

Draft Integrated Interim Response
Feasibility Report and Environmental
Assessment for Actionable Elements

**NEW YORK-NEW JERSEY
HARBOR AND TRIBUTARIES
COASTAL STORM RISK MANAGEMENT
FEASIBILITY STUDY**

**SUBAPPENDIX A-2A
HARLEM RIVER
ACTIONABLE ELEMENT SITE
ENDANGERED SPECIES ACT - USFWS**

July 2025

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1 INTRODUCTION

The U.S. Army Corps of Engineers (USACE), New York District, has prepared this assessment to evaluate Federally listed threatened and endangered species for the New York New Jersey Harbor and Tributaries (NYNJHAT) Coastal Storm Risk Management (CSRM) Feasibility Study, Integrated Interim Response Feasibility Report and Environmental Assessment on Actionable Elements.

The NYNJHAT Study was authorized as a result of the findings in the January 2015, USACE North Atlantic Coast Comprehensive Study (NACCS) which identified high-risk areas on the Atlantic Coast for warranting further investigation of flood and coastal storm risk management solutions including the NYNJHAT study. In February 2019, a NYNJHAT Feasibility Study Interim Report (Interim Report) was completed to document existing information and assumptions about the future, and to identify knowledge gaps that warranted further investigation because of their potential to affect plan selection. The Interim Report states the impacts from Hurricane Sandy highlighted the National need for a comprehensive and collaborative evaluation to manage risk for vulnerable populations within the North Atlantic region. In September 2022, a Draft Integrated Feasibility Report and Tier 1 (Programmatic) Environmental Impact Statement for the Comprehensive Plan was released detailing the additional analyses conducted following the Interim Report (2019) and what additional information was needed in the future for the remainder of Tier 1 and Tier 2 of the programmatic process.

The Endangered Species Act (ESA) of 1973 was passed to protect and recover imperiled species and the ecosystems upon which they depend. The ESA is administered by the USFWS and the National Marine Fisheries Service (NMFS). Under the ESA, species may be listed as either endangered or threatened, whereby species are either in danger of extinction through all, or a significant portion, of its range (endangered) or are species that are likely to become endangered within the foreseeable future (threatened). The ESA prohibits the “take” of protected species, including harassment, hunting, capturing, collecting, or killing.

Consultation with USFWS and NMFS is required for any Federal action that may adversely affect ESA species. An adverse effect includes direct or indirect physical, chemical, or biological alterations to waters or substrate, species and their habitat, other ecosystem components, supportive of listed species.

This document focuses on the Harlem River Actionable Element Site, inclusive of both the Landward and Seaward Alignments, as a complimentary feature to the NYNJHAT Study Comprehensive Plan.

1.1 PROJECT PURPOSE AND NEED

Storms have historically severely impacted the New York New Jersey Harbor region, including Hurricane Sandy most recently, causing loss of life and extensive economic damages.

In 2012, Hurricane Sandy caused considerable loss of life, extensive damage to property, and massive disruption to the North Atlantic Coast. The effects of this storm were particularly severe because of its tremendous size and the timing of its landfall during high tide. Twenty-six states were impacted by Hurricane Sandy, and disaster declarations were issued in 13 states. NY and NJ were the most severely impacted states, with the greatest damage and most fatalities in the NY Metropolitan Area. For example, a storm surge of 12.65 feet above normal high tide was reported at Kings Point on the western end of Long Island Sound and 9.4 feet at the Battery on the southern tip of Manhattan. Flood depths due to the storm tide were as much as nine feet in Manhattan, Staten Island, and other low-lying areas within the NY Metropolitan Area. The storm exposed vulnerabilities

associated with inadequate coastal storm risk management (CSRM) measures and lack of defense to critical transportation and energy infrastructure.

The January 2015, USACE North Atlantic Coast Comprehensive Study (NACCS) identified high-risk areas on the Atlantic Coast for warranting further investigation of flood risk management solutions. In February 2019, a NYNJHAT Feasibility Study Interim Report was completed to document existing information and assumptions about the future conditions, and to identify knowledge gaps that warranted further investigation because of their potential to affect plan selection. The Interim Report states the impacts from Hurricane Sandy highlighted the national need for a comprehensive and collaborative evaluation to manage risk for vulnerable populations within the North Atlantic region. To address the impacts and concerns associated with devastating storms, the New York District has proposed measures to manage coastal storm risk in the NYNJ Harbor and its tributaries.

In response, the New York District is investigating measures to manage future flood and coastal storm risk in ways that support the long-term resilience and sustainability of the coastal ecosystem and surrounding communities, and reduce the economic costs and risks associated with flood and storm events for the NYNJHAT Study Area (USACE 2019). The alternative concepts proposed would help the region manage flood risk that is expected to be exacerbated by relative sea level rise.

The scope of the Interim Response Actionable Element builds upon the September 2022 Draft Integrated Feasibility Report (FR) and Tier 1 (Programmatic) Environmental Impact Statement (EIS), as an interim action while the overall Comprehensive Plan continues to be studied, subject to future funding and appropriations. The Comprehensive Plan is a programmatic assessment described as containing two tiers, with September 2022 Draft Report initiating the Tier 1, or broad-level assessment, with plans for a future Tier 2 containing the detailed site-specific analyses including any design refinements and reasonable alternatives. This Report is not a Tier 2, but rather an Interim Response to the Comprehensive Plan responsive to the larger Coastal Storm Risk Management (CSRM) authorization to assess a 2,500+ square mile radius in the New York-New Jersey Metropolitan Area. This interim response, like Tier 2, assesses the measures at a site-specific level, completing enough design maturity and analyses to disclose the potential effects of the Alternatives, and complete full environmental compliance. Interim responses often arise during the progress of a programmatic study, of which purpose and need is to respond to an immediate need for CSRM where able in the interim and corresponding with future legislative cycles (e.g. Water Resources Development Act (WRDA), while the more complex measures of the larger NYNJHAT Study require additional analysis, modeling, public engagement, and design maturity to complete. Interim responses often arise during the progress of a programmatic study, of which purpose is to respond to an immediate CSRM need in the interim and corresponding with future legislative cycles (e.g. Water Resources Development Act (WRDA), while the more complex measures of the larger NYNJHAT Study require additional analysis, modeling, public engagement, and design maturity to complete. The purpose and need of this action is to manage risk to critical infrastructure in local areas of high susceptibility to storm surge and at-risk communities. This Interim Response action addresses a critical need for CSRM measures in Harlem River, New York, East Riser, New Jersey, and Oakwood Beach, New York.

1.2 COORDINATION AND CONSULTATION HISTORY

Coordination with stakeholders has been a critical component of the NYNJHAT study. Since early 2017 the New York District held many workshops and meetings with Cooperating and Participating Agencies and other stakeholders to share information on the study scope and purpose and formulation of alternatives, and to exchange ideas and information on natural and marine resources

within the Study Area. Cooperating Agencies include the U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service, U.S. Coast Guard, National Oceanic and Atmospheric Administration National Marine Fisheries Service, and the National Park Service. The Federal Emergency Management Agency is a Participating Agency.

The New York District announced the preparation of an Integrated Feasibility Report/Tiered EIS for the NYNJHAT study feasibility in the February 13, 2018 Federal Register pursuant to the requirements of Section 102(2)(C) of NEPA. The NEPA scoping period initially spanned 45 days from July 6 – August 20, 2018, but was extended to 120 days due to numerous requests from the public. The New York District held a total of nine public scoping meetings during the public scoping period. In 2019, four NYBEM workshops were held on January 3, March 11, June 6, and November 14 to help inform the NYBEM model set up to be used as a tool for assessing some direct and indirect effects of agency actions on regional ecosystems including the NYNJHAT Study, among others.

In February 2020, the NYNJHAT Study paused until October 2021 due to a lack of Federal funding. Following study resumption, the New York District held several Cooperating Agency meetings to facilitate open communication, share study progress, status updates, and data as it became available, including an Engineering presentation on the study alternatives, a presentation on the TSP, and a presentation on the NYBEM development progress. In September 2022, a Draft Integrated FR/Tier 1 (Programmatic) EIS was released for stakeholder, agency, and public review and comment. Following a substantial public review period of 175+ days, and approximately 2,700 comments received, many comments required a need for, among other requests, more consideration for Nature-Based Solutions to be incorporated into the Study. Ultimately, these comments informed the future of the NYNJHAT Study, and introduced the need for further coordination with public and resource agencies as the Study progresses.

Previously, In August 2022, the New York District and the USFWS initiated a scope of work for the preparation of a Fish and Wildlife Coordination Act Report (FWCAR) pursuant to the Fish and Wildlife Coordination Act 48 Stat. 401, as amended; 16 U.S.C 661 et seq., to provide information of fish and wildlife resources, including listed species under the ESA, and trust resources within the NYNJHAT Study Area. The USFWS provided a PAL letter until further information would become available to allow for the preparation of a FWCAR for the comprehensive study, or for the Tier 2 documents.

Given the schedule timeline following Study resumption, the New York District requested the USFWS advance the preparation of a Fish and Wildlife Coordination Act Report (FWCAR) instead of a PAL for the Actionable Element Sites. The FWCAR will be coordinated with the National Oceanic and Atmospheric Administration National Marine Fisheries Service, US Environmental Protection Agency (EPA), NYSDEC, NJDEP, and other agencies/organizations as appropriate, regarding the Interim Response Actionable Element area resources, potential project related impacts, and conservation recommendations to avoid, minimize, or compensate for impacts to fish and wildlife resources resulting from the Alternatives, including the Action Alternative. The New York District anticipates a Draft FWCAR will be received between the Draft and Final Integrated Interim Response FR/EA, prior to January 2026, and a Final FWCAR thereafter following a review and comment period. This Subappendix, as well as the Integrated Interim Response FR/EA will be updated with the FWCAR findings and recommendations for issuance of the Final Integrated Interim Response FR/EA. Refer to the ESA NOAA NMFS Subappendix for aquatic species considerations.

2 STUDY AREA

2.1 COMPREHENSIVE PLAN

The Study Area of the NYNJHAT Study includes the NY Metropolitan Area, including New York City (NYC) which is the most densely populated city in the United States, and five of the six largest cities in New Jersey by population. The shorelines of some of the NYNJHAT Study Area is characterized by low elevation areas, developed with residential and commercial infrastructure, and is subject to tidal flooding during storms. The Study Area covers more than 2,150 square miles and comprises parts of 25 counties in New Jersey and New York, including Bergen, Passaic, Morris, Essex, Hudson, Union, Somerset, Middlesex, and Monmouth Counties in New Jersey; and Rensselaer, Albany, Columbia, Greene, Dutchess, Ulster, Putnam, Orange, Westchester, Rockland, Bronx, New York, Queens, Kings, Richmond, and Nassau Counties in New York.

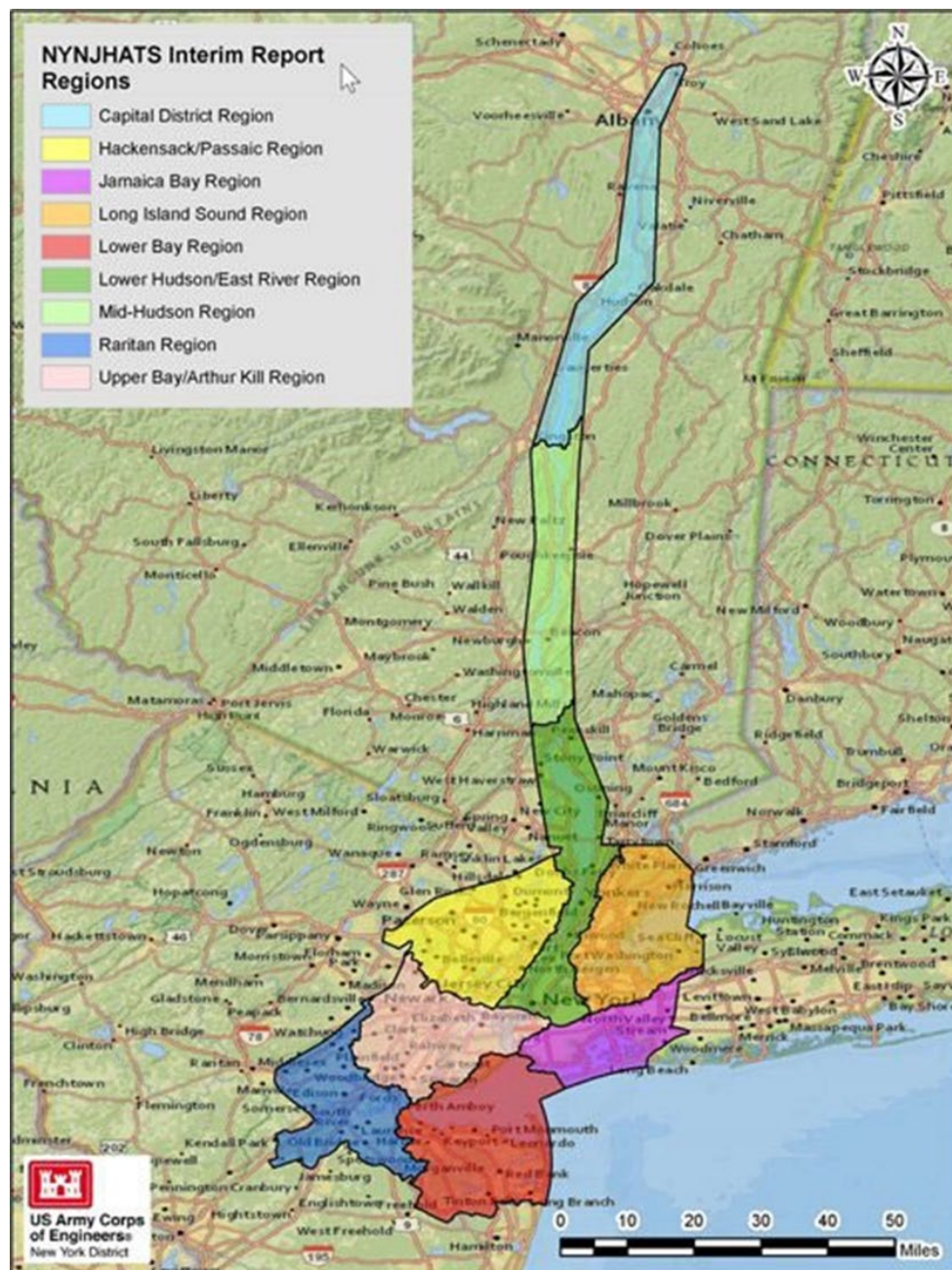


Figure 1. NYNJHAT Study Area

2.2 ACTIONABLE ELEMENT SITE - HARLEM RIVER

The Harlem River Actionable Element is located in and near the Harlem, New York County, Manhattan, New York, with the Lower Hudson/East River Planning Region of the NYNJHAT Study Area. The location is characterized by mixed residential/commercial uses and open space and includes Holcombe Rucker Park, Frederick Johnson Tennis Courts, Macomb's Bridge Library, Harlem Lane Playground NYCHA's Ralph J. Rangel Houses and Polo Grounds Towers, the Macombs Dam Bridge, and Harlem River Drive.

3 HARLEM RIVER ACTIONABLE ELEMENT SITE

3.1 PROJECT DESCRIPTION

All NYNJHAT Study Alternatives contained primary structural features, such as floodwalls, seawalls, and storm surge barriers as well as secondary, complementary Nature-Based Solutions (NBS) and Non-Structural Measures. At the time of the release of the September 2022 Draft Integrated Feasibility Report and Tier 1 (Programmatic) EIS, only the structural measures had been included as those would provide the primary CSRM function, and complimentary NBS and non-structural measures would be identified for inclusion into all Alternatives at a future date. Following substantial public review period of 175+ days, and approximately 2,700 comments received, many comments requested a need for, among other requests, more consideration for NBS to be incorporated into the Study. Following, Harlem River Actionable Element was identified to include NBS for consideration in the NYNJHAT Study.

The Harlem River Actionable Element is a Coastal Storm Risk Management (CSRM) structural measure with complimentary nature-based solution (NBS) features to the NYNJHAT Study Overall Comprehensive Plan, providing high-frequency flood risk management, and serves as a multi-line of defense to the NYNJHAT Study, Harlem River section of Manhattan. This Site includes two separate alignments for public consideration: (1) a Seaward Alignment consisting of an in-water measure (combination seawall and tunnel span structure), shore-based tie-in measures (e.g. floodwall), deployable vehicular gates, and complimentary NBS; and, (2) a Landward Alignment consisting of entirely on-land measures (e.g. floodwalls), several deployable vehicular gates, and invasive vegetation species management for replacement with native species and other potential complementary NBS to be identified.

No Action:

Under the No Action Alternative, the U.S. Army Corps of Engineers will not construct the CSRM project, therefore, the proposed Actionable Element Site would remain as is and would continue to be exposed to flood risks.

Action (two alternative alignments):

Seaward Alignment:

This alternative proposes approximately 320 linear feet (LF) of floodwall, two 40 LF each deployable flood barriers – vehicle gates, 3,636 LF anchored combi wall, and 155 LF tunnel span. The top of the CSRM line of protection is approximately 17 ft NAVD88 which corresponds to approximately 6 ft higher than the existing barrier along the north bound section of the Harlem River Dr. The CSRM protection is approximately 25 feet in water (seaward) from the existing Harlem River Drive barrier and 5 feet wide. Backfill will fill in the space between the roadway barrier and the seawall, and will include NBSs such as oyster reefs, tidal wetlands, tide pools, and seawall panels, armor blocks, and or pile encapsulations that support aquatic marine organism growth for wave attenuation. This alignment also includes some invasive vegetation species management and replacement for the tie-ins.

Landward Alignment:

This alternative proposes approximately 2,700 LF of floodwall and five 40 LF each deployable flood barriers. approximately 17 ft NAVD88 which corresponds to 0 - 12 ft above ground. The floodwalls and barriers will be approximately 5 ft wide. Also included is approximately 1+ acre (AC) of invasive vegetation species management and replacement with native species.

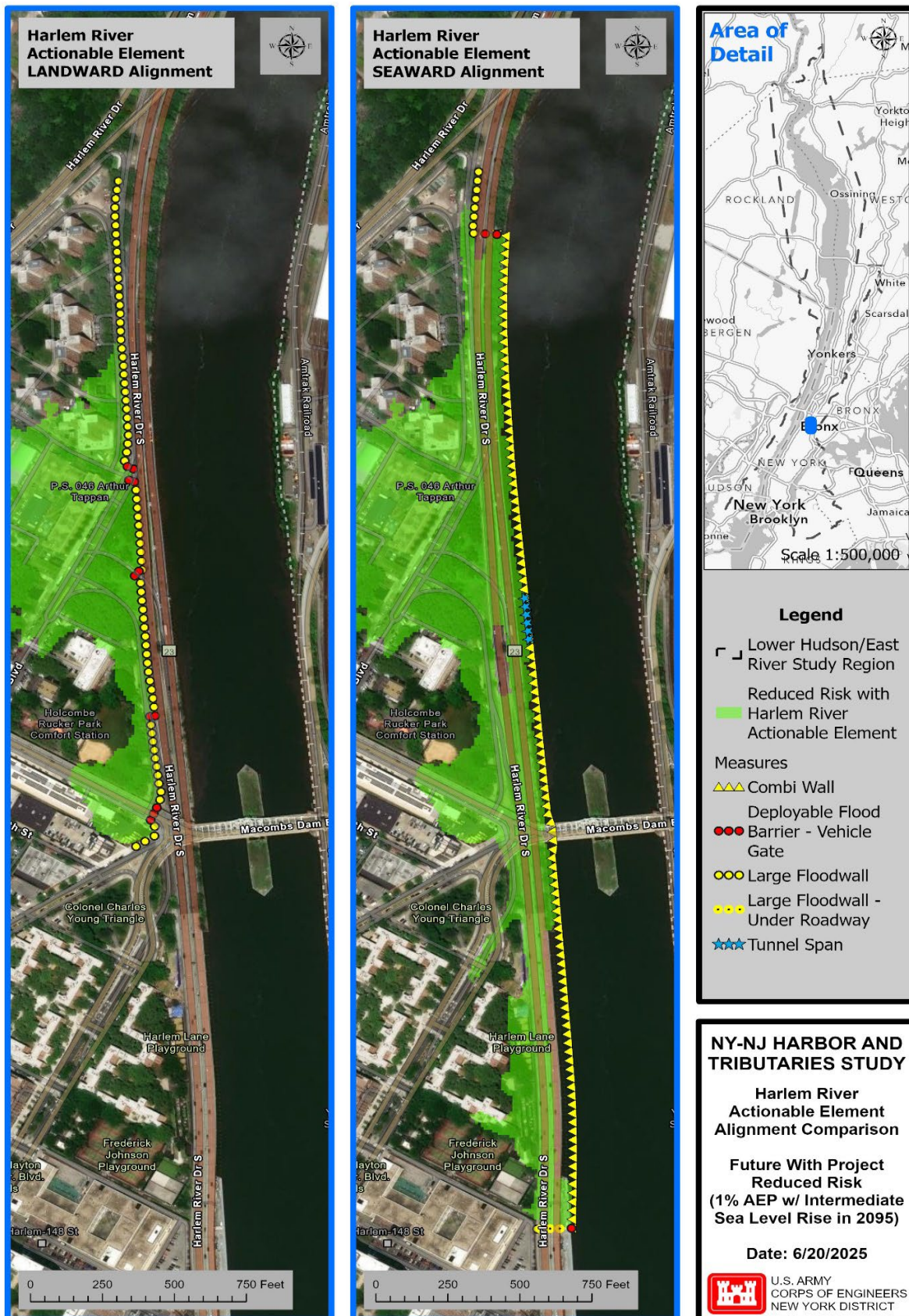


Figure 2. Harlem River CSRM Alignment Alternatives

3.2 ACTIONABLE ELEMENT PROJECT OBJECTIVES

Actionable Elements were evaluated on whether they make significant contributions to the planning objectives and sufficiently avoid planning constraints. The study objectives, below, were used to evaluate the Actionable Elements:

- Manage the risk of coastal storm flood damage to communities, public infrastructure, important societal resources, and the environment.
- Improve the community's ability to recover from damages caused by storm surges by reducing the duration of interruption in services provided by manufactured and natural systems.
- Enhance human health and safety by improving the performance of critical infrastructure and natural features during and after storm surge events.
- Recruit natural ecosystems into the coastal storm risk management framework where able to provide multiple lines of defense.

3.3 EXISTING CONDITIONS SUMMARY

Threatened and endangered species, as well as vulnerable species of concern, with the potential to be present within the NYNJHAT Study Area, Lower Hudson/East River Planning Region and the Actionable Element Site were sourced from the Draft Integrated FR/Tier 1 (Programmatic) EIS, the USFWS IPaC database, the NMFS Section 7 Mapper, and the New York Natural Heritage Program website. A Fish and Wildlife Coordination Act Report (FWCAR) was requested from USFWS and a request for information was also submitted to the New York Natural Heritage Program, a response is pending at this time. Additional information received from the USFWS and NYNHP will be incorporated into the Final Integrated Interim Response FR/EA.

Refer to the September 2022 Draft Integrated FR/Tier 1 (Programmatic) EIS for a list of all ESA species throughout the NYNJHATS Study Area.

Federal-listed terrestrial threatened and endangered species potentially present within the Comprehensive Plan Study Area, East River/Lower Hudson Planning Region are listed below, and those species identified as potentially present in the vicinity of the Actionable Element site, sourced from the IPaC database (accessed May 6, 2025, attached), are highlighted yellow:

Common Name	Scientific Name	Federal Status	New York State Status	Listing/Recovery Plan Citation	Region/Site Where Species May Occur
Mammals					
Indiana bat	<i>Myotis sodalis</i>	E	E	32 FR 4001; Draft Recovery Plan: USFWS 2007	LH/ER
Northern long-eared bat	<i>Myotis septentrionalis</i>	E	T	80 FR 17973 18033	LH/ER
Tricolored bat	<i>Perimyotis subflavus</i>	P	NL	FR 2022-18852	LH/ER
Birds					
Piping plover	<i>Charadrius melodus</i>	T	E	49 FR 44712; Recovery plan USFWS 2016	LH/ER
Red knot	<i>Calidris canutus rufa</i>	T	T	79 FR 73705; Draft Recovery plan: USFWS 2021	LH/ER

Roseate tern	<i>Sterna dougalli dougalli</i>	E	E	52 FR 42064; Recovery plan USFWS 1998	LH/ER
Bald eagle	<i>Haliaeetus leucocephalus</i>	NL	T	N/A	LH/ER
Reptiles					
Bog turtle	<i>Glyptemys muhlenbergii</i>	T	E	62 FR 59605 59623; Recovery plan: USFWS 2001	LH/ER
Insects					
Monarch butterfly	<i>Danaus plexippus</i>	P	NL	85 FR 81813	LH/ER, AE
Rusty-patched bumble bee	<i>Bombas affinis</i>	E	NL	80 FR 56423 56432; Recovery plan: 85 FR 4334 4336	LH/ER
Yellow-banded bumble bee	<i>Bombas terracola</i>	C	NL	Not Found	LH/ER
Flowering Plants					
Seabeach amaranth	<i>Amaranthus pumilus</i>	T	T	58 FR 18035; Recovery plan: USFWS 1996	LH/ER
Small whorled pogonia	<i>Isotria medeoloides</i>	T	E	59 FR 50852 50857; Recovery plan: USFWS 1992	LH/ER

Notes: 1 Status Abbreviations – Threatened (T), Endangered (E), Candidate (C), Proposed (P), Not Listed (NL); 2 Region/Site Abbreviations - Lower Hudson/East River (LH/ER) Planning Region, Actionable Element (AE) site vicinity. Yellow = sourced from the USFWS IPaC database as potentially occurring at the Actionable Element Site.

3.4 EFFECTS AND CONSEQUENCES SUMMARY

The species identified as potentially present within the Lower Hudson and East River Planning Region and this Actionable Element Site were reviewed for potential effect, based on the existing conditions and the proposed action, to determine if the species was likely to be present at the Site relative to suitable habitat, and if so further assess if there is an anticipated adverse or beneficial effect. Species that are anticipated to not have suitable habitat available at the Site are to have no effect.

Common Name	Scientific Name	Species Habitat Description	Potential Habitat Presence (Y/N)	Potential to adversely effect	Potential to beneficially effect
Mammals					
Indiana bat	<i>Myotis sodalis</i>	Maternal roosts under the bark of dead trees during the summer. Prefers riparian zones, floodplain habitat, and wooded wetlands.	Y	Potential habitat loss of live/dead trees, during excavation and vegetative clearing.	Replacement of trees, and conversion of low quality non-native invasive species dominated habitat to quality habitat.

Northern long-eared bat	<i>Myotis septentrionalis</i>	Roosts under tree bark, bridges, and crevices of live and dead trees during the summer. Roosts sometimes in buildings, barns, sheds, under eaves, bridges and other manmade structures (USFWS 2022b)	Y	Potential habitat loss of live/dead trees, during excavation and vegetative clearing.	Replacement of trees, and conversion of low quality non-native invasive species dominated habitat to quality habitat.
Tricolored bat	<i>Perimyotis subflavus</i>	Caves, abandoned mines; where caves are sparse may be found roosting in road-associated culverts, forested habitats of live and dead deciduous hardwood trees, human structures.	Y	Potential habitat loss of live/dead trees, during excavation and vegetative clearing.	Replacement of trees, and conversion of low quality non-native invasive species dominated habitat to quality habitat.
Birds					
Piping plover	<i>Charadrius melodus</i>	Ocean beaches; sand dunes, tidal inlets, and tidal flats.	N	Habitat does not occur at the site.	Habitat does not occur at the site.
Red knot	<i>Calidris canutus rufa</i>	Uses ocean beaches, tidal flats, and inlets for foraging and resting during migration.	N	Habitat does not occur at the site.	Habitat does not occur at the site.
Roseate tern	<i>Sterna dougalli dougalli</i>	Ocean beaches and barrier islands with vegetation. Nests from Nova Scotia to Long Island.	N	Habitat does not occur at the site.	Habitat does not occur at the site.
Reptiles					
Bog turtle	<i>Glyptemys muhlenbergii</i>	Sunny open freshwater wetlands, especially fens, bogs, and marshes bordering wooded areas.	N	Habitat does not occur at the site.	Habitat does not occur at the site.
Insects					
Monarch butterfly	<i>Danaus plexippus</i>	Open wildflower meadows and grasslands, including vegetated roadsides. Requires milkweed for egg laying, larval development, and protection of larvae.	Y	Potential disturbance to habitat if it occurs at site.	Removal of invasive species and conversion to high quality native species.
Northeast beach tiger beetle	<i>Habroscelimorpha dorsalis dorsalis</i>	Inter-tidal zone on undisturbed sandy beaches. Considered extirpated from New York.	Y	Habitat does not occur at the site.	Habitat does not occur at the site.

Rusty-patched bumble bee	<i>Bombas affinis</i>	Prairies, woodlands, marshes, agricultural landscapes and residential parks and gardens	Y	Potential disturbance to habitat if it occurs at site.	Removal of invasive species and conversion to high quality native species.
Yellow-banded bumble bee	<i>Bombas terracola</i>	Mixed woodlands, farmlands, wildflower grasslands, seeps, and urban areas. Prefers wetland vegetation for pollinator activity.	Y	Potential disturbance to habitat if it occurs at site.	Removal of invasive species and conversion to high quality native species.
Flowering Plants					
Seabeach amaranth	<i>Amaranthus pumilus</i>	Barrier islands, inlets, and overwash areas.	N	Habitat does not occur at the site.	Habitat does not occur at the site.
Small whorled pogonia	<i>Isotria medeoloides</i>	Upland locations in mixed-deciduous or mixed-deciduous/coniferous forests. Grows in highly acidic and nutrient poor soils.	N	Habitat is not known to occur in the Study Area. Disturbance to any potential habitat will be avoided.	N/A

Adverse Effects

The ESA prohibits the “take” of protected species, including harassment, hunting, capturing, collecting, or killing. Direct impacts from construction are not anticipated to result in a “take” of a regulated wildlife species due to the limited presence of these species at the project site. Prior to construction, threatened and endangered species surveys may be conducted as necessary to identify potential special status plants or wildlife species present, or with the potential to be present. Should species be identified as present, or potentially present, avoidance is the primary mitigation action to prevent adverse effects to these species.

Seaward Alignment

Prior to construction, threatened and endangered species surveys may be conducted as necessary to identify potential special status plants or wildlife species present, or with the potential to be present. Should species be identified as present, or potentially present, avoidance is the primary mitigation action to prevent adverse effects to these species. The proposed efforts at this Actionable Element Site that are relevant to the terrestrial environment portions of the alignment (such as the floodwall tie-ins to high ground) are highly urban. It is likely species potentially present in this area are accustomed to urban environments (e.g. bats).

Potential indirect effects may include the temporary disturbance and/or removal of habitat for foraging species and prey during construction. Although the threatened and endangered species will be avoided, there may be ancillary disturbances that cannot be avoided that may deter species, such as noise and vibrations although those are anticipated to be temporary, low, and addressed through no-construction windows and/or cofferdams as necessary to avoid or reduce effects.

No direct or indirect adverse effects from operation and maintenance of the site are anticipated to

threatened and/or endangered species, as the site would continue to be monitored for establishment of the native habitat, to prevent the return on non-native habitat, preserving the quality of habitat for wildlife present. Maintenance may include non-native plant management, such as herbicide application and removal which could temporarily disturb terrestrial vegetation to eliminate non-native or invasive species but would be negligible given that procedures would be established to avoid such impacts.

Landward Alignment

Prior to construction, threatened and endangered species surveys may be conducted as necessary to identify potential special status plants or wildlife species present, or with the potential to be present. Should species be identified as present, or potentially present, avoidance is the primary mitigation action to prevent adverse effects to these species. The proposed efforts at this Actionable Element Site are primarily focused on a terrestrial environment that is highly urban. Potential indirect effects may include the temporary disturbance and/or removal of habitat for foraging species and prey during construction. Although the threatened and endangered species will be avoided, there may be ancillary disturbances that cannot be avoided that may deter species, such as noise and vibrations although those are anticipated to be temporary, low, and addressed through best management practices.

No direct or indirect adverse effects from operation and maintenance of the site are anticipated to threatened and/or endangered species, as the site would continue to be monitored for establishment of the native habitat, to prevent the return on non-native habitat, preserving the quality of habitat for wildlife present. Maintenance may include non-native plant management, such as herbicide application and removal which could temporarily disturb terrestrial vegetation to eliminate non-native or invasive species but would be negligible given that procedures would be established to avoid such impacts.

Beneficial Effects

Seaward Alignment

Replacement of existing degraded habitat will be replaced with native habitat, may consider pollinator friendly species. Complimentary NBS will provide newly created habitat for terrestrial (birds) and aquatic species to forage and shelter.

Landward Alignment

Replacement of existing degraded habitat will be replaced with native habitat, may consider pollinator friendly species.

3.5 POTENTIAL STRESSORS LIKELIHOOD OF EFFECT ASSESSMENT

Potential Stressor	Species			
	Mammals	Birds	Insects	Plants
Physical Seabed/Land Disturbance	NLAA	NLAA	NLAA	NLAA
Air Emissions	NLAA	NLAA	NLAA	NLAA
Habitat Conversion	NLAA	NLAA	NLAA	NLAA
Noise	NLAA	NLAA	NLAA	NLAA
Visible Structures	NLAA	NLAA	NLAA	NLAA

Land Use and Economic Change	NLAA	NLAA	NLAA	NLAA
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Notes: NLAA (not likely to adversely affect) is the appropriate conclusion when effects on listed species are expected to be discountable, insignificant, or completely beneficial. LAA (likely to adversely affect) is the appropriate conclusion when effects on listed species are expected to be measurable and significant. N/A (not applicable) means the stressor/species is not applicable to the action and will not be considered further.

Additional information received from the USFWS and NYNHP will be incorporated into the Final Integrated Interim Response FR/EA, including any conclusions to the adverse and/or beneficial effects of the Actionable Element Site.

4 LIST OF PREPARERS AND CONTRIBUTORS

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IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

New York County, New York



Local office

Long Island Ecological Services Field Office

☎ (631) 286-0485

📠 (631) 286-4003

340 Smith Road
Shirley, NY 11967-2258

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

- 1. Draw the project location and click CONTINUE.
- 2. Click DEFINE PROJECT.
- 3. Log in (if directed to do so).
- 4. Provide a name and description for your project.
- 5. Click REQUEST SPECIES LIST.

Listed species¹ and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

- 1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
- 2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Insects

NAME	STATUS
Monarch Butterfly Danaus plexippus	Proposed Threatened
Wherever found	
There is proposed critical habitat for this species. Your location does not overlap the critical habitat.	
https://ecos.fws.gov/ecp/species/9743	

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

You are still required to determine if your project(s) may have effects on all above listed species.

Bald & Golden Eagles

Bald and Golden Eagles are protected under the Bald and Golden Eagle Protection Act ² and the Migratory Bird Treaty Act (MBTA) ¹. Any person or organization who plans or conducts activities that may result in impacts to Bald or Golden Eagles, or their nests, should follow appropriate regulations and implement required avoidance and minimization measures, as described in the various links on this page.

The [data](#) in this location indicates that no eagles have been observed in this area. This does not mean eagles are not present in your project area, especially if the area is difficult to survey. Please review the 'Steps to Take When No Results Are Returned' section of the [Supplemental Information on Migratory Birds and Eagles document](#) to determine if your project is in a poorly surveyed area. If it is, you may need to rely on other resources to determine if eagles may be present (e.g. your local FWS field office, state surveys, your own surveys).

Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds>
- Nationwide avoidance and minimization measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC <https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

Bald and Golden Eagle information is not available at this time

Bald & Golden Eagles FAQs

What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?

The potential for eagle presence is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are an eagle ([Bald and Golden Eagle Protection Act](#) requirements may apply).

Proper interpretation and use of your eagle report

On the graphs provided, please look carefully at the survey effort (indicated by the black vertical line) and for the existence of the "no data" indicator (a red horizontal line). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort line or no data line (red horizontal) means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list and associated information help you know what to look for to confirm presence and helps guide you in knowing when to implement avoidance and minimization measures to eliminate or reduce potential impacts from your project activities or get the appropriate permits should presence be confirmed.

How do I know if eagles are breeding, wintering, or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating, or resident), you may query your location using the [RAIL Tool](#) and view the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If an eagle on your IPaC migratory bird species list has a breeding season associated with it (indicated by yellow vertical bars on the phenology graph in your "IPaC PROBABILITY OF PRESENCE SUMMARY" at the top of your results list), there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

Interpreting the Probability of Presence Graphs

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. A taller bar indicates a higher probability of species presence. The survey effort can be used to establish a level of confidence in the presence score.

How is the probability of presence score calculated? The calculation is done in three steps:

The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.

The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season ()

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort ()

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data ()

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

Migratory birds

The Migratory Bird Treaty Act (MBTA) ¹ prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior [authorization](#) by the Department of Interior U.S. Fish and Wildlife Service (FWS). The incidental take of migratory birds is the injury or death of birds that results from, but is not the purpose, of an activity. The FWS interprets the MBTA to prohibit incidental take.

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds>
- Nationwide avoidance and minimization measures for birds
- Supplemental Information for Migratory Birds and Eagles in IPaC <https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

Migratory bird information is not available at this time

Migratory Bird FAQs

Tell me more about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Avoidance & Minimization Measures for Birds](#) describes measures that can help avoid and minimize impacts to all birds at any location year-round. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is one of the most effective ways to minimize impacts. To see when birds are most likely to occur and breed in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location, such as those listed under the Endangered Species Act or the [Bald and Golden Eagle Protection Act](#) and those species marked as "Vulnerable". See the FAQ "What are the levels of concern for migratory birds?" for more information on the levels of concern covered in the IPaC migratory bird species list.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) with which your project intersects. These species have been identified as warranting special attention because they are BCC species in that area, an eagle ([Bald and Golden Eagle Protection Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, and to verify survey effort when no results present, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

Why are subspecies showing up on my list?

Subspecies profiles are included on the list of species present in your project area because observations in the AKN for **the species** are being detected. If the species are present, that means that the subspecies may also be present. If a subspecies shows up on your list, you may need to rely on other resources to determine if that subspecies may be present (e.g. your local FWS field office, state surveys, your own surveys).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go to the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating, or resident), you may query your location using the [RAIL Tool](#) and view the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your IPaC migratory bird species list has a breeding season associated with it (indicated by yellow vertical bars on the phenology graph in your "IPaC PROBABILITY OF PRESENCE SUMMARY" at the top of your results list), there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern \(BCC\)](#) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Bald and Golden Eagle Protection Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially BCC species. For more information on avoidance and minimization measures you can implement to help avoid and minimize migratory bird impacts, please see the FAQ "Tell me more about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds".

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Proper interpretation and use of your migratory bird report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please look carefully at the survey effort (indicated by the black vertical line) and for the existence of the "no data" indicator (a red horizontal line). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list does not represent all birds present in your project area. It is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list and associated information help you know what to look for to confirm presence and helps guide implementation of avoidance and minimization measures to eliminate or reduce potential impacts from your project activities, should presence be confirmed. To learn more about avoidance and minimization measures, visit the FAQ "Tell me about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds".

Interpreting the Probability of Presence Graphs

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. A taller bar indicates a higher probability of species presence. The survey effort can be used to establish a level of confidence in the presence score.

How is the probability of presence score calculated? The calculation is done in three steps:

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To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.

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Survey Timeframe

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Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

ESTUARINE AND MARINE DEEPWATER

[E1UBL](#)

A full description for each wetland code can be found at the [National Wetlands Inventory website](#)

NOTE: This initial screening does **not** replace an on-site delineation to determine whether wetlands occur. Additional information on the NWI data is provided below.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercled worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

NOT FOR CONSULTATION