



U.S. Army Corps  
of Engineers  
New York District

**US Army Corps of Engineers  
New York State Department of Environmental Conservation  
Village of Asharoken**



# **PUBLIC INFORMATION MEETING**

**North Shore of Long Island, Asharoken, New York  
Coastal Storm Risk Management Project  
Hurricane Sandy Draft Feasibility Report  
& Draft Environmental Assessment**



**6:30 – 7:30**

**7:30 – 7:40**

**7:40 – 8:00**

**8:00**

**Poster Board Viewing**

**Non-Federal Local Sponsor Remarks**

**US Army Corps of Engineers Presentation**

**Question and Comment Period**



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**New York State Department of Environmental Conservation**  
**Village of Asharoken**



# **PUBLIC INFORMATION MEETING**

## **Meeting Purpose**

**The purpose of this meeting is to provide key information contained in the Draft Feasibility Report & Draft Environmental Assessment (EA) to the public and to receive public comments on these documents.**

**The National Environmental Policy Act (NEPA):**

- **provides for public involvement**
- **ensures that the environmental effects of alternatives are considered**
- **fosters improved decision-making.**

**The Draft EA is open for public comment through January 29, 2016.**

**The Draft Feasibility Report and Draft EA are being concurrently reviewed by Corps, Federal & State Agencies**

- The draft report and EA identify a Tentatively Selected Plan (TSP), and Alternatives considered
- The report identifies Plan 4 as the TSP, which includes beachfill and a tapered groin field at the west end.
- The Corps identifies Plan 4 as best meeting the coastal storm damage reduction needs
- The Corps & State recognize the Village has stated a preference for Plan 1, beachfill only
- The draft report acknowledges that the selected plan may change as a result of public and agency review
- Comments received will be considered when finalizing the plan
- A plan for the Village of Asharoken will not move forward unless supported by Corps, State and Village
- The final, selected plan will be identified in May 2016 after full consideration of public & agency input



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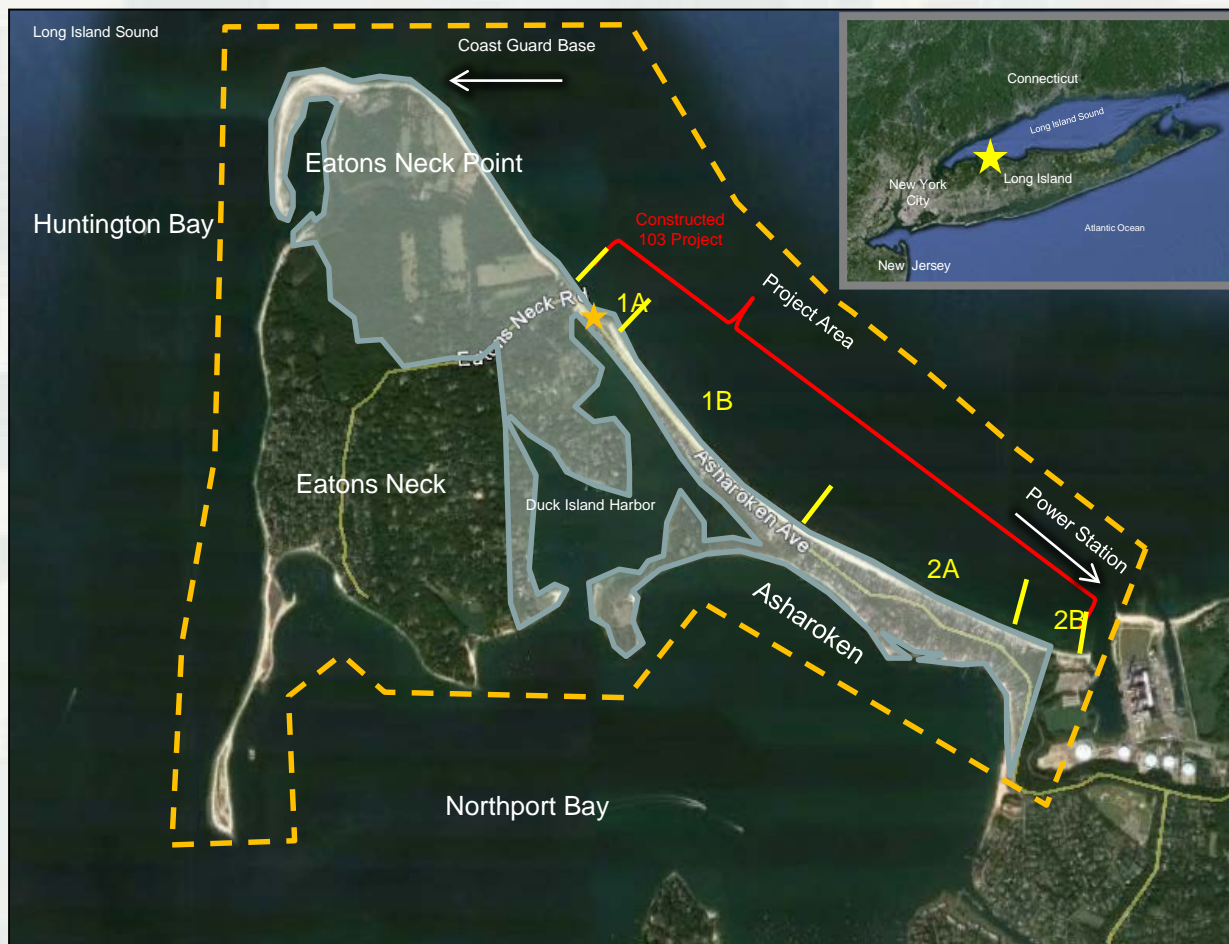
# Study Area

## North Shore of Long Island, Asharoken, New York Coastal Storm Risk Management Study



The **study area** encompasses the Village of Asharoken;

- Bordered by Huntington Bay, Northport Bay, Eaton's Neck, and Long Island Sound.
- Asharoken Avenue provides the only land access to Eaton's Neck and the western parts of the Village.
- Northport Power Station is located south of the Village boundary.



### ★ Existing Section 103 Project (Asharoken Seawall)

- Project was constructed in 1997.
- Designed and evaluated to bridge the gap until a larger plan could be implemented
- Project includes a "reinforced dune," shallow-depth sheet pile with tie-back structure, fronted with armor stone.
- When the project was designed it was evaluated with a 100-foot-wide fronting beach.
- Significant erosion has occurred since construction (waves now break directly on structure).
- Past storm events have repeatedly exceeded project design level, significantly damaging the project and Asharoken Ave.
- Repairs were made in 2007, 2010, 2011, 2012.
- Project is subject to damages by 10-year event
- With continued erosion, future project damages could occur at 5-year storm event.
- Monthly events result in overtopping and periods of road closure.







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# Problem Identification

North Shore of Long Island, Asharoken, New York  
Coastal Storm Risk Management Study



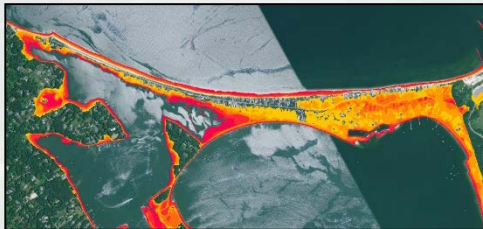
The Village of Asharoken experiences beach erosion on the Long Island Sound shore.

The **problems** in the study area are:

- Damage to structures (including buildings and existing coastal structures) caused by: wave attack, storm surge inundation, long-term erosion, storm recession
- Disruption to Asharoken Avenue due to storm-induced wave attack, erosion, and flooding, closing the only route to and from the Village of Asharoken and Eatons Neck.



Wave overtopping

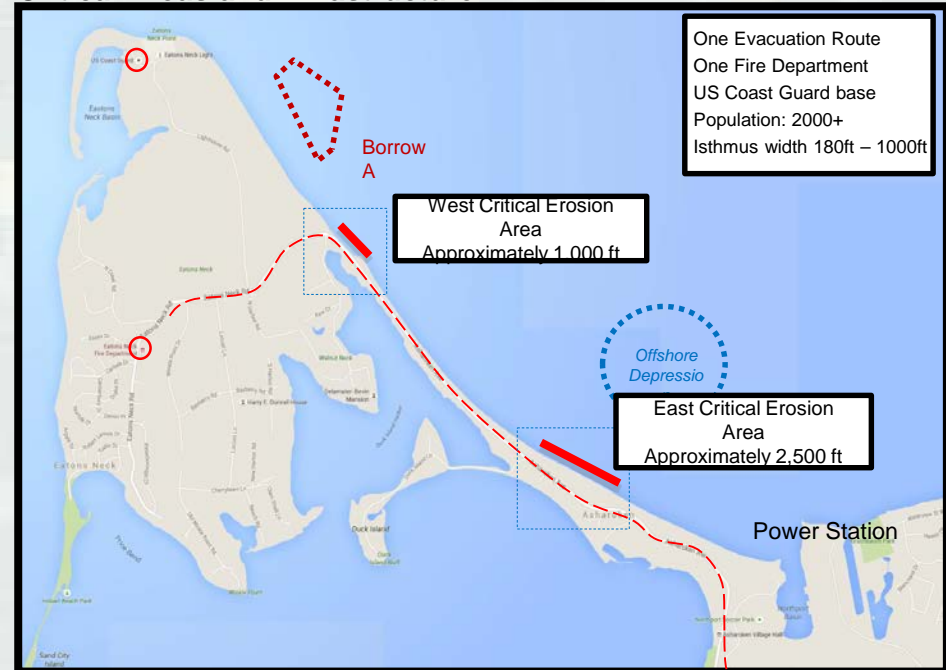


Inundation Mapping from Hurricane Sandy

## Sediment Budget and Erosion

The jetties by the Northport Basin located in the Northport Power Station have contributed to the long-term erosion problems west of the west jetty. The powerplant currently bypasses sand to offset any impact. Coastal effects from Long Island Sound dominate the erosion processes.

## Critical Areas and Infrastructure



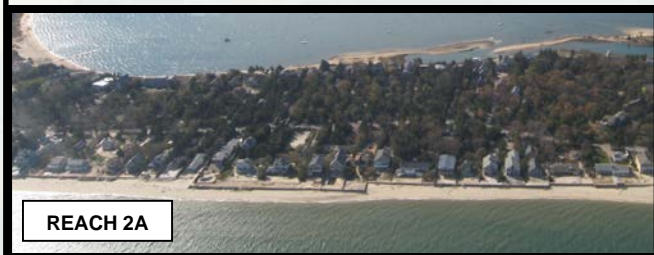
One Evacuation Route  
One Fire Department  
US Coast Guard base  
Population: 2000+  
Isthmus width 180ft – 1000ft

West Critical Erosion  
Area  
Approximately 1,000 ft

East Critical Erosion  
Area  
Approximately 2,500 ft

**No Action** will result in continued:

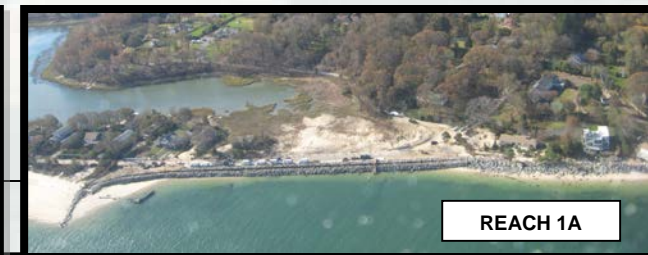
- Financial losses from storm, erosion and wave attack damages to property and infrastructure
- Beach erosion at rate of 10 feet per year in east and west critical erosion areas
- Threats to life and safety from flood induced disruptions to Asharoken Avenue



REACH 2A



REACH 1B



REACH 1A



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# Screening of Alternatives

North Shore of Long Island, Asharoken, New York  
Coastal Storm Risk Management Study

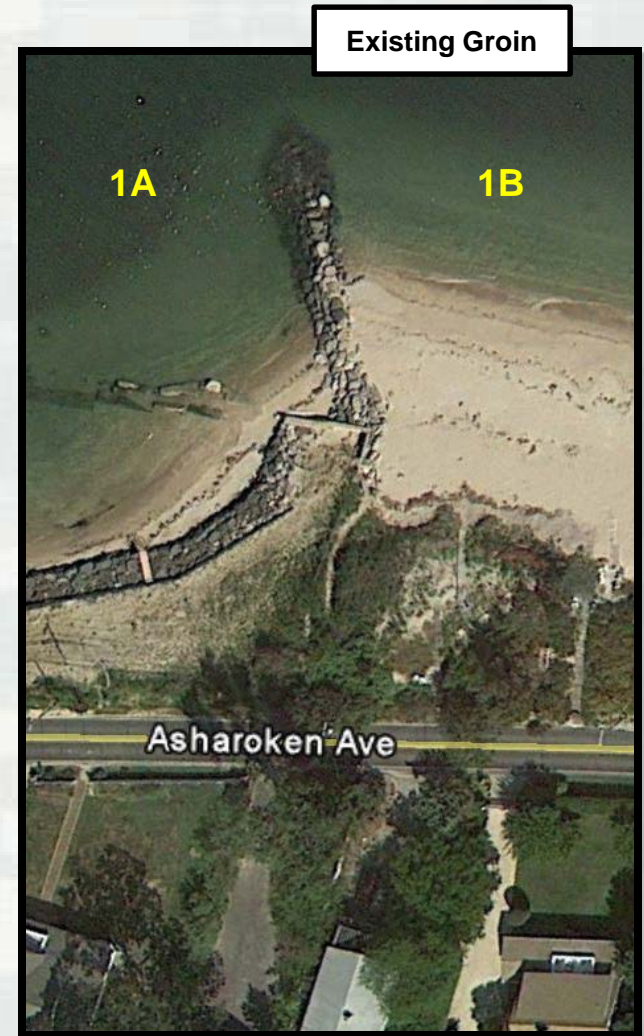


The preliminary screening shows the full array of measures considered.

Measure	Screening	Reason for Consideration/Elimination
Buy-Outs	Eliminated	Not Cost effective (100 houses, 50M)
Zoning	Eliminated	Not effective for existing structures
Retrofitting	Eliminated	Not effective for most structures facing L.I. Sound which are subject to erosion and wave attack.
Relocation	Eliminated	Not Cost Effective
Floodwalls and Levees	Eliminated	Not effective against erosion and wave attack
Beach Nourishment	Carried Forward	Cost Effective (12,400 ft length; 22M)
Reinforced Dune with Beach Nourishment	Carried Forward	Cost Effective (12,400 ft length; 43M)
Bulkhead or Bulkhead with Raised Dune	Eliminated	Not recommended because of frequent maintenance
Groins with Beach Fill	Eliminated	Not Cost Effective (24 groins; 45M)
Localized Groins with Beach Nourishment	Carried Forward	Cost Effective
Offshore Breakwater with Beach Fill	Eliminated	Not Cost Effective (10 breakwater segments; 50M)
Sand Bypassing	Eliminated	Not effective to reduce storm damage risk. Limited updrift supply of material available..
Installation of a Diffusion Pipe	Eliminated	Not effective as jetties and intake channel form an effective littoral blockage
Modification of the Jetties	Eliminated	Not effective as storm damage reduction measures. Would adversely impact power plant operations.
Dredging the Updrift Fillet Areas	Eliminated	Not Cost Effective
Causeway	Eliminated	Not Cost Effective
Road Raising	Eliminated	Not Cost Effective, Incomplete Solution
Road Raising with beachfill	Eliminated	Not Cost Effective

# Groin Considerations

- Potential to reduce localized erosion
- Reduced erosion results in reduced renourishment need (amount & frequency)
- Modeling undertaken to evaluate effectiveness of structures and refine designs
- Structures can be recommended by demonstrating that initial costs are offset by future sand needs







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# Preliminary Screening of Alternatives

North Shore of Long Island, Asharoken, New York  
Coastal Storm Risk Management Study



The detailed evaluation of alternatives shows the alternative plans that were evaluated further to arrive at the tentatively selected plan.

	WEST	1A	1B	2A	2B	EAST
1	Dune and Beachfill					
2	Reinforced Dune and Beachfill					
3A	Reinforced Dune and Beachfill			Beachfill		
3B	Beachfill			Reinforced Dune and Beachfill		
4	Groin Field	Beachfill				
5	Groin Field	Beachfill		Groin Field	Beachfill	

## Asharoken, Long Island, New York

	Alternative 1 Beachfill Only	Alternative 2 Beachfill and Buried Seawall-full shoreline	Alternative 3 Beachfill and Buried Seawall-half shoreline	Alternative 4 Beachfill with West Groins	Alternative 5 Beachfill with West and East Groins
Initial Fill Volume (CY)	600,000	375,000	450,000	600,000	600,000
Coastal Structures	n/a	buried seawall	partial buried seawall	3 rock groins	11 rock groins
Nourishment (cy/period)	60,000 cy/3 yrs	200,000 cy/10 yrs	200,000 cy/10 yrs	80,000 cy/5 yrs	100,000 cy/10 yrs
Total Nourishment in 50yrs	1,000,000 cy	1,000,000 cy	1,000,000 cy	800,000 cy	500,000 cy
<b>COSTS</b>					
Initial Construction Cost	\$21,552,000	\$66,931,000	\$45,940,000	\$23,665,000	\$32,426,000
Annualized Initial Constr.	\$734,000	\$2,310,000	\$1,579,000	\$806,000	\$1,114,000
Annual Nourishment Cost	\$1,143,000	\$997,000	\$997,000	\$883,000	\$504,000
Annualized Monitoring Cost	\$50,000	\$50,000	\$50,000	\$50,000	\$93,000
Annual OMRR Cost	\$147,000	\$353,000	\$259,000	\$156,000	\$196,000
Total Annual Cost	\$2,074,000	\$3,710,000	\$2,885,000	\$1,895,000	\$1,907,000
Annual Damage Benefits	\$2,570,900	\$2,570,900	\$2,570,900	\$2,570,900	\$2,570,900
Net Benefit:	\$496,900	-\$1,139,100	-\$314,100	\$675,900	\$663,900
<b>Benefit/Cost Ratio:</b>	<b>1.24</b>	<b>0.69</b>	<b>0.89</b>	<b>1.36</b>	<b>1.35</b>



The Tentatively Selected Plan is identified as Alternative 4. The TSP is subject to change based upon public and agency review.

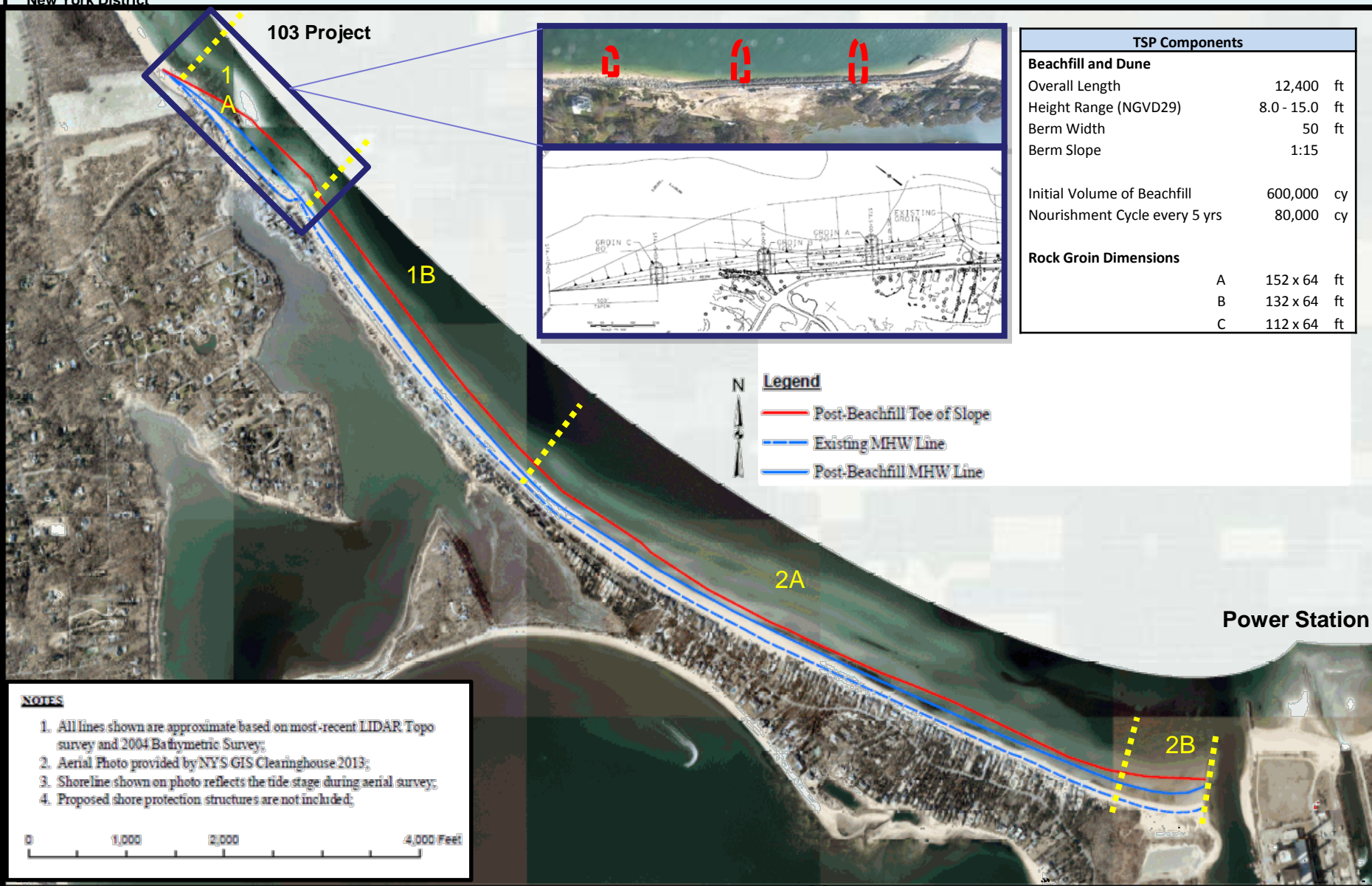
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# Tentatively Selected Plan Overview

North Shore of Long Island, Asharoken, New York  
Coastal Storm Risk Management Study



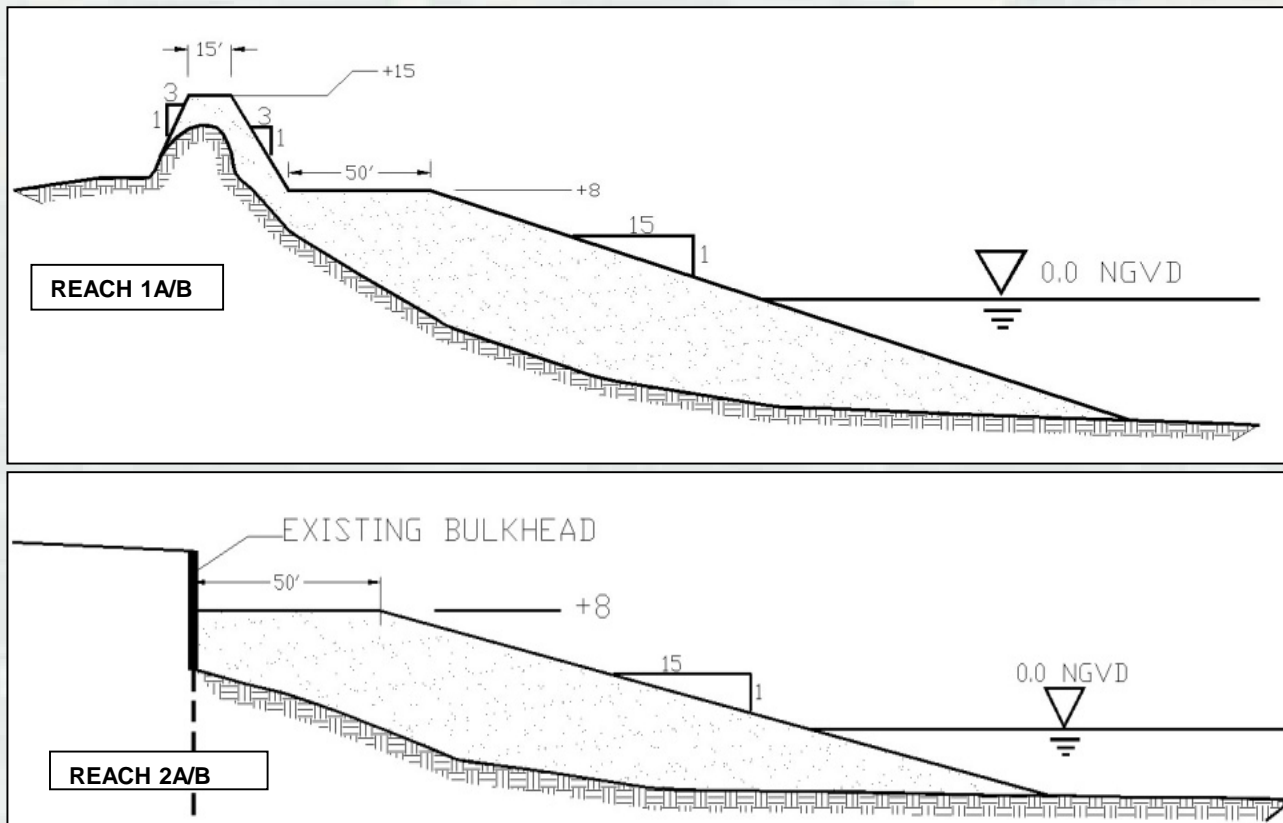




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# Plan Elements – Beachfill Cross-Sections

North Shore of Long Island, Asharoken, New York  
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12,400 linear feet of beach berm and dune fill,

- Dune height at elevation +15 ft NGVD29 with a 15 ft dune crest width, landward and seaward dune slopes of 1V:3H
- 50 ft berm width at elevation +8 ft NGVD29 and a foreshore slope of 1V:15H to the existing bottom (Reach 2A/2B)

Under continued historic Sea Level Rise projections:

Reach 1 – reduces damages up to a 200 year storm event

Reach 2 – reduces damages up to a 50 year storm event



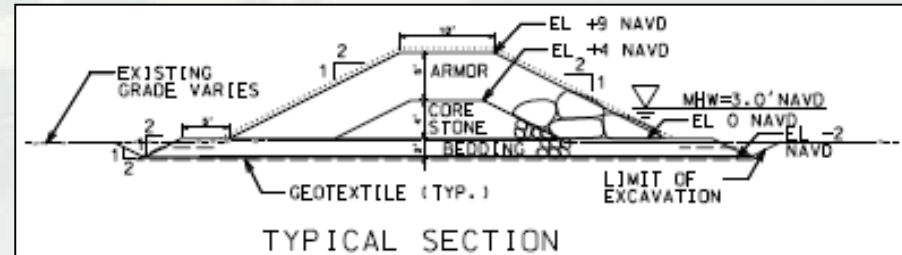
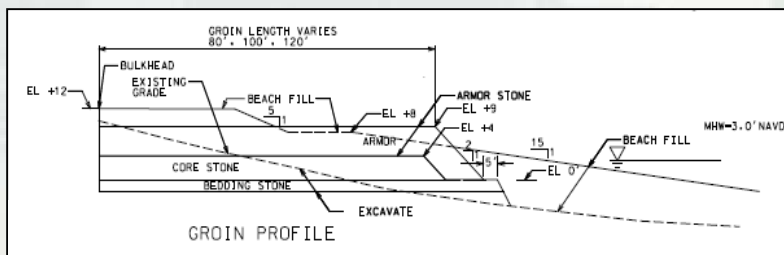
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# Plan Elements – groin details

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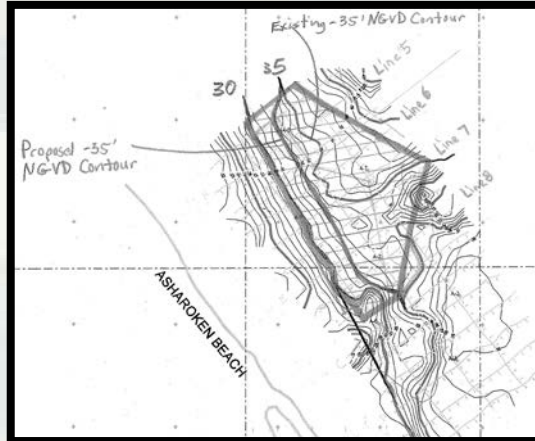
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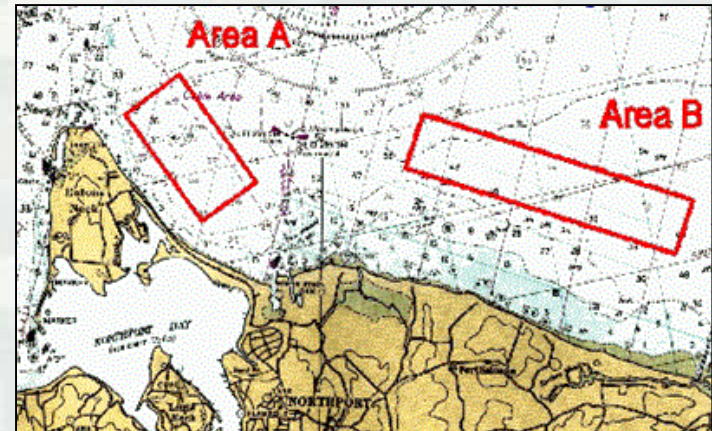
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# Offshore Borrow Area

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Coastal Storm Risk Management Study



- Borrow area usage in Long Island Sound will balance sand needs, and environmental impacts associated with dredging.
- The offshore sand borrow source will be used only for initial beach fill as previously coordinated with NYSDEC Region 1.
- The costs of upland sand for renourishment is less expensive than the cost of borrow area sand, based upon volume required and expected mobilization and demobilization costs.



Borrow Location/ Potential Volume	Distance from Project Site	Method of Construction for Dredging/Transportation
Asharoken Offshore Borrow Area A 3.75 million cubic yard (Recommended)	2 miles	Cutterhead pipeline dredge
Asharoken Offshore Borrow Area B 0.8 million cubic yard (Alternative Site)	5 miles	3,000 cy hopper dredge with booster pump
Upland Long Island Horan Sand and Gravel (Renourishment Source)	20 miles	Trucked to site
Upland Long Island Ranco Sand and Stone (Renourishment Source)	40 miles	Trucked to Site



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# Environmental Considerations

## Impacts Considered

Geology, Topography, Soils, Water Quality, Vegetation and Wetlands, Wildlife, Threatened and Endangered Species, Socioeconomics and Environmental Justice, Cultural Resources, Land Use and Zoning, Recreation, Aesthetics, Coastal Zone Management, Hazardous, Toxic and Radioactive Material (HTRW), Transportation, Air Quality and Noise

### Unavoidable, Permanent, Minimal & Temporary Impacts

**Geology, Topography, Soils:** Offshore dredging and removal 600,000 cy sand and subsequent placement on Asharoken Beach.

**Land Use and Transportation:** Project implementation will not change traditional accepted land use in or around the project site..

**Fish and Benthic Invertebrates:** Dredging and placement will impact fish and benthic organisms at both action areas.

**Wildlife:** Construction of the project will disturb some wildlife which will be displaced to adjacent areas .

**Vegetation:** Movement and storage of equipment and placement of fill sand may eliminate some existing beach vegetation.

**Water Quality:** No significant impacts to water quality are expected. Dredging and placement will create temporary localized effects

**Noise and Air Quality:** For the duration of project construction there will be an increase in ambient noise due to construction. No significant impacts to air quality are anticipated.

**Recreation:** Areas of the beach and compatible uses will be temporarily unavailable around the area of active construction.

### Benefits and Adverse Impacts Avoided/Minimized

**Land Use and Zoning:** Project will not conflict with local zoning.

**Wildlife:** Enhanced and enlarged beach habitat will benefit shore birds and waterfowl as well as spawning habitat for horseshoe crabs. Groin tips will become reef habitats providing structured substrate and increasing local diversity of marine fish and invertebrates. The timing of the dredging window and use of a pipeline cutter head dredge will minimize impacts. Groins will provide roosting and foraging areas for many species of birds.

**Vegetation (upland):** The new beach will be planted with dune grass, greatly increasing wildlife habitat value and strengthening storm protection.

**Recreation:** The beach will be greatly enlarged providing much more area for typical beach activities. Groins will attract many species of finfish sought by recreational fishermen.

**Cultural Resources:** The project will not effect any cultural resources

**HTRW** The potential for the project to produce any hazardous material issues will be minimized by the adoption of and attention to the Standard Operating Procedures and the Health and Safety Plan.



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## Non-Federal Sponsor

North Shore of Long Island, Asharoken, New York  
Coastal Storm Risk Management Study



The non-Federal sponsor for the study is the **New York State Department of Environmental Conservation**. New York State Department of Environmental Conservation's Local Sponsor for the study is the Village of Asharoken.

### **Cost Sharing Allotment:**

- Study completion: 100% Federal
- Initial construction: 65% Federal, 35% Non-Federal
  - Non-Federal portion is 70% State, 30% Village of Asharoken
- Future beach nourishment: 50% Federal, 50% Non-Federal

### **Non-Federal responsibilities include:**

- Support for the plan
- Cost-Share the Plan
- Acquire Real Estate
- Operate and Maintain the Project
- Identify public access plan, and provide public access or adjust cost-sharing



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# Non-Federal Sponsor

North Shore of Long Island, Asharoken, New York  
Coastal Storm Risk Management Study



## Key Real Estate Requirements

- Location of sand placement requires a permanent easement
- Locations of groin construction and public access must be in municipal ownership
- Costs for obtaining real estate required for project construction, maintenance, or public access are credited towards the Village's share of the project cost.

## Public Access Requirements

- Public access is required for eligibility of Federal cost-sharing
- Village of Asharoken & NYSDEC have prepared a Draft Public Access Plan
- Public Access Plan appears to meet Corps / State requirements (under formal review):
  - Access consistent with expected use of the area
  - Access points to the beach, open to the public every ½ mile
  - Parking at east and west sites, with intermediate drop-off locations
  - Specific access points to be identified by Village of Asharoken







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# Costs



## Cost Apportionment

	Federal Share	Non-Federal Share	Total Cost
<b>Project First Costs**</b>			
Cash Contribution	\$ 15,382,000	\$ 2,411,000	\$ 17,793,000
Real Estate Lands and Damages	-	\$ 5,872,000	\$ 5,872,000
<b>Total First Cost</b>	<b>\$ 15,382,000</b>	<b>\$ 8,283,000</b>	<b>\$ 23,665,000</b>
<b>Continuing Construction***</b>			
Beach Renourishment	\$ 28,883,000	\$ 28,883,000	\$ 57,765,000
Annual Beach Renourishment	\$ 442,000	\$ 442,000	\$ 883,000
Annual Coastal Monitoring	\$ 5,000	\$ 5,000	\$ 9,000
Annual Environmental Monitoring	\$ 21,000	\$ 21,000	\$ 41,000
<b>Annual Continuing Construction Cost</b>	<b>\$ 468,000</b>	<b>\$ 468,000</b>	<b>\$ 933,000</b>
Annual Beach and Groin Maintenance Cost	-	\$ 26,000	\$ 26,000
Annual Major Rehabilitation Cost	-	\$ 130,000	\$ 130,000
<b>Total Annual OMRR&amp;R Costs</b>	<b>-</b>	<b>\$ 156,000</b>	<b>\$ 156,000</b>

\* October 2014 Price Level

\*\* Shared based on 65% Federal and 35% non-Federal for construction

\*\*\* Shared based on 50% Federal and 50% non-Federal for renourishment

Village share: \$2,485,000 initial construction



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# Schedule



Item	Date
Draft Report/DEA	November 2015
Public information meeting	9 December 2015
End of Public Comment Period	8 January 2016 <b>extended to 29 January 2016</b>
Agency Decision Milestone	May 2016
Chief of Engineers Report	Fall 2016
Initiate Plans & Specifications	Summer 2017
Construction Funds Agreement PPA)	Fall 2017
Acquire Real Estate	Spring 2018
Construction Start	Fall 2018
Construction Completion	Spring 2019

Notes:

Schedule has been updated from that contained in the draft report  
Construction reflects a dredge window from Oct 1 – Jan 15



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Village of Asharoken**



# **PUBLIC INFORMATION MEETING**

**The Draft Environmental Assessment is open for public  
comment through January 29, 2016.**

**Please address your comments to:**

**US Army Corps of Engineers – New York District  
Attn: Mr. Howard Ruben  
26 Federal Plaza, Room 2151  
New York, NY 10278  
[howard.ruben@usace.army.mil](mailto:howard.ruben@usace.army.mil)**

**Public comment cards are available at this Information Meeting**



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