

DEPARTMENT OF THE ARMY U.S. ARMY CORPS OF ENGINEERS 441 G STREET, NW WASHINGTON, D.C. 20314-1000

CECW-NAD-RIT

JAN 8 2014

MEMORANDUM FOR CHIEF, SANDY COASTAL MANAGEMENT DIVISION

SUBJECT: Fire Island to Montauk Point, Completion Strategy

1. The North Atlantic Division's attached completion strategy for the Fire Island to Montauk Point (FIMP) project outlines the proposed approach for expediting completion of the FIMP reformulation study while concurrently moving forward with stabilization projects consisting of the beach fill (dune/berm) elements authorized pre-Sandy. HQUSACE concurs with this approach to expedite construction of the FIMP project.

2. The stabilization projects will be documented in Hurricane Sandy Limited Reevaluation Reports for Fire Island Inlet to Moriches Inlet and Downtown Montauk. The strategy for the stabilization projects is intended to expedite implementation of previously authorized elements of the FIMP project to reduce the heightened risk post-Sandy. The stabilization projects should be developed so that they do not foreclose the consideration of alternatives in the reformulation study. The FIMP reformulation study will be documented in a General Reevaluation Report and will consider non-structural alternatives (to include structure elevation/flood-proofing) and nature-based solutions.

3. Questions or concerns regarding this matter should be directed to Mr. Michael Voich, North Atlantic Division, Regional Integration Team, at (202) 761-4655.

STEVEN L. STOCKTON, P.E. Director of Civil Works

Encl

Fire Island to Montauk Point Completion Strategy

Executive Summary

- There is increased urgency to complete the Fire Island Inlet to Montauk Point (FIMP) Reformulation Study and to implement the recommendations, in the wake of Hurricane Sandy within the Project Area. The following outlines the Corps' approach for expediting completion of the FIMP Reformulation Study, and a concurrent approach for stabilizing vulnerable and susceptible areas.
- FIMP falls into several programs within PL 113-2 including Constructed Projects, eligible for repair and restoration (Westhampton, WOSI) and Authorized but Unconstructed (ABU) Projects. The identified efforts for FIMP are itemized below. This approach focuses on the effort necessary for the last 2 tasks, completion of the Reformulation Study Effort (d), and Stabilization Efforts (e).
 - a. PL 84-99 Repair, and Enhanced Repair of the Westhampton Interim Project
 - b. PL 84-99 Enhanced Repair of the WOSI Project (84-99 repair already accomplished)
 - c. Execution of Breach Contingency Plan (BCP) in the Wilderness Area (two other breaches already closed)
 - d. Completion of the Reformulation Study, and construction of Recommendations
 - e. Stabilization Efforts to address Sandy impacts including:
 - i. Fire Island Inlet to Moriches Inlet Reach (Fire Island)
 - ii. Downtown Montauk
- 3. Stabilization Efforts are intended to reduce the heightened risk post-Sandy while the FIMP reformulation study is being completed. The solutions will not foreclose on alternatives under consideration for FIMP.

Reformulation Study Effort Approach

4. Prior to Hurricane Sandy, there had been significant advances in identifying a recommended plan acceptable to all partners. A Recommended Plan for FIMP must have agreement between USACE, DOI, and NYS (who represents the local governments). In March 2011, USACE and DOI identified a Tentative Federally Supported Plan (TFSP) that was coordinated at the Secretary-level of both USACE and DOI. This plan was provided to NYS for their concurrence. NYS provided comments on TFSP, and asked for additional information to come to a decision on a Tentatively Selected Plan (TSP) in a letter dated December 29, 2011. The Corps provided a response to NYS by letter dated May 16, 2013 which addressed the State's comments, and identified the changes that are being proposed to

address post-Sandy impacts. In response, NYSDEC provided a letter dated June 14, 2013 supporting the TFSP, and the Stabilization Efforts.

- 1. <u>Post-Sandy Refinements.</u> Following Sandy, it was recognized by USACE, DOI, and NYS that the TFSP must be re-evaluated and incorporate changes due to Sandy. The primary changes that have been incorporated are revisions to the dune alignment and updates to the quantities, costs, and benefits reflecting the current island condition. Additionally, changes in project features have been incorporated at several locations (feeder beach in Smith Point County Park, a dune in the Lighthouse Tract, a plan for downtown Montauk, updates to nature-based features, and updated breach response protocols).
- 2. The most significant change in the TFSP is an updated beachfill alignment. The team has identified a beachfill alignment located further north than the prior agreed-upon alignment. The revised alignment requires the acquisition and relocation of approximately 48 houses. The comparison of costs indicates that this new plan has a lower life-cycle cost as compared to the prior, more seaward alignment. NYSDEC has indicated support for this alternative and asked that USACE minimize the scope to the extent possible for unwilling sellers.
- 3. Based upon the letter of support from NYS, the District is proceeding with the following efforts. This information will ultimately feed into the recommended plan section of the HSGRR. The HSGRR will be based upon the Draft Reformulation Report previously reviewed by NAD and HQ, which was the subject of the prior IPR held in August 2010.
 - Updating quantities, costs and economics of the alternatives
 - Updating and comparing plans specific for Fire Island and Downtown Montauk
 - Incorporating Sea Level Rise into the analysis (as per USACE guidance and requested by NYS)
- 4. The District has undertaken additional coordination as part of completing the Reformulation Study. The District has followed a three-pronged approach to coordinating the plan:
 - Ensuring vertical team buy-in within the Corps;
 - Reaffirming vertical team support with the Federal partners (DOI);
 - Reaffirming Local sponsor support of the plan.
- 5. The partner coordination to date has been extensive, at the Federal, State, and Local-levels. Based upon the recent meetings, it is recognized that there is both USACE and DOI agreement on the overall approach for FIMP, and for the stabilization efforts. Local sponsor support for the plan has also been confirmed. It is recognized that there are still several details of the plan that need to be finalized.

Stabilization Project: Approach

- The current schedule to complete the Reformulation Study will leave the identified vulnerable and susceptible portions of the Study Area (as a result of Hurricane Sandy) exposed to future damages until the recommendations from the FIMP Reformulation Study can be implemented. A proposed solution to address this concern is the advanced implementation of Stabilization Projects. The assumption for these Stabilization Projects is that these projects are necessary to address the effects of Hurricane Sandy as quickly as possible before another major storm event occurs, and will be independent of the FIMP Reformulation recommendations.
- Based upon the existing vulnerability in the Study Area, it is expected that there should be two stabilization efforts: 1) Fire Island Inlet to Moriches Inlet (Fire Island) and 2) Downtown Montauk.
- 3. It is expected that a "Hurricane Sandy Limited Reevaluation Report (HSLRR)" will be prepared for each area (Fire Island and Downtown Montauk) to obtain approval for construction of the recommended plan, and will serve as the basis of a PPA for construction of each stabilization project.
- 4. These HSLRR's will contain independent plans that are economically justified. These plans will be evaluated in an appropriate NEPA document, and a PPA will be prepared for the plan described in the HSLRR and NEPA document. There may be differences in the exact plan development for each stabilization effort since site conditions may warrant different life-cycle considerations. The following approach describes the plan for the Fire Island Inlet to Moriches Inlet Stabilization Project with similar approach for Downtown Montauk
- 5. The Fire Island HSLRR will include a plan that includes a one-time action, beachfill recommendation that would not negate consideration of any of the alternatives under consideration for FIMP. The No Action FIMP alternative would be achieved post-stabilization, because renourishment is not contemplated after the Stabilization Project is complete. The overall FIMP HSGRR/EIS will assess the entire Project Area and all elements of its implementation. Due to the need to implement the stabilization efforts at Fire Island and Downtown Montauk prior to the completion of the overall HSGRR/EIS , the District will prepare respective Environmental Assessments (EA) that will evaluate appropriate project alternatives including the one-time action, as described above and associated environmental impacts. As required by NEPA, the EA must conclude with a finding that a selected alternative either will or will not significantly affect the quality of the human environment. If a significant impact is found, an EIS will be prepared.

ANDREW M. CUOMO GOVERNOR



JOE MARTENS COMMISSIONER

State of New York Department of Environmental Conservation Albany, New York 12233-1010

June 14, 2013

Colonel Paul E. Owen District Commander United States Army Corps of Engineers New York District 26 Federal Plaza Room 2109 New York, NY 10278

Dear Colonel Owen:

I am pleased to inform you that New York State supports implementation of the fully federally funded Fire Island to Montauk Point (FIMP) project, including the United States Army Corps of Engineers' (Corps) proposal to expedite the implementation of elements of FIMP, such as the immediate restoration of dunes and beaches damaged by Hurricane Sandy on Fire Island and downtown Montauk. This support is based on the overall concepts of the FIMP project subject to the items further described in this letter.

On March 11, 2011, representatives of the Corps and the United States Department of Interior sent a letter to me outlining the potential plan of improvement for the Fire Island to Montauk Point ("FIMP") Reformulation Study. This "Tentative Federal Supported Plan" ("TFSP") was proposed as the basis to move forward with Reformulation Study efforts for the entire FIMP study area – encompassing approximately 83 miles of Atlantic Ocean coastal and bay areas of Suffolk County, New York. As noted in the federal letter, New York State must find the general plan of improvement acceptable before its attributes can be finalized through a collaborative process. New York's approval at this stage, I understand, would allow the Corps and State to move forward with a final analysis of the TFSP, including such matters as plan formulation, engineering, economics, environmental assessment, model certifications and formal agency policy-level approvals.

After a series of discussions, on December 29, 2011, DEC sent a letter to the Army Corps presenting information requests aimed at better understanding some of the basic elements of the TFSP so that DEC would be in a position to accurately explain project elements, costs, maintenance obligations and impacts of the TFSP to the required local community sponsor(s). While further discussions were taking place, Hurricane Sandy arrived – altering the physical and fiscal landscape in a variety of ways. On May 16, 2013 the Corps responded to the Department's letter which addressed a number of the concerns raised by the Department, but deferred a response on a few issues that are currently under review based on the impacts from Sandy.

I understand that alternative components of the TFSP are now being further refined, including: breach response measures along the barrier island, including "advanced" breach response methods or protocols; inlet management, beach and dune fill components and alignments with on-going beach nourishment; structural groin modifications; resiliency measures, including a significant number of coastal community building elevations; road elevations; land and development management to limit new development in certain flood hazard areas; protective natural infrastructure features (including wetland complexes, living shorelines, shellfish reefs, dunes, ecologically friendly in-bay breakwaters, and marsh islands) and environmental restoration, particularly in south shore bay areas.

All of the above elements would be sharpened in a process that fully involves local stakeholders. As you have emphasized, this massive project would need to be finalized in a manner that takes into account increased storm surge intensity associated with climate change and sea level rise. It is understood that the Corps will be performing an environmental impact review process under the National Environmental Policy Act (NEPA) for the entire FIMP project and that the National Park Service is evaluating the need for a NEPA review with respect to the existing breach in the Wilderness Area of the Fire Island National Seashore. It is through these processes that the elements of the project will be fully analyzed and a final FIMP project will be fully defined.

The State also supports the Corps' review of the post Sandy dune re-alignment along Fire Island that may be necessary based on the Corps' cost to benefit analysis that is still underway. If the cost to benefit analysis indicates that the alignment should be moved north in order to make the project more economical, resilient, and sustainable over the 50-year period of the project, then the State would support this realignment. If the realignment requires the purchase of properties, then the State would request that the Corps minimize the scope of this activity to the extent possible for unwilling sellers and to perform the procurement of these properties for the State at full federal expense. The State awaits the Corps' submittal of the elements of the project that you are currently working on, as delineated in your May 16, 2013 response. Thank you for all of your good and continuing efforts to help New York rebuild smarter and stronger in the face of the challenges presented by Hurricane Sandy.

Sincerely,

Martin eph J. Marten

c: Mr. Joseph Vietri



DEPARTMENT OF THE ARMY NEW YORK DISTRICT, CORPS OF ENGINEERS JACOB K. JAVITS FEDERAL BUILDING NEW YORK, N.Y. 10278-0090

REPLY TO ATTENTION OF Project Management Division

16 MAY 2013

Mr. Alan A. Fuchs, P.E. Director, Bureau of Flood Protection and Dam Safety New York State Department of Environmental Conservation Division of Water Bureau of Flood Protection and Dam Safety, 4th Floor 625 Broadway Albany, New York, 12233-3504

Dear Mr. Fuchs:

Thank you for your letter dated December 29, 2011 regarding the Fire Island Inlet to Montauk Point (FIMP) Reformulation Study, which requested additional information on the Tentative Federal Supported Plan (TFSP). This was in response to the March 11, 2011 jointly signed letter from both the U.S. Army Corps of Engineers and the U.S. Department of Interior (DOI) which requested New York State's review and verification of acceptability of the TFSP.

We recognize there have been significant changes since the exchange of this correspondence, most notably Hurricane Sandy, the passage of PL 113-2 (The Disaster Relief Appropriations Act; 2013) which includes provisions that establish a framework for proceeding with Sandy affected authorized and unconstructed projects, and the increased support to bring the FIMP Reformulation Study to a conclusion.

Prior to Hurricane Sandy, the Corps was coordinating proposed responses with both your office and the DOI, as well as in the process of developing the requested information. As we are currently in the process of updating this information to account for necessary changes due to Hurricane Sandy, we have attached preliminary responses to your comments for your immediate review.

Since Hurricane Sandy, our offices have also been engaged in a number of discussions regarding appropriate revisions to the TFSP, and the evaluation of alternatives which properly reflect the post-Sandy condition. The revisions to the TFSP that are currently under consideration include the following:

- Beach fill alignment adjustments along Fire Island to account for post-Sandy changes
- Incorporation of a dune and beach feature in the Fire Island Lighthouse Tract
- Incorporation of a feeder beach in Smith Point County Park
- Updating of Breach Response protocols
- Updating of potential plan features in Downtown Montauk

The details requested by the State are necessary for identifying a FIMP mutually acceptable plan between the Corps, DOI and State of New York. Local sponsor concurrence with the features and scale set forth in the TFSP is an essential first step to formalizing the specific features of a recommendable plan. The Corps will continue to coordinate development of the updated TSFP implementation details with affected agencies to ensure the priorities communicated by NYS are incorporated.

We look forward to your timely review and continued discussion and coordination with your office. Please contact Mr. Frank Verga, Project Manager, at (917) 790-8212 if you have any questions.

Sincerely,

aul E. Owen Colone, U.S. Army

Commander

CF w/Attachments: NYSDEC, (P. Scully; S. McCormick) NYSDOS, (F. Anders; B. Pendergrass) NPS, (C. Soller) USFWS, (D. Stilwell) Joint Signed TFSP, dated March 11, 2011

NYS comments, dated December 29, 2011

NYS comments, dated June 28, 2012







March 11, 2011

Honorable Joe Martens, Commissioner New York State Department of Environmental Conservation 625 Broadway Albany, New York 12233

Dear Mr. Martens:

We write together to ask for your consideration of a newly developed potential plan of improvement for the Fire Island Inlet to Montauk Point, New York, Reformulation Study.

Any plan developed for this area that involves erosion control and beach nourishment must be mutually acceptable to the United States Secretary of the Army and Secretary of the Interior. Through a series of meetings spanning nearly 18 months, the U.S. Army Corps of Engineers and the U.S. Department of Interior now stand ready to move forward with Reformulation Study efforts by utilizing this potential plan of improvement for the entire project study area. This plan of improvement is the Tentative Federal Supported Plan (TFSP) and outlines a plan that appears to meet the Federal agency objectives and requirements necessary for mutual acceptability.

We have enclosed for your review a summary of the TFSP components. While this is a brief overview, supporting information for this plan is included in the May 2008 Draft Formulation Report, similar to Alternative 3G. The State of New York, the non-Federal sponsor, must find the general plan of improvement acceptable before any finalization can occur, including completion of the Reformulation Study Draft General Reevaluation Report and Draft Environmental Impact Statement.

If the State finds the components of the TFSP acceptable, we would immediately move forward with final analysis of the TFSP plan (plan formulation, engineering, economics, environmental assessment, model certifications, internal/external reviews), including higher authority approvals by each Federal agency. If the State finds any components of the TFSP not acceptable, we request the State provide a locally preferred alternative (LPA). The LPA should include specific components that could be supported, in order to move forward with the required additional analysis. Both Federal agencies would still need to assess their ability to support the LPA.

We look forward to your timely review and are willing to arrange a meeting with your office in the March/April timeframe in order to further discuss the elements of the TFSP as necessary. Please do not hesitate to contact Mr. Anthony Ciorra, Chief of Civil Works at (917) 790-8208, or Mr. Frank Verga, Project Manager at (917) 790-8212, if you have any questions.

Sincerely,

John R. Boulé II Colonel, Corps of Engineers District Commander

Auntych Solla

K. Christopher Soller Superintendent, Fire Island National Seashore National Park Service

Dave A.

David Stilwell Field Supervisor, New York Field Office U.S. Fish and Wildlife Service

Enclosure

CF:

Al Fuchs, NYS Department of Environmental Conservation Fred Anders, NYS Department of State, Coastal Resources

FIRE ISLAND INLET TO MONTAUK POINT, NY Tentative Federally-Supported Plan Summary of Components

INLETS: FIRE ISLAND, MORICHES, SHINNECOCK

• Continuation of authorized projects, with increased sediment bypassing at each inlet

MAINLAND

- 10-year floodplain non-structural building retrofits, including road raisings
- Over 4,400 structures, and 4 road raising locations

BARRIER ISLANDS:

FIRE ISLAND @ DEVELOPED LOCATIONS (communities, minor Federal Tracts)

- Beachfill (+15 ft dune, with berm)
- minimum real estate impact alignment
- No tapers into Federal tracts; with overfill in communities

FIRE ISLAND @ UNDEVELOPED LOCATIONS (major Federal Tracts & Smith Point Park)

- Conditional Breach Response (+9.5 ft berm only), guidelines to be developed, anticipated closure to be initiated within 45-60 days
- @ Lighthouse Reactive Breach Response (+9.5 ft berm only), closure initiated w/in 45 days
- @ Smith Point County Park short term beachfill in western, developed section to allow relocation of infrastructure, then Conditional Breach Response
- Science Response Team to advise the decision makers for conditional closure
- No maintenance fill for breach closure, action taken only when a breach occurs

WESTHAMPTON BARRIER ISLAND:

- Beachfill (+15ft dune with berm) fronting Moriches Bay
- Breach Response (+13 ft dune, with berm), fronting Shinnecock Bay
- Breach Response to include action to be taken when vulnerable to breaching (specifics still to be defined)

DOWNTOWN MONTAUK AND POTATO ROAD

- Sediment management measures at both sites (feeder beach)
- Potato Road contingent upon a local pond opening management plan for Georgica Pond

GROIN MODIFICATION

• Taper existing Westhampton Groins (13) and existing Ocean Beach Groins (2)

RESTORATION

• Various alternatives at locations throughout study area

INTEGRATION OF ADAPTIVE MANAGEMENT

- Period of renourishment subject to adaptive management considerations and local land use regulations, or 50 year period of renourishment
- Provisions to continually adjust components of the project to improve effectiveness
- Applies to all plan features, developed to address climate change concerns (e.g., Sea Level Rise)

INTEGRATION OF LOCAL LAND USE REGULATIONS AND MANAGEMENT

- Local Land Management planning to include enforcement of federal and state zoning requirements, land acquisition or other measures is a necessary component for long-term risk reduction
- Improved land management can allow for adaptation to reduce costs for renourishment
- Important to ensure that the project does not induce development.



New York State Department of Environmental Conservation Division of Water

Bureau of Flood Protection and Dam Safety, 4th Floor 625 Broadway, Albany, New York 12233-3504 Phone: (518) 402-8185 • FAX: (518) 402-9029 Website: <u>www.dec.ny.gov</u>



December 29, 2011

Colonel John R. Boulé II United States Army Corps of Engineers New York District 26 Federal Plaza Jacob K. Javits Federal Building New York, New York 10278

Re: Fire Island Inlet to Montauk Point (FIMP) Reformulation Study

Dear Colonel Boulé:

Thank you for the March 11, 2011, letter regarding the Federal Government's (New York District of the Army Corps of Engineers, National Park Service Fire Island National Seashore Office, and U.S. Fish and Wildlife Service New York Field Office) request for New York State to consider a potential plan of improvement for the Fire Island Inlet to Montauk Point area which is identified in the March 11th letter as the "Tentatively Federally Supported Plan" ("TFSP"). As the March 11th letter notes, the TFSP "appears to meet the Federal agency objectives and requirements," yet will need further approvals in the respective federal agencies before it would be fully approved.

The State has reviewed the TFSP and has had discussions with potential local sponsors. Unfortunately, we find that additional information is needed for the State and the potential local sponsors to respond to your request. As you understand, a positive response, or an adequately formulated request for a locally preferred alternative, will require the State to have support from its potential local partners. It is highly difficult for the State to fully understand, and to present the TFSP to potential local sponsors to seek their response or participation, when the TFSP is general in nature and does not contain the supporting information needed to justify its attributes. Therefore, the State respectfully requests the following information:

The March 11th letter provides a one page summary of the components of the 1. TFSP. In May 2009 the Corps issued a Draft FIMP Reformulation Study ("Study"). Within this Study the Corps identified a number of options, including "Alternative 3G." The March 11th letter stated that Alternative 3G is "similar" to the TFSP. In the Study, we understand that alternative 3G was identified as being Economic Development/National Ecosystem National Restoration the ("NED/NER") plan, which was identified as the plan that best accomplishes the storm damage reduction objectives, based upon the integration of the alternatives. The NED/NER plan previously was discussed at a FIMP Executive Steering Committee meeting on November 10, 2009, and was presented by the Corps as the plan recommended for further development. Alternative 3G was also recommended for inclusion in the Draft General Re-evaluation Report and the

Environmental Impact Statement for evaluation as a part of the public review process. Unfortunately, it is impossible to identify the significant differences between the newly developed TFSP and alternative 3G and we would appreciate receiving a detailed comparison of the two plans. We request that this comparison include a detailed description of the increased or decreased risks and impacts to the communities within in the study, as well as the level of storm damage reduction that would be provided by the TFSP.

For the State and potential local sponsors to determine the feasibility of agreeing to all or some of the TFSP, it is necessary to understand the costs involved with each phase. The State requests that the Corps provide the detailed costestimate/cost-breakdown for various elements of the TFSP and compare TFSP costs to those for Alternative 3G and the NED/NER plan. The Department is currently not clear on which plan is the NED/NER plan.

The March 11th letter indicates that the "plan *appears* to meet the Federal Agency objectives" (emphasis supplied). The State respectfully requests confirmation that the TFSP does, in fact, meet Federal Agency objectives and is the Corps "Recommended Plan". It is an extensive process for the State, in conjunction with potential local sponsors, to determine if the TFSP is fully acceptable or if a locally preferred alternative needs to be proposed for all or some of the project area. The State would strongly prefer to undertake this more extensive consultation with the knowledge that the TFSP will be acceptable to the Federal Government (subject to NEPA review and modifications, as well as appropriations) if endorsed by the State.

The TFSP calls for significant non-structural measures, such as elevation or relocation of structures. The State would appreciate detailed information on the Corps' proposed options for implementation of this portion of the TFSP. As one might expect, this is of great interest to potential local sponsors. The State would also be interested in the results of any consultations the Corps has undertaken with the Federal Emergency Management Agency on these proposed measures and their implementation. This non-structural effort has a direct relationship to FEMA's flood plain management and flood insurance programs, and they may be of great assistance in this implementation. Also, we request that the Corps provide a comparison of the levels of flood protection provided by the TFSP, Alternate 3G and the NED/NER plan versus the residual flood risks associated with maintaining the existing inlets.

Please provide more detailed information on the various barrier island breach and breach closure plans (current and proposed via the TFSP) including their locations, impacts, timeframes for closure, benefits, future estimated costs and how they relate to flood risk. It would be very useful to know how the level of storm damage reduction increases or decreases with the proposed breach plans in the TFSP in comparison to Alternative 3G and the NED/NER plan.

The State has discussed with the Federal Agencies its interest in evaluating the option of reducing or phasing out the re-nourishment portion of this project over the project's 50-year life span. This option might allow the beach configuration to eventually return to a more naturalized status or to possibly have beach

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configuration addressed by property owners, local municipalities or local zoning entities. The State requests information on the manner in which this option would be addressed within the proposed TFSP. If these concepts are not addressed in the TFSP, the State requests that they be addressed.

The State has also previously raised concerns regarding the total cost of implementing any adopted plan for FIMP. One option in which there is strong potential interest is breaking the TFSP, or any plan, into a number of smaller geographical areas which could then be implemented in phases based on the availability of resources and the particular interest of non-federal sponsors. Please provide the Federal Agencies' views on whether such a phased approach would be acceptable and if there is any preferred or priority order recommended by the Federal Agencies for the implementation of a phased approach.

Please explain how sea level rise and climate change considerations and concerns were integrated in the TFSP, and how they will be integrated as we learn more in the future. Similarly, the summary of components associated with the TFSP also makes brief reference to beach re-nourishment being the subject of adaptive management measures; please provide information on the monitoring and assessment program associated with an adaptive management approach, as well as the entities potentially responsible for undertaking such an adaptive management approach. It is essential to understand the method by which elements of the TFSP could be adapted and modified to accommodate sea level rise and climate change.

The State very much appreciates the extensive efforts of the Federal Agencies and looks forward to working through the process with the local sponsor(s) to achieve a plan that best meets our mutual objectives. We look forward to your response to the above requests. If there are any questions pertaining to these requests, please contact me at the above number.

Sincerely,

Alan A. Fuchs, P.E. Director Bureau of Flood Protection and Dam Safety

cc.:

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- K. Christopher Soller, U.S. National Park Service
- D. Stilwell, U.S. Fish and Wildlife Service
- F. Santamora, Corps of Engineers
- A. Ciorra, Corps of Engineers
- F. Anders, NYSDOS
- B. Culhane, Suffolk County
- **Commissioner Joe Martens**
- P. Scully, NYSDEC, Region 1
- J. Tierney, NYSDEC
- M. Klotz, NYSDEC
- S. McCormick, NYSDEC

FIRE ISLAND INLET TO MONTAUK POINT (FIMP) REFORMULATION STUDY

Below are New York State comments to the "MODIFIED 2B" plan which the Corps has proposed as an alternative to be prepared to other alternatives in order to respond to the State letter dated December 29, 2011. The Corps has recommended that a comparison be made of alternatives 3A, TFSP, and MODIFIED 2B, and no action. These alternatives will be prepared in order to address the questions raised in the State's letter.

June 28, 2012

- 1. In "MODIFIED 2B" plan the non-structural measures need to stand alone and the benefits cost ratio of the overall plan cannot depend on them.
- 2. "MODIFIED 2B" proposes 13 ft dune under Proactive Breach Response at Fire Island Developed Locations. Why is the dune 2 ft lower than under Plans 3A and TFSP? How is the berm width affected?
- 3. What is the cross-section for 25-year plan Proactive Breach Response for "MODIFIED 2B" and what does subject to evaluation mean for all the project locations?
- 4. What will the real estate impact alignment be under "MODIFIED 2B"?
- 5. Under Integration of Adaptive Management in "MODIFIED 2B" nourishment is not included. Does that mean that it is not planned?
- 6. Will there be any maintenance fill for any of the breach closures under "MODIFIED 2B" and other remaining plans?
- 7. Is there an ability to taper off the State's involvement over time under any of the remaining plans?
- 8. Will FIMP prevent non-federal entities from constructing non-project activities within the project footprint such as building higher dunes, planting additional vegetation, installing snow fences, or privately funding beach replenishment?
- 9. Will FIMP allow non-federal entities (state, county, communities) take advantage of dredge mobilization to build a larger locally preferred alternative? Should they choose to provide additional funding to do so? Can they mobilize their own dredge in the event FIMP is providing less protection than they desire?
- 10. Will FIMP prevent non-federal entities from securing FEMA damage assistance or FEMA mitigation grant monies within the project footprint? (FEMA funded replenishment of non-federal engineered beaches, or FEMA funded home elevations through programs such as "project impact")?

- 11. If the FIMP plan becomes so big that it is unaffordable, will the lesser plan exist or there will be only no action plan left?
- 12. Natural processes value: The relative benefit/cost to natural processes of each alternative should be estimated, particularly with respect to flood protection and coastal barrier migration. For example, preventing breaches eliminates the primary method of barrier adjustment and retreat in response to sea level rise. See for example the recently prepared Ecosystem-based Management Plan for Great South Bay prepared by TNC. It would benefit all participants to know the environmental costs of such actions. A conceptual description of the effects of each alternative should be developed as a precursor to providing this information for the alternatives that will advanced for study in the EIS.
- 13. Environmental Restoration Alternatives and beach fill: The descriptions of alternatives provided by the Army Corps do not identify an opportunity to reduce the volume of fill along the ocean front in the event that bay side fill reduces the likelihood of a breach. This factor should be incorporated into the Breach Contingency and beachfill options.
- 14. Road raising/levees: We previously understood that this measure was not likely to be used because of state concerns over maintenance and long term effectiveness. If it is still under consideration, include evaluation of the potential costs if the levee is compromised, the maintenance work that can be anticipated over the project life, and cost shares among federal, state and local partners for both construction and long term maintenance.
- 15. Groins at Ocean Beach: The alternatives in the Army Corps spreadsheet cite "Taper Ocean Beach Groins" as a project measure. What exactly does "taper" mean with respect to two groins? Are they going to be shortened or rebuilt so the seaward end declines in elevation until it matches the bottom surface, or both?
- 16. Potato Road: The alternatives in the Army Corps spreadsheet all recommend "feeder beaches" contingent upon a management plan for opening Georgica Pond. What is being protected by these actions? Are the feeder beaches cost effective?
- 17. "MODIFIED 2B", beach/dune construction for all reaches: The Corps spreadsheet heading for this alternative says "Initial Beach Placement Will First Be Provided for All Reaches" Clarification is needed regarding which reaches are involved.
- 18. "MODIFIED 2B", Land Use Management: The clause that appears on the spreadsheet for TFSP "Improve land management can allow for adaptation to reduce nourishment cost" is missing from the description in "MODIFIED 2B". It should be included for all nourishment alternatives in any selected plan.

Responses to NYS Comments

<u>Detailed NAN Responses to</u> <u>NYSDEC Comments, as dated December 29, 2011, and dated 28 June 2012</u>

NYS Comment #1

The March 11th letter provides a one page summary of the components of the TFSP. In May 2009 the Corps issued a Draft FIMP Reformulation Study ("Study"). Within this Study the Corps identified a number of options, including "Alternative 3G". The March 11th letter stated that Alternative 3G is "similar" to the TFSP. In the Study, we understand that alternative 3G was identified as being the National Economic Development/National Ecosystem Restoration ("NED/NER") plan, which was identified as the plan that best accomplishes the storm damage reduction objectives, based upon the integration of the alternatives. The NED/NER plan previously was discussed at a FIMP Executive Steering Committee meeting on November 10, 2009, and was presented by the Corps as the plan recommended for further development. Alternative 3G was also recommended for inclusion in the Draft General Re-Evaluation Report and the Environmental Impact Statement for evaluation as a part of the public review process. Unfortunately, it is impossible to identify the significant differences between the newly developed TFSP and alternative 3G and we would appreciate receiving a detailed comparison of the two plans. We request that this comparison include a detailed description of the increased or decreased risks and impacts to the communities within in the study, as well as the level of storm damage reduction that would be provided by the TFSP.

➢ <u>NAN Response #1</u>

The May 2009 Draft Formulation Report (May 2009 Report) recommended two alternative plans for further consideration. The plans were described in Chapter 11 of the Report. Alternative 3A, which was identified as the plan that appears to maximize storm damage reduction benefits, and Alternative 3G, which was identified as the plan that appears to best balance the objectives of storm damage reduction, and achieving the objectives of the FIMP Vision Statement.

Following coordination with involved agencies, the TFSP evolved from 3G and was proposed in the March 2011 letter. The TFSP differs from 3G in two ways: 1) The TFSP includes beach fill in the portion of Smith Point County Park fronting the pavilion, where Plan 3G recommended only a breach response in this area, and: 2) The specific breach closure procedures in the TFSP acknowledges a delay of up to 60 days in closing a breach and possibility of natural closure. Plan 3G estimated 45 days to close breach.

As indicated in the cover letter, we are incorporating changes in the plan due to Sandy, in an <u>Updated TFSP</u>, which are not reflected in the following information. That information will be provided at a later date. The changes that are being incorporated include the following:

- Adjustments to beach fill alignment along Fire Island to account for post-Sandy changes
- Incorporation of a dune and beach feature in the Fire Island Lighthouse Tract
- Incorporation of a feeder beach in Smith Point County Park
- Updating of Breach Response Protocols
- Updating of potential plan features in Downtown Montauk

The comparisons of the alternative plans are documented in the May 2009 Report (Chapter 10). This information has also been summarized in the following sub-attachments:

- <u>Attachment #1</u> Table that provides a comparison of the remaining potential plans
- <u>Attachment #2</u> Text description of the TFSP
- <u>Attachment #3</u> A series of figures that compares the effectiveness of the TFSP

<u>Please note</u>: in coordinating the proposed responses to comments, the Corps suggested that the analysis consider the effectiveness of an additional alternative, identified as Plan 2B. Plan 2B is included in the table that compares alternatives. <u>This table reflects the comments that were provided by NYS and DOI by email on 28 June 2012</u>. Plan 2B is presently under evaluation.

NYS Comment #2

For the State and potential local sponsors to determine the feasibility of agreeing to all or some of the TFSP, it is necessary to understand the costs involved with each phase. The State requests that the Corps provide the detailed cost estimate/cost-breakdown for various elements of the TFSP and compare TFSP costs to those for Alternative 3G and the NED/NER plan. The Department is currently not clear on which plan is the NED/NER plan.

▶ <u>NAN Response #2</u>

Updated project costs are being developed to show costs associated with each remaining plan. Please note, all costs will change as the plan is updated to account for post-Sandy changes.

In general, costs include the upfront costs associated with construction, and recurring costs associated with renourishment, breach response, and sand bypassing.

- <u>Attachment #4</u> shows costs associated with the following plans, based upon information contained in the May 2009 Report.
 - 1) Plan 3A, which appears to be the plan that maximizes net benefits
 - 2) TFSP, the plan supported by the Federal Agencies

NYS Comment #3

The March 11th letter indicates that the "plan appears to meet the Federal Agency objectives" (emphasis supplied). The State respectfully requests confirmation that the TFSP does, in fact, meet Federal Agency objectives and is the Corps "Recommended Plan". It is an extensive process for the State, in conjunction with potential local sponsors, to determine if the TFSP is fully acceptable or if a locally preferred alternative needs to be proposed for all or some of the project area. The State would strongly prefer to undertake this more extensive consultation with the knowledge that the TFSP will be acceptable to the Federal Government (subject to NEPA review and modifications, as well as appropriations) if endorsed by the State.

➢ <u>NAN Response #3</u>

The Corps anticipates further confirmation that the TFSP is acceptable to the Federal agencies, but can only document its understanding of agency priorities communicated in the most recent coordination. These plans were briefed at the Secretary-level and general

support was expressed for them. It is expected that Secretary-level support will be reaffirmed to account for changes that are incorporated as a result of Hurricane Sandy. Even with this re-affirmation, until the necessary NEPA reviews are completed, it is appropriate to indicate that this support is tentative.

Vertical support is also conditional upon local sponsor concurrence. While confirming support from the State's sponsors can be challenging, it is necessary before the District seeks higher authority confirmation of the acceptability of these plans. Therefore, we request some indication from NYS that all components of the TFSP are found to be acceptable to the State. This would be a pre-requisite to engaging our HQ on the acceptability of any of these 3 remaining potential plans.

NYS Comment #4.

The TFSP calls for significant non-structural measures, such as elevation or relocation of structures. The State would appreciate detailed information on the Corps' proposed options for implementation of this portion of the TFSP. As one might expect, this is of great interest to potential local sponsors. The State would also be interested in the results of any consultations the Corps has undertaken with the Federal Emergency Management Agency on these proposed measures and their implementation. This non-structural effort has a direct relationship to FEMA's flood plain management and flood insurance programs, and they may be of great assistance in this implementation. Also, we request that the Corps provide a comparison of the levels of flood protection provided by the TFSP, Alternate 3G and the NED/NER plan versus the residual flood risks associated with maintaining the existing inlets.

➢ <u>NAN Response #4:</u>

The implementation of non-structural measures affords flexibility to accommodate local sponsor interests and leverage FEMA expertise. For evaluation of alternatives, the relative cost and anticipated benefits is sufficient for inclusion of measures in the TSFP.

The Corps has consulted FEMA and our USACE Center of Expertise for non-structural planning in the "National Flood Proofing Committee (NFPC)."

• <u>Attachment #5</u> is a paper that was assembled for the Reformulation Study and communicates the options available for implementing non-structural solutions and some of the challenges that need to be addressed. At this point, our preference is to follow the model of implementation through the "homeowner-led approach". The Corps is willing to work with representatives of the State and local governments to further this discussion, and take advantage of State initiatives that are underway following Hurricane Sandy, as a model for how to proceed.

The Corps will coordinate a meeting to evaluate implementation options, and clarify preferred implementation approaches.

The Corps has been in contact with FEMA regarding the intersection of the non-Structural plan contained within FIMP, and how that relates to FEMA initiatives. As it relates to flood insurance, there is recent legislation that requires homeowners to pay actuarial rates, based upon the elevation of their house. As such, it is expected that the decision whether or not to participate in the non-structural program could have a bearing on the individual's financial responsibility for their individual flood insurance. In our discussions with FEMA, it also appears that the inclusion of the non-structural program will have a bearing on a homeowner's eligibility for participation in various FEMA programs. Similar to the funding of repair of engineered beaches, FEMA and the Corps need to consider the need to avoid augmentation. We are working to obtain a legal opinion on this, but at this point, it would be best to assume that the Corps program could limit the availability of FEMA funds, through certain programs.

NYS Comment #5.

Please provide more detailed information on the various barrier island breach and breach closure plans (current and proposed via the TFSP) including their locations, impacts, timeframes for closure, benefits, future estimated costs and how they relate to flood risk. It would be very useful to know how the level of storm damage reduction increases or decreases with the proposed breach plans in the TFSP in comparison to Alternative 3G and the NED/NER plan.

➢ <u>NAN Response #5</u>:

Chapters 8 and 9 of the draft formulation report summarize the breach response plans to the extent they were developed at the time. The report identified the expected number of breaches for each plan alternative. Refinements to the breach closure measures which have been made since the compilation of the formulation report draft, as well as additional changes that have been requested will require that the team assess changes which may result if we allow for "natural closure" at a lower elevation than the breach closure design level. Further evaluation of the impacts will be sensitive to the assumptions in the trigger for action to be taken.

The information provided in <u>Attachment #2</u>, in response to NYS Comment #1, provides a comparison as it presently exists of the comparison between the two plans.

NYS Comment #6.

The State has discussed with the Federal Agencies its interest in evaluating the option of reducing or phasing out the re-nourishment portion of this project over the project's 50-year life span. This option might allow the beach configuration to eventually return to a more naturalized status or to possibly have beach configuration addressed by property owners, local municipalities or local zoning entities. The State requests information on the manner in which this option would be addressed within the proposed TFSP. If these concepts are not addressed in the TFSP, the State requests that they be addressed.

▶ <u>NAN Response #6:</u>

Presently the May 2009 draft Formulation Report includes text on three different alternatives for lifecycle management of these alternatives. These three scenarios are the ones jointly developed by the involved agencies, and are described in Chapter 11, Consideration of Lifecycle Management.

Presently, the report includes a brief summary of the options, without extensive quantitative analysis. The report presently concludes that of the three available options, the preferred approach is to address this through an adaptive management program.

An excerpt of the possible approaches and recommended approach is attached to this response (<u>Attachment #6</u>).

NYS Comment #7.

The State has also previously raised concerns regarding the total cost of implementing any adopted plan for FIMP. One option in which there is strong potential interest is breaking the TFSP, or any plan, into a number of smaller geographical areas which could then be implemented in phases based on the availability of resources and the particular interest of non-federal sponsors. Please provide the Federal Agencies' views on whether such a phased approach would be acceptable and if there is any preferred or priority order recommended by the Federal Agencies for the implementation of a phased approach.

➢ NAN Response #7:

Implementation of a Recommended Plan for the Reformulation Study would be a large effort which would be undertaken under multiple contracts. Incremental constructible elements may be achieved in several ways. The Corps considers identification of constructible elements to be a critical step undertaken in the final design phases of the project, following local sponsor concurrence with the elements and features within the recommended plan. At this point, the project is being formulated to prepare a Reformulation Report to address the entire Study Area with a project formulated on Separable Elements, which would allow for separate PPA's for one or more separable elements and multiple construction contracts for each PPA, as necessary.

The specifics of this are still subject to the final plan refinements and the updated final economic analyses.

NYS Comment #8.

Please explain how sea level rise and climate change considerations and concerns were integrated in the TFSP, and how they will be integrated as we learn more in the future. Similarly, the summary of components associated with the TFSP also makes brief reference to beach renourishment being the subject of adaptive management measures; please provide information on the monitoring and assessment program associated with an adaptive management approach, as well as the entities potentially responsible for undertaking such an adaptive management approach. It is essential to understand the method by which elements of the TFSP could be adapted and modified to accommodate sea level rise and climate change.

▶ <u>NAN Response #8:</u>

The Corps' Sea Level Change (SLC) guidance has been superseded twice since the May 2009 Draft Formulation Report. The current Corps Guidance is EC 1165-2-212 Sea-Level Change Considerations for Civil Works Programs, dated 1 October 2011. A 9 June 2010 workshop with the FIMP stakeholders considered the implementation and inclusion of prior guidance, EC 1165-2-211, dated July 2009, into the analysis of the alternatives and the selected plan and a scope of work for SLC analysis resulted from the meeting. Subsequent coordination with the Corps' leadership on the Corps guidance, which requires analysis of a three scenarios: "low" (historic), "intermediate" and "high" rates of sea level change further refined this scope of work. An AE is under contract to complete this analysis and to reflect the impact of SLC on the costs and benefits of the various alternatives.

In general, adaptive management of beach renourishment for sea level change considerations can be determined by sea level change and physical project features monitoring. Beach renourishment is highly adaptable due to its "soft" nature, and project features can be revised throughout the life of the projects. Monitoring will be specifically recommended as a feature of the plan, and as a cost-shared project requirement.

Similarly, based upon our discussions with HQUSACE, a similar course of action is recommended for non-structural solutions so that proposed plans can be adapted in the future based upon actual or realized SLC.

ATTACHMENT #1

FIMP - COMPARISON OF REMAINING PLANS OF IMPROVEMENT ---- AS OF MAY 2, 2013

* Final comparison will also include the <u>NO ACTION PLAN</u> *

Plan 3A *NOTE; THIS PLAN IS NOT ACCEPTABLE TO ALL PARTNERS	Updated TFSP Tentative Federally Supported Plan (dated March 11, 2011) *This contains updates to reflect post-Sandy considerations	Plan 2B * Full Analysis of this plan still to be undertaken *This contains updates to reflect post-Sandy considerations		
INLETS: FIRE ISLAND + MORICHES + SHINNECOCK Continuation of authorized projects, with increased sediment bypassing	INLETS: FIRE ISLAND + MORICHES + SHINNECOCK Continuation of authorized projects, with increased sediment bypassing	INLETS: FIRE ISLAND + MORICHES + SHINNECOCK Continuation of authorized projects, with increased sediment bypassing		
<u>MAINLAND</u> <u>6-year floodplain</u> Non-structural building retrofits, including road raisings Over 3,200 structures	MAINLAND <u>10-year floodplain</u> Non-structural building retrofits, including road raisings Over 4,400 structures + 4 road raising locations	<u>MAINLAND</u> <u>10-year floodplain</u> Non-structural building retrofits, including road raisings Over 4,400 structures + 4 road raising locations		
BARRIER ISLANDS:	BARRIER ISLANDS:	BARRIER ISLANDS:		
FIRE ISLAND @ DEVELOPED LOCATIONS Communities + minor Federal Tracts Beachfill (+15 ft dune, with berm) Minimum real estate impact alignment	FIRE ISLAND @ DEVELOPED LOCATIONS Communities + minor Federal Tracts Beachfill (+15 ft dune, with berm) Post-Sandy Adjusted Beachfill Alignment Tapers into Federal tracts; alternately overfill in communities	FIRE ISLAND @ DEVELOPED LOCATIONS Communities + minor Federal Tracts Beachfill (+13 ft dune, with berm) Post-Sandy Adjusted Beachfill Alignment Tapers into Federal tracts; alternately overfill in communities		
	@ Lighthouse; Beachfill (+15 ft dune, with berm)	@ Lighthouse; Beachfill (+13 ft dune, with berm)		
Groin Modifications; Taper existing Ocean Beach Groins (2)	Groin Modifications; Taper existing Ocean Beach Groins (2)	No set renourishments; renourish when cross-section falls below design level (25-year) Groin Modifications; Taper existing Ocean Beach Groins (2)		
FIRE ISLAND @ UNDEVELOPED LOCATIONS Major Federal Tracts + Smith Point County Park Beachfill (+13 ft dune, with berm) Minimum real estate impact alignment	FIRE ISLAND @ UNDEVELOPED LOCATIONS Major Federal Tracts + Smith Point County Park Conditional Breach Response (details TBD) - guidelines TBD; anticipated closure to be initiated within 45-60 days @ Smith Point County Park (East + West)	FIRE ISLAND @ UNDEVELOPED LOCATIONS <u>Major Federal Tracts + Smith Point County Park</u> Conditional Breach Response (details TBD) - guidelines TBD; anticipated closure to be initiated within 45-60 days @ Smith Point County Park (East + West)		
	Feeder Beach - beachfill to offset inlet effects, details TBD Long-term relocation of park facilities to minimize renourishment	Feeder Beach - beachfill to offset inlet effects, details TBD Long-term relocation of park facilities to minimize renourishment		
	Science Response Team to advise decision makers for conditional closure	Science Response Team to advise decision makers for conditional closure		
	No maintenance fill for breach closure; action taken only when breach occurs	No set renourishments; renourish when cross-section falls below design level (25-year)		
WESTHAMPTON (fronting Moriches Bav) Beachfill (+15 ft dune, with berm)	WESTHAMPTON (fronting Moriches Bay) Beachfill (+15 ft dune, with berm)	WESTHAMPTON (fronting Moriches Bay) Beachfill (+13 ft dune, with berm) No set renourishments; renourish when cross-section falls below design level (25-year)		
Groin Modifications; Taper existing Westhampton Groins (13)	Groin Modifications; Taper existing Westhampton Groins (13)	Groin Modifications; Taper existing Westhampton Groins (13)		
SHINNECOCK (fronting Shinnecock Bay) Proactive Breach Response (+13 ft dune, with berm)	SHINNECOCK (fronting Shinnecock Bay) Beachfill / Proactive Breach Response (+13 ft dune, with berm) No set renourishments; renourish when cross-section falls below design level (25-year)	SHINNECOCK (fronting Shinnecock Bay) Beachfill (+13 ft dune, with berm) No set renourishments; renourish when cross-section falls below design level (25-year)		

FIMP - COMPARISON OF REMAINING PLANS OF IMPROVEMENT ---- AS OF MAY 2, 2013

* Final comparison will also include the <u>NO ACTION PLAN</u> *

Plan 3A *NOTE; THIS PLAN IS NOT ACCEPTABLE TO ALL PARTNERS	Updated TFSP Tentative Federally Supported Plan (dated March 11, 2011) *This contains updates to reflect post-Sandy considerations	Plan 2B * Full Analysis of this plan still to be undertaken *This contains updates to reflect post-Sandy considerations		
DOWNTOWN MONTAUK + POTATO ROAD Sediment management measures at both sites (feeder beaches) Potato Road contingent upon pond opening mgt plan for Georgica Pond Structural Solution at Downtown Montauk under consideration *	DOWNTOWN MONTAUK + POTATO ROAD Sediment management measures at both sites (feeder beaches) Potato Road contingent upon pond opening mgt plan for Georgica Pond Structural Solution at Downtown Montauk under consideration *	DOWNTOWN MONTAUK + POTATO ROAD Sediment management measures at both sites (feeder beaches) Potato Road contingent upon pond opening mgt plan for Georgica Pond Structural Solution at Downtown Montauk under consideration *		
ENV RESTORATION Various alternatives throughout the study area (TBD)	ENV RESTORATION Various alternatives throughout the study area (TBD)	ENV RESTORATION Various alternatives throughout the study area (TBD)		
INTEGRATION OF ADAPTIVE MANAGEMENT N/A	INTEGRATION OF ADAPTIVE MANAGEMENT Period of nourishment subject to adaptive management considerations and local land use regulations or; 50-year period of nourishment Provisions to continually adjust components of project to improve effectiveness Applies to all plan features, developed to address climate change concerns (Sea level rise)	INTEGRATION OF ADAPTIVE MANAGEMENT No structured renourishment; renourish upon breach vulnerability planned for 50 years, or, can be adapted Provisions to continually adjust components of project to improve effectiveness Applies to all plan features, developed to address climate change concerns (Sea level rise)		
INTEGRATION OF LAND USE REGULATIONS AND MANAGEMENT	INTEGRATION OF LAND USE REGULATIONS AND MANAGEMENT Local land management planning to include enforcement of Federal and State zoning requirements, land acquisition or other measures as necessary component for long-term risk reduction Improved land management can allow for adaptation to reduce nourishment costs Important to ensure project does not induce development	INTEGRATION OF LAND USE REGULATIONS AND MANAGEMENT Local land management planning to include enforcement of Federal and State zoning requirements, land acquisition or other measures as necessary component for long-term risk reduction Improved land management can allow for adaptation to allow for less frequent nourishment Important to ensure project does not induce development		

ATTACHMENT #2

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SUMMARY OF TENTATIVE FEDERAL SELECTED PLAN (TFSP)

The Tentative Federal Selected Plan (TFSP) has been identified as the plan that reasonably balances the policies of the US Army Corps of Engineers and the Department of the Interior.

The full analysis of how this plan was identified is included in the Draft GRR. This paper provides a summary of the TFSP. The following alternative has been developed and considered as a comprehensive plan, but each component is described separately below. In simplified terms, the TFSP is:

- > Continuation of authorized projects at the inlets, with sand bypassing
- ➤ +15 ft dune, 90 ft berm beachfill plan at the post Sandy adjusted alignment along developed locations spanning Great South Bay and Moriches Bay, maintained for 50 years
- ▶ +13 ft dune, Proactive Breach Response Plan along Shinnecock Bay
- > Conditional Breach Response in Fire Island undeveloped areas
- Restoration measures in conjunction with breach response
- Sediment management measures for Downtown Montauk, and Potato Road (contingent upon an improved management plan for Georgica Pond)
- Modification of the Westhampton and Ocean Beach groinfields
- Non-structural building retrofit plan for structures in the 10-year floodplain, in conjunction with road raising where cost-effective
- > Approximately 38 restoration alternatives at various locations throughout the study area

A. Beach and Dune Fill Component.

Based upon the engineering and economic evaluation of the beach fill alternatives, and coordination with the Federal Partners, the TFSP includes beach fill with the following characteristics:

- Continuous beach and dune fill along the developed shorefront areas fronting Great South Bay and Moriches Bay, where necessary, to meet this design threshold; and
- > Alignment: Beachfill configured along a post Sandy alignment;
- ▶ +15 ft NGVD dune, 90 ft berm at +9.5 ft NGVD in developed areas & minor federal tracts
- ➤ +15 ft NGVD dune, berm at Lighthouse Tract
- Renourishment: 50 years, approximate 4-year cycle, along same length of shoreline

B. Non-Structural Plan

Based upon the engineering and economic evaluation of the non-structural plans, the non-structural plan that optimizes the net excess benefits is a combined building retrofit plan and road-raising plan along the mainland floodplain, which is generally described as follows:

- > 100-year level of protection for structures inside 10-year flood plain
- Building retrofit measures are proposed, include limited relocation or buyouts, based upon structure type and condition
- ▶ 4 locations of road raising, totaling 5.91 miles in length, directly protects 1,020 houses
- Over 4,400 structures are included for non-structural treatment
- Estimated construction period is 20 years

C. Inlet Modification Plan

Based upon the engineering and economic evaluation of the inlet modification and management measures, including the multiple criteria screening matrix, the recommended plan for inlet management is continuation of the authorized project at each inlet with increased sediment bypassing from the ebb shoal to offset the downdrift deficit. A long-term, monitoring and adaptive management plan is included to allow for future changes or improvements in the inlet management, over time. The inlet management measures are generally described as follows:

Moriches Inlet: Continuation of authorized project + Ebb shoal dredging

➢ 1 year cycle; additional 100,000 CY/yr;

<u>Fire Island Inlet</u>: Continuation of authorized project + Ebb shoal dredging; deposition basin expansion, with additional updrift disposal

> 2 year interval; additional 100,000 CY/yr; and

D. Groin Modification Plan

Based upon engineering and economic analysis of groin modifications, recommendation is shortening (or tapering) of Westhampton groin field (15 existing), which will increase the amount of sediment transported to the west, and will reduce renourishment requirements for the shoreline downdrift of the groins. This plan includes:

- Shortening of groins, varying between 70 100 ft;
- ▶ Releases 0.5M to 2M CY of sand to west

E. Breach Response Plan (BRP)

Based upon engineering and economic analysis of the alternatives, recommendation is:

- Conditional Breach Response Plan in Fire Island undeveloped areas, with threshold details currently under development
- Proactive Breach Response Plan for areas along Shinnecock Bay, where a beachfill plan is not recommended:
 - Breach Closure Template: +13' NGVD dune, berm height +9.5 ft NGVD, berm width generally 90 ft wide, but vary depending on conditions prior to the breach and within adjacent areas
 - Proactive Response Plans include restoring the template to the design condition when the shoreline is degraded to an effective width of 50 ft.

F. Sediment Management Plans

The engineering and economic analyses identified two areas of high damages where a conventional beach nourishment project was not economically viable (Downtown Montauk, and Potato Road). In these areas, Sediment Management Alternatives were evaluated to offset the long-term erosion trend, to maintain the current protection, and prevent conditions from getting worse; these features would also serve as feeder beaches. In the area of Potato Road, the implementation of this plan

would be contingent upon the development of a local management plan for Georgica Pond to address the effects of the pond opening and measures to minimize the consequences of this. The plans generally include:

Sediment placement to offset long-term erosion trend; 120,000 CY at each location; includes placement every 4 years with material to be placed as advance fill on front face of existing berm

G. Restoration Measures

Collaborative planning with an interagency team drawn from the Study's Environmental Technical Management Group and supported by the Interagency Reformulation Group established specific objectives through the development of a Restoration Framework.

This framework called for the restoration of five coastal processes that are critical to the development and sustainability of the various coastal features (such as beaches, dunes, barrier islands and bluffs), which together form the natural system. In a natural ecosystem, features such as barrier islands and dunes protect coastal lands and property, and reduce danger to human life, stemming from flooding and erosion, while establishing habitats important to coastal species. The five Coastal Processes identified by the Restoration Framework (reference as *"Processes Targeted"* within the attached Table titled "Summary of Restoration Ranks and Scores") as vital to maintain the natural coastal features are: Longshore Sediment Transport; Cross Island Sediment Transport; Dune Development and Evolution; Estuarine Circulation; and Bayside Shoreline Processes.

The Design of restoration alternatives focused on measures that contribute to the restoration of these coastal processes that are consistent with the Reformulation objectives. Such alternatives have been developed into specific and sustainable National Ecosystem Restoration (NER) alternatives.

H. Adaptive Management

Adaptive Management has been identified as a component of TFSP. There is significant uncertainty associated with this plan, therefore the implementation requires an incremental adaptive management approach. This approach will be defined in the next phase of planning and will include 1) data collection to improve the understanding of the physical, social and environmental setting, 2) modeling efforts (engineering and formulation) to analyze the data, and 3) an adaptive management framework that would establish the overall objectives, decision rules, and identify the adaptations to the plan that could be accomplished with the project. This adaptation strategy will require a periodic review of the project execution (10-yr basis) and recommendations for the adaptation of the project, based upon the findings.

The adaptive management plan will formalize mechanisms for reviewing and revising the lifecycle management of elements of the project, relating to the following elements: Inlet Management, Breach Response, Beach fill, Borrow Area, Non-Structural, Restoration, Land Management Policies and Climate Change. Climate change will be accounted for with the monitoring of climate change parameters, identification of the effect of climate change on the project design, and identification of adaptation measures that are necessary to accommodate climate changes, as it relates to all the project elements.

ATTACHMENT #3



FIMP – Alternative 3 Summary





- 1. Increase in number of expected breaches
- 2. Increase in back-bay stage frequency curves
- 3. Increase in number of houses flooded
- 4. Increase in Residual Risk

Average I	ikelihood	of beachi	ng				
Loca	ation	Without	3A	3B/E	3C/F	3D/G	Location
1	WGSB	1	0	0	1	1	MFTL
2	WGSB	2.1	0	0	0	0	
3	CGSB	1.8	0	0	1.7	1.7	MFTL
4	CGSB	0.1	0	0	0	0	
5	EGSB	1.7	0	1.7	1.7	1.7	Wilderness
6	EGSB	1.5	0	1.5	1.5	1.5	Wilderness
7	MOR	1.8	0	0	0	1.8	County Park
8	WSHN	0.2	0.1	0.1	0.1	0.1	
9	WSHN	0.5	0.4	0.4	0.4	0.4	
10	SHN	0.3	0.2	0.2	0.2	0.2	
Total		11	0.7	3.9	6.6	8.4	

Mean Values based upon 50 years of analysis



County Park Land


The figures above show the engineering modeling used as input into the lifecycle damages model. The upper and Lower (red) curves represent the variability in the back-bay stages that are likely in the future without project condition based upon projected changes in the barrier Island condition, considering storm activity, and local actions that may be implemented. Plan 3A is represented by the lower red curve, which is comparable to the baseline condition. The intermediate curves show the effect of eliminating beachfill in various locations. Western GSB is most influenced by eliminating fill in the MFTL. Eastern GSB is most influenced by eliminating fill in the wilderness area. Moriches Bay is relatively insensitive to the effects of fill removal.



Differences Between Plans 3A and 3G/TFSP:

Plan 3A Reduces Breaching in all locations in Great South and Moriches Bay Plan 3G/TFSP Allows Breaching in Multiple Locations, but includes a larger N-S Plan

Success of Both Plans (but greater for 3G/TFSP) depends upon participation in N-S Plan Reduction in "breach reduction benefits" between 3A and 3G/TFSP is: \$140M Increase in "non-structural benefits" between 3A and 3G/TFSP is: \$110M 3G/TFSP relies more upon N-S, and is also significantly more expensive than 3A, \$105M more



FIMP Damage Contributions by Alternatives

ATTACHMENT #4

FIMP Cost Overview by Plan Feature

* <u>Please note costs are presently being updated to account for changed</u> <u>conditions, and current price levels</u>

* Costs below reflect those contained in the May 2009 Draft Report

Plan 3A

<u>Beach fill</u> = \$160,000,000 <u>Building Retrofits</u> = \$407,000,000 <u>Road Raising</u> = \$14,900,000 <u>Groin Modification</u> = \$10,000,000 <u>Inlet Management</u> (additional cost of bypassing) Shinnecock Inlet = \$756,000 per cycle Moriches Inlet = \$600,000 per cycle Fire Island Inlet = \$4,100,000 per cycle <u>Breach Response</u> (\$6-\$12M per closure) <u>Restoration Alternatives</u> = up to \$60,000,000

> Plan TFSP

<u>Beach fill</u> = \$140,000,000 <u>Building Retrofits</u> = \$550,000,000 <u>Road Raising</u> = \$14,900,000 <u>Groin Modification</u> = \$10,000,000 <u>Inlet Management</u> (additional cost of bypassing) Shinnecock Inlet = \$756,000 per cycle Moriches Inlet = \$600,000 per cycle Fire Island Inlet = \$4,100,000 per cycle <u>Breach Response</u> (\$6-\$12M per closure) <u>Restoration Alternatives</u> = up to \$60,000,000

Table 10.10 – Annual Cost

Plan 3 – Management,	Non-Structural and	Beach Nour	ishment Plans
i iun 3 i inunugeniene,	Non Structurul und	Deach Noui	isinine in turis

	Plan 3.a	Plan 3.g / (TFSP)
	Inlet Mgmt, BCP 13 @SB,	Inlet Mgmt, BCP 13 @ SB,
	NS2R, 15ft Dune @ GSB &	BCP 9.5 @ OPWA, MFT, &
	MB	SPCP, NS3R, 15 ft Dune @
Cost Category		GSB & MB
Beach Fill	\$160,200,000	\$139,200,000
Nonstructural	\$407,200,000	\$550,800,000
Road Raising	\$14,900,000	\$14,900,000
Total First Cost	\$582,400,000	\$705,000,000
Total IDC	\$26,600,000	\$29,400,000
Total Investment Cost	\$609,000,000	\$734,400,000
Interest and Amortization	\$34,000,000	\$41,000,000
Operation & Maintenance	\$9,300,000	\$8,900,000
Renourishment	\$12,900,000	\$11,000,000
Subtotal	\$56,200,000	\$60,900,000
Annual Breach Closure Cost	\$0	\$1,000,,000
Major Rehabilitation	\$0	\$0
Total Annual Cost	\$56,200,000	\$61,900,000

Interest Rate 5.125%, Project Life 50 years

ATTACHMENT #5



Implementation of Non-Structural Measures

As a member of your local municipal government, you may know that you must play a key role in the implementation of non-structural measures that are recommended for your community as a result of the FIMP study. However, what does this really mean? To what degree would you be involved? At what phase of the

process would you be involved. In what phase of the process would your involvement begin? How would your role in a project with US Army Corps participation differ from what you may be used to through your community's participation in other Federal programs? This fact sheet provides answers to questions you may have regarding the implementation of building retrofit measures, such as elevating and/or floodproofing.

THREE BASIC OPTIONS

There are three basic options available for the implementation of non-structural measures. The options differ in their level of municipal, homeowner, and federal involvement. Let's call these options 1) municipally-managed 2) Federal government-managed 3) homeowner and Federal-government managed.

Under option 1, a participating municipality would enter into an agreement that outlines the local responsibilities for issuing requests-for-proposal (RFPs), selecting a contractor to perform the work, providing oversight during the construction phase of the project, distributing Federal funds to the contractor upon successful completion, and post-project monitoring to ensure that the effectiveness of the project is not compromised; e.g., to prevent residents from converting areas below the base flood elevation to living space.

This approach would likely require the dedication of municipal resources, such as a full-time staff person(s) for the project duration. The Village of Freeport in Nassau County provides an example of a Long Island community using a similar approach. (see sidebar)



Under option 2, the Corps would handle the design specifications, RFP, contracting, construction monitoring and inspection tasks. This options reduces the work required by both the municipality and the homeowner; however,

since the Corps would conduct contract arrangements, detailed plans and specifications would need to be developed for each building to be retrofit. This requirement increases the project cost per building.

FREEPORT'S STORY

Since 1997, Freeport's Superintendent of Buildings, Joseph Madigan, has worked to achieve the elevation of 24 flood-prone residential structures through participation in FEMA's Hazard Mitigation Grant Program and Flood Mitigation Assistance Program.

After their project applications were approved by FEMA, the Village issued RFPs and hired contractors on a case-by-case basis. FEMA paid 75% of the project costs, and the individual homeowners paid the remaining 25%. The average cost to raise each flood-prone structure in Freeport was roughly \$75,000.

In general, there was significant public support of the elevation projects. The most prominent concerns identified by homeowners were the 25% matching share, and the need to vacate their homes for the roughly 3-week construction phase.

Option 3, in which participating homeowners take a lead role, is a technique that the Corps has used successfully on a number of large non-structural projects. The homeowner enters into a real estate agreement with the Corps under which the homeowner, using Corps-prepared guide specifications, contracts directly with area contractors. Project funds are provided at an agreed-upon level of funding to the homeowner. Experience within the agency has shown that this method can achieve significant cost savings, and also gives the homeowner a greater degree of control over the work and the flexibility to incorporate additional home improvements (at their cost) as part of the retrofit project. The use of real estate agreements establishes a legal requirement that the homeowner maintain the structure in a manner to minimize future flood damages.

For these reasons, this third option would appear to be the optimal approach for implementing non-structural protection for typical structures in Long Island. (The Corps may choose to develop plans and specifications for more complex retrofit designs.) This proposed approach is broken down into the following four phases:

REFORMULATION/PLANNING PHASE:

This first phase is now being undertaken by the FIMP



Study Team, and will identify building retrofit plans for alternative levels of protection, using input from the municipalities. Next, the benefits, costs, and impacts of the different plans will be

evaluated to determine which measures are best suited for the different portions of the study area. Based upon these results, the Reformulation Study will recommend plans for Congressional authorization and funding.

DESIGN PHASE

If Congress authorizes a plan that includes non-structural measures, the Corps then coordinates with participating homeowners to discuss and select retrofit options. After considering homeowner preferences, the Corps prepares design alternatives and evaluates the cost-effectiveness of each option. The Corps would then meet with homeowners to refine the details of the plan. After the final alternative is selected, final cost estimates are developed. Please note that all retrofit work will be done in compliance with FEMA/National Flood Insurance Program (NFIP) regulations, and may provide some reduction in flood insurance premiums.

IMPLEMENTATION PHASE

At the start of this phase, individual municipalities enter into Project Cooperation Agreements with New York State and the Corps, and sponsor funding is obtained. Real Estate Agreements are then executed with participating homeowners. (Participation in the program is strictly voluntary, and at the discretion of the individual homeowner.) Next, each homeowner issues a Corpsprovided RFP and guide specifications to contractors, and evaluates submitted bids (designs, cost estimates, and qualifications). Based upon this evaluation, the homeowner decides which firm they would like to hire to retrofit their home.

Nationally, non-structural projects typically have a 65/35 federal/non-federal cost-sharing arrangement. The State of New York as non-federal sponsor would pay between 50% and 70% of the non-federal share, while the remainder would be borne by local municipalities, who can in turn pass the cost onto participating homeowners. A homeowner would be responsible for up to 50% of the 25% non-federal share, or 12.5% of the total project cost. Temporary relocation during construction would be included in the cost-sharing arrangement as a project component.

Each participating homeowner is then required to submit a proposal to the Corps, stating their selection. Upon approval, the Corps meets with the homeowner and their selected contractor to sign a Contractor/Homeowner Agreement (CHA). Construction activities then begin. The Corps will periodically provide construction inspectors as necessary to review the work. The homeowner is responsible for ensuring that their selected contractor complies with the CHA, and adheres to the approved scope of work and required safety measures.

In the event of unforeseen conditions requiring changes to selected project plans, an appeals process would be established whereby homeowners can submit requests for change orders. The Corps deems the construction phase complete upon a Final Inspection of the building.

MONITORING PHASE

Upon completion of the construction phase, the homeowner is responsible for adhering to the requirements set forth in the Real Estate Agreement regarding acceptable uses. Periodic inspections to ensure continued compliance are conducted by State, County, or local officials.



Above: Residential structure elevation project underway in the Village of Freeport

Some **key points** to keep in mind during project implementation:

- Local height restrictions may be exceeded by elevated buildings, requiring the issuance of variances.
- Legislation in your municipality may require that homes be reassessed after elevation *(in Freeport, this requirement was waived for participating homeowners).*
- Traffic slowdowns during construction due to driver curiosity are common.
- Your local utility company likely has height restrictions for electrical panels, meters, etc. This equipment may need to placed at acceptable heights after the building is elevated.
- During the winter months, ensure that contractors insulate pipes to prevent freezing.
- For small lots with limited workspace, helical piles are a space-saving alternative for building elevation, if substantial wave action is not anticipated.

ATTACHMENT #6

D. Consideration of the life cycle management of these plans.

Alternative Plans 3A and 3G, were developed with a 50-year project life, and 50 years of renourishment. These plans do not meet the Vision objectives that "the plan addresses long-term demands for public resources". These plans do not include provisions that would change the need for continued renourishment within the project life, or alter the conditions so that a different solution could be expected following the 50-year project life.

In order to achieve a reduction in the long-term commitment for renourishment, alternatives would need to be implemented that would reduce the infrastructure that is at risk, or remove infrastructure to allow for a more efficient use of resources. The integration of land and development management regulations identifies improvements in the application of land use regulations, acquisition planning, and post-storm response planning that could help to reduce the infrastructure at risk along the shorefront.

With this as a component of the overall plan, there are several approaches which could be undertaken in the life-cycle management of the project to achieve this. The options that have been identified include:

1 - A scheduled reduction in the scale of protection for the beachfill in a timeframe that coincides with the acquisition planning. Under this scenario a beachfill plan would be maintained for a shorter period of time, over which purchase of property would be offered to shorefront structures at risk. After this period of time, the scale of protection would be reduced, thus reducing the commitment of resources for continued renourishment. The benefit of this approach is that the reduction in protection is not dependent upon the acquisition occurring.

2 - A scheduled relocation of the proposed line of protection that coincides with the acquisition planning. Under this scenario, the beachfill plan would be linked with the proposed acquisition plan. After a period of time, the footprint of the project would be maintained in a more landward location on a scheduled timeframe. The difficulty with this initiative is that the movement of the dune on a prescribed timeframe would require guaranteed acquisition, and could not be guaranteed with a willing-seller program.

3 - Adaptive Management. Under this scenario, the beachfill plan and the acquisition plan could proceed independently. On a periodic basis, coinciding with the scheduled renourishment, the constructed project would be revisited to identify if opportunities exist for adjustment of the maintained profile based upon the relative success in implementing the acquisition plan.

Under any of these scenarios, it is important to 1) identify the time scale that would be necessary for the implementation of alternatives, and 2) identifying the effect that these changes would have on project economics.

It is recognized that the acquisition of shorefront property through a willing-seller program is not an instantaneous action, particularly with consideration for acquisition strategies that could allow for a homeowner to sell their property but be allowed to continuously use the property.

The timeframes necessary for implementation of these measures suggests a timeframe measured in decades, not in years. Along the shorefront, consideration must be given for: the funding availability for acquisition, the timing of interest in selling, and the staffing to process these acquisitions.

When consideration was given for the time necessary to implement the non-structural alternatives along the mainland, accounting for staffing this effort, and funding these programs, it is expected that implementation of the mainland non-structural program would require 25 to 30 years. Discussions have also been held with agencies responsible for the relocation of public infrastructure along the shorefront. Input from these agencies indicates that major public works improvements, whether relocation or otherwise typically require 10 to 20 years, from conception to execution.

These timeframes suggest that if there is interest in reducing the long-term commitment for public investment in renourishment, a beachfill with a duration of 20 to 30 years could be considered in conjunction with an acquisition plan. As the project duration is shortened, it impacts the project economics. A sensitivity analysis was conducted which established that Alternative 3, built and maintained for 30 years, and subsequently replaced with a breach response plan, would have little effect on the project economics, and the economic viability. Achieving this objective, however, would require a larger investment in Real Estate to provide an alternative form of risk reduction for houses along the shorefront.

The challenge with developing a plan that integrates the land management, acquisition, and scheduled renourishment of the project is the uncertainty that exists. These elements introduce uncertainty to a situation that is already uncertain due to the complexities of projecting renourishment, projecting the functioning of the inlets, and the unknowns regarding future climate change. With all these uncertainties it is suggested that the implementation of the project adopt an incremental adaptive management approach. This approach would establish 1) data collection that would be implemented, 2) modeling efforts to analyze the data, and 3) an adaptive management framework that would establish the overall objectives, and the adaptations to the plan that could be accomplished with the project. This adaptation strategy is based upon the concept that with the passage of time the trends become established and more appropriate strategies can be executed. It is expected that this adaptation strategy would require a periodic review of the project execution (10-yr basis) and recommendations for the adaptation of the project, based upon the findings.

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JOE MARTENS COMMISSIONER

STATE OF NEW YORK DEPARTMENT OF ENVIRONMENTAL CONSERVATION ALBANY, NEW YORK 12233-1010

June 14, 2013

Colonel Paul E. Owen District Commander United States Army Corps of Engineers New York District 26 Federal Plaza Room 2109 New York, NY 10278

Dear Colonel Owen:

I am pleased to inform you that New York State supports implementation of the fully federally funded Fire Island to Montauk Point (FIMP) project, including the United States Army Corps of Engineers' (Corps) proposal to expedite the implementation of elements of FIMP, such as the immediate restoration of dunes and beaches damaged by Hurricane Sandy on Fire Island and downtown Montauk. This support is based on the overall concepts of the FIMP project subject to the items further described in this letter.

On March 11, 2011, representatives of the Corps and the United States Department of Interior sent a letter to me outlining the potential plan of improvement for the Fire Island to Montauk Point ("FIMP") Reformulation Study. This "Tentative Federal Supported Plan" ("TFSP") was proposed as the basis to move forward with Reformulation Study efforts for the entire FIMP study area – encompassing approximately 83 miles of Atlantic Ocean coastal and bay areas of Suffolk County, New York. As noted in the federal letter, New York State must find the general plan of improvement acceptable before its attributes can be finalized through a collaborative process. New York's approval at this stage, I understand, would allow the Corps and State to move forward with a final analysis of the TFSP, including such matters as plan formulation, engineering, economics, environmental assessment, model certifications and formal agency policy-level approvals.

After a series of discussions, on December 29, 2011, DEC sent a letter to the Army Corps presenting information requests aimed at better understanding some of the basic elements of the TFSP so that DEC would be in a position to accurately explain project elements, costs, maintenance obligations and impacts of the TFSP to the required local community sponsor(s). While further discussions were taking place, Hurricane Sandy arrived – altering the physical and fiscal landscape in a variety of ways. On May 16, 2013 the Corps responded to the Department's letter which addressed a number of the concerns raised by the Department, but deferred a response on a few issues that are currently under review based on the impacts from Sandy.

ANDREW M. CUOMO GOVERNOR I understand that alternative components of the TFSP are now being further refined, including: breach response measures along the barrier island, including "advanced" breach response methods or protocols; inlet management, beach and dune fill components and alignments with on-going beach nourishment; structural groin modifications; resiliency measures, including a significant number of coastal community building elevations; road elevations; land and development management to limit new development in certain flood hazard areas; protective natural infrastructure features (including wetland complexes, living shorelines, shellfish reefs, dunes, ecologically friendly in-bay breakwaters, and marsh islands) and environmental restoration, particularly in south shore bay areas.

All of the above elements would be sharpened in a process that fully involves local stakeholders. As you have emphasized, this massive project would need to be finalized in a manner that takes into account increased storm surge intensity associated with climate change and sea level rise. It is understood that the Corps will be performing an environmental impact review process under the National Environmental Policy Act (NEPA) for the entire FIMP project and that the National Park Service is evaluating the need for a NEPA review with respect to the existing breach in the Wilderness Area of the Fire Island National Seashore. It is through these processes that the elements of the project will be fully analyzed and a final FIMP project will be fully defined.

The State also supports the Corps' review of the post Sandy dune re-alignment along Fire Island that may be necessary based on the Corps' cost to benefit analysis that is still underway. If the cost to benefit analysis indicates that the alignment should be moved north in order to make the project more economical, resilient, and sustainable over the 50-year period of the project, then the State would support this realignment. If the realignment requires the purchase of properties, then the State would request that the Corps minimize the scope of this activity to the extent possible for unwilling sellers and to perform the procurement of these properties for the State at full federal expense. The State awaits the Corps' submittal of the elements of the project that you are currently working on, as delineated in your May 16, 2013 response. Thank you for all of your good and continuing efforts to help New York rebuild smarter and stronger in the face of the challenges presented by Hurricane Sandy.

Sincerely, Joseph J. Martens

c: Mr. Joseph Vietri



United States Department of the Interior

OFFICE OF THE SECRETARY WASHINGTON, D.C. 20240

in Reply Refer To FW5/DC

MAR 0 7 1378

Honorable Charles H. Warren, Chairman Council on Environmental Quality Executive Office of the President 722 Jackson Place, N.W. Washington, D.C. 20006

Dear Mr. Warren:

Whis Department has reviewed the final Environmental Impact Statement for the U.S. Army Corps of Engineers <u>Fire Island Inlet to Montauk</u> <u>Point, New York Beach Erosion Control and Murricane Protection</u> <u>Project.</u> Severe long term adverse environmental effects will result if this project is implemented as proposed in the EIS and authorized by the River and Harbor Act of 1960. We are, therefore, referring it to you in accordance with the interim guidence of your August 11. 1977 memorandum. This project is the largest barrier beach modification proposal to date. It will result in serious and irrevocable adverse impacts on the natural resource values of this barrier island and beach with National precedent setting potential to other barrier beach ecosystems. Further, this proposal is in conflict with the Congressional authorization establishing Fire Island National Seeshore.

We met with representatives of the Office of the Chief of Ingineers and New York Division Engineer on March 1, 1978, and are continuing our offorts to seek a resolution to rajor iscues. There have been numerous meetings during the years on this project since a public meeting in 1964. Since filing of the final EIS signifies an intent to proceed with the action as proposed, we believe action by the Council is appropriate. We have advised the Corps of our intent to refer this matter to you.

The attached statement supports our conclusions. We are prepared to discuss the issues with you at your earliest convenience.

Sincerely, Act in-secretary

Al Save Energy and You Serve America! ATTACHMENT A1

Statement of the U.S. Department of Interior concerning the

Fire Island Inlet to Montauk Point, New York Beach Erosion Control and Burricane Protection Project. - U.S. Army Corps of Engineers

The Department of Interior as well as other Federal agencies in reviews of the draft EIS for this project pointed out many deficiencies. Our letters of June 4 and 14, 1977, were reproduced in the final EIS. However, no attempt was made by the Corps to answer the concerns in our June 4 letter and most of the major points in the June 14 letter went unanswered. On most other points, the answers were not satisfactory or stated that the concern would be addressed in future studies, as needed, when preparing detailed plans for a particular reach. One of the most serious difficiencies is the failure to assess the impacts on off-shore marine resources of the initial dredging of 64 million cubic yards of sand with the periodic (every 2 to 3 years) dredging of additonal sand for maintenance.

The final EIS itself does not present adequate information to assess the full potential effects of this project. However, from the information available we provide the following statement.

A. Completion of the project as proposed by the U.S. Army . Corps of Engineers, according to an authorization in the River and Harbor Act of 1960, will permanently and adversely alter the barrier islands and beach along 83 miles (70 percent of the total ocean frontage) of Long Island from 50 miles east of New York City to the eastern tip of the Island. The project will result in;

- Raising the sand dunes to an elevation of 20 feet above mean sea level to form a nearly continuous dune line, except for existing inlets, along the whole reach,
- Establishing a minimum 100 ft. wide berm at an elevation of 14 feet above mean sea level seaward of the dune with the beach sloping from the berm at a 30.1 slope,
- 3. The utilization of approximately 64,500,000 cubic yards of sand for inital construction to be dredged largely from undesignated areas off shore,

. The construction of not more than 50 groins perpandicular to the beach to control natural sand movement,

5. Provide for the maintenance of the works of improvement through;

- a. periodic nourishment (replacement of sand croded away) every 2 to 3 years as a Foderal cost for 10 years
- b. requiring the nourishment needs be continued at a local cost "...unless Federal participation in providing periodic nourishment is renewed." and
- c. Federal reconstruction as needed after major storms, should a disaster be declared in the region, under the "emergency repair and rescue" category of Public Law 84-99 or under Section 206 of the Flood Control Act of 1962 that provides for emergency protection of threatened works at 100 percent Federal cost.

The Corps in their final environmental impact statement of September 1977, filed with EPA February 3, 1978, recognized most of the adverse impacts but, in our opinion, underestimates their severity and long term nature. They concluded that the environmental losses are offset by the economic gains to be derived by local residents as a result of the project. We do not believe this to be the case.

B. The project as proposed appears to be inconsistent with the following law and policy directive.

- The spirit and intent c Presidents Carter's Executive Order 11988 - Floodplain Management. The project can not help but lead to increased development in flood prone areas in addition to the loss of the natural and beneficial values of coastal flood plains. The President emphasized his specific concern for barrier islands in his May 23, 1977, Environmental Message.
- 2. As we stated in our June 4, 1976 letter, "Public Law 88-587 authorized and established the Fire Island National Seashore, "...for the purpose of conserving and preserving for the use of future generations certain relatively unspoiled and undeveloped beaches, dunes, and other natural features

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within Suffolk County, New York, which possess high values to the Nation as examples of unspoiled areas of great natural beauty in close proximity to large concentrations of urban population..." It is this Department's policy, as reflected in the Seashore's Master Plan, that these goals are achievable through a thorough understanding of the natural processes at work in a barrier island setting and by informed accommodation with them." Our policy is based on the belief that to interdict natural processes for the purposes of stablizing barrier island resources to achieve short term goals is ultimately a futile effort.

Further, P.L. 83-587 (78 Stat. 928), Sec. 8(a) requires that shore erosion control and beach protection projects on the Fire Island National Seashore be a part of a plan mutually acceptable to the Secretary of Interior and the Secretary of Army. The Corps plan, as presented in the EIS, is not acceptable to the Department of Interior.

3. The project conflicts with the main purposes, to protect and preserve the flora and fauna of the dune ecosystem, for which the Amagansett National Wildlife Refuge is a part of.

C. The Department of Interior believes the project, as proposed, is environmentally unsatisfactory as:

- It would permanently alter the naturally functioning dune ecosystem along 83 miles (70 percent) of Long Island's ocean frontage. The fragile plant and animal communities associated with these ecosystems would no longer exist in their present form in most of the area.
- 2. The elimination of oceanic overwash will result in the gradual loss of the wetlands associated with bays behind the barrier islands. The highly valued fish and wildlife resources of the inshore bays will gradually decrease in quality and quantity without the periodic overwash.

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3. Construction activities and especially the continual maintenance requiring the disturbance of oceanic benthic communities will jeopordize their existence and that of the fish that depend on them. Maintenance operations will be especially damaging following, as they must, major storms when the benthic communities are under severe natural stress.

- 4. Project activities as proposed conflict directly with the objectives of the Fire Island National Sea Shore and the Amagansett National Wildlife Refuge. (See previous discussion in Section B. of this statement)
- 5. Secondary impacts resulting from more intensive use of land now used for residential and commercial development will result in the loss of additional fish and wildlife habitat resources. Unless proposed zoning in the areas to be protected by the proposed works are more effective than they have been in any other similar area, development is likely to occur that will nearly eliminate the existing terrestrial wildlife habitat on all but public lands. Secondary effects of such development would also degrade the fishery resources associated with the inshore bays.
- 6. Potential offshore borrow sites described to complete this project have been identified as supporting populations of surf clams that serve as the source of recruitment of this fishery stock off Long Island. Sandy substrate, which is also the most desireable material for beach nourishment, is the preferred habitat of this species. Further, extensive study of borrow sites in Connecticut and New Jersey waters have shown that there is a strong potential that this area will be removed, or have entensively lowered value, as habitiat for renewable marine resources.

D. The impacts of this project as proposed will result in degradation of a Nationally significant environmental resource. The project also represents the most ambitious attempt ever undertaken to modify barrier islands in order to eliminate the effects of severe storms and hurricanes.

E. The Department of Interior has attempted to work with the Corps on this project since it was first proposed. Because of our efforts the Corps no longer proposes to take the fill material from the inshore bays. Other minor changes have been incorporated as a result of our efforts, however, the portions of the proposal that will cause the major long term adverse impacts have not been modified.

• The following are the major steps taken since 1968 by the Department to resolve the issues:

- Department of the Interior reports dated December 17, 1968, and April 16, 1969, were submitted to the Corps of Engineers to assist in their planning.
- Department of the Interior responded on November 15, 1974, to Public Notice No. 7871 dated October 21, 1974, and recommended:
 - a. Permit denial
 - b. A public hearing be held.
 - c. An EIS be prepared prior to initiation of work, and
 - d. In view of the adverse environmental impacts resulting from the existing groins, that the groins be removed and the shoreline be allowed to restore itself through natural processes.
- 3. Department of the Interior offered to meet with the Corps, both at the District and Division level, to resolution differences and attempt to resolve deficiencies via letter dated December 31, 1974. Also the letter noted that DOI had not received any response from letters to the Corps dated November 15, 1974 and November 19, 1974.

Department of the Interior reviewed and made extensive comments on the DEIS on June 4 and 14, 1976, stating that it exhibited deficiencies regarding on-site data collection, comparison of alternative actions, assessment of long- and short-term impacts resulting from the project, and the need for more specific determinations as to the unavoidable adverse impacts and to the extent of existing marine resources in the borrow sites and the impact of the project on them. Our review of the final environmental states ment found it to still be deficient in that no new significant information was provided.

- 5. In addition there have been numerous field level contacts and meetings between Corps of Engineers, Fish and Wildlife Service, and Park Service personnel. Attached is a listing of contacts between the Corps and Park Service personnel since 1973.
 - On March 1, 1978, Assistant Directors of the Fish and Wildlife Service and the Park Service met with the Corps Deputy Director of Civil Works, members of his staff and represenatives from the New York District of the Corps of Engineers. They stated that, "The final project could potentially differ substantially from that described in the Chief of Engineers Report and the final EIS." If this is the case the EIS, as now written, should be withdrawn and one prepared on what will actually be done. It was concluded that Interior and Corps personnel will work together to see if a mutually acceptable plan can be developed. It was also agreed that the Department of Interior would proceed with its referral to the Council of Environmental Quality.

P. The Department of Interior recommends that CEQ become involved in discussions with us and the Corps with the objective of mediating the differences so the proposed project will be environmentally sound and conform to existing laws and the spirit and intent of current Executive policies.

The goals should be to;

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- have the Corps withdraw their EIS on this project and have the Corps and the Department of Interior, with other agencies as appropriate, work together in developing a protection plan that promotes to the greatest degree possible the long term perpetuation of barrier island, estuarine and marine resources,
- 2. have the project revised to work with the natural barrier island evolution process in providing protection to existing property. Such a solution could be developed by combining components of alternatives \$2, \$4 and \$5, as shown in the final EIS, already studied by the Corps with limited structural work on the barrier island and beaches and "flood-proofing", of mainland facilities, and
- 3. have the President recommend ammending the project ' authorization as needed to accomplish the above goals.

Attachments (2)

A7.

COUNTY OF SUFFOLK



COUNTY LEGISLATURE

JOHN T. DONOHUE LEGISLATOR, 2ND DISTRICT 163 MONTAUK HIGHWAY HAMPTON BAYS, NEW YORK 11946 (516) 728-1434

CHAIRMAN: COMMERCE & TRANSPORTATION COMMITTEE ENERGY COMMITTEE

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April 5, 1978

Colonel Clark H. Benn, District Engineer U. S. Army Corps of Engineers 26 Federal Plaza New York, N. Y. 10007

Dear Colonel Benn:

ومراغم والمعادية ومحافظ مناطقا للمعالية والحد محترك والمتنا فالمالية المحاط والمالية والمحاص والمتكرك التركي كمرا

As requested, I am forwarding a copy of Suffolk County Resolution 202-1978 (Intro. 1249-78) concerning local support of the proposed work on Reach #2 of the Fire Island Inlet to Montauk Point Hurricane Protection and Erosion Control project.

It was my pleasure to see that the resolution passed unanimously among the members present, and was signed shortly afterward.

I hope I will be able to help further this work along, and look forward to hearing from you in that regard shortly.

Cordially Donohue

County Legislator, 2nd L. D.

encl: Certified Copies of 202-78, 204-78

ATTACHMENT 2

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Intro. Res. No. 1249-78 Laid on Table 3/14/78 - Requested by Legislators Donohue, Wehrenberg, Feldman, Noto and Foley

> RESOLUTION NO. 204 - 1978, SUFFOLK COUNTY IS IN SUPPORT OF THE CONTINUANCE OF THE REACH #2 BEACH EROSION CONTROL AND HURRICANE PROTECTION PROJECT IN THE TOWNS OF BROOKHAVEN AND SOUTHAMPTON.

WHEREAS, the erosion of the beaches on the South Shore of Suffolk County was felt most severely in the Reach #2 area; Moriches Inlet to Shinnecock Inlet; and

WHEREAS, all preliminary work on this Reach #2 Project has been completed; and

WHEREAS, New York State and the Federal Government are willing and able to support this project by the amount of 21% and 70% respectively of an approximate \$20 million total cost; and

WHEREAS, it is necessary to show local interest in the amount of 9% in order that this Reach #2 Project continue; now, therefore, be it

RESOLVED, that Suffolk County is willing and able to fulfill its requirement of local participation of 9% of approximately \$20 million, or \$1.8 million for Beach Erosion Control and Hurricane Protection Project, Reach #2 in the Towns of Brookhaven and Southampton; and be it further ۶.,

RESOLVED, that Suffolk County request that the U.S. Army Corps of Engineers prepare plans and surveys for the Reach #2 Project, and place this project into the President of the U. S. Capital Budget for Fiscal Year 1979.

DATED: March 28, 1978

APPROVED, BY:

Suffolk County County Executive of

Date of Approval: 3-30-75

SUFFOLK COUNTY County Tegislature RIVERHEAD, N. Y.

This is to Certify That 3, William H. Rogers, Clerk of the County Legislature of the County of Suffolk, have compared the foregoing copy of resolution with the original resolution now on file in this office, and which was duly adopted by the County Legislature of said County on March 28, 1978

and that the same is a true and correct transcript of said resolution and of the whole thereof.

In Mitness Mhereof, I have hereunto set my hand and the official seal of the County Legislature of the County of Suffolk

A9

Clerk of the County Legislature

April 3, 1978

New York State Department of Environmental Conservation 50 Wolf Road, Albany, New York 12233



Peter A. A. Berle, Commissioner

April 10, 1978

Dear Colonel Benn:

Please refer to your letter of December 23, 1977, requesting an endorsement of the plans of improvement for Reach 2, Sections 1A, 1B and 2A of the Fire Island Inlet to Montauk Point Hurricane Protection Project.

The plans have been reviewed by this Department and by Suffolk County. Suffolk County, by resolution of the Board of Legislators, has expressed approval of the proposed increment of work and further expressed willingness and ability to fulfill its participation in the project.

The project is hereby endorsed and this Department is willing and able to provide the necessary local cooperation required for construction subject to review of final plans and specifications necessary for construction.

Vangdon Marsh First Deputy Commissioner

Colonel Clark H. Benn District Engineer Department of the Army New York District, Corps of Engineers 26 Federal Plaza New York, New York 10007

ATTACHMENT A3

EXECUTIVE OFFICE OF THE PRESIDENT COUNCIL ON ENVIRONMENTAL QUALITY 722 JACKSON PLACE, N. W. WASHINGTON, D. C. 20006

JUN 6 1978

Lt. Gen. John W. Morris Chief of Engineers U.S. Army Corps of Engineers Washington, D.C. 20314

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Dear General Morris:

The Council has reviewed the U.S. Army Corps of Engineers' proposal for a beach erosion control and hurricane protection project from Fire Island to Montauk Point, N.Y., in response to the referral from the Secretary of the Department of the Interior. The Commerce Department and the Environmental Protection Agency also expressed major concerns about your proposed course of action.

The Council agrees with the objectives of the proposal, which are to preserve the natural shoreline and barrier beaches of Long Island and to reduce the risk of human and other losses as a result of flooding. As you know, the Council has maintained a long-standing interest and involvement in these two aspects of the human environment.

We have carefully reviewed the final environmental impact statement; we also appreciate the briefings your staff has provided on the proposal. As we understand the proposal, the Corps of Engineers would rebuild the southern edge of Long Island by creating a 25 x 16 foot dune along 83 miles of barrier beach in order to slow the pace of erosion and shield developed and undeveloped areas from storm flooding. Initial construction of the overall project would involve more than \$100 million of federal funds, between 48 and 80 million cubic yards of sand taken mainly from the ocean, and the potential for dredging operations at existing inlets and for substantial construction of groins and other works. These estimates do not include the resources required for frequent maintenance of the system for an unspecified period of time after initial construction. We realize the Corps does not intend to construct the entire proposal immediately, but would study each part in detail before proceeding.

ATTACHMENT A4

This is a proposal for a radical, artificial facelift for Long Island's southern shoreline. The major policy questions are whether the proposal presented and analyzed in the environmental impact statement will resolve the problems it seeks to address and whether it is the best available alternative.

By way of background, we fully agree with your statement on the first page of the final environmental impact statement that the whole project area "must be considered as a system." We also agree, therefore, that the evaluation of alternative courses of action and their environmental impacts and acceptability is required for the entire system and must be presented in a single statement, prior to proceeding with any part of the proposal.

The dynamics of barrier beaches and islands underscores this point, as does your own analysis. The impact statement repeatedly reveals the system-wide effects that actions on one part of the Long Island shore have had on other parts. Indeed, Long Island has had a history of subsequently confronting and constantly compensating for human manipulations of the barrier island system for several decades since the inlets at Moriches and Shinnecock Bays were first artificially kept open. The impact statement illustrates the westward erosion that can result from the construction of groins. The actions taken on one part of Long Island's barrier beach and ocean shore have repeatedly been shown to affect other parts that are often many miles away.

The Fire Island National Seashore, for example, which comprises nearly a third of the project area and is located on the western end of the system, is likely to be affected by any major shoreline changes to its east. This relationship gives us special cause for concern in light of the intention of the Congress and the National Park Service to allow the National Seashore to revert to as natural a state as possible. In addition, the Congress wisely instructed the Corps to exercise its authority within the Fire Island National Seashore in accordance with a plan which is acceptable to the Secretary of the Interior (16 U.S.C. 459e-7).

Although the Corps recognizes the impact on the National Seashore of actions taken to its east, the Corps would proceed first with the reach immediately to the east of the Seashore without any plan to which the Secretaries of the Army and the Interior have agreed. This lack of coordination at the planning stage can only cause subsequent delays and referrals to the Council which should be avoided.

We believe that the proposed course of action has not been planned with adequate attention to the significant, potentially adverse impacts of the project. We have appended an indication of several specific concerns and have noted areas requiring your attention.

In conclusion, we believe that the proposed course of action, as described in the environmental impact statement, is environmentally unacceptable and that the Corps has not demonstrated that there are no practicable alternatives available. Rather, a number of reasonable alternatives and combinations of alternatives, which we believe warrant serious consideration by the Corps, have been given short shrift or been omitted from the programmatic statement. Because the entire project area is a system, it would be disingenuous to treat these issues solely in connection with a particular segment of the shore.

We would have strong objections to the Corps proceeding with the project as planned and would seek full Executive branch resolution prior to any Administration request for appropriations of funds for the project. However, we recognize that the project, initially conceived about two decades ago, and its impact statement, begun more than a year ago, may not accurately reflect the Corps' currently stated intention to include other alternative approaches in its plans before proceeding with any actual construction. We also recognize the vast improvement in the knowledge of barrier beach dynamics that has occurred since the project was authorized in 1960.

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Because each facet of the proposal is likely to affect other parts, as well as the whole highly dynamic barrier beach system, we recommend that the Corps revise its overall project plan to create an adequate framework within which subsequent detailed planning for specific parts--or reaches-might occur. We would expect, of course, that your existing final EIS would be revised accordingly (by draft and final supplement if you believe that to be most appropriate). We would also expect your revised analysis to explain the rationale and criteria for dividing the overall project into its constituent parts for detailed review and future actions.

We appreciate the Corps' current plan to prepare "fully coordinated EIS supplements in draft and final format for each reach" which would discuss the full range of alternatives, as General Wilson noted in his April 28, 1978 letter to the Council. We believe that this approach would, however, cause unnecessary duplication and delay. We agree with your view that further site-specific analysis for actions on a particular reach (and their impacts on neighboring reaches) is appropriate at the design stage, prior to funding and construction. But the Corps' intention to prepare detailed analyses of all reasonable alternatives and their environmental impacts for each individual reach--including broad alternatives and impacts which apply to the entire system-would result in repetitive analysis of questionable scope conducted at different times in the absence of an overall framework. This approach is likely to delay planning and decisionmaking processes unnecessarily, and would undercut the Corps' laudable effort to produce an adequate overview or "umbrella" statement for the proposal that fully recognizes the dynamic and fragile character of the entire shoreline.

In addition to treating the deficiencies mentioned above, we recommend that you work more closely with the Interior and Commerce Departments and the Environmental Protection Agency in revising your programmatic proposals and analysis of their impacts.

Sincerely, Spleth Gus Member

Attachment

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Appendix

We believe that the proposed course of action has not been planned with adequate attention to the significant, potentially adverse impacts of the project and recommend that you pay particular attention to the following in any subsequent work:

1. The physical capability of the proposed construction techniques may not achieve the project's stated purposes over the long run, particularly in light of the anticipated storms. (The impact statement indicates a minimum 10year federal commitment; the costs and benefits were computed on a 50-year basis.) Recent scientific evidence has shown that the radical modification of barrier beach floodplains, such as is proposed here, can accelerate--not reduce--erosion. This, in turn, increases the need for and commitment of persistent federal efforts to rebuild these environments, accompanied by new and usually more disruptive environmental effects. This approach would be contrary to sections 101 and 102 of the National Environmental Policy Act, which require careful attention to long term environmental consequences in order to fulfill the Federal Government's responsibility to each generation as trustee of the environment for succeeding generations.

By their very nature, barrier beaches are constantly changing and reforming, but the proposal neither incorporates actions to eliminate the existing structures which impede natural processes, nor employs wider use of natural processes to achieve the purposes of the proposal, such as greater reliance on sand bypasses or a combination of alternative approaches. More serious consideration of the system-wide impact of groins on beach erosion and of the advisability of removing existing groins is warranted, as well as the definition of circumstances or limitations for using long term, heavy structural devices.

2.

The impact statement recognizes that the project will spur development of the barrier beach and mainland coast, much of which is adjacent to the National Seashore, but it does not identify or analyze nonstructural alternatives to the project. Corps officials should know whether, or to what extent, or under what circumstances the Corps could or would condition its assistance on local efforts to control floodplain development, including the use of appropriate enforcement tools. We would call your attention to Executive Order 11988 on floodplain management, which requires the Corps to avoid conducting or supporting floodplain development unless there is no practicable alternative, and, equally important, to provide leadership and take action to restore and preserve the natural and beneficial values served by floodplains.

3.

4. We have several other concerns about the proposal, which do not require detailed discussion in this letter. Among these are the impacts of the planned pond drainage structures on wetlands and the contradictory assumptions regarding the impacts of the proposal and its alternatives on the bay wetlands, bay ecology, and shellfish population. NADDE (29 Jun 78) 1st Ind SUBJECT: South Shore of Long Island, Fire Island Inlet to Montauk Point, New York

DA, North Atlantic Division, Corps of Engineers, 90 Church Street, New York, New York 10007 JUL 1 4 1978

TO: District Engineer, New York

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1. Subject project was authorized by the Rivers and Harbors Act of 1960. Since that time, we have had many additional requirements imposed upon our water resources planning program by legislation and by executive action. Among these are the National Environmental Policy Act, the Water Resources Council's Principles and Standards and specifically in this case, the Fire Island National Seashore Act. There are many others as well. Therefore, it is clear that time has overtaken the Fire Island Inlet to Montauk Point project.

2. At this point, we are unable to demonstrate for the record that we have complied with and are in conformance with the new criteria and procedures. Therefore, the District will have to re-evaluate the subject project based on current procedures and, if necessary, reformulate it. This reformulation process should not be a reinvented wheel but should take into account all of the work that has occurred up to this time.

3. Special attention should be given to coordination with the Department of Interior. In view of the sensitive nature of the coastal zone, this coordination is particularly important. It is also mandatory because of the DOI's special interest in the reach from Fire Island Inlet to Moriches Inlet due to the Fire Island National Seashore Act and their position as a major land owner in this reach.

4. Your schedule should be submitted as promptly as possible.

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Major General, USA Division Engineer

ATTACHMENT A5



DEPARTMENT OF THE ARMY OFFICE OF THE CHIEF OF ENGINEERS WASHINGTON, D.C. 20314

REPLY TO ATTENTION OF:

DAEN-CWP-E

2 9 JUN 1978

SUBJECT: South Shore of Long Island, Fire Island Inlet to Montauk Point, New York

Division Engineer, North Atlantic

1. A copy of CEQ's letter to the Chief of Engineers on DOI's referral of the subject project is inclosed. CEQ is concerned whether the project analyzed in the EIS will resolve the problems it seeks to address and whether it is the best available alternative. They believe that the proposed course of action has not been planned with adequate attention to the significant, potentially adverse impacts of the project, and conclude that the proposed course of action as described in the environmental statement is environmentally unacceptable. They also believe that the Corps has not demonstrated that there are no practicable alternatives available. CEQ indicates that the evaluation of alternative courses of action and their environmental impacts and acceptability is required for the entire system and must be presented in a single statement prior to proceeding with any part of the proposal. They recommend that we work more closely with the Interior and Commerce Departments and the Environmental Protection Agency in revising programmatic proposals and analyses of their impacts.

2. You are requested to reformulate the project for Fire Island Inlet to Montauk Point in accordance with WRC's Principles and Standards and Corps guidance thereon. You should revise the EIS, as necessary, by draft and final supplement. You should comply with the most recent guidance on pertinent Executive Orders, particularly those on barrier beaches and flood plains. We would expect reformulation to address a broad range of alternatives, including non-structural measures, and to present conclusive support for dividing the project into constituent parts. The EIS supplement will present an evaluation of alternative course of action and their environmental impacts for the entire project area. In recognition of DOI's specific interest in this project, we suggest special coordination efforts during reformulation and preparation of the EIS supplement.

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DAEN-CWP-E SUBJECT: South Shore of Long Island, Fire Island Inlet to Montauk Point, New York

3. After you have had an opportunity to review the inclosed, please submit a schedule.

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FOR THE CHIEF OF ENGINEERS:

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CHARLES I. MCGINNIS Major General, USA Director of Civil Works

CF: District Engineer, New York

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DEPARTMENT OF THE ARMY OFFICE OF THE CHIEF OF ENGINEERS WASHINGTON, D.C. 20314

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Honorable Robert L. Herbst Assistant Secretary, Fish and Wildlife Parks Department of the Interior Washington, D. C. 20240

Dear Mr. Herbst:

On 7 March 1978, the Department of Interior made a referral to the Council on Environmental Quality (CEQ) on the authorized Federal beach erosion control and hurricane protection project for the area from Fire Island Inlet to Montauk Point, Long Island, New York. By letter, dated 6 June 1978, to Licutemant General J. W. Morris, Chief of Engineers, the CEQ recommended that the U. S. Army Corps of Engineers reformulate the authorized Federal project. The Corps of Engineers has initiated reformulation of the project plan in coordination with the Departments of Interior and Commerce and the Environmental Protection Agency (EFA).

Following the action taken by CEQ, several meetings have been held by representatives of the Departments of Interior and Commerce, the EPA. and the Corps of Engineers to develop an acceptable solution to mitigate immediate threats to property and human welfare at Westhampton Beach where serious erosion is occurring. During these discussions, your agency has underscored its concern that the objective of any action taken at Westhempton Beach will be to provide hurricane protection and beach erosion control benefits during the reformulation period for the overall project. The Corps affirms this objective and assures that any pending decision on the Westhampton Beach portion of the authorized project will not preempt future decisions on the design and nourishment of the reformulated overall project for hurricane protection and erosion control from Fire Island Inlet to Montauk Point. The Corps further considers that the nourishment requirements of any plan constructed for the Westhampton Beach portion of the project will be superseded by the nourishment commitments of the overall reformulated project, assuming the Congress funds the construction of the Westhsmpton Beach element and authorizes and funds the reformulated project.

. С. DAEN-CWP-E Honorable Robert L. Herbst

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In order to assure that the concerns of the various agencies and CEQ are fully considered, the Gorps proposes to plan the Westhampton Beach portion of the project in the manner described in the inclosure hereto. A decision to construct this element will await completion of the environmental review responsibilities which are set forth in the inclosure.

The Corps intends to prepare an analysis of the Westhempton Beach portion of the overall suthorized project which will be used to reach a decision on construction. The Corps will work closely with you to develop a plan of study for reformulating the overall project over its full 83-mile reach. Both the analysis and the plan of study could be completed within Fiscal Year 1979, if sufficient funds are made available.

The Corps recognizes the interrelationship of the contemplated construction at Westhampton Beach with the reformulation activities for the overall project, and therefore, any construction and nourishment activities at Westhampton Beach will be performed in a manner that will be consistent with study results that may be available from the reformulation activities. Since Congressional appropriation of funds will be required before construction of the Westhampton Beach portion can be initiated or before the reformulation studies can be continued, the Corps will, consistent with guidelines and policies established by the Office of Hanagement and Budget, recommend and support simultaneous funding for the reformulation studies and any construction or nourishment proposals at Westhampton Beach.

If the proposals set forth above, and detailed in the inclosure, are acceptable to you, it is anticipated that CEQ will agree to the Corps proceeding with the aualysis of the Westhampton Beach portion of the project in order to reach a decision on construction in that seriously eroding area. As previously stated, the Corps will continue to reformulate the overall project plan concurrently with the analyis of Westhampton Beach

Sincerely,

SIGNER

l Incl As stated CHARLES I. McCINNIS, Msjor General, USA Director of Civil Works

Identical letter sent to: Hon Peter L. Cook, EPA; Hon Terry Lettzel, WOAA.

PROPOSAL FOR ANALYSIS OF WESTHAMPTON BEACH

1. <u>Analysis and Demonstration of No Adverse Effect on Fire Island</u> National Seashore

The Corps will prepare an analysis of the Westhampton Beach portion of the authorized project to assess the direct and indirect environmental impacts of alternative implementation strategies, including the alternative of allowing existing conditions and trends to continue (i.e., no action). In preparing the analysis, the Corps will rely primarily on existing data and other readily svailable information. The Corps will gather any additional information that is needed, provided that such data gathering will not cause delay in preparation of the analysis.

The Corps will work in close cooperation with the National Park Service, the U. S. Fish and Wildlife Service, the National Marine Fisheries Service and the Environmental Protection Agency in identifying alternatives to be assessed and in preparing the analysis of environmental impacts. The cooperating agencies are expected to provide timely review of materials submitted to them by the Corps, and to furnish available technical information that may be required to facilitate objective analysis.

Each cooperating agency should identify personnel responsible for carrying out these cooperative activities.

The enalysis will be used in reaching a decision on whether to proceed to construction and, if construction proceeds, on the specific design and nourishment program for the project. If construction proceeds, the analysis will be used to ensure that, to the maximum extent practicable:

(1) the project is designed and nourished in a manner that minimizes short-term disturbance of coastal ecosystems and, in particular, the hard clam beds and fisheries of the offshore region, and

(2) there will not be significant long-term impacts on these resources.

The analysis will contain evidence that any Corps action in the Westhampton Beach area will not adversely affect, either directly or indirectly, the environment of Fire Island National Seashore.

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Federal participation in nourishment of the Westhampton Beach portion of the authorized project will be limited to the period of nourishment authorized by Congress, and will be superseded by the requirements of the
overall reformulated project plan. if authorized and funded by Congress. The Corps will consult with and consider the views of the National Fark Service, the U. S. Fish and Wildlife Service, the National Marine Fisheries Service, and the Environmental Protection Agency prior to taking any action to nourish the project. The Corps will consult and cooperate with said agencies to the greatest extent practicable if it becomes necessary to act pursuant to the Corps' emergency authorities. Any required nouristment will be accomplished in a manner that minimizes and mitigates, to the greatest extent practicable, short-term adverse impacts on coastal ecosystems as well as on any research/monitoring activities that may be planned or in progress in support of the overall project reformulation. A separate analysis will be prepared for any nourishment program assessed in the original analysis of the Westhampton Beach portion of the overall project (i.e., an average of 500,000 cu. yds every 2 years). The analysis will contain evidence that any revised nourishment action will not adversely affect, either directly or indirectly, the environment of Fire Island National Seashore.

3. Selection and Operation of Borrow Sites

Should a decision to construct the Westhampton Beach segment be made, the Corps will withdraw all nourishment material from locations seaward of the offshore bar in areas of minimum benchic habitat value.

The Corps of Engineers will consult with the U. S. Fish and Wildlife Service, the National Marine Fisheries Service, and the Environmental Protection Agency and will fully consider the views of these agencies in the selection and operation of borrow sites for suitable sand to be used as nourishment material. The objective of this consultation will be to control the location, timing and volume of sand withdrawal so as to reduce adverse impacts on coastal ecosystems, and, in particular, the hard clam and fisheries resources of the area, to the greatest extent practicable.

4. The Westhampton Groin Field

Modification or removal of the Westhampton groin field will be considered within the context of overall project reformulation, and will not be undertaken as part of the Westhampton Beach project. The Corps will initiate a monitor and analysis program to assess the effects of the existing groins on the distribution of sand in the littoral drift system. This monitoring program will be continued to assess the effects and effectiveness of the interim measure during the construction and post-construction phases of project implementation.

5. Interagency Agreement on Overall Project Reformulation

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The Corps will prepare a plan of study for the reformilation of the overall project. The plan of study will be made available for review by the Departments of Interior and Commerce, and the Environmental Protection Agency, and their concurrence will be obtained prior to approving the plan of study. The plan of study will identify: (1) research and monitoring to be undertaken by the Corps is support of reformulation; (2) responsibilities of Interior and NOAA in providing technical assistance; (3) content and purpose of interim and final documents to be prepared by the Corps within the guidelines of the Water Resource Council's Principals and Standards; (4) estimated schedule for completion of identified work elements; and (5) funding to be made available for identified work elements. The Corps will seek from the Gongress, through the budgetary process, funds for reformulating the overall project. Should a decision be made to seek funds for the construction of the Westhampton Beach portion of the project, a simultaneous appropriation of funds will be sought for pursuing both the reformulation study and the construction of the Westhampton Beach portion.



UNITED STATES DEF ARTMENT OF COMMERCE National Oceanic and Atmospheric Administration National Marine Fisheries Service Washington, D.C. 20235

DEC 2_1978

Major General Charles I. McGinnis Director of Civil Works Office of the Chief of Engineers Department of the Army Washington, D.C. 20314

Dear General McGinnis:

We have reviewed your letter of November 22, 1978, concerning the Federal beach erosion control and hurricane protection project for the area from Fire Island Inlet to Montauk Point, Long Island, New York, and the Proposal for Analysis of Westhampton Beach.

We are pleased to note that paragraph two of the letter affirms our concern that any action at the Westhampton Duch portion of the authorized project will not preempt future decisions on the reformulated overall project. The National Marine Fisheries Service is interested in a short-term project with minimal volumes of sand taken from a jointly agreed upon location. This sand should be placed only along the most critically impacted sections of the beach.

We remain concerned that not all of Reach II (Moriches Inlet to Shinnecock Inlet) is in need of an interim measure. We believe the critical impacted areas are: (1) down current from the 13th groin and (2) just east of Moriches Inlet. While the Corps has estimated that this area encompasses about 9600 feet of shore line, we believe the critical areas are actually much less.

We are particularly interested in the proposed analysis of the Westhampton Beach portion of the authorized project. The data in the Final Environmental Impact Statement were insufficient to adequately assess the overall project. We are apprehensive about the use of either existing data or any which may be generated without delaying the assessment document. However, in the interest of cooperation with you, the Department of the Interior, and the Environmental Protection Agency, we will await the results of the proposed analysis.



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We appreciate the opportunity to review the proposal for analysis of the Westhampton beach area.

Sincerely, Lehvent Terry L. Leitzell Assistant Administrator for Fisheries

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United States Department of the Interior

OFFICE OF THE SECRETARY WASHINGTON, D.C. 20240

DEC 2 2 1978

Maj. General Charles I. McGinnis, USA Director of Civil Works Office of the Chief of Engineers Washington, D.C. 20314

Dear General McGinnis:

The Department of the Interior has reviewed your proposed process for analysis of hurricane protection and erosion control measures at Westhampton Beach. Your process provides the necessary assurances that the resources of Fire Island National Seashore will not be adversely affected by any future action in this area, that impacts on coastal ecosystems of the project area will be reduced to the greatest extent practicable, and that any decision to proceed with the Westhampton Beach portion of Reach II would be planned and implemented in a manner compatible with the reformulation of the overall Fire Island Inlet to Montauk Point project. I appreciate your commitment to fully coordinate planning and operational activities with this Department and other interested agencies, and assure you that our personnel will be working closely with you in these efforts.

In analyzing alternatives at Westhampton Beach, and in carrying out the planned research and monitoring program for the overall project reformulation, we would anticipate continuing involvement of the technical staff of your Coastal Engineering Research Center, with whom we would expect to have close professional collaboration.

Your commitment to recommend and support simultaneous funding for the reformulation studies and any construction or nourisiment that may be needed at Westhampton Beach is the cornerstone of your proposal and an essential prerequisite for this Department's decision to withdraw its objection to the Corps' decision to proceed with the environmental assessment of the Westhampton segment. In order to ensure that we are kept informed of the status of funding or reauthorization, I would appreciate your providing me a reasonable advance notice of any Corps of Engineers' request to the Office of Management and Budget for engressional appropriations or legislation, as well as any congressionally initiated action on these projects.

By copy of this correspondence, I am informing the Council on Environmental Quality of this Department's decision and our above-outlined additional suggestions for carrying out future cooperative activities. I am looking

ATTACHMENT A8

forward to their favorable review and official endorsement of these commitments and understandings. I assume the Council will provide . you with their recommendations for proceeding under these constraints and understandings.

Let me reemphasize my sincere appreciation of your responsiveness to our concerns for protection of coastal ecosystems and Fire Island National Seashore. I can assure you of our prompt participation in your environmental assessment review and in your future planning efforts.

Sincerely, Assistant Secretary

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cc: K. Weiner

EXECUTIVE OFFICE OF THE PRESIDENT COUNCIL ON ENVIRONMENTAL QUALITY 722 JACKSON PLACE, N W. WASHINGTON, D. C. 20036

January 18, 1979

Maj. Gen. Charles I. McGinnis Director of Civil Works U.S. Army Corps of Engineers Washington, D.C. 20314

Dear General McGinnis:

The Council has reviewed your letter of 22 November 1978 to Assistant Secretary of the Interior Robert L. Herbst and his response to you of 22 December 1978, concerning the Federal project for beach erosion and hurricane protection from Fire Island to Montauk Point, N.Y.

We are pleased that your agencies, together with the Commerce Department and the Environmental Protection Agency, have reached agreement for taking interim remedial action on portions of Reach II of the project area in a way which will not prejudice the overall project revision begun by the Corps last year on our recommendation.

Your letters reflect the results of negotiations encouraged by the Council after the resolution of the formal referral on this project from the Interior Department. The letters clarify the relationship between the overall project plan, which is being reformulated by the Corps, and the need for specific measures to mitigate immediate problems caused by severe erosion at Westhampton Beach. Equally important, they indicate a new spirit of cooperation between your agencies.

Your exchange of letters adequately addresses the Council's concern that interim remedial action should be taken as quickly as possible in cooperation with interested agencies

- MARY LANSING MICHARD

that is (1) limited to these areas for which it is essential; (2) designed and implemented in an environmentally responsible fashion; and (3) does not involve actions that are inconsistent with the reformulated project planning.

On behalf of the Council I would like to express our appreciation for the constructive efforts of the Corps, the Interior Department and other concerned Federal agencies in resolving the controversy. We trust that this momentum will be maintained in the coming months as you proceed with planning and implementation.

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cc: Robert L. Herbst Michael Blumenfeld



UNITED STATES DEPARTMENT OF COMMERCE National Oceanic and Atmospharic Administration NATIONAL MARINE FISHERIES SERVICE Federal Building, 14 Elm Street Gloucester, Massachusetts 01930

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July 17, 1979

Col. Clark H. Benn District Engineer Department of the Army Corps of Engineers 26 Federal Plaza New York, New York 10007

Dear Colonel Benn:

The National Marine Fisheries Service has quantified the fishery landings and the related extent of marine resources along the southern shore of Long Island with special emphasis on the area from Moriches Inlet to Shinnecock Inlet. This information is being field checked with local fishermen but, as it represents a compilation of their landings, we doubt it will be altered significantly.

From the information collected it appears that several of the areas identified in the Offshore Borrow Investigation and Evaluation and Side Scan Survey along Reach 2, Fire Island Inlet to Montauk Point, New York, could be usable without significant impact to existing benthic resources of commercial interest. In particular it would appear, pending additional refinement and review of the specific distances offshore, that core sampling Areas 7, 9, and 16 are good sites for borrow. Site 8 also may be in that category, although there does seem to be a clay-silt problem in several horizons. Back-up sites might include core sample sites 12, 13, 14, 24, 35, 37, 42, and 43 provided that their distance offshore is less than 1.5 nautical miles. Any sites mined will be adversely impacted, but surf clam populations seem to be lower in these areas. The major issue now remaining appears to be the dimensions of the borrow area, which must be coordinated with all concerned parties.

We look forward to coordination of these matters. Should your staff require further explanation of the data provided please contact Mr. Michael Ludwig at Milford, Connecticut facility. His telephone number is 203/878-2459.

Sincerely,

Allen E. Peterson, Jr. Regional Director



Commercial Finfish Activity Offshore of Eastern Reach I and Reach II.

Commercial fishing occurs in this area from the surf zone outward. However, fishing effort varies from moderate in the zero to three-mile zone, to very low three to six miles offshore; becoming moderate again in the six to twelve-mile zone, and increasing noticably beyond the twelve-mile mark.

Fishing activity within three miles of shore appears to drop off during July and August. Most vessels working this area use Shinnecock Inlet for access to the fishing grounds. Fishing pressure, therefore, builds close to that _ point, but the effort extends from the Shinnecock Jetty westerly toward the Moriches Inlet Jetty with a possible net hauling effort occurring at Moriches. There is also an easterly effort, again beginning at Shinnecock.

During spring and early fall, after the inshore depression of finfish stocks in July and August, there are inshore and/or offshore movements of squid (Loligo sp), scup (Stenotomus chrysops), fluke (Paralichthys dentatus), bluefish (Pomatomus saltatrix), weakfish (Cynoscion regalis), striped bass (Morone saxatilis) and butterfish (Peprilus triacanthus). The period of April through June appears to be the period in which commercial fishermen direct their effort primarily toward catching fluke. This effort is generally within three miles of shore but more offshore than the concurrent striped bass and bluefish efforts which take the boats as inshore as they can get. April also represents the beginning of the inshore movement of lobsters (Homarus americanus), toward which a fair amount of effort is directed. Since the lobster catch remains relatively stable during July and August, some of the Shinnecock-based fishermen shift their primary effort from finfish to the high valued lobster during this period. Other fishermen shift their efforts into Long Island Sound,

further offshore or into Block Island Sound as the species composition alters with increasing water temperature. During September finfish populations again begin to increase offshore off of the Hamptons and efforts are redirected back toward these more local stocks.

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In the late fall, silver hake (whiting) (<u>Merluccius bilinearis</u>)is taken, typically in waters from 12 to 35 meters. The 1978 catch of silver hake was rather good and continued until falling water temperatures drove the fish out of the inshore area.

During winter the effort is directed primarily toward yellowtail flounder (<u>Limanda ferruginea</u>), but Atlantic cod (<u>Gadus morhua</u>) and winter flounder (<u>Pseudopleuronectes americanus</u>) are also valuable portions of the catch. The effort, at least for yellowtail flounder, is generally in 22 to 30 meters of water.

Since it has been stated that the sand mining effort will be performed outside the ten meter depth, the borrow effort should have little impact on the haul seine and surf fisheries. However, the placement activity may impact these fisheries. A dichotomy of impacts may result from the discharge of material on the beach and the resulting outwash of fine grained material and its associated benthic infauna. While the suspended sediment will induce avoidance by some species, the presence of increased and readily available food sources may lure species that are less sensitive to turbid conditions into the outwash plume.

Fishery catches for 1978 are tabulated below by month and are identified by gear type. Unless otherwise noted all fish catches are by fish trawl. They represent only those catches which were made within three miles of the shore in the east Fire Island and Hamptons area. Typical habitat of the captured species is also indicated. A note of caution: the following data show catches, not effort. Catches appear to vary primarily with season, number of participants, and extent of effort, rather than with fish availability.

 Anglerfish (Lophius americanus): benchic inhabitant usually found over sand, pebbles or gravel.

> January 1,500

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February 360 pounds

March 400

April 3,410 pounds

May 12,030 pounds

June 8,300 pounds July -1,440 pounds

August 1,000 pounds

September 1,200 pounds

October 1,100 pounds

November 4,650 pounds

December 1,110 pounds

 Bluefish (<u>Pomatomus saltatrix</u>): a midwater fish found from the bottom to the surface, inshore to the open sea.

	JULY	
	11,970 pounds	3
\ <u>`</u>	1,150 pounds	by hand held lines
	2,830 pounds	; by gill nets
	14,120 pounds	by haul seine
	`	11,970 pounds 1,150 pounds 2,830 pounds 14,120 pounds

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	March	N
	No recorded estables	August
	No recorded catches	10,470 pounds
		1,300 pounds by nand neid lines
		5,790 pounds by gill net
		5,350 pounds by haul seine
	April	Controller
	No recorded estables	September
	No recorded catches	8,000 pounds
	May	2,000 pounds by hand held lines
	11ay	19,000 pounds by gill nets
	6 000 pounda hu cill not	10,000 pounds by naul seine
	2,220 pounds by gill net	O a hall and
	2,520 pounds by haur seine	
	Tumo.	34,150 pounds
		2,150 pounds by nand held lines
·	4,000 pounds	31,780 pounds by gill net
	6 540 pounds by hand held line	s 59,/10 pounds by haul seine
	6,540 pounds by gill net	XT X
	19,590 pounds by haul seine	November
		64,960 pounds
		2,500 pounds by hand held lines
		12,000 pounds by gill net
		33,000 pounds by haul seine
	· · · · ·	
		December
		3,780 pounds
		920 pounds by hand held lines
D	Fich (Domilie this sector)	
DULLE	geriish (<u>repriids triacantnus</u>): ger	nerally occur inshore hear the surfa
but π	ay overwinter in deep water.	
	January	July
	5,000 pounds	· 7,720 pounds
	, .	
	February	August
	February No recorded catches	August 2,250 pounds
	February No recorded catches	August 2,250 pounds
	February No recorded catches March	August 2,250 pounds September
	February No recorded catches March No recorded catches	August 2,250 pounds September 4,800 pounds
	February No recorded catches March No recorded catches	August 2,250 pounds September 4,800 pounds
	February No recorded catches March No recorded catches April	August 2,250 pounds September 4,800 pounds October
	February No recorded catches March No recorded catches April 1.180 pounds	August 2,250 pounds September 4,800 pounds October 2,350 pounds
	February No recorded catches March No recorded catches April 1.180 pounds	August 2,250 pounds September 4,800 pounds October 2,350 pounds
	February No recorded catches March No recorded catches April 1.180 pounds	August 2,250 pounds September 4,800 pounds October 2,350 pounds
	February No recorded catches March No recorded catches April 1.180 pounds	August 2,250 pounds September 4,800 pounds October 2,350 pounds

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May	November
1,600 pounds	1,980 pounds
June	December
11,734 pounds	4,630 pounds

4. Cod (<u>Gadus morhua</u>): Found from the surface to the bottom. Larger individuals lay close to the bottom and best catches are made on rocky, pebbly or sandy bottoms.

> January 20,000 pounds 5,930 pounds by set lines

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-July 480 pounds

August No recorded catches

March 8,350 pounds 4,450 pounds by set lines

6,110 pounds by set lines

April 11,930 pounds

12,350 pounds

February

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May 9,320 pounds

June 1,100 pounds September 180 pounds

October 1,160 pounds

November 7,680 pounds

December 48,770 pounds

1,850 pounds

5. Blackback or winter flounder (<u>Pseudopleuronectes</u> <u>americanus</u>): Generally

found inshore as benthic inhabitants on silty-sand to sandy bottoms.

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July

January 2,000 pounds

February 18,990

1.00

August 970 pounds 1,200 pounds by hand held lines

March 15,100 pounds

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April 26,500 pounds

May 71,970 pounds November 8,910 pounds

4,380 pounds

3,090 pounds

September

October

June December 39,820 pounds 29,870 pounds 610 pounds by hand held lines

 Fluke or summer flounder (<u>Paralichthys dentatus</u>): Benthic inhabitants which prefer sandy or muddy bottoms then tend to move shoreward as water temperatures increase.

> January No recorded catches

> February No recorded catches

> March No recorded catches

April 1,480 pounds

May 102,490 pounds

June 112,560 pounds July 40,440 pounds

August 35,220 pounds

September 94,290 pounds 1,200 by hand held lines

October 36,400 pounds

November 31,240 pounds

December No recorded catches

7. Yellowtail flounder (<u>Limanada ferruginea</u>): This benthic inhabitant prefers sandy to silty-sandy bottoms typically staying somewhat more offshore in deeper water.

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January 690 pounds

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February 2,540 pounds

March 10,750 pounds

April 10,160 pounds

May 4,220 pounds

June No recorded landings July No recorded landings

August No recorded landings

September No recorded landings

October No recorded landings

November 9,970 pounds

December 23,990 pounds

8. Red hake (squirrel hake or ling) (<u>Urophycis chuss</u>): Commonly confused with white hake (<u>Urophycis tenuis</u>). This benthic species tends to inhabit progressively deeper water as it matures, although it does move inshore as an adult, preferring soft bottoms to rocky ones.

> January 2,000 pounds

April 6,350 pounds

May

February 2,370 pounds

March No recorded catches

June 470 pounds

76,950 pounds

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July 280 pounds

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October 1,880-pounds

November

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August No recorded catches

September 380 pounds December 6,530 pounds

1,150 pounds

4,200 pounds

 Atlantic mackerel (<u>Scomber scombrus</u>): A midwater species which feeds at all depths. It moves inshore as water temperatures rise.

-8-

January No recorded catches

February No recorded catches

September

July

August

March No recorded catches

April 5,280 pounds 4,750 pounds by gill net 14,430 pounds by haul seine

May 19,360 pounds 3,700 pounds by gill net

5,020 pounds by haul seine

June

520 pounds 3,200 pounds by gill net October

No recorded catches

No recorded catches

200 pounds

November No recorded catches

December

2,880 pounds

3,110 pounds by hand held lines

- 10. Scup or porgy (<u>Stenotomus chrysops</u>): Inshore migrants as waters warm, they prefer smooth bottoms, although they are a midwater species.
 - January July 830 pounds 17,690 pounds 1,820 pounds by inshore traps
 - February No recorded catches 5,180 pounds 180 pounds by inshore pots 2,000 pounds by hand held lines No recorded catches

April 10,160 pounds 1,260 pounds 2,250 pounds by hand held lines

MayOctober53,750 pounds6,740 pounds2,180 pounds by inshore traps2,100 pounds by hand held lines

June 39,770 pounds November 1,000 pounds by inshore traps 1,340 pounds 2,000 pounds by hand held lines

> December 630 pounds

11. Weakfish (grey sea trout) (<u>Cynoscion regalis</u>): A migrant midwater species that

prefers inshore waters during the warmer months.

January No recorded landings March No recorded landings

February No recorded landings April 680 pounds 260 pounds by gill net

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May September 11,700 pounds 5,480 pounds 16,220 pounds by gill net 1,500 pounds by hand held lines 10,040 pounds by haul seine 9,590 pounds by gill net 8,330 pounds by haul seine June 10,700 pounds October 1,000 pounds by hand held lines 19,640 pounds 12,300 pounds by gill net2,000 pounds by hand held lines11,460 pounds by haul seine6,430 pounds by gill net . 41,850 pounds by haul seine July 10,220 pounds November 1,500 pounds by hand held lines 940 pounds 1,880 pounds by hand held lines 4,800 pounds by gill net 2,020 pounds by gill net 6,440 pounds by haul seine 74,548 pounds by haul seine August 120 pounds December 1,600 pounds by hand held lines 3,410 pounds 3,550 pounds by gill net 2,130 pounds by haul seine 12. Striped bass (Morone saxatilis),'A seasonal midwater migrant to the area, it feeds from the surface to the bottom. May January No recorded catches 200 pounds 870 pounds by gill net 2,030 pounds by haul seine February No recorded catches June 1,570 pounds 1,420 pounds by gill net March 4,460 pounds by haul seine No recorded catches

July170 pounds3,560 pounds260 pounds by gill net4,410 pounds by haul seine

April

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August					November				
400	pounds	Ъу	gill	net	37,400	pounds			
1,100	pounds	Ъу	hau l	seine	4,900	pounds	Ъу	gill	net
					43,960	pounds	Ъу	haul	seine

September 1,230 pounds 7,040 pounds by gill net 1,650 pounds by haul seine

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December 4,110 pounds 5,000 pounds by hand held lines

- October 15,430 pounds 2,050 pounds by gill net 63,330 pounds by haul seine
- 13. Silver hake (whiting) (<u>Merluccius bilinearis</u>): This midwater fish is found both inshore and offshore as a resident to the area.

January 6,900 pounds

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July 1,150 pounds

February 5,290 pounds August 750 pounds

March 4,000 pounds

April 36,790 pounds

1,510 pounds

September 1,200 pounds

October 3,850 pounds

58,130 pounds

May 219,870 pounds

June

December 230,790 pounds

November

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14. American lobster (<u>Homarus americanus</u>): Of the various life patterns of lobsters, it appears that fishermen in this area harvest the onshoreoffshore migrants.

July

October

November

January No recorded catches

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February No recorded catches

March No recorded catches August 12,000 pounds by traps

4,000 pounds by traps

September 7,200 pounds by traps

> 6,400 pounds in traps 580 pounds by divers

800 pounds in traps

April No recorded catches

May 500 pounds by traps

2

4,000 pounds by traps

December No recorded catches

15. Long finned and short finned squid (Loligo peale and Ilex illacebrosus): Although two separate species are caught, the long finned species comprises more than 90 percent of the catch. The two species are combined in the catch data presented below.

> January 5,000 pounds

April 2,000 pounds

February 70 pounds

March 1,510 pounds May 16,490 pounds

June 34,790 pounds

July 36,560 pounds

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August 55,880 pounds

September 14,440 pounds

October 7,170 pounds

November 11,610 pounds

December 500 pounds

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Offshore' Shellfish Resources Along Southern Long Island

The following assessment discusses only the commercially sought surf clam (<u>Spisula solidisima</u>) and ocean quahog (<u>Arctica islandica</u>). To facilitate an understanding of the resource, a brief historical overview of the commercial fishery for these resources and the impact of fishing on local populations is discussed below.

The surf clam has been harvested off New York since the early 1900's. The effort, however, was relatively insignificant until the mid 1940's. During the war years the modern fishery developed and known stocks were heavily fished. This rapidly depleted the available resource, forcing the fishery to range further afield in the search for fishable concentrations. Most surf clam populations are found in depths of 12 to 43 meters but have been recovered at depths up to 128 meters. The ocean quahog has slowly joined the surf clam in commercial importance. The quahog fishery has, to a large extent, resulted from depletion of the surf clam resource. Quahogs inhabit the same general area as surf clams, but occur also in deeper water.

The surf clam resource has been slow in recovering from the overfishing that occurred in the 1950's and 1960's. Judging from observations made in 1974-1975, it appears that reproductive success has been limited in recent years and that there is a general failure of juveniles to survive their first two years, resulting in significant gaps in year classes entering the adult population and marketable size range.

Regarding the presence of both clam species in the proposed borrow area, the most extensive sampling efforts to date were carried out during 1974 and 1975. However, the character of the species involved and their life expectancy allow reasonable belief that the resource has not significantly altered its

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population structure or established major colonies in areas previous uninhabitated by them. The sampling was carried out by David R. Franz.¹ Using 47 transect lines placed every two nautical miles, sampling occurred at 0.5, 1.5 and 2.5 nautical miles offshore.

Adult <u>Spisula</u> and <u>Arctica</u> were collected with a 48 inch (1.2 meter) commercial hydraulic clam dredge operated for five minutes at each station. Associated with each dredging effort replicate sediment samples were collected using a 1/4 meter Shipek grab sampler. The sample was sieved through a 1mm mesh screen and that portion not passing the grid was preserved for later analysis.

In the eastern portion of the sampling area (transects 1 thru 30; Figure 1), adult <u>Spisula</u> per bushel ranged in number from 40 to 57 with a mean of 49. West of transect 30, clams per bushel ranged from 78 to 125 with a mean of 86. This indicates that the population east of transect 30 is significantly older (larger clams taking fewer to fill the bushel measure), or has had better growth rates than their counterparts to the west. Additionally, this apparent age discrepancy was accompanied by a gradual decline in abundance west of Shinnecock Inlet. This decline was reversed near the Rockaways.

It was found that approximately 56% of the estimated standing stock of about 3.5 million bushels of clams is located east of Fire Island Inlet. This fac is hypothesized as being related to the fact that the resource east of Fire Island Inlet has not experienced the same level of fishing as has the resource further west. This is felt to be related to the lack of suitable harbors

Franz, David R. 4/26/76. A Management Study of Surf Clam Resources Along the Long Island Coast - Final Report, Contract #03-4-043-355, State/Federal Surf Clam Fishery Management Program. June 1974-Sept. 1975.

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for basing commercial fishing activities. The specific location of the resource within the sampling grid revealed the presence of a distribution pattern which only breaks down in the 0.5 nautical mile stations west of Moriches Inlet. Thus, the inshore-offshore distribution might be used to indicate preferred mining locations along the shoreline east of Moriches Inlet. That pattern indicates that the populations are depressed in the 1.5 to shore zone along most of the Westhampton Beach Reach. It was also noted that populations west of Jones Inlet exhibit major differences in shell ring development over those east of the inlet.

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Distribution of juvenile clams show lowest densities near Montauk, increasing as one moves westward, attaining a maximum of 2.5 animals per Shipek grab sample just short of Moriches Inlet. In addition to the east-west pattern, there appears to be an onshore-offshore pattern. Inshore (stations at 0.5 miles), peak abundance was found along the eastern half of Fire Island. Abundance decreases rapidly with increasing distance offshore. Within the 1.5 mile grid the longshore pattern is visible; however, in the 2.5 grid only populations outside the Westhampton Beach study area reflect the inshore pattern.

Visual evidence on both surface sediment character and concentrations of <u>Spisula</u> suggests that juvenile populations concentrate in finer grained sediments. It may be hypothesized that these concentrations are caused by disruption of long-shore transport processes that result in the deposition of both finer bay sediments and recently metamorphosed <u>Spisula</u>. This would explain why populations of juvenile <u>Spisula</u> are elevated near inlets. However, there are too few data to adequately test the above hypothesis. By contrast it should be noted that in approximately 80 percent of samples taken in the 1974-1975 study, adult <u>Spisula</u> were found to occupy habitats having a mixture of medium to fine sand instead of finer grained sediments.

Extensive populations of adult <u>Arctica</u> were noted off eastern Long Island from Fire Island Inlet almost to Montauk and typically in fine to medium sized sand. Although it has been shown that <u>Arctica</u> normally are found in somewhat siltier sands and deeper waters, the sampling revealed them in waters of 10 to 12 meters depth and in the less stable inshore sites.

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Figure 2.

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Station No.	<u>Spisula in</u> Bushels Per Haul	Arctica Presence at each Station ²
130	2.5	
131	1.5	G 86
132	مین ا	
140	1.0	+
141	3.0	-
142	2.0	dana
150	0.3	+
151	1.0	-
152	1.0	
160	0.5	
161	0.5	-
162	2.0	200
170	0.4	+
171	1.0	
172	0.5	-
180	0.1	+
181	1.5	-
182 :	0.9	207
190	0.1	+
191	0.2	-
192	0.2	-
200	1.0 .	+
201	0,5	+
202	0.3	

Abundance of Spisula solidissima and Arctica islandical

- The stations are numbered so that the final digit represents station location. Station numbers ending with (0) are 2.5 nautical miles offshore, (1) is 1.5 nautical miles offshore and (2) is 0.5 nautical miles offshore.
- 2. Plus (+) indicates presence of adults while minus (-) indicates lack of species in sample.

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AGREEMENT BETWEEN THE UNITED STATES OF AMERICA AND THE STATE OF NEW YORK

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FOR LOCAL COOPERATION AT FIRE ISLAND INLET TO MONTAUK POINT, N.Y. BEACH EROSION CONTROL AND HURRICANE PROTECTION PROJECT

INCREMENT OF WORK SECTIONS 1B, 1A and 2A MORICHES TO SHINNECOCK REACH

This AGREEMENT entered into this _____ day of _____ 1980, by and between the UNITED STATES OF AMERICA (hereinafter called the "Government"), represented by the Contracting Officer executing this agreement, and the STATE OF NEW YORK (hereinafter called the "State"), WITNESSETH THAT:

WHEREAS, construction of the Fire Island Inlet to Montauk Point, New York, Beach Erosion Control and Hurricane Project (hereinafter called the "Entire Project") was authorized by the River and Harbor Act of Congress, approved 14 July 1960 (Public Law 86-645), substantially in accordance with House Document No. 425, 86th Congress, 2nd Section, and heretofore modified by Section 31 of the Water Resources Development Act of 1974, approved 7 March 1974; and

WHEREAS, the State has requested the continuation of the Entire Project by the placement of beach and dune fill in the Sections 1B, 1A and 2A of the Moriches Inlet to Shinnecock Inlet Reach (hereinafter called the "Project"), the said area consisting of the previously constructed 15 groin field and a 9500ft section to the west of the groin field.

WHEREAS, the State hereby represents that it has the authority and capability to furnish the Non-Federal cooperation required by the Federal legislation authorizing the Entire Project and by other applicable laws;

NOW, THEREFORE, the parties agree as follows:

1. The State agrees that if, within two years of the date of this contract, the Government shall commence construction of the Project in accordance with existing Federal legislation authorizing such construction, the State shall, in consideration of the Government commencing construction of such Project, fulfill the requirements of Non-Federal cooperation specified in such legislation, to wit:

a. The State for its share, will bear 30 percent of the first cost, including the value of lands easements, and rights-or-way, of the Entire Project, with the local cash contribution to be paid either in a lump sum prior to commencement of the Entire Project, or in installments prior to commencement of pertinent items including those of the Project, in accordance with the construction schedules as required by the Chief of Engineers. Final Apportionment of costs will be made after actual costs and values have been determined; b. The State will maintain and operate all the improvements and undertake periodic beach nourishment for the Entire Project after completion in accordance with regulations prescribed by the Secretary of the Army, which are attached hereto as Schedule "A", except that for a period of ten years after completion of a useful nourishment unit, the Government will contribute an amount now estimated at annually towards the said periodic beach nourishment in accordance with the authorizing House Document for the Entire Project dependent on conditions of public use and ownership and other changes at the time of construction;

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c. The State willhold and save the United States free from damages due to the construction works of the Entire Project and periodic beach nourishment, except for for damages due to the fault or negligence of the United States or its contractors;

d. The State will maintain, during the economic life of the Entire Project, continued public ownership of the Non-Federal publicly-owned shores;

e. The State will adopt appropriate ordinances for the Entire Project to provide for the preservation of the dunes and their protective vegetation;

f. The State will control water pollution for the Entire Project to the extent necessary to safeguard the health of bathers;

g. With respect to the Project, the State, as cooperating agency, agrees to:

(1) The placement of beach and dune fill utilizing an offshore borrow site within the existing 15 groinfield area and an area 9500ft. to the west (Sections 1B, 1A and 2A). The dune will be constructed to an elevation of 16ft. above m.s.l. with a crest width of 40ft. Within the groinfield area, the top of the beach berm will be 14ft. above m.s.l. with a 100ft. width at that elevation. In the 9500ft. section west of the groinfield, the top of the beach berm will be 12ft, above m.s.l. with a 100-foot width at that elevation.

(2) The installation of sand fences and the planting of beach grass on the dune areas. Such work to constitute an increment of the Entire Project which extends from Fire Island Inlet to Montauk Point;

h. The State will bear 30 percent of the first cost, including lands, easements, and rights-of-way for its share of the beach and dune fill work of the Project to be initiated in FY 1981, with the local cash contribution to be paid either in a lump sum prior to commencement of the Project, or in installments prior to commencement of pertinent items, in accordance with the construction schedules as required by the Chief of Engineers. The State, upon request by the Government, will program its share of funds in succeeding fiscal years to continue this project (as an increment of the Entire Project) to completion. In addition, the State will program funds in the amount to be mutually determined for other work until the Entire Project is completed;

i. The Commissioner of the Department of Environmental Conservation agrees for the State of New York to contribute the full amount of any increase in Federal costs, if any, resulting from the separate construction of the beach and dune fill, sand fences, and the planting of beach grass;