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
Environmental Analysis Branch

Notice of Availability

The U.S. Army Corps of Engineers, New York District announces the availability of the *Draft Finding of No Significant Impact* (DFONSI), *Draft Environmental Assessment for the Downtown Montauk Stabilization Project (*DEA) and Draft Hurricane Sandy Limited Reevaluation Report (DHSLRR) for the Downtown Montauk Stabilization Project.

With the passage of the Hurricane Sandy Disaster Relief Appropriations Act of 2013 (Public Law 113-2), the U.S. Army Corps of Engineers has been given the authority and funding to complete ongoing coastal storm damage risk reduction projects and studies in the Northeast.

This DEA was prepared to identify, evaluate, and disclose all associated impacts that would result from the proposed action.

The DFONSI, DEA and DHSLRR will be posted on the on the New York District's website: http://www.nan.usace.army.mil/Missions/CivilWorks/ProjectsinNewYork/

For further project information contact:

Frank Verga
Project Manager
New York District Corps of Engineers
(917) 790-8212
frank.verga@usace.army.mil

To request a copy of the DFONSI, DEA and DHSLRR and to submit written comments, please contact:

Robert Smith
Project Biologist
New York District Corps of Engineers
Attn: CENAN-PL-E
26 Federal Plaza
New York, NY 10278-0090
(917) 790-8729
robert.j.smith@usace.army.mil

Comments received regarding the DEA will assist in the agency's evaluation of the project will be reflected in the project record. The comment period will be 30 days of the date of this notice.

TOWN OF EAST HAMPTON
300 Pantigo Place – Suite 105
East Hampton, New York 11937-2684

Planning Department
Marguerite Wolffsohn
Director

Telephone (631) 324-2178
Fax (631) 324-1476

November 3, 2014

U.S. Army Corps of Engineers
Jacob K. Javits Federal Building
Planning Division, Room 2131
26 Federal Plaza,
New York, NY 10278-0090
Attn: Peter Weppler, Chief Environmental Analysis Branch

Re: Downtown Montauk Stabilization Plan and the East Hampton Local Waterfront Revitalization Plan (LWRP)

From the perspective of the Planning and Natural Resources Departments, the proposed Downtown Montauk Stabilization project is unique and does not conflict with the adopted Local Waterfront Revitalization Plan. § 255-4-29 [Emergency activities] of the Town Code established a suite of options, including the installation of a geotextile tube or sand bag system with provisions for its eventual removal, for private property owners to utilize under circumstances when a building or structures are in imminent peril of incurring damage from flooding and erosion. The Corps project consists of a federal, state and local government collaboration whose purpose is to provide uniform protection across the entire downtown commercial district. The project is intended to provide interim protection to Montauk's business district while a more comprehensive and longer term solution is developed either independently from or as part of the Fire Island to Montauk Point Reformulation Study (FIMP).

In the absence of a more substantial beach fill or feeder beach, the geotextile project with its sand cover component is far more preferable than the permanent hardening of the downtown beaches or the compulsion of an individual property owner to undertake a protective measure that is clearly beyond compatibility with the LWRP. The time frame for the eventual removal of a geotextile system authorized by the above referenced Code section was established for an individual property owner and may not be adequate to address the goals of an intergovernmental regional management strategy. It is recognized that the project and the LWRP may need to be

reconciled either by the adaptive management of the project, based upon its performance in the field, or by the modification of the LWRP and Town Code if necessary.

Feel free to contact the undersigned if there are any questions or for any additional information regarding this project and the LWRP.

Sincerely,

Brian Frank
Chief Environmental Analyst
bfrank@ehamptonny.gov

STATE OF NEW YORK
DEPARTMENT OF STATE
ONE COMMERCE PLAZA
99 WASHINGTON AVENUE
ALBANY, NY 12231-0001

ANDREW M. CUOMO
GOVERNOR

CESAR A. PERALES
ACTING SECRETARY OF STATE

October 24, 2014

Mr. Peter Weppler
U.S. Department of the Army - NY District
Jacob K. Javits Federal Bldg. - 26 Federal Plaza
New York, NY 10278-0090

Re: **F-2014-0696 (DA)**
Downtown Montauk (DM) Project
County of Suffolk, New York; Atlantic Ocean
Provide coastal storm risk management through dune construction within the Downtown Montauk project area
County of Suffolk, New York; Atlantic Ocean
Concurrence with Consistency Determination

Dear Mr. Weppler,

The Department of State (DOS or "the Department") has completed its review of the U.S. Army Corps of Engineers' (Corps) consistency determination regarding the consistency of the above referenced project with the policies of the Town of East Hampton Local Waterfront Revitalization Program (LWRP) and the New York State Coastal Management Program (NYS CMP). Based upon the information submitted, including the Hurricane Sandy Limited Re-evaluation Report (HSLRR) and the Environmental Assessment (EA), the Department of State concurs with the Corps' consistency determination.

As with the DM project, we expect that there will be other provisional projects proposed within the Fire Island to Montauk Point (FIMP) project area for which the Department would like to improve collaboration with the Corps and other stakeholders, with the overall goal of developing more resilient and sustainable approaches to coastal management and risk reduction. As a means to better achieving this goal, we encourage inclusion of DOS in the early stages of all project planning and also recommend the following actions:

Place more emphasis on comprehensive long-term risk reduction and implementation of adaptive measures to better protect the coastal communities. This can be accomplished through

- integrating projects with local and regional land use planning
- developing appropriate resilience measures to improve community safety
- accounting for natural processes and sea level rise in project planning

Improve communication and documentation on these projects to ensure that the public and decision-makers are provided with a better understanding of the expected level of risk reduction.

- Defining resiliency benefits for shorter term, interim projects, like DM, is particularly important.

This concurrence is without prejudice to and does not obviate the need to obtain all other applicable licenses, permits, or other forms of authorization or approval that may be required pursuant to existing State statutes, nor does it obviate the need for the submission of a consistency determination for any additional or related activities which may be proposed within or which may affect the project area in the future.

When communicating with us regarding this matter, please contact us at (518) 474-6000 and refer to our file number F-2014-0696.

Sincerely,

Matthew Millea
Deputy Secretary of State
Office of Planning and Development

MM/ jz
Cc: USACE - New York District – Jodi McDonald; Peter Weppler
NYSDEC – Sue McCormick
East Hampton (T) – Brian Frank
GOSR – Jamie Rubin
NYSDEC – Jim Tierney

From:	Smith, Robert J NAN02
To:	Ashton, Karen NAN02
Subject:	FW: [EXTERNAL] Downtown Montauk Project description (UNCLASSIFIED)
Date:	Tuesday, October 21, 2014 12:13:25 PM
Attachments:	Downtown Montauk Draft Project Description.docx

Classification: UNCLASSIFIED
Caveats: NONE

-----Original Message-----
From: Weppler, Peter M NAN02
Sent: Friday, June 20, 2014 12:19 PM
To: Sinkevich, Steve; Smith, Robert J NAN02
Subject: RE: [EXTERNAL] Downtown Montauk Project description

Steve

Draft Project Description Attached -

Re: T&E Species - Based on the habitats present in the Downtown Montauk project area, the proximity of the project area to developed areas and agency responses regarding lack of known records of rare or state-listed animals and plants, and significant natural communities the likelihood of protected species occurring in the Downtown Montauk project area is minimal. Therefore, the District has made a determination of no effect for listed species.

Thanks
Peter

Peter Weppler
Chief, Environmental Analysis Branch
U.S. Army Corps of Engineers - Planning
26 Federal Plaza - Room 2151
New York, NY 10278-0090
Tel: 917-790-8634
Fax: 212-264-0961

-----Original Message-----
From: Sinkevich, Steve [mailto:steve_sinkevich@fws.gov]
Sent: Wednesday, June 18, 2014 3:34 PM
To: Weppler, Peter M NAN02; Smith, Robert J NAN02
Subject: [EXTERNAL] Downtown Montauk Project description

Did you send the project description to us yet? If so, could you send it to me? Thanks.

--
Steve Sinkevich
Senior Fish and Wildlife Biologist
U.S. Fish and Wildlife Service
Long Island Field Office (Region 5)
340 Smith Road
Shirley, N.Y. 11967
631-286-0485 ext 2121 (voice)
631-286-4003 (fax)

steve_sinkevich@fws.gov (e-mail)

Classification: UNCLASSIFIED
Caveats: NONE

1.1 Downtown Montauk Project Area

The Montauk Reach is the eastern most of the five designated Reaches within the overall FIMP study area; its location is shown on Figure 2. Montauk is the eastern most hamlet in the Town of East Hampton. It extends from Hook Pond in Easthampton to Montauk Point, a distance of about 20 miles. The Downtown Montauk project area consists of the business area in the hamlet of Montauk and is approximately 1 mile long by 0.25 mile wide. The Downtown Montauk project area is shown on Figure 3.

Downtown Montauk is the largest business area in the hamlet of Montauk. The land use in the Downtown Montauk project area consists of motels, restaurants and shops for transient visitors making Montauk the most seasonal of the hamlets in East Hampton. Residential development is also present in the project area. The layout of downtown Montauk has largely been governed by its unique oceanfront setting and the development pattern. Dense development has resulted from the small size of the lots and the high appeal of a coastal resort community along the Atlantic Ocean.

Within the project area, ocean shoreline sand generally moves east to west alongshore, in response to waves and currents during normal conditions and during storms. This alongshore movement of sand maintains the prevailing shoreline conditions. In addition to alongshore movement, sediment is also exchanged in the cross-shore direction, through erosion and accretion of the beach and dune, exchange of sand through and across tidal inlets, continued erosion of the inner continental shelf, redistribution of reworked sediments, and during large storm events through the episodic transport of sand across the island.

Purpose and Need

Recent storm events, such as the storms in the fall of 2009 and Hurricane Sandy in 2012, have eroded beaches and dunes in the Downtown Montauk project area, creating a potentially imminent hazard that has left many commercial buildings along the shoreline vulnerable to damages from future storms. Beach and dune erosion caused by Hurricane Sandy has partially undermined several shorefront structures in downtown Montauk, leaving the area vulnerable to damage from future storms. This Draft EA documents the impacts associated with implementing the Downtown Montauk Stabilization Project.

A proposed solution to address this vulnerability is the implementation of Stabilization Projects (at Downtown Montauk and also from Fire Island to Moriches Inlet (FIMI) which is discussed in another report). These projects are proceeding on a separate, accelerated path separate from those previously executed as "Interim Projects" along the south shore of Long Island because of the urgency to restore the coastline in this particular reach, thereby addressing the immediate need to reduce risk to life and property that resulted from Hurricane Sandy. The assumption for these Stabilization Projects is that these projects are advancing as unique 100% Federally-funded stabilization components and separate from other projects.

The Downtown Montauk Stabilization Project (the Project) has been developed to reinforce the existing dune and berm system along the Downtown Montauk project area. The selected design consists of dune reinforcement along 3,100 ft of the shoreline. Because there are restrictions on placement of hard structures in the coastal zone at East Hampton, dune reinforcement will be accomplished utilizing geobags, which are geotextile bags filled with sand. The sand-filled geobags will be covered with a minimum of 3-ft of sand to reduce the likelihood of bag exposure.

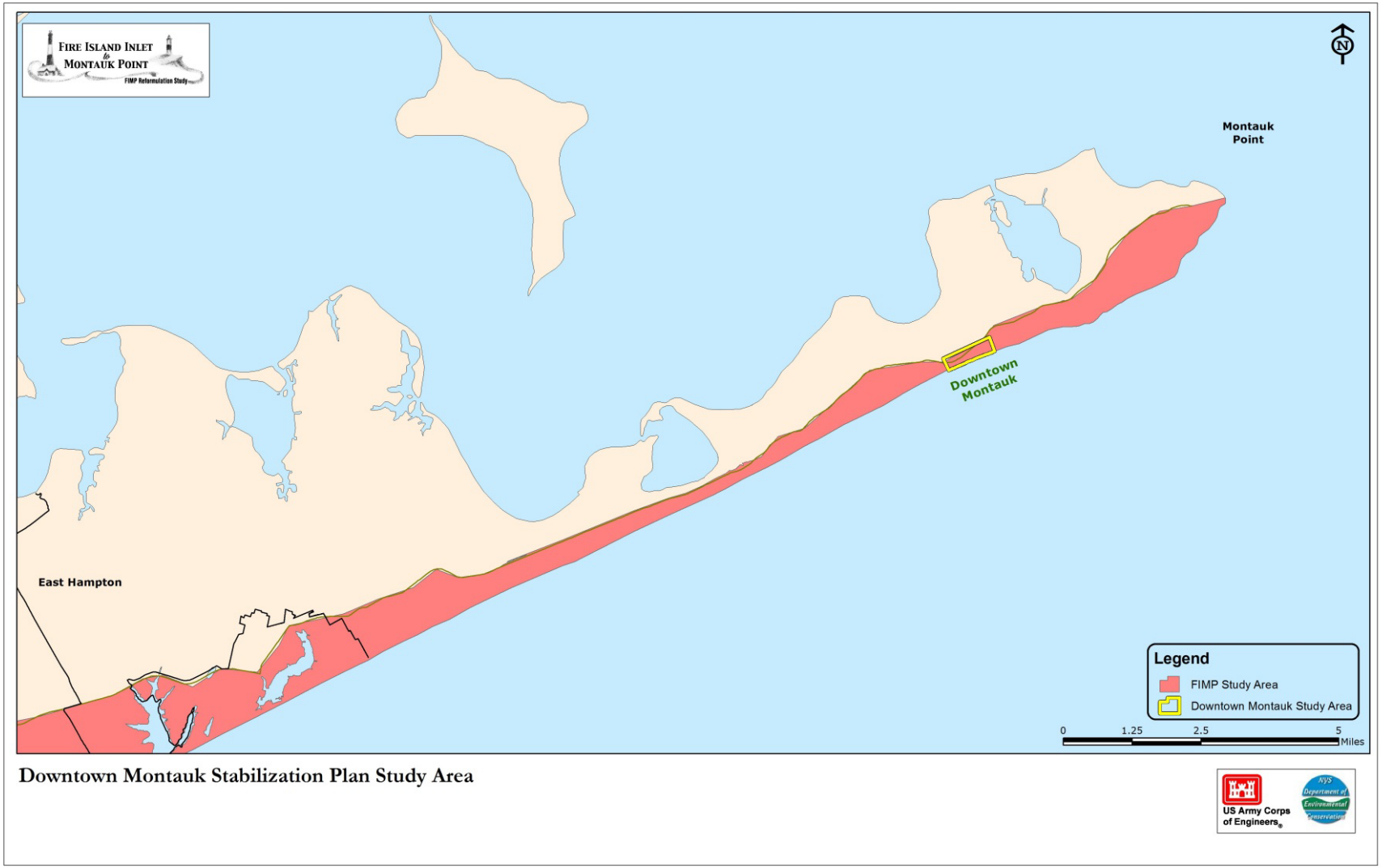


Figure 1: Downtown Montauk Study Area

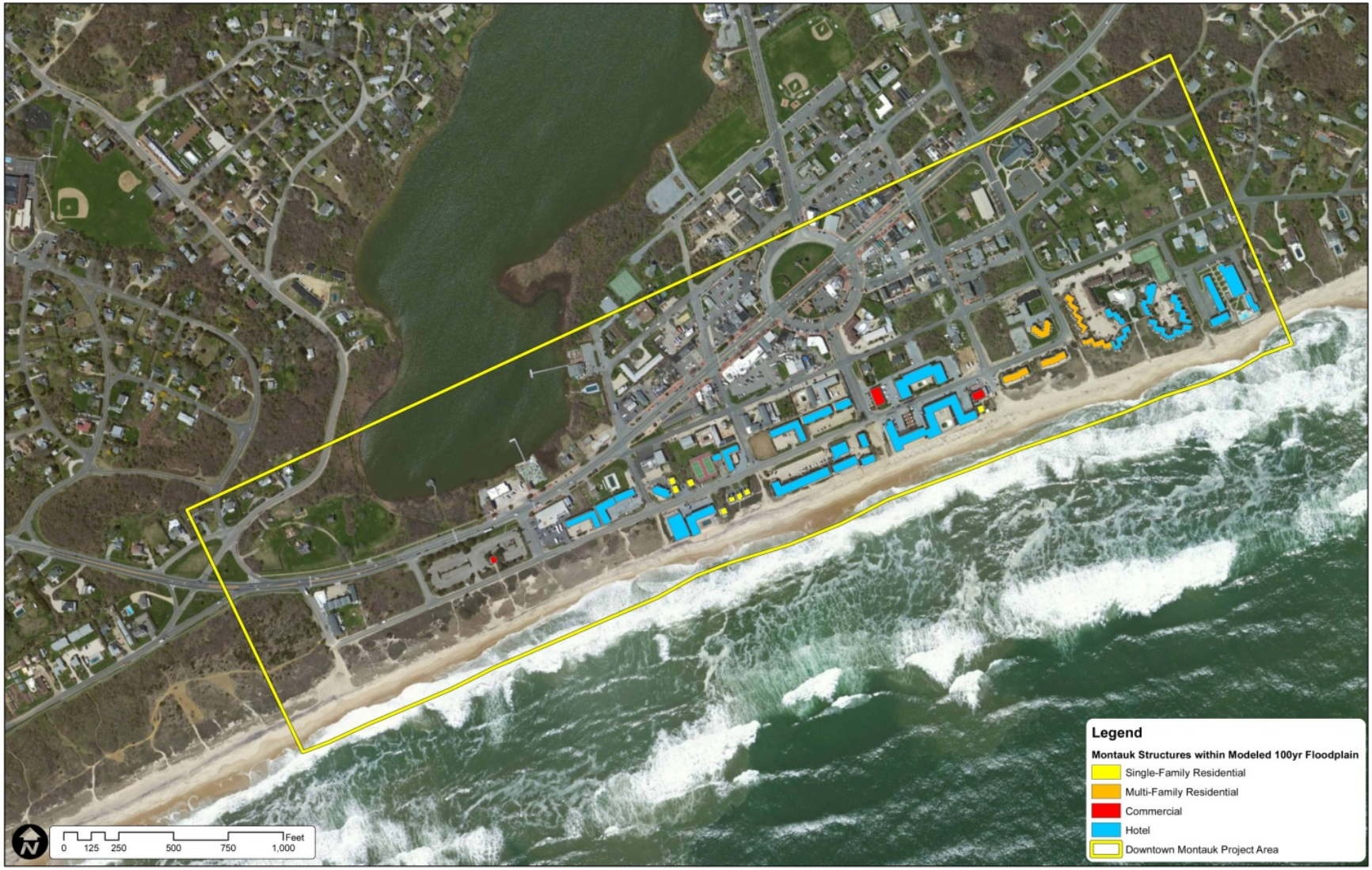


Figure 2: Downtown Montauk Project Area- Aerial View

Identification of Montauk Stabilization Plan

As a consequence of severe coastal erosion during Hurricane Sandy, the dune and berm system at Downtown Montauk is now depleted. The foundations of several shorefront commercial buildings were exposed during Hurricane Sandy and are now vulnerable to future storm events. In response to the increased vulnerability to future events, consistent with the Disaster Relief Appropriations Act of 2013 (Public Law. 113-2; herein P.L. 113-2), and recognizing the urgency to repair and implement immediate storm protection measures, the USACE has proposed an approach to expedite implementation of construction of necessary stabilization efforts at Downtown Montauk independent of the FIMP Reformulation Study. This approach has gained widespread approval from New York State, Suffolk County, N.Y. and the Town of Easthampton, who recognize the extreme vulnerability of the coast and the need to move quickly to address this need.

The post-Sandy Downtown Montauk Stabilization Project was developed based upon the Engineering, Economic, Environmental, and Planning efforts that have been undertaken through the ongoing FIMP Reformulation Study. The study compared several alternatives to identify the recommended scale and scope of a stabilization project. Stabilization efforts were focused on Downtown Montauk as there is a more urgent need to advance the stabilization of this reach due to its vulnerability and potential for major damage and risk to life and property.

This stabilization effort has been developed as a one-time, stand-alone construction project to repair damages caused by Hurricane Sandy and to stabilize / reinforce the dune. This Chapter demonstrates that the Downtown Montauk Stabilization Project has its own independent utility, and as developed does not limit the options available in the overall FIMP Reformulation Study or pre-suppose the outcome of the Reformulation Study.

Effective Project Life

The Stabilization Project has been evaluated over a 15 year period. In the absence of a sediment management solution as part of the overall FIMP Reformulation Study, long-term erosion will lead to a reduced level of protection increasing the likelihood of undermining and displacement of the reinforced dune core. In addition, degradation and failure of the Geotextile Sand Containers (GSC) is inevitable as the GSCs will breakdown over time from UIV radiation, vandalism, and debris. Continued maintenance over the effective project life is required to maintain the sand dune cover and increase the longevity of the GSCs.

Stabilization Plan Details

Extent

The proposed design includes 3,100 feet of reinforced dune extending from South Emery Street to Atlantic Terrace Motel and tapers into high dunes at both ends of the Project Area. The extent of the proposed plan was selected to provide protection to all of the shorefront commercial buildings in Downtown Montauk.

Alignment

The design alignment defines the cross-shore location of the design section. For the Stabilization Project the alignment closely follows the existing dune (+ 12 ft NGVD contour). In some locations the alignment was adjusted to ensure that the footprint of the GSCs is seaward of shorefront structures. Figure 17 shows an example of the alignment in the Project Area. The plan layout for the Stabilization Project is available in Appendix A.

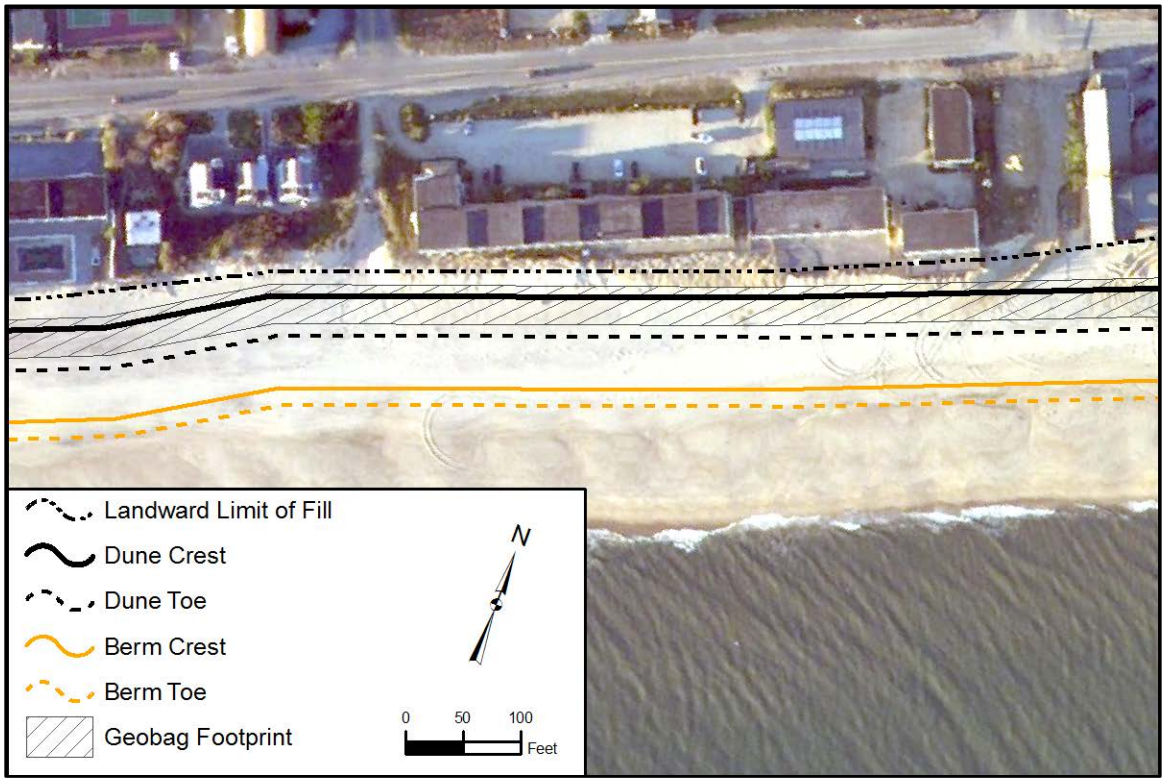


Figure 3: Downtown Montauk Alignment

Design Section

A typical section of the proposed Reinforced Dune is shown in Figure 18. The core of dune consists of sixteen 2.4 ton GSCs with filled dimensions of approximately 5.5 ft long, 3.5 ft wide, and 1.5 ft tall. For greater stability the GSCs are aligned with the long side perpendicular to the shoreline with an overlap of 50% of the filled width. The GSCs are stacked along the existing dune at a 1V:2H slope. The GSCs extend from a toe elevation of +3 ft to a crest elevation of +13.5 ft NGVD. In order to increase the resiliency of the design and reduce the potential for undermining, the proposed design includes a 45 foot wide berm cap at +9.5 ft NGVD. The additional sand will provide protection to the toe of the structure and decrease the likelihood of exposure of the GSCs during small storm events.

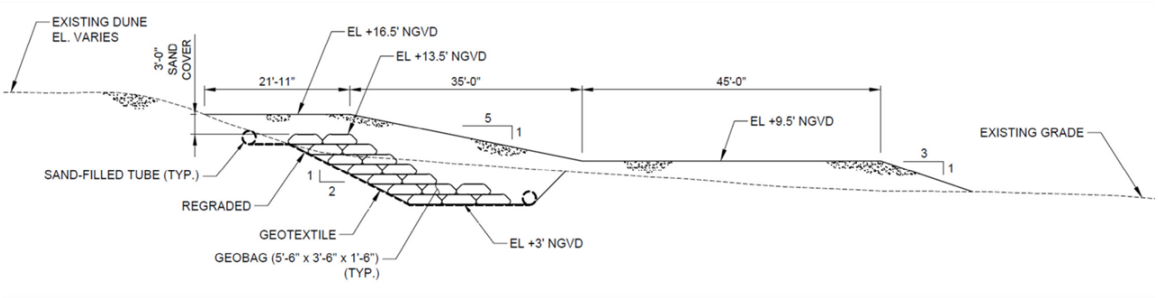


Figure 4: Reinforced Dune Typical Section

Geotextile Sand Containers

Geotextile Sand Containers (GSC) are an emerging technology and design guidance for the use of GSC in coastal protection structures is still evolving. Large scale model tests and field tests have shown that the dislodgment and pullout of the slope containers by wave action, including the sliding and the overturning of crest containers, are strongly affected by the deformation of the sand containers (Dassanayake and Oumeraci, 2012). Recent advances in understanding the hydraulic stability of the GSC under wave attack (Wouters, 1998; Pilarczyk, 2000; Oumeraci et al, 2003; and Dassanayake and Oumeraci, 2012) have led to several design formulae for GSC structures. Most of the design formulae relate the stability of the GSC to the surf similarity parameter and wave height. An increase in the wave height and wave period results in decreased stability of the GSCs and increases the required size and weight of the GSC.

The aforementioned design guidance led to selection of 2.4 ton GSCs with filled dimensions of approximately 5.5 ft long, 3.5 ft wide, and 1.5 ft tall. In order to increase the stability of the GSCs the long side of GSCs is laid out perpendicular to the shoreline with an overlap of 50% of the filled width. A total of 14,171 GSC are required to construct the reinforced dune core.

Sand Fill Volumes

A total of 65,000 cy of sand are required to construct the reinforced dune. Approximately two-thirds of the sand fill will be used to fill the GSCs or placed in the dune. The remaining one-third will be used to construct the berm cap. A portion of the sand, 20,000 cy, will be obtained from excavation and re-grading of the existing dune. The remaining 45,000 cy will be obtained from upland sediment sources.

Upland Sediment Sources

Due to the relatively small quantity of sand fill needed to construct the project it is recommended that the sand fill be obtained from upland sediment sources. The cost of mobilizing a dredge, approximately $4 million, would not be cost-effective considering the relatively small quantities of sand fill required.

Two upland sediment sources that could meet the sediment demands of the project were identified within 25 miles of the Project Area. The compatibility of the upland sediment and native sediment was evaluated based on the grain size distribution and color. The analysis indicated that the median grain size of the

upland sediment sources (0.51 and 0.44 mm) is the same or slightly larger than the native sediment (0.42 mm). In addition, the grain size distribution of the upland sediment sources and native sediment are similar. The compatibility of the color of the sediment is illustrated by Figure 19 which compares sediment samples from the two upland sediment sources.

Figure 5: Upland Sediment Samples

Real Estate

Real estate requirements include the easements and rights of way, and relocations to implement the initial construction and are described in complete detail in the Real Estate Appendix E. No property acquisitions or structural relocations are required for the project. The lands, easements, rights of ways, and relocations necessary for implementing the project are described herein. The two types of easements required for the Stabilization Project include a perpetual easement, and a temporary work easement. A perpetual easement would be obtained along all areas where beachfill material is placed to allow continual access to construct, operate, maintain, patrol, repair, and replace the beach berm and dune. This easement precludes development, other than approved dune crossings and ensures that the design section would be held inviolate from future development. Temporary work area easement would be obtained to allow right of way in, over, and across the land for a period of three years for construction operations. Acquisition of the necessary lands and easements are a responsibility of the non-federal interests.

Public Access

Suitable public access is required for any areas where Federal expenditure of funds will be utilized for beach restoration. Analysis and acceptability of public access is documented in Appendix D. The analysis of public access indicates that the areas where sand is being placed is fully accessible and in compliance with ER 1165-2-130.

From: Weppler, Peter M NAN02
Sent: Thursday, October 16, 2014 5:00 PM
To: Ashton, Karen NAN02; Couch, Stephen NAN02
Subject: Fw: [EXTERNAL] Downtown Montauk Project ESA Section 7 Consultation

Follow Up Flag: Follow up
Flag Status: Flagged

Peter Weppler
Chief, Environmental Analysis Branch
U.S. Army Corps of Engineers - Planning
26 Federal Plaza - Room 2151
New York, NY 10278-0090
Tel: 917-790-8634
Fax: 212-264-0961

From: Sinkevich, Steve <steve_sinkevich@fws.gov>
Sent: Thursday, October 16, 2014 3:17 PM
To: Weppler, Peter M NAN02; Smith, Robert J NAN02; Patricia Cole; David Stilwell
Subject: [EXTERNAL] Downtown Montauk Project ESA Section 7 Consultation

We received the Corps' "no effect to federally listed species" determination for the above referenced project in your June 20, 2014 e-mail. No further ESA-Section 7 coordination or consultation is required.

--
Steve Sinkevich
Senior Fish and Wildlife Biologist
U.S. Fish and Wildlife Service
Long Island Field Office (Region 5)
340 Smith Road
Shirley, N.Y. 11967
631-286-0485 ext 2121 (voice)
631-286-4003 (fax)
steve_sinkevich@fws.gov (e-mail)

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
Environmental Analysis Branch

August 11, 2014

Jeffery Zappieri
Consistency Review
NYS Department of State
Division of Coastal Resources and Water Front Revitalization
41 State Street
Albany, NY 12231

Subject: Down Town Montauk Stabilization Project NY, Suffolk County,

Mr. Zappieri:

The New York District (District) and the State of New York Department of Environmental Conservation (DEC) are partnering on the development of a plan to stabilization and reduce unanticipated flooding effects associated with storm events within the project area. Recent storm events, such as Hurricane Sandy and Hurricane Irene, have the left the dune and berm system along the south shore of Down Town Montauk vulnerable, increasing the potential for overwash during future storm events. The proposed action has been developed to reinforce the existing dune and berm system in this area. The Downtown Montauk Stabilization Project (the Project) has been developed to reinforce the existing dune and berm system along the Downtown Montauk project area. The selected design consists of dune reinforcement along 3,100 ft of the shoreline. Because there are restrictions on placement of hard structures in the coastal zone at East Hampton, dune reinforcement will be accomplished utilizing geotextile bags, which are geotextile bags filled with sand. The sand-filled geotextile bags will be covered with a minimum of 3-ft of sand to reduce the likelihood of bag exposure. . In order to increase the resiliency of the design and reduce the potential for undermining, additional sand placement to build a berm cap is proposed. The additional sand, estimated at approximately 18,600 cubic yards (6cy/ft), will provide additional protection to the toe of the structure from undermining and decrease the likelihood of geotextile bags exposure during small storm events. The Dune Reinforcement Alternative including filling of the bags will requires approximately 45,083 cy of sand. This quantity of sand can be obtained from upland sources rather than offshore borrow areas. It is estimated that the reinforced dune in combination with the average existing beach width would provide a level of protection of approximately 25 year. No renourishments are included in the Dune Reinforcement Alternative.

Enclosed you will find applicable State Coastal Policies and the Determination of how they project meets or advances their intent (attachment). The District has determined that the intended activity is consistent with New York State's Coastal Management Program (CMP) as required by U.S. Department of Commerce regulations (15 CFR 930.57). I look forward to working with you and your staff on this effort. If you should have any questions, please contact Mr. Robert J. Smith of my staff at 917-790-8729

Sincerely,

Peter Weppler
Chief, Environmental section

Attachments

Preserving America's Heritage

September 2, 2014

Mr. Peter Weppler
Chief, Environmental Analysis Branch
U.S. Army Corps of Engineers - Planning
26 Federal Plaza - Room 2151
New York, NY 10278-0090

Ref: ***Proposed Downtown Montauk Stabilization Project***
Suffolk County, New York

Dear Mr. Weppler:

On August 26, 2014, the Advisory Council on Historic Preservation (ACHP) received your notification and supporting documentation regarding the adverse effects of the referenced undertaking on properties listed on and eligible for listing in the National Register of Historic Places. Based upon the information you provided, we have concluded that Appendix A, *Criteria for Council Involvement in Reviewing Individual Section 106 Cases,* of our regulations, "Protection of Historic Properties" (36 CFR Part 800) does not apply to this undertaking. Accordingly, we do not believe that our participation in the consultation to resolve adverse effects is needed. However, if we receive a request for participation from the State Historic Preservation Officer, Tribal Historic Preservation Officer, or another party, we may reconsider this decision. Additionally, should circumstances change, and you determine that our participation is needed to conclude the consultation process, please notify us.

Pursuant to 36 CFR 800.6(b)(1)(iv), you will need to file the final Memorandum of Agreement (MOA), developed in consultation with the New York State Historic Preservation Officer (SHPO) and any other consulting parties, and related documentation with the ACHP at the conclusion of the consultation process. The filing of the Agreement and supporting documentation with the ACHP is required in order to complete the requirements of Section 106 of the National Historic Preservation Act.

Thank you for providing us with your notification of adverse effect. If you have any questions or require further assistance, please contact Brian Lusher at 202-517-0221, or via email at blusher@achp.gov.

Sincerely,

Raymond V. Wallace

Raymond V. Wallace
Historic Preservation Technician
Office of Federal Agency Programs

September 23, 2014

The U.S. Army Corps of Engineers, New York District
Planning Division-Environmental Branch (ATTN: Mr. Robert Smith)
26 Federal Plaza, New York, New York 10278-0090

RE: Downtown Montauk Stabilization Project

Submitted by: Robert S. Young, PhD, PG
Director, Program for the Study of Developed Shorelines

Please consider the following comments as you evaluate the DEA of the proposed geotextile bag/sand dune construction project. I am a coastal geologist with 25 years of experience in coastal science, coastal management, and the evaluation of coastal engineering design. I have national and international experience along with significant experience locally along the beaches of Long Island through my work with Trustees of the Town of Southampton, the National Park Service at Fire Island, and The Nature Conservancy of Long Island. This evaluation was performed by me at the request of the Eastern Long Island Chapter of the Surfrider Foundation. I am a licensed professional geologist.

In short, I have reviewed all documents and maps related to the project and the Draft Environmental Assessment. I conclude that the project design is ill conceived. The berm will not last and the geotextile bags will be uncovered far before the design life of the project is reached. If the geotextile bags are not destroyed in a storm, they will act as a seawall, narrowing the beach until it disappears (through passive erosion). There is a very high likelihood that the public beach will be lost as the project erodes. The project will provide only moderate protection for infrastructure in a very small storm. The project will be constructed using sand that is of questionable compatibility. In a large storm, the beach will be littered with bags that will be very difficult to remove. The Town will be setting a very bad precedent in sacrificing the public beach for the protection of private property.

Project Design

The project will attempt to move slightly more than 3000ft of shoreline seaward of its current position. This will create an unsustainable bulge in the shoreline. The design berm will be redistributed alongshore at a faster rate than neighboring shorelines. Even a small storm will exhume and uncover the geotextile bags, leaving behind what is effectively, a seawall. It should be made very clear that, as long as the bags are in place, they will act as a seawall and they will have the same detrimental effects.

Seawalls are shore parallel structures designed to protect property from coastal erosion. Any structure that is designed to combat storm erosion by reflecting waves and surge is effectively a seawall. If a line of geotextile bags remains in tact during storm wave attack, then the bags are acting like a seawall and will have identical impacts. Many

states have recognized this fact and codified it. Florida recognizes that geotextile walls fall into the same category as other types of coastal armoring:

> *COASTAL ARMORING POLICY and GUIDELINES: Section 161.085, Florida Statutes and Chapter 62B-33, Florida Administrative Code.*
>
> *COASTAL ARMORING: A manmade structure designed to either prevent erosion of the upland property or protect eligible structures from the effects of coastal wave and current action. Examples include seawalls, revetments, bulkheads, retaining walls, sloped boulder revetments, sloped geotextile revetments, geotextile dune scour protection, or other similar structures.*

So, one must keep in mind that if the geotextile bags works as designed, that wall will have the same impacts as a seawall.

1) When placed on an eroding or retreating beach or bluff, they will cause that beach to narrow and eventually disappear.

2) Erosion (especially during storms) will be increased at the ends of the wall, the so-called "end effect." The end effect is the result of waves diffracting around the edges of the wall during storms or high water events. It results in a clear increase in erosion at the margins of the geotextile bag wall.

It is my opinion that the project will be likely to result in the loss of the public recreational beach well before the design life is reached.

Alternatives

For reasons that are difficult to understand, the DEA did not evaluate the simple construction of dunes and berm reconfiguration without a geotextile bag core. Even though such a project would not provide the same level of protection as a geotextile bag wall, this alternative should have been evaluated because the negative impacts described above would be eliminated. Cost savings would be significant. In fact, if a desirable upland source of sand could be identified, the dunes could be constructed multiple times over the 15-year lifespan of the project.

Sand Quality

The DEA is relatively silent on the compatibility of the sand identified for the project. There is a brief mention of similar average grain size, but no details on the percentage of fine-grained sediments or mention of color differences. One photograph is presented which appears to show material of very different color with additional fine sediments. Those concerned about the potential environmental impacts of the project sand and the aesthetic appeal of a beach potentially composed of this material should demand further investigation and explanation. At the very least, a much closer examination of the material being proposed for the project should be conducted.

Storms Exceeding Project Design

All parties must consider the possibility that a storm exceeding project design will occur during the planned lifespan of the project. In a significant storm, the bags will be scattered along the beach, buried further into the berm, and tossed landward. Removal of the debris could be quite difficult and will have its own environmental consequences. Who will be responsible for the cleanup? Coastal storms have destroyed geotextile walls in other locations leaving a problematic mess.

Precedent

Is this project to become the design precedent for the entire Town of East Hampton? Is the Town ready to make this the model for shoreline management? Clearly, there is an issue with a certain number of buildings impinging on the public, recreational beach that is utilized by residents and tourists alike. All coastal communities must balance the need to protect economically important oceanfront development with the need to protect the economic value of the Town's beaches (which also serve the economic interests of the entire community). In my experience, once you travel down the road of seawall construction (geotextile or otherwise), there is no turning back. The property owners along the Montauk project area will always expect at least this level of protection, and other property owners in East Hampton will also expect the right to construct similar structures. Careful consideration must be given to the development of a vision for what future Town beaches will look like, and where the Town's priorities will lie. Eventually, you will need to decide between protecting oceanfront property, and protecting the beach. This is not a suggestion that one should entertain the possibility of abandoning the coast: not at all. It is not an either or choice. But, there is an opportunity here to consider changing vulnerability "footprint" of the community, and to examine in a fair way, the economics of attempting to hold the shoreline in place forever while severely degrading the beach. This discussion should take place whether the project proceeds or not.

In summary, it is my opinion that the project design is flawed. The geotextile wall will be exposed well before the projected lifespan is reached. The project will likely result in significant degradation of the public beach, while providing little protection for property. All reasonable alternatives were not considered in the DEA. The sand quality of the proposed upland source needs to be examined in greater detail. Above all, the Town of East Hampton will be setting a terrible precedent for future coastal management.

Thanks very much for the opportunity to comment on the DEA. Please contact me with any questions

Robert S. Young, PhD (Licensed Professional Geologist in NC, SC, FL)
Director, Program for the Study of Developed Shorelines
Cullowhee, NC 28723
828-227-3822, FAX 828-227-7163
ryoung@email.wcu.edu

SENT ALSO BY EMAIL TO: robert.j.smith@usace.army.mil

September 23, 2014

Robert Smith
Project Biologist
New York District Corps of Engineers
Attn: CENAN-PL-E
26 Federal Plaza
New York, NY 10278-0090

Re: Draft Environmental Assessment for the Downtown Montauk Stabilization Project (DEA); comments

Dear Mr. Smith:

We have reviewed with interest the various documents prepared by the Army Corps of Engineers related to the referenced Project. The shoreline protection contemplated for this Project, utilizing geotextile sand bags, is a form of erosion control in which we have been actively involved over the course of the past two decades.

We are strong advocates for this type of shoreline protection, and believe it can provide the benefits that are sought for the referenced Project. However, our experience in the design and construction of this form of erosion control has made us acutely familiar with the critical details that make the difference between successful projects that can meet the needs of controlling identified erosion problems, and the failure of such projects that result in a waste of expenditures, and the creation of follow-on problems that have significant additional costs associated with restoration of shorelines and the alleviation of resulting environmental and navigational impacts.

Please find as part of this correspondence our comments on the referenced Project, which we hope, if given proper consideration, will lead to successful results for the proposed shoreline erosion control in Montauk.

Sincerely,

Yogi Harper
President

Encl: Comments on Project

Cc: Frank Verga, Project Manager, New York District Corps of Engineers
frank.verga@usace.army.mil

COMMENTS ON DOWNTOWN MONTAUK STABILIZATION PROJECT

Prepared by: Yogi Harper, President, Erosion Control Specialists of North Carolina, Inc., and Theodore Sampson, Capt. USCG(Ret), CEO Sampson Contracting, Inc. (a SDVOSB Company)

Background:

The use of geotextile containers for sand, placed to provide protection for ocean-side buildings and stabilization of ocean shorelines, have been used for many years now with varying degrees of success. The success of the use of geotextile sand containers for such purposes is related to appropriate designs that properly take into consideration the many variables at play, and construction techniques that ensure the geotextile sand bag protection is stable and incorporates the degree of care that allow it to continue to function despite the changes that result in response to ocean forces.

Design variables are related to:

- Forces and characteristics associated with anticipated wave energy and currents related to prevailing and projected storm conditions along the target coastline;
- topography and geology of the shoreline;
- geomorphology the shoreline and how this is related to shoreline location relative to headlands, inlets, and other natural or man-made projections or changes in shoreline configuration;
- proper location of protective alignments, relative to slope of beach and proximity to tidal reach during Spring tides, top elevation needed for protection from anticipated storms, and anticipated scour at the bottom of the alignment;
- proper selection of geotextile sand bag dimensions/geometry, and orientation of sand bags; and
- matching geotextile fabric to sand fill characteristics.

Construction techniques for stability and functionality are related to:

- Preparation of a stable geotextile sand bag foundation;
- protection of sand bag foundation from loss of sand;
- proper securing of scour apron;
- proper placement of seaward, lower tiers of sand bags to sink vertically in response to anticipated scour, without destabilizing protective alignment;
- careful placement of successive sand bags in each tier to ensure mutual support among individual sand bags;
- careful placement of successive tiers of sand bags, with appropriate overlap, to ensure stability of higher sand bag tiers, and overall stability of the alignment;
- proper inflation of sand bags with sand slurry to effect a tight, mutually supporting alignment, and sealing of the fill ports;
- insertion of filler sandbags to ensure a tight revetment when changes in alignment direction occur, and where “return” revetments are constructed at alignment termini; and
- provision of properly compacted backfill of tiered sand bag alignment.

Both the design and construction of geotextile sand bag erosion control revetments are very much more an art than a science, and, at the present state of understanding, such revetments cannot be readily designed by following known engineering principles, nor constructed by

following established construction techniques. A number of academic studies (some referenced by the USACOE for this Project) have addressed the challenge of developing a better understanding of the behavior of geotextile sandbags in response to the forces to which they are subjected, and in the environment in which they are placed. However, the variables are numerous, and the models investigated have been limited in their relevance to the real-world conditions in which geotextile sand bag revetments must function.

The academic studies that have been undertaken have, by necessity, had to place strict limits on design parameters so as to generate meaningful, repeatable, experimental data. While these studies move forward the engineering understanding of how these structures function, they do not translate, at present, into an ability to design well functioning geotextile sand bag shoreline protection revetments.

In contrast to the limited experimental evidence of sand bag function, there does exist considerable empirical evidence of what works, and what does not work in the design and construction of geotextile sand bag revetments. In North Carolina, environmental regulations limit shoreline erosion protection structures to “non-hardened” structures. These regulations go on to limit the size of geotextile sand bags, and limit the footprint of the erosion protection structures. In certain extenuating circumstances, variances to these regulations authorize the placement of enlarged footprints of sand bag alignments in order to achieve the degree of protection needed along shorelines exhibiting dramatic ongoing erosion.

This limitation on the size of geotextile sand bags, and their associated footprints, has resulted in years of “experimentation” in the design and construction of geotextile erosion protection structures. This has lead to an understanding of which designs, and which construction techniques work, and which do not work.

In the early days, simple nine-bag pyramid structures were constructed with the length of the sand bags parallel to the shoreline. These structures proved that they would fail to provide desired protection with virtually the first occurrence of the alignment being subjected to the forces of the ocean. These structures also showed that the degree to which the sandbags were filled, the closeness with which the sand bags were stacked, and whether the higher tiers were overlapped played a role in how fast these structures would fail to provide the desired protection.

Today, in North Carolina, some installation contractors continue to provide geotextile sand bag alignments with this simple pyramid configuration, and they can be predicted to have the same rapid failure rate. The reason this design is still installed relates to what the property owner is willing to pay for the erosion protection. Better designed alignments contain a greater number of sand bags, and property owners typically seek bids for the work which are based on the total cost. Fewer sand bags equates to a lower total project cost.

Where property owners have been willing to pay a higher cost for better geotextile sand bag alignment designs, the results have been the installation of shoreline protection that withstand the rigors of the ocean forces over an extended period of time. Some alignments have been placed directly adjacent to existing high-tide elevations and have remained in place for 10 – 15 years, and have survived the onslaught of repeated nor-easters, tropical storms and hurricanes.

The designs that have proven most successful in fulfilling their shoreline erosion protection function have typically utilized a combination of shoreline-parallel sand bags with shoreline-perpendicular sand bags on the higher tiers. The function of these designs is notably superior, but the long-term success of these designs relates to a great many factors and variables as addressed, above, relating to construction techniques. The failure of a contractor to properly address all of the various construction techniques has a direct result on the success and longevity of a geotextile sand bag erosion protection structure.

While no design, and no amount of care taken during the installation process can guarantee that a geotextile sand bag alignment will function in all circumstances, the experience in North Carolina is indisputable that proper design and proper construction techniques makes the difference between rapid failure and long-term erosion protection.

The negative effects of rapid failure of geotextile sand bag structures has caused on-going negative environmental impacts in North Carolina. Many of the failed sand bag structures have resulted in the deposition of, and sinking of fragmented geotextile material within the beach substrates. Subsequent erosion has brought these to the surface, sometimes well out onto the beach from the "protected" structures. This fabric swirls around in the surf and threatens entanglement of swimmers and boat propellers. Even where the fabric has not become unraveled, some stretches of beach show extended stretches of scattered sand bags that detract from the enjoyment of the public trust by citizen and tourist beach-goers.

In North Carolina, it is accepted policy that geotextile sand bag erosion protection is the preferred alternative to the use of hardened structures for this purpose. There is good evidence that the effects of geotextile sand bag erosion protection structures on adjoining shorelines is limited compared to that of hardened structures. The added advantages of geotextile sand bag erosion protection structures also include the ease of reversibility, and the compatibility of the structure material with that of the ocean beaches. It is important to maintain these advantages through proper design and construction. If this is not done, the advantages disappear, and the negative impacts increase beyond those of hardened shoreline protection.

Comments on the Montauk Project:
Our review of the proposed shoreline protection for the Town of Montauk, unfortunately, leads to a conclusion that the design will fail to provide the desired protection, and based on our experience it is believed that the design will lead to an early, if not rapid, failure of the protective structure.

It is noted that a number of pictures have been provided by the USACOE showing sandbag alignments (see Attachment A), representative of geotextile sand bag erosion protection structures. Three of these pictures are of alignments that were installed by us, utilizing designs developed to address the particular conditions along these stretches of shoreline, and utilizing construction techniques that we have developed over the course of many years to ensure a structure that will survive to provide the needed protection. It is important to note that the design proposed for the Town of Montauk is very different from the designs shown in these three

pictures. Additional pictures of our installation of these alignments are provided in Attachment B.

The most significant difference is simply in the size of geotextile sand bag proposed for use in the Town of Montauk project. The project design calls for geotextile sand bags of a flat dimension of 5-ft x 7-ft. This is a sandbag design dimension that we developed for production by Flint Industries, later distributed by Macaferri, the sole purpose of which was to be used as a "filler bag." Such bags were needed when changes in direction of the alignment had to be accommodated, and when repairs to alignments had to be effected with minimum disturbance to the remaining effective alignment. In the past 12 years, we have found need to place approximately 65 of the sand bags of this dimension. To our knowledge, sand bags with these dimensions have not been used, or tested for use, as the "building blocks" of a protective alignment.

It was never our intent that geotextile sand bags of this dimension would have applicability as the primary sand bags for construction of the entire sand bag protective structure. Sand bags of this dimension have proven very effective for their intended purpose. They expand and deform to fill gaps in an alignment, providing the tightness to the structure needed to achieve an integrated mutually supportive revetment. Pumped on their own, without the confines of already existing adjoining bags, they inflate to a configuration resembling large footballs (see Attachment C). Attempting to construct a large revetment of juxtaposed geotextile sand bags of this dimension would be akin to stacking marbles. It is our opinion that utilization of this dimension of geotextile sand bag for the construction of the desired structure will ensure its early failure when subjected to attack by ocean forces, not to mention that the installation process will be extremely difficult, slow, and lead to a non-uniform and un-integrated alignment.

Despite theoretical calculations provided to suggest that this size of sand bag is sufficient to withstand the anticipated forces of ocean waves, our experience suggests that this minimal size and weight is subject to ready dislodgement by not infrequent wave forces. Larger sand bags may also be moved by such wave forces, but the movement is typically slight, occurring near the end of a bag. The remaining length of the bag most often allows the larger bag to settle back into its installed place, whereas the smaller bags would become dislodged from the alignment, bringing with such movement a permanent weakening of the entire revetment.

In a recent effort to protect a shoreline in South Carolina, small geotextile sand bags were placed, which soon became dislodged by ocean forces. The results of this failure have lead to extensive and expensive response to remove these sandbags from navigation channels and distant beaches. (See Attachment D.)

A second significant difference in the Town of Montauk project relates to the method of providing scour protection for the toe of the geotextile sand bag erosion control structure. The "Typical Section" of the geotextile sand bag reinforced dune shows a small sand-filled tube to anchor the bottom of a 3-ft scour apron, designed to descend to an elevation of approximately 0-ft NGVD. Our experience in providing sand bag alignments suggests that this amount of scour protection would be insufficient to prevent the total undermining of the entire sand bag alignment in significant storm conditions.

In addition, the use of a scour apron with a tube attached limits the ability of the scour apron to prevent undermining of the entire revetment. Our experience has shown that the scour apron is one of the first things that fail when using geotextile tubes due to the lack of ability to respond to the dynamic conditions that occur during storm events. The advantage of utilizing geotextile sand bags for shoreline protection is their ability to respond to the dynamic ocean conditions. Providing inappropriate scour protection and utilizing sand bags of insufficient size works to defeat this advantage.

This limited scour protection, coupled with the minimal size of the proposed adjacent sand bags, suggests that the adjacent bags at the toe of the alignment would not sink vertically to anchor the apron, but would instead roll beyond the apron to be further displaced by the surf and littoral currents. It is critical that the size, number and orientation of the sand bags adjacent to the scour apron be properly chosen and installed in order to attain the scour protection that is essential to structural stability of the entire alignment. While the section drawing of the proposed alignment shows a geotextile fabric to protect the foundation of the alignment, and to serve as a scour apron, the type of material chosen to perform these functions is critical to the long-term survival of the entire alignment.

A third significant difference in the Town of Montauk project relates to the geoxtextile sand bag stack design. The depicted design has been around for years, but we are unable to document any record of its successful performance in an environment that must withstand the onslaught of waves in storm conditions – especially in conditions where the elevation of the alignment may be overtopped by waves breaking against the revetment. In such situations, water reaching the landward side of the revetment removes sand from behind the alignment, which results in the total collapse of the revetment due to the dependence of the sand bags on this sand which serves as a foundation for the support.

In the proposed design, the landward-most geotextile sand bags are to be placed on the dune face, and there is nothing to prevent the sand from being washed out from under these bags. The weight of the alignment tiers cannot rely on this sand for its support, but must derive adequate support from the bags in lower tiers. With the design proposed, at an elevation of 13.5-ft NGVD, removal of landward sand by an overtopping ocean would diminish the height of the protective revetment, and result in a much lower pile of geotextile sand bags scattered along the shoreline. The resultant alignment would offer very little protective value to shoreside structures.

A fourth significant difference in the Town of Montauk project relates to the relative positioning of individual sandbags in successive tiers of the alignment. Each lower tier of the alignment must be able to provide support for the tier above, and must do so even after initial settling of the alignment, and after anticipated shifting of the alignment as the sand bags at the toe of the revetment sink in response to inevitable scour. The dimensions of the geotextile sand bags chosen for this project, and their inflated geometry precludes any means of building in the needed stability for the alignment from the bottom up. The curvature of inflated sand bags of these dimensions would leave little area for friction between bags of adjoining tiers, and preclude the cantilevering support that is needed as successive tiers retreat landward up the slope of the dune.

A fifth significant difference in the Town of Montauk project relates to the sand fill ratio that appears to be proposed. The typical section of the reinforced dune shows inflated bag dimensions of 5'-6" x 3'-6" x 1'-6". This suggests a low sand fill ratio, which our experience has shown to be detrimental to the overall stability of the sand bag revetment. Corroboration of this experience has been referenced by Darshana T. Dassanayake and Hocine Oumeraci who have indicated that the stability increases with increasing sand fill ratio, and that similar behavior was reported by Wilms et al. (2011) based on another series of large-scale experiments in GWK. In that this research has been referenced in Army Corps documents provided for the Montauk project, the low sand fill ratio for the selected dimension of sand bags is curious.

It is supposed that the minimal size of these selected sand bags was seen to necessitate a low sand fill ratio to achieve sufficient contact surface between sand bags. However, superior performance of a higher sand fill ratio can be achieved simply by specifying larger size geotextile sand bags.

A sixth significant difference in the Town of Montauk project relates to the amount of sand that is being identified for the fill of the sand bags and for the construction of the covering sand berm. From our review of the information, it appears that the amount of sand specified is insufficient for the intended purposes as the total quantity does not seem to take into account the amount of compaction that takes place when filling sand bags with slurries, and when placing sand with heavy equipment on a beach. The compaction factor is approximately 30%, and if the project is put out for bids with the quantities specified, it will leave the contractor who wins the award to bear the cost of acquiring the additional sand. Astute bidders will know to build this cost into their bids, but the result of will likely be that they are not awarded the contract as the non-astute bidders will have a bid that is 30% lower related to sand expense. Successful bidders who must find away to address the shortfall in monies to truck-in sand will have to find means to "make-up" the money, which will likely take the form of a looser alignment, with non-compacted alignment back-fill, and non-compacted dune construction. These adjustments will build-in elevated potential for rapid failure of the constructed alignment.

In conclusion, our review of the proposed Town of Montauk project allows us to concur that the selection of geotextile sand bags to reinforce the dunes and provide protection of shoreline structures is appropriate for the conditions being experienced along this shoreline. We have looked at the beach characteristics and the data for anticipated waves and storms and concluded that these are very similar conditions to those which must be addressed in providing shoreline erosion control along the coast of North Carolina. We believe that effective shoreline protection can be provided for the Town of Montauk through the use of geotextile sand bags, but we have serious reservations that the project, as designed, will be successful.

After careful analysis of what is desired to be put in place for the protection of the Town of Montauk's shoreline, we have found that a significantly better design is possible, utilizing essentially the same footprint that is currently proposed, and we believe that it can be constructed at a price that is lower than what has currently been projected.

Suggestions for a Successful Project:
When government entities solicit bids for the construction of geotextile sand bag erosion control structures, it is typical that all details for the design are specified and that the project award is based solely on lowest price. Efforts to ensure that competent sand bag installers will do the work is often addressed by requiring that bidders have a certain number of years, or projects for which geotextile sand bag alignments were constructed, and at times a demonstration of some experience in working with the specific material that is mandated for the project design.

While this approach does bring some assurance that contractors totally unfamiliar with the construction of geotextile sand bag alignments can be excluded from consideration, it falls far short of attaining a contractor for the project with experience in building successful geotextile sand bag revetments. Most such solicitations result in awards to the contractors who have been installing the rapidly failing alignments over the course of their "years of experience," in that low bid is the deciding criterion. The only way to compete with the contractors whose experience does not include the installation of successful protective sandbag alignments, is to try to cut costs by rapidly installing sandbags without the degree of care that is needed to ensure a tight, integrated placement of bags critical to the success of the structure.

This solicitation approach also locks-in the defects of designs that are based on very limited data, derived from closely controlled experiments that limit the number of variable parameters, and which, at this stage of academic study, cannot be directly applied to real world situations. This approach places qualified, experienced geotextile sand bag contractors in a dilemma when considering whether to even bid a large government project. No successful contractor wants to be associated with a project that can be seen to incorporate a design which the contractor believes is inadequate to perform as needed to achieve the design objectives. Failure of such a project carries with it a stigma for the contractor, which is difficult to overcome when seeking new work.

Ensuring a successful design prior to soliciting bids for a project is a difficult task and needs to rely on the empirical information that can be derived from a review of successful designs that have a proven record of providing shoreline protection over a period of years while subjected to the ocean forces, including times when alignments have been subjected to the effects of high Spring tides and storm situations. While this can be done prior to bid solicitation, it requires the government to carefully analyze what has worked and what has not. Ensuring a successful design can probably also be done as part of the acquisition process utilizing FAR procedures for negotiated acquisitions involving appropriate mechanisms to address best value, tradeoff process, lowest price technically acceptable bids, hypothetical seed projects and price negotiation after contract award.

In that any protective structure placed along an ocean shoreline can be subjected to failing conditions, it is not appropriate to put solicitations out on a Design-Build basis, where the contractor assumes the liability for the success of the design. This is especially true in this arena of constructing geotextile sand filled protective structures in that this is an evolving approach to shoreline protection that has been improving over the past two decades, but has not yet reached a point where firm levels of confidence can be assigned to the anticipated period over which they will satisfactorily function. This uncertainty is expected to continue well into the future due to

the dichotomy of requirements placed on such structures, i.e., they must be readily reversible, not constitute "hardened" shoreline protection, yet they must be shown capable to withstand the significant ocean forces over an extended period of time.

Ensuring a competent contractor that is familiar with the critical construction techniques that ensure stability and functionality can be accomplished by stringent qualification criteria as part of the bid solicitation process. While this does not necessarily mean that extremely detailed qualification criteria need to be developed, it should, as a minimum, require evidence be provided of having successfully designed and constructed protective geotextile sand bag shoreline protection structures which can be documented to have successfully performed over a significant period of years.

This can also be accomplished by incorporating a bid analysis process that provides for evaluation of bids "with discussions" of contractors submitting bids. Asking the right questions during such discussions will facilitate identification of contractors whose experience makes them capable of building a successful design.

A successful geotextile sand bag revetment can be placed for the protection of the shoreline of the Town of Montauk. While the above suggestions would move the proposal evaluation process into a less clear-cut decision for award, the difficulty of designing and constructing a successful shoreline protection structure out of geotextile sand bags warrants this detailed level of care. Following a more complex bid evaluation process that departs from a simple low-bid award can ensure that money is not wasted, and can ensure that the structure to be built can be expected to deliver the desired level of performance.

ATTACHMENT A
Pictures in USACOE Documents

Figure 14 from U.S. Army Corps of Engineers, New York District's August 2014 Downtown Montauk Stabilization Project Hurricane Sandy Limited Reevaluation Report, Evaluation of a Stabilization Plan for Coastal Storm Risk Management in Response to Hurricane Sandy & Public Law 113-2

Above photo depicts the Hardesty house, on the Atlantic Ocean in Nags Head, NC, which was protected with a 20-ft wide by 6-ft high geotextile sand bag alignment, installed by Erosion Control Specialists, LLC in 2006.

Figure 5 from U.S. Army Corps of Engineers New York District's August 2014 Downtown Montauk Stabilization Project, Evaluation of a Stabilization Plan for Coastal Storm Risk Management in Response to Hurricane Sandy & Public Law 113-2, Draft Environmental Assessment.

Above photo depicts the Diamond Shoals Condominiums, on the Atlantic Ocean in Nags Head, NC, which was protected with a 20-ft wide by 6-ft high geotextile sand bag alignment, installed by Erosion Control Specialists, LLC in 2010.

Figure 5 from U.S. Army Corps of Engineers New York District's August 2014 Downtown Montauk Stabilization Project, Evaluation of a Stabilization Plan for Coastal Storm Risk Management in Response to Hurricane Sandy & Public Law 113-2, Draft Environmental Assessment.

Above photo depicts the shoreline protection of the Picha house, in Ocean Isle Beach, NC, along Tubbs Inlet, which was protected with a 20-ft wide by 6-ft high geotextile sand bag alignment, installed by Erosion Control Specialists, LLC in 2007.

ATTACHMENT B
Pictures of Some of Our Successfully Designed and Installed Revetments

Installed 7/30/2006

Nor' Ida 11/14/2009

Above photos depict the Hardesty house, on the Atlantic Ocean in Nags Head, NC, which was protected with a 20-ft wide by 6-ft high geotextile sand bag alignment, installed by Erosion Control Specialists, LLC in 2006. This alignment has taken many hits over a 6 year period before finally receiving a beach nourishment project in the summer of 2011.

Started on 4/4/2010 Finished 4/17/2010

Finished product 5/20/2010

Above photos depict the Diamond Shoals Condominiums, on the Atlantic Ocean in Nags Head, NC, which was protected with a 20-ft wide by 6-ft high geotextile sand bag alignment, installed by Erosion Control Specialists, LLC in 2010.

Installed October 2007 (View into Inlet)

.

6’ Tide Range -- 5’ of Water Hitting Bags Twice A Day (View toward Ocean)

Aerial of Picha & Adjoining Houses Tubbs Inlet, NC

Above photos depict the shoreline protection of the Picha house, in Ocean Isle Beach, NC, along Tubbs Inlet, which was protected with a 20-ft wide by 6-ft high geotextile sand bag alignment, installed by Erosion Control Specialists, LLC in 2007

Installed 2013 Prior to Inlet Shift

Alignment After major Inlet Shift & 6' Elevation Drop

Above photos depict the shoreline protection approaching the Picha house, in Ocean Isle Beach, NC, along Tubbs Inlet, which was protected with a 20-ft wide by 6-ft high geotextile sand bag alignment, installed by Erosion Control Specialists, LLC in 2007.

Following photos depict the shoreline protection provided for 8 Buildings of Topsail Reef Condominiums, in North Topsail Beach, NC, near New River Inlet. Protected with a 45-ft wide by 16-ft high (to +12 NAVD) geotextile sand bag alignment, installed by Erosion Control Specialists, LLC in 2012.

Revetment Approaching Last 2 Buildings

Install completed on 10/8/2012

Alignment 2 Days After Hurricane Sandy Passes Offshore 10/31/12

Beach Nourishment Approaches Condos 12/4/12

Beach Nourishment Completed 2/2013

Beach Nourishment Is Temporary 18 Mo. 8/27/14

ATTACHMENT C
Inflated 5-Ft x 7-Ft Geotextile Sand Bag

Above photo depicts an inflated 5-ft x 7-ft geotextile sand bag (beneath man in yellow jacket) as part of the alignment transition to a return wall. Part of the shoreline protection of Topsail Reef Condominiums, in North Topsail Beach, NC, near New River Inlet. Installed by Erosion Control Specialists, LLC in 2012.

ATTACHMENT D
Isle of Palms, SC Small Sandbag Use

From: The Post and Courier, June 17, 2014, Paul Zoeller/Staff

ISLE OF PALMS - Washed-away sandbags are starting to litter the beach at Dewees Island, as well as the inlet between the island and Wild Dunes. Residents say it's a menace for nesting sea turtles and a hazard for boaters.

Two resident environmental groups have written the city of Isle of Palms to call for better cleanup of collapsed bags along about a half-mile of beachfront properties that are now protected by the bags as the beach erodes. The city has told its sandbag cleanup contractor to increase efforts, City Administrator Linda Tucker assured the groups.

The letter came two months after a clam farmer filed a first complaint with state regulators about bags floating in Dewees Inlet. Alarmed residents said they don't want a repeat of the 2007 "sandbag debacle" in which hundreds of smaller bags washed out and littered the coast for miles.

"It's just a rewind of the problem we had," said Dewees resident Gary McGraw, who runs the island's turtle-watch group monitoring the beach for nesting sea turtles, which are an endangered species. The turtles can get entangled in the bags. The bags also can snarl boat propellers, throwing passengers out of the boat, he said.

So far, five sandbags have been found, he said. "One sandbag is one too many. They need to fix it so there is zero percent pollution, or the state should give them some trouble."

The watch group, along with the island environmental program, wrote the letter.

The cleanup company has been under contract to do two sweeps per day. Tucker said she is on the beach almost daily and regularly sees the contractor at work at low tide.

No fines have been levied to date, said S.C. Department of Health and Environmental Control spokesman Jim Beasley. Department staff routinely check on the permit sites for compliance, he said.

But bags turning up in the surf and channels are an unpleasant reminder of the 2007 incidents that led to state fines.

DHEC staff inspected Dewees Inlet in April after a clam farmer complained about bags washing into the beds. No violations were cited.

The Dewees Inlet end of Wild Dunes is a volatile stretch of beach for erosion and shoal attachment. In 2008 the beach was renourished, but has eroded continually since then. Officials now are waiting for a shoal, or sandbar, just off the beach to move in with the currents, so sand can be scraped from the shoal to renourish the stretch again. That's expected to happen in November.

In the meantime, the larger sandbags have been placed in front of the 18th hole of the resort's Links course, as well as the Ocean Club and Seascape Villas condominiums alongside, and now Beachwood East homes farther down the beach. In 2007, the same row of homes, condominiums and golf course hole staved off the seas by piling tens of thousands of small sandbags that then washed away in storms and littered the nearby coast. The larger bags are supposed to be more stable.

The golf course was cited in December for not removing the bags or reapplying in time to meet a mandated deadline. Permits, issued for emergencies, are given only for a set number of days.

Resort officials worked with DHEC to resolve the missed deadline and the course is now considered under compliance, Beasley said. No fines were issued. Permits have now been extended through Aug. 31.

September 24, 2014

Robert J. Smith
Project Biologist
United States Army Corps of Engineers
Robert.J.Smith@usace.army.mil

Frank Verga
Project Manager
United States Army Corps of Engineers
Frank.Verga@usace.army.mil

Re: Comments on the Downtown Montauk Stabilization Project

Dear Mr. Smith and Mr. Verga,

Thank you for the opportunity to submit public comments on the Downtown Montauk Stabilization Plan, specifically the proposal for a constructed dune with geobag core at South Emery Street to the Atlantic Terrance motel. The authors of this letter are active or former environmental planners and longtime residents of East Hampton Township (Township). Our interest is the conservation of an ecologically and economically functional waterfront in downtown Montauk, and the safety of the residents of our Township in face of increased storm events and rising sea level. We also express concern that the financial cost of maintenance on the proposed geobag and sand structure has been underestimated and urge adoption of a cost-share arrangement with the United States Army Corps of Engineers (USACE) that increases USACE's responsibility and reduces the financial risk to the taxpayers of East Hampton.

We the authors believe that a soft solution to flooding in downtown Montauk is the best path forward at this time of all the options presented by USACE to date. A soft solution of a dune construction with a geobag core offers emergency flood protection to vulnerable downtown Montauk which is predicted to experience increasingly frequent and severe storm events in coming decades. The soft solution creates a near-term barrier to storm surge while a comprehensive planning process commences that thoroughly explores various long-term solutions. At the same time, the soft solution maintains the ecological and economic functionality of the beach, providing the topography and habitat features to support wildlife and beachgoers alike.

The proposed soft solution is preferred to any proposed hard structure because the former can be removed and a natural beach slope restored by littoral processes in approximately 2-5 years--assuming the sand can migrate alongshore and inshore unimpeded by hardened structures such as groins, revetments and buildings. A hard structure such as a groin or revetment is not an option for downtown Montauk because it is designed only for protecting the buildings behind it and not the beach in front of it. Hardened structures transfer wave energy into scouring forces that shift sand seaward and leave narrow, eroded, pebbly or rocky beaches void of soft sand, dry slopes and vegetation suitable for wildlife and beachgoers.

While we support the proposed soft solution for the above reasons, and consider the financial cost of the initial capital investment to be reasonable, our chief concern is that the long-term maintenance costs of the structure are inaccurate. The annual maintenance budget was recently published as $60,000. We believe the proposed annual maintenance cost underestimates the frequency and severity of storm events powerful enough to erode the constructed dune and damage the geobag core over the structure's proposed fifteen year life cycle. We urge USACE and East Hampton Township to inform their negotiation with data such as detailed repair and maintenance cost breakdowns and the latest storm frequency predictions. The latest data may indicate a need for a sand replacement schedule as frequent as every three years.

We encourage USACE and the Township to consider a cost-share arrangement by which the Township's responsibility for structural repairs including sand replenishment be capped at a number affordable to the Township. If that amount is $100,000 per year, then the Township could put the annual maintenance fee into escrow, and any cost beyond the $100,000 per year becomes the responsibility of USACE. Ideally Suffolk County would contribute up to 75% of the Township's cost. The authors also encourage USACE, and not the Township, to assume financial responsibility of the structure after its 15 year design-life or until such time that a more permanent comprehensive solution can be implemented.

In follow-up to the construction of this temporary solution, the authors urge USACE and the Township to commence a comprehensive long-term planning process for Montauk downtown. The 20-50 year vision and strategy should acknowledge that our coastal landscape is undergoing rapid transformation. In coming decades we will witness a coastline that will be dramatically reformed and relocated by storm events, flooding and breaching. The comprehensive plan should embrace these changes; build off the East Hampton Local Waterfront Revitalization Plan (LWRP); integrate sea level rise and severe weather projections in line with the pending New York State legislation titled, "Community Risk and Resiliency Act"; and consider a new master plan that includes relocation of structures from the risky coastal edge to higher elevations in order to protect lives and livelihoods and build the local economy in a location can sustain long-term growth.

As part of the comprehensive plan the authors wish to propose a vision for a public beachfront park that replaces the at-risk coastal buildings in downtown Montauk. The current landscape configuration and buildings are being protected by artificial means at a huge financial, economic and ecological cost to government and the residents of East Hampton. A wiser long-term investment is the creation of a public beachfront park consisting of restored double dunes that protect downtown Montauk. A public amenity such as this has the potential to generate more tourism-based revenue for the downtown than the hotels. A multitude of world-class parks have proven to generate visitorship and revenue for coastal towns across the United States' Atlantic and Pacific seaboards. A beachfront park could be financed by a series of bonds, special taxes and financial incentives that could support the planning process and infrastructure design and construction.

USACE and the Township should urgently advance the proposed soft solution to protect downtown Montauk from the next storm, but it requires the financial arrangement for maintenance costs be fairly negotiated and take into account the known frequency of storm events over coming years. Furthermore, any investment of public dollars should acknowledge that the coastal zone is migrating inland with accelerating sea level rise, and that all coastal features, including dunes, wetlands and buildings need to migrate in turn. A long term financial plan including a coastal property buy-out program should be part of any future planning and investment. Decision-makers must maintain a commitment to Montauk's beaches as the primary economic generator for the community, Township and county. Hardened structures such as walls only protect structures and not beaches. If we create a beachfront park in harmony with our coastal ecology in downtown Montauk, those beaches will continue to attract tourists and provide safety to the residents for decades to come.

Thank you for your time and consideration,

Peter Strugatz
President, Strugatz Ventures
strugatz@me.com

Rachel Gruzen, MEM, LEED AP
Environmental Planner & Educator
rachelgruzen@hotmail.com

Rameshwar Das
Chair, East Hampton Town Waterfront Advisory Committee, 1989-1999
rameshdas@aol.com

Barnaby Friedman
President, Progressive Mapping, Inc.
Barnaby@progressivemapping.com

CCOM
CONCERNED CITIZENS OF MONTAUK

September 25, 2014

The U.S. Army Corps of Engineers, New York District
Planning Division-Environmental Branch
Attn: Frank Verga
26 Federal Plaza
New York, New York 10278-0090

RE: Downtown Montauk Beach Stabilization Project

To Whom It May Concern:

Please find below a summary of issues raised by Concerned Citizens of Montauk at the September 25th, 2014, public meeting focusing on the Downtown Montauk Beach Stabilization Project. For the record, Concerned Citizens of Montauk (CCOM) is a community-based environmental non-profit founded in 1970 and representing over 1,200 individuals, families and businesses as active members.

CCOM has reviewed the Draft Environmental Assessment (DEA) prepared by U.S. Army Corps of Engineers (ACOE) and N.Y. State Department of Environmental Conservation (DEC). Comments at today's hearing focused on four specific design elements we feel are substandard in the current proposal: geotextile bags, sand sourcing, projected maintenance costs and engineering. The intent of this memo is underline our concerns in reference to the sand sourcing and maintenance budget.

SAND:

The project as proposed in the DEA fails to adequately define the standards for "beach compatibility" for imported sand. Experience on Montauk beaches, post Hurricane Sandy, points to a wide variability among sands that have been describe as "beach compatible" and approved for local use. Most notably, the replenishment project at Ditch Plains following Sandy continues to diminish the value of that public beach. Without specific, articulated standards that can be used to judge the quality of sand, and a clear designation as to who has the final say in determining compliance with a "beach compatibility" standard, ACOE's claim is moot and unenforceable. This project will be improved by the establishment of a standard and a clear assigning of responsibility, preferably to the local sponsor, of the authority certify when that standard has been met. Substandard sand should be not be allowed to be used in this project and onsite monitoring is the only means to assure this is avoided.

MAINTENANCE:

ACOE has justified the maintenance budget for the proposal as the annualized average over 15 years, the projected life of the project. Even a cursory examination of the budget suggests that the projected annual estimate of $157,000 is wildly optimistic. ACOE and DEC staff made reference in today's meeting to budget justification worksheets that were discussed with the

Town of East Hampton but that have not been made publically available. This material should be posted along with the DEA on the ACOE project webpage. Even with this material, it is nearly impossible to believe that this project will be maintained for such a modest amount. Were the numbers believable, Suffolk County would not be so reticent in signing on as a local sponsor.

ACOE has the responsibility to the community that will be paying for the annual and ongoing maintenance to provide a more accurate and more detailed accounting of the projected costs. The numbers offered to date are unsupported and unrealistic.

CCOM believes that the project can be greatly improved by further refining of the two spefic areas described above and hopes ACOE and DEC will take the comments into consideration.

Thank you for the opportunity to comment on the DEA. Please contact me with any questions.

Respectfully

Jeremy Samuelson, Executive Director

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
290 BROADWAY
NEW YORK, NY 10007-1866

SEP 2 4 2014

Robert Smith
Planning Division, Environmental Branch
26 Federal Plaza
New York, New York 10278-0090

Dear Mr. Smith:

The U.S. Environmental Protection Agency has reviewed the Downtown Montauk Stabilization Project Draft Environmental Assessment (EA). The purpose of the project is to address erosion which occurred during Hurricane Sandy, leaving the Montauk area of Long Island, New York vulnerable to future storms. The draft EA states that the project intends to provide protection to the project area while the overall Fire Island Inlet to Montauk Point (FIMP) Reformulation Study is being finalized.

The document states, "the recommended plan utilizes information and data from the ongoing FIMP study to develop a one-time stabilization project that does not limit the options being considered or presuppose the outcome of the Reformulation study." Section 1.5 states that the FIMP Reformulation Study is currently evaluating five alternatives (beach restoration; beach restoration and buried seawall; feeder beach; dune reinforcement; and dune reinforcement and feeder beach). The draft EA indicates that a stabilization project for Downtown Montauk must: 1) be compatible with the likely outcome of the Reformulation process; 2) be economically justified as a separate, independent project; and 3) be limited in duration to provide stabilization prior to implementation of the FIMP Reformulation. A reinforced dune spanning the length of the project area was the selected alternative for the interim effort.

While compatibility is a criteria for alternative selection, the EA should discuss in detail how a reinforced dune would be addressed under each of the FIMP Reformulation alternatives to demonstrate that the selected alternative would not presuppose the Reformulation outcome and to identify the cumulative impacts to resources that would result from implementation of both projects. Having compatible outcomes (i.e., of enhancing protection of the project area) as well as the limited duration of the downtown Montauk stabilization, does not preclude greater environmental impacts. Therefore, clarification is needed to illustrate the way that the two

projects will complement one another as opposed to simply working to achieve the same goal regardless of approach. This discussion should include what costs are expected to be offset for the future project as a result of this stabilization effort.

The draft EA states that since the sand-filled geotextile bags to be used in the selected alternative are susceptible to vandalism, puncture, and deterioration from UV light, they will be covered by a minimum of 3 feet of sand to decrease the likelihood of exposure. The EA should include a discussion of the expected fate of the geotextile bags at the end of the project life, or in the event that they prematurely become unearthed as the result of another superstorm. This discussion should include any possible risks to wildlife that can result from portions of deteriorated bags being washed into the ocean (including risks to threatened and endangered species such as sea turtles and piping plovers as well as marine mammals such as harbor and grey seals that reside in the area and subsist on small fish which could appear similar to small pieces of geotextile material floating in near shore waters). Additionally, inland impacts from possible dune erosion or failure in the event of a major storm should be discussed. Impacts can result from elevated storm tides and high waves that accompany major storms. The eroded sand can be transported landward by surging water. The sand and water can wash over or break through the dunes, significantly impacting the landward side of the barrier dune. Potential costs of clean-up and removal that could be required should also be discussed in the context of geotextile bag deterioration and dune failure.

The addition of reinforced dunes could have an indirect impact on the flow of inland stormwater, particularly during major rain events. Expected impacts of diverted stormwater and potential remedies should be discussed in the EA.

After the 15 year duration of the reinforced dune to provide stabilization against the design storm, it is expected that the project would provide a decreasing level of protection and eventually no protection after approximately 25 years. Given that the FIMP is expected to be implemented in less than 15 years, the draft EA should include a discussion of the expected condition of the reinforced dune when the FIMP Reformulation project is implemented. Included in the discussion should be an assessment of whether there will be cost savings for the future project (e.g., through reuse of materials) or if the interim stabilization project could result in increased costs for the FIMP (in the form geotextile bag removal, additional sand relocation, etc).

Thank you for the opportunity to comment on this project. Should you have any questions concerning this letter, please feel free to contact Stephanie Lamster of my staff at 212-637-3465.

Sincerely,

Grace Musumeci

Grace Musumeci, Chief
Environmental Review Section

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
Environmental Analysis Branch

October 15, 2014

Grace Musumeci
Chief Environmental Review Section
United States Environmental Protection Agency
Region 2
290 Broadway, New York 10007-1866

Subject: Downtown Montauk Beach Stabilization Project, Long Island NY

Dear Ms. Musumeci,

This letter is in reference to your comments dated September 24, 2014 on the Downtown Montauk Beach Stabilization Project EA. In response to extensive storm damages and increased vulnerability to future events, consistent with the Disaster Relief Appropriations Act of 2013 (Public Law. 113-2; herein P.L. 113-2), and recognizing the urgency to repair and implement immediate storm protection measures, particularly in the Downtown Montauk project area, the U.S. Army Corps of Engineers, New York District (New York District) is undertaken a project to provide coastal storm risk management through construction of a reinforced dune.

Comment page one related to the FIMP:

The constraint for stabilization project compatibility with the likely outcome of the Reformulation process has been removed and replaced with a requirement that the selected plan not limit the overarching FIMP reformulation process.

Comment on page two related to geotextile bags and impact to wildlife from deteriorated bags includes addition of maintenance aspect of the alternative and discussion of fate of geotextile should the material be introduced to the environment in unintended fashion:

We concur with most of your comments and changes have been made to EA is sections 1.7and 1.14.2 under the heading of: Dune Reinforcement Alternative (Tentatively Selected Plan), Cumulative Impact of the Preferred Alternative and Measures to Minimize Cumulative Impacts.

Comment on page two related to inland impacts from dune erosion or failure:

Revisions have been made to the EA in section 1.13.1 Human Environment, with the exception of geotextile deterioration. The matter of geotextile deterioration is addressed by the addition of the maintenance aspect to the project description.

Comment on page two related to stormwater:

The project does not establish new high ground and will not alter existing patterns of stormwater drainage

Comment on page two related to discussion on condition of the stabilization project upon implementation of the FIMP Reformulation Project and associated costs (savings or increases):

The implementation schedule for the FIMP Reformulation Project is not known; therefore, any discussion on the condition of the stabilization project in this future undefined time would be speculative and presupposing. In addition, with the planned maintenance activities, the condition of the stabilization project is expected to be similar to the design condition. A discussion of cost differentials is more appropriately included in the FIMP Reformulation Project than the Stabilization project EA.

I appreciate your agency's comments and your continued cooperation during these activities. Should any questions arise, or if additional information is required, please contact Mr. Robert J. Smith at (917) 790-8729.

Sincerely,

Peter Weppler
Chief, Environmental Analysis Branch

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
Environmental Analysis Branch

October 6, 2014

Robert S. Young PhD
Western Carolina University
Belk 294
Cullowhee, NC 28723

Subject: Downtown Montauk Beach Stabilization Project, Long Island NY

Dear Mr. Young,

This letter is in reference to your comments dated September 23, 2014 on the Downtown Montauk Beach Stabilization Project. In response to extensive storm damages and increased vulnerability to future events, consistent with the Disaster Relief Appropriations Act of 2013 (Public Law. 113-2; herein P.L. 113-2), and recognizing the urgency to repair and implement immediate storm protection measures, particularly in the Downtown Montauk project area, the U.S. Army Corps of Engineers, New York District (New York District) is undertaken a project to provide coastal storm risk management through construction of a reinforced dune.

Thank you for your comments regarding the Downtown Montauk Stabilization Project. The Corps of Engineers is confident that the proposed project represents a sound engineering solution to property damage concerns within the project area and will perform as stated in the Draft Environmental Assessment. Sand brought in for the project will be similar in grain size and gradation to the existing beach, and existing beach sand will be used as the sand cover for the geotextile bags and berm cap to limit aesthetic impacts to the existing beach.

I appreciate your comments should any questions arise, or if additional information is required, please contact Mr. Robert J. Smith at (917) 790-8729.

Sincerely,

Peter Weppler
Chief, Environmental Analysis Branch

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
Environmental Analysis Branch

October 6, 2014

CCOM
Jeremy Samuelson
PO Box 915
Montauk NY, 11954

Subject: Downtown Montauk Beach Stabilization Project, Long Island NY

Dear Mr. Samuelson,

This letter is in reference to your comments dated September 25, 2014 on the Downtown Montauk Beach Stabilization Project. In response to extensive storm damages and increased vulnerability to future events, consistent with the Disaster Relief Appropriations Act of 2013 (Public Law. 113-2; herein P.L. 113-2), and recognizing the urgency to repair and implement immediate storm protection measures, particularly in the Downtown Montauk project area, the U.S. Army Corps of Engineers, New York District (New York District) is undertaken a project to provide coastal storm risk management through construction of a reinforced dune.

Thank you for your comments regarding the Downtown Montauk Stabilization Project. The Corps of Engineers is confident that the proposed project represents a sound engineering solution to property damage concerns within the project area and will perform as stated in the Draft Environmental Assessment. Sand brought in for the project will be similar in grain size and gradation to the existing beach, and existing beach sand will be used as the sand cover for the geotextile bags and berm cap to limit aesthetic impacts to the existing beach.

I appreciate your comments should any questions arise, or if additional information is required, please contact Mr. Robert J. Smith at (917) 790-8729.

Sincerely,

for Peter Weppler
Chief, Environmental Analysis Branch

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
Environmental Analysis Branch

October 6, 2014

Erosion Control Specialists, LLC
Yogi Harper
P.O. Box 16633
Chesapeake Va. 23328

Subject: Downtown Montauk Beach Stabilization Project, Long Island NY

Dear Mr. Harper,

This letter is in reference to your comments dated September 23, 2014 on the Downtown Montauk Beach Stabilization Project. In response to extensive storm damages and increased vulnerability to future events, consistent with the Disaster Relief Appropriations Act of 2013 (Public Law. 113-2; herein P.L. 113-2), and recognizing the urgency to repair and implement immediate storm protection measures, particularly in the Downtown Montauk project area, the U.S. Army Corps of Engineers, New York District (New York District) is undertaken a project to provide coastal storm risk management through construction of a reinforced dune.

Thank you for your comments regarding the Downtown Montauk Stabilization Project. The Corps of Engineers is confident that the proposed project represents a sound engineering solution to property damage concerns within the project area and will perform as stated in the Draft Environmental Assessment. Sand brought in for the project will be similar in grain size and gradation to the existing beach, and existing beach sand will be used as the sand cover for the geotextile bags and berm cap to limit aesthetic impacts to the existing beach.

I appreciate your comments should any questions arise, or if additional information is required, please contact Mr. Robert J. Smith at (917) 790-8729.

Sincerely,

for Peter Weppler
Chief, Environmental Analysis Branch

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
Environmental Analysis Branch

October 6, 2014

Rachel Gruzen
PO Box 2016
Amagansett, NY 11930

Subject: Downtown Montauk Beach Stabilization Project, Long Island NY

Dear Mrs. Gruzen,

This letter is in reference to your comments dated September 24, 2014 on the Downtown Montauk Beach Stabilization Project. In response to extensive storm damages and increased vulnerability to future events, consistent with the Disaster Relief Appropriations Act of 2013 (Public Law. 113-2; herein P.L. 113-2), and recognizing the urgency to repair and implement immediate storm protection measures, particularly in the Downtown Montauk project area, the U.S. Army Corps of Engineers, New York District (New York District) is undertaken a project to provide coastal storm risk management through construction of a reinforced dune.

Thank you for your comments regarding the Downtown Montauk Stabilization Project. The Corps of Engineers is confident that the proposed project represents a sound engineering solution to property damage concerns within the project area and will perform as stated in the Draft Environmental Assessment. Sand brought in for the project will be similar in grain size and gradation to the existing beach, and existing beach sand will be used as the sand cover for the geotextile bags and berm cap to limit aesthetic impacts to the existing beach.

I appreciate your comments should any questions arise, or if additional information is required, please contact Mr. Robert J. Smith at (917) 790-8729.

Sincerely,

Peter Weppler
Chief, Environmental Analysis Branch

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
Environmental Analysis Branch

October 7, 2014

Mr. Roger Evans
Regional Permit Administrator
New York State Department of
Environmental Conservation - Region 1
50 Circle Road, SUNY@ Stony Brook
Stony Brook, NY 11790-3409

Subject: Downtown Montauk Beach Stabilization Project, Long Island NY

Dear Mr. Evans:

Pursuant to our above referenced subject, the U.S. Army Corps of Engineers, New York District (District), is requesting a Water Quality Certificate. Please find attached the information describing the proposed project. Below is a brief overview of the proposed project as well

Project Description: The U.S. Army Corps of Engineers, New York District (New York District) is proposing to provide coastal storm risk management through construction of a reinforced dune.

a. The project includes construction of a reinforced dune within the Downtown Montauk project area. The proposed dune design includes 3,100 ft. of reinforced dune extending from South Emery Street to Atlantic Terrace motel in downtown Montauk and tapers into high dunes at both ends of the project area. The core of the dune consists of 2.4 ton Geotextile Sand Containers (GSCs) with filled dimensions of about 5.5 ft long, 3.5 ft wide and 1.5 ft tall. The alignment closely follows the existing dune (+12 ft NGVD contour). The proposed dune will provide protection to the shorefront commercial and residential buildings in downtown Montauk.
b. A total of 65,000 CY of sand is required to construct the reinforced dune. Approximately two-thirds of the sand fill will be used to fill the GSCs or placed in the dune. The remaining one-third will be used to construct the berm cap. About 20,000 CY will be obtained from excavation and re-grading of the existing dune, with the remaining 45,000 CY obtained from upland sand sources.
c. This Stabilization Project is a one-time, stand-alone project with its own independent utility. As developed, this project does not limit the options available in the Fire Island to Montauk Point (FIMP) Reformulation Study or pre-suppose the outcome of the Reformulation Study. After the initial construction of the

reinforced dune, the project is expected to erode, and diminish in its protective capacity, eventually returning to a pre-project condition.

d. The Stabilization Project has been evaluated over a 15 year period. In the absence of a sediment management solution as part of the overall FIMP Reformulation Study, long term erosion will lead to a reduced level of protection increasing the likelihood of undermining and displacement of the reinforced dune core.
e. No property acquisitions or structural relocations are required for the project. However, two types of easements are required for the Stabilization project. Perpetual easements are needed in locations where beachfill and reinforced dune will be placed to allow for construction, operation, maintenance, patrol, repair and replacement of the beach berm and dune. Temporary work area easements are required to allow right-of-way, in, over and across the land for the planned four month construction schedule.

Environmental Impacts:

f. Impacts to living natural resources in the Downtown Montauk project area would be associated with direct impacts related to sand placement along the ocean shoreline of downtown Montauk for reinforced dune construction. The Dune Reinforcement Alternative would not directly result in deposition of materials within the marine nearshore habitat, as all sand placement for dune reinforcement would be located landward of MLW.
g. Section 7 of the Endangered Species Act (ESA) Compliance: Based on the habitats present in the Downtown Montauk project area, the proximity of the project area to developed areas and agency responses regarding lack of known records of rare or state-listed animals and plants, and significant natural communities the likelihood of protected species occurring in the project area is minimal. Therefore, the Dune Reinforcement Alternative would not have an impact on any listed species.
h. Short-term unavoidable effects on wildlife species include the loss of invertebrate species in the marine beach and dune habitats. Long-term positive effects include restoration and maintenance of beach berm and slope habitats.
i. Overall, the environmental impacts of implementing the proposed action are expected to be minor in scope and temporary in duration.

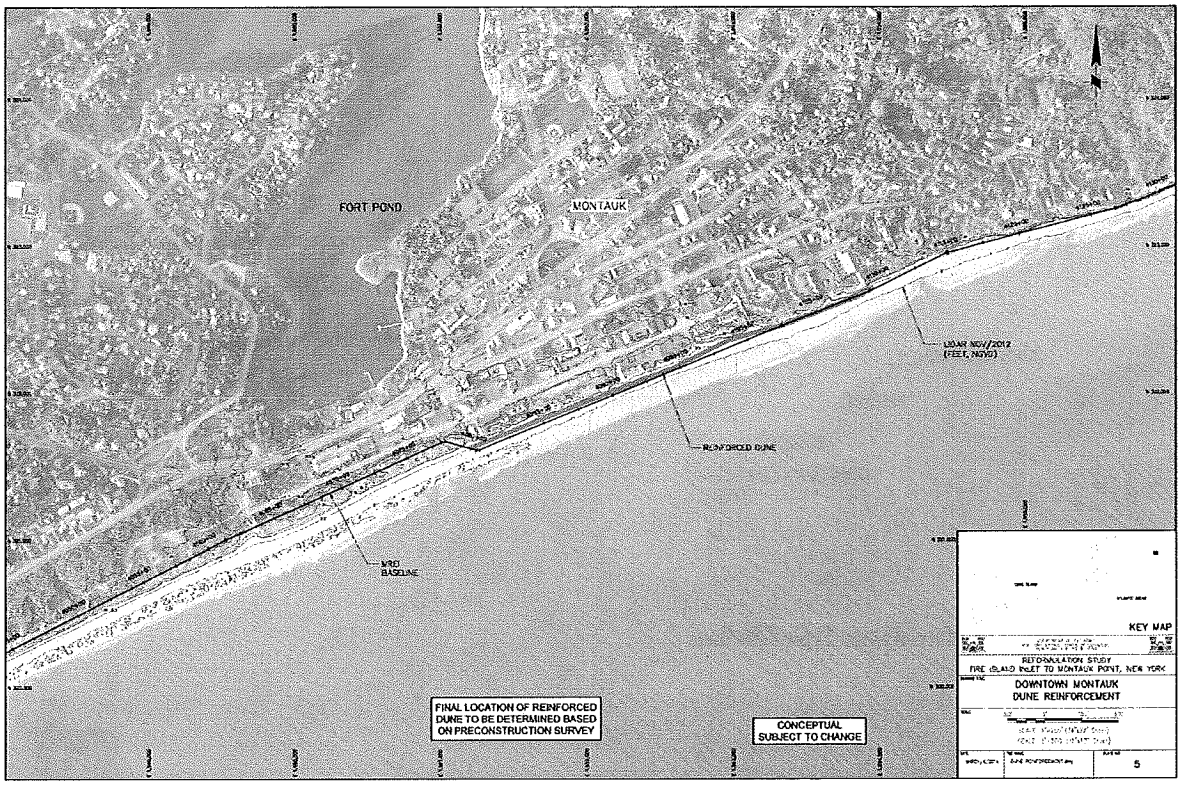
The District looks forward to continue working with New York State with regard to the continued protection and preservation of NYS natural resources. If you need any further assistance, please contact Robert Smith – Coastal Ecosystem Section at (917) 790-8729.

Sincerely,

Mr. Peter Weppler
Chief, Environmental Analysis Branch

cc:

George Hammarth, Deputy Regional Permits NYSDEC, Region 1
Matt Chlebus, Coastal Erosion Management Section, Albany


FORT POND
MONTAUK
USACE NOV/2012
(FEET, NGVD)
REINFORCED DUNE
MHW
BASELINE
FINAL LOCATION OF REINFORCED
DUNE TO BE DETERMINED BASED
ON PRECONSTRUCTION SURVEY
CONCEPTUAL
SUBJECT TO CHANGE
KEY MAP
REFORMULATION STUDY
FIRE ISLAND INLET TO MONTAUK POINT, NEW YORK
DOWNTOWN MONTAUK
DUNE REINFORCEMENT
5

Location

Reinforced Dune & Berm Section

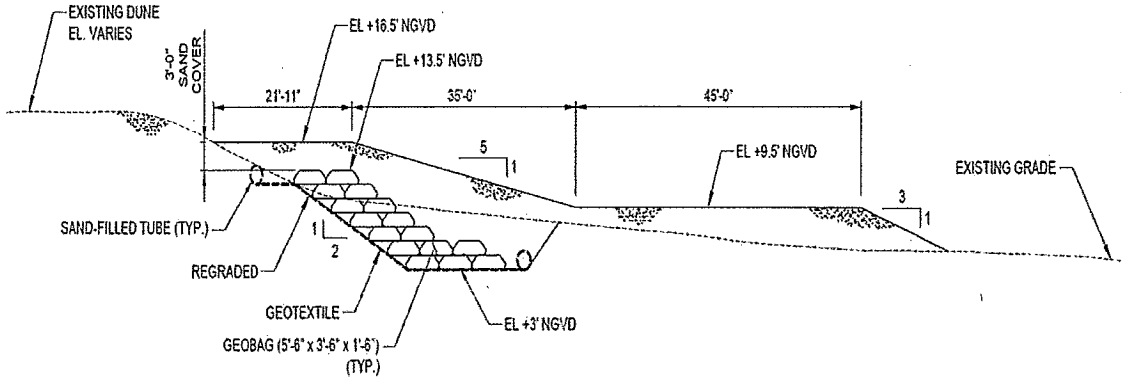


Figure 5: Reinforced Dune Typical Section