



APPENDIX - J

STATE SPECIES

I-64 Hampton Roads Bridge-Tunnel Expansion Project

Hampton Roads Connector Partners

240 Corporate Blvd. 4th floor

Norfolk, VA 23502

Hampton-Norfolk, Virginia

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ATTACHMENTS

Attachment J-1: VAFWIS Search Report

Attachment J-2: VDCR Natural Heritage Report

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J. STATE SPECIES

J.1 INTRODUCTION

This appendix identifies species listed under the State of Virginia Endangered Species Act (ESA) with the potential to occur in the Hampton Roads Bridge and Tunnel (HRBT) Expansion Project (Project) area and was prepared in support of the Joint Permit Application (JPA) for the Project.

The Project will widen I-64 for approximately 9.9 miles along I-64 from Settlers Landing Road in Hampton, Virginia to the I-64/I-564 interchange in Norfolk, Virginia (Figure J-1). The Project will create an eight lane facility with six consistent use lanes. The expanded facility will include four general purpose lanes, two new High Occupancy Toll (HOT) lanes, and two new drivable (hard-running) shoulders to be used as HOT lanes during peak usage (Figure J-1).

The Project will include full replacement of the North and South Trestle Bridges, two new parallel tunnels constructed using a Tunnel Boring Machine (TBM), expansion of the existing portal islands, and widening of the Willoughby Bay Trestle Bridges, Bay Avenue Trestle Bridges, and Oastes Creek Trestle Bridges. Also, upland portions of I-64 will be widened to accommodate the additional lanes, the Mallory Street Bridge will be replaced, and the I-64 overpass bridges will be improved.

PROPOSED HRBT EXPANSION PROJECT LOCATION

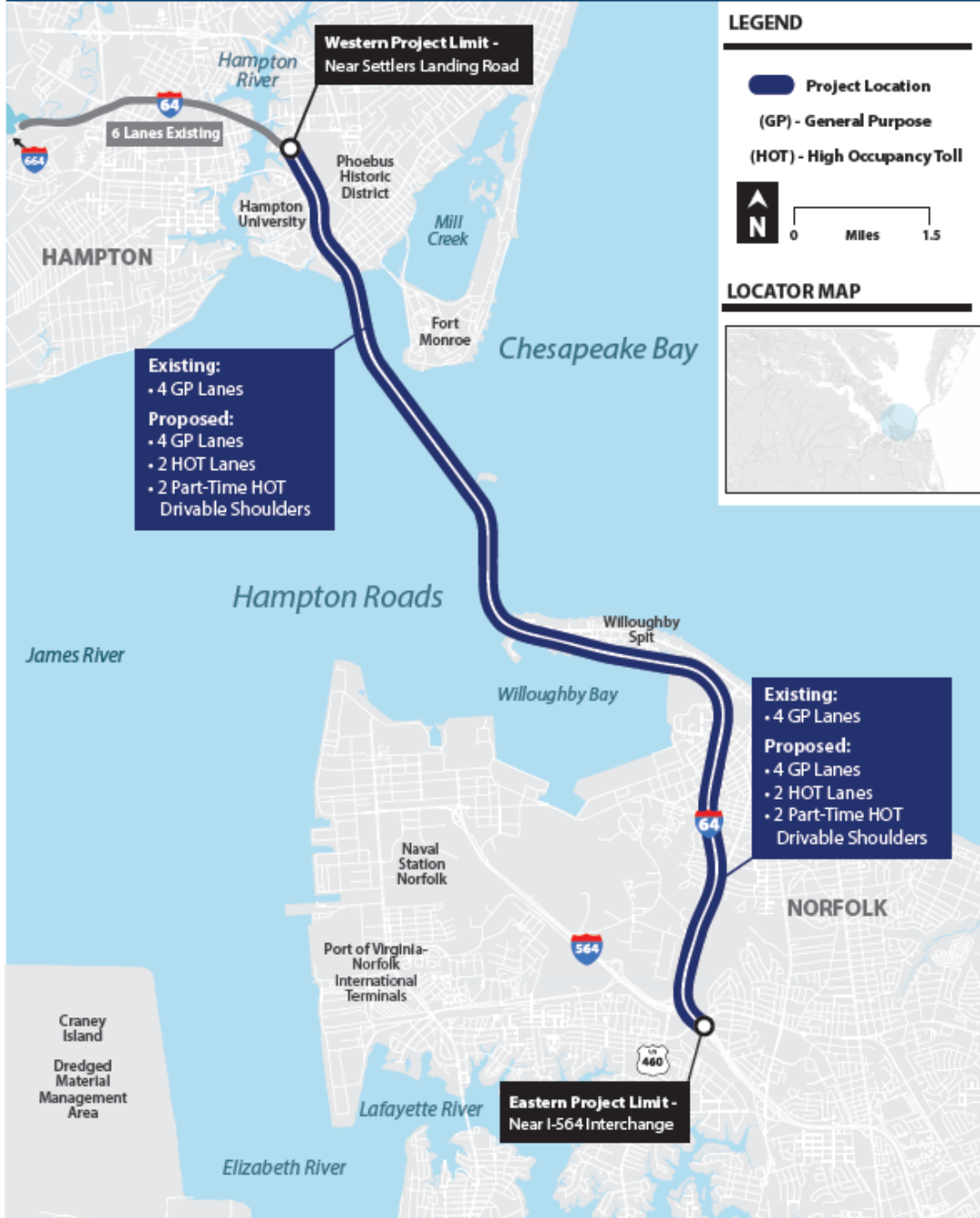


Figure J-1: HRBT Expansion Project Location

J.1.1 CONSULTATION HISTORY

In cooperation with Federal Highway Administration (FHWA), Virginia Department of Transportation (VDOT) has coordinated with local, state, regional, and federal agencies (U.S. Fish and Wildlife Service (USFWS), National Marine Fisheries Service (NMFS) throughout the duration of the Hampton Roads Crossing Study (HRCS). Coordination with local, state, regional, and federal agencies began in 1999 regarding the HRCS and the following coordination has occurred through the National Environmental Policy Act (NEPA) process:

- In July 2000, a BA for sea turtle species was completed as part of the March 2001 Final Environmental Impact (EIS).
- In a letter dated 3 October 2000, the NMFS wrote “Based upon the location of this project, the proposed time of year restrictions for hopper dredging, and the distribution of listed species in the project area, the proposed HRCS is not likely to adversely affect endangered or threatened sea turtles. No further consultation pursuant to Section 7 of the ESA of 1973, as amended, is required.”
- In November 2003, FHWA and VDOT completed a NEPA re-evaluation of the HRCS FEIS. The re-evaluation analyzed implementing a portion of the preferred alternative, based on an un-solicited public-private partnership proposal. The data included in the re-evaluation documented that there did not appear to be any changes to the project or the surrounding environment that resulted in significant environmental impacts not already evaluated in the FEIS. This included threatened and endangered species.

In 2015, Pursuant to 40 CFR 1501.7, FHWA published a Notice of Intent (NOI) to prepare a Supplemental EIS in the Federal Register on 23 June 2015. Since the June 2015 NOI, the following coordination has occurred:

- On 27 July 2015, National Oceanic and Atmospheric Administration (NOAA) Fisheries was copied on a memorandum from the Commonwealth of Virginia to VDOT. This memorandum lists impacts to ESA-listed species within three alternative segments as well as their biodiversity significance rating. Impacted species under NMFS jurisdiction included Atlantic sturgeon, loggerhead sea turtle, and Kemp’s ridley sea turtle.
- On 6 August 2015, NOAA Fisheries sent a letter to VDOT to provide preliminary comments as VDOT and FHWA work to develop a SEIS for the HRCS. In this letter, NOAA Fisheries states that the HRCS project area might overlap with areas known to support several ESA-listed species, including four species of sea turtles including leatherback sea turtle, green sea turtle, Kemp’s ridley sea turtle, and the Northwest Atlantic Ocean Distinct Population Segment (DPS) of loggerhead sea turtle, as well as five DPSs of Atlantic sturgeon. NOAA Fisheries encouraged VDOT to consider the effects of the alternatives on ESA-listed species and reminds them that any discretionary federal action that may affect a listed species must undergo consultation pursuant to Section 7 of the ESA. As the federal lead

agency for the HRCS project, FHWA would be responsible for determining whether the proposed action is likely to affect the listed species.

- On 4 November 2015, VDOT sent a letter to NOAA Fisheries requesting their approval of the species list (including Atlantic sturgeon, Kemp's ridley sea turtle, leatherback sea turtle, loggerhead sea turtle, green sea turtle, and hawksbill sea turtle) as those which will be addressed in the SEIS, approval of the proposed review actions noted in the attached table and body of text, as well as approval of the qualified biologists proposed as responsible surveyors in charge of the habitat assessments for the purposes of providing input to the SEIS.
- On 12 November 2015, the Virginia Department of Conservation and Recreation's (DCR) sent a letter to Stantec Consulting Services, Inc. regarding the DCR search in their Biotics Data System for occurrences of natural heritage resources from the area outlined on the figure provided. At the time of this letter, the natural heritage resources of concern at the Project were the following species: gull-billed tern, black skimmer, royal tern, sandwich tern, Atlantic sturgeon, least tern, loggerhead sea turtle, Kemp's ridley sea turtle, canebrake rattlesnake, and Northern long-eared bat.
- In their 19 September 2016 comments on the Draft SEIS, NOAA Fisheries acknowledged that the information and level of detail needed to assess the potential for project impacts to aquatic resources, including listed species under their jurisdiction, is not normally available during the NEPA process and isn't developed until after a Record of Decision (ROD) is issued. This includes specific information on the means, methods, materials, timing and duration of various construction elements. Experience from other projects in the Hampton Roads region has shown that concerns over effects on these listed aquatic species can be adequately addressed with best management practices and time-of-year restrictions employed during construction. NOAA Fisheries also encouraged VDOT and FHWA to assess the effects of the proposed alternatives on ESA-listed species before selecting a Preferred Alternative. Finally, NOAA Fisheries indicated, "When specific project plans are being developed, FHWA should submit their determination of effects, along with justification for the determination of effects, and a request of concurrence to NOAA Fisheries Service ... " FHWA and VDOT will ensure that this determination and supporting information is submitted as soon as practicable.
- Within Appendix H of the FSEIS, the FHWA and VDOT provide written responses to comments provided by the NMFS. In response, FHWA and VDOT state that (1) Best Management Practices would be determined during the final design and permitting phases, after the issuance of a ROD and (2) Given the nature of the marine species and the extent of their habitat, the Preferred Alternative was not likely to adversely affect endangered and threatened species. Experience from other projects in the region show that any concerns over effects on the marine species identified can be adequately addressed with

conservation measures and time-of-year restrictions employed during construction. FHWA expresses confidence that an informed decision can be made regarding the Preferred Alternative and that sufficient controls are in place to ensure adverse effects to endangered and threatened species do not occur.

- On 16 November 2016, the cooperating agencies for the HRCS met to concur on a preferred alternative to be recommended to the Commonwealth Transportation Board (CTB). During the meeting, cooperating agencies concurred that Alternative A, as described in the Draft SEIS, should be recommended to the CTB as the preferred alternative because it represented the LEDPA that meets the purpose and need of the project.

J.1.2 RESOURCES REVIEWED

The Virginia Department of Game and Inland Fisheries (VDGIF Virginia Fish and Wildlife Information Service (VAFWIS) was utilized to identify state-listed species (Threatened and Endangered; species whose status is such that they are at some degree of risk of becoming extinct) that may occur in the Project area. The Project area was covered by performing searches in two separate locations that encapsulate the Project area. The search areas and results are provided in Attachment J-1. Search Area 1 encapsulated the northern section of the Project area and consisted of a two mile buffer around (36°59'58.2",-76°19'12.8"). Search Area 2 encapsulated the southern section of the Project area and consisted of a 2.5 mile buffer around (36°57'00.9",-76°19'12.8"). The two search areas slightly overlap to ensure the Project area is fully captured.

Additionally a review of the DCR Virginia Natural Heritage Data Explorer was conducted for Hampton (City) and Norfolk (City) on August 12, 2019 (see Attachment J-2).

The species list for the preferred alternative, Alternative A, in the Natural Resources Technical Report, a supporting Technical Report prepared in support of the Supplemental Environmental Impact Statement (EIS), was reviewed.

J.1.3 SPECIES POTENTIALLY PRESENT

State-listed species that are reported to occur or potentially occur within the vicinity of the Project area were identified through the VAFWIS and DCR databases, as well as state -listed species. Table J-1. State-listed species identified through the VAFWIS and DCR databases.

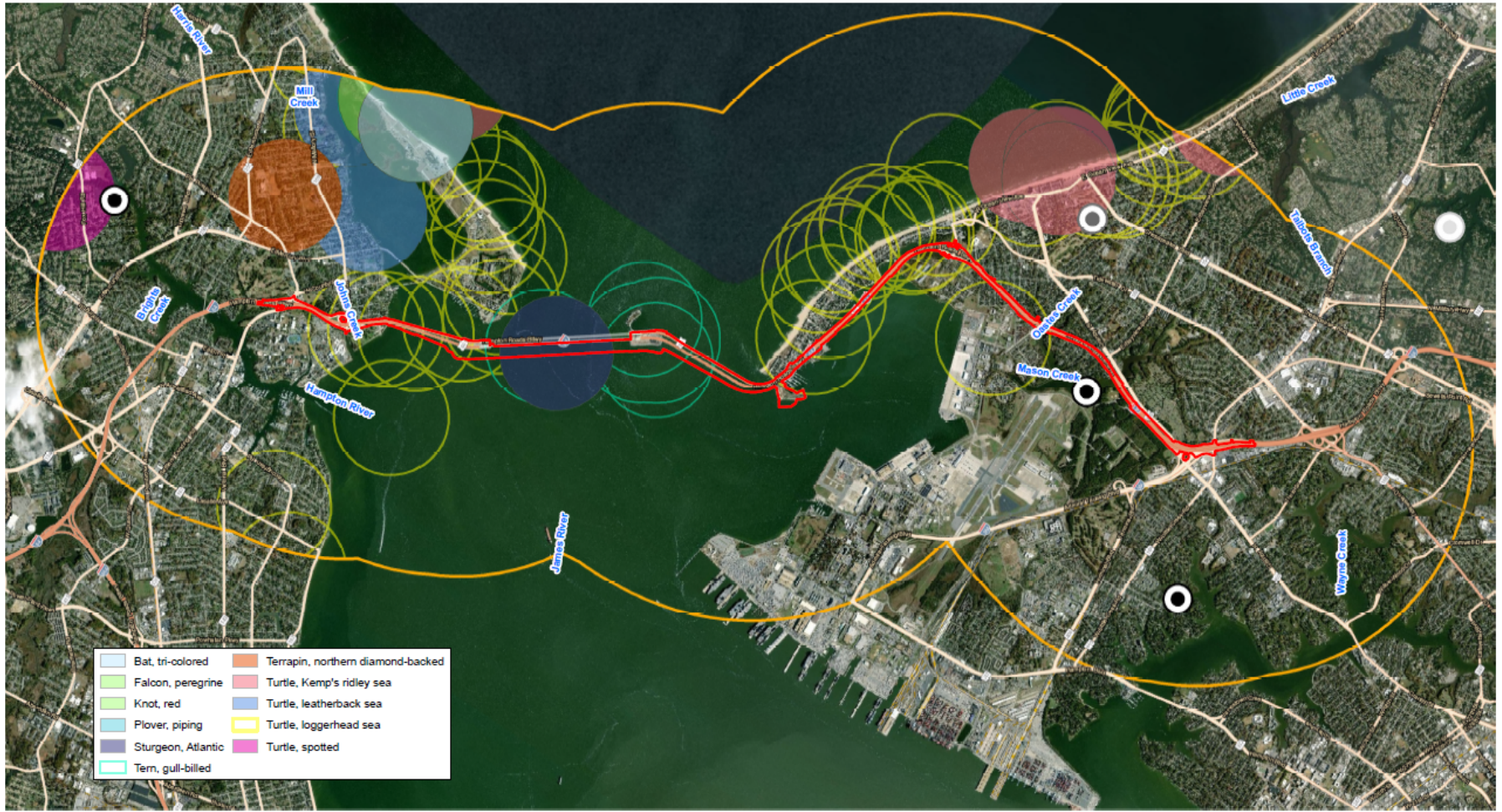
Table J-1: State Listed Species Identified through VAFWIS and DCR

Common Name	Scientific Name	State / Federal Status	Virginia Fish and Wildlife Information Service Database	Confirmed Species on the Virginia Fish and Wildlife Information Service Database	DCR Natural Heritage Data Explorer Database
Northern Long Eared Bat	<i>Myotis septentrionalis</i>	T	Yes		
Tri-colored bat	<i>Perimyotis subflavus</i>	E	Yes	Yes	
Northeastern beach tiger beetle	<i>Cicindela dorsalis</i>	T / T	Yes		Yes
Gull billed tern	<i>Sterna nilotica</i>	T	Yes	Yes	Yes
Roseate tern	<i>Sterna dougallii dougallii</i>	E / E	Yes		
Piping plover	<i>Charadrius melodus</i>	T / T	Yes	Yes	Yes
Red knot	<i>Calidris canutus rufa</i>	T / T	Yes	Yes	
Peregrine Falcon	<i>Falco peregrinus</i>	T	Yes		Yes
Atlantic sturgeon	<i>Acipenser oxyrinchus oxyrinchus</i>	E / E	Yes	Yes	Yes
Green sea turtle	<i>Chelonia mydas</i>	T / T	Yes		
Loggerhead sea turtle	<i>Caretta caretta</i>	T / T	Yes	Yes	
Kemp's ridley sea turtle	<i>Lepidochelys kempii</i>	E / E	Yes	Yes	
Hawksbill sea turtle	<i>Eretmochelys imbricate</i>	E / E	Yes		
Leatherback sea turtle	<i>Dermochelys coriacea</i>	E / E	Yes	Yes	
Canebrake rattlesnake	<i>Crotalus horridus</i>	E	Yes	Potential	Yes
Mabee's salamander	<i>Ambystoma mabeei</i>	T	Yes	Potential	Yes
West Indian manatee	<i>Trichechus manatus</i>	E / T	Yes		
Eastern Chicken Turtle	<i>Deirochelys reticularia reticularia</i>	E	Yes		
Wilson's Plover	<i>Charadrius wilsonia</i>	E	Yes		
Eastern Black Rail	<i>Laterallus jamaicensis jamaicensis</i>	E	Yes		
Little Brown Bat	<i>Myotis lucifugus</i>	T	Yes		
Rafinesque's eastern big eared bat	<i>Corynorhinus rafinesquii macrotis</i>	E	Yes		
Loggerhead shrike	<i>Lanius ludovicianus</i>	T	Yes		
Henslow's sparrow	<i>Centronyx henslowii</i>	T	Yes		
Barking treefrog	<i>Hyla gratiosa</i>	T	Yes		
Migrant loggerhead shrike	<i>Lanius ludovicianus migrans</i>	T	Yes		

Based on the information from the VAFWIS search, the DCR Natural Heritage Data Explorer, and the species listed for Alternative A in the SEIS, the following species have the potential to occur within the Project area (Table J-2). Confirmed observations of these species are included in Table J-1, Figure J-2 and Attachment J-1 and only those species confirmed in Table J-2 are further discussed as they have the potential to occur in the Project area. Those species that did not have confirmed sightings on the VAFWIS database in either the cities of Hampton or Norfolk or those not occurring on the DCR database were eliminated for further consideration unless the species was determined to have potentially suitable habitat within the Project area. These databases and information were utilized as a general framework for the habitat evaluation to determine the presence of habitat and affected environment of the proposed activities within the Project area.

Table J-2: State-listed species with the potential to occur in the Project area

Common Name	Scientific Name	State / Federal Status	Determination
Northern Long Eared Bat	<i>Myotis septentrionalis</i>	T	No Effect
Tri-colored bat	<i>Perimyotis subflavus</i>	E	No Effect
Northeastern beach tiger beetle	<i>Cicindela dorsalis</i>	T / T	Not Likely to Adversely Effect
Gull billed tern	<i>Sterna nilotica</i>	T	Not Likely to Adversely Effect
Piping plover	<i>Charadrius melodus</i>	T / T	Not Likely to Adversely Effect
Red knot	<i>Calidris canutus rufa</i>	T / T	Not Likely to Adversely Effect
Peregrine Falcon	<i>Falco peregrinus</i>	T	Not Likely to Adversely Effect
Atlantic sturgeon (New York Bight, Chesapeake Bay, South Atlantic and Carolina Distinct Population Segments [DPSs]; Gulf of Maine DPS)	<i>Acipenser oxyrinchus oxyrinchus</i>	E / E	Not Likely to Adversely Effect
Green sea turtle	<i>Chelonia mydas</i>	T / T	Not Likely to Adversely Effect
Loggerhead sea turtle	<i>Caretta caretta</i>	T / T	Not Likely to Adversely Effect
Kemp's ridley sea turtle	<i>Lepidochelys kempii</i>	E / E	Not Likely to Adversely Effect
Hawksbill sea turtle	<i>Eretmochelys imbricata</i>	E / E	No Effect
Leatherback sea turtle	<i>Dermochelys coriacea</i>	E / E	Not Likely to Adversely Effect
Canebrake rattlesnake	<i>Crotalus horridus</i>	E	Not Likely to Adversely Effect
Mabee's salamander	<i>Ambystoma mabeei</i>	T	Not Likely to Adversely Effect



- | | |
|--------------------|-----------------------------------|
| Bat, tri-colored | Terrapin, northern diamond-backed |
| Falcon, peregrine | Turtle, Kemp's ridley sea |
| Knot, red | Turtle, leatherback sea |
| Plover, piping | Turtle, loggerhead sea |
| Sturgeon, Atlantic | Turtle, spotted |
| Tern, gull-billed | |

	PROJECT BOUNDARIES 2-Mile Buffer Limits of disturbance	BALD EAGLE NEST BUFFERS (FT) Active 330 Active 660 Empty/Remnant 330 Occupied 330 Empty/Remnant 660 Occupied 660		I-64 HAMPTON ROADS BRIDGE-TUNNEL EXPANSION PROJECT THREATENED AND ENDANGERED SPECIES <small>PAGE 1 OF 1</small>
	<small>DATA SOURCE: CEDAR, Esri World Imagery, Esri World Transportation</small>			

Figure J-2: I-64 Hampton Roads Bridge-Tunnel Expansion Project Threatened and Endangered Species

Bats: Impacts to listed bat species (federally and state-listed Northern long-eared bat and tri-colored bat) were considered in the Final Supplemental EIS and the Environmental Assessment Re-Evaluation (VDOT and FHWA 2016, 2017, 2018). Smaller fragmented areas of forest and individual trees, bridges, buildings, and culverts may provide suitable roosting habitat (sheltered places that include human structures or natural structures), but in general would be considered suboptimal habitat. These smaller fragmented areas surrounded by development are generally less suitable for use by the bats. Maternity habitat is defined as suitable summer habitat that is used by juveniles and reproductive females. The summer maternity season in Virginia is April 1 through September 30. Winter habitat includes underground caves and cave-like structures such as abandoned or active mines and railroad tunnels. Additionally, no confirmed Northern long-eared bat observations, maternity roosts, or hibernacula are located within a two-mile radius of the limits of disturbance (LOD) (DGIF 2019b, VDOT 2019). Throughout the Project area there is the potential that the selective removal of trees and other vegetation will be required. The majority of trees potentially targeted for removal are currently located adjacent to Interstate I-64 or underneath the I-64 trestle for access in VDOT right of ways. Because bat habitat identified within the LOD is suboptimal and no confirmed maternity roosts or hibernacula are located within a two-mile radius of the LOD (VDOT and FHWA 2016, 2017, 2018), any trees that would be removed would be associated with already disturbed and fragmented habitat and construction activities would not affect the quality of the habitat and no incidental takes of bats would occur. Ongoing coordination will continue with Federal and State agencies.

Northeastern Beach Tiger Beetle: The VAFWIS May 2019 and Virginia Department of Conservation and Recreation's Virginia Natural Heritage Data Explorer query for Hampton (City) and Norfolk (City) on 12 August 2019 indicated that the northeastern beach tiger beetle has the potential to occur in the Project area. This species is only found along wide, saltwater beaches of medium to medium-coarse sand, from about the foredune to the high tide lines (Natureserve 2019); however, this type of habitat is not present in the Project area which contains primarily modified shorelines. Additionally, there were no confirmed sightings of this species in the Project area. This species is unlikely to be affected by Project activities. Ongoing coordination will continue with Federal and State agencies.

Peregrine Falcon: Peregrine falcons were identified in the VAFWIS and DCR Natural Heritage searches. Peregrine falcons are known to live in urban areas where they prefer tall buildings and bridges to perch and forage from and are well adapted to avoiding stressors. While construction work is expected to occur on bridges and trestles, none of these bridges are currently known to be used by peregrine falcons and there are no documented sightings or nests in the VAFWIS database. Further, Project related bridges that are being constructed or demolished are low to the water and unlikely to represent an attractive perching location. Peregrine falcons prefer to search and hunt for prey from high perches because it increases the successfulness of the peregrine's ability to successfully live hunt (Dewey and Potter 2009). Peregrine falcons are therefore unlikely to be adversely affected by Project activities. Ongoing coordination will continue with Federal and State agencies.

Piping Plover: In the James River and Chesapeake Bay, the piping plover historically nested on Craney Island and Grandview Beach in Hampton, outside of the Project area; however, no nesting has recently been documented there (Watts 2013; VDOT and FHWA 2016). Nesting habitats typically are

laid in washover areas cut into or between dunes and often in close proximity to backside marshes, mudflats, or vegetation barriers where there is greater protection from predators. No nesting habitat is expected to occur within the Project area. Piping plover have been observed in Cities of Chesapeake, Hampton, Newport News, Norfolk, Portsmouth, and Suffolk (VDOT and FHWA 2016; DGIF 2019a; VDOT 2019). One sighting of a piping plover occurred at Fort Monroe, greater than one mile from the Project area (VDOT 2019). A few areas of sandy shoreline at Willoughby Spit and marsh under the I-64 bridges in Hampton and Norfolk were identified as suboptimal foraging areas (areas appearing to have more frequent human disturbance) in Norfolk and Hampton (see Appendix G in VDOT and FHWA 2016). A large portion of the shoreline within the Project area are hardened and/or developed and provide no habitat potential for this species.

A small area of suboptimal piping plover foraging habitat occurs within the Project area. Construction activities would result in temporary disturbance to this habitat. The construction and demolition of bridge foundations will directly impact suboptimal foraging habitat at Willoughby Spit and result in temporary disturbance to this habitat. Piping plovers are highly mobile and are capable of avoiding Project activities in and impacts such as elevated noise in the unlikely event they are present in the suboptimal foraging habitat during disturbance activities. Project activities would not attract predators or interfere with piping plover breeding success, as no known breeding habitat occurs within the Project area. Ongoing coordination will continue with State agencies.

Gull-billed Tern: The gull-billed tern is a state-listed threatened species under the Virginia ESA and have been confirmed to nest on South Island and typically inhabit salt marshes or portions of beaches that are away from the tide. Breeding habitat consists of gravelly or sandy beaches, salt marshes, lagoons, plowed fields, along rivers and lakes. Impacts to this waterbird species has been addressed through collaboration and continuing partnership between VDOT and VDGIF. It is expected that, through this partnership and ongoing study and data collection on South Island, additional information will be generated to assist in managing this species as the Project progresses with South Island Expansion activities and the removal of breeding habitat through the approved Colonial-Nesting Waterbird Hazing Plan. Breeding habitat removal will occur outside nesting season and no unintentional take of gull-billed nests will occur.

Foraging habitat for the gull-billed tern is present within the Project area and the majority of these intertidal areas have been fragmented or altered by the presence of the current roadways and development. A large portion of the estuarine habitat is dominated by common reed, rendering it unsuitable for foraging in its current vegetative state and activities would have minimal impact on the foraging habitat that is present (VDOT and FHWA). Ongoing coordination will continue with State agencies.

Red Knot: Red knots have the potential to occur in the Project area, starting in mid-April to May, prior to making one of the longest migrations in the world (USFWS 2019b) to breeding areas above the Arctic Circle from June to July. Red knots do not breed in Virginia (VDOT and FHWA 2016).

Red knots appear to have highly diverse routes; with some flying over open-ocean and some hugging the United States (U.S.) Atlantic coast for the duration of the migration (USFWS 2019b). These birds

stop over along the Atlantic coast for feeding (USFWS 2019b), which occurs primarily on sandy or stony beaches but may also occur in mudflats. A few areas of sandy shoreline at Willoughby Spit and marsh under the I-64 bridges in Hampton and Norfolk were identified as suboptimal foraging areas in Norfolk and Hampton because the shorelines within the Project area are hardened and/or developed and provide no habitat potential (VDOT and FHWA 2016). VDOT (2019) data indicate that one observation of red knot occurred at Fort Monroe, greater than one mile from the Project area. There are documented sightings of red knots in the Cities of Chesapeake, Hampton, Newport News, Norfolk, Portsmouth, and Suffolk (VDOT and FHWA 2016). A large portion of the shoreline within the Project area are hardened and/or developed and provide no habitat potential for this species. Suboptimal red knot foraging habitat occurs within the Project area. Bridge construction would result in temporary disturbance of this habitat. Bridge foundation construction and demolition activities would directly impact suboptimal habitat at Willoughby Spit and access to this area might disturb this habitat. Foraging could temporarily be disrupted due to construction activities that generate noise, light, or sediment; however, red knots have demonstrated the ability to utilize other available suitable habitat on the island during construction activities. These disturbances will be temporary and upon completion of construction, the primary threat would remain predators, which should not be an increased concern during construction. Red knots are highly mobile and are capable of avoiding Project activities in the unlikely event they are present in the suboptimal foraging habitat. Ongoing coordination will continue with State agencies.

Sea Turtles: Five sea turtle species were identified in the VAFWIS and DCR Natural Heritage searches, the loggerhead sea turtle, green sea turtle, Kemp's ridley sea turtle, leatherback sea turtle, and hawksbill sea turtle. Sea turtle occurrence for foraging is seasonal in Virginia waters, appearing in the region in the late spring when water temperatures rise to approximately 20° Celsius, and leave in the fall when water temperatures decrease (Mansfield et al. 2009; Barco and Lockhart 2016). Sea turtle nesting sites in Virginia are primarily limited to ocean facing beaches (VDOT and FHWA 2016).

Loggerhead and Kemp's ridley sea turtles are the most abundant sea turtle species off of Virginia (and are expected to be seen in the Project area (Barco and Lockhart 2016). Juvenile loggerhead sea turtles are frequent visitors to the Hampton Roads area (VDOT and FHWA 2016). The majority of the Kemp's ridley sea turtles in the Chesapeake Bay are also juveniles, which enter the bay to forage as the water warms, and leave by early November (VDOT and FHWA 2016). Kemp's ridley and loggerhead sea turtles would primarily use the Project area to opportunistically forage from April to November (VDOT and FHWA 2016). Green sea turtles occur in the Chesapeake Bay during the late summer and early fall, and most are juveniles (Barco and Lockhart 2016; VDOT and FHWA 2016). Green sea turtles forage in marine sea grasses in the shallow areas of the Chesapeake Bay (VDOT and FHWA 2016).

The leatherback sea turtle, the third most abundant turtle in Virginia's waters, appears to occur further off the Virginia coastline (Keinath et al. 1991) and nesting does not occur on Virginia beaches (VDOT and FHWA 2016). Leatherback sea turtles would primarily use the Project area to opportunistically forage from April to November (VDOT and FHWA 2016) and could be seen in small numbers. The hawksbill sea turtle is a very uncommon species in the region. The only confirmed sighting in the inshore waters of Virginia since 2001 were two stranded turtles (Keinath et al. 1991). Therefore, the

hawksbill sea turtle is not expected in the Project area and is unlikely to be impacted by Project activities.

The potential impacts to sea turtles are discussed in detail in the NMFS Biological Assessment in Appendix I which concluded that Project activities will have no effect on hawksbill turtles and may affect but are not likely to adversely affect the other four species of sea turtles. Ongoing coordination will continue with State agencies.

Sturgeon: Atlantic sturgeon were identified in the VAFWIS and DCR Natural Heritage searches. Atlantic Sturgeon primarily use the Project Area as a migration corridor during spawn migrations. Spawning has been documented in the James River in the spring and fall and the groups are genetically distinct (Balazik and Garman 2018). The James River (including Hampton Roads) is identified as a Confirmed Anadromous Fish Use Area and Atlantic Sturgeon use these areas to complete their life cycles (VDOT and FHWA 2017). During migrations, they primarily transit along the river within natural or artificial channels (Balazik and Garman 2018). Atlantic Sturgeon would generally be found within these deep water habitats during the migration period (VDOT and FHWA 2017). Potential foraging habitat is present throughout Hampton Roads as the entire substrate is composed of sand, mud, or a combination suitable for benthic species (VDOT and FHWA 2017). Atlantic Sturgeon studies have been conducted in the tidal–freshwater portion of the James River during putative spawning runs in the fall and spring and show that this species most likely could occur in the Project Area (Balazik and Garman 2018). Migrating adult and subadult (resident) Atlantic Sturgeon could be present year-round in the Project Area (Balazik and Garman 2018). The potential impacts to Sturgeon species area are discussed in detail in the NMFS Biological Assessment in Appendix I, which concluded that Project activities may affect but are not likely to adversely affect Atlantic sturgeon. Ongoing coordination will continue with State agencies.

Mabee's Salamander and Cane Break Rattlesnake: Mabee's salamanders spend the larval period of their life cycle in aquatic environments, but most of the adult life is spent in terrestrial burrows. The breeding habitat is described as fish-free vernal ponds or Coastal Plain ephemeral sinkholes up to 5 feet deep. Breeding occurs from late fall to early spring and females lay eggs and attach them to small twigs, leaves, or debris. Larval young live in ponds until April or May, when they become juveniles (VDGIF 2016a). Surrounding forests are generally composed of bottomland hardwoods mixed with pines, pine savannas, bogs, and swamps (VDGIF 2016a).

Cane break rattlesnake habitat consists of Hardwood or mixed pine-hardwood forests, canefields, and the ridges and glades of swampy areas. Canebrake rattlesnakes are generally active in Virginia from early April – October. During the fall and winter months, the snakes hibernate in forested habitat and are known to utilize the base of hollow trees, or stumps, and the underground tunnels resulting from stump and root decomposition (VDOT and FHWA 2016). Existing roadways have caused fragmentation of the habitat and act as a barrier to migration between the habitats (VDOT and FHWA 2016)

No habitat for these species was identified within the LOD (VDOT and FHWA 2016), and there are no confirmed sightings for either species in the VAFWIS database. Therefore these species are unlikely to be affected by Project activities. Ongoing coordination will continue with State agencies.

J.1.4 REFERENCES

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ATTACHMENT J-1: VAFWIS SEARCH REPORT

VaFWIS - Department of Game and Inland Fisheries



36,59,58.2 -76,19,12.8
is the Search Point
Submit Cancel

[back](#) [Refresh Browser Page](#)

Map Click **Pan** **3d** **M** Map Scale **In** **Zoom** **Out** Screen Size **Small** **Size** **Big** [Help](#)

Search Point

- Change to "clicked" map point
- Fixed at 36,59,58.2 -76,19,12.8

Show Position Rings

- Yes No
- 1 mile and 1/4 mile at the Search Point

Show Search Area

- Yes No
- 2 Search distance miles radius

Search Point is at map center

Base Map Choices

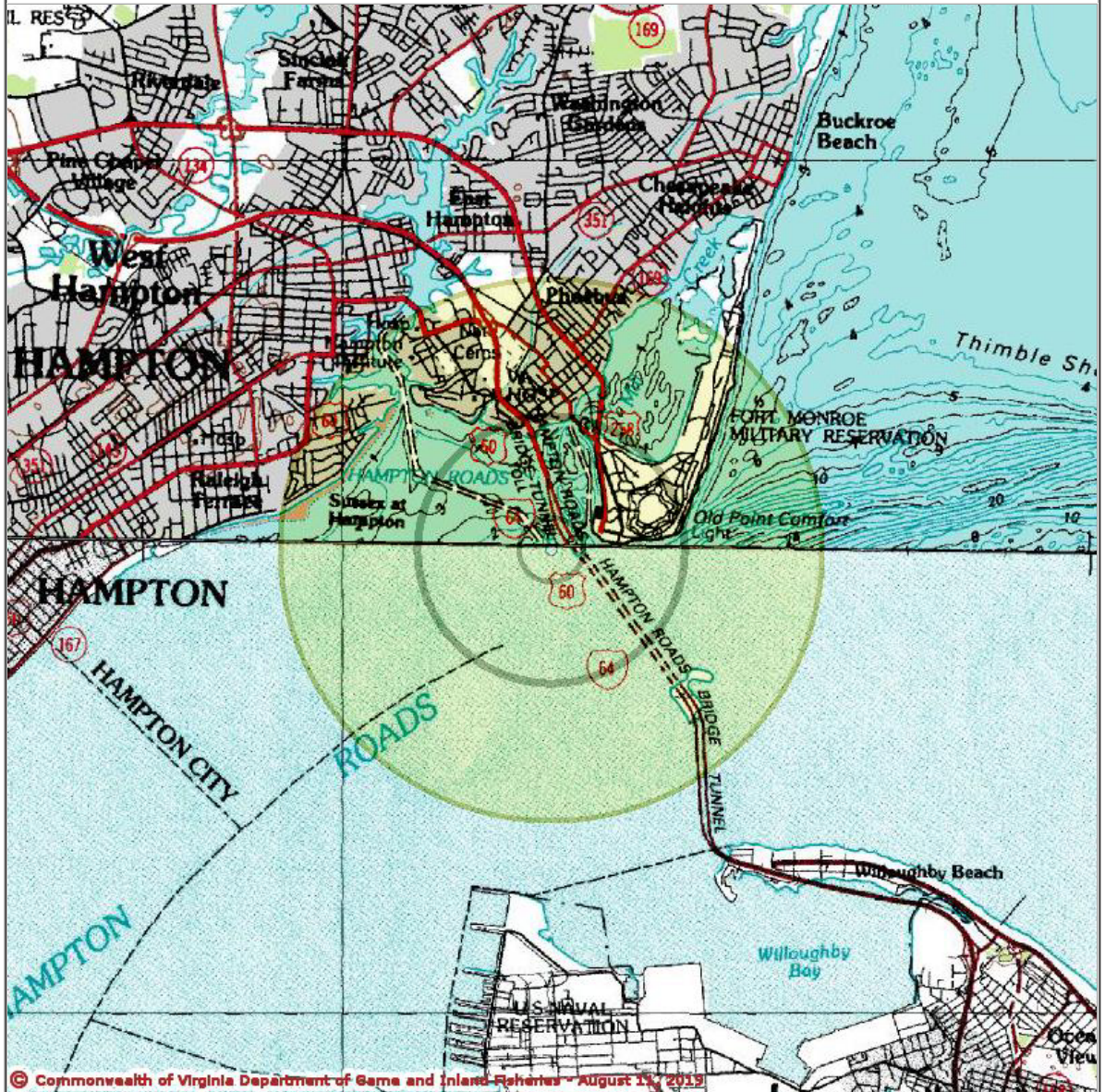
Topography

Map Overlay Choices

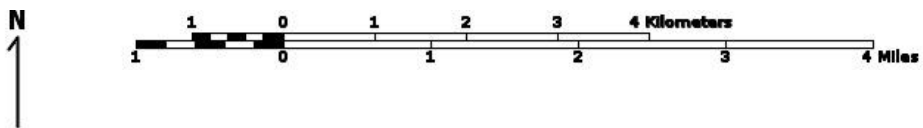
Current List: Position, Search

Map Overlay Legend

- Position Rings**
1 mile and 1/4 mile at the Search Point
- 2 mile radius Search Area**



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Point of Search 36,59,58.2 -76,19,12.8
Map Location 36,59,58.2 -76,19,12.8

- Select **Coordinate System:**
- Degrees,Minutes,Seconds Latitude - Longitude
 - Decimal Degrees Latitude - Longitude
 - Meters UTM NAD83 East North Zone
 - Meters UTM NAD27 East North Zone

Base Map source: USGS 1:100,000 topographic maps (see [Microsoft terraserver-usa.com](http://Microsoft.terraserver-usa.com) for details)

Map projection is UTM Zone 18 NAD 1983 with left 376130 and top 4102031. Pixel size is 16 meters. Coordinates displayed are Degrees, Minutes, Seconds North and West. Map is currently displayed as 800 columns by 800 rows for a total of 640000 pixels. The map display represents

12800 meters east to west by 12800 meters north to south for a total of 163.8 square kilometers.
The map display represents 42001 feet east to west by 42001 feet north to south for a total of 63.2 square miles.

Topographic maps and Black and white aerial photography for year 1990+ are from the United States Department of the Interior, United States Geological Survey. Color aerial photography aquired 2002 is from Virginia Base Mapping Program, Virginia Geographic Information Network.

Shaded topographic maps are from TOPO! ©2006 National Geographic
<http://www.national.geographic.com/topo>

All other map products are from the Commonwealth of Virginia Department of Game and Inland Fisheries.

map assembled 2019-08-11 15:17:04 (qa/qc March 21, 2016 12:20 - tn=987833 dist=3218 1)
\$poi=36.9995000 -76.3202222

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Species Information

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- [By Land Management](#)
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- [By Place Name](#)

Database Search

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VaFWIS Search Report Compiled on 8/11/2019, 3:21:49 PM

Known or likely to occur within a **2 mile radius around point 36,59,58.2 -76,19,12.8** in **650 Hampton City, 710 Norfolk City, VA** [View Map of Site Location](#)

567 Known or Likely Species ordered by Status Concern for Conservation (displaying first 45) (45 species with Status* or Tier I** or Tier II**)

BOVA Code	Status*	Tier**	Common Name	Scientific Name	Confirmed	Database(s)
030074	FESE	Ia	Turtle, Kemp's ridley sea	Lepidochelys kempii	Yes	BOVA, SppObs, HU6
010032	FESE	Ib	Sturgeon, Atlantic	Acipenser oxyrinchus	Yes	BOVA, TEWaters, SppObs, HU6
030075	FESE	Ic	Turtle, leatherback sea	Dermochelys coriacea	Yes	BOVA, SppObs, HU6
030073	FESE		Turtle, hawksbill sea	Eretmochelys imbricata		BOVA
040183	FESE		Tern, roseate	Sterna dougallii dougallii		HU6
030071	FTST	Ia	Turtle, loggerhead sea	Caretta caretta	Yes	BOVA, SppObs, HU6
040144	FTST	Ia	Knot, red	Calidris canutus rufa	Yes	BOVA, SppObs, HU6
050022	FTST	Ia	Bat, northern long-eared	Myotis septentrionalis		BOVA
030072	FTST	Ib	Turtle, green sea	Chelonia mydas		BOVA, HU6
040120	FTST	Ila	Plover, piping	Charadrius melodus	Yes	BOVA, SppObs, HU6
100361	FTST	Ila	Beetle, northeastern beach tiger	Cicindela dorsalis dorsalis		HU6
120030	FTSE	IVb	Manatee, West Indian	Trichechus manatus		BOVA, HU6
030064	SE	Ia	Turtle, eastern chicken	Deirochelys reticularia reticularia		HU6
040118	SE	Ia	Plover, Wilson's	Charadrius wilsonia		HU6
040110	FPSE	Ia	Rail, eastern black	Laterallus jamaicensis jamaicensis		BOVA, HU6
050020	SE	Ia	Bat, little brown	Myotis lucifugus		BOVA
050034	SE	Ia	Bat, Rafinesque's eastern big-eared	Corynorhinus rafinesquii macrotis		HU6
050027	SE	Ia	Bat, tri-colored	Perimyotis subflavus	Yes	BOVA, SppObs, HU6
030013	SE	Ila	Rattlesnake, canebrake	Crotalus horridus	Potential	BOVA, Habitat, HU6
040096	ST	Ia	Falcon, peregrine	Falco peregrinus	Yes	BOVA, SppObs, HU6
040293	ST	Ia	Shrike, loggerhead	Lanius ludovicianus		BOVA
040379	ST	Ia	Sparrow, Henslow's	Ammodramus henslowii		HU6
040179	ST	Ia	Tern, gull-billed	Sterna nilotica	Yes	BOVA, Habitat, SppObs, CWB, HU6
020044	ST	Ila	Salamander, Mabee's	Ambystoma mabeei	Potential	BOVA, Habitat
020002	ST	Ila	Treefrog, barking	Hyla gratiosa		HU6
040292	ST		Shrike, migrant loggerhead	Lanius ludovicianus migrans		BOVA
030067	CC	Ila	Terrapin, northern diamond-backed	Malaclemys terrapin terrapin	Yes	BOVA, Habitat, SppObs, HU6
030063	CC	IIla	Turtle, spotted	Clemmys guttata		BOVA, HU6
040040		Ia	Ibis, glossy	Plegadis falcinellus	Yes	BOVA, SppObs, HU6
040306		Ia	Warbler, golden-winged	Vermivora chrysoptera	Yes	BOVA, SppObs
040213		Ic	Owl, northern saw-whet	Aegolius acadicus		HU6
020063		Ila	Toad, oak	Anaxyrus quercicus		HU6

040052	Ila	Duck, American black	Anas rubripes	Yes	BOVA,SppObs,HU6
040033	Ila	Egret, snowy	Egretta thula	Yes	BOVA,BBA,SppObs,HU6
040029	Ila	Heron, little blue	Egretta caerulea caerulea	Yes	BOVA,SppObs
040036	Ila	Night-heron, yellow-crowned	Nyctanassa violacea violacea	Yes	BOVA,BBA,SppObs,CWB
040114	Ila	Oystercatcher, American	Haematopus palliatus	Yes	BOVA,Habitat,SppObs,HU6
040192	Ila	Skimmer, black	Rynchops niger	Yes	BOVA,Habitat,BBA,SppObs,CWB,HU6
040181	Ila	Tern, common	Sterna hirundo	Yes	BOVA,BBA,SppObs,CWB,HU6
040320	Ila	Warbler, cerulean	Setophaga cerulea		BOVA,HU6
040140	Ila	Woodcock, American	Scolopax minor	Yes	BOVA,SppObs,HU6
040203	Ilb	Cuckoo, black-billed	Coccyzus erythrophthalmus	Yes	BOVA,SppObs,HU6
040105	Ilb	Rail, king	Rallus elegans		BOVA,HU6
040304	Ilc	Warbler, Swainson's	Limnithyphs swainsonii		HU6
110353	Ilc	SPIDER, FUNNEL-WEB	Barronopsis jeffersi		HU6

To view All 567 species [View 567](#)

*FE=Federal Endangered; FT=Federal Threatened; SE=State Endangered; ST=State Threatened; FP=Federal Proposed; FC=Federal Candidate; CC=Collection Concern

**I=VA Wildlife Action Plan - Tier I - Critical Conservation Need; II=VA Wildlife Action Plan - Tier II - Very High Conservation Need; III=VA Wildlife Action Plan - Tier III - High Conservation Need; IV=VA Wildlife Action Plan - Tier IV - Virginia Wildlife Action Plan Conservation Opportunity Ranking:

a - On the ground management strategies/actions exist and can be feasibly implemented.; b - On the ground actions or research needs have been identified but cannot feasibly be implemented at this time.; c - No on the ground actions or research needs have been identified or all identified conservation opportunities have been exhausted.

[View Map of All Query Results from All Observation Tables](#)

Bat Colonies or Hibernacula: **Not Known**

Anadromous Fish Use Streams (1 records)

[View Map of All Anadromous Fish Use Streams](#)

Stream ID	Stream Name	Reach Status	Anadromous Fish Species			View Map
			Different Species	Highest TE*	Highest Tier**	
C92	James River_1	Confirmed	6		IV	Yes

Impediments to Fish Passage

N/A

Colonial Water Bird Survey (7 records , 3 Observations with Threatened or Endangered species)

[View Map of All Query Results Colonial Water Bird Survey](#)

Colony_Name	N Obs	Latest Date	N Species			View Map
			Different Species	Highest TE*	Highest Tier**	
Urban, Norfolk North, Norfolk	1	Jun 4 2013	8	ST	I	Yes
HRB Tunnel Island	4	Jun 12 2008	7	ST	I	Yes
Hampton Roads Bridge-Tunn	1	Jun 1 1993	3	ST	I	Yes
Fort Monroe	1	Jun 25 2003	1		II	Yes
Kecoughtan	1	Jun 25 2003	2		II	Yes
Hampton-Ft. Monroe/Bridge	1	Jun 1 1993	1		II	Yes
HAMPTON ROADS TUNNEL	8	Jun 1 1990	2		II	Yes

Displayed 7 Colonial Water Bird Survey

Threatened and Endangered Waters (2 Reaches)

[View Map of All Threatened and Endangered Waters](#)

Stream Name	Highest TE*	T&E Waters Species					View Map
		BOVA Code, Status*, Tier**, Common & Scientific Name					
James River (0316799)	FESE	010032	FESE	Ib	Sturgeon, Atlantic	Acipenser oxyrinchus	Yes
James River (0336863)	FESE	010032	FESE	Ib	Sturgeon, Atlantic	Acipenser oxyrinchus	Yes

Managed Trout Streams

N/A

Bald Eagle Concentration Areas and Roosts

N/A

Bald Eagle Nests

N/A

Species Observations (52 records - displaying first 31 , 31 Observations with Threatened or Endangered species)

[View Map of All Query Results](#)
[Species Observations](#)

obsID	class	Date Observed	Observer	N Species			Vi
				Different Species	Highest TE*	Highest Tier**	
319029	SppObs	Jun 13 2007	John Musick	2	FESE	I	
308412	SppObs	Sep 4 2004	Meredith Fagan	1	FESE	I	
308384	SppObs	May 17 2004	Meredith Fagan	1	FESE	I	
63110	SppObs	Nov 4 1997	USFWS	1	FESE	I	
602475	SppObs	Oct 15 2008	Danielle; McCulloch	1	FTST	I	
604922	SppObs	Oct 11 2008	Trish; Bargo	1	FTST	I	
604406	SppObs	Jul 7 2008	Diane; Tulipani	1	FTST	I	
601425	SppObs	Jun 24 2008	Ryan; Gill	1	FTST	I	
607945	SppObs	Jun 3 2008	Trish; Bargo	1	FTST	I	
600454	SppObs	May 29 2008	Trish; Bargo	1	FTST	I	
319052	SppObs	Aug 24 2007	John Musick	1	FTST	I	
319045	SppObs	Jun 29 2007	John Musick	1	FTST	I	
319027	SppObs	Jun 12 2007	John Musick	1	FTST	I	
319015	SppObs	May 30 2007	John Musick	1	FTST	I	
317925	SppObs	Aug 26 2006	John Musick	1	FTST	I	
313344	SppObs	Oct 25 2005	John Musick (principal permittee), K. Mansfield, M. Fagan & V. Saba collectors	1	FTST	I	
313335	SppObs	Jun 29 2005	John Musick (principal permittee), K. Mansfield, M. Fagan & V. Saba collectors	1	FTST	I	
312962	SppObs	Jun 12 2005	John Musick (principal permittee), K. Mansfield, M. Fagan & V. Saba collectors	1	FTST	I	
308417	SppObs	Nov 2 2004	Meredith Fagan	1	FTST	I	
308391	SppObs	Jun 1 2004	Meredith Fagan	1	FTST	I	
308390	SppObs	May 30 2004	Meredith Fagan	1	FTST	I	
308385	SppObs	May 23 2004	Meredith Fagan	1	FTST	I	
54905	SppObs	Apr 1 1998	USFWS - GOFA	213	FTST	I	
367008	SppObs	Jan 1 1900		1	FTST	I	
367009	SppObs	Jan 1 1900		1	FTST	I	
54902	SppObs	Mar 1 1998	USFWS - GOFA	24	SE	I	
503323	CWB	Jun 4 2013	Beck	8	ST	I	
212526	CWB	Jun 12 2008	Watts and Paxton, The Center for Conservation Biology, College of William and Mary	4	ST	I	
210246	CWB	Jun 1 2003	Beck, R.	6	ST	I	
211705	CWB	Jun 1 1993		3	ST	I	
366303	SppObs	Jan 1 1900		1	CC	II	

Displayed 31 Species Observations

Selected 52 Observations [View all 52 Species Observations](#)

Habitat Predicted for Aquatic WAP Tier I & II Species

N/A

Habitat Predicted for Terrestrial WAP Tier I & II Species (8 Species)

[View Map of Combined Terrestrial Habitat Predicted for 8 WAP Tier I & II Species Listed Below](#)

ordered by Status Concern for Conservation

BOVA Code	Status*	Tier**	Common Name	Scientific Name	View Map
030013	SE	Ila	Rattlesnake, canebrake	Crotalus horridus	Yes
040179	ST	Ia	Tern, gull-billed	Sterna nilotica	Yes
020044	ST	Ila	Salamander, Mabee's	Ambystoma mabeei	Yes
030067	CC	Ila	Terrapin, northern diamond-backed	Malaclemys terrapin terrapin	Yes
040114		Ila	Oystercatcher, American	Haematopus palliatus	Yes
040192		Ila	Skimmer, black	Rynchops niger	Yes
040186		IIla	Tern, least	Sterna antillarum	Yes
040187		IVa	Tern, royal	Sterna maxima maximus	Yes

Virginia Breeding Bird Atlas Blocks (3 records)

[View Map of All Query Results](#)
[Virginia Breeding Bird Atlas Blocks](#)

BBA ID	Atlas Quadrangle Block Name	Breeding Bird Atlas Species			View Map
		Different Species	Highest TE *	Highest Tier **	
60056	Hampton, SE	37		II	Yes
60055	Hampton, SW	25		II	Yes
60041	Norfolk North, NW	4		II	Yes

Public Holdings: (1 names)

Name	Agency	Level
Fort Monroe Army Reservation	Dept. of the Army	Federal

Summary of BOVA Species Associated with Cities and Counties of the Commonwealth of Virginia:

FIPS Code	City and County Name	Different Species	Highest TE	Highest Tier
650	Hampton City	397	FESE	I
710	Norfolk City	445	FESE	I

USGS 7.5' Quadrangles:

Norfolk North
 Hampton

USGS NRCS Watersheds in Virginia:

N/A

USGS National 6th Order Watersheds Summary of Wildlife Action Plan Tier I, II, III, and IV Species:

HU6 Code	USGS 6th Order Hydrologic Unit	Different Species	Highest TE	Highest Tier
CB24	Lower Chesapeake Bay-Back River	91	FESE	I
CB26	Lower Chesapeake Bay-Little Creek	94	FESE	I
CB47	Lower Chesapeake Bay	78	FESE	I
JL57	Willoughby Bay	50	FTSE	I
JL58	Hampton Roads-Hampton River	84	FESE	I
JL59	Hampton Roads Channel	97	FESE	I

Compiled on 8/11/2019, 3:21:50 PM | 1987838.0 | report=all | searchType=R | dist= 3218 | poi= 36,59,58.2 -76,19,12.8
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36,57,00.9 -76,16,29.9 is the Search Point
Submit Cancel

Map Click **Pan** **Zoom In** **Zoom Out** Map Scale Screen Size **Small** **Size** **Big** **Help**

Search Point
 Change to "clicked" map point
 Fixed at 36,57,00.9 -76,16,29.9

Show Position Rings
 Yes No
1 mile and 1/4 mile at the Search Point

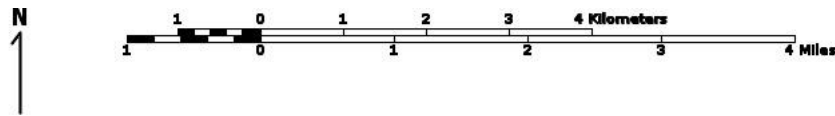
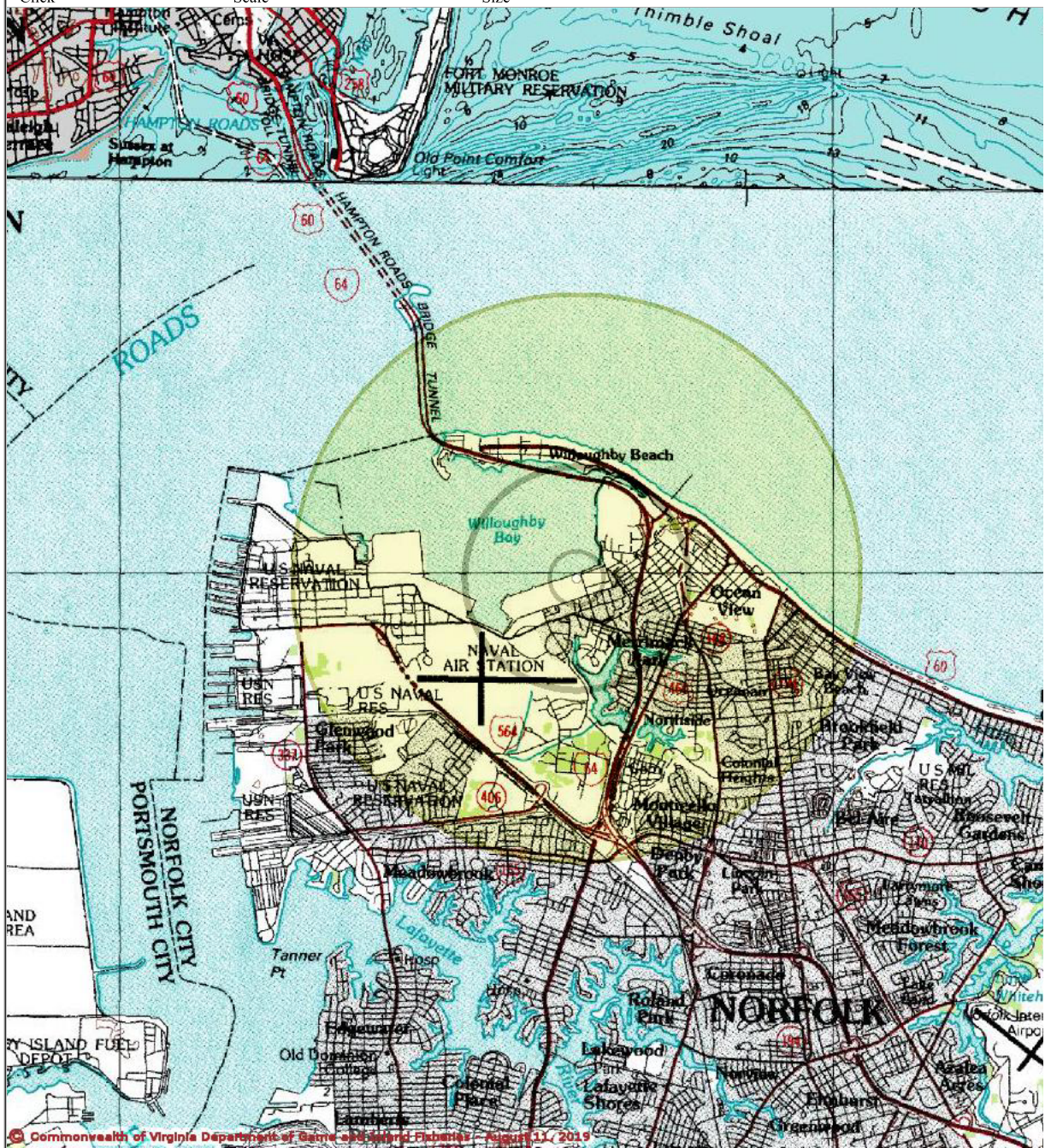
Show Search Area
 Yes No
2.5 Search distance miles radius

Search Point is at map center

Base Map **Choices**
Topography

Map Overlay **Choices**
Current List: Position, Search

- Map Overlay Legend
- Position Rings 1 mile and 1/4 mile at the Search Point
 - 2.5 mile radius Search Area



Point of Search 36,57,00.9 -76,16,29.9
Map Location 36,57,00.9 -76,16,29.9

- Select Coordinate System:
- Degrees, Minutes, Seconds Latitude - Longitude
 - Decimal Degrees Latitude - Longitude
 - Meters UTM NAD83 East North Zone
 - Meters UTM NAD27 East North Zone

Base Map source: USGS 1:100,000 topographic maps (see [Microsoft terraserver-usa.com](https://Microsoft.terraserver-usa.com) for details)

Map projection is UTM Zone 18 NAD 1983 with left 378483 and top 4098113. Pixel size is 16 meters . Coordinates displayed are Degrees, Minutes, Seconds North and West. Map is currently displayed as 1000 columns by 1000 rows for a total of 1000000 pixels. The map display represents 16000 meters east to west by 16000 meters north to south for a total of 256.0 square kilometers. The map display represents 52502 feet east to west by 52502 feet north to south for a total of 98.8 square miles.

Topographic maps and Black and white aerial photography for year 1990+- are from the United States Department of the Interior, United States Geological Survey. Color aerial photography aquired 2002 is from Virginia Base Mapping Program, Virginia Geographic Information Network.

Shaded topographic maps are from TOPO! ©2006 National Geographic
<http://www.national.geographic.com/topo>

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\$poi=36.9502500 -76.2749722

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VaFWIS Search Report Compiled on 8/11/2019, 3:40:14 PM

Known or likely to occur within a **2.5 mile radius around point 36,57,00.9 -76,16,29.9**
in **650 Hampton City, 710 Norfolk City, VA**

[View Map of Site Location](#)

565 Known or Likely Species ordered by Status Concern for Conservation
(displaying first 43) (43 species with Status* or Tier I** or Tier II**)

BOVA Code	Status*	Tier**	Common Name	Scientific Name	Confirmed	Database(s)
030074	FESE	Ia	Turtle, Kemp's ridley sea	Lepidochelys kempii	Yes	BOVA, SppObs, HU6
010032	FESE	Ib	Sturgeon, Atlantic	Acipenser oxyrinchus		BOVA, HU6
030075	FESE	Ic	Turtle, leatherback sea	Dermochelys coriacea		BOVA
030073	FESE		Turtle, hawksbill sea	Eretmochelys imbricata		BOVA
040183	FESE		Tern, roseate	Sterna dougallii dougallii		HU6
030071	FTST	Ia	Turtle, loggerhead sea	Caretta caretta	Yes	BOVA, SppObs, HU6
040144	FTST	Ia	Knot, red	Calidris canutus rufa		BOVA, HU6
050022	FTST	Ia	Bat, northern long-eared	Myotis septentrionalis		BOVA
030072	FTST	Ib	Turtle, green sea	Chelonia mydas		BOVA, HU6
040120	FTST	Ila	Plover, piping	Charadrius melodus		BOVA, HU6
120030	FTSE	IVb	Manatee, West Indian	Trichechus manatus		BOVA, HU6
030064	SE	Ia	Turtle, eastern chicken	Deirochelys reticularia reticularia		HU6
040118	SE	Ia	Plover, Wilson's	Charadrius wilsonia		HU6
040110	FPSE	Ia	Rail, eastern black	Laterallus jamaicensis jamaicensis		BOVA
050020	SE	Ia	Bat, little brown	Myotis lucifugus		BOVA
050034	SE	Ia	Bat, Rafinesque's eastern big-eared	Corynorhinus rafinesquii macrotis		HU6
050027	SE	Ia	Bat, tri-colored	Perimyotis subflavus		BOVA
030013	SE	Ila	Rattlesnake, canebrake	Crotalus horridus		BOVA, HU6
040096	ST	Ia	Falcon, peregrine	Falco peregrinus		BOVA, HU6
040293	ST	Ia	Shrike, loggerhead	Lanius ludovicianus		BOVA
040179	ST	Ia	Tern, gull-billed	Sterna nilotica	Yes	BOVA, SppObs, HU6
020044	ST	Ila	Salamander, Mabee's	Ambystoma mabeei		BOVA
020002	ST	Ila	Treefrog, barking	Hyla gratiosa		HU6
040292	ST		Shrike, migrant loggerhead	Lanius ludovicianus migrans		BOVA
030067	CC	Ila	Terrapin, northern diamond-backed	Malaclemys terrapin terrapin	Potential	BOVA, Habitat, HU6
030063	CC	IIla	Turtle, spotted	Clemmys guttata		BOVA, HU6
040040		Ia	Ibis, glossy	Plegadis falcinellus		BOVA, HU6
040306		Ia	Warbler, golden-winged	Vermivora chrysoptera		BOVA
040213		Ic	Owl, northern saw-whet	Aegolius acadicus		HU6
020063		Ila	Toad, oak	Anaxyrus quercicus		HU6
040052		Ila	Duck, American black	Anas rubripes	Potential	BOVA, BBA, HU6
040033		Ila	Egret, snowy	Egretta thula	Potential	BOVA, BBA

040029		Ila	Heron, little blue	Egretta caerulea caerulea		BOVA
040036		Ila	Night-heron, yellow-crowned	Nyctanassa violacea violacea	Yes	BOVA,BBA,CWB
040114		Ila	Oystercatcher, American	Haematopus palliatus		BOVA
040192		Ila	Skimmer, black	Rynchops niger	Yes	BOVA,BBA,SppObs,HU6
040181		Ila	Tern, common	Sterna hirundo	Yes	BOVA,BBA,SppObs,HU6
040320		Ila	Warbler, cerulean	Setophaga cerulea		BOVA,HU6
040140		Ila	Woodcock, American	Scolopax minor		BOVA,HU6
040203		Ilb	Cuckoo, black-billed	Coccyzus erythrophthalmus		BOVA
040105		Ilb	Rail, king	Rallus elegans		BOVA,HU6
040304		Ilc	Warbler, Swainson's	Limnothlypis swainsonii		HU6
110353		Ilc	SPIDER, FUNNEL-WEB	Barronopsis jeffersi		HU6

To view **All 565 species** [View 565](#)

*FE=Federal Endangered; FT=Federal Threatened; SE=State Endangered; ST=State Threatened; FP=Federal Proposed; FC=Federal Candidate; CC=Collection Concern

**I=VA Wildlife Action Plan - Tier I - Critical Conservation Need; II=VA Wildlife Action Plan - Tier II - Very High Conservation Need; III=VA Wildlife Action Plan - Tier III - High Conservation Need; IV=VA Wildlife Action Plan - Tier Virginia Wildlife Action Plan Conservation Opportunity Ranking:
 a - On the ground management strategies/actions exist and can be feasibly implemented.; b - On the ground actions or research needs have been identified but cannot feasibly be implemented at this time.;
 c - No on the ground actions or research needs have been identified or all identified conservation opportunities have been exhausted.

[View Map of All Query Results from All Observation Tables](#)

Bat Colonies or Hibernacula: **Not Known**

Anadromous Fish Use Streams (1 records)

[View Map of All Anadromous Fish Use Streams](#)

Stream ID	Stream Name	Reach Status	Anadromous Fish Species			View Map
			Different Species	Highest TE*	Highest Tier**	
C92	James River_1	Confirmed	6		IV	Yes

Impediments to Fish Passage

N/A

Colonial Water Bird Survey (5 records)

[View Map of All Query Results Colonial Water Bird Survey.](#)

Colony_Name	N Obs	Latest Date	N Species			View Map
			Different Species	Highest TE*	Highest Tier**	
Pine Wells	1	May 8 2008	1		II	Yes
Morwin	2	Jul 10 2003	1		II	Yes
Pinewell	2	Jul 9 2003	1		II	Yes
Bay View Beach	1	Jun 1 1993	1		II	Yes
Ocean View at Lenox	1	Jun 1 1993	1		II	Yes

Displayed 5 Colonial Water Bird Survey

Threatened and Endangered Waters

N/A

Managed Trout Streams

N/A

Bald Eagle Concentration Areas and Roosts

N/A

Bald Eagle Nests

N/A

Species Observations (53 records - displaying first 32 , 32 Observations with Threatened or Endangered species)

[View Map of All Query Results Species Observations](#)

obsID	class	Date Observed	Observer	N Species			Vi
				Different Species	Highest TE*	Highest Tier**	
604058	SppObs	Oct 18 2008	Christina; Trapani	1	FESE	I	
600190	SppObs	Oct 18 2008	Gwen; Lockhart	1	FESE	I	
605898	SppObs	Sep 20 2008	Shannon; Davis	1	FESE	I	
607549	SppObs	Oct 29 2008	Lisa; Wright	1	FTST	I	
600455	SppObs	Oct 20 2008	Gwen; Lockhart	1	FTST	I	
600604	SppObs	Oct 15 2008	Christina; Trapani	1	FTST	I	
607382	SppObs	Oct 12 2008	Lisa; Wright	1	FTST	I	
607659	SppObs	Sep 19 2008	Christina; Trapani	1	FTST	I	
600673	SppObs	Sep 18 2008	Christina; Trapani	1	FTST	I	
606920	SppObs	Sep 18 2008	Margaret; Cook	1	FTST	I	
606919	SppObs	Sep 17 2008	Christina; Trapani	1	FTST	I	
600739	SppObs	Sep 11 2008	Wendy; Walton	1	FTST	I	
601055	SppObs	Aug 23 2008	Christina; Trapani	1	FTST	I	
600958	SppObs	Aug 23 2008	Shannon; Davis	1	FTST	I	
604864	SppObs	Aug 21 2008	Shannon; Davis	1	FTST	I	
601216	SppObs	Aug 5 2008	Christina; Trapani	1	FTST	I	
607815	SppObs	Jul 24 2008	Shannon; Davis	1	FTST	I	
607994	SppObs	Jul 18 2008	Christina; Trapani	1	FTST	I	
600756	SppObs	Jul 2 2008	Christina; Trapani	1	FTST	I	
601467	SppObs	Jun 18 2008	Christina; Trapani	1	FTST	I	
601428	SppObs	Jun 18 2008	Christina; Trapani	1	FTST	I	
601205	SppObs	Jun 18 2008	Christina; Trapani	1	FTST	I	
606886	SppObs	Jun 12 2008	Christina; Trapani	1	FTST	I	
607298	SppObs	Jun 7 2008	Christina; Trapani	1	FTST	I	
604186	SppObs	Jun 5 2008	Christina; Trapani	1	FTST	I	
600000	SppObs	May 25 2008	Linda; D'Eri	1	FTST	I	
601318	SppObs	Feb 24 2008	Gwen; Lockhart	1	FTST	I	
367003	SppObs	Jan 1 1900		1	FTST	I	
367004	SppObs	Jan 1 1900		1	FTST	I	
503323	CWB	Jun 4 2013	Beck	8	ST	I	
212526	CWB	Jun 12 2008	Watts and Paxton, The Center for Conservation Biology, College of William and Mary	4	ST	I	
210246	CWB	Jun 1 2003	Beck, R.	6	ST	I	

Displayed 32 Species Observations

Selected 53 Observations [View all 53 Species Observations](#)

Habitat Predicted for Aquatic WAP Tier I & II Species

N/A

Habitat Predicted for Terrestrial WAP Tier I & II Species (2 Species)

[View Map of Combined Terrestrial Habitat Predicted for 2 WAP Tier I & II Species Listed Below](#)

ordered by Status Concern for Conservation

BOVA Code	Status*	Tier**	Common Name	Scientific Name	View Map
030067	CC	Ila	Terrapin, northern diamond-backed	Malaclemys terrapin terrapin	Yes
040186		IIla	Tern, least	Sterna antillarum	Yes

Virginia Breeding Bird Atlas Blocks (4 records)

[View Map of All Query Results](#)

[Virginia Breeding Bird Atlas Blocks](#)

BBA ID	Atlas Quadrangle Block Name	Breeding Bird Atlas Species			View Map
		Different Species	Highest TE*	Highest Tier**	
61043	Little Creek, CW	5		II	Yes
60044	Norfolk North, CE	1		II	Yes
60041	Norfolk North, NW	4		II	Yes
60046	Norfolk North, SE	67		II	Yes

Public Holdings: (1 names)

Name	Agency	Level
U.S. Naval Air Station	U.S. Dept. of Navy	Federal

Summary of BOVA Species Associated with Cities and Counties of the Commonwealth of Virginia:

FIPS Code	City and County Name	Different Species	Highest TE	Highest Tier
650	Hampton City	397	FESE	I
710	Norfolk City	445	FESE	I

USGS 7.5' Quadrangles:

Norfolk North
Little Creek

USGS NRCS Watersheds in Virginia:

N/A

USGS National 6th Order Watersheds Summary of Wildlife Action Plan Tier I, II, III, and IV Species:

HU6 Code	USGS 6th Order Hydrologic Unit	Different Species	Highest TE	Highest Tier
CB26	Lower Chesapeake Bay-Little Creek	94	FESE	I
CB47	Lower Chesapeake Bay	78	FESE	I
JL56	Elizabeth River	75	FESE	I
JL57	Willoughby Bay	50	FTSE	I
JL59	Hampton Roads Channel	97	FESE	I

Compiled on 8/11/2019, 3:40:14 PM 1987845.0 report=all searchType=R dist= 4022 poi= 36,57,00.9 -76,16,29.9

PixelSize=64; Anadromous=0.039909; BBA=0.069362; BECAR=0.02402; Bats=0.024432; Buffer=0.150561; County=0.107962; HU6=0.151373; Impediments=0.025226; Init=0.207133; PublicLands=0.044131; Quad=0.08133; SppObs=0.311563; TEWaters=0.039631; TierReaches=0.063745; TierTerrestrial=0.226819; Total=1.738228; Tracking_BOVA=0.175238;

| 8/11/2019, 3:40:17 PM | [DGIF](#) | [Credits](#) | [Disclaimer](#) | Please view our [privacy policy](#) |
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ATTACHMENT J-2: VDCR NATURAL HERITAGE REPORT

Natural Heritage Resources

Your Criteria

Taxonomic Group: Select All

County: Hampton (City), Norfolk (City)

Search Run: 8/12/2019 10:25:22 AM

Result Summary

Total Species returned: 33

Total Communities returned: 2

Click scientific names below to go to NatureServe report.

Click column headings for an explanation of species and community ranks.

Common Name/Natural Community	Scientific Name	Scientific Name Linked	Global Conservation Status Rank	State Conservation Status Rank	Federal Legal Status	State Legal Status	Statewide Occurrences	Virginia Coastal Zone
Hampton (City)								
AMPHIBIANS								
Mabee's Salamander	Ambystoma mabeei	Ambystoma mabeei	G4	S1S2	None	LT	17	Y
BIRDS								
Great Egret	Ardea alba	Ardea alba	G5	S2S3B,S3N	None	None	12	Y

Common Name/Natural Community	Scientific Name	Scientific Name Linked	Global Conservation Status Rank	State Conservation Status Rank	Federal Legal Status	State Legal Status	Statewide Occurrences	Virginia Coastal Zone
Piping Plover	Charadrius melodus	Charadrius melodus	G3	S2B,S1N	LT	LT	16	Y
Northern Harrier	Circus hudsonius	Circus hudsonius	G5	S1S2B,S3N	None	None	15	Y
Gull-billed Tern	Gelochelidon nilotica	Gelochelidon nilotica	G5	S2B	None	LT	19	Y
Yellow-crowned Night-heron	Nyctanassa violacea	Nyctanassa violacea	G5	S2S3B,S3N	None	None	10	Y
Black Skimmer	Rynchops niger	Rynchops niger	G5	S2B,S1N	None	None	19	Y
Least Tern	Sternula antillarum	Sternula antillarum	G4	S2B	None	None	18	Y
Royal Tern	Thalasseus maximus	Thalasseus maximus	G5	S2B	None	None	6	Y
Sandwich Tern	Thalasseus sandvicensis	Thalasseus sandvicensis	G5	S1B	None	None	4	Y
COLEOPTERA (BEETLES)								
Northeastern Beach Tiger Beetle	Cicindela dorsalis	Cicindela dorsalis	G3G4T2	S2	LT	LT	18	Y
A Tiger Beetle	Cicindela trifasciata	Cicindela trifasciata	G5	S1	None	None	6	Y
FISH								
Atlantic Sturgeon	Acipenser oxyrinchus	Acipenser oxyrinchus	G3	S2	LE	LE	2	Y
REPTILES								
Canebrake Rattlesnake	Crotalus horridus [Coastal Plain]	Crotalus horridus [Coastal Plain]	G4T4	S1	None	LE	18	Y

Common Name/Natural Community	Scientific Name population]	Scientific Name Linked population]	Global Conservation Status Rank	State Conservation Status Rank	Federal Legal Status	State Legal Status	Statewide Occurrences	Virginia Coastal Zone
TERRESTRIAL NATURAL COMMUNITY								
Southern Coastal Plain Mesic Mixed Hardwood Forest	Fagus grandifolia - Quercus (alba, nigra, michauxii) / Symplocos tinctoria - (Stewartia malacodendron) Forest	Fagus grandifolia - Quercus (alba, nigra, michauxii) / Symplocos tinctoria - (Stewartia malacodendron) Forest	G3	S2S3	None	None	11	Y
Non-Riverine Wet Hardwood Forest (Northern Coastal Plain Type)	Quercus (phellos, pagoda, michauxii) / Ilex opaca - Clethra alnifolia / Woodwardia areolata Forest	Quercus (phellos, pagoda, michauxii) / Ilex opaca - Clethra alnifolia / Woodwardia areolata Forest	G2?	S2	None	None	15	Y
VASCULAR PLANTS								
Purple Milkweed Big-seed Alfalfa dodder	Asclepias purpurascens	Asclepias purpurascens	G5?	S2	None	None	24	Y
Pineland Tick-trefoil	Cuscuta indecora	Cuscuta indecora	G5	S1	None	None	15	Y
Slim-leaf Tick-trefoil	Desmodium strictum	Desmodium strictum	G4	S2	None	None	15	Y
	Desmodium	Desmodium	G4	S1	None	None	14	Y

Common Name/Natural Community	Scientific Name	Scientific Name Linked	Global Conservation Status Rank	State Conservation Status Rank	Federal Legal Status	State Legal Status	Statewide Occurrences	Virginia Coastal Zone
trefoil	tenuifolium	tenuifolium						
White-top	Erigeron	Erigeron	G5	S2	None	None	15	Y
Fleabane	vernus	vernus						
Dune marsh-elder	Iva imbricata	Iva imbricata	G5?	S1	None	None	8	Y
Beach plum	Prunus	Prunus	G4	S1?	None	None	2	Y
	maritima	maritima						
Spanish-moss	Tillandsia	Tillandsia	G5	S1S2	None	None	19	Y
	usneoides	usneoides						
Virginia Least Trillium	Trillium	Trillium	G3T2	S2	SOC	None	36	Y
	pusillum var. virginianum	pusillum var. virginianum						

Norfolk (City)

BIRDS

Peregrine Falcon	Falco peregrinus	Falco peregrinus	G4	S1B,S2N	None	LT	36	Y
Yellow-crowned Night-heron	Nyctanassa violacea	Nyctanassa violacea	G5	S2S3B,S3N	None	None	10	Y
Least Tern	Sternula antillarum	Sternula antillarum	G4	S2B	None	None	18	Y

FISH

Atlantic Sturgeon	Acipenser oxyrinchus	Acipenser oxyrinchus	G3	S2	LE	LE	2	Y
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VASCULAR PLANTS

Big-seed Alfalfa dodder	Cuscuta indecora	Cuscuta indecora	G5	S1	None	None	15	Y
Dune marsh-elder	Iva imbricata	Iva imbricata	G5?	S1	None	None	8	Y

Common Name/Natural Community	Scientific Name	Scientific Name Linked	Global Conservation Status Rank	State Conservation Status Rank	Federal Legal Status	State Legal Status	Statewide Occurrences	Virginia Coastal Zone
Sand laurel oak	Quercus hemisphaerica	Quercus hemisphaerica	G5	S1	None	None	6	Y
One-flowered sclerolepis	Sclerolepis uniflora	Sclerolepis uniflora	G4	S1	None	None	2	Y
Twisted leaf goldenrod	Solidago tortifolia	Solidago tortifolia	G4G5	S1	None	None	10	Y
Spanish-moss	Tillandsia usneoides	Tillandsia usneoides	G5	S1S2	None	None	19	Y

Note: On-line queries provide basic information from DCR's databases at the time of the request. They are NOT to be substituted for a project review or for on-site surveys required for environmental assessments of specific project areas.

For Additional Information on locations of Natural Heritage Resources please submit an [information request](#).

To Contribute information on locations of natural heritage resources, please fill out and submit a [rare species sighting form](#).