

New York – New Jersey Harbor and Tributaries **Coastal Storm Risk Management Study** TIER 1 ENVIRONMENTAL IMPACT STATEMENT



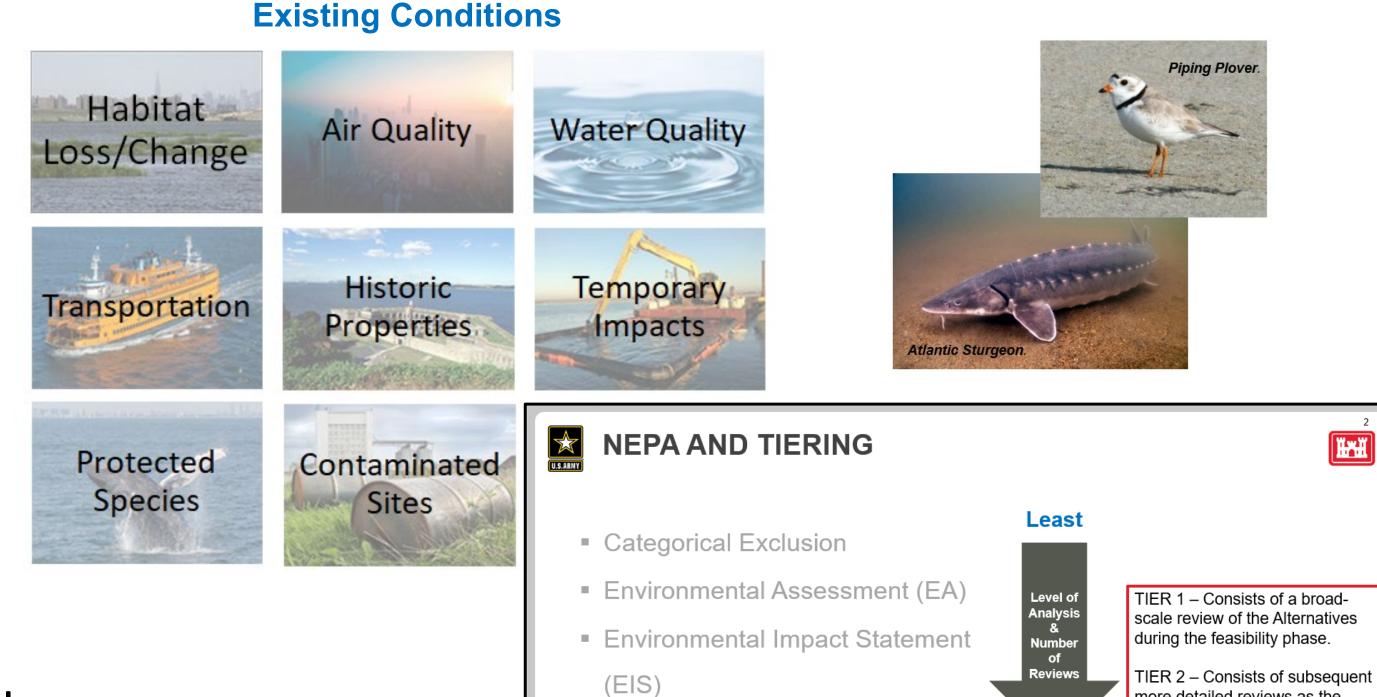
US Army Corps of Engineers® New York District

What is an Environmental Impact Statement?

The National Environmental Policy Act (NEPA) requires federal agencies to assess environmental effects prior to constructing a project. An Environmental Impact Statement (EIS) is the most detailed level of review required under NEPA. Multiple laws, executive orders, and regulations are considered during the NEPA process.

Due to the scale and complexity of the NYNJHAT Study, the EIS will be prepared in two tiers: Tier 1

and Tier 2. No Alternative can be constructed until the full Tier 1 and Tier 2 EIS(s) are completed, and all permits have been obtained.



How are the Tier 1 environmental impacts and benefits assessed?

- Approximately 50 resources assessed
- Alternatives are compared to existing conditions

Impacts by Structural Measure Type

RESOURCE	STORM SURGE BARRIERS	TIDE GATES	FLOODWALL	FLOODWALLS WITH PARK	LEVEES	ELEVATED PROMENADES	BURIED SEAWALL/SAND DUNES	SEAWALLS	REVETMENTS	SEAWALLS WITH REVETMENTS	DEPLOYABLE FLOOD BARRIERS	BERMS	BULKHEADS	PEDESTRIAN/VEHICULAR GATES	NAVIGABLE GATES	ROAD RAISING
Wildlife	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Fish	Y+	Y+	Y+	Y+	N	Y+	Y+	Y+	Y+	Y+	Y+	N	Y+	N	Y+	N
Migratory Fish	Y	Y	Y	Y	N	Y	Y	Y	N	N	Y	Y	Y	N	Y	N
Terrestrial Vegetation	Y+	Y+	Y+	Y+	Y+	Y+	Y+	Y+	Y+	Y+	Y+	Y+	Y+	Y+	Y+	Y
Submerged Aquatic Vegetation	Y	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Invasive and Aquatic Nuisance Species	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	N
Threatened and Endangered Species Terrestrial	Y+	Y+	Y+	Y+	Y+	Y+	Y+	Y+	Y+	Y+	Y+	Y+	Y+	Y+	Y+	Y

Impact Rating Criteria

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Impact Rating Definitions Impact Rating | Description and Numerical Score Effects to the resource would have substantial consequences, locally and/or High (5) regionally. Impacts would exceed regulatory standards. Mitigation measures to offset the adverse effects would not be enough to reduce the significance of effect and therefore, effects to the resource would not be environmentally acceptable. Effects to the resource would be locally and/or regionally significant. Moderate to Impacts would be within regulatory standards; however, existing resource High (4) conditions are expected to be affected in the near-term, but not necessarily in the long term. Mitigation measures to reduce any potential adverse impacts would be necessary. Effects to the resource are expected to be moderate in the near-term and Moderate (3) localized. Impacts would be within or below regulatory standards, as applicable, and the use of mitigation measures would reduce potential adverse impacts, if applicable. Effects to the resource would either be negligible or, if detectable, have Low (2) minor temporary impacts locally to the resource. The impacts would be well below regulatory standards, as applicable, and mitigation measures may be implemented to sustain low to no impact to the resource. There would be no impacts to the resource because the resource would not No Impact (1) be affected.

nore detailed reviews as the designs are further refined Tiered Environmental Impact during the pre-construction engineering design phase Most Statement (EIS)

- Incorporating stakeholder input
- Assessed by an impact rating criteria and scorecards:

ALT 2 Fish Impact Rating by Measu Cons O&N ALT 3A Wetlands Impact Rating by Measure Mitię + indic ALT 4 Constr National Park Service Land Rating O&M A Mitiga + indicate Const ALT 5 Cultural Resources Impact Rating by O&M Mitiga + indica Constr O&M A Water Quality Impact Rating by Mitiga Measure Construction/Footprint O&M Assumption Mitigated Rating

Individual Resource Scorecard Examples from the Draft Report

How are the Alternatives compared for Environmental Acceptability?

The individual resource scorecards were combined into Resource Categories and averaged for an Alternative Score:

FOOTPRINT/CONSTRUCTION SCORE CARD		ALTERNATIVE							
RESOURCE CATEGORY	2	3A	3В	4	5				
NATURAL AND PHYSICAL ENVIRONMENT									
Wildlife and Vegetation ^A	1.75	1.77	1.51	1.53	1.20				
Special Status Species (Terrestrial) ^B	2.11	2.0	1.66	1.66	1.33				
Special Status Species (Aquatic) ^c Special Status Areas ^D Commercial and Recreational Fishing		1.77	1.5	1.44	1.05				
Special Status Areas ^D	1.66	1.62	1.41	1.43	1.16				
Commercial and Recreational Fishing	2.0	2.22	1.77	1.66	1.11				
Physical Resources ^E	1.94	2.08	1.69	1.66	1.33				
Hydrological Resources ^F	1.53	1.73	1.46	1.46	1.06				
Water Quality	2.11	2.22	1.77	1.66	1.33				
Ecosystems (NYBEM)	*To be incorpo				ited for the Final FR/Tier 1 EIS				
Air Quality and Clean Air Act ^G	1	1	1	1	1				
Regional Climate and Climate Change	1	1	1	1	1				
Cultural Resources ^H	2.77	2.66	2.66	2.66	2.22				
Native American Lands	1	1	1	1	1				
Hazardous, Toxic, and Radioactive Waste Sites	2.2	2.22	2.0	2.0	1.55				
Navigation	1.22	1.44	1.22	1.11	1.0				
Noise and Vibration	2.0	2.22	1.77	1.66	1.33				
Environmental Justice	1.66	1.66	1.55	1.55	1.33				
CALCULATION: Sum of the Footprint/Construction Impact Ratings (x) divided by the included in each resource category (y). (x = alternative score; y = # of resources) x ÷ y = Rating (1-5) 1 - No Impact, 2 - Low Impact, 3 - Moderate Impacts, 4 - Moderate-H									
ALTERNATIVE TOTAL: (rounded to the nearest 10 th)	1.7	1.8	1.6	1.5	1.3				

OPERATIONS AND MAINTENANCE SCORE CARD		ALTERNATIVE							
RESOURCE CATEGORY	2	3A	3В	4	5				
NATURAL AND PHYSICAL ENVIRONMENT									
Wildlife and Vegetation ^A	1.42	1.44	1.31	1.27	1.12				
Special Status Species (Terrestrial) ^B	1.77	1.77	1.51	1.55	1.33				
Special Status Species (Aquatic) ^c	1.27	1.30	1.22	1.13	1.02				
Special Status Areas ^D	1.26	1.25	1.23	1.18	1.05				
Commercial and Recreational Fishing	1.88	1.55	1.55	1.33	1.11				
Physical Resources ^E	1.30	1.38	1.25	1.30	1.08				
Hydrological Resources ^F	1.20	1.42	1.17	1.17	1.0				
Water Quality	1.66	1.55	1.44	1.22	1.0				
Ecosystems (NYBEM)	*To be i	incorpora	ted for the EIS	Final FR					
Air Quality and Clean Air Act ^G	1	1	1	1	1				
Regional Climate and Climate Change	1	1	1	1	1				
Cultural Resources ^H	2.0	1.55	1.22	1.55	1.22				
Native American Lands	1	1	1	1	1				
Hazardous, Toxic, and Radioactive Waste Sites	1.66	1.44	1.33	1.33	1.0				
Navigation	1.22	1.44	1.22	1.11	1.0				
Noise and Vibration	1.0	1.0	1.0	1.0	1.0				
Environmental Justice	1.77	1.66	1.55	1.55	1.33				
CALCULATION: Sum of the Operations and Maintenance Assumption resources in each resource category (y). (x = alternative score; y = $\#$ of resources) x ÷ y = Rational statements of the score in the score is the statement of the score is		ded by the	total number of						
1 - No Impact, 2 - Low Impact, 3 - Moderate Impact	h Impact,	i - High l	- High Impact						
ALTERNATIVE TOTAL: (rounded to the nearest 10 th)	1.4	1.4	1.3	1.2	1.1				

MITIGATED IMPACT SCORE CARD	ALTERNATIVE							
RESOURCE CATEGORY	2	3A	3В	4	5			
NATURAL AND PHYSICAL ENVIRONMENT								
Wildlife and Vegetation ^A	1.51	1.53	1.37	1.35	1.12			
Special Status Species (Terrestrial) ^B	1.16	1.05	1.05	1.05	1.0			
Special Status Species (Aquatic) ^c	1.50	1.5	1.33	1.25	1.02			
Special Status Areas ^D	1.12	1.11	1.07	1.08	1.06			
Commercial and Recreational Fishing		2.11	1.77	1.66	1.11			
Physical Resources ^E		1.52	1.33	1.41	1.11			
Hydrological Resources ^F	1.24	1.33	1.13	1.13	1.06			
Water Quality	1.11	1.0	1.0	1.0	1.0			
Ecosystems (NYBEM)	ted for the EIS	Final FR/ Tier 1						
Air Quality and Clean Air Act ^G	1	1	1	1	1			
Regional Climate, Climate Change, and RSLC		1	1	1	1			
Cultural Resources ^H	1.2	1.33	1.11	1.22	1.11			
Native American Lands		1	1	1	1			
Hazardous, Toxic, and Radioactive Waste Sites		1.88	1.55	1.77	1.44			
Navigation		1.44	1.22	1.11	1.0			
Noise and Vibration	1.22	1.44	1.22	1.11	1.0			
Environmental Justice	1.0	1.0	1.0	1.0	1.0			
CALCULATION: Sum of the Footprint/Construction impact ratings and Operations an Ratings (x) divided by the total number of resources. (x = alternative score; y = $\#$ of resources) x ÷ y = Rating (1-5)				ance Assumption				
1 - No Impact, 2 - Low Impact, 3 - Moderate Impact	h Impact,	5 - High Impact						
ALTERNATIVE TOTAL: (Rounded to the nearest 10 th)	1.3	1.3	1.2	1.2	1.1			

Tentatively Selected Plan

Tentatively Selected Plan

Tentatively Selected Plan

