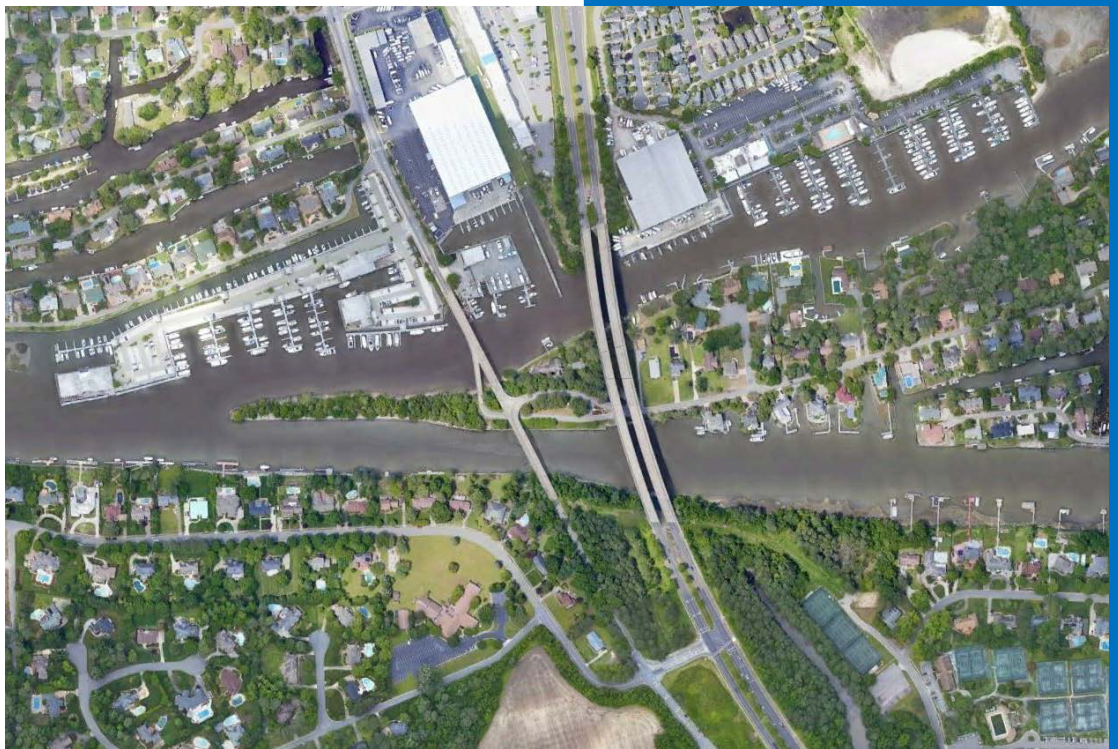


Environmental Assessment W. Great Neck Bridge Navigation Fender System Rehabilitation

Virginia Beach, Virginia

DRAFT ENVIRONMENTAL ASSESSMENT



Prepared By:
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Operations Branch
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1 May 2018

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1.0 Project purpose and need

Joint Permit Application No. NAO-2017-00711/VMRC#17-0542 (Long Creek) provides the proposed scope of activities proposed by the City of Virginia Beach for the W. Great Neck Bridge. The W. Great Neck bridge over Long Creek was built circa 1961 (55 years old). As per the recently completed NBIS Inspection report, the structure has an “Overall Condition” of Fair. Since, there are no plans to replace the bridge in the near future, the City of Virginia Beach is taking measures to maximize the service life of the bridge for an additional 15 years. The focus of this project is to overlay the deck, replace expansion joints at abutments, repair deck soffit, zone paint steel girders, seal cracks and apply protective coating to bent caps and piles, and repair fender system. MOT will be required for all the bridge repairs and will be completed from top of bridge. The W. Great Neck road will be partially closed in phases for completion of bridge repairs. The repair of fender system includes steel pile (total 18) and timber pile (total 68) driving, replacing timber wales and catwalk, and replacing electric conduits and navigation lights. All the fender system repair work will be completed from Beach Canal with the use of barges.

This EA will only consider the environmental impacts of the Proposed Action, specifically repairs to the fender system that have the ability impair the usefulness of the Federal navigation channel located in Wolfsnare Creek.

1.1 Federal project authority

The Lynnhaven Inlet Federal Navigation Channel was authorized by the River and Harbor Act of 23 October 1962, House Document Number 580, by the 87th Congress.

1.2 Project location

Lynnhaven Inlet is located in the northernmost portion of the City of Virginia Beach, Virginia (Fig. 1). It connects the waters of Lynnhaven Bay with the southernmost extension of Chesapeake Bay. Both Long Creek and Wolfsnare Creek connect Lynnhaven Bay with Broad Bay to the east. Features of the Proposed Action are located in Long Creek and Wolfsnare Creek in the City of Virginia Beach.

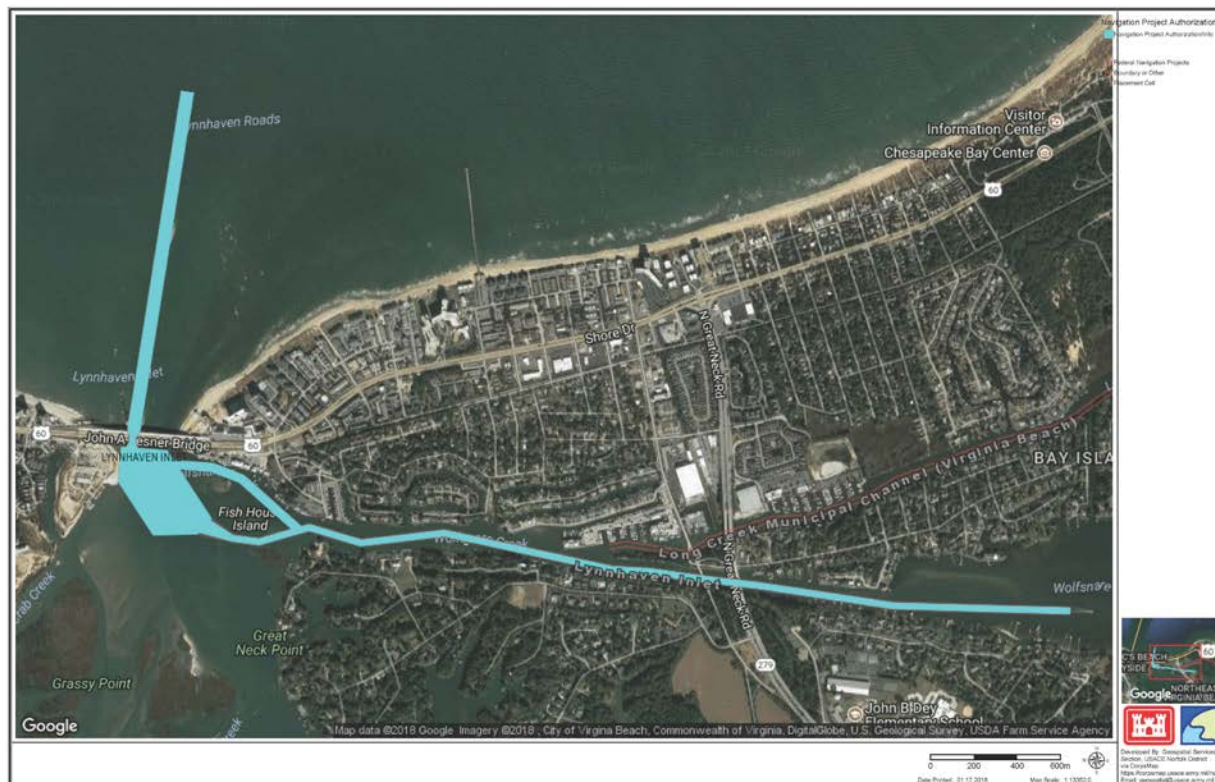


Figure 1. Lynnhaven Inlet Federal Navigation Channel

1.3 Project need or opportunity

The W. Great Neck bridge, built c. 1961, over Long Creek and Wolfsnare Creek has an overall condition rated as “fair” in a recently completed NBIS Inspection report. The City of Virginia Beach plans to increase the service life of the bridge by 15 years via repairs, since the bridge is not anticipated to be replaced in the near future. As part of this rehabilitation project, the fender system will be repaired adjacent to the section of Lynnhaven Inlet Federal Navigation Channel running through Wolfsnare Creek. Repairs to the fender system include steel and timber pile driving, replacement of timber wales and catwalk, and replacement of electric conduits and navigation lights. The fender system will be repaired via barges.

1.4 Related environmental documents

The Corps has documented a number of environmental documents relevant to the Proposed Action. These include: maps of the area, including extent of the channel, shellfish grounds, seagrass habitat, wetlands, and historic resources; IPaC resource list; GARFO NLAA Program Verification Form; and Section 404(b)(1) evaluation. Other documents can be found within the EA for Lynnhaven Inlet, Bay, and Connecting Waters dated August 24, 1979.

1.5 Decisions to be made

This EA will evaluate the Proposed Action elements pertinent to the Federal navigation project so that a Section 408 consultation may take place, since the work will take place in a waterway and impede traffic. This EA will document and evaluate the proposed alternative to accomplish that goal. The No Action Alternative and proposed alternative will be studied in detail to determine the Least Environmentally Damaging Preferred Alternative (LEDPA).

2.0 Proposed action and alternative

The alternatives described below were evaluated against the project purposes and the environmental impacts considered.

Alternative A (No Action Alternative): The No Action Alternative will mean that no repair work will be done on the fender system, electric conduits, or navigation lights.

Alternative B (Repair of Fender System, Electric Conduits, and Navigation Lights): Alternative A will allow for the full repair of the fender system, including steel and timber pile driving and replacement of timber wales and catwalk, as well as replacement of electric conduits and navigation lights.

3.0 Issues and basis for choice

Based upon the impact analysis conducted within this EA, Alternative B is the Preferred Alternative. This plan is expected to best meet the objectives and constraints of the Proposed Action with minimal negative impacts.

4.0 Affected environment

The affected environment is the subaqueous bottom and water column adjacent to pilings that will be removed and replaced.

5.0 Description of environmental impacts of Proposed Action

The rehabilitation of the fender system on the W. Great Neck bridge will cause temporary and insignificant downstream environmental impacts. The Proposed Action is expected to cause underwater noise due to the replacement of piles, including steel piles, via pile driving. This short-term impact, once complete, will allow for increased safety of both the bridge and vessel traffic through the channel, which will ultimately increase the safety and security of the Federal channel. The Proposed Action will use barges to implement fender system repairs, and, due to the narrow nature of the creek, a buffer of 150 feet for all listed species is not practicable. However, the barges will be stationary during active construction activities, the number of project vessels will be limited to the greatest extent possible, and there is no expected net

increase in vessels resulting from the Proposed Action. The Proposed Action is not anticipated to create a large sediment plume due to the coarse nature of the sediment in and around the channel, as described in the EA for Lynnhaven Inlet, Bay, and Connecting Waters dated August 24, 1979, as well as the nature of the activities. Therefore, it is anticipated that the Proposed Action will have minimal impacts on listed species.

6.0 List of agencies and persons consulted

The Corps has coordinated with other Federal and state agencies regarding the Proposed Action. Parties include the EPA, NOAA, USFWS, Virginia Department of Historic Resources, Virginia Institute of Marine Science, Virginia Marine Resources Commission, and Virginia Coastal Zone Management Program. All documents related to consultations may be found in Appendix A.

6.1 U.S. Environmental Protection Agency (EPA)

To ensure compliance with Section 404 of the Clean Water Act, an informal consultation was conducted with the EPA through a Section 404(b)(1) evaluation. Through this evaluation, USACE determined that the fill associated with this project complied with Section 404(b)(1).

6.2 NOAA – National Marine Fisheries Service (NMFS)

An informal consultation with NMFS was conducted through the GARFO NLAA Program Verification Form. Through this project analysis, USACE determined that the project was not likely to adversely affect listed species given the nature of the activities.

6.3 U.S. Fish and Wildlife Service (USFWS)

To determine if protected species and habitats would be impacted by the project, IPaC was consulted on 27 April 2018. Through this consultation, it was determined that the project activities will not impact protected mammals or migratory birds that may be present in the project area. There are no refuge lands or hatcheries in or near the project area. The National Wetlands Inventory was consulted to identify any wetlands in or near the project area (Fig. 2). There are no wetlands in the project area or immediately adjacent to the project area. Wetlands are present both to the east and west of the project area.

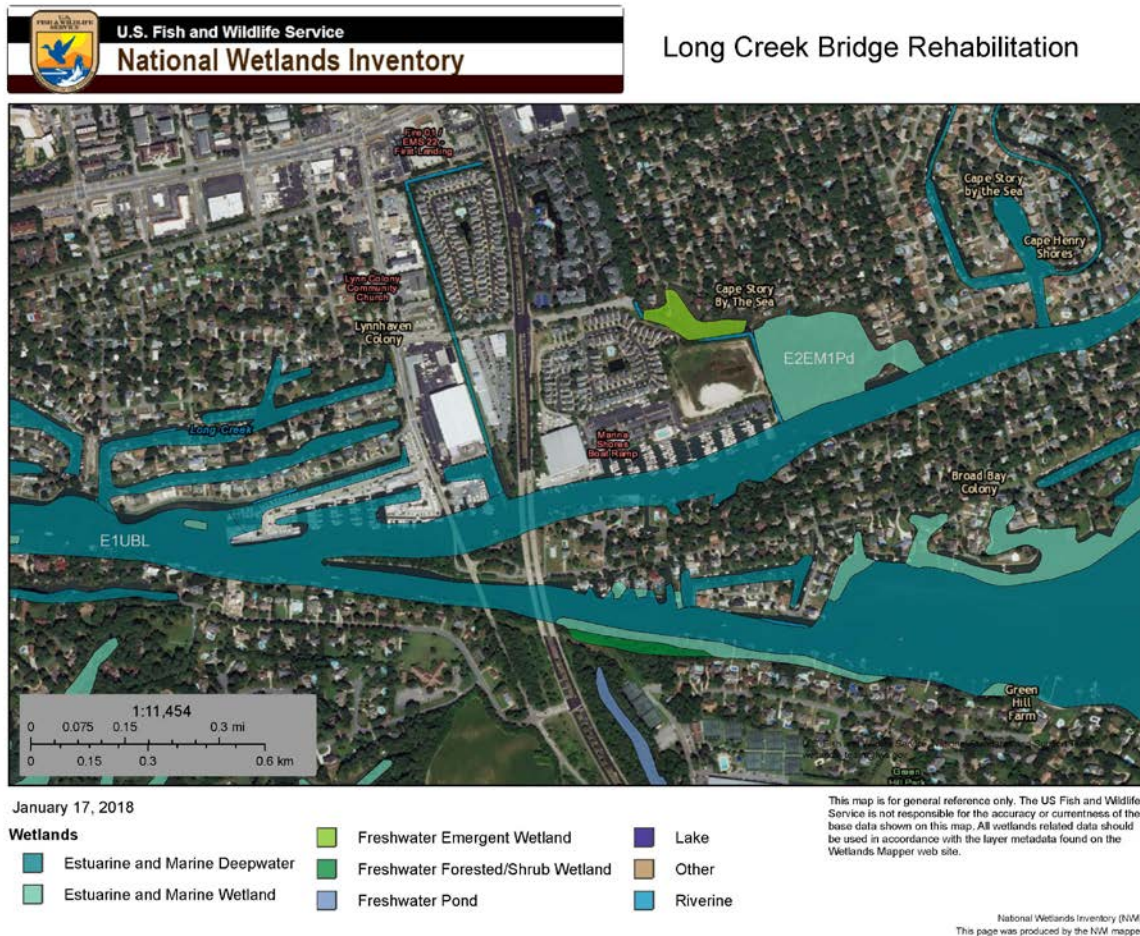


Figure 2. National Wetlands Inventory map of wetlands in the vicinity of the Project Area.

6.4 Virginia Department of Historic Resources (VDHR)

Per VDHR, there is one archeological resource in the project area, downstream of the Proposed Action, and two archeological resources near the project area. There are no architectural resources in the project area. Based on the proposed project activities and past activities in the area, it is unlikely that the proposed project will impact the archeological resources in or adjacent to the project area.

6.5 Virginia Institute of Marine Science (VIMS)

Per the VIMS SAV survey, no seagrass is present in or adjacent to the project area (Fig. 4).

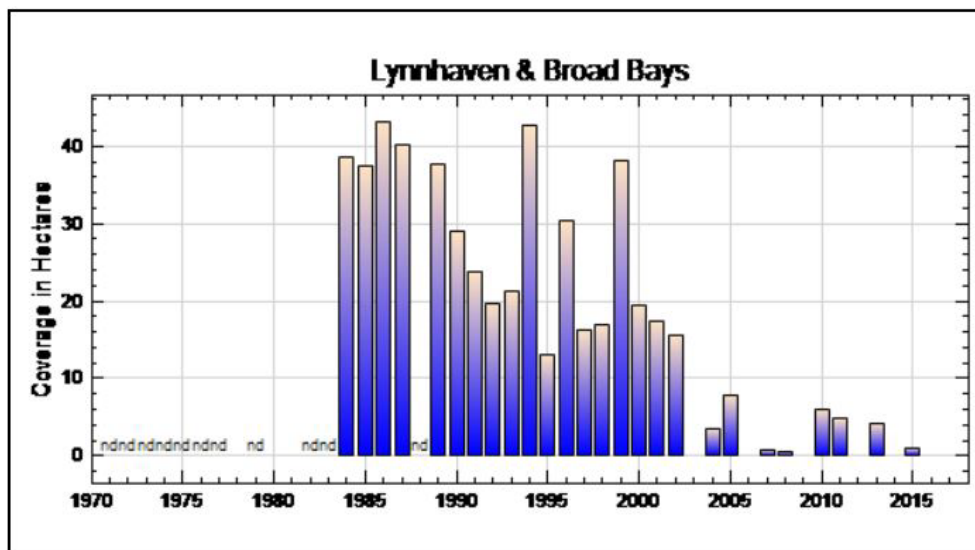


Figure 3. SAV area (hectares) in Lynnhaven and Broad Bays by year, where "nd" indicates that the area was not mapped.

6.6 Virginia Marine Resources Commission (VMRC)

VMRC provided maps of both private oyster leases and public shellfish grounds (Fig. 5). There are no private or public shellfish grounds in or adjacent to the project area.

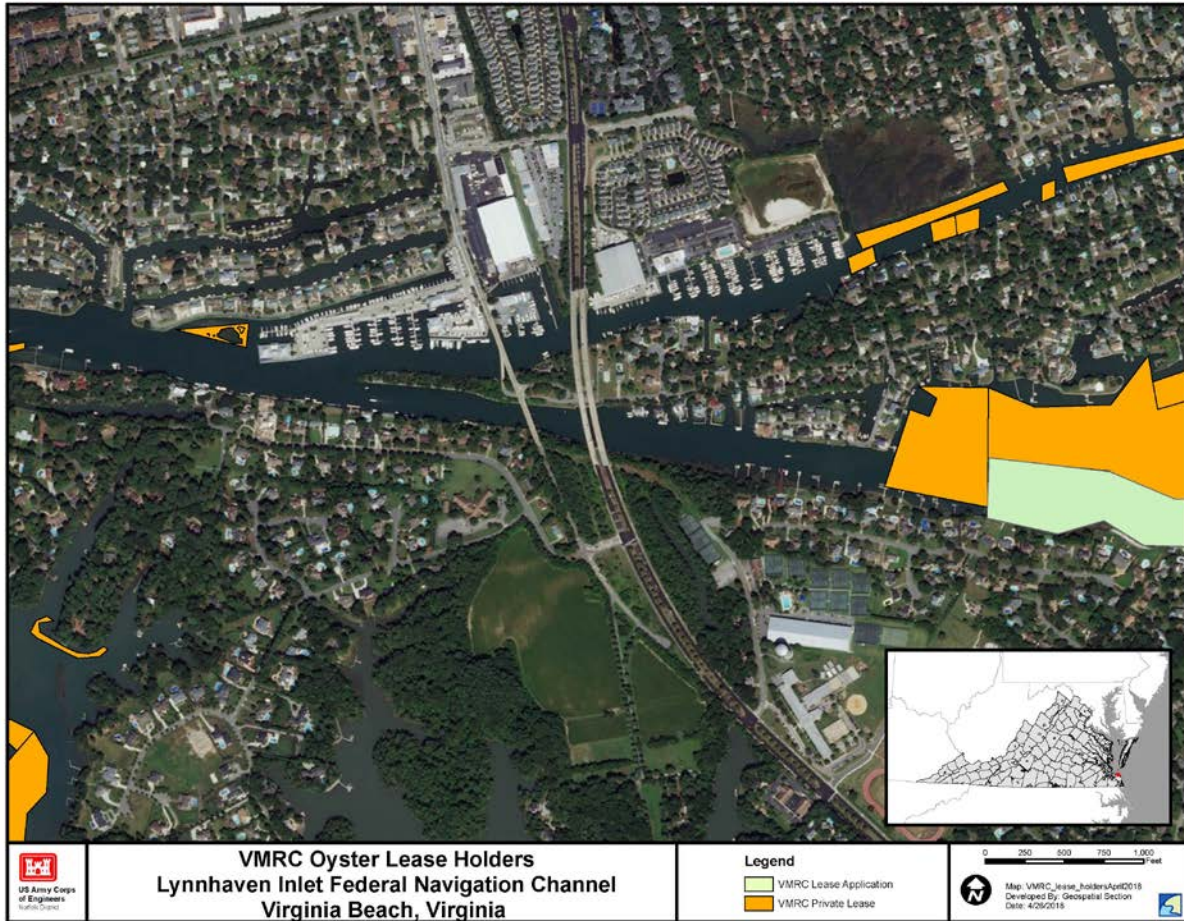


Figure 4. Map of oyster leases and oyster lease applications in the vicinity of the Project Area.

6.7 Virginia Coastal Zone Management (CZM) Program

USACE coordinated with the Virginia CZM Program to determine if state permits were required for this project. The two permitting agencies (VMRC and Virginia Department of Environmental Quality) determined that no permit was required for this project.

7.0 Cumulative effects

Cumulative effects are defined in 40 CFR 1508.7 as those effects that result from: the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. The primary goal of cumulative effects analysis is to determine the magnitude and significance of the environmental consequences of the Proposed Action in the context of cumulative effects of other past, present, and future actions.

The Proposed Action is expected to increase the service life of the bridge. The cumulative effect of the Proposed Action would be insignificant and any downstream impacts would be temporary.

8.0 Irreversible and irretrievable commitment of resources

An irreversible commitment of resources is one in which the ability to use and/or enjoy the resource is lost forever. One example of an irreversible commitment might be the mining of a mineral resource. An irretrievable commitment of resources is one in which, due to decisions to manage the resource for another purpose, opportunities to use or enjoy the resource as they presently exist are lost for a period of time. An example of an irretrievable loss might be where a type of vegetation is lost due to road construction. The Preferred Alternative consists of the replacement of existing structures, including pilings, to increase the service life of the bridge. The Proposed Action would not cause the permanent removal or consumption of any natural resources.

9.0 Unavoidable adverse environmental effects

Environmental effects for each resource are discussed above. Adverse environmental effects associated with implementing the Preferred Alternative are expected to be temporary based on the flow through the channel and the coarse composition of the sediments in and around the channel. Temporary adverse impacts may occur due to noise caused by pile driving and due to project vessels stationed in and around the channel to facilitate repairs; however, significant impacts are not expected. Potential environmental effects would be limited in spatial extent to the immediate project area.

10.0 Conflicts and controversy

Over the lifetime of the maintenance of Lynnhaven Inlet Federal Navigation Channel, considerable interest has been generated among local and regional stakeholders. The Corps continually strives to include all interested parties in its decision-making process and will continue to consider all issues that arise.

11.0 Environmental commitments

The Corps commits to avoiding, minimizing, or mitigating adverse effects. All practicable means to avoid or minimize environmental effects were incorporated into the Preferred Alternative.

Appendix A
Consultation documentation

Final Evaluation of 404(b)(1) Guidelines
 Contained in Vol. 45 No. 249 of the
Federal Register dated 24 December 1980

W. Great Neck Bridge Rehabilitation April 2018

1. Technical Evaluation Factors

a. Physical and Chemical Characteristics of the Aquatic Ecosystem (230.20-230.25)(Subpart C)

	N/A	Not Significant	Significant
(1) Substrate impacts	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(2) Suspended particulates/turbidity impacts	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(3) Water Quality Control	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(4) Alteration of current patterns and water circulation	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(5) Alteration of normal water fluctuations/hydroperiod	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(6) Alteration of salinity gradients	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Fender system repair, including pile driving, will increase turbidity at the project location, but this will be minor, short-term impact that will dissipate once construction has ceased.

b. Biological Characteristics of the Aquatic Ecosystem(230.30-230.32) (Subpart D)

	N/A	Not Significant	Significant
(1) Effect on threatened/endangered species and their habitat	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(2) Effect on the aquatic food web	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(3) Effect on other wildlife (mammals, birds, reptiles, and amphibians)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Based on a search of VA's endangered species database and coordination with the U.S. Fish and Wildlife Service, the project will not affect any federally or state listed threatened or endangered species.

c. Special Aquatic Site (230.40-230.45) (Subpart E)

	N/A	Not Significant	Significant
(1) Sanctuaries and refuges	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(2) Wetlands	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(3) Mud flats	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(4) Vegetated shallows	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(5) Coral reefs	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(6) Riffle and pool complexes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The proposed discharge will not affect any special aquatic sites.

d. Human Use Characteristics (230.50-230.54) (Subpart F)

	N/A	Not Significant	Significant
(1) Effects on municipal and private water supplies	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(2) Recreational and Commercial fisheries impacts	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(3) Effects on water-related recreation	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(4) Aesthetic impacts	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(5) Effects on parks, national and historical monuments, national seashores, wilderness areas, research sites, and similar preserves	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2. Evaluation of Dredged or Fill Material (230.60) (Subpart G)

- a. The following information has been considered in evaluating the biological availability of possible contaminants in dredged or fill material. **(Check only those appropriate)**

- ☒ (1) Physical characteristics
☐ (2) Hydrography in relation to known or anticipated sources of contaminants
☒ (3) Results from previous testing of the material in the vicinity of the project
☐ (4) Known, significant, sources of persistent pesticides from land runoff or percolation
☐ (5) Spill records for petroleum products or designated (Section 311 of CWA) hazardous substances
☐ (6) Other public records of significant introduction of contaminants from industries, municipalities or other sources
☐ (7) Known existence of substantial material deposits of substances which could be released in harmful quantities to the aquatic environment by man-induced discharge
☐ (8) Other sources (specify)

List appropriate references and a brief of supportive evidence.

Channel sediment is coarse in nature, and, therefore, the Corps has no reason to suspect contamination.

- b. An evaluation of the appropriate information in 3a above indicated that there is reason to believe the proposed dredged or fill material is not a carrier of contaminants, of that levels of contaminants are substantively similar at extraction and disposal sites and not likely to exceed constraints. The material meets the testing exclusion criteria.

YES ☒ NO ☐

3. Disposal Site Delineation (Section 230.11(f))

- a. The following factors, as appropriate, have been considered in evaluating the disposal site.

- ☐ (1) Depth of water at disposal site
☐ (2) Current velocity, direction, and variability at disposal site
☐ (3) Degree of turbulence
☐ (4) Water volume stratification
☐ (5) Discharge vessel speed and direction
☐ (6) Rate of discharge

- ☐ (7) Dredged material characteristics (constituents, amount, and type of material, settling velocities)
☐ (8) Number of discharges per unit of time
☐ (9) Other factors affecting rates and patterns of mixing (specify)

List appropriate references.

No dredged material will be produced.

- b. An evaluation of the appropriate factors in 4a above indicates that the disposal site and/or size of mixing zone are acceptable.

YES ☒

NO ☐

4. Actions to Minimize Adverse Effects (Section 230.70-230.77)(Subpart H)

All appropriate and practicable steps have been taken, through application of recommendation of Section 230.70-230.77 to ensure minimal adverse effects of the proposed discharge. List actions taken.

YES ☒

NO ☐

5. Factual Determination (Section 230.11)

A review of appropriate information as identified in items 2-5 above indicates that there is minimal potential for short or long-term environmental effects of the proposed discharge as related to:

- ☐ a. Physical substrate at the disposal site (review sections 2a, 3, 4, & 5)
☒ b. Water circulation, fluctuation & salinity (review sections 2a, 3, 4, & 5)
☒ c. Suspended particulates/turbidity (review sections 2a, 3, 4, & 5)
☒ d. Contaminant availability (review sections 2a, 3, & 4)
☒ e. Aquatic ecosystem structure and function (review sections 2b, c; 3, & 5)
☐ f. Disposal site (review sections 2, 4, & 5)
☒ g. Cumulative impact on the aquatic ecosystem
☒ h. Secondary impacts on the aquatic ecosystem

6. Review of Compliance (230.10(a)-(d) (Subpart B)

A review of the permit application indicates that:

- a. The discharge represents the least environmentally damaging practicable alternative and if in a special aquatic site, the activity associated with the discharge must have direct access or proximity to, or be

located in the aquatic ecosystem to fulfill its basic purpose (if no, see section 2 and information gathered for EA alternative);

YES ☒

NO ☐

- b. The activity does not appear to 1) violate applicable state water quality standards or effluent standards prohibited under Section 307 of the CWA; 2) jeopardize the existence of Federally designated marine sanctuary (if no, see section 2b and check responses from resource and water quality certifying agencies;

YES ☒

NO ☐

- c. The activity will not cause or contribute to significant degradation of waters of the U.S. including adverse effects on human health, life stages of organisms dependent on the aquatic ecosystem, ecosystem diversity, productivity and stability, and recreational, aesthetic, and economic values (if no, see section 2);

YES ☒

NO ☐

- d. Appropriate and practicable steps have been taken to minimize potential adverse impacts of the discharge on the aquatic ecosystem (if no, see section 5);

YES ☒

NO ☐

The proposed discharge of fill or dredged material is the least environmentally damaging practicable alternative and meets the Federal Standard.

7. Findings

- ☒ a. The proposed disposal site for discharge of dredged or fill material complies with the Section 404 (b)(1) guidelines

- ☐ b. The proposed disposal site for discharge of dredged or fill material complies with the Section 404(b)(1) guidelines with the inclusion of the following conditions:

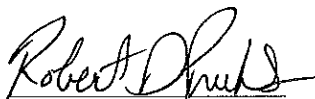
- c. The proposed disposal site for discharge of dredged or fill material does not comply with the Section 404(b)(1) guidelines for the following reason(s):

☐ (1) There is a less damaging practicable alternative

☐ (2) The proposed discharge will result in significant degradation of the aquatic ecosystem

☐ (3) The proposed discharge does not include all practicable and appropriate measures to minimize potential harm to the aquatic ecosystem

4/26/13
DATE

For 
Keith Lockwood
Chief, Operations Branch



GARFO ESA Section 7: 2017 NLAA Program Verification Form

Section 1: General Project Details

Application Number:		NOA-2017-00711/VMRC #17-1542	
Applicant(s):		City of Virginia Beach, VA	
Permit Type (e.g. NWP, LOP, RGP, IP, Permit Modification):			
Anticipated project duration (e.g., start/end date of construction/permit duration)		July 2018 – July 2019	
Project Type/Category (check all that apply to entire action):			
<input type="checkbox"/>	Aquaculture (shellfish) and artificial reef creation	<input checked="" type="checkbox"/>	Transportation and development (e.g., culvert construction, bridge repair)
<input type="checkbox"/>	Routine maintenance dredging and disposal/beach nourishment	<input type="checkbox"/>	Mitigation (fish/wildlife enhancement or restoration)
<input type="checkbox"/>	Piers, ramps, floats, and other structures	<input type="checkbox"/>	Bank stabilization and dam maintenance
<input type="checkbox"/>	If other, describe project type/category:		
Project/Action Description and Purpose:			
<p>The W. Great Neck bridge, built c. 1961, over Long Greek and Wolfsnare Creek has an overall condition rated as “fair” in a recently completed NBIS Inspection report. The City of Virginia Beach plans to increase the service life of the bridge by 15 years, since the bridge is not anticipated to be replaced in the near future. As part of this rehabilitation project, the fender system will be repaired adjacent to the section of Lynnhaven Inlet Federal Navigation Channel running through Wolfsnare Creek. Repairs to the fender system include steel and timber pile driving, replacement of timber wales and catwalk, and replacement of electric conduits and navigation lights. The fender system will be repaired via barges.</p>			
Total area of habitat modification (acres) by habitat type (e.g., 2.5 acres sand; 3 acres silt/mud, 0.25 acres cobble):		No habitat will be modified.	

Project Latitude (e.g., 42.625884)	36.90365
Project Longitude (e.g., -70.646114)	-76.06884

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

<input checked="" type="checkbox"/>	Atlantic sturgeon (all DPSs) If not all DPSs, list which here: Chesapeake Bay DPS	<input checked="" type="checkbox"/>	Kemp's ridley sea turtle
<input type="checkbox"/>	Atlantic sturgeon critical habitat (proposed or designated) (GOM, NYB, Chesapeake Bay DPSs)	<input checked="" type="checkbox"/>	Loggerhead sea turtle (NW Atlantic DPS)
<input type="checkbox"/>	Shortnose sturgeon	<input checked="" type="checkbox"/>	Leatherback sea turtle
<input type="checkbox"/>	Atlantic salmon (GOM DPS)	<input type="checkbox"/>	Right whale (N. Atlantic DPS)
<input type="checkbox"/>	Atlantic salmon critical habitat (GOM DPS)	<input type="checkbox"/>	Right whale critical habitat (N. Atlantic DPS)
<input checked="" type="checkbox"/>	Green sea turtle (N. Atlantic DPS)	<input type="checkbox"/>	Fin whale

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

a) GENERAL PDC		
<input type="checkbox"/>	Yes, my project meets all of the General PDC (justification for PDC 8, below) Width of water body in action area (m): Max extent (m) of activity stressor into water body: (e.g., turbidity plume, sound pressure wave) 	
<input checked="" type="checkbox"/>	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):	
<input type="checkbox"/>	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.
<input type="checkbox"/>	2.	No work will occur in the tidally influenced portion of rivers/streams where Atlantic salmon presence is possible from April 10–November 7.
<input type="checkbox"/>	3.	No work will occur in Atlantic or shortnose sturgeon spawning grounds as follows: i. New England: April 1–Aug. 31 ii. New York/Philadelphia: March 15–August 31 iii. Baltimore/Norfolk: March 15–July 1 and Sept. 15–Nov. 1

<input type="checkbox"/>	4.	No work will occur in shortnose sturgeon overwintering grounds as follows: i. New England District: October 15–April 30 ii. New York/Philadelphia: Nov. 1–March 15 iii. Baltimore: Nov. 1–March 15
<input type="checkbox"/>	5.	Within designated Atlantic salmon critical habitat, no work will affect spawning and rearing areas (PBFs 1-7).
<input type="checkbox"/>	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).
<input type="checkbox"/>	7.	Work will not change temperature, water flow, salinity, or dissolved oxygen levels.
<input checked="" type="checkbox"/>	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).
<input type="checkbox"/>	9.	Any work in designated North Atlantic right whale critical habitat must have no effect on the physical and biological features (PBFs).
<input type="checkbox"/>	10.	The project will not adversely impact any submerged aquatic vegetation (SAV).
<input type="checkbox"/>	11.	No blasting will occur.

b) The following stressors are applicable to the action (check all that apply—use table for guidance):

<input checked="" type="checkbox"/>	Sound Pressure
<input type="checkbox"/>	Impingement/Entrapment/Capture
<input checked="" type="checkbox"/>	Turbidity/Water Quality
<input type="checkbox"/>	Entanglement
<input checked="" type="checkbox"/>	Habitat Modification
<input checked="" type="checkbox"/>	Vessel Traffic

Activity Category	Stressor Category					
	Entanglement	Sound Pressure	Impingement/Entrapment/Capture	Turbidity/Sedimentation	Vessel Traffic	Habitat Mod.
Aquaculture (shellfish) and artificial reef creation	Y	N	N	Y	Y	Y
Routine maintenance dredging and disposal/beach	N	N	Y	Y	Y	Y

nourishment						
Piers, ramps, floats, and other structures	Y	Y	N	Y	Y	Y
Transportation and development (e.g., culvert construction, bridge repair)	N	Y	N	Y	Y	Y
Mitigation (fish/wildlife enhancement or restoration)	N	N	N	Y	Y	Y
Bank stabilization and dam maintenance	N	Y	N	Y	Y	Y

c) SOUND PRESSURE PDC

<input type="checkbox"/>	Yes, my project meets all of the Sound Pressure PDC below (attach analysis for PDC 14 if necessary). Please indicate the number, type(s), and diameter(s)/width(s) of all piles (e.g., 10-16" steel pipe piles; 20-14" timber piles): 18-14.6" steel H piles, 68-12" timber piles Please indicate the installation method (e.g., impact hammer, vibratory hammer):	
<input checked="" type="checkbox"/>	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):	
<input type="checkbox"/>	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.
<input type="checkbox"/>	13.	Any new pile supported structure must involve the installation of ≤ 50 piles (below MHW).
<input checked="" type="checkbox"/>	14.	The project involves non-steel piles (or steel sheet piles) less than (\leq) 24-inches in diameter (or width) and all underwater noise (pressure) is below ($<$) the physiological/injury noise threshold for ESA-species in the action area.

d) IMPINGEMENT/ENTRAINMENT/CAPTURE PDC

<input checked="" type="checkbox"/>	Yes, my project meets all of the Impingement/Entrainment/Capture PDC below. Please indicate mesh size for PDC 18 here:
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<input type="checkbox"/>	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):
<input type="checkbox"/>	15. Only mechanical, cutterhead, and low volume hopper (e.g., CURRITUCK) dredges may be used.
<input type="checkbox"/>	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).
<input type="checkbox"/>	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.
<input type="checkbox"/>	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.
<input type="checkbox"/>	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	
<input checked="" type="checkbox"/>	Yes, my project meets all of the Turbidity/Water Quality PDC below.
<input type="checkbox"/>	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):
<input type="checkbox"/>	20. Work behind cofferdams, turbidity curtains, or other methods to control turbidity are required when operationally feasible and ESA-listed species may be present.
<input type="checkbox"/>	21. In-water offshore disposal may only occur at designated disposal sites that have already been consulted on with GARFO.
<input type="checkbox"/>	22. Any temporary discharges must meet state water quality standards; no discharges of toxic substances.
<input type="checkbox"/>	23. Only repair of existing discharge pipes allowed; no new construction.
f) ENTANGLEMENT PDC	
<input checked="" type="checkbox"/>	Yes, my project meets all of the Entanglement PDC below. The aquaculture gear type (e.g., cage on bottom) is:

<input type="checkbox"/>	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):	
<input type="checkbox"/>	24.	Shell on bottom <50 acres with maximum of 4 corner marker buoys;
<input type="checkbox"/>	25.	Cage on bottom with no loose floating lines <5 acres and minimal vertical lines (1 per string of cages, 4 corner marker buoys);
<input type="checkbox"/>	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);
<input type="checkbox"/>	27.	Floating upweller docks in >10 feet MLLW.
<input type="checkbox"/>	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		
<input checked="" type="checkbox"/>	Yes, my project meets all of the Habitat Modification PDC below.	
<input type="checkbox"/>	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):	
<input type="checkbox"/>	29.	No conversion of habitat type (soft bottom to hard, or vice versa) for aquaculture or reef creation.
h) VESSEL TRAFFIC PDC		
<input type="checkbox"/>	Yes, my project meets all of the Vessel Traffic PDC below. Below, please list separately the number of temporary project/construction vessels and the net increase of permanent non-commercial vessels (must be ≤ 2 per PDC 32): Temporary project/construction vessels (# and type): 2 barges Permanent net increase of non-commercial vessels (#): 0	
<input checked="" type="checkbox"/>	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):	
<input checked="" type="checkbox"/>	30.	Speed limits below 10 knots for project vessels with buffers of 150 feet for all listed species (1,500 feet for right whales).
<input type="checkbox"/>	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.
<input type="checkbox"/>	32.	The number of project vessels must be limited to the greatest extent possible, as appropriate to size and scale of project.
<input type="checkbox"/>	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).
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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 (all effects are insignificant and/or discountable) 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:

PDC#	Justification
8	The creeks in which the project will take place are too narrow to allow for large buffers. However, the vessels used in this project will be barges, and they are expected to be stationary during active construction activities. Noise barriers due to pile driving will be temporary.
14	The project requires the use of steel piles for structural integrity. Underwater noise will be below the injury threshold for ESA species in the action area.
30	The creeks in which the project will take place are too narrow to allow for large buffers. However, the vessels used in this project will be barges, and they are expected to be stationary during active construction activities.

Section 5: USACE Verification of Determination

<input type="checkbox"/>	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.	
<input checked="" type="checkbox"/>	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:
		27 Apr 2018

Section 6: GARFO Concurrence

<input type="checkbox"/>	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.
<input type="checkbox"/>	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.
<input type="checkbox"/>	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:	

TABLE 1:

Proxy Projects for Estimating Underwater Noise

Project Location	Water Depth (m)	Pile Size (inches)	Pile Type	Hammer Type	Attenuation rate (dB/10m)
Alameda, CA - San Francisco Bay	2-3	15"	Steel H-Type	Impact	5
Alameda, CA - San Francisco Bay	2-3	15"	Steel H-Type	Impact	5

TABLE 2:

Proxy-Based Estimates for Underwater Noise

Type of Pile	Hammer Type	Estimated Peak Noise Level (dB _{Peak})	Estimated Pressure Level (dB _{RMS})	Estimated Single Strike Sound Exposure Level (dB _{sSEL})
15" Steel H-Type	Impact	190	165	155
15" Steel H-Type	Impact	195	180	170



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Virginia Ecological Services Field Office
6669 Short Lane
Gloucester, VA 23061-4410
Phone: (804) 693-6694 Fax: (804) 693-9032
<http://www.fws.gov/northeast/virginiafield/>



In Reply Refer To:
Consultation Code: 05E2VA00-2018-SLI-3030
Event Code: 05E2VA00-2018-E-07058
Project Name: Long Creek Bridge Rehabilitation

April 27, 2018

Subject: 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, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*). Any activity proposed on National Wildlife Refuge lands must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered

species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
 - USFWS National Wildlife Refuges and Fish Hatcheries
-

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:

Virginia Ecological Services Field Office

6669 Short Lane

Gloucester, VA 23061-4410

(804) 693-6694

Project Summary

Consultation Code: 05E2VA00-2018-SLI-3030

Event Code: 05E2VA00-2018-E-07058

Project Name: Long Creek Bridge Rehabilitation

Project Type: BRIDGE CONSTRUCTION / MAINTENANCE

Project Description: Joint Permit Application No. NAO-2017-00711/VMRC#17-0542 (Long Creek) provides the proposed scope of activities proposed by the City of Virginia Beach for the W. Great Neck Bridge. The W. Great Neck bridge over Long Creek was built circa 1961 (55 years old). As per the recently completed NBIS Inspection report, the structure has an “Overall Condition” of Fair. Since, there are no plans to replace the bridge in the near future, the City of Virginia Beach is taking measures to maximize the service life of the bridge for an additional 15 years. The focus of this project is to overlay the deck, replace expansion joints at abutments, repair deck soffit, zone paint steel girders, seal cracks and apply protective coating to bent caps and piles, and repair fender system. MOT will be required for all the bridge repairs and will be completed from top of bridge. The W. Great Neck road will be partially closed in phases for completion of bridge repairs. The repair of fender system includes steel pile (total 18) and timber pile (total 68) driving, replacing timber wales and catwalk, and replacing electric conduits and navigation lights. All the fender system repair work will be completed from Beach Canal with the use of barges.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/36.903882264596476N76.06892685038697W>



Counties: Virginia Beach, VA

Endangered Species Act Species

There is a total of 1 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 Fisheries¹, 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 <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

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.
