# Raritan Bay and Sandy Hook Bay, Highlands, New Jersey Coastal Storm Risk Management Feasibility Study

## Final Integrated Feasibility Report and Environmental Assessment
## May 2020

## Appendix A8:
## Endangered Species Act: Section 7 Consultation

# United States Department of the Interior

FISH AND WILDLIFE SERVICE
New Jersey Field Office
4 E. Jimmie Leeds Road, Suite 4
Galloway, New Jersey 08205
Tel: 609/646 9310
http://www.fws.gov/northeast/njfieldoffice

In Reply Refer To:
20-CPA-0107a

Peter M. Weppler, Chief
Environmental Analysis Branch
U.S. Army Corps of Engineers
New York District
Jacob K. Javits Federal Building
26 Federal Plaza
New York, New York 10278-0090

MAR 0 2 2020

Dear Mr. Weppler:

The U.S. Fish and Wildlife Service (Service), New Jersey Field Office has received your letter dated February 21, 2020 requesting concurrence with the U.S. Army Corps of Engineers' (Corps) determination of "not likely to adversely affect" the piping plover (*Charadrius melodus*), a federally listed threatened species under the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*) for the Raritan Bay and Sandy Hook Bay, Highlands, New Jersey, Coastal Storm Risk Management Feasibility Study.

To bring all effects to the level of insignificant and/or discountable as related to the proposed pile driving and resulting noise, the Corps currently proposes to adhere to the following conservation measures:

1. Investigate the use of noise muffling devises on pile drivers and demolition equipment between March 15 and August 15.

2. In order to mitigate any impacts, noise at piping plover nest cannot exceed 10 dBA higher than ambient level.

3. Alternatively, demolition and pile driving activities can occur outside the March 15 - August 31 nesting season.

Having reviewed and evaluated the Corps-proposed conservation measures, the Service concurs that the project as proposed is not likely to adversely affect the piping plover. The Service concurrence may be reconsidered for any change beyond the aforementioned parameters, requiring re-initiation of ESA Section 7 consultation.

The Service appreciates the continuous efforts and cooperation of the Corps in bringing all effects on piping plover to an insignificant and/or discountable level. Please contact Wendy Walsh at (609) 382-5274 if you have any questions or require further assistance.

Sincerely,

Eric Schrading
Field Supervisor

cc: Matthew.Voisine@usace.army.mil
Wendy_Walsh@fws.gov

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P:/Shared/Carlo/20-CPA0107a

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, NEW YORK DISTRICT
JACOB K. JAVITS FEDERAL BUILDING
26 FEDERAL PLAZA
NEW YORK NEW YORK 10278-0090

REPLY TO
ATTENTION OF
Environmental Analysis Branch

February 21, 2020

Mr. Eric Schrading, Field Office Supervisor
U.S. Fish and Wildlife Service
New Jersey Field Office
4 E. Jimmie Leeds Road, Suite 4
Galloway, New Jersey 08205

Dear Mr. Schrading:

On January 23, 2020, the U.S. Army Corps of Engineers, New York District (District) received the U. S. Fish and Wildlife Service's (Service) final Section 2(b) of the Fish and Wildlife Coordination Act (FWCA) for the District's Raritan Bay and Sandy Hook Bay, Highlands, New Jersey, Coastal Storm Risk Management Feasibility Study. The Service included information pursuant to the Endangered Species Act of 1973 (ESA) in the Section 2b report.

The Service did not conclude with the District's determination of not likely to adversely affect (NLAA) for the federally listed (threatened) piping plover (*Charadrius melodus*). The Service included conservation measures for the District to follow. The Service stated in an email from Carlo Popolizio dated February 20, 2020, if the District follows the conservation measures, the Service will concur with the District's NLAA for the piping plover. The District will adhere to the conservation measures.

The conservation measures are:

1. The use of noise muffling devises on pile drivers and demolition equipment between March 15 and August 15 should be investigated.
2. In order to mitigate any noise impacts; dBA at piping plover nest cannot exceed 10 dBA higher than ambient level.
3. Alternatively, demolition and pile driving activities can occur outside the March 15 - August 31 nesting season.

The Service provided research on two previous bridge studies as a basis for the 10 dBA level described in number 2 above. The studies saw no piping plover response for the pile driving and demolition activities. The pile driving and demolition activities from the studies were 400 - 1700 feet away from piping plover nests. The Highlands project will be at least 1,320 feet away from any potential nesting piping plovers and is anticipated to produce similar noise levels from pile driving.

The Service stated in an email from Ms. Wendy Walsh dated February 4, 2020 that if the Highlands expected project noise level at potential nesting piping plovers is below the target levels in the bridge studies, the Service would be comfortable

concluding a NLAA for the Highlands project. The Highlands project is further from potential nesting piping plovers than the bridge projects. Noise levels from the Highlands project at potential nesting piping plovers is not expected to exceed 10 dBA at potential nesting piping plovers.

The District is requesting that the Service respond with their concurrence regarding the NLAA for piping plovers, provided the conservation measures are followed.

Thank you for your continued cooperation with this project. If you have any questions or require additional information, please contact Matthew Voisine, Project Biologist at 917.790.8718 or matthew.voisine@usace.army.mil.

Sincerely,

WEPPLER.PETER.M.1228647353

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Date: 2020.02.21 15:20:31 -05'00'

Peter Weppler
Chief, Environmental Analysis Branch

**DEPARTMENT OF THE ARMY**
U.S. ARMY CORPS OF ENGINEERS, NEW YORK DISTRICT
JACOB K. JAVITS FEDERAL BUILDING
26 FEDERAL PLAZA
NEW YORK NEW YORK 10278-0090

REPLY TO
ATTENTION OF
Environmental Analysis Branch

October 30, 2019

Mr. Eric Schrading, Field Office Supervisor
U.S. Fish and Wildlife Service
New Jersey Field Office
4 E. Jimmie Leeds Road, Suite 4
Galloway, New Jersey 08205

Dear Mr. Schrading:

The U.S. Army Corps of Engineers, New York District (District) is conducting a Feasibility Report for the Raritan Bay and Sandy Hook Bay Highlands, New Jersey Coastal Storm Risk Management. The District is transmitting the Endangered Species Act (ESA) determination and assessment for the federally threatened northern long-eared bat (*Myotis septentrionalis*), federally threatened piping plover (*Charadrius melodus*), federally threatened red knot (*Calidris canutus rufa*), and the federally threatened seabeach amaranth (*Amaranthus pumilus*) to fulfill Section 7 consultation under the ESA of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq*).

The Service identified the northern long-eared bat, piping plover, red knot, and seabeach amaranth as potentially occurring at or near the project area on February 10, 2016, in the Draft Fish and Wildlife Coordination Act Section 2(b) Report.

Attached is a project description consisting of raised bulkheads, raised ground surfaces, floodwalls, and reinforced dunes. Also attached is the District's ESA determination and assessment for northern long-eared bat, piping plover, red knot, and seabeach amaranth to fulfill Section 7 consultation under the ESA of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq*).

The District has determined there is "No effect" on the federally threatened northern long-eared bat, a "May affect, but is not likely to adversely affect" on the federally threatened piping plover, a "May affect, but is not likely to adversely affect" on the federally threatened red knot, and a "May affect, but is not likely to adversely affect" on the federally threatened seabeach amaranth.

If you have any questions or require additional information, please contact Matthew Voisine, Project Biologist at 917.790.8718 or matthew.voisine@usace.army.mil.

Sincerely,

WEPPLER.PETER.M.1228647353

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Date: 2019.10.30 14:35:07 -04'00'

Peter Weppler
Chief, Environmental Analysis Branch

Attachment

**Endangered Species Act (ESA) determination and assessment for northern long-eared bat (*Myotis septentrionalis*), piping plover (*Charadrius melodus*), red knot (*Calidris canutus rufa*),), and seabeach amaranth (*Amaranthus pumilus*)**

## Northern Long-Eared Bat (*Myotis septentrionalis*)

*Species Information*

The northern long-eared bat is a medium-sized bat with a body length of 3 to 3.7 inches but a wingspan of 9 to 10 inches. Their fur color can be medium to dark brown on the back and tawny to pale-brown on the underside. This bat is distinguished by its long ears, particularly as compared to other bats in its genus (USFWS 2015).

Northern long-eared bats spend winter hibernating in caves and mines, called hibernacula. They use areas in various sized caves or mines with constant temperatures, high humidity, and no air currents. Within hibernacula, they are found hibernating most often in small crevices or cracks, often with only the nose and ears visible. During the summer, northern long-eared bats roost singly or in colonies underneath bark, in cavities or in crevices of both live trees and snags (dead trees) if trees are greater than 3 inches in diameter (USFWS 2015).

Northern long-eared bats emerge at dusk to feed. They primarily fly through the understory of forested areas feeding on moths, flies, leafhoppers, caddisflies, and beetles, which they catch while in flight using echolocation or by gleaning motionless insects from vegetation.

The northern long-eared bat's range includes much of the eastern and north central United States, and all Canadian provinces from the Atlantic Ocean west to the southern Yukon Territory and eastern British Columbia. The species' range includes 37 States (including New Jersey) and the District of Columbia, (USFWS 2015).

*Species Observations within Highlands Project Area*

The Service did not report northern long-eared bats within the project area. A literature search yielded no reports of northern long-eared bats within the project area.

*Highlands, New Jersey Project*

There are no known caves or mines within the project area. The District does not expect to remove trees greater than 3 inches in diameter.

After a full evaluation of the northern long-eared bat life history, habitats in the project area, and proposed project activities, a "no affect" determination was made by the

District on populations of northern long-eared bat as a result of implementation of the proposed activities.

### *Piping plover (Charadrius melodus)*

*Species Information*

The piping plover is a small shorebird approximately 7 inches long with a wingspan of about 15 inches. Piping plovers have white underparts with a light beige back and crown. Breeding adults have a single black breast band, which is often incomplete, and a black bar across the forehead. The legs and bill are orange in summer, with a black tip on the bill. In winter, the birds lose the breast bands, the legs fade from orange to pale yellow, and the bill becomes mostly black. Piping plover adults and chicks feed on marine macroinvertebrates such as worms, fly larvae, beetles, and crustaceans (USFWS 1996).

Piping plovers are present on the New Jersey shore during the breeding season, generally between March 15 and August 31. These territorial birds nest above the high tide line, usually on sandy ocean beaches and barrier islands, but also on gently sloping foredunes, blowout areas behind primary dunes, washover areas cut into or between dunes, the ends of sandspits, and deposits of suitable dredged or pumped sand. Piping plover nests consist of a shallow scrape in the sand, frequently lined with shell fragments and often located near small clumps of vegetation. Females lay four eggs that hatch in about 25 days, and surviving chicks learn to fly (fledge) after about 25 to 35 days. The flightless chicks follow their parents to feeding areas, which include the intertidal zone of ocean beaches, ocean washover areas, mudflats, sandflats, wrack lines (organic ocean material left by high tide), and the shorelines of coastal ponds, lagoons, and salt marshes (USFWS 1996).

*Species Observations within Highlands Project Area*

The Service stated in the draft Fish and Wildlife Coordination Act Report (FWCAR; USFWS 2016) that piping plovers are not observed within Highlands, however, piping plovers are observed breeding on the beaches of Sandy Hook and Sea Bright about ¼ of a mile from the Highlands project area. eBird, a real-time, online checklist program, managed by the Cornell Lab of Ornithology and National Audubon Society, provides rich data sources for basic information on bird abundance and distribution at a variety of spatial and temporal scales. There are numerous reports of piping plovers on the beaches of Sandy Hook and Sea Bright through eBird (eBird 2019). There is also one report from 2013 (Saldutti 2013), of piping plovers in Highlands on eBird. However, this report is suspect as the report states 10 piping plovers, on Bay Ave, three blocks inland,

surrounded by houses, with no sandy beach. This is not piping plover habitat (confirmed by seasonal field inspection associated with USACE/FWS monitoring events).

*Highlands, New Jersey Project*

There are no reported piping plovers within the project alignment. Most of the project alignment is along existing bulkhead that does not provide beach habitat for piping plovers. The little beach areas that do exist, do not provide habitat for piping plovers. The beaches are very small, surrounded by homes or commercial buildings, and provide no foredune or washover areas. However, there are breeding piping plovers nearby on Sandy Hook beaches about a ¼ of a mile away for the project alignment. The use of vibratory pile driving may provide noise disturbance to the piping plovers. If present, piping plovers may be exposed to in air noise from pile driving, but would be expected to avoid the area around active impact pile driving and extraction construction activities. Pile driving activities would not occur at beaches that are designated as piping plover critical habitat. Current design level does not detail the type of pile driving, materials, or duration. During the Preconstruction Engineering and Design (PED) phase of the project, the District will coordinate with the Service in order to mitigate any noise impacts (dBA at nest cannot exceed 6 dBA higher than ambient level). Construction of the project would temporarily increase ambient noise levels in and around the construction sites. Based on data presented in Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances (EPA , 1971), the main phases of outdoor construction typically generate noise levels that range from 78 dBA to 89 dBA, approximately 50 feet from a construction site. Noise levels are estimated to decrease by approximately 6 dBA with every doubling of distance from a noise source. (It should be noted that the standard attenuation rate for point source noise (e.g. pile driving) is 6 dBA, and the standard attenuation rate for line source noise (e.g. traffic related noise) is 3 dBA. These standard attenuation rates do not take into account any reduction factors, such as soft site, vegetation, or atmospheric conditions. The threshold level for a significant noise impact is defined as a permanent increase in noise or prolonged periods of nighttime noise in noise-sensitive areas). Construction noise may at times be between 78 and 89 dBA outside the houses adjacent to the construction sites, depending on the type of construction activity that is conducted; noise levels inside the houses would be approximately 30 to 40 dBA lower. Such measures may include but are not limited to construction windows and noise dampening measures.

After a full evaluation of the piping plover life history, habitats in the project area, coordination with the Service, and proposed project activities, a “May Affect, but is not likely to adversely affect” determination was made by the District on populations of piping plover as a result of implementation of the proposed activities.

**Red Knot (*Calidris canutus rufa*)**

*Species Information*

The rufa red knot (*Calidris canutus rufa*) is a medium-sized shorebird about 9 to 11 inches (in) in length. The red knot migrates annually between its breeding grounds in the Canadian Arctic and several wintering regions, including the Southeast United States (Southeast), the Northeast Gulf of Mexico, northern Brazil, and Tierra del Fuego at the southern tip of South America. During both the northbound (spring) and southbound (fall) migrations, red knots use key staging and stopover areas to rest and feed.

On the breeding grounds, the red knot's diet consists mostly of terrestrial invertebrates such as insects and other arthropods.

Geolocator and resightings data show definitively that the *rufa* nonbreeding range includes the entire Atlantic and Caribbean coasts of South America and the Caribbean islands.

Coastal habitats used by red knots in migration and wintering areas are similar in character, generally coastal marine and estuarine (partially enclosed tidal area where fresh and salt water mixes) habitats with large areas of exposed intertidal sediments. Migration and wintering habitats include both high-energy ocean- or bay-front areas, as well as tidal flats in more sheltered bays and lagoons. Preferred wintering and migration microhabitats are muddy or sandy coastal areas, specifically, the mouths of bays and estuaries, tidal flats, and unimproved tidal inlets. Along the U.S. Atlantic coast, dynamic and ephemeral (lasting only briefly) features are important red knot habitats, including sand spits, islets, shoals, and sandbars, features often associated with inlets. In many wintering and stopover areas, quality high-tide roosting habitat (i.e., close to feeding areas, protected from predators, with sufficient space during the highest tides, free from excessive human disturbance) is limited (USFWS 2014).

The red knot breeds in the Canadian arctic and winters mainly in Tierra del Fuego, northern Brazil, or Florida, and migrates through New Jersey, to and from its breeding sites in the spring and fall (USFWS 2014). Red knots utilize coastal marine and estuarine habitats during the spring and fall migrations. Red knots show moderate fidelity to particular migration staging areas between years (USFWS 2014). These habitats include high-energy ocean or bay front shores, tidal flats in sheltered bays, and lagoons (USFWS 2014). In North America, red knots are found along sandy, gravel, or cobble beaches; tidal mudflats; saltmarshes; shallow coastal impoundments and lagoons; and peat banks. Red knots use sandy beaches during both the spring and fall migration (USFWS 2014).

The red knot is a specialized molluscivore, primarily eating hard-shelled mollusks and supplementing with softer invertebrate prey (USFWS 2014). Red knots are restricted to foraging in the top 0.8 to 1.2 inches of sediment due to bill morphology (USFWS 2014). Red knots forage on a number of prey, exhibiting preference for specific prey within specific stopovers, during the spring and fall migrations and based on wintering location (USFWS 2014). In New Jersey, red knots exhibited preference of horseshoe crab eggs during the spring migration (USFWS 2014). Red knots also forage on small periwinkles *(Littorina* spp.), tiny blue mussels and blue mussel spat *(Mytilus edulis),* gem clams *(Gemma gemma)* (not preferred), amphipods, naticid snails, polycheata worms, insect larvae, crustaceans, sand fleas *(Haustoriids* spp.), mole crabs *(Emerita talpoida),* dwarf surf clams *(Mulinia lateralis),* small bilvalves *(Tellina, Macoma, Donax, Gemmula, Iphigenia, Tivella, and Arca* spp.), and mud snails *(Peringia* ulvae; USFWS 2014).

*Species Observations within Highlands Project Area*

eBird reports three observations of red knots near the Highlands project area. One siting (Goione 2019) was on Sandy Hook and the other two observations (Fanning 2018) were along the Navesink River 1 mile south of the Rt. 36 Bridge over the river.

*Union Beach, New Jersey Project*

Red knot may migrate through the Highland project area in the spring and the fall. However, the project area does not contains suitable habitat for foraging. As noted above, red knots have not been observed within the project footprint.

Therefore, after a full evaluation of red knot life history, habitats in the project area, and proposed project activities, a “May Affect, but is not likely to adversely affect” determination was made by the District on populations of red knot as a result of implementation these proposed activities.

***Seabeach Amaranth (Amaranthus pumilus)***

*Species Information*

An annual member of the amaranth family, seabeach amaranth has reddish stems and small, rounded, notched, spinach-green leaves. In New Jersey, these low-growing plants are typically about 4 inches across by late summer, but can occasionally reach 2 or 3 feet in diameter. The small white flowers and dark seeds are located in inconspicuous clusters along the stems. Germination begins in May and continues through the summer. Flowering begins as soon as plants reach sufficient size (June or

July) and continues until the plants die between September and December (USFWS 2013).

Seabeach amaranth is native (endemic) to Atlantic Coast beaches and barrier islands. The primary habitat of seabeach amaranth consists of overwash flats at accreting ends of islands, lower foredunes, and upper strands of non-eroding beaches (landward of the wrackline), although the species occasionally establishes small temporary populations in other habitats, including sound-side beaches, blowouts in foredunes, inter-dunal areas, and on sand and shell material deposited for beach replenishment or as dredge spoil. Seabeach amaranth usually grows on a nearly pure sand substrate, occasionally with shell fragments mixed in (USFWS 2013).

Seabeach amaranth occupies elevations from 8 inches to 5 feet above mean high tide. The plant grows in the upper beach zone above the high tide line, and is intolerant of even occasional flooding during its growing season. The habitat of seabeach amaranth is sparsely vegetated with annual herbs and, less commonly, perennial herbs (mostly grasses) and scattered shrubs. Vegetative associates of seabeach amaranth include sea rocket (*Cakile edentula*), seabeach spurge (*Chamaesyce polygonifolia*), and other species that require open, sandy beach habitats. However, this species is intolerant of competition and does not occur on well-vegetated sites (USFWS 2013).

*Species Observations within Highlands Project Area*

The Service stated in the February 2016 draft FWCAR that seabeach amaranth occurs along the Raritan Bay and Atlantic Ocean beaches but not in Highlands. A literature search yielded no reports of seabeach amaranth within the project area.

*Highlands, New Jersey Project*

The USACE will survey for seabeach amaranth one week prior to construction on the beaches during the growing season (May 15 – Nov 30). If any seabeach amaranth plants are identified, the USACE will install string-and-post fencing to allow a 3-meter buffer around each plant or group of plants. Fencing will be marked with flagging and signs. No intrusions (including personnel, equipment, or materials) will be allowed within fenced areas. Surveys and fencing will be coordinated with the Service before and during the construction period.

After a full evaluation of seabeach amaranth life history, habitats in the project area, and proposed project activities, a “May Affect, but is not likely to adversely affect” determination was made by the District on populations of seabeach amaranth as a result of implementation of the proposed activities.

## References


eBird 2019 Checklist: https://ebird.org/map/pipplo?env.minX=-124.3044523775&env.minY=11.3462354134857&env.maxX=-52.4392296479381&env.maxY=54.0935076551961 eBird: An online database of bird distribution and abundance [web application]. eBird, Ithaca, New York. Available: http://www.ebird.org. (Accessed: Date [October 23, 2019]).

Kerlinger, P., J. D. Dowell, and J. Guarnaccia. 2011. Preconstruction avian studies, Bayshore Regional Sewerage Authority Wind Power Project Borough of Union Beach Monmouth County, New Jersey.

Fanning, Lisa Ann. 2018. eBird Checklist: https://ebird.org/checklist/S46037605. eBird: An online database of bird distribution and abundance [web application]. eBird, Ithaca, New York. Available: http://www.ebird.org. (Accessed: Date [October 23, 2019]).

Goione, Michael. 2019. eBird Checklist: https://ebird.org/checklist/S59982399. eBird: An online database of bird distribution and abundance [web application]. eBird, Ithaca, New York. Available: http://www.ebird.org. (Accessed: Date [October 23, 2019]).

Saldutti, Katelyn. 2013. eBird Checklist: https://ebird.org/checklist/S15395520. eBird: An online database of bird distribution and abundance [web application]. eBird, Ithaca, New York. Available: http://www.ebird.org. (Accessed: Date [October 23, 2019]).

U.S. Fish and Wildlife Service. 1996. Piping plover *(Charadrius melodus),* Atlantic Coast population, revised recovery plan. U.S. Department of the Interior, Fish and Wildlife Service, Hadley, Massachusetts. 245 pp.

U.S. Fish and Wildlife Service. 2013. Seabeach amaranth 2012 year-end report. U.S. Department of the Interior, Fish and Wildlife Service, Pleasantville, New Jersey. 12 pp.

U. S. Fish and Wildlife Service. 2014. Rufa red knot background Information and threats assessment supplement to Endangered and Threatened Wildlife and Plants; Final Threatened Status for the Rufa Red Knot (Calidris canutus rufa) [Docket No. FWS–R5–ES–2013–0097; RIN AY17].

U. S. Fish and Wildlife Service. 2016. Draft Fish and Wildlife Coordination Act Section 2(b) Report Raritan Bay and Sandy Hook Bay Highlands, New Jersey Coastal Storm Risk Management Feasibility Study Monmouth County, New Jersey, New Jersey Field Office, Galloway New Jersey

# United States Department of the Interior

FISH AND WILDLIFE SERVICE
New Jersey Ecological Services Field Office
4 E. Jimmie Leeds Road, Suite 4
Galloway, NJ 08205
Phone: (609) 646-9310 Fax: (609) 646-0352
http://www.fws.gov/northeast/njfieldoffice/Endangered/consultation.html

In Reply Refer To:
Consultation Code: 05E2NJ00-2015-SLI-0394
Event Code: 05E2NJ00-2019-E-03733
Project Name: Highlands

September 06, 2019

Subject: Updated list of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed, and candidate species that may occur in your proposed action area and/or may be affected by your proposed project. This species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under Section 7(c) of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 *et seq.*)

If the enclosed list indicates that any listed species may be present in your action area, please visit the New Jersey Field Office consultation web page as the next step in evaluating potential project impacts: http://www.fws.gov/northeast/njfieldoffice/Endangered/consultation.html

On the New Jersey Field Office consultation web page you will find:

- habitat descriptions, survey protocols, and recommended best management practices for listed species;
- recommended procedures for submitting information to this office; and
- links to other Federal and State agencies, the Section 7 Consultation Handbook, the Service's wind energy guidelines, communication tower recommendations, the National Bald Eagle Management Guidelines, and other resources and recommendations for protecting wildlife resources.

The enclosed list may change as new information about listed species becomes available. As per Federal regulations at 50 CFR 402.12(e), the enclosed list is only valid for 90 days. Please return to the ECOS-IPaC website at regular intervals during project planning and implementation to obtain an updated species list. When using ECOS-IPaC, be careful about drawing the boundary of your Project Location. Remember that your action area under the ESA is not limited to just the footprint of the project. The action area also includes all areas that may be indirectly affected

through impacts such as noise, visual disturbance, erosion, sedimentation, hydrologic change, chemical exposure, reduced availability or access to food resources, barriers to movement, increased human intrusions or access, and all areas affected by reasonably forseeable future that would not occur without ("but for") the project that is currently being proposed.

We appreciate your concern for threatened and endangered species. The Service encourages Federal and non-Federal project proponents to consider listed, proposed, and candidate species early in the planning process. Feel free to contact this office if you would like more information or assistance evaluating potential project impacts to federally listed species or other wildlife resources. Please include the Consultation Tracking Number in the header of this letter with any correspondence about your project.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Migratory Birds
- Wetlands

# Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**New Jersey Ecological Services Field Office**
4 E. Jimmie Leeds Road, Suite 4
Galloway, NJ 08205
(609) 646-9310

# Project Summary

Consultation Code: 05E2NJ00-2015-SLI-0394

Event Code: 05E2NJ00-2019-E-03733

Project Name: Highlands

Project Type: LAND - FLOODING

Project Description: Highlands, NJ coastal flood control consisting of buried seawalls, bulkheads, and roadway swing gate. Anticipated start of construction Dec 2017

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/40.40432960896218N73.98696760935101W

Counties: Monmouth, NJ

# Endangered Species Act Species

There is a total of 4 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. 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.

## Mammals

| NAME | STATUS |
|---|---|
| Northern Long-eared Bat *Myotis septentrionalis*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/9045 | Threatened |

## Birds

| NAME | STATUS |
|---|---|
| Piping Plover *Charadrius melodus*<br>Population: [Atlantic Coast and Northern Great Plains populations] - Wherever found, except those areas where listed as endangered.<br>There is **final** critical habitat for this species. Your location is outside the critical habitat.<br>Species profile: https://ecos.fws.gov/ecp/species/6039 | Threatened |
| Red Knot *Calidris canutus rufa*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/1864 | Threatened |

## Flowering Plants

| NAME | STATUS |
| --- | --- |
| Seabeach Amaranth *Amaranthus pumilus* | Threatened |

No critical habitat has been designated for this species.

Species profile: https://ecos.fws.gov/ecp/species/8549

## Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

# USFWS National Wildlife Refuge Lands And Fish Hatcheries

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 OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

# Migratory Birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

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1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

| NAME | BREEDING SEASON |
|---|---|
| American Oystercatcher *Haematopus palliatus*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/8935 | Breeds Apr 15 to Aug 31 |
| Bald Eagle *Haliaeetus leucocephalus*<br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.<br>https://ecos.fws.gov/ecp/species/1626 | Breeds Oct 15 to Aug 31 |

| NAME | BREEDING SEASON |
|---|---|
| Black Scoter *Melanitta nigra*<br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. | Breeds elsewhere |
| Black Skimmer *Rynchops niger*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/5234 | Breeds May 20 to Sep 15 |
| Black-billed Cuckoo *Coccyzus erythropthalmus*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/9399 | Breeds May 15 to Oct 10 |
| Black-legged Kittiwake *Rissa tridactyla*<br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. | Breeds elsewhere |
| Bobolink *Dolichonyx oryzivorus*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds May 20 to Jul 31 |
| Bonaparte's Gull *Chroicocephalus philadelphia*<br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. | Breeds elsewhere |
| Brown Pelican *Pelecanus occidentalis*<br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.<br>https://ecos.fws.gov/ecp/species/6034 | Breeds Jan 15 to Sep 30 |
| Buff-breasted Sandpiper *Calidris subruficollis*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/9488 | Breeds elsewhere |
| Canada Warbler *Cardellina canadensis*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds May 20 to Aug 10 |
| Clapper Rail *Rallus crepitans*<br>This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA | Breeds Apr 10 to Oct 31 |

| NAME | BREEDING SEASON |
|---|---|
| Common Eider *Somateria mollissima*<br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. | Breeds Jun 1 to Sep 30 |
| Common Loon *gavia immer*<br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.<br>https://ecos.fws.gov/ecp/species/4464 | Breeds Apr 15 to Oct 31 |
| Common Tern *Sterna hirundo*<br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.<br>https://ecos.fws.gov/ecp/species/4963 | Breeds May 10 to Sep 10 |
| Double-crested Cormorant *phalacrocorax auritus*<br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.<br>https://ecos.fws.gov/ecp/species/3478 | Breeds Apr 20 to Aug 31 |
| Dunlin *Calidris alpina arcticola*<br>This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA | Breeds elsewhere |
| Eastern Whip-poor-will *Antrostomus vociferus*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds May 1 to Aug 20 |
| Golden-winged Warbler *Vermivora chrysoptera*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/8745 | Breeds May 1 to Jul 20 |
| Great Black-backed Gull *Larus marinus*<br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. | Breeds Apr 15 to Aug 20 |
| Gull-billed Tern *Gelochelidon nilotica*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/9501 | Breeds May 1 to Jul 31 |

| NAME | BREEDING SEASON |
|---|---|
| Herring Gull *Larus argentatus*<br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. | Breeds Apr 20 to Aug 31 |
| Hudsonian Godwit *Limosa haemastica*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds elsewhere |
| Kentucky Warbler *Oporornis formosus*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds Apr 20 to Aug 20 |
| Least Tern *Sterna antillarum*<br>This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA | Breeds Apr 20 to Sep 10 |
| Lesser Yellowlegs *Tringa flavipes*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/9679 | Breeds elsewhere |
| Long-eared Owl *asio otus*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/3631 | Breeds elsewhere |
| Long-tailed Duck *Clangula hyemalis*<br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.<br>https://ecos.fws.gov/ecp/species/7238 | Breeds elsewhere |
| Nelson's Sparrow *Ammodramus nelsoni*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds May 15 to Sep 5 |
| Northern Gannet *Morus bassanus*<br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. | Breeds elsewhere |
| Parasitic Jaeger *Stercorarius parasiticus*<br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. | Breeds elsewhere |

| NAME | BREEDING SEASON |
|---|---|
| Prairie Warbler *Dendroica discolor*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds May 1 to Jul 31 |
| Prothonotary Warbler *Protonotaria citrea*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds Apr 1 to Jul 31 |
| Purple Sandpiper *Calidris maritima*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds elsewhere |
| Razorbill *Alca torda*<br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. | Breeds Jun 15 to Sep 10 |
| Red-breasted Merganser *Mergus serrator*<br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. | Breeds elsewhere |
| Red-headed Woodpecker *Melanerpes erythrocephalus*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds May 10 to Sep 10 |
| Red-throated Loon *Gavia stellata*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds elsewhere |
| Ring-billed Gull *Larus delawarensis*<br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. | Breeds elsewhere |
| Roseate Tern *Sterna dougallii*<br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. | Breeds May 10 to Aug 31 |
| Royal Tern *Thalasseus maximus*<br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. | Breeds Apr 15 to Aug 31 |

| NAME | BREEDING SEASON |
|---|---|
| Ruddy Turnstone *Arenaria interpres morinella*<br>This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA | Breeds elsewhere |
| Rusty Blackbird *Euphagus carolinus*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds elsewhere |
| Seaside Sparrow *Ammodramus maritimus*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds May 10 to Aug 20 |
| Semipalmated Sandpiper *Calidris pusilla*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds elsewhere |
| Short-billed Dowitcher *Limnodromus griseus*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/9480 | Breeds elsewhere |
| Snowy Owl *Bubo scandiacus*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds elsewhere |
| Surf Scoter *Melanitta perspicillata*<br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. | Breeds elsewhere |
| Whimbrel *Numenius phaeopus*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/9483 | Breeds elsewhere |
| White-winged Scoter *Melanitta fusca*<br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. | Breeds elsewhere |
| Willet *Tringa semipalmata*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds Apr 20 to Aug 5 |

| NAME | BREEDING SEASON |
|---|---|
| Wilson's Storm-petrel *Oceanites oceanicus*<br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. | Breeds elsewhere |
| Wood Thrush *Hylocichla mustelina*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds May 10 to Aug 31 |

## Probability Of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

**Probability of Presence (■)**

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 year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

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

1. 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.
2. 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.
3. 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.

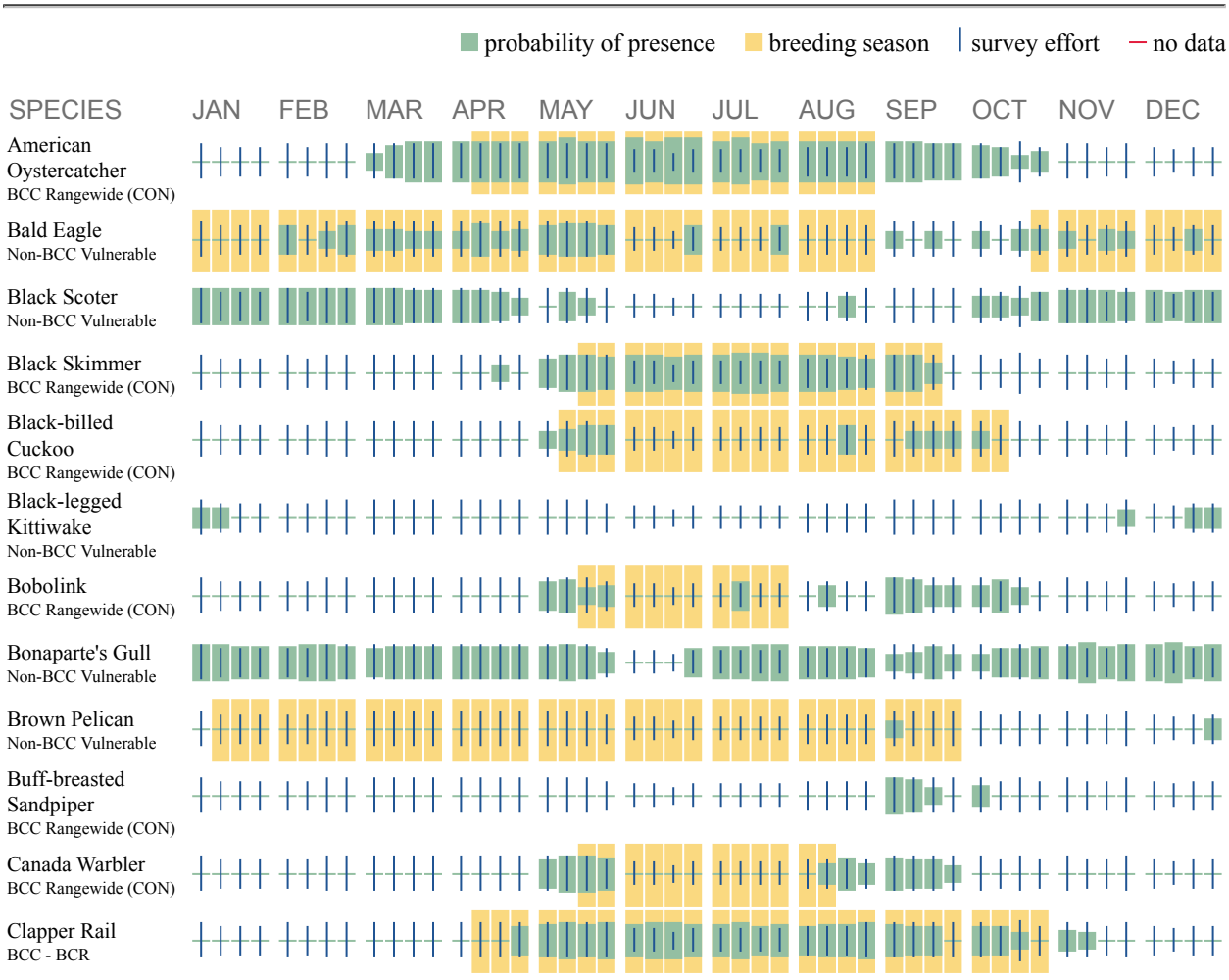
**Breeding Season (■)**

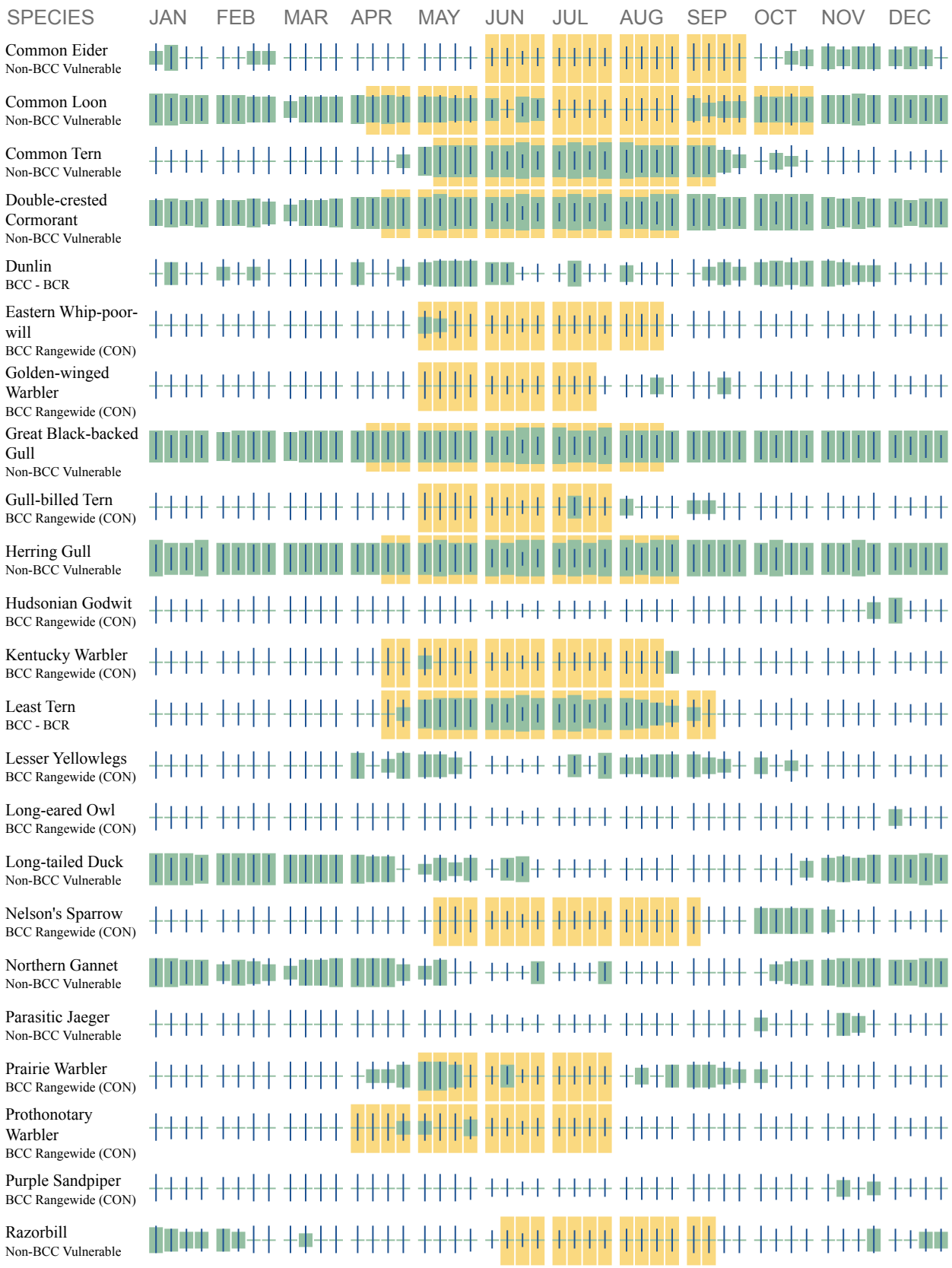
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

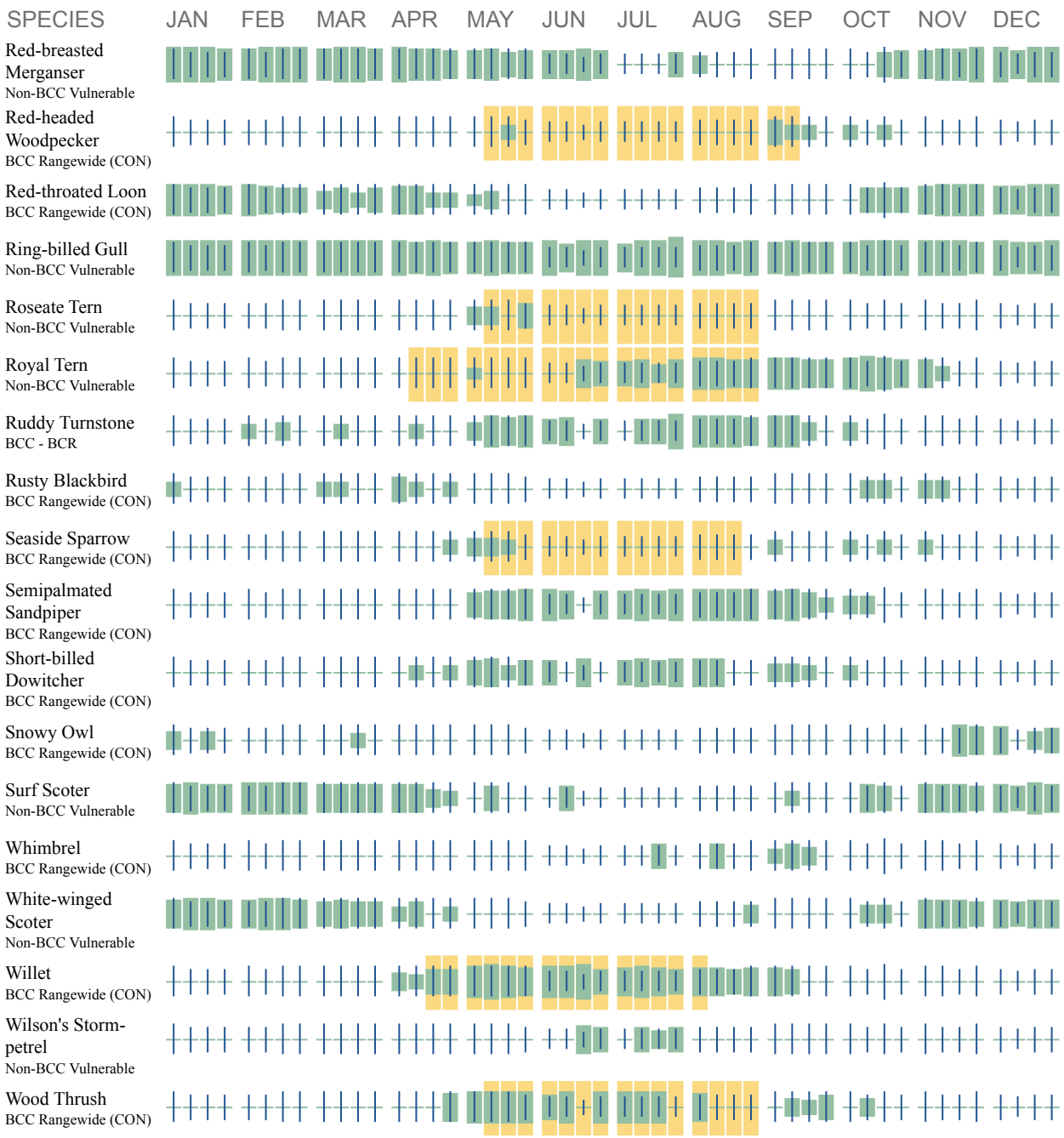
**Survey Effort** (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

**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.




SPECIES
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
Common Eider
Non-BCC Vulnerable
Common Loon
Non-BCC Vulnerable
Common Tern
Non-BCC Vulnerable
Double-crested Cormorant
Non-BCC Vulnerable
Dunlin
BCC - BCR
Eastern Whip-poor-will
BCC Rangewide (CON)
Golden-winged Warbler
BCC Rangewide (CON)
Great Black-backed Gull
Non-BCC Vulnerable
Gull-billed Tern
BCC Rangewide (CON)
Herring Gull
Non-BCC Vulnerable
Hudsonian Godwit
BCC Rangewide (CON)
Kentucky Warbler
BCC Rangewide (CON)
Least Tern
BCC - BCR
Lesser Yellowlegs
BCC Rangewide (CON)
Long-eared Owl
BCC Rangewide (CON)
Long-tailed Duck
Non-BCC Vulnerable
Nelson's Sparrow
BCC Rangewide (CON)
Northern Gannet
Non-BCC Vulnerable
Parasitic Jaeger
Non-BCC Vulnerable
Prairie Warbler
BCC Rangewide (CON)
Prothonotary Warbler
BCC Rangewide (CON)
Purple Sandpiper
BCC Rangewide (CON)
Razorbill
Non-BCC Vulnerable




Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php

- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

## Migratory Birds FAQ

**Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.**
Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures and/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 migratory birds potentially occurring in my specified location?**
The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

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) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle 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, please visit the AKN Phenology Tool.

**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 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, migrating or present year-round in my project area?**

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, 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 Eagle 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 try 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 eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

**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.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

**What if I have eagles on my list?**
If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

**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 also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the “no data” indicator (a red horizontal bar). 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 is not perfect; 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 helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ “Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds” at the bottom of your migratory bird trust resources page.

# Wetlands

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.

ESTUARINE AND MARINE DEEPWATER

- E1UBLx
- E1UBL

ESTUARINE AND MARINE WETLAND

- E2US2P

**DEPARTMENT OF THE ARMY**
NEW YORK DISTRICT, CORPS OF ENGINEERS
JACOB K. JAVITS FEDERAL BUILDING
26 FEDERAL PLAZA
NEW YORK, NEW YORK 10278-0090

REPLY TO
ATTENTION OF
Environmental Analysis Branch

June 24 2014

Mr. Eric Davis
U.S. Fish & Wildlife Service, New Jersey Field Office
927 North Main Street, Building D
Pleasantville, New Jersey 08232

Subject: Section 7 Consultation for Raritan and Sandy Hook Bay Hurricane and Storm Damage Reduction Project for Highlands, Monmouth County, New Jersey.

Dear Mr. Davis,

The U.S. Army Corps of Engineers, New York District (District), has been undertaking actions following Hurricane Sandy along the Atlantic Coast of New York and New Jersey, which includes the Raritan Bay shoreline. This assistance consists of the rehabilitation of federally authorized hurricane and shore protection projects under the Disaster Relief Appropriation Act of 2013 (Public Law 113-2 also known as the Sandy Relief Bill). Under this authorization, the District is evaluating the Raritan and Sandy Hook Bay Hurricane and Storm Damage Reduction Project for Highlands, Monmouth County, New Jersey (Project).

Pursuant to our above referenced subject, the District, would like to initiate informal section 7 coordination for the project. Through the Services iPac system, Piping Plover (*Charadrius melodus*), Seabeach amaranth (*Amaranthus pumilus*), and northern long-eared Bat (*Myotis septentrionalis*) were identified as potentially occurring in the project area. The project will not affect the northern long-eared bat as there will be no activities near mines or caves and there will be no removal of any trees >3" in diameter at breast height.

The District is requesting information regarding seabeach amaranth and Piping Plover in and near Highlands, NJ. The District has been in contact with Ron Popowski regarding this project and we have exchanged multiple documents discussing the project extend and footprint. If you have any questions regarding this request, please do not hesitate to contact me at matthew.voisine@usace.army.mil or 917-790-8718.

Sincerely,

Matthew Voisine, Project Biologist

cc:
Ron Popowski, USFWS

# United States Department of the Interior

FISH AND WILDLIFE SERVICE

New Jersey Field Office
Ecological Services
927 North Main Street, Building D
Pleasantville, New Jersey 08232
Tel: 609/646 9310
Fax: 609/646 0352
http://www.fws.gov/northeast/njfieldoffice/

In Reply Refer To:
**2014-TA-0427**

JUL 15 2014

Matthew Voisine, Biologist
U.S. Army Corps of Engineers - NewYork District
26 Federal Plaza, Room 2151
New York, New York 10278
matthew.voisine@usace.army.mil

Dear Mr. Voisine:

The U.S. Fish and Wildlife Service (Service) has reviewed your June 24, 2014 request for updated information on the presence of federally listed threatened and endangered species for the Highlands Hurricane and Storm Damage Reduction Project, Monmouth County, New Jersey.

## AUTHORITY

The following comments are provided as technical assistance.

## FEDERALLY LISTED SPECIES AND SPECIES PROPOSED FOR LISTING

### Piping Plover

The federally listed (threatened) piping plover (*Charadrius melodus*) nests approximately six miles east in Gateway National Recreation Area, Sandy Hook Unit during the breeding season between March 15 and August 31. The Highlands project area has no history of nesting piping plovers. We do not have any records indicating that piping plovers are nesting within the project area in 2014.

### Seabeach Amaranth

The federally listed (threatened) plant seabeach amaranth (*Amaranthus pumilus*) is an annual plant endemic to Atlantic Coast beaches and barrier islands that was documented occurring in nearby Keansburg in 2013 approximately 3.5 linear miles from the proposed project area. The Highlands project area has no history of seabeach amaranth plants. The Service has yet to receive information regarding the presence of seabeach amaranth along the New Jersey coast in 2014.

**Northern Long-Eared Bat**

On October 3, 2013, the Service announced a proposed rule to list the northern long-eared bat (*Myotis septentrionalis*) as an endangered species throughout its range. The northern long-eared bat is a medium-sized bat found across much of the eastern and north-central United States. The northern long-eared bat predominantly overwinters in hibernacula that include caves and abandoned mines. During the summer, this species typically roosts singly or in colonies underneath bark or in cavities or crevices of both live trees and snags. Northern long-eared bats are also known to roost in human-made structures such as buildings, barns, sheds, and under eaves of windows. Threats to the northern long-eared bat include disease due to the emergence of white-nose syndrome, improper closure at hibernacula, degradation and destruction of summer habitat, and use of pesticides. Tree removal could impact this species by killing, injuring, or disturbing breeding or roosting bats if conducted between April 1 and September 30.

**OTHER COMMENTS**

Please be advised that Section 7 consultation pursuant to the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*) requires the lead Federal agency in charge of the proposed project (*i.e.*, the U.S. Army Corps of Engineers, New York District) to provide a determination to the Service on whether the project as proposed may affect federally listed species. Also please be advised that Mr. Eric Davis is no longer employed at the New Jersey Field Office. Our Field Supervisor is Mr. Eric Schrading.

Thank you for the opportunity to provide this review. Should you have any questions, please contact Ron Popowski at Ron_Popowski@fws.gov.

Sincerely,

for Eric Schrading
Field Supervisor

NOAA FISHERIES
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
Greater Atlantic Region

US Army Corps of Engineers®

**GARFO ESA Section 7: 2017 NLAA Program Verification Form**
(Please submit a signed version of this form, together with any project plans, maps, supporting analyses, etc., to nmfs.gar.esa.section7@noaa.gov with "2017 NLAA Program" in the subject line)

## Section 1: General Project Details

| | |
|---|---|
| Application Number: | Raritan Bay and Sandy Hook Bay Highlands, New |
| Applicant(s): | USACE-New York District |
| Permit Type (e.g. NWP, LOP, RGP, IP, Permit Modification): | Civil Works Program |
| Anticipated project start date (e.g., 9/1/2017) | 12/01/2023 |
| Anticipated project end date (e.g., 3/14/2018 – if there is no permit expiration date, write "N/A") | 12/01/2026 |

Project Type/Category (check all that apply to entire action):

| | | | |
|---|---|---|---|
| ☐ | Aquaculture (shellfish) and artificial reef creation | ☐ | Transportation and development (e.g., culvert construction, bridge repair) |
| ☐ | Routine maintenance dredging and disposal/beach nourishment | ☐ | Mitigation (fish/wildlife enhancement or restoration) |
| ☐ | Piers, ramps, floats, and other structures | ☐ | Bank stabilization and dam maintenance |
| ☑ | If other, describe project type/category: Bulkhead, floodwall and reinforced dune for coastal storm risk management | | |

Project/Action Description and Purpose (*include town/city/state and water body where project is occurring; relevant permit conditions that aren't captured elsewhere on form*):

The U.S. Army Corps of Engineers (USACE)'s Recommended Plan for the Coastal Storm Risk Management (CSRM) for Raritan Bay and Sandy Hook Bay, Highlands, New Jersey (Highlands) feasibility study is an alignment of floodwalls at elevation +14 feet (ft) North American Vertical Datum of 1988 (NAVD88).

LOCATION
The Borough of Highlands is located in Monmouth County, NJ, along Sandy Hook Bay and the Shrewsbury River.

| | |
|---|---|
| Type of Habitat Modified (e.g., sand, cobble, silt/mud/clay): | Area (acres): |
| beach sand | 1.90 |
| silt and clay bay bottom | 1.00 |
| | |
| Project Latitude (e.g., 42.625884) | 40.407494 |
| Project Longitude (e.g., -70.646114) | -73.990383 |

**Section 2: ESA-listed species and/or critical habitat in the action area:**

| | | | |
|---|---|---|---|
| ☑ | Atlantic sturgeon (all DPSs)<br>If not all DPSs, list which here: | ☑ | Kemp's ridley sea turtle |
| ☐ | Atlantic sturgeon critical habitat (proposed or designated)<br>Indicate which DPS (GOM, NYB, Chesapeake Bay DPSs): | ☑ | Loggerhead sea turtle (NW Atlantic DPS) |
| ☐ | Shortnose sturgeon | ☑ | Leatherback sea turtle |
| ☐ | Atlantic salmon (GOM DPS) | ☐ | North Atlantic right whale |
| ☐ | Atlantic salmon critical habitat (GOM DPS) | ☐ | North Atlantic right whale critical habitat |
| ☑ | Green sea turtle (N. Atlantic DPS) | ☐ | Fin whale |

**Section 3: NLAA Determination (check all applicable fields):**

| a) GENERAL PDC | |
|---|---|
| ☑ | Yes, my project meets all of the General PDC. |
| ☐ | No, my project does not meet all the General PDC as indicated below (please check the PDC the action does NOT comply with below, and provide justification in Section 4 of this form): |
| | **Information for PDC 8** (if "max extent of stressor" exceeds "width of water body", PDC 8 is NOT met, and a justification in Section 4 is required to proceed with the verification form) |

| | Width (m) of water body in action area: | Stressor Category (stressor that extends furthest distance into water body – e.g., turbidity plume; sound pressure wave): | Max extent (m) of stressor into the water body: |
|---|---|---|---|
| | 400.00 | sound pressure | 40.00 |

| | | |
|---|---|---|
| ☐ | 1. | No work will individually or cumulatively have an adverse effect on ESA-listed species or designated critical habitat; no work will cause adverse modification or destruction to proposed critical habitat. |
| ☐ | 2. | No work will occur in the tidally influenced portion of rivers/streams where Atlantic salmon presence is possible from April 10–November 7. |
| ☐ | 3. | No work will occur in Atlantic or shortnose sturgeon spawning grounds as follows:<br>i. New England: April 1–Aug. 31<br>ii. New York/Philadelphia: March 15–August 31<br>iii. Baltimore/Norfolk: March 15–July 1 and Sept. 15–Nov. 1 |
| ☐ | 4. | No work will occur in shortnose sturgeon overwintering grounds as follows:<br>i. New England District: October 15–April 30<br>ii. New York/Philadelphia: Nov. 1–March 15<br>iii. Baltimore: Nov. 1–March 15 |
| ☐ | 5. | Within designated Atlantic salmon critical habitat, no work will affect spawning and rearing areas (PBFs 1-7). |
| ☐ | 6. | Within proposed/designated Atlantic sturgeon critical habitat, no work will affect hard bottom substrate (e.g., rock, cobble, gravel, limestone, boulder, etc.) in low salinity waters (i.e., 0.0-0.5 parts per thousand) (PBF 1). |
| ☐ | 7. | Work will not change temperature, water flow, salinity, or dissolved oxygen levels. |
| ☐ | 8. | If it is possible for ESA-listed species to pass through the action area, a zone of passage with appropriate habitat for ESA-listed species (e.g., depth, water velocity, etc.) must be maintained (i.e., physical or biological stressors such as turbidity and sound pressure must not create barrier to passage). |
| ☐ | 9. | Any work in designated North Atlantic right whale critical habitat must have no effect on the physical and biological features (PBFs). |
| ☐ | 10. | The project will not adversely impact any submerged aquatic vegetation (SAV). |
| ☐ | 11. | No blasting will occur. |

b) The following stressors are applicable to the action
(check all that apply – use Stressor Category Table for guidance):

| | |
|---|---|
| ☑ | Sound Pressure |
| ☐ | Impingement/Entrapment/Capture |
| ☑ | Turbidity/Water Quality |
| ☐ | Entanglement |

| | |
|---|---|
| ☑ | Habitat Modification |
| ☐ | Vessel Traffic |

| | Stressor Category | | | | | |
|---|---|---|---|---|---|---|
| **Activity Category** | Sound Pressure | Impingement/ Entrapment/ Capture | Turbidity/ Water Quality | Entanglement | Habitat Mod. | Vessel Traffic |
| Aquaculture (shellfish) and artificial reef creation | N | N | Y | Y | Y | Y |
| Routine maintenance dredging and disposal/beach nourishment | N | Y | Y | N | Y | Y |
| Piers, ramps, floats, and other structures | Y | N | Y | Y | Y | Y |
| Transportation and development (e.g., culvert construction, bridge repair) | Y | N | Y | N | Y | Y |
| Mitigation (fish/wildlife enhancement or restoration) | N | N | Y | N | Y | Y |
| Bank stabilization and dam maintenance | Y | N | Y | N | Y | Y |

c) SOUND PRESSURE PDC

| | |
|---|---|
| ☑ | Yes, my project meets all of the Sound Pressure PDC below. |
| ☐ | No, my project does not meet all the Sound Pressure PDC as indicated below (please check the PDC the action does NOT comply with below, and provide justification in Section 4 of this form): |

**Information for PDC 14** (refer to SOPs for guidance):

| | Pile material (e.g., steel pipe, timber, concrete) | Pile diameter/width (inches) | Number of piles | Installation method (e.g., impact hammer, vibratory start and then impact hammer to depth) |
|---|---|---|---|---|
| a) | steel sheet | 24.00 | 40 | vibratory |
| b) | | | | |

| | | | | | |
|---|---|---|---|---|---|
| | c) | | | | |
| | d) | | | | |

| | | |
|---|---|---|
| ☐ | 12. | If the pile driving is occurring during a time of year when ESA-listed species may be present, and the anticipated noise is above the behavioral noise threshold of those species (please see SOPs), a 20 minute "soft start" is required to allow for animals to leave the project vicinity before sound pressure increases. |
| ☐ | 13. | Any new pile supported structure must involve the installation of ≤ 50 piles (below MHW). |
| ☐ | 14. | All underwater noise (pressure) is below (<) the physiological/injury noise threshold for ESA-listed species in the action area (if project involves steel piles, or non-steel piles > 24-inches in diameter/width, include noise estimate with this form). |
| d) IMPINGEMENT/ENTRAINMENT/CAPTURE PDC | | |
| ☐ | | Yes, my project meets all of the Impingement/Entrainment/Capture PDC below. |
| ☐ | | No, my project does not meet all the Impingement/Entrainment/Capture PDC as indicated below (please check the PDC the action does NOT comply with below, and provide justification in Section 4 of this form): |
| | | **Information for Dredging:** |
| | | If dredging permit/authorization includes multiple years of maintenance, include estimated number of dredging/disposal events: |
| | | **Information for PDC 18** (refer to SOPs for guidance): |
| | | Mesh screen size (mm) for temporary intake: |
| ☐ | 15. | Only mechanical, cutterhead, and low volume hopper (e.g., CURRITUCK) dredges may be used. |
| ☐ | 16. | No new dredging in proposed or designated Atlantic sturgeon or Atlantic salmon critical habitat (maintenance dredging still must meet all other PDCs). New dredging outside Atlantic sturgeon or salmon critical habitat is limited to one time dredge events (e.g., burying a utility line) and minor (≤ 2 acres) expansions of areas already subject to maintenance dredging (e.g., marina/harbor expansion). |
| ☐ | 17. | Work behind cofferdams, turbidity curtains, and other methods to block access of animals to dredge footprint is required when operationally feasible and ESA-listed species may be present. |
| ☐ | 18. | Temporary intakes related to construction must be equipped with appropriate sized mesh screening (as determined by GARFO section 7 biologist and/or according to Chapter 11 of the NOAA Fisheries Anadromous Salmonid Passage Facility Design) and must not have greater than 0.5 fps intake velocities, to prevent impingement or entrainment of any ESA-listed species life stage. |
| ☐ | 19. | No new permanent intake structures related to cooling water, or any other inflow at facilities (e.g. water treatment plants, power plants, etc.). |
| e) TURBIDITY/WATER QUALITY PDC | | |
| ☐ | | Yes, my project meets all of the Turbidity/Water Quality PDC below. |

| | | |
|---|---|---|
| ☑ | No, my project does not meet all the Turbidity/Water Quality PDC as indicated below (please check the PDC the action does NOT comply with below, and provide justification in Section 4 of this form): | |
| ☐ | 20. | Work behind cofferdams, turbidity curtains, or other methods to control turbidity are required when operationally feasible and ESA-listed species may be present. |
| ☐ | 21. | In-water offshore disposal may only occur at designated disposal sites that have already been consulted on with GARFO. |
| ☐ | 22. | Any temporary discharges must meet state water quality standards; no discharges of toxic substances. |
| ☑ | 23. | Only repair of existing discharge pipes allowed; no new construction. |

f) ENTANGLEMENT PDC

| | | |
|---|---|---|
| ☐ | Yes, my project meets all of the Entanglement PDC below. | |
| ☐ | No, my project does not meet all the Entanglement PDC as indicated below (please check the PDC the action does NOT comply with below, and provide justification in Section 4 of this form): | |
| | **Information for Aquaculture Projects:** | |
| | Type of Aquaculture (e.g., cage on bottom) | Acreage |
| | a) | |
| | b) | |
| | c) | |
| ☐ | 24. | Shell on bottom <50 acres with maximum of 4 corner marker buoys; |
| ☐ | 25. | Cage on bottom with no loose floating lines <5 acres and minimal vertical lines (1 per string of cages, 4 corner marker buoys); |
| ☐ | 26. | Floating cages in <3 acres in waters and shallower than -10 feet MLLW with no loose lines and minimal vertical lines (1 per string of cages, 4 corner marker buoys); |
| ☐ | 27. | Floating upweller docks in >10 feet MLLW. |
| ☐ | 28. | Any in-water lines, ropes, or chains must be made of materials and installed in a manner (properly spaced) to minimize the risk of entanglement by keeping lines taut or using methods to promote rigidity (e.g., sheathed or weighted lines that do not loop or entangle). |

g) HABITAT MODIFICATION PDC

| | |
|---|---|
| ☑ | Yes, my project meets all of the Habitat Modification PDC below. |
| ☐ | No, my project does not meet all the Habitat Modification PDC as indicated below (please check the PDC the action does NOT comply with below, and provide justification in Section 4 of this form): |

| | | | |
|---|---|---|---|
| ☐ | 29. | No conversion of habitat type (soft bottom to hard, or vice versa) for aquaculture or reef creation. | |
| h) VESSEL TRAFFIC PDC | | | |
| ☐ | Yes, my project meets all of the Vessel Traffic PDC below. | | |
| ☐ | No, my project does not meet all the Vessel Traffic PDC as indicated below (please check the PDC the action does NOT comply with below, and provide justification in Section 4 of this form): | | |
| | **Information for PDC 33** (refer to SOPs for guidance): | | |
| | | Temporary Project Vessel Type (e.g., work barge, tug, scow, etc.) | Number of Vessels |
| | a) | | |
| | b) | | |
| | c) | | |
| | | Type of Non-Commercial Vessels Added (e.g., 20' recreational motor boat – *only include if there is a net increase directly/indirectly resulting from project*) | Number of Vessels (*if sum > 2, PDC 33 is not met and justification required in Section 4*) |
| | a) | | |
| | b) | | |
| | | Type of Commercial Vessels Added (*only include if there is a net increase directly/indirectly resulting from project*) | Number of Vessels (*if > 0, PDC 33 is not met and justification required in Section 4*) |
| | a) | | |
| | b) | | |
| ☐ | 30. | Speed limits below 10 knots for project vessels with buffers of 150 feet for all listed species (1,500 feet for right whales). | |
| ☐ | 31. | While dredging, dredge buffers of 300 feet in the vicinity of any listed species (1,500 feet for right whales), with speeds of 4 knots maximum. | |
| ☐ | 32. | The number of project vessels must be limited to the greatest extent possible, as appropriate to size and scale of project. | |
| ☐ | 33. | The permanent net increase in vessels resulting from a project (e.g., dock/float/pier/boating facility) must not exceed two non-commercial vessels. A project must not result in the permanent net increase of any commercial vessels (e.g., a ferry terminal). | |

**Section 4: Justification for Review under the 2017 NLAA Program**

If the action is not in compliance with all of the General PDC and appropriate stressor PDC, but you can provide justification and/or special conditions to demonstrate why the project still meets the NLAA determination and is consistent with the aggregate effects considered in the programmatic consultation, you may still certify your project through the NLAA program using

this verification form. Please identify which PDC your project does not meet (e.g., PDC 9, PDC 15, PDC 22, etc.) and provide your rationale and justification for why the project is still eligible for the verification form.

To demonstrate that the project is still NLAA, you must explain why the effects on ESA-listed species or critical habitat are **insignificant** (i.e., too small to be meaningfully measured or detected) or **discountable** (i.e., extremely unlikely to occur). Please use this language in your justification.

| PDC# | Justification |
|---|---|
| 23 | If constructed the two new water outfalls will help with interior drainage during a storm. The construction of the proposed outfalls will not result in an increase of storm-water runoff generated on the project site. The current design calls for the installation of two concrete box culverts 4'x4'. The exact placement has not been determined however it will be on the western side of the project. Any authorized outfall would be required to comply with the NJDEP storm water pollution plan requirements as regulated by the state permits. The storm water will not have a measurable effect on water temperature, water flow, salinity, or dissolved oxygen levels. Most of construction can take place above MLW so it can be constructed at low tide, above |
| | |
| | |
| | |

**Section 5: USACE Verification of Determination**

| | |
|---|---|
| ☐ | In accordance with the 2017 NLAA Programmatic Consultation, the Corps has determined that the action complies with all applicable PDC and is not likely to adversely affect listed species. |
| ☑ | In accordance with the 2017 NLAA Programmatic Consultation, the Corps has determined that the action is not likely to adversely affect listed species per the justification and/or special conditions provided in Section 4. |

| USACE Signature: | Date: |
|---|---|
| WEPPLER.PETER.M.1228647353 Digitally signed by WEPPLER.PETER.M.1228647353 Date: 2020.02.11 08:16:18 -05'00' | 02/11/2020 |

**Section 6: GARFO Concurrence**

| | |
|---|---|
| ☐ | In accordance with the 2017 NLAA Program, GARFO PRD concurs with USACE's determination that the action complies with all applicable PDC and is not likely to adversely affect listed species or critical habitat. |
| ☑ | In accordance with the 2017 NLAA Program, GARFO PRD concurs with USACE's determination that the action is not likely to adversely affect listed species or critical habitat per the justification and/or special conditions provided in Section 4. |
| ☐ | GARFO PRD does not concur with USACE's determination that the action complies with the applicable PDC (with or without justification), and recommends an individual Section 7 consultation to be completed independent from the 2017 NLAA Program. |

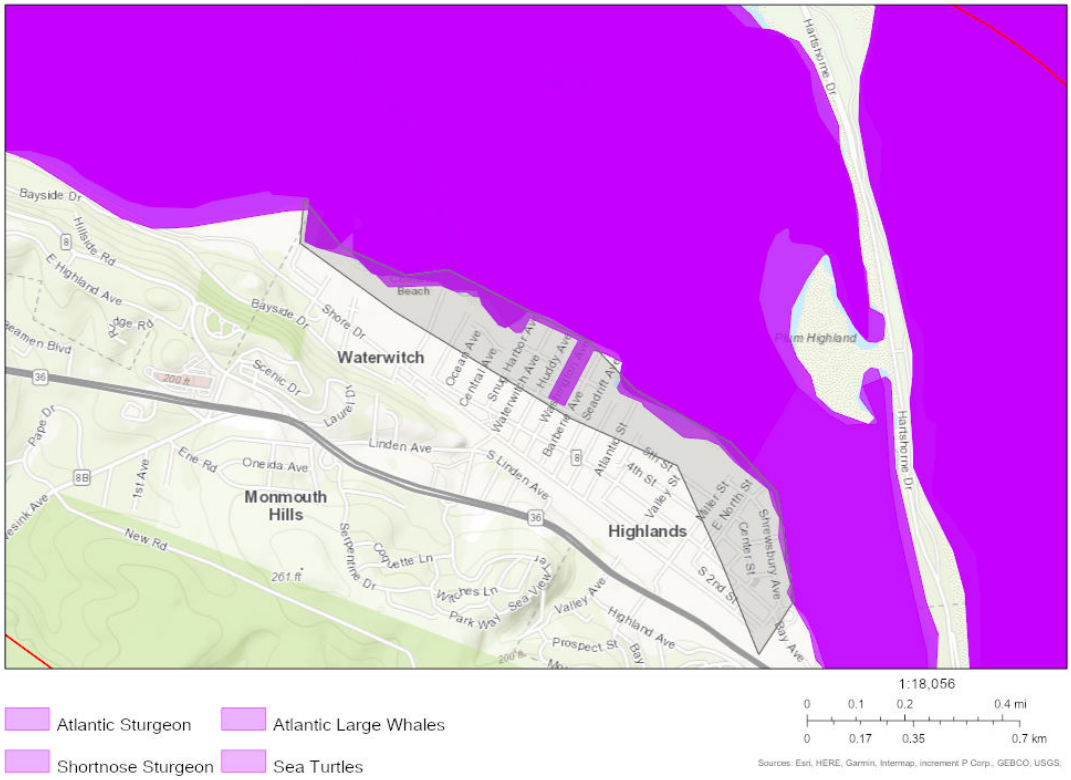
| GARFO Signature: | Date: |
|---|---|
| CARSON-SUPINO.EDITH.ELEANOR.1404702722 Digitally signed by CARSON-SUPINO.EDITH.ELEANOR.1404702722 Date: 2020.02.11 11:16:32 -05'00' | 02/11/2020 |

# Drawn Action Area & overlapping S7 Consultation Areas

## Area of Interest (AOI) Information

Area : 3,967.6 acres

Oct 23 2019 17:07:27 Eastern Daylight Time



## Summary

| Name | Count | Area(acres) | Length(mi) |
|---|---|---|---|
| Atlantic Sturgeon | 2 | 4,264.18 | N/A |
| Shortnose Sturgeon | 1 | 2,132.09 | N/A |
| Atlantic Salmon | 0 | 0 | N/A |
| Sea Turtles | 4 | 8,716.84 | N/A |
| Atlantic Large Whales | 5 | 9,445.63 | N/A |
| In or Near Critical Habitat | 0 | 0 | N/A |

## Atlantic Sturgeon

| # | Feature ID | Species | Life Stage | Behavior | Zone | From | Until | From (2) | Until (2) | Area(acres) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | ANS_C50_SUB_MAF | Atlantic sturgeon | Subadult | Migrating & Foraging | N/A | 01/01 | 12/31 | N/A | N/A | 2,132.09 |
| 2 | ANS_C50_ADU_MAF | Atlantic sturgeon | Adult | Migrating & Foraging | N/A | 01/01 | 12/31 | N/A | N/A | 2,132.09 |

## Shortnose Sturgeon

| # | Feature ID | Species | Life Stage | Behavior | Zone | From | Until | From (2) | Until (2) | Area(acres) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | SNS_C50_ADU_MAF | Shortnose sturgeon | Adult | Migrating & Foraging | N/A | 04/01 | 11/30 | N/A | N/A | 2,132.09 |

## Sea Turtles

| # | Feature ID | Species | Life Stage | Behavior | Zone | From | Until | From (2) | Until (2) | Area(acres) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | LTR_STS_AJV_MAF | Leatherback sea turtle | Adults and juveniles | Migrating & Foraging | Massachusetts (S of Cape Cod) through Virginia | 5/1 | 11/30 | *No Data* | *No Data* | 2,179.21 |
| 2 | LOG_STS_AJV_MAF | Loggerhead sea turtle | Adults and juveniles | Migrating & Foraging | Massachusetts (S of Cape Cod) through Virginia | 5/1 | 11/30 | *No Data* | *No Data* | 2,179.21 |
| 3 | KMP_STS_AJV_MAF | Kemp's ridley sea turtle | Adults and juveniles | Migrating & Foraging | Massachusetts (S of Cape Cod) through Virginia | 5/1 | 11/30 | *No Data* | *No Data* | 2,179.21 |
| 4 | GRN_STS_AJV_MAF | Green sea turtle | Adults and juveniles | Migrating & Foraging | Massachusetts (S of Cape Cod) through Virginia | 5/1 | 11/30 | *No Data* | *No Data* | 2,179.21 |

## Atlantic Large Whales

| # | Feature ID | Species | Life Stage | Behavior | Zone | From | Until | From (2) | Until (2) | Area(acres) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | RIT_WRS_AJV_MIG | North Atlantic right whale | Adults and juveniles | Migrating | Mid-Atlantic (Cape Cod, MA to VA) | 1/1 | 12/31 | *No Data* | *No Data* | 1,889.13 |
| 2 | FIN_WFS_AJV_MIG | Fin whale | Adults and juveniles | Migrating | Mid-Atlantic (Cape Cod, MA to VA) | 1/1 | 12/31 | *No Data* | *No Data* | 1,889.13 |
| 3 | FIN_WFS_AJV_WIN | Fin whale | Adults and juveniles | Overwintering | Mid-Atlantic (Cape Cod, MA to VA) | 11/1 | 1/31 | *No Data* | *No Data* | 1,889.13 |
| 4 | FIN_WFS_AJV_FOR | Fin whale | Adults and juveniles | Foraging | Mid-Atlantic (Cape Cod, MA to VA) | 1/1 | 12/31 | *No Data* | *No Data* | 1,889.13 |
| 5 | FIN_WFS_ADU_CLV | Fin whale | Adult | Calving | Mid-Atlantic (Cape Cod, MA to VA) | 10/1 | 1/31 | | | 1,889.13 |