National Fish and Wildlife Foundation
1133 15th Street NW, Suite 1100
Washington, DC 20005

Dear Mr. McHugh

I am pleased to submit this letter in support of the Suffolk County Department of Economic Development and Planning's application, to 2013 Hurricane Sandy Coastal Resiliency Competitive Grants Program. The main objective of this project is to improve and strengthen Great South Bay estuarine-salt marsh coastal habitats to enhance resiliency of coastal ecosystems, fish and wildlife, and reduce inland communities' vulnerability against risks related to storm surges, flooding, wave energy, erosion, and long-term resiliency to sea level rise. This project will restore and enhance environmental and socioeconomic services from currently degraded salt marsh areas affected by large areas of invasive common reed (*Phragmites australis*), waterlogging, extensive mudflat and panne formations, shoreline erosion and high mosquito production. In addition, this project will provide volunteer and educational opportunities for citizens, as well as research opportunities to undergraduate and graduate students by integrating ecosystem structural and functional indicators into the pre and post project monitoring activities.

The Town of Brookhaven is familiar with the successes of past efforts at marsh restoration by Suffolk County and believes that the expertise and experience which the County's staff has will make this proposal a resounding success should it be funded. Again, Brookhaven supports Suffolk County and its partners in this important project.

Sincerely,



Anthony Graves
Chief Environmental Analyst

Planning, Environment and Land Management
Tullio Bertoli, AICP, Commissioner
Brenda Prusinowski, AICP, Chief Deputy Commissioner
One Independence Hill • Farmingville • NY 11738 • Phone (631) 451-6400 • Fax (631) 451-6419
www.brookhaven.org



Cornell University
Cooperative Extension
of Suffolk County

Extension Education Center

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

Mr. Martin McHugh
Program Coordinator
National Fish and Wildlife Foundation
1133 15th Street NW, Suite 1100
Washington, DC 20005

Date: January 23, 2014

Re: Letter of support for SCDEDP Sandy Application

Dear Mr. McHugh:

Cornell Cooperative Extension of Suffolk County strongly supports the Suffolk County Department of Economic Development and Planning's application, for the 2013 Hurricane Sandy Coastal Resiliency Competitive Grant.

This proposed project to improve and strengthen Great South Bay estuarine-salt marsh coastal habitats to enhance resiliency of coastal ecosystems, fish and wildlife, and reduce inland communities' vulnerability against risks related to storm surges, flooding, wave energy, erosion, and improve long-term resiliency to sea level rise is a goal we support. Implementation of this project will help to restore currently degraded salt marsh areas affected by invasion of common reed (*Phragmites australis*), excessive waterlogging, extensive mudflat and panne formations, shoreline erosion and high mosquito production.

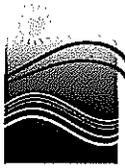
There are many areas of concern for Suffolk County and the Nation, including the loss of tidal marshes and other coastal habitats that have reduced estuarine productivity and eliminated critical feeding and nursery habitat for fin and shellfish. We feel the proposed project goes a long way towards addressing these concerns and does it in a sound scientific manner.

I consider this to be an excellent proposal to enhance our south shore of Long Island wetlands to better protect our communities and to also strengthen our natural ecosystems to benefit fish and wildlife. I look forward to supporting Suffolk County and in this important project

Sincerely,

A handwritten signature in black ink, appearing to read 'Chris Pickerell', written over a white background.

Chris Pickerell
Marine Program Director
Cornell Cooperative Extension of Suffolk County



Memo

To: Mr. David O'Neill, Vice President, Conservation Programs, National Fish & Wildlife Federation

From: Paul Capotosto, Program Specialist 1 

Date: 1/30/2014

Re: DOI/Sandy Funding Program – support Suffolk County, NY's, “Enhancing coastal resiliency through integrated salt marsh management along the south shore of Long Island, New York”.

We at the Department of Energy and Environmental Protection, Wetlands Habitat and Mosquito Management Program in CT support Suffolk County, NY's application for NFWF Hurricane Sandy funds under the proposal, “Enhancing coastal resiliency through integrated salt marsh management along the south shore of Long Island, New York”.

The primary goal of this proposal is to restore the multiple benefits of healthy wetlands to deteriorating wetlands on the south shore of Long Island, NY; however, in addition to the local restoration benefits, this proposal also includes a very important regional component that will have significant influence on wetlands across the entire Sandy-impacted region.

The Regional Technical Workgroup (RTW) to be led by The Nature Conservancy will be composed of experts in wetland restoration from across the region (DE, NJ, CT, NY, and RI). This group will be further strengthened by including Project PI's from other Hurricane Sandy resilience projects across the region into the RTW. Any lessons learned from one project will be easily shared across the entire region and range of projects because of this regional forum.

This is an unprecedented opportunity to foster collaboration of regional marsh restoration experts. It will ensure that the best available restoration methods and monitoring metrics will be implemented for on-the-ground projects. The RTW will also create the opportunity for a synoptic analysis of marsh response to the restoration techniques used across the region resulting in a more comprehensive approach for implementing adaptive management beyond just Long Island, NY.

For example, many current and proposed projects across the region (internally funded DOI projects and projects submitted in response to this call) are considering the beneficial use of dredge material to reestablish appropriate elevations and restore healthy functioning marsh. A synoptic analysis of responses to these restoration strategies, to provide proof of concept, will be incredibly valuable for current and future restoration projects. This may be particularly applicable for restoration of marshes that are experiencing marsh loss by expansion of unvegetated pannes (an increasingly common and widespread marsh loss phenomenon).

This is a timely and valuable effort which will have a long lasting impact on the resilience of our coastal salt marshes along with the many economic and cultural activities that depend on them.

In summary, we enthusiastically support the formation of the RTW and look forward to participating as an active member in order to produce a regional assessment of restoration success and adaptive management recommendations across the Sandy-impacted region.

New York State Department of Environmental Conservation

Division of Fish, Wildlife & Marine Resources

Bureau of Marine Resources

205 North Belle Mead Road, Suite 1, East Setauket, New York 11733

Phone: (631) 444-0430 • Fax: (631) 444-0434

Website: www.dec.ny.gov



Joe Martens
Commissioner

January 29, 2014

Mr. Martin McHugh
Program Coordinator
National Fish and Wildlife Foundation
1133 15th Street NW, Suite 1100
Washington, DC 20005

Re: Letter of support for "Salt marsh restoration and enhancement to improve coastal resilience along the south shore of Long Island, New York".

Dear Mr. McHugh:

The New York State Department of Environmental Conservation, Bureau of Marine Resources, Marine Habitat Section, strongly supports the Suffolk County Department of Economic Development and Planning's application, for the 2013 Hurricane Sandy Coastal Resiliency Competitive Grant.

There are significant concerns with the health of estuarine marshes, not only globally but here in Suffolk County, New York. Documentation of significant losses have reduced estuarine productivity and eliminated critical feeding and nursery habitat for finfish and shellfish. Inland communities' vulnerability to risks related to storm surges, flooding, wave energy, erosion, and long-term resiliency to sea level rise have also been compromised by these degradations.

It is critical that proposed projects, such as the subject application, address restoration needs of these marshes. Of utmost importance to the success of these projects is the Regional Technical Workgroup (RTW). Restoration sites will be assessed, projects planned, designed and monitored with the expertise of the proposed group. This is an unprecedented collaboration of regional experts in the field of marsh restoration. This will make available the best restoration methods, analysis of marsh response, provide recommendations for new methods and assure adaptive management of these sensitive resources. This project will allow the County and its partners to improve water quality, living resources and community resiliency in a sound and up to date scientific manner.

We feel the proposed project in concert with RTW will make this project advance towards addressing restoration of these much needed marine resources. I look forward to working with Suffolk County and its other partners on this very important project.

Sincerely,



Dawn McReynolds

Section Head, Marine Habitat

New York State Department of Environmental Conservation



January 30, 2014

Mr. David O'Neill, Vice President
Conservation Programs
National Fish & Wildlife Federation
1133 Fifteenth St., M.W. Suite 1100
Washington, DC 2005

RE: Support for Hurricane Sandy Coastal Resiliency Competitive Grants Program Proposal

Dear Mr. O'Neil:

On behalf of the Barnegat Bay Partnership in New Jersey, we support Suffolk County, NY's application for NFWF Hurricane Sandy funds under the proposal, **"Enhancing coastal resiliency through integrated salt marsh management along the south shore of Long Island, New York"** as proposed for the Hurricane Sandy Coastal Resiliency Competitive Grants Program

The primary goal of this proposal is to restore the multiple benefits of healthy wetlands to deteriorating wetlands on the south shore of Long Island, NY; however, in addition to the local restoration benefits, this proposal also includes a very important regional component that will have significant influence on wetlands across the entire Sandy-impacted region.

The Regional Technical Workgroup (RTW) to be led by The Nature Conservancy will be composed of experts in wetland restoration from across the region (DE, NJ, CT, NY, and RI). This group will be further strengthened by including Project PI's from other Hurricane Sandy resilience projects across the region into the RTW. Any lessons learned from one project will be easily shared across the entire region and range of projects because of this regional forum.

This is an unprecedented opportunity to foster collaboration of regional marsh restoration experts and monitoring activities. Such collaboration not only promotes better science within my own marsh monitoring project but will foster partnership across the region encouraging additional research beyond this proposed work.

ONE OF 28 NATIONAL ESTUARY PROGRAMS ADMINISTERED BY THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY.

Ocean County College | College Drive | PO Box 2001 | Toms River, NJ 08754
phone (732) 255-0472 | fax (732) 864-3851

BBP.OCEAN.EDU

It will ensure that the best available restoration methods and monitoring metrics will be implemented for on-the-ground projects.

The RTW will also create the opportunity for a synoptic analysis of marsh response to the restoration techniques used across the region resulting in a more comprehensive approach for implementing adaptive management beyond just Long Island, NY. For example, many current and proposed projects across the region (internally funded DOI projects and projects submitted in response to this call) are considering the beneficial use of dredge material to reestablish appropriate elevations and restore healthy functioning marsh. A synoptic analysis of responses to these restoration strategies, to provide proof of concept, will be incredibly valuable for current and future restoration projects. This may be particularly applicable for restoration of marshes that are experiencing marsh loss by expansion of unvegetated as we have observed in our wetlands monitoring and assessment in Barnegat Bay.

This is a timely and important effort which will have a long lasting impact on the resilience of our coastal salt marshes along with the many economic and cultural activities that depend on them.

In summary, we enthusiastically support the formation of the RTW and look forward to participating as an active member in order to produce a regional assessment of restoration success and adaptive management recommendations across the Sandy-impacted region.

Sincerely,

Martha Maxwell-Doyle

Martha Maxwell-Doyle
BBP Deputy Director



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Long Island National Wildlife Refuge Complex
340 Smith Road
Shirley, New York 11967

January 30, 2014

Mr. David O'Neill, Vice President
Conservation Programs
National Fish & Wildlife Federation

This letter is to confirm our support for Suffolk County, NY's application for NFWF Hurricane Sandy funds under the proposal, "**Enhancing coastal resiliency through integrated salt marsh management along the south shore of Long Island, New York**".

The primary goal of this proposal is to enhance resiliency of coastal ecosystems, maintain and improve fish and wildlife habitat, and reduce inland communities' vulnerability against risks related to storm surges, flooding, wave energy, erosion, and long-term sea level rise. The expected beneficial outcomes for these tidal wetlands include: improved flood buffering, increased cover and health of native vegetation, improved nutrient fluxes buffering, enhanced natural marsh accretion, reduction in mosquito production, and enhanced use of the marsh by wildlife. As a result of improved conditions for native vegetation and increased sediment capture, the marsh is expected to become more resilient to sea level rise resulting on an improvement of marsh services to the surrounding residential areas regarding protection against storm surges and flooding, as well as maintaining these open space areas for future enjoyment.

The work proposed here dovetails perfectly with federally funded Hurricane Sandy resiliency projects on U.S. Fish and Wildlife Service's Long Island National Wildlife Refuge Complex. Many of the proposed project sites in Suffolk County's proposal are immediately adjacent to National Wildlife Refuge lands. The ability to work on adjacent lands will broaden the scope and strengthen the adjacent work that has already been funded in these locations. Additionally, the creation of a Regional Technical Working Group will offer an unprecedented collaboration of regional experts and will not only bring to bear the best available restoration methods but will most likely provide the opportunity for creation of new methods, thereby advancing restoration science to meet our 21st century circumstances.

Given our long-term planning goals and documents, biological priorities for salt marsh habitats, and our excellent working relationship with Suffolk County over the years, I strongly support this project proposal. This is a timely and valuable effort which will have a long lasting impact on the resilience of our coastal salt marshes along with the many ecological benefits, economic and educational activities that depend on them.

A handwritten signature in blue ink, appearing to read "Michelle Potter". The signature is fluid and cursive, with a large initial "M" and a long horizontal stroke at the end.

Michelle Potter
Project Leader
Long Island NWR Complex

To Whom It May Concern:

As Co-Chair of the New York Rising Community Reconstruction Planning Committee for the Village of Amityville and Copiague, I am writing in support of Suffolk County's application for a grant under the 2014 Hurricane Sandy Coastal Resiliency Grant Program.

The Committee is part of New York Governor Andrew M. Cuomo's New York Rising Community Reconstruction (NYRCR) Program—a grassroots planning process that is designed to empower local residents and community leaders to create stronger, more resilient places to live and work. We are one of nine NYRCR Communities in Suffolk County, where a sum total of \$48.5 million in Community Block Development Grant –Disaster Recovery (CDBG-DR) funds have been allocated. (More information about the program can be found at www.governor.ny.gov/press/07182013-ny-rising-communitiesand www.stormrecovery.ny.gov/nyrcr.) The projects proposed in Suffolk County's grant application will leverage this investment to protect our community.

Furthermore, our Committee is composed of local leaders who are dedicated to realizing our community's Vision Statement (below) over the long-term and have a demonstrated commitment to stewardship:

- *Everett "Ken" Budd, Former Village of Amityville Trustee, Engineer*
- *Sharon Fattoruso, Copiague Chamber of Commerce*
- *Mary Cascone, Town of Babylon Historical Archivist, American Venice Resident*
- *Joan Donnison, President Bay Village Civic Association*
- *Melissa Firmes, FEGS/Copiague Chamber*
- *Mary Byrnes, Licensed Professional Civil Engineer NYS DOT*
- *Corinne "Corky" Amico, Past President of the Kiwanis Club of Amityville, Member Bay Village Civic Association*
- *Terrance Doran, former ZBA member*
- *Thomas Howard, Adjunct Professor at Adelphi University*
- *Townsend Thorn, Past president of Amityville Kiwanis, Member Amityville Fire Department*
- *David Heller, Member of Amityville Chamber of Commerce and Amityville Kiwanis*
- *Michael O'Lear, Construction Consultant*
- *Vincent Ricciuti, Board of Governors; Past President Amityville Historical Society; Rotarian; VFW*
- *Mike Greb, Member of the Copiague School Board*
- *Chris Carman, Village of Amityville Resident*
- *Jerry O'Neill, Realtor*

Vision Statement for the Village of Amityville/Copiague

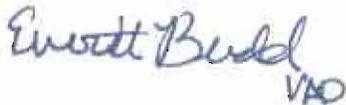
The Village of Amityville and the Hamlet of Copiague are small, historic, bayside/seaside communities located on the Great South Bay of Long Island that wish to maintain a safe, quiet and inviting character. We will work cooperatively to preserve the traditional continuity of our historic landmarks, maritime culture and suburban lifestyles and protect, maintain and enhance the quality of our natural resources, which are fundamental to our quality of life and are the basis of our local economy. We will plan for new and improved strategies which will eliminate potential loss of life and minimize damage caused by future natural disasters.

- *Carolina Zavala-Anderson, Village of Amityville Resident*
- *Liz White, Town of Babylon, Copiague/Amity Harbor Resident*
- *Joe Guarino, Town of Babylon*
- *James Wandell, Mayor of Village of Amityville*

The specific marsh/wetland restoration projects included in Suffolk County's application will result in the installation of proven Integrated Marsh Management practices in key areas along Suffolk County's shoreline. These practices, which the County has successfully put into place within the Wertheim National Wildlife Refuge, under a separate pilot program, have already demonstrated multiple benefits and co-benefits to the Refuge in the form of wave attenuation, flood resilience, habitat restoration, mosquito control, improved natural hydrologic functions and the introduction of green infrastructure, among others. The intent of the County's application is to expand these benefits by replicating this successful project at other sites on Long Island's Great South Bay shoreline—nearly all of which sustained some degree of significant damage during Hurricane Sandy.

We strongly urge funding of this proposal because we are confident Suffolk County has the resources and dedication to implement it, and, furthermore, that this project will provide widespread and important regional benefits, all of which will enhance Long Island's coastal resiliency.

Sincerely,

A handwritten signature in blue ink that reads "Everett Budd" with "VAD" written below it.

Everett Budd

Co-Chair, Village of Amityville/Copiague New York Rising Community Reconstruction Planning Committee

Vision Statement for the Village of Amityville/Copiague

The Village of Amityville and the Hamlet of Copiague are small, historic, bayside/seaside communities located on the Great South Bay of Long Island that wish to maintain a safe, quiet and inviting character. We will work cooperatively to preserve the traditional continuity of our historic landmarks, maritime culture and suburban lifestyles and protect, maintain and enhance the quality of our natural resources, which are fundamental to our quality of life and are the basis of our local economy. We will plan for new and improved strategies which will eliminate potential loss of life and minimize damage caused by future natural disasters.

January 22, 2014

To Whom It Concern:

As Co-Chairs of the New York Rising Community Reconstruction Planning Committee for Babylon/West Babylon, we are writing in support of Suffolk County's application for a grant under the 2014 Hurricane Sandy Coastal Resiliency Grant Program.

The Committee is part of New York Governor Andrew M. Cuomo's New York Rising Community Reconstruction (NYRCR) Program—a grassroots planning process that is designed to empower local residents and community leaders to create stronger, more resilient places to live and work. We are one of nine NYRCR Communities in Suffolk County, where a sum total of \$48.5 million in Community Block Development Grant –Disaster Recovery (CDBG-DR) funds have been allocated. (More information about the program can be found at www.governor.ny.gov/press/07182013-ny-rising-communities and www.stormrecovery.ny.gov/nyrcr/.) The projects proposed in Suffolk County's grant application will leverage this investment to protect our community.

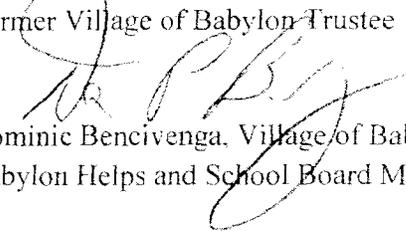
Furthermore, our Committee is composed of local leaders who are dedicated to realizing our community's Vision Statement (see attached) over the long-term and have a demonstrated commitment to stewardship. A Member of the Babylon/West Babylon Committee is also a long-time member of Long Island South Shore Estuary Reserve Council (SEERC); in that capacity, he will help ensure integration with that program throughout the grant administration process.

The specific marsh/wetland restoration projects included in Suffolk County's application will result in the installation of proven Integrated Marsh Management practices in key areas along Suffolk County's shoreline. These practices, which the County has successfully put into place within the Wertheim National Wildlife Refuge, under a separate pilot program, have already demonstrated multiple benefits and co-benefits to the Refuge in the form of wave attenuation, flood resilience, habitat restoration, mosquito control, improved natural hydrologic functions and the introduction of green infrastructure, among others. The intent of the County's application is to expand these benefits by replicating this successful project at other sites on Long Island's shoreline—nearly all of which sustained some degree of significant damage during Hurricane Sandy.

We strongly urge funding of this proposal because we are confident Suffolk County has the resources and dedication to implement it, and, furthermore, that this project will provide widespread and important regional benefits, all of which will enhance Long Island's coastal resiliency.

Sincerely,


Ray Accetella, Village of Babylon and West NYRCR Committee Co-Chair
Former Village of Babylon Trustee


Dominic Bencivenga, Village of Babylon and West NYRCR Committee Co-Chair
Babylon Helps and School Board Member

Village of Babylon and West Babylon Committee List

Ray Accettella, Former Village of Babylon Trustee

Dominic Bencivenga, Babylon Helps and School Board Member

Jon Taylor, President, Village of Babylon Chamber of Commerce

Scott Glenn, Fire Chief, Village of Babylon

Richard Rozakis, Superintendent of Schools, Town of Babylon

Mary Adams, Chamber of Commerce, Village of Babylon

Tony Davida, Village of Babylon Trustee

Theresa DePietto-Roesler, President of Neighbors Supporting Neighbors Babylon Inc.

Judy Skillen, Neighbors Supporting Neighbors, Inc.

Kim Skillen, Executive Director of Neighbors Supporting Neighbors Babylon Inc. and FEMA
VOAD

Ellen McArdle, West Babylon Fire Department

Claire McKeon, Executive Director for Youth and Disabled Services for the Town of

Charles “Skip” Gardner, Department of Public Works, Village of Babylon

Richard Groh, Department of Environmental Control, Town of Babylon

Village of Babylon and West Babylon Vision Statement

The residents of Babylon Village, West Babylon and Venetian Shores are committed to developing stronger, more resilient communities by implementing innovative infrastructure projects, land use policies, “green” technology and emergency management procedures to better prepare for natural disasters and to preserve the region’s historic and nautical character and quality of life. We will accomplish those goals through sustained economic investment, improved communication, and strong educational outreach, which will provide an ongoing example of what can be achieved when communities come together with a common purpose.

January 25, 2014

To Whom It Concern:

As Co-Chairs of the New York Rising Community Reconstruction Planning Committee for Fire Island, we are writing in support of Suffolk County's application for a grant under the 2014 Hurricane Sandy Coastal Resiliency Grant Program.

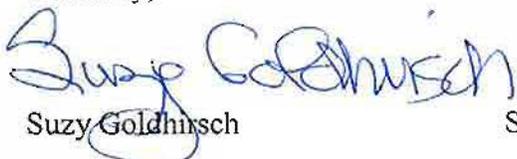
The Committee is part of New York Governor Andrew M. Cuomo's New York Rising Community Reconstruction (NYRCR) Program—a grassroots planning process that is designed to empower local residents and community leaders to create stronger, more resilient places to live and work. We are one of nine NYRCR Communities in Suffolk County, where a sum total of \$48.5 million in Community Block Development Grant –Disaster Recovery (CDBG-DR) funds have been allocated. (More information about the program can be found at www.governor.ny.gov/press/07182013-ny-rising-communitiesand www.stormrecovery.ny.gov/nyrcr.) The projects proposed in Suffolk County's grant application will leverage this investment to protect our community.

Furthermore, our Committee is composed of local leaders who are dedicated to realizing our community's Vision Statement (see attached) over the long-term and have a demonstrated commitment to stewardship.

The specific marsh/wetland restoration projects included in Suffolk County's application will result in the installation of proven Integrated Marsh Management practices in key areas along Suffolk County's shoreline. These practices, which the County has successfully put into place within the Wertheim National Wildlife Refuge, under a separate pilot program, have already demonstrated multiple benefits and co-benefits to the Refuge in the form of wave attenuation, flood resilience, habitat restoration, mosquito control, improved natural hydrologic functions and the introduction of green infrastructure, among others. The intent of the County's application is to expand these benefits by replicating this successful project at other sites on Long Island's Great South Bay shoreline—nearly all of which sustained some degree of significant damage during Hurricane Sandy.

We strongly urge funding of this proposal because we are confident that Suffolk County has the expertise, resources, dedication, and, mostly importantly, a track record of success with these practices to successfully implement it. Furthermore, this project will provide widespread and important regional benefits, all of which will enhance Long Island's coastal resiliency.

Sincerely,

 
Suzy Goldhirsch Susan Barbash

Fire Island NYRCR Planning Committee Co-Chairs

Fire Island NYRCR Vision Statement:

To preserve and strengthen Fire Island as a resilient mosaic of vibrant and unique ocean and bay-front communities located within and working together with the Fire Island National Seashore to adapt to life on a dynamic barrier island with creativity, collaboration, consensus and determination. Fire Island is a barrier island that protects Long Island from storms while providing a sustainable community and infrastructure for residents and visitors alike, contributing to the economy of Long Island.

Fire Island NYRCR Planning Committee		
Committee Role	Name	Position
Co-Chair	Susan Barbash	Organizer of Protect Long Island; Dunewood
Co-Chair	Suzy Goldhirsch	President, Fire Island Association
Member	Scott Hirsch	Owner of Island Mermaid and The Pantry (Ocean Beach); Revive Fire Island
Member	Dominic Bertucci	Kismet Fire Department
Member	Patrick Macri	President of Millenium Communications; Revive FI
Member	Vern Hendrickson	Suffolk County Fire Coordinator for Fire Island; Saltaire Fire Department
Member	Tim Mooney	President, Fire Island Ferries
Member	John Lund	Board Member, Fire Island Association
Member	Mary Parker	President, Davis Park Association
Member	John Adams	Resident, Cherry Grove
Member	Steve Norring	Resident, Fire Island Pines
Member	Marsha Hunter	President, Kismet Homeowners Association
Member	Forrest Clock	Lonelyville Tax Payers
Member	Jennifer Rider	Lonelyville Property Owners
Member	Steve Placilla	Vice President, Ocean Bay Park Association
Member	Justin McCarthy	Community Manager, Point O' Woods
Member	Alan Altman	Summer Club/Corneille Estates/Robbins Rest
Member	Alan Goldberg	Resident, Water Island
Member	Judy Corcoran	Resident, Fair Harbor
Federal Representative	Chris Soller*	Superintendent, Fire Island National Seashore
Municipal Representative	Bob Cox*	Mayor, Village of Saltaire
Municipal Representative	Mario Posillico*	Village Administrator, Village of Saltaire
Municipal Representative	Tom Marquardt*	Planning and Development, Town of Islip
Municipal Representative	Harry Sundin*	Commissioner of Planning and Development, Recreation and Cultural Affairs
Municipal Representative	Tim Mazzei*	Councilman, Town of Brookhaven
Municipal Representative	Jim Mallot*	Mayor, Village of Ocean Beach
Municipal Representative	Steve Brautigam*	Village Clerk/Treasurer, Village of Ocean Beach
Municipal Representative	Paul Fusco*	Legislator Barraga's Office
Municipal Representative	Matthew Miner*	Chief of Operations, Town of Brookhaven

*Non-voting member

January 22, 2014

To Whom It Concerns:

As Co-Chairs of the New York Rising Community Reconstruction Planning Committee for the Village of Lindenhurst, we are writing in support of Suffolk County's application for a grant under the 2014 Hurricane Sandy Coastal Resiliency Grant Program.

The Committee is part of New York Governor Andrew M. Cuomo's New York Rising Community Reconstruction (NYRCR) Program—a grassroots planning process that is designed to empower local residents and community leaders to create stronger, more resilient places to live and work. We are one of nine NYRCR Communities in Suffolk County, where a sum total of \$48.5 million in Community Block Development Grant – Disaster Recovery (CDBG-DR) funds have been allocated. (More information about the program can be found at www.governor.ny.gov/press/07182013-ny-rising-communities and www.stormrecovery.ny.gov/nyrcr.) The projects proposed in Suffolk County's grant application will leverage this investment to protect our community.

Furthermore, our Committee is composed of local leaders who are dedicated to realizing our community's Vision Statement (see attached) over the long-term and have a demonstrated commitment to stewardship

The specific marsh/wetland restoration projects included in Suffolk County's application will result in the installation of proven Integrated Marsh Management practices in key areas along Suffolk County's shoreline. These practices, which the County has successfully put into place within the Wertheim National Wildlife Refuge, under a separate pilot program, have already demonstrated multiple benefits and co-benefits to the Refuge in the form of wave attenuation, flood resilience, habitat restoration, mosquito control, improved natural hydrologic functions and the introduction of green infrastructure, among others. The intent of the County's application is to expand these benefits by replicating this successful project at other sites on Long Island's Great South Bay shoreline—nearly all of which sustained some degree of significant damage during Hurricane Sandy.

We strongly urge funding of this proposal because we are confident Suffolk County has the resources and dedication to implement it, and, furthermore, that this project will provide widespread and important regional benefits, all of which will enhance Long Island's coastal resiliency.

Sincerely,



Alex Keller, Committee Co-Chair



Dave Collins, Committee Co-Chair

Village of Lindenhurst NYRCR Committee:

Village of Lindenhurst NYRCR Committee		
Committee Role	Name	Position
Co-Chair	David Collins	Fire Department Member
Co-Chair	Alex Keller	Long-time Village Resident
Member	Amy Castiglia	Case Manager for Lindy Manpower (Branch of Adopt a House)
Member	Maryann Weckerle	Village Trustee, Business Owner, Vice-Chair
Member	MaryEllen Cunningham	Board of Education Board Member, Homeowner
Member	Gloria Sheahan	Planning Board Member, Homeowner
Member	Daniel Horn	Operation Resilient Long Island Co-Chair
Member	Jacqueline Milton	President of the Rotary Club
Member	Belinda Pagdanganan	National Grid: Manager of Governmental Relations
Municipal Representative	Shawn Cullinane	Village Clerk - Treasurer

Village of Lindenhurst Community Vision Statement

The Village of Lindenhurst is a close-knit and caring community of hard-working neighbors and families who seek to protect their homes, schools, businesses, parks and waterfront resources from storms, flooding and other natural and man-made disasters. We are a coastal community and seek to improve public access to the waterfront while utilizing built and natural features to reduce flooding. We seek to encourage economic development opportunities at the waterfront as well as in our downtown. We will actively support and pursue improvements and policies that address our immediate recovery needs as well as long-term needs that lessen storm damage and improve our resiliency over time. We are strong survivors and our community will endure, prosper and be safer for all!

To Whom It May Concern:

As Co-Chairs of the New York Rising Community Reconstruction Planning Committee for Mastic Beach and Smith Point of Shirley, we are writing in support of Suffolk County's application for a grant under the 2014 Hurricane Sandy Coastal Resiliency Grant Program.

The Committee is part of New York Governor Andrew M. Cuomo's New York Rising Community Reconstruction (NYRCR) Program—a grassroots planning process that is designed to empower local residents and community leaders to create stronger, more resilient places to live and work. We are one of nine NYRCR Communities in Suffolk County, where a sum total of \$48.5 million in Community Block Development Grant –Disaster Recovery (CDBG-DR) funds have been allocated. (More information about the program can be found at www.governor.ny.gov/press/07182013-ny-rising-communities and www.stormrecovery.ny.gov/nyrcr.) The projects proposed in Suffolk County's grant application will leverage this investment to protect our community.

Our NYRCR Committee is composed of local leaders dedicated to realizing our Vision:

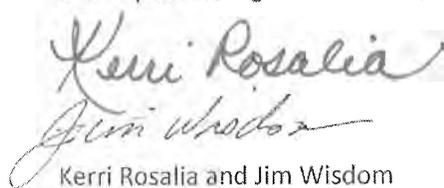
The Mastic Beach community wishes to protect and enhance the safety and quality of life of its residents. We want to develop a sustainable local economy that is built on our natural and cultural resources. We need to protect our assets by increasing our resilience to climate change and our capacity to withstand future storms. To achieve our vision, we will:

- *Utilize our natural and cultural resources as economic assets to retain and attract young people, visitors, and appropriate businesses.*
- *Revitalize our downtowns by expanding housing and retail choices and increasing its function as a village center.*
- *Protect our housing stock, infrastructure, and other critical assets from future storms and the effects of climate change.*

The natural resources of Mastic Beach and Smith Point of Shirley are a central focus of our Vision. We recognize their ecological value, their role in flood mitigation, and their economic value for eco-tourism. Our community's waterfront is home to impressive tidal wetlands whose protection and enhancement is solidly supported by our NYRCR Committee.

The marsh/wetland restoration projects in Suffolk County's application will result in the installation of Integrated Marsh Management practices in key areas of Suffolk County's shoreline. These practices, which the County has successfully put into place within the Wertheim National Wildlife Refuge under a separate pilot program, have already demonstrated multiple benefits and co-benefits to the Refuge in the form of wave attenuation, flood resilience, habitat restoration, mosquito control, improved natural hydrologic functions and the introduction of green infrastructure, among others. The Refuge adjoins the Mastic Beach and Smith Point of Shirley Community Reconstruction area. One of the wetlands that would be included in the proposed projects is within our community.

We strongly urge funding of this proposal because we are confident that Suffolk County has the resources and dedication to implement it, and, furthermore, that this project will provide widespread and important regional benefits, all of which will enhance Long Island's coastal resiliency.



Kerri Rosalia and Jim Wisdom

Co-Chairs, Mastic Beach and Smith Point of Shirley NYRCR Committee

Oakdale and West Sayville Community Reconstruction Committee- Membership

Co-Chair	Richard Remmer	President and CEO of the Snapper Inn on the Connetquot River, Oakdale, NY.
Co-Chair	Ron Beattie	Former Chair of the Oakdale Chamber of Commerce
Member	Jamie Flynn	Oakdale Improvement Society
Member	Carol Schwasnick	Oakdale Civic Association
Member	Mark Murray	Owner and Managing Attorney, General Counsel to Natasha Justice Project, former Housing Supervisor, Nassau County Office of Governmental Affairs, and community resident.
Member	Brian Bast	Oakdale Civic Association
Member	Monica Musetti-Carlin	President, Oakdale Chamber of Commerce
Member	Raymond Carta	Oakdale Civic Association
Member	Cathline Cohen	Idle Hour Civic Association
Member	Mark DeAngelis	Owner of West Sayville Boat Basin
Member	Brendan McCurdy	President, West Sayville Civic Association
Member	Allen Seeley	President, West Oak Recreation Club (WORC)
Member	Brian Browne	St. John's Univ., Assistant VP, Gov't Relations,
Member	Clyde Payne	Dowling College, Dean of Students
Member	George J. Munkenbeck Jr.	West Sayville Fire Department
Municipal Representative	Tom Marquardt	Islip Department of Planning
Municipal Representative	Lynda Distler	Islip Supervisor's Office Chief of Staff
Municipal Representative	Richard Zapolski	Islip Deputy Commissioner of Planning & Development

Municipal Representative	Joe Montuori	Islip Commissioner of Parks & Recreation
Municipal Representative	Tom Owens	Islip Commissioner of Public Works
Municipal Representative	Anthony D'Amico	Islip Deputy Commissioner of Public Safety
Municipal Representative	Ann Mendes	Islip Public Safety Public Relations Specialist
Municipal Representative	Bryan Bortzfield	Islip Parks & Rec./Marinas & Docks
Representative	Ben Monachino	Representative for State Senator Zeldin

Vision Statement



Oakdale-West Sayville

Vision Statement

Oakdale and West Sayville will be communities with a 'greener' and more sustainable future with hazard resistant buildings and infrastructure and well-functioning natural systems that can prevent or minimize damage to life and property and the disruption of critical services. The rich history of the communities, the spectacular public and private spaces emphasizing the importance of the health of our waterways and coastal proximity will guide future development with downtown identities which will focus on the essential character and charm of Oakdale and West Sayville.



Richard H. Remmer, Co-Chair
Ron Beattie, Co-Chair
Oakdale and West Sayville
Community Reconstruction Planning Committee
500 Shore Drive, Oakdale, New York 11769

January 28, 2014

To Whom It Concern:

As Co-Chairs of the New York Rising Community Reconstruction Planning Committee for Oakdale and West Sayville, we are writing in support of Suffolk County's application for a grant under the 2014 Hurricane Sandy Coastal Resiliency Grant Program.

The Committee is part of New York Governor Andrew M. Cuomo's New York Rising Community Reconstruction (NYRCR) Program—a grassroots planning process that is designed to empower local residents and community leaders to create stronger, more resilient places to live and work. We are one of nine NYRCR Communities in Suffolk County, where a sum total of \$48.5 million in Community Block Development Grant –Disaster Recovery (CDBG-DR) funds have been allocated. (More information about the program can be found at www.governor.ny.gov/press/07182013-ny-rising-communities and www.stormrecovery.ny.gov/nyrcr.) The projects proposed in Suffolk County's grant application will leverage this investment to protect our community.

Furthermore, our Committee is composed of local leaders who are dedicated to realizing our community's Vision Statement (see attached) over the long-term and have a demonstrated commitment to stewardship.

The intent of the County's application is to restore the multiple benefits of healthy wetlands to a number of deteriorating wetlands on the south shore—nearly all of which sustained some degree of significant damage during Hurricane Sandy. Some of the restoration practices that will be employed were used successfully by Suffolk County at the Wertheim National Wildlife Refuge under a separate pilot program a number of years ago. Additional restoration strategies such as the beneficial application of dredge material will also be incorporated into restoration strategies that are tailored to the conditions at each of the candidate marshes. The sites under consideration include several in the Oakdale and West Sayville communities including wetlands known by the names Remmer-Pickman, Pepperidge Hall, Ludlows Creek/ Benton Bay, Indian Creek and West Oak Recreation. The Remmer-Pickman project will also provide the benefit of storm surge/ flood control while the Indian Creek and West Oak Recreation is planned to include habitat restoration. An additional candidate wetland site that provides physical protection to this community is the NY State owned Timber Point wetland complex.

An additional component of this proposal that adds value is the Regional Technical Workgroup to be led by The Nature Conservancy. This regional effort will involve marsh restoration experts and practitioners from across the Sandy-impacted region such that analysis of marsh response to similar restoration strategies can be analyzed and important regional lessons learned.

We would also like to add that the Committee is particularly interested in seeing projects that provide proof of concept for restoration of marshes that are experiencing marsh loss by expansion of unvegetated pannes.

We strongly urge funding of this proposal because we are confident Suffolk County has the resources and dedication to implement it, and, furthermore, that this project will provide widespread and important regional benefits, all of which will enhance Long Island's coastal resiliency.

Sincerely,



Richard Remmer, Co- Chair



Ron Beattie, Co- Chair

Enclosures: Vision Statement of the Oakdale and West Sayville Community Reconstruction Planning Committee

List of Committee Membership

January 22, 2014

To Whom It Concern:

As Chair of the New York Rising Community Reconstruction (NYRCR) Planning Committee for the West Gilgo to Captree communities, I am writing in support of Suffolk County's application for a grant under the 2014 Hurricane Sandy Coastal Resiliency Grant Program.

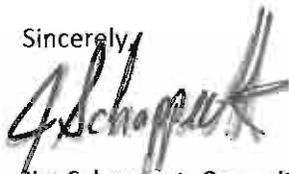
The Committee is part of New York Governor Andrew M. Cuomo's NYRCR Program – a grassroots planning process that is designed to empower local residents and community leaders to create stronger, more resilient places to live and work. We are one of nine NYRCR Communities in Suffolk County, where a total of \$48.5 million in Community Block Development Grant – Disaster Recovery (CDBG-DR) funds have been allocated. More information about the program can be found at www.governor.ny.gov/press/07182013-ny-rising-communities and www.stormrecovery.ny.gov/nyrcr.

The project proposed in Suffolk County's grant application for integrated marsh management will leverage this CDBG-DR investment to protect our community. Furthermore, our Committee is composed of local leaders who are dedicated to realizing our community's Vision Statement over the long-term and have a demonstrated commitment to stewardship. Please see attached the Community Vision Statement and Committee Member list.

The specific marsh/wetland restoration activities included in Suffolk County's application will result in the installation of proven Integrated Marsh Management practices in key areas along Suffolk County's shoreline. These practices, which the County has successfully put into place within the Wertheim National Wildlife Refuge under a separate pilot program, have already demonstrated multiple benefits and co-benefits to the Refuge in the form of wave attenuation, flood resilience, habitat restoration, mosquito control, improved natural hydrologic functions and the introduction of green infrastructure, among others. The intent of the County's application is to expand these benefits by replicating this successful project at other sites on Long Island's Great South Bay shoreline – nearly all of which sustained some degree of significant damage during Hurricane Sandy.

On behalf of my Committee, I strongly urge the funding of this proposal because I am confident that Suffolk County has the resources and dedication to implement it, and, furthermore, that this project will provide widespread and important regional benefits, all of which will enhance Long Island's coastal resiliency.

Sincerely,

A handwritten signature in black ink, appearing to read "J. Schappert". The signature is written in a cursive, somewhat stylized font.

Jim Schappert, Committee Chair

West Gilgo to Captree Community Vision Statement:

The vision for our community is to restore, preserve and protect the natural resources that serve to provide habitat to a biologically diverse coastal ecosystem as well as to fortify the barrier island shielding the south shore of Long Island against storms. The priority is to improve storm preparedness while striving to retain and protect the culture and assets that make the barrier beach communities unique and desirable to both residents and visitors.

West Gilgo to Captree Committee:

West Gilgo to Captree NYRCR Committee		
Committee Role	Name	Position
Chair	James Schappert	Former VP of the Oak Beach Civic Association; Babylon School Teacher; Oak Beach resident
Member	Tom Cassidy	West Gilgo Beach Board Member; Gilgo resident
Member	Cindy Dale	West Gilgo Beach Board and Save the Beaches Board member; West Gilgo resident
Member	Arnie Lanzillotta	President Oak Island Beach Association
Member	Paul McDuffie	Unofficial liaison between the Gilgo community and the Town of Babylon; Gilgo resident
Member	Jed Meade	President of Oak Beach Civic Association
Member	Mark Nuccio	Oak Island resident
Member	Bert Pedersen	Greenman-Pedersen, Captree resident
Municipal Representative	Dorian Dale	Director of Sustainability for the County; West Gilgo resident
Municipal Representative	Brian Zitani	Babylon Department of Environmental Control

January 30, 2014

To Whom It Concern:

As Co-Chair of the New York Rising Community Reconstruction (NYRCR) Planning Committee for West Islip, I am writing in support of Suffolk County's application for a grant under the 2014 Hurricane Sandy Coastal Resiliency Grant Program.

The Committee is part of New York Governor Andrew M. Cuomo's NYRCR Program – a grassroots planning process that is designed to empower local residents and community leaders to create stronger, more resilient places to live and work. We are one of nine NYRCR Communities in Suffolk County, where a total of \$48.5 million in Community Block Development Grant – Disaster Recovery (CDBG-DR) funds have been allocated. More information about the program can be found at www.governor.ny.gov/press/07182013-ny-rising-communities and www.stormrecovery.ny.gov/nyrcr.

The project proposed in Suffolk County's grant application for integrated marsh management will leverage this CDBG-DR investment to protect our community. Furthermore, our Committee is composed of local leaders who are dedicated to realizing our community's Vision Statement over the long-term and have a demonstrated commitment to stewardship. Please see attached the Community Vision Statement and Committee Member list.

The specific marsh/wetland restoration activities included in Suffolk County's application will result in the installation of proven Integrated Marsh Management practices in key areas along Suffolk County's shoreline. These practices, which the County has successfully put into place within the Wertheim National Wildlife Refuge under a separate pilot program, have already demonstrated multiple benefits and co-benefits to the Refuge in the form of wave attenuation, flood resilience, habitat restoration, mosquito control, improved natural hydrologic functions and the introduction of green infrastructure, among others. The intent of the County's application is to expand these benefits by replicating this successful project at other sites on Long Island's Great South Bay shoreline – nearly all of which sustained some degree of significant damage during Hurricane Sandy.

On behalf of our Committee, I strongly urge the funding of this proposal because I am confident that Suffolk County has the resources and dedication to implement it, and, furthermore, that this project will provide widespread and important regional benefits, all of which will enhance Long Island's coastal resiliency.

Sincerely,



Joseph DeCarlo, Committee Co-Chair

West Islip Community Vision Statement:

The vision for West Islip is a tight-knit community where multiple generations of families reside amongst a protected and resilient coastal environment. The community enjoys the active and thriving waterfront amenities for recreation and tourism, which are healthy and robust due to a longtime commitment to careful study and maintenance of the natural resources and manmade shoreline structures. The investment in a well-defined commercial corridor sustains an array of businesses that are supported by proud local residents and visitors alike.

West Islip NYRCR Committee:

West Islip NYRCR Committee		
Committee Role	Name	Position
Co-Chair	Joseph DeCarlo	Chairman West Islip Association
Co-Chair	Lawrence Donohue	West Islip Chamber of Commerce
Member	Maria Figalora	West Islip Chamber of Commerce
Member	Sandra Galian	VP of Sequams Neighborhood Resident
Member	Steve Gellar	West Islip Summit Coalition
Member	Bruce Lorenz	Long-time Resident
Member	Lynn Luttenberger	West Islip Association
Member	Joseph Palmisano	West Islip Fire Department
Member	Michael Sacca	Southside Hospital
Member	Jay Van Cott	Sequams Property Owner Association
Municipal Representative	John Carney	Commissioner of Public Safety
Municipal Representative	Bill Clifton	Deputy Commissioner of DPW
Municipal Representative	Lynda Distler	Chief of Staff
Municipal Representative	Paul J. Fusco Jr.	Legislative Aide
Municipal Representative	Dave Genaway	Commissioner of Planning & Development
Municipal Representative	Anne Mendes	Secretary to the Commissioner – Public Safety Enforcement
Municipal Representative	Harry Sundin	Parks and Recreation/Marinas and Docks

January 22, 2014

To Whom It Concerns:

As Co-Chairs of the New York Rising Community Reconstruction (NYRCR) Planning Committee for West Islip, we are writing in support of Suffolk County's application for a grant under the 2014 Hurricane Sandy Coastal Resiliency Grant Program.

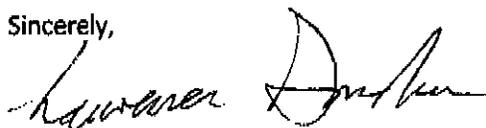
The Committee is part of New York Governor Andrew M. Cuomo's NYRCR Program – a grassroots planning process that is designed to empower local residents and community leaders to create stronger, more resilient places to live and work. We are one of nine NYRCR Communities in Suffolk County, where a total of \$48.5 million in Community Block Development Grant – Disaster Recovery (CDBG-DR) funds have been allocated. More information about the program can be found at www.governor.ny.gov/press/07182013-ny-rising-communities and www.stormrecovery.ny.gov/nyrcr.

The project proposed in Suffolk County's grant application for integrated marsh management will leverage this CDBG-DR investment to protect our community. Furthermore, our Committee is composed of local leaders who are dedicated to realizing our community's Vision Statement over the long-term and have a demonstrated commitment to stewardship. Please see attached the Community Vision Statement and Committee Member list.

The specific marsh/wetland restoration activities included in Suffolk County's application will result in the installation of proven integrated marsh management practices in key areas along Suffolk County's shoreline. These practices, which the County has successfully put into place within the Wertheim National Wildlife Refuge under a separate pilot program, have already demonstrated multiple benefits and co-benefits to the Refuge in the form of wave attenuation, flood resilience, habitat restoration, mosquito control, improved natural hydrologic functions and the introduction of green infrastructure, among others. The intent of the County's application is to expand these benefits by replicating this successful project at other sites on Long Island's Great South Bay shoreline – nearly all of which sustained some degree of significant damage during Hurricane Sandy.

On behalf of our Committee, we strongly urge the funding of this proposal because we are confident that Suffolk County has the resources and dedication to implement it, and, furthermore, that this project will provide widespread and important regional benefits, all of which will enhance Long Island's coastal resiliency.

Sincerely,



Lawrence Donohue, Committee Co-Chair

West Islip Community Vision Statement:

The vision for West Islip is a tight-knit community where multiple generations of families reside amongst a protected and resilient coastal environment. The community enjoys the active and thriving waterfront amenities for recreation and tourism, which are healthy and robust due to a longtime commitment to careful study and maintenance of the natural resources and manmade shoreline structures. The investment in a well-defined commercial corridor sustains an array of businesses that are supported by proud local residents and visitors alike.

West Islip NYRCR Committee:

West Islip NYRCR Committee		
Committee Role	Name	Position
Co-Chair	Joseph DeCarlo	Chairman West Islip Association
Co-Chair	Lawrence Donohue	West Islip Chamber of Commerce
Member	Maria Figalora	West Islip Chamber of Commerce
Member	Sandra Galian	VP of Sequams Neighborhood Resident
Member	Steve Gellar	West Islip Summit Coalition
Member	Bruce Lorenz	Long-time Resident
Member	Lynn Luttenberger	West Islip Association
Member	Joseph Palmisano	West Islip Fire Department
Member	Michael Sacca	Southside Hospital
Member	Jay Van Cott	Sequams Property Owner Association
Municipal Representative	John Carney	Commissioner of Public Safety
Municipal Representative	Bill Clifton	Deputy Commissioner of DPW
Municipal Representative	Lynda Distler	Chief of Staff
Municipal Representative	Paul J. Fusco Jr.	Legislative Aide
Municipal Representative	Dave Genaway	Commissioner of Planning & Development
Municipal Representative	Anne Mendes	Secretary to the Commissioner – Public Safety Enforcement
Municipal Representative	Harry Sundin	Parks and Recreation/Marinas and Docks



January 30, 2014

Mr. Martin McHugh
Program Coordinator
National Fish and Wildlife Foundation
1133 15th Street NW, Suite 1100
Washington, DC 20005

Re: Letter of support for “Salt marsh restoration and enhancement to improve coastal resilience along the south shore of Long Island, New York”.

Dear Mr. McHugh:

I am writing to express Seaturck Environmental Association’s support for the Suffolk County Department of Economic Development and Planning’s application for the 2013 Hurricane Sandy Coastal Resiliency Competitive Grant. Seaturck is a not-for-profit organization dedicated to conserving Long Island wildlife and the environment. Among other conservation and education work, Seaturck manages and operates the Suffolk County Environmental Center, a public nature center at the Scully Estate in Islip, NY, through a long-term contract with Suffolk County.

Seaturck supports the proposed project’s goals of improving and strengthening Great South Bay estuarine-salt marsh coastal habitats, enhancing the resiliency of coastal ecosystems and furthering the restoration goals identified by the New York State South Shore Estuary Reserve Comprehensive Management Plan. Seaturck is particularly supportive of the proposed project’s potential to conduct restoration work on the 30 acres of estuarine-salt marsh at the Scully Estate. These wetlands are adjacent to and hydrologically connected to wetlands on the Seaturck National Wildlife Refuge, which will be the subject of a U.S. Department of the Interior restoration project through the Hurricane Sandy Mitigation Funding program.

With our full-time presence on the Scully Estate, our expertise in environmental education and our experience in managing large-scale volunteer and citizen-science projects, we are poised to assist Suffolk County and help ensure the project’s success.

We consider this to be an excellent proposal to restore the critically important wetlands that remain on the south shore of Long Island. Enhancing these wetlands will protect our communities and benefit our coastal ecosystem. We look forward to working with Suffolk County on this important project.

Sincerely,

Enrico Nardone, Esq.
Executive Director
Seaturck Environmental Association

LONG ISLAND
SOUTH SHORE ESTUARY RESERVE OFFICE

New York State Department of State ♦ 250 Veterans Memorial Highway ♦ 2nd Floor Room 2A15
Hauppauge, New York 11788-5519

Main Telephone: (516) 470-BAYS ♦ Fax: (631) 952-7902 ♦ www.LISSER.us

Mr. Martin McHugh
Program Coordinator
National Fish and Wildlife Foundation
1133 15th Street NW, Suite 1100
Washington, DC 20005

January 17, 2014

Dear Mr. McHugh:

The Long Island South Shore Estuary Reserve Council (SSERC) is pleased to inform the National Fish and Wildlife Foundation that the Suffolk County Department of Economic Development and Planning's application to the 2013 Hurricane Sandy Coastal Resiliency Competitive Grants Program is consistent with recommendations made in the Long Island South Shore Estuary Reserve (SSER) Comprehensive Management Plan (CMP). In addition, the proposed project will further the progress of the Governor's New York Rising Community Reconstruction Program.

Suffolk County, through this proposed project, seeks to improve and strengthen Great South Bay estuarine-salt marsh coastal habitats to enhance resiliency of coastal ecosystems, fish and wildlife habitat, and reduce the inland communities' vulnerability against risks related to storm surges, flooding, wave energy, erosion, and long-term resiliency to sea level rise. The SSERC is encouraged by the potential positive environmental impacts that these proposed marsh restorations could produce.

Sincerely,



Greg Capobianco
NYS Department of State
Office of Planning and Development

C: Frank Castelli, Suffolk County
Paul Beyer, NYS DOS

SOUTH SHORE ESTUARY RESERVE COUNCIL: Cesar A. Perales, New York State Secretary of State / Chair ♦ Edward P. Mangano, Nassau County Executive ♦ Steven Bellone, Suffolk County Executive ♦ Jack Schairman, City Manager, City of Long Beach ♦ Kate Murray, Supervisor, Town of Hempstead ♦ John Vandinio, Supervisor, Town of Oyster Bay ♦ Richard H. Schaffer, Supervisor, Town of Babylon ♦ Thomas D. Croci, Supervisor, Town of Islip ♦ Edward P. Romaine, Supervisor, Town of Brookhaven ♦ Anna Throne-Holst, Supervisor, Town of Southampton ♦ Vacant, New York Conference of Mayors ♦ Maureen Dolan Murphy, Chair, Citizens Advisory Committee ♦ Cornelia Schlenk, Chair, Technical Advisory Committee ♦ Robert Grover, Great South Bay Audubon Society ♦ Dr. Minghua Zhang, Interim Dean, School of Marine and Atmospheric Sciences, Stony Brook University ♦ Jim Hutchinson, New York Sportfishing Federation ♦ Matthew Cohen, Long Island Association ♦ Mitch Pally, Long Island Builders Institute, Inc. ♦ Vacant, Property Owners Association ♦ Christopher Squeri, New York Marine Trades Association ♦ Carl LoBue, Long Island Chapter of The Nature Conservancy ♦ Ken Buday, Brookhaven Baymen's Association ♦ Michael Eagan, Captree Boatman's Association ♦ **COUNCIL ADVISORS:** Joseph Martens, Commissioner, New York State Department of Environmental Conservation ♦ Rose Harvey, Commissioner, New York State Office of Parks, Recreation and Historic Preservation ♦ Joan McDonald, Commissioner, New York State Department of Transportation

30 January 2014

Mr. David O'Neill, Vice President
Conservation Programs
National Fish & Wildlife Federation

Re: Hurricane Sandy Coastal Resilience Competitive Grant Program

Dear Mr. O'Neill,
The Nature Conservancy on Long Island enthusiastically supports Suffolk County, NY's application for NFWF Hurricane Sandy funds under the proposal, **"Enhancing coastal resiliency through integrated salt marsh management along the south shore of Long Island, New York"**.

The primary goal of this proposal is to restore the multiple benefits of healthy wetlands to deteriorating wetlands on the south shore of Long Island, NY. Many of Long Island's south shore marshes are losing acreage (particularly through the expansion of unvegetated pannes) and require intervention so that they can become resilient and self-sustaining into the future so that they can continue to provide multiple benefits to both natural and human communities along our coasts.

However, in addition to the tangible restoration benefits locally, this proposal also includes a very important regional component that will have significant influence on wetlands across the entire Sandy-impacted region.

TNC will assemble and lead a multi-state Regional Technical Workgroup (RTW) to provide a forum to improve the exchange of ideas and information among practitioners across the region working to improve the resiliency of our coastal wetlands. This RTW will be composed of experts in wetland restoration from across the region (DE, NJ, CT, NY, and RI) including Project PI's from other Hurricane Sandy resilience projects across the region. Our findings will help practitioners maximize their likelihood of success by improving the design, implementation, and monitoring of salt marsh restoration projects and disseminating the "lessons learned" across the region.

This is an unprecedented opportunity to foster collaboration of regional marsh restoration experts and advance restoration science to meet our 21st Century needs. It will ensure that the best available restoration methods and monitoring metrics will be implemented for on-the-ground projects. The RTW will also create the opportunity for a synoptic analysis of marsh response to the restoration techniques used across the region resulting in a more comprehensive approach for implementing adaptive management beyond just Long Island, NY. This 2-year grant will enable this RTW to have a long lasting impact because it will connect the practitioners across the region and form the basis for a long-term wetland restoration study.

For example, many current and proposed projects across the region (internally funded DOI projects and projects submitted in response to this call) are considering the beneficial use of dredge material to reestablish appropriate elevations and restore healthy functioning marsh. A synoptic analysis of responses to these restoration strategies, to provide proof of concept, will be incredibly valuable for current and future restoration projects.

This is a timely and valuable effort which will have a long lasting impact on the resilience of our coastal salt marshes along with the many economic and cultural activities that depend on them.

In summary, we enthusiastically support this entire proposal including the formation of the RTW. We look forward to leading the Regional Technical Workgroup component of the Suffolk County proposal in order to produce a regional assessment of restoration

Center for Conservation
P.O. Box 5125
East Hampton, NY 11973
Tel (631) 329-7689
Fax (631) 329-0215
www.nature.org/longisland

Uplands Farm Sanctuary
250 Lawrence Hill Road
Cold Spring Harbor, NY 11724
Tel (631) 367-3225
Fax (631) 367-4715
www.nature.org/longisland

Mashomack Preserve
P.O. Box 850
Shelter Island, NY 11964
Tel (631) 749-1001
Fax (631) 749-1480

Worldwide Office
4245 North Fairfax Street
Suite 100
Arlington, VA 22203
Tel (703) 841-5300
www.nature.org

success and adaptive management recommendations across the wider Sandy-impacted region.

Sincerely,



Nicole P. Maher, Ph.D.
Senior Coastal Scientist
Cold Spring Harbor, NY 11724
(631) 367-3225



Diana Albie
Finance Manager Long Island

Anne E. McElroy, Ph.D.
Professor & Graduate Program Director
Stony Brook University, Stony Brook, NY 11794-5000

T: 631-632-8488
F: 631-632-3072
Anne.McElroy@Stonybrook.edu

January 31st, 2014

Mr. Martin McHugh
Program Coordinator
National Fish and Wildlife Foundation
1133 15th Street NW, Suite 1100
Washington, DC 20005

Re: Letter of support for “Coastal resiliency via integrated salt marsh management”.

Dear Mr. McHugh:

I am writing to make you aware of my support for the Suffolk County Department of Economic Development and Planning’s application to the 2013 Hurricane Sandy Coastal Resiliency Competitive Grant. Over the course of the last 10 years I have been involved in several projects dealing with environmental conditions in Great South Bay and the marshes surrounding it. There is a pressing need to support restoration and resiliency and community awareness and support for these important coastal ecosystems.

Loss of tidal marshes and other coastal habitats, is an area of scientific concern for Suffolk County and the Nation. Degradation of these ecosystems reduces estuarine productivity and eliminates critical feeding and nursery habitat for finfish and shellfish, as well as reducing their role as an important buffer for upland infrastructure such as homes and roads. The subject application addresses restoration needs identified by the New York State South Shore Estuary Reserve Comprehensive Management Plan to improve water quality and living resources. As such it is deserving of support. I will be pleased to support this effort in any way that I can. In addition, both graduate and undergraduate students in our programs could also be effectively engaged to help in Suffolk County’s efforts on this project. I look forward to supporting Suffolk County and in this important project.

Sincerely,



Anne E. McElroy, Ph.D.
Professor and Graduate Program Director
School of Marine and Atmospheric Sciences



United States Department of the Interior

U.S. GEOLOGICAL SURVEY
New York Water Science Center
425 Jordan Road
Troy, New York 12180
(518) 285-5665

January 31, 2014

Mr. Martin McHugh
Program Coordinator
National Fish and Wildlife Foundation
1133 15th Street NW, Suite 1100
Washington, DC 20005

Re: Letter of support for “Enhancing coastal resiliency through integrated salt marsh management along the south shore of Long Island, New York”

Dear Mr. McHugh:

The U.S. Geological Survey (USGS) New York Water Science Center strongly supports the application being submitted by Suffolk County Department of Economic Development and Planning for the 2013 Hurricane Sandy Coastal Resiliency Competitive Grant.

This proposed project to improve and strengthen Great South Bay estuarine-salt marsh coastal habitats to enhance resiliency of coastal ecosystems, fish and wildlife, and reduce the vulnerability of coastal and inland communities against risks related to storm surges, flooding, wave energy, erosion, and improve long-term resiliency to sea-level rise is a goal we want to succeed. Implementation of this project will help to restore currently degraded salt marsh areas affected by large areas of invasive common reed (*Phragmites australis*), waterlogging, extensive mudflat and panne formations, shoreline erosion and high mosquito production, and impaired by Hurricane Sandy. In addition, we would be interested in assisting with pre- and post-project monitoring of water quality, water-table altitude, and estuary water-surface elevation, as appropriate. This work with the County will supplement, and be supplemented by, our current USGS Hurricane Sandy Supplemental: Theme 3 funded projects, in which we will be developing transects at strategic locations near restoration sites to collect linear data to measure success in restoration activities.

There are many areas of scientific concern for Suffolk County and the Nation, including the loss of tidal marshes and other coastal habitats that have reduced estuarine productivity and eliminated critical feeding and nursery habitat for finfish and shellfish. It is critical that restoration projects such as those being proposed by Suffolk County, which are also identified by the New York State South Shore Estuary Reserve Comprehensive Management Plan to improve water quality and living resources, be supported and funded. We feel the proposed project goes a long way towards addressing those restoration plans and does it in a sound scientific manner.

We consider this to be an excellent proposal to enhance our south shore of Long Island wetlands to better protect our communities and to also strengthen our natural ecosystems to benefit fish and wildlife. We look forward to supporting Suffolk County and in this important project.

Sincerely,



Ward O. Freeman 1/31/2014
Director, New York Water Science Center



January 31, 2014

David O'Neil
Vice President
National Fish and Wildlife Foundation

Dear Mr. O'Neil

Save The Bay in Rhode Island and southeastern Massachusetts supports the Suffolk County, NY's application for NFWF Hurricane Sandy funds under the proposal, **"Enhancing coastal resiliency through integrated salt marsh management along the south shore of Long Island, New York"**.

Save The Bay looks forward to the opportunity to be a member of the Regional Technical Workgroup to be led by The Nature Conservancy. Save The Bay has coordinated a number of salt marsh adaptation projects in Narragansett Bay to address the expansion of unvegetated panes and impounded water conditions. Through established protocols, Save The Bay is monitoring the effects of these projects on the vegetation community. We have been sharing this data with colleagues including USFWS, NOAA and other non-profit restoration practitioners in the region as we assess the effectiveness of these types of adaptation techniques on restoring salt marsh function.

Save The Bay is working with USFWS staff on an internally funded DOI project on the Narrow River that is considering the use of thin layer of dredge material to elevate the marsh surface to appropriate elevations to restore marsh function. Additionally, Save The Bay is partnering with the Rhode Island Coastal Resources Management Council on a similar project that is seeking DOI funding to use thin layer deposition of dredge material on degraded marshes in southern Rhode Island. We are proposing to follow established monitoring protocols by the National Park Service so that the marsh response from each of these restoration efforts can be compared throughout the southern New England and mid-Atlantic region.

We look forward to being part of the Regional Technical Workgroup to compare and assess salt marsh adaptation management projects across the Sandy-impacted region.

Sincerely,

Wenley Ferguson
Restoration Coordinator

THE BAY CENTER
100 Save The Bay Drive
Providence, RI 02905
phone: 401-272-3540
fax: 401-273-7153

EXPLORATION CENTER
Easton's Beach
P.O. Box 851
Newport, RI 02840
phone: 401-324-6020
fax: 401-324-6022

SOUTH COUNTY
COAST OFFICE
Riverside Building
12 Broad Street, Suite 6
Westerly, RI 02891
phone/fax: 401-315-2709

savebay@savebay.org
www.savebay.org

Amityville/Copiague, Village of Lindenhurst, Village of Babylon/West Babylon and the West Gilgo to Captree Islands, all in consultation with the New York State Department of Environmental Conservation Control (NYSDEC) to manage the pannes on Captree Island and other potential wetland locations in the Town of Babylon. To fund this project, the Captree Pannes team will apply to the Hurricane Sandy Coastal Resiliency Competitive Grants Program from the US Department of Interior and National Fish and Wildlife Foundation, for a Restoration Project that is eligible for between \$250,000 to \$5 million due January 31, 2014; and

WHEREAS, the Town of Babylon desires to work in partnership with Suffolk County, The Nature Conservancy, and the four NY Rising Reconstruction Communities in the Town of Babylon; Village of Amityville/Copiague, Village of Lindenhurst, Village of Babylon/West Babylon and the West Gilgo to Captree Islands, all in consultation with NYSDEC to manage the pannes on Captree Island and other potential wetland locations in the Town of Babylon.

NOW, THEREFORE, BE IT RESOLVED, that the Town Board of the Town of Babylon hereby respectfully urges Suffolk County, The Nature Conservancy, and the four NY Rising Reconstruction Communities in the Town of Babylon; Village of Amityville/Copiague, Village of Lindenhurst, Village of Babylon/West Babylon and the West Gilgo to Captree Islands, all in consultation with NYSDEC to manage the pannes on Captree Island and other potential wetland locations in the Town of Babylon and apply to the Hurricane Sandy Coastal Resiliency Competitive Grants Program from the US Department of Interior and National Fish and Wildlife Foundation; and be it further

RESOLVED, that the Town Board of the Town of Babylon authorizes the Supervisor to sign any and all necessary documents, including but not limited to, an application to the Hurricane Sandy Coastal Resiliency Competitive Grants Program from the US Department of Interior and National Fish and Wildlife Foundation, and Memorandums of Agreement or Understanding with Suffolk County, The Nature Conservancy, and the four NY Rising Reconstruction Communities in the Town of Babylon; Village of Amityville/Copiague, Village of Lindenhurst, Village of Babylon/West Babylon and the West Gilgo to Captree Islands, all in consultation with NYSDEC to manage the pannes on Captree Island and other potential wetland locations in the Town of Babylon.

VOTES: _____ **YEAS:** _____ **NAYS:** _____



State of Rhode Island and Providence Plantations
Coastal Resources Management Council
Oliver H. Stedman Government Center
4808 Tower Hill Road, Suite 3
Wakefield, RI 02879-1900

(401) 783-3370
Fax (401) 783-3767

David O'Neil
Vice President, National Fish and Wildlife Foundation

January 31, 2014

Dear Mr. O'Neil,

The Rhode Island Coastal Resources Management Council would like to express support for Suffolk County, NY's application for NFWF Hurricane Sandy funds under the proposal, **"Enhancing coastal resiliency through integrated salt marsh management along the south shore of Long Island, New York"**.

The primary goal of this proposal is to restore the multiple benefits of healthy wetlands to deteriorating wetlands on the south shore of Long Island, NY; however, in addition to the local restoration benefits, this proposal also includes a very important regional component that will have significant influence on wetlands across the entire Sandy-impacted region.

The Regional Technical Workgroup (RTW) to be led by The Nature Conservancy will be composed of experts in wetland restoration from across the region (DE, NJ, CT, NY, and RI). This group will be further strengthened by including Project PI's from other Hurricane Sandy resilience projects across the region into the RTW. Any lessons learned from one project will be easily shared across the entire region and range of projects because of this regional forum.

This is an unprecedented opportunity to foster collaboration of regional marsh restoration experts. It will ensure that the best available restoration methods and monitoring metrics will be implemented for on-the-ground projects. The RTW will also create the opportunity for a synoptic analysis of marsh response to the restoration techniques used across the region resulting in a more comprehensive approach for implementing adaptive management beyond just Long Island, NY.

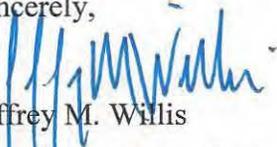
For example, many current and proposed projects across the region (internally funded DOI projects and projects submitted in response to this call) are considering the beneficial use of dredge material to reestablish appropriate elevations and restore healthy functioning marsh. A synoptic analysis of responses to these restoration strategies, to provide proof of concept, will be incredibly valuable for current and future restoration projects. This may be particularly applicable for restoration of marshes that are experiencing marsh loss by expansion of unvegetated pannes (an increasingly common and widespread marsh loss phenomenon).

The CRMC is currently involved in an internally funded DOI project on the Narrow River that is considering the use of thin layer of dredge material to elevate the marsh surface to appropriate elevations to restore marsh function. Additionally, we are applying for DOI funding for a similar project to use thin layer deposition of dredge material on degraded marshes in southern Rhode Island. We are proposing to follow established monitoring protocols by the National Park Service so that the marsh response from each of these restoration efforts can be compared throughout the southern New England and mid-Atlantic region.

This is a timely and valuable effort which will have a long lasting impact on the resilience of our coastal salt marshes along with the many economic and cultural activities that depend on them.

In summary, we enthusiastically support the formation of the RTW and look forward to participating as an active member in order to produce a regional assessment of restoration success and adaptive management recommendations across the Sandy-impacted region.

Sincerely,



Jeffrey M. Willis

Deputy Director, Rhode Island Coastal Resources Management Council

January 31, 2014

Frank Castelli
Environmental Projects Coordinator
Suffolk County
Dept. of Economic Development and Planning
100 Veterans Memorial Highway, 4th Floor
Hauppauge, NY 11788

Dear Mr. Castelli:

Please accept this letter of commitment for the Suffolk County Department of Economic Development and Planning NFWF Hurricane Sandy Coastal Resiliency Competitive Grants Program application. The Corps Network is excited about our partnership on this project and is prepared to provide Conservation Corps Crews to work with the department on the restoration of the south shore Suffolk County marshes.

Founded in 1985, The Corps Network (TCN) represents approximately 130 state, local, and non-profit organizations, many of which have been in existence and changing lives and communities through service for several decades. Since it was established, TCN member Corps have engaged more than 750,000 young people in service. At present, TCN member Corps enroll almost 30,000 Corpsmembers a year, the majority of whom come from diverse and disadvantaged backgrounds, many of whom are looking for a second chance to succeed in life.

The founders of what is now TCN (formerly the National Association of Service and Conservation Corps) drew their inspiration from the Civilian Conservation Corps (CCC), the Depression-era program that engaged and supported three and a half million young men in natural resource conservation and development. Similarly, today's Service and Conservation Corps – the heirs of the CCC – engage youth and young adults in conservation-related community service and service learning; provide training, education, and full scope of supportive services; and set young people on a defined pathway leading to post-secondary education, sustainable employment, and a lifetime of civic engagement.

The Corps Network will oversee the conservation crews working with the Suffolk County Department of Economic and Planning. This department will provide project oversight and management of project work and The Corps Network will oversee the administrative functions of the crews. The crew size and length of service will be determined. The Corps Network and selected member organization will plan to recruit local and regional Corpsmembers with proper education and / or work experience. The Corps Network will provide training and technical assistance and subgrant the Corps management to a TCN member organization.

The Conservation Corps crews will work with the county on its project objectives. The primary objective of this project is to apply marsh management techniques to approximately 400 acres of estuarine-salt marsh coastal habitat. On-going stewardship will reverse degradation of salt marsh areas impacted by large areas of invasive common reed (*Phragmites australis*), waterlogging, extensive mudflat and panne formation, and shoreline erosion. Besides providing buffers to minimize loss of property, wetlands are valuable open spaces that accommodate outdoor recreation and educational experiences. Physical and biological control of mosquitoes will be incorporated to ensure that the restored areas do not become mosquito habitats that pose a threat public health. In addition, this project will provide volunteer and educational opportunities, as well as research opportunities to undergraduate and graduate students in terms of integrating structural and functional ecosystem indicators into pre and post project monitoring activities.

The Suffolk County partnership with The Corps Network will result in employment, service, training, and education opportunities for young Americans, and significant work accomplishments that preserve, protect, and promote America's greatest natural and cultural treasures. The project will help develop skilled workers, educated and active citizens, future leaders, and stewards of natural resources.

A TCN member Conservation Corps will handle recruiting, engaging diverse and local youth, and provide environmental education and safety training. They employ skilled and experienced crew leaders and project directors to supervise the youth and oversee the work. TCN Conservation Corps follow stringent risk management procedures and constantly re-evaluate their policies and practices to ensure that they are in line with the latest developments and requirements.

If you or your staff have any additional questions, please contact Joe Gersen, Director of Government Relations, Public Lands Service Coalition, at jgersen@corpsnetwork.org or (202) 737-6272.

TCN wholly supports this application for grant funding.

Sincerely,



Mary Ellen Ardouny
President and CEO