APPENDIX E

CONSULTATION LETTERS

SHPO

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS, 733D MISSION SUPPORT GROUP
JOINT BASE LANGLEY-EUSTIS
FORT EUSTIS, VIRGINIA

Civil Engineering Division

JUN 19 2012

Mr. Marc Holma
Review and Compliance
Virginia Department of Historic Resources
2801 Kensington Avenue
Richmond, Virginia 23221

Dear Mr. Holma

The US Air Force proposes to dredge a section of Skiffes Creek that leads into the Third Port facility at Fort Eustis, Virginia. Skiffes Creek is located in the City of Newport News, Virginia. The creek is approximately 4 miles long, and has a surface area of 137 acres. Skiffes Creek is a tidal stream which empties into the east side of the James River, 18 miles above its mouth. It is a navigational channel that serves as the entrance to Third Port. The Third Port is located in the northwest corner of Ft Eustis. The project consists of maintenance dredging of the Skiffes Creek channel over 15 years. Each dredging cycle may involve up to 500,000 cubic yards of material per cycle. Dredged material will be pumped by hydraulic pipeline directly to the upland confined placement facility, Fort Eustis Dredged Material Management Area (FEDMMA). Fort Eustis proposes to dredge 500,000 cubic yards of material from this channel. The following depths include 2 feet of paid allowable overdepth and 1 foot of nonpaid overdepth dredging: A. 7,800 ft long area, -23 feet MLLW, B. 690 ft long area, -20 ft MLLW, C. 715 ft long area, -14 MLLW.

There are no known historic properties in the projects Area of Potential Effect. Since this project is taking place in a previously dredged location, in accordance with paragraph 3 (b) (1) of Appendix C to 33 CFR 325 the Air Force is "presuming that any historic properties that may have at one time existed within the permit area have been lost."

The US Air Force has therefore determined that there are no historic properties in the area of potential effects for these undertakings. Therefore, the Air Force has determined that no further work is required in order for this project to proceed in compliance with the National Historic Preservation Act of 1966, as amended. We request that you review this determination and forward your comments within 30 days. If you do not comment within 30 days, we will assume you agree with the Air Force's determination of no historic properties adversely affected by this undertaking and will proceed without taking further steps in the Section 106 process.

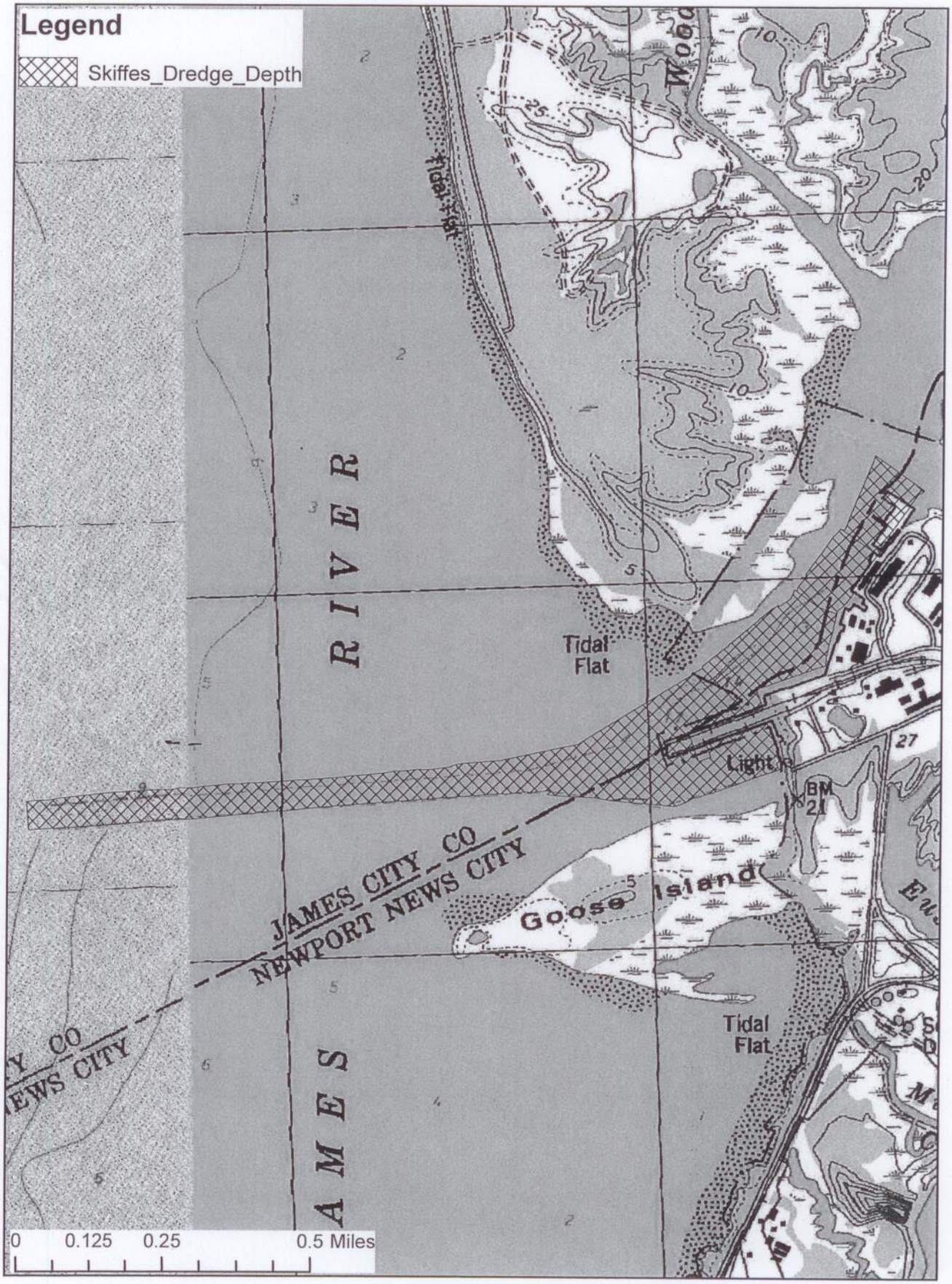
If you have any questions, please contact Christopher L. McDaid at (757) 878-4123 ext 295 or email christopher.mcdaid@us.army.mil.

Sincerely,

Susan P. Miller

Susan P. Miller
Chief, Environmental Element

Enclosure


Legend
Skiffes_Dredge_Depth
Tidal Flat
Tidal Flat
Light
BM 21
Goose Island
JAMES CITY CO
NEWPORT NEWS CITY
RIVER
JAMES
0 0.125 0.25 0.5 Miles

The VDHR concurs with the Air Force's determination of no adverse effect by the following undertaking.

Project Reference: FE 2012.014: Dredging of Skiffes Creek

26 June 12

Signature/Date

DHR# 2012-0961

ESSENTIAL FISH HABITAT (EFH)

Nadal, Teresita I NAO

From: Nadal, Teresita I NAO
Sent: Tuesday, February 04, 2014 2:10 PM
To: 'David.L.O'Brien@noaa.gov'
Subject: Skiffes Creek EFH assessment (UNCLASSIFIED)
Attachments: Skiffes_Creek.pdf

Classification: UNCLASSIFIED
Caveats: NONE

Dave,

Attached is an EFH assessment for Skiffes Creek.

Please let me know if you have questions.

Thank you.

Teri

Teri Nadal
Ops Branch, Technical Support Section
U.S. Army Corps of Engineers
Norfolk District
(757) 201-7299

Classification: UNCLASSIFIED
Caveats: NONE

EFH ASSESSMENT WORKSHEET FOR FEDERAL AGENCIES

PROJECT NAME: Skiffes Creek Federal Navigation Channel DATE: February 4, 2014

PROJECT NO.: Permit # LOCATION: Newport News, VA

PREPARER: Teri Nadal

Step 1. Use the Habitat Conservation Division EFH webpage, Guide to Essential Fish Habitat Designations in the Northeastern United States to generate the list of designated EFH for federally-managed species for the geographic area of interest (http://www.nero.noaa.gov/hcd/index2a.htm). Use the species list as part of the initial screening process to determine if EFH for those species occurs in the vicinity of the proposed action. Attach that list to the worksheet because it will be used in later steps. Make a preliminary determination on the need to conduct an EFH Consultation.

1. INITIAL CONSIDERATIONS		
EFH Designations	Yes	No
Is the action located in or adjacent to EFH designated for eggs?	x	
Is the action located in or adjacent to EFH designated for larvae?	x	
Is the action located in or adjacent to EFH designated for juveniles?	x	
Is the action located in or adjacent to EFH designated for adults?	x	
Is the action located in or adjacent to EFH designated for spawning adults?		x
If you answered no to all questions above, then EFH consultation is not required -go to Section 5. If you answered yes to any of the above questions proceed to Section 2 and complete remainder of the worksheet.		

Step 2. In order to assess impacts, it is critical to know the habitat characteristics of the site before the activity is undertaken. Use existing information, to the extent possible, in answering these questions. Please note that, there may be circumstances in which new information must be collected to appropriately characterize the site and assess impacts.

2. SITE CHARACTERISTICS	
Site Characteristics	Description
Is the site intertidal, sub-tidal, or water column?	The dredging area site is tidal.
What are the sediment characteristics?	The dredged material consists of 25% sand, 60% silt and 15% clay.
Is Habitat Area of Particular Concern (HAPC) designated at or near the site? If so what type, size, characteristics?	Shallow areas have been identified has HAPC for sandbar shark nursery and pupping grounds. There are no shallow areas within the project area.
Is there submerged aquatic vegetation (SAV) at or adjacent to project site? If so describe the spatial extent.	There is no SAV at or adjacent to the project site. Determined using VIMS website. Attachment D.
What is typical salinity and temperature regime/range?	The average range in salinity is 3 to 15 ppt. The average range in temperature is 37º to 88º F.
What is the normal frequency of site disturbance, both natural and man-made?	This site is used year round. The facility provides a safe harbor for the 7th Group's watercraft fleet and serves as a deployment platform for Army units. In addition, it is a joint service training facility for watercraft operators and cargo handlers. Commercial vessels access two industrial complexes located upstream of Skiffes Creek. Recreational vessels also transit the channel. Dredging is usually performed every 7 years.
What is the area of proposed impact (work footprint & far afield)?	The Skiffes Creek channel dimensions consist of: a. One 7,800 foot long area, -23 feet below mean lower low water (station 0+00 - 77+64.16) variable in width. b. One 690 foot long area, -20 feet below mean lower low water (station 77+64.16 - 83+52.69) variable in width. c. One 715 foot long area, -14 feet below mean lower low water (station 83+52.69 - 90+67.69) variable in width. As an interim dredging cycle, up to 250,000 CYs will be dredged with placement at the Norfolk Ocean Disposal Site (NODS). The long term plan is to place 500,000 CYs of dredged material per cycle at the upland confined placement, the Fort Eustis Dredged Material Management Area (FEDMMA) once it is restored.

Step 3. This section is used to describe the anticipated impacts from the proposed action on the physical/chemical/biological environment at the project site and areas adjacent to the site that may be affected.

3. DESCRIPTION OF IMPACTS			
Impacts	Y	N	Description
Nature and duration of activity(s)			An interim dredging will be performed using a mechanical dredge and transported by bottom dump scow to the NODS. The anticipated duration of mechanical dredging is approximately 120 days. The long term plan for maintenance dredging is to use a hydraulic dredge with material placement at an upland confined placement facility (FEDMMA) once it is restored. The dredged material will be transported by pipeline to the FEDMMA. The anticipated duration of hydraulic dredging is approximately 90 days.
Will benthic community be disturbed?	x		Dredging will permanently impact non-motile benthic organisms within the dredging area through direct removal of substrate in the channel prism. Once dredging is complete, benthic organisms should begin to repopulate quickly.
Will SAV be impacted?		x	There is no SAV (identified through the VIMS website).
Will sediments be altered and/or sedimentation rates change?	x		Post dredge substrate characteristics will be the same as shoaled sediments removed by dredging. Short-term impacts will occur during dredging operations. There will be minor impacts to sedimentation rates in the dredging area.
Will turbidity increase?	x		Turbidity will temporarily increase at the dredging location and the overboard placement site (NODS) due to the physical characteristics of the sediment.
Will water depth change?	x		Yes
Will contaminants be released into sediments or water column?		x	Dredged material from Skiffes Creek Channel has been evaluated in accordance with the Federal regulations and complies with the Marine Protection, Research, and Sanctuaries Act (MPRSA) and CWA requirements.
Will tidal flow, currents or wave patterns be altered?		x	There will be a no significant change in tidal flow, currents, or wave patterns.
Will ambient salinity or temperature regime change?		x	The ambient salinity and temperature regime should not change as a result of the dredging or placement operations.
Will water quality be altered?	x		Short-term and isolated impacts to dissolved oxygen may occur through increased turbidity. Impacts should be temporary.

Step 4. This section is used to evaluate the consequences of the proposed action on the functions and values of EFH as well as the vulnerability of the EFH species and their life stages. Identify which species from the EFH species list (generated in Step 1) will be adversely impacted from the action. Assessment of EFH impacts should be based upon the site characteristics identified in Step 2 and the nature of the impacts described within Step 3. The Guide to EFH Descriptions webpage (http://www.nero.noaa.gov/hcd/list.htm) should be used during this assessment to determine the ecological parameters/preferences associated with each species listed and the potential impact to those parameters.

4. EFH ASSESSMENT			
Functions and Values	Y	N	Describe habitat type, species and life stages to be adversely impacted
Will functions and values of EFH be impacted for:			
Spawning		x	
Nursery	x		Demersal waters serve as nursery areas for juvenile and adult windowpane and summer flounder. Shallow areas of have been identified has HAPC for sandbar shark nursery and pupping grounds. There will be temporary impacts during dredging operations. However, these species are expected to relocate during operations and return upon completion of the work.
Forage	x		Juvenile and adult windowpane and summer flounder are benthic feeders. These species are motile benthic feeders and are expected to relocate during operations and return upon completion of the work.
Shelter		x	Shallow areas of have been identified as HAPC for sandbar shark nursery and pupping grounds. However, these species are expected to relocate during operations and return upon completion of the work.
Will impacts be temporary or permanent?			Impacts are anticipated to be temporary. Species that may be present in the project area are expected to relocate during the dredging activity and return once the work is complete.
Will compensatory mitigation be used?		x	n/a

Step 5. This section provides the Federal agencys determination on the degree of impact to EFH from the proposed action. The EFH determination also dictates the type of EFH consultation that will be required with NOAA Fisheries.

5. DETERMINATION OF IMPACT		
		Federal Agencys EFH Determination
Overall degree of adverse effects on EFH (not including compensatory mitigation) will be: (check the appropriate statement)		There is no adverse effect on EFH EFH Consultation is not required
	X	The adverse effect on EFH is not substantial. This is a request for an abbreviated EFH consultation. This worksheet is being submitted to NMFS to satisfy the EFH Assessment requirement.
		The adverse effect on EFH is substantial. This is a request for an expanded EFH consultation. A detailed written EFH assessment will be submitted to NMFS expanding upon the impacts revealed in this worksheet.

Step 6. Consultation with NOAA Fisheries may also be required if the proposed action results in adverse impacts to other NOAA-trust resources, such as anadromous fish, shellfish, crustaceans, or their habitats. Some examples of other NOAA-trust resources are listed below. Inquiries regarding potential impacts to marine mammals or threatened/endangered species should be directed to NOAA Fisheries' Protected Resources Division.

6. OTHER NOAA-TRUST RESOURCES IMPACT ASSESSMENT	
Species known to occur at site (list others that may apply)	Describe habitat impact type (i.e., physical, chemical, or biological disruption of spawning and/or egg development habitat, juvenile nursery and/or adult feeding or migration habitat).
alewife	
blueback herring	
rainbow smelt	
Atlantic sturgeon	
Atlantic menhaden	
American shad	
American eel	
American lobster	
blue mussels	
soft-shell clams	
quahog	
Other species:	
Anadromous fish	

Skiffes Creek is located in Fort Eustis, Newport News, Virginia. The creek is approximately 4 miles long, and has a surface area of 137 acres. Skiffes Creek is a tidal creek which empties into the east side of the James River, 18 miles above its mouth. It is a navigational channel that serves as the entrance to Third Port. The Third Port is located in the northwest corner of Fort Eustis. The Third Port is a deepwater port used to train personnel in cargo logistics and vessel operations. The facility provides a safe harbor for the 7th Group's watercraft fleet and serves as a deployment platform for Army units. In addition, it is a joint service training facility for watercraft operators and cargo handlers. Commercial vessels and recreational vessels also transit Skiffes Creek. The purpose of this project is to provide safe navigation to Army vessels.

Sedimentation has reduced the operating depth of Skiffes Creek channel from authorized dimensions. Current soundings in Skiffes Creek indicate the channel leading to the Third Port and its main pier has shoaled in some locations. Vessels are subject to running aground, hampering navigation. With the current shallow depths, these vessels are drawing silt and muck into these systems resulting in increased maintenance, repairs and downtime for the larger vessels. Because of the shoaling the existing channel width will not allow large vessels to enter and exit the channel simultaneously, thus increasing the time associated with contingency deployments. Maintenance dredging is necessary to accommodate the deeper draft vessels during all tidal stages. Fort Eustis has a transportation training function which would be adversely affected if dredging is not performed. The larger vessels that are assigned to the post need full project dimensions to safely navigate during all tidal stages between the James River and Third Port.

Previous maintenance dredging was completed in 2004. The average dredging frequency has been approximately every 7 years. Maintenance dredging of Skiffes Creek project will be conducted during a fifteen-year period. An interim dredging cycle is required and will be performed by mechanical dredge removing up to 250,000 cubic yards (CY) of dredged material and transported by bottom dump scow to the overboard placement at the Norfolk Ocean Disposal Site (NODS). Dredging is expected to be completed within 120 days. The long term goal is to conduct dredging by hydraulic dredge to the maximum permitted depth removing approximately 500,000 CYs of material each dredging cycle with upland confined placement at the previously used Fort Eustis Dredged Material Management Area (FEDMMA) once it is restored. An approximate total of 1,500,000 CY will be dredged over a fifteen-year period and placed at FEDMMA.

The following depths include 2 feet of paid allowable advance maintenance overdepth and 1 foot of nonpaid overdepth dredging:
a. One 7,800 foot long area, -23 feet below mean lower low water (station 0+00 - 77+64.16) variable in width.
b. One 690 foot long area, -20 feet below mean lower low water (station 77+64.16 - 83+52.69) variable in width.
c. One 715 foot long area, -14 feet below mean lower low water (station 83+52.69 - 90+67.69) variable in width.

An interim dredging cycle will be performed with overboard placement at the NODS. The NODS was designated by the Environmental Protection Agency (EPA) pursuant to Section 102(c) of the Marine Protection, Research, and Sanctuaries Act of 1972, as amended, as suitable for ocean disposal of dredged material on July 2, 1993 (FR. Vol. 5a No. 126). The NODS is located in the Atlantic Ocean approximately 17 miles east of Cape Henry and is approximately 50 square nautical miles in size. The site is circular with a radius of 4 nautical miles and the water depth ranges from 43 to 85 feet. The NODS has unlimited capacity and was designated for use as a placement site for suitable materials from the Skiffes Creek Channel. The NODS is located in the Atlantic Ocean approximately 17 miles east of Cape Henry and approximately 2 statute miles north/northwest of The Chesapeake Light Tower. The NODS is approximately 50 square nautical miles in size with a circular radius of 4 nautical miles and water depths ranging from 43 to 85 feet. The center point coordinate of the site is north latitude 36° 59' and west longitude 75° 39'.

The long term plan is to pump by hydraulic pipeline the dredged material directly to the upland confined placement facility FEDMMA once it is restored. The FEDMMA is an 80 acre facility located on the western portion of Fort Eustis, south of the Third Port facility. The dredged material placed in the upland site will undergo sedimentation processes. Coarse grained materials will settle out immediately at the dredged material inflow point and fine sediments will settle out in the ponded area within the upland site.

Dredged material from Skiffes Creek Channel has been evaluated in accordance with the Marine Protection, Research, and Sanctuaries Act (MPRSA). Ocean placement of dredged material is regulated under Section 103 of the MPRSA of 1972 (Public Law 92-532). This law states that any proposed placement of dredged material into ocean waters must be evaluated through the use of criteria published by the U.S. Environmental Protection Agency (USEPA) in Title 40 of the Code of Federal Regulations, Parts 220-228 (40 CFR 220-228). The primary purpose of Section 103 of the MPRSA is to limit and regulate adverse environmental impacts of ocean placement of dredged material. Dredged material proposed for ocean placement must comply with 40 CFR 220-228 (Ocean Dumping Regulations) and 33 CFR 320-330 and 335-338 (USACE Regulations for Discharge of Dredged Materials into Waters in U.S. or Ocean Water) prior to being issued an ocean placement permit. The technical evaluation of potential contaminant-related impacts that may be associated with ocean placement of dredged material is conducted in accordance with 40 CFR 220-228 and the *Ocean Testing Manual* (USEPA/USACE 1991). The criteria defined in 40 CFR Part 227 are used to determine compliance. The dredged material is 25% sand, 60% silt and 15% clay.

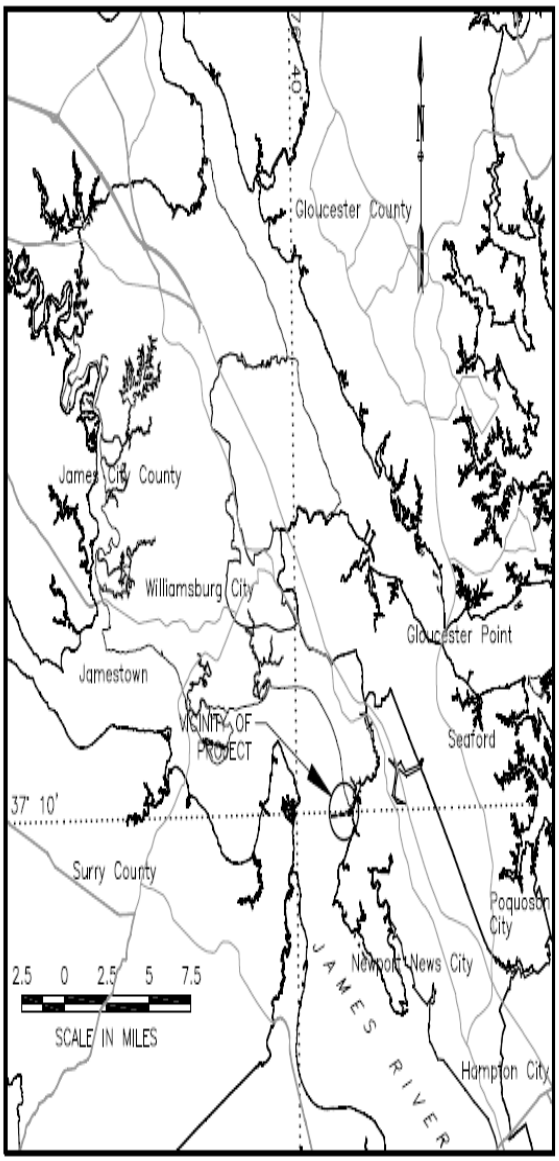
The Magnuson-Stevens Fishery Conservation and Management Act (MSA), as amended by the Sustainable Fisheries Act of 1996, requires all Federal agencies to consult with the National Marine Fisheries Service (NMFS) on all actions, or proposed actions, permitted, funded, or undertaken by the agency that may adversely affect Essential Fish Habitat (EFH). Congress defines EFH as, "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity". The Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) governs the EFH and requires the identification of EFH for managed species as well as measures to conserve and enhance the habitat necessary for fish to carry out their life cycles. The NMFS oversees the EFH designations, and gives guidance to minimize harm to EFH. Habitat Areas of Particular Concern (HAPC) are subsets of EFH and are given special consideration to adverse impacts.

The Skiffes Creek Federal Navigation Channel lies adjacent to EFH for several species including: juvenile and adult Atlantic butterfish (*Peprilus triacanthus*); juvenile and adult black sea bass (Centropristis striata); juvenile and adult bluefish *(Pomatomus saltatrix*); eggs, larvae, juvenile, and adult stages of cobia (*Rachycentron canadum*); dusky shark larvae *(Charcharinus obscurus)*; eggs, larvae, juvenile, and adult king mackerel (*Scomberomorus cavalla*); eggs, larvae, juvenile, and adult red drum (*Sciaenops occelatus*); larvae and adult sandbar shark *(Charcharinus plumbeus)*; eggs, larvae, juvenile, and adult Spanish mackerel (*Scomberomorus maculatus)*; larvae, juvenile and adult summer flounder (*Paralicthys dentatus*); juvenile and adult windowpane flounder (*Scopthalmus aquosus*). In addition to these EFH designations, the area has been designated as a HAPC for larvae, juvenile and adult life cycles of the sandbar shark.

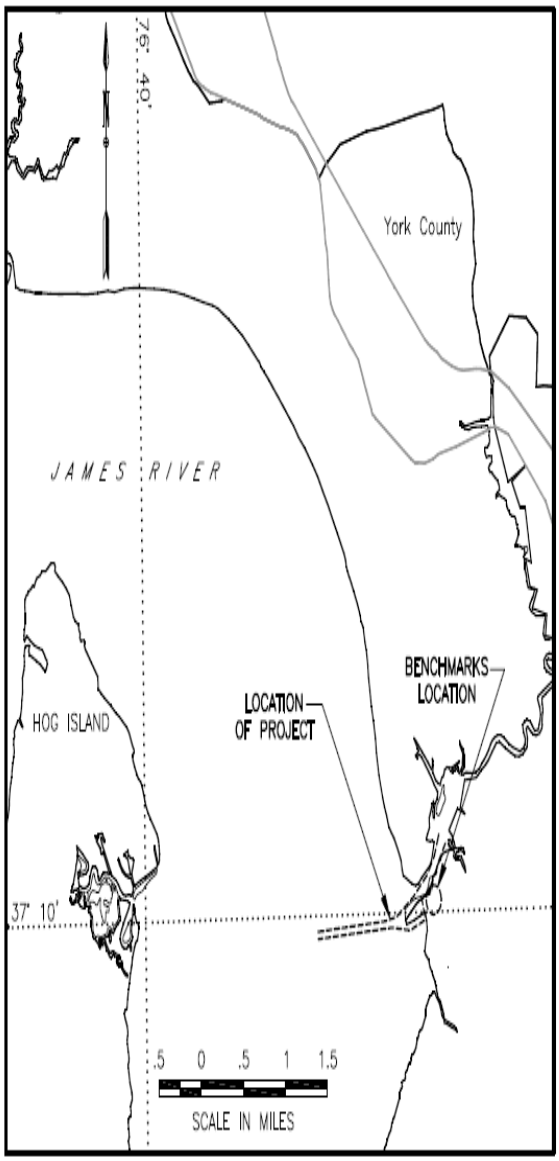
The NODS lies adjacent to EFH for several species that are identified within four quadrants (Attachment F). The NODS was designated by the Environmental Protection Agency (EPA) pursuant to Section 102(c) of the Marine Protection, Research, and Sanctuaries Act of 1972, as amended, as suitable for ocean disposal of dredged material on July 2, 1993 (FR. Vol. 5a No. 126). Since then, the NODS is used by several projects for dredged material placement. Any fish within the NODS would relocate and return once work is complete.

Maintenance dredging and material placement site impacts to fish will be temporary. Any fish within area would relocate and return once work is complete. This project does not have the potential to substantially adversely affect EFH for the species of concern by loss of forage and/or shelter habitat.

ATTACHMENT A: Project Vicinity and Location Map

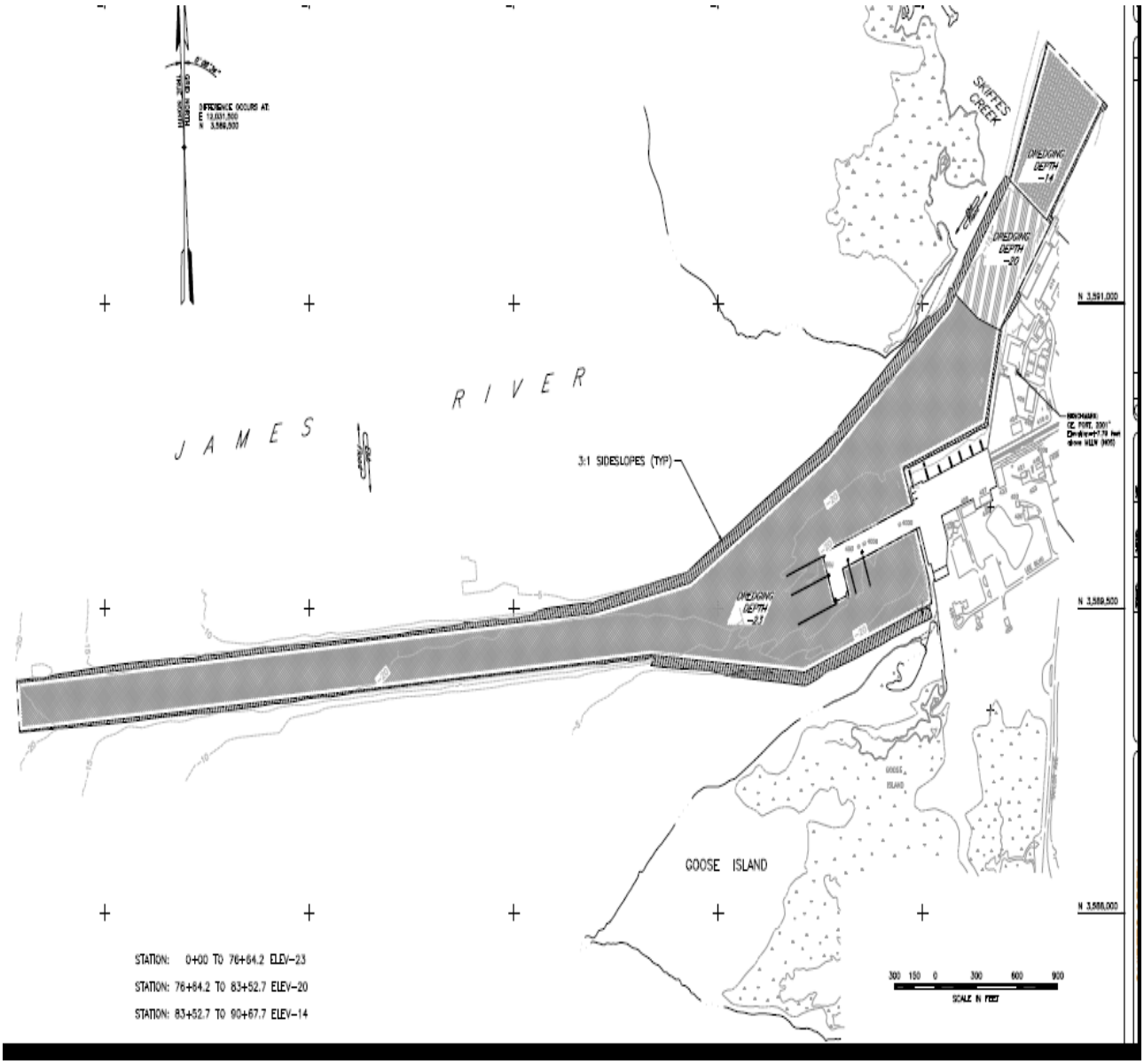


VICINITY MAP

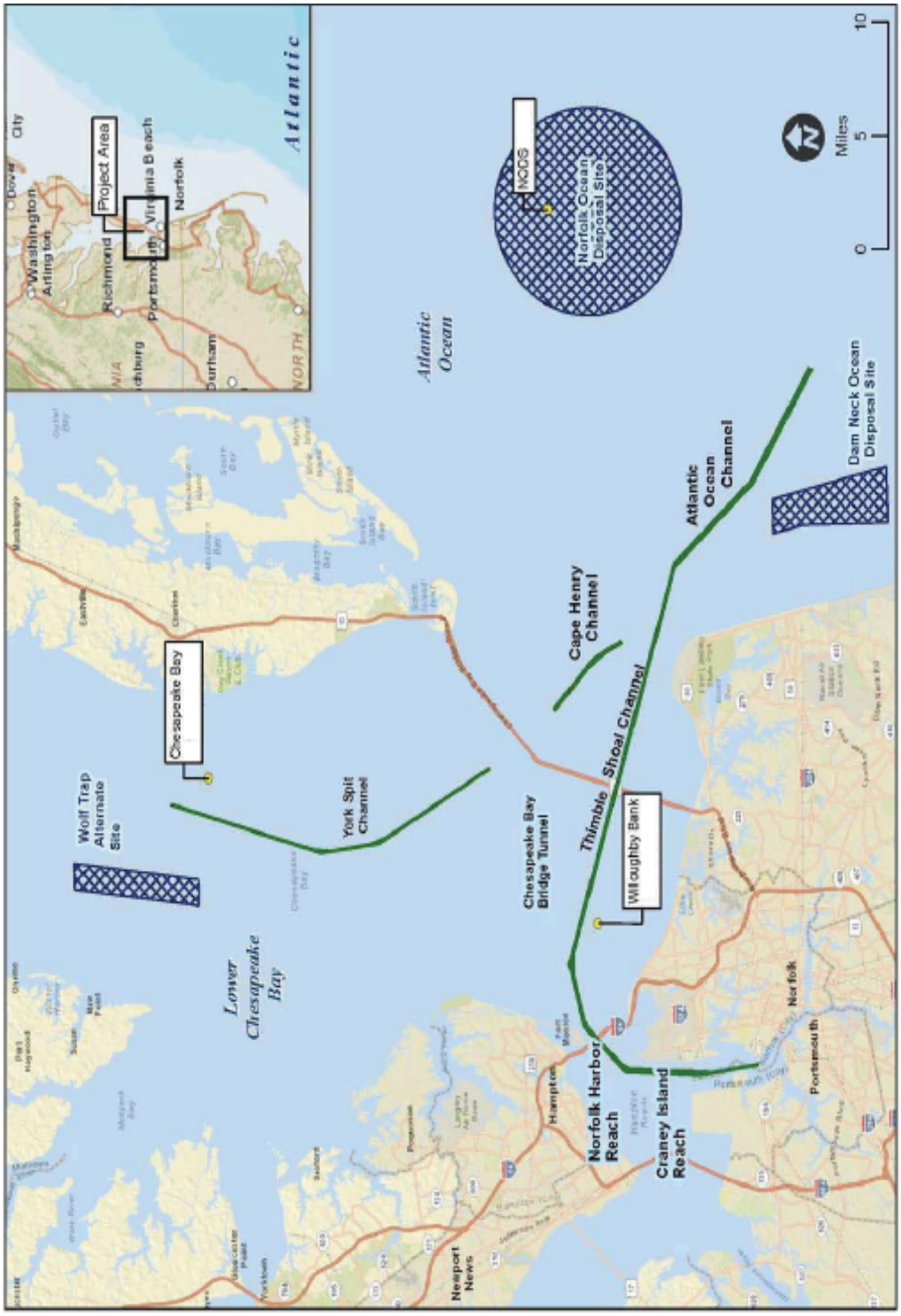


LOCATION MAP

ATTACHMENT B: Project Map

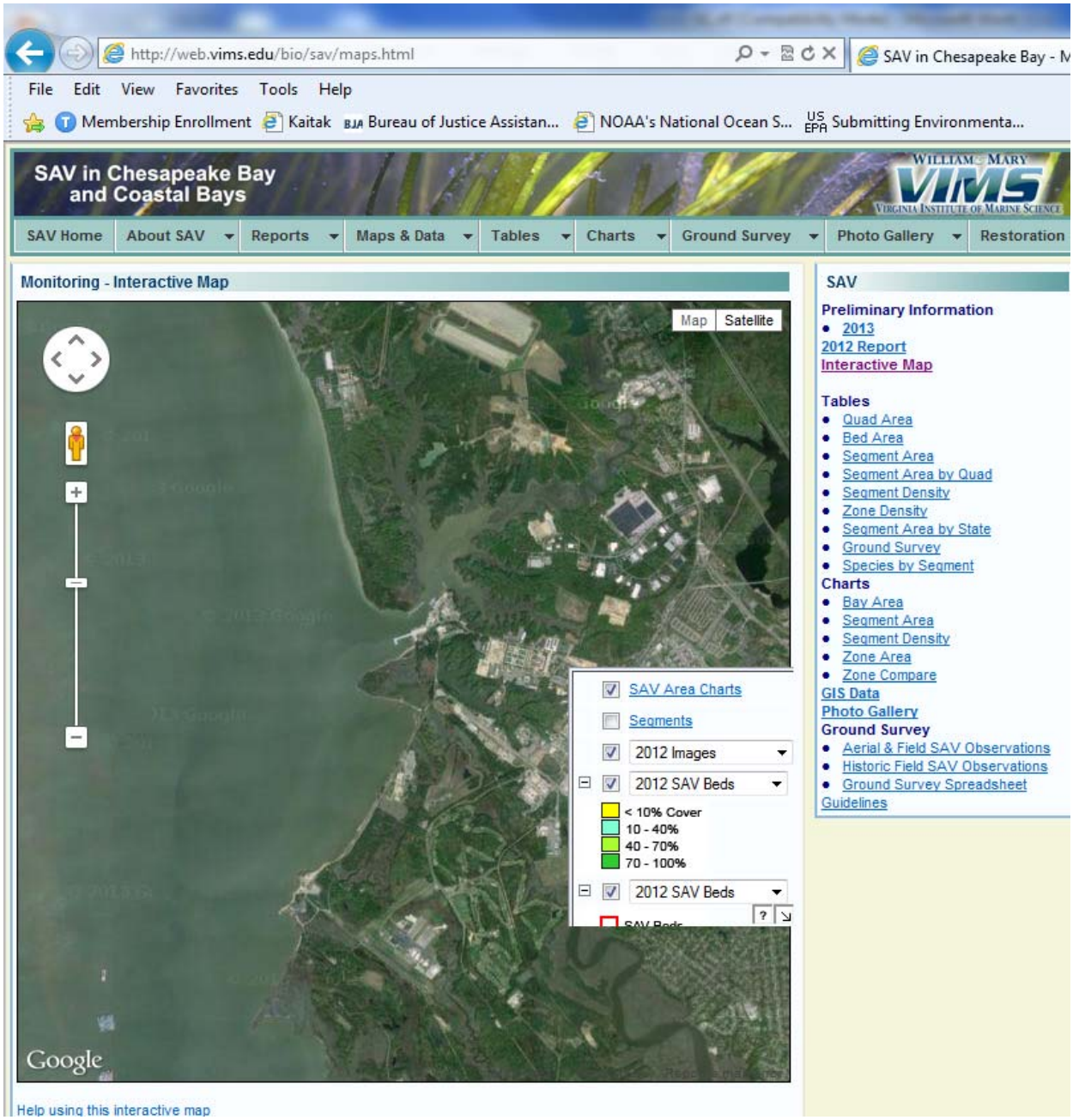


ATTACHMENT C: Norfolk Ocean Disposal Site Map



ATTACHMENT D: SAV Map

Accessed January 16, 2014 http://web.vims.edu/bio/sav/maps.html



ATTACHMENT E: Skiffes Creek Summary of EFH Designations

Accessed January 16, 2014 http://www.nero.noaa.gov/hcd/STATES4/virginia/virginia/

Summary of Essential Fish Habitat (EFH) Designations

10 x 10 Square Coordinates:

Boundary	North	East	South	West
Coordinate	37 10.0 N	76 30.0 W	37 00.0 N	76 40.0 W

Square Description (i.e. habitat, landmarks, coastline markers): James River waters within the square affecting the following: Warwick River, Deep Creek, Burwell Bay, Point of Shoals, Rocklanding Shoal Channel, White Shoal, Rainbow Farm Pt., Pagan River Inlet, Blunt Pt., Menchville, VA., Jail Pt., Jail Creek, Mulberry I., Swash Hole, Swash Hole Islands, Mulberry Pt., Crisholm Creek, eastern Lawnes Neck, and Deep Waters Shoals.

Skiffes Creek

Species	Eggs	Larvae	Juveniles	Adults
Atlantic butterfish *(Peprilus triacanthus)*			X	X
black sea bass *(Centropristis striata)*	n/a		X	X
bluefish *(Pomatomus saltatrix)*			X	X
cobia *(Rachycentron canadum)*	X	X	X	X
dusky shark *(Carcharhinus obscurus)*		X		
king mackerel *(Scomberomorus cavalla)*	X	X	X	X
red drum *(Sciaenops occelatus)*	X	X	X	X
sandbar shark *(Carcharhinus plumbeus)*		X		X
sandbar shark *(Carcharhinus plumbeus)*		HAPC	HAPC	HAPC
Spanish mackerel *(Scomberomorus maculatus)*	X	X	X	X
summer flounder *(Paralichthys dentatus)*		X	X	X
windowpane flounder *(Scophthalmus aquosus)*			X	X

ATTACHMENT F: NODS Summary of EFH Designations

Summary of Essential Fish Habitat (EFH) Designations

10 x 10 Square Coordinates:

Boundary	North	East	South	West
Coordinate	37 10.0 N	75 40.0 W	37 00.0 N	75 50.0 W

Square Description (i.e. habitat, landmarks, coastline markers): Waters within the Atlantic Ocean within the square one square east of the square affecting Cape Charles, Fishermans I., and most of Smith I. There is also a large dumpsite area that is affected by the waters within this square. It is the northwestern quarter of the dumpsite.

NODS Northwest Quarter

Species	Eggs	Larvae	Juveniles	Adults
Atl. sharpnose shark *(Rhizopriondon terraenovae)*				X
Atlantic sea herring *(Clupea harengus)*				X
black sea bass *(Centropristis striata)*	n/a		X	X
bluefish *(Pomatomus saltatrix)*			X	X
cobia *(Rachycentron canadum)*	X	X	X	X
dusky shark *(Carcharhinus obscurus)*		X	X	
king mackerel *(Scomberomorus cavalla)*	X	X	X	X
monkfish *(Lophius americanus)*	X	X		
red drum *(Sciaenops occelatus)*	X	X	X	X
sand tiger shark *(Carcharias taurus)*		X		X
sandbar shark *(Carcharhinus plumbeus)*		X	X	X
scalloped hammerhead shark *(Sphyrna lewini)*			X	
scup *(Stenotomus chrysops)*	n/a	n/a	X	X
Spanish mackerel *(Scomberomorus maculatus)*	X	X	X	X
spiny dogfish *(Squalus acanthias)*	n/a	n/a	X	X
summer flounder *(Paralichthys dentatus)*	X		X	X
tiger shark *(Galeocerdo cuvieri)*		X	X	X
windowpane flounder *(Scophthalmus aquosus)*	X	X	X	X
witch flounder *(Glyptocephalus cynoglossus)*	X			

Summary of Essential Fish Habitat (EFH) Designations

10 x 10 Square Coordinates:

Boundary	North	East	South	West
Coordinate	37 10.0 N	75 30.0 W	37 00.0 N	75 40.0 W

Square Description (i.e. habitat, landmarks, coastline markers): Waters within the Atlantic Ocean within the square two squares east of the square affecting Cape Charles, Fishermans I., and most of Smith I., in Virginia. There is also a large dumpsite area that is affected by the waters within this square. It is the northeastern quarter of the dumpsite.

NODS Northeast Quarter

Species	Eggs	Larvae	Juveniles	Adults
Atl. sharpnose shark *(Rhizopriondon terraenovae)*				X
black sea bass *(Centropristis striata)*	n/a		X	X
bluefish *(Pomatomus saltatrix)*		X	X	X
cobia *(Rachycentron canadum)*	X	X	X	X
dusky shark *(Carcharhinus obscurus)*		X	X	
king mackerel *(Scomberomorus cavalla)*	X	X	X	X
monkfish *(Lophius americanus)*	X	X		
red drum *(Sciaenops occelatus)*	X	X	X	X
red hake *(Urophycis chuss)*	X	X	X	
sand tiger shark *(Carcharias taurus)*		X		X
sandbar shark *(Carcharhinus plumbeus)*		X	X	X
scalloped hammerhead shark *(Sphyrna lewini)*			X	
scup *(Stenotomus chrysops)*	n/a	n/a	X	X
Spanish mackerel *(Scomberomorus maculatus)*	X	X	X	X
spiny dogfish *(Squalus acanthias)*	n/a	n/a	X	X
summer flounder *(Paralichthys dentatus)*			X	X
surf clam *(Spisula solidissima)*	n/a	n/a	X	X
tiger shark *(Galeocerdo cuvieri)*		X	X	X
windowpane flounder *(Scophthalmus aquosus)*		X	X	X
witch flounder *(Glyptocephalus cynoglossus)*		X		

Summary of Essential Fish Habitat (EFH) Designations

10 x 10 Square Coordinates:

Boundary	North	East	South	West
Coordinate	37 00.0 N	75 40.0 W	36 50.0 N	75 50.0 W

Square Description (i.e. habitat, landmarks, coastline markers): Waters within the Atlantic Ocean within the square one square east of the square affecting from Cape Henry on the south, to just north of Rudee Inlet at Virginia Beach, VA. There is also a large dumpsite area that is affected by the waters within this square. It is the southwestern quarter of the dumpsite. There is also a buoy testing area just north of the Chesapeake Horn.

NODS Southwest Quarter

Species	Eggs	Larvae	Juveniles	Adults
Atl. sharpnose shark *(Rhizopriondon terraenovae)*				X
Atlantic butterfish *(Peprilus triacanthus)*	X			
Atlantic sea herring *(Clupea harengus)*				X
black sea bass *(Centropristis striata)*	n/a	X	X	X
bluefish *(Pomatomus saltatrix)*			X	
cobia *(Rachycentron canadum)*	X	X	X	X
dusky shark *(Carcharhinus obscurus)*		X	X	
king mackerel *(Scomberomorus cavalla)*	X	X	X	X
long finned squid *(Loligo pealeii)*	n/a	n/a	X	
monkfish *(Lophius americanus)*	X	X		
red drum *(Sciaenops occelatus)*	X	X	X	X
sand tiger shark *(Carcharias taurus)*		X		X
sandbar shark *(Carcharhinus plumbeus)*		X	X	X
scalloped hammerhead shark *(Sphyrna lewini)*			X	
scup *(Stenotomus chrysops)*	n/a	n/a	X	X
Spanish mackerel *(Scomberomorus maculatus)*	X	X	X	X
spiny dogfish *(Squalus acanthias)*	n/a	n/a	X	X
summer flounder *(Paralichthys dentatus)*	X		X	X
surf clam *(Spisula solidissima)*	n/a	n/a	X	
tiger shark *(Galeocerdo cuvieri)*		X	X	X
windowpane flounder *(Scophthalmus aquosus)*	X	X	X	X
witch flounder *(Glyptocephalus cynoglossus)*	X			

Summary of Essential Fish Habitat (EFH) Designations

10 x 10 Square Coordinates:

Boundary	North	East	South	West
Coordinate	37 00.0 N	75 30.0 W	36 50.0 N	75 40.0 W

Square Description (i.e. habitat, landmarks, coastline markers): Waters within the Atlantic Ocean within the square two squares east of the square affecting from Cape Henry on the south, to just north of Rudee Inlet at Virginia Beach, VA. There is also a large dumpsite area that is affected by the waters within this square. It is the southeastern quarter of the dumpsite.

NODS Southeast Quarter

Species	Eggs	Larvae	Juveniles	Adults
Atl. sharpnose shark *(Rhizopriondon terraenovae)*				X
Atlantic butterfish *(Peprilus triacanthus)*			X	X
Atlantic sea herring *(Clupea harengus)*				X
black sea bass *(Centropristis striata)*	n/a	X	X	X
bluefish *(Pomatomus saltatrix)*	X	X	X	X
cobia *(Rachycentron canadum)*	X	X	X	X
dusky shark *(Carcharhinus obscurus)*		X	X	
king mackerel *(Scomberomorus cavalla)*	X	X	X	X
monkfish *(Lophius americanus)*	X	X		
ocean quahog *(Artica islandica)*	n/a	n/a		
red drum *(Sciaenops occelatus)*	X	X	X	X
sand tiger shark *(Carcharias taurus)*		X		X
sandbar shark *(Carcharhinus plumbeus)*		X	X	X
scalloped hammerhead shark *(Sphyrna lewini)*			X	
scup *(Stenotomus chrysops)*	n/a	n/a	X	X
Spanish mackerel *(Scomberomorus maculatus)*	X	X	X	X
spiny dogfish *(Squalus acanthias)*	n/a	n/a	X	X
summer flounder *(Paralichthys dentatus)*	X	X	X	X
surf clam *(Spisula solidissima)*	n/a	n/a	X	
tiger shark *(Galeocerdo cuvieri)*		X	X	X
whiting *(Merluccius bilinearis)*	X	X	X	
windowpane flounder *(Scophthalmus aquosus)*	X	X		
witch flounder *(Glyptocephalus cynoglossus)*	X			

ENDANGERED SPECIES ACT

SECTION 7 CONSULTATIONS

DEPARTMENT OF THE ARMY
NORFOLK DISTRICT CORPS OF ENGINEERS
FORT NORFOLK 803 FRONT STREET
NORFOLK VIRGINIA 23510-1096

REPLY TO ATTENTION OF:

March 22, 2012

Operations Branch

Ms. Mary Colligan, Assistant Regional Director for Protected Services
National Marine Fisheries Service
Northeast Regional Office
55 Great Republic Drive
Gloucester, Massachusetts 01930-2276

Dear Ms. Colligan:

In order to comply with Section 7 of the Endangered Species Act (ESA) of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*), all major Federal actions that may affect listed species or species proposed to be listed must consult with the National Marine Fisheries Service (NMFS). The NMFS has listed the Chesapeake Bay distinct population segment (DPS) of the Atlantic sturgeon (*Acipenser oxyrinchus oxyrinchus*) as an endangered species. The final listing determination for the Chesapeake Bay DPS of Atlantic sturgeon was published in the Federal Register on February 6, 2012. I am requesting an informal Section 7 consultation to evaluate potential impacts from maintenance dredging of the Skiffes Creek Federal Navigation Project on the Chesapeake Bay DPS of the Atlantic sturgeon.

The Skiffes Creek Federal Navigation Project is located at Fort Eustis, Newport News, Virginia. The creek is approximately 4 miles long, and has a surface area of 137 acres. Skiffes Creek is a tidal creek which empties into the east side of the lower James River, 18 miles above its mouth. The total project distance is approximately 1.7 miles in length. The dredging distance upstream is approximately 0.37 miles in length.

Previous maintenance dredging was completed in 2004. The average dredging frequency has been approximately every 7 years. Maintenance dredging of Skiffes Creek project will be conducted during a fifteen-year period. Dredging will be conducted by hydraulic dredge to the maximum depth for each area removing approximately 500,000 cubic yards of material each dredging cycle. An approximate total of 1,500,000 cubic yards will be dredged over a fifteen-year period. Dredging is expected to commence during the month of January 2013 and be completed within 90 days.

Following are the project depths:

a. One 7,800 foot long area, -19 feet below mean lower low water (station 0+00 - 77+64.16) variable in width.
b. One 690 foot long area, -17 feet below mean lower low water (station 77+64.16 - 83+52.69) variable in width.

c. One 715 foot long area, -11 feet below mean lower low water (station 83+52.69 - 90+67.69) variable in width.

Dredging of the Skiffes Creek Federal Navigation Channel will be performed with a hydraulic cutterhead dredge. Cutterhead dredges previously used have been small, usually with a maximum pipe diameter of 18 inches. The dredged material will be pumped by hydraulic pipeline directly to the upland confined placement facility known as Fort Eustis Dredged Material Management Area (FEDMMA). The FEDMMA is an 80-acre facility located on the western portion of Fort Eustis, south of the Third Port facility. The dredged material is approximately 25% sand, 60% silt and 15% clay.

Maintenance dredging of the Skiffes Creek Federal Navigation Project has the potential to impact the Atlantic sturgeon. These impacts include the following:

1) burial, removal, and/or alteration of benthic habitat at the dredging site;
2) physical injury or death of adults or sub-adults due to entrainment by the dredge;
3) physical or biological impacts to water quality via:
   a) decreased dissolved oxygen levels
   b) predator/prey interactions
   c) primary productivity and respiration
   d) loss of benthic prey species
4) noise and presence of the dredge and related equipment

Enclosed are drawings of the project site. The site is not an area where spawning is known to occur. The incidence of Atlantic sturgeon in Skiffes Creek is low. Small juveniles are not likely using the area, but adults and sub-adults may transit the project area during migration or to forage. The effects of maintenance dredging of Skiffes Creek would be temporary in nature and are not likely to adversely affect Atlantic sturgeon in the project area. We are requesting your concurrence.

Should you have any questions or require further information on this submittal, please contact Ms. Teri Nadal of my staff at (757) 201-7299 or via email teresita.i.nadal@usace.army.mil. Thank you for your assistance.

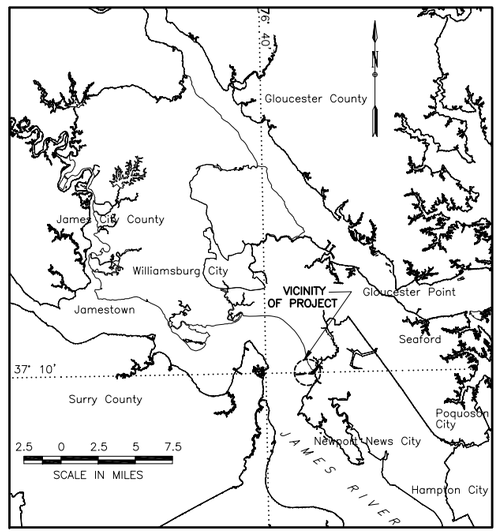
Sincerely,

Elizabeth G. Waring

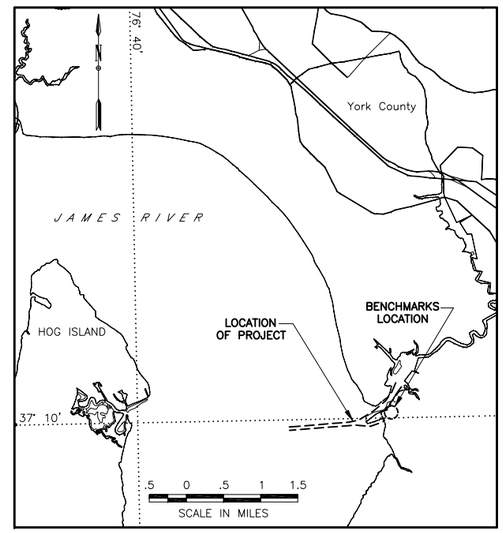
Elizabeth G. Waring
Chief, Operations Branch

Enclosure

SKIFFES CREEK
PROJECT CONDITION
SURVEY OF OCTOBER 2008
JAMES RIVER, VIRGINIA



VICINITY MAP

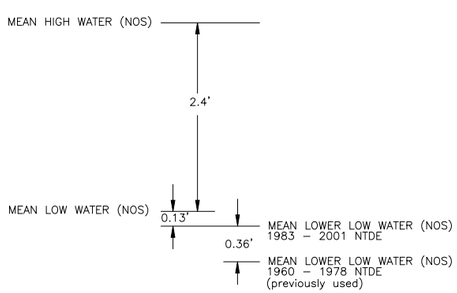


LOCATION MAP

– LEGEND –

CHANNEL LIMITS

CONCRETE DOLDHINS



DATUM DIAGRAM
1983 – 2001 Tidal Epoch
(not to scale)

– NOTES –

MEAN LOWER LOW WATER (MLLW), 1960–1978 National Tidal Datum Epoch (NTDE) was determined by interpolating between MLLW–NGVD differentials at Scotland and Burwell Bay based on National Ocean Service (NOS) tidal observations and Corps of Engineers leveling. The update to the 1983–2001 NTDE was determined to be 0.36 foot by interpolating the NOS NTDE differentials at Sewells Point and Claremont VA.

SOUNDINGS are in feet referenced to NOS MLLW and were taken on 8 October 2008.

MEAN RANGE OF TIDE is 2.4 feet at Mulberry Point, James River, Virginia based on NOS observations.

COORDINATES are in U.S. Survey feet, referred to the Virginia State Plane Coordinate System, South Zone and are based on North American Datum of 1983.

PLANIMETRIC FEATURES were developed by stereo–photogrammetric methods which included a layered digital database from aerial photographs flown on 25 March 1995.

LAST DREDGED by Hampton Roads Leasing during the period 1 July – 1 September 2004 under Contract No. W91236–04–C–0039 dated 11 and 15 March 2004.

BENCHMARKS
Elevations are relative to
NOS MLLW, 1983–2001 NTDE

VERTICAL DATUM TABLE

BENCHMARK	ELEVATION
CE "THIRD, 2001"	+9.94
CE "PORT, 2001"	+7.79
USE TBM "CHISELED SQUARE #1, 1991"	+7.24

The information depicted on this map represents the results of surveys made on the date(s) indicated and can only be considered as indicating the general conditions existing at that time.

SIGNATURES AFFIXED BELOW INDICATE OFFICIAL RECOMMENDATION AND APPROVAL OF ALL DRAWINGS IN THIS SET AS INDICATED ON INDEX TO DRAWINGS.

INDEX TO DRAWINGS

SHEET NO.	TITLE	FILE NUMBER
1	TITLE SHEET	FILE NO. H–29–16–41(1)
2	MAPPING SHEET	FILE NO. H–29–16–41(2)

COORDINATES OF CENTERLINE STATIONS

STATION	EAST (X)	NORTH (Y)
0+00.0	12,027,863.29	3,589,034.09
46+43.3	12,032,491.47	3,589,409.04
66+63.3	12,034,390,22	3,590,098.36
71+46.5	12,034,786.36	3,590,423.04
76+64.2	12,034,902.97	3,590,927.38
90+67.7	12,035,721.23	3,592,067.71

DEPARTMENT OF THE ARMY
NORFOLK DISTRICT, CORPS OF ENGINEERS
NORFOLK, VIRGINIA

REVIEWED: CHIEF, NAVIGATION SUPPORT AND SURVEY SECTION
APPROVED: CHIEF, OPERATIONS BRANCH
SUBMITTED: CHIEF, DESIGN SECTION
APPROVED: CHIEF, TECHNICAL SERVICES DIVISION

US Army Corps of Engineers Norfolk District

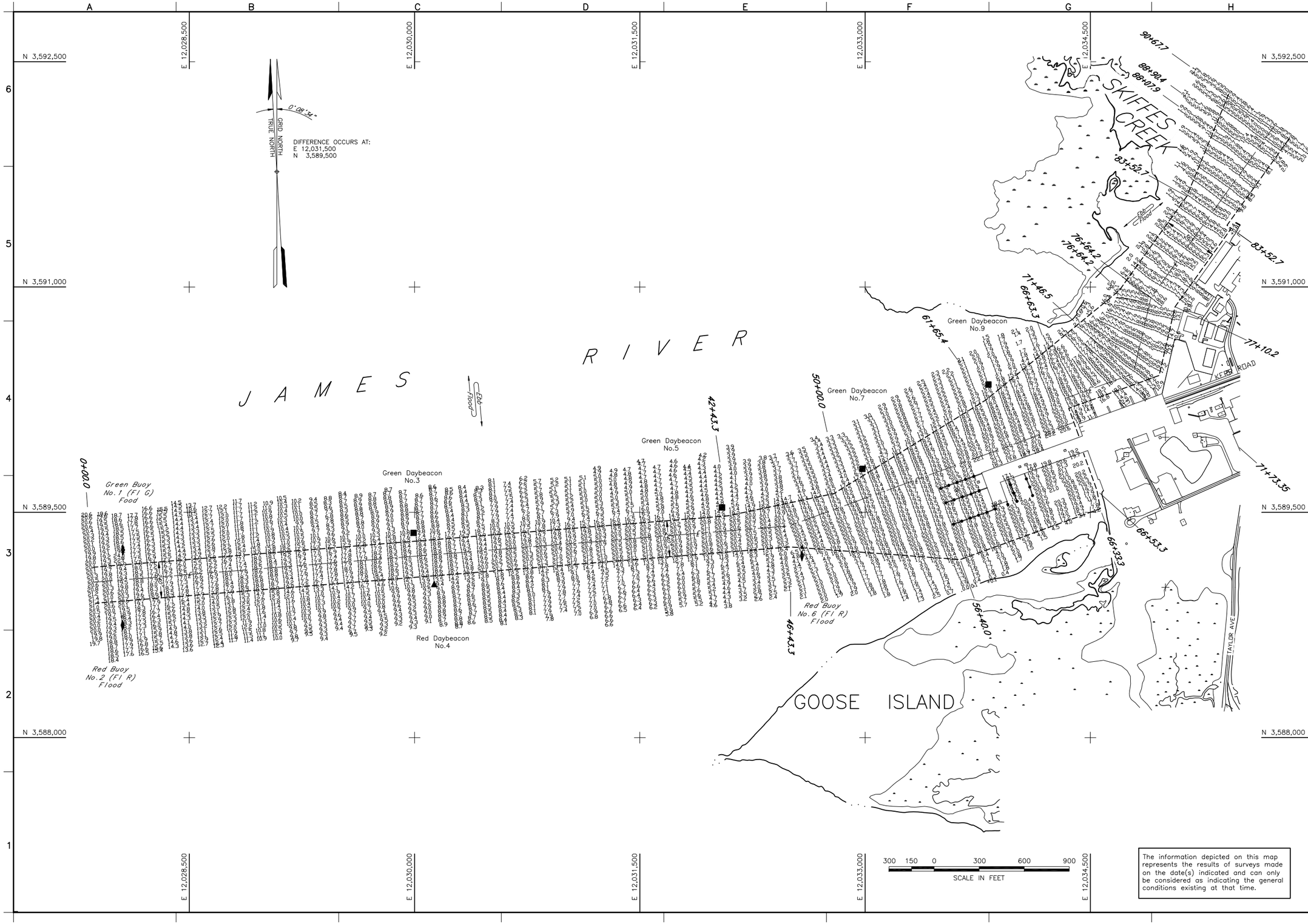
REV.	DATE	DESCRIPTION	BY	APP

DESIGNED: R.J.W.
DRAWN: M.L.M.
PROJECT NO.:
DATE: 13 AUG 09
SCALE: AS SHOWN
NORFOLK DISTRICT FILE NO.: H–29–16–41(1)
DRAWING NO.:
SUBMITTED: S.J.P.
SURVEYED BY: Waterway Surveys and Engineering, Ltd.

NORFOLK DISTRICT
CORPS OF ENGINEERS
NORFOLK, VIRGINIA

SKIFFES CREEK
PROJECT CONDITION
SURVEY OF OCTOBER 2008
JAMES RIVER, VIRGINIA

SHEET 1 OF 2



The information depicted on this map represents the results of surveys made on the date(s) indicated and can only be considered as indicating the general conditions existing at that time.

US Army Corps of Engineers
Norfolk District

REV.	DATE	DESCRIPTION	BY	APP

DATE: 13 AUG 09
SCALE: AS SHOWN
NORFOLK DISTRICT FILE NO.: H-29-16-41(2)

DESIGNED: R.J.W.
DRAWN: M.L.M.
SUBMITTED: S.J.P.
PROJECT NO.:
DRAWING NO.:

SURVEYED BY: Waterway Surveys and Engineering, Ltd.

NORFOLK DISTRICT
CORPS OF ENGINEERS
NORFOLK, VIRGINIA

SKIFFES CREEK
PROJECT CONDITION
SURVEY OF OCTOBER 2008
JAMES RIVER, VIRGINIA

SHEET 2 OF 2

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
NORTHEAST REGION
55 Great Republic Drive
Gloucester, MA 01930-2276

APR 17 2012

Elizabeth G. Waring
Department of the Army
Norfolk District Corps of Engineers
Fort Norfolk 803 Front Street
Norfolk, VA 23510-1096
Attn: Operations Branch

Re: Skiffles Creek Federal Navigation Project

Dear Ms. Waring,

Your letter, regarding the Army Corps of Engineers, Norfolk District's (The Corps) proposal to dredge the Skiffles Creek Federal Navigation Channel in Fort Eustis, Newport News, Virginia, requested our concurrence with your preliminary determination that the project is not likely to adversely affect any species listed as threatened or endangered under the Endangered Species Act (ESA) of 1973, as amended. Based on information provided to us on March 22, 2012, we have conducted a consultation in accordance with Section 7 of the ESA. We concur with your determination. Our supporting analysis is provided below.

Proposed Project

The proposed project is located in Skiffles Creek, which is a tidal creek that flows into the east side of the lower James River, 18 miles above its confluence with Chesapeake Bay. Skiffles Creek is approximately 4 miles long and has a surface area of 137-acres. The total length proposed for dredging in the federal channel is 1.7 miles (with 1.33 miles of overlap in the James River). The total distance to be dredged within Skiffles Creek itself is 0.37 miles.

Previous maintenance dredging was completed in 2004, and the average dredge cycle is once every 7 years. Currently, the maintenance dredging is proposed to be accomplished within a 15 year period. Dredging will be conducted with a hydraulic cutterhead dredge to the maximum depth for each reach, ranging from -11 to -19 feet below mean lower low water (MLLW), and will remove approximately 500,000 cubic yards of material per dredging cycle. An approximate total of 1,500,000 cubic yards will be dredged over the 15 year period. The current dredge cycle will begin in January 2013 and last for 90 days.

The cutterhead dredges used for this project have previously been small, usually with a maximum pipe diameter of 18 inches. The dredged material will be pumped by hydraulic pipeline directly to the upland confined placement facility known as Fort Eustis Dredged Material Management Area (FEDMMA). The FEDMMA is an 80-acre facility located near the

project site. The dredged material is 25% sand, 60% silt, and 15% clay, which constitutes a relatively fine-grained sediment type.

NMFS listed species in Project Area

The action area is defined as "all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action" (50 CFR § 402.02). For this project, the action area includes the dredge footprint as well as the underwater area where effects of dredging (e.g., increase in suspended sediment) will occur. Based on analysis of hydraulic dredging activities (ACOE 1983), increased sediment levels are likely to be present for no more than 1,000-feet downstream of the dredge area. As such, the action area is the area within Skiffles Creek and the James River located within a 1,000-foot radius from the dredge footprint. This area will encompass all of the effects of the proposed dredging project.

Sea Turtles

Four species of federally threatened or endangered sea turtles under the jurisdiction of NMFS may be found seasonally in the coastal waters of New York: federally threatened Northwest Atlantic Ocean distinct population segment (DPS) of loggerhead (*Caretta caretta*), and the federally endangered Kemp's ridley (*Lepidochelys kempi*), green (*Chelonia mydas*) and leatherback (*Dermochelys coriacea*) sea turtles, although the latter species tends to frequent offshore habitats (not within bay systems/estuarine habitat) is unlikely to occur in the action area (i.e., depths up to approximately 20 feet). In general, listed sea turtles are seasonally distributed in coastal US Atlantic waters, migrating to and from habitats extending from Florida to New England, with overwintering concentrations in southern waters. Sea turtles are expected to be in the Chesapeake Bay during warmer months. This typically equates to April through December in Virginia waters (Morreale 1999; Morreale 2003; Morreale and Standora 2005; Shoop and Kenney 1992).

The sea turtles in the Chesapeake Bay area are typically small juveniles with the most abundant species being the loggerhead followed by the Kemp's ridley sea turtle. Several studies have examined the seasonal distribution of sea turtles in the mid-Atlantic, including Maryland and Virginia. Sea turtles begin appearing in nearshore habitats of the mid-Atlantic as water temperatures rise to greater than 11°C during the spring and then remain in the region throughout the summer and fall (Morrealle and Standora 2005). As temperatures decline in the fall (usually beginning the first week of November), sea turtles tend to leave their coastal habitats and join a larger contingent of other turtles migrating southward to overwinter in southern waters. Consequently, by the end of November, listed sea turtles have left the waters of the Chesapeake Bay (Shoop and Kenney 1992; Musick and Limpus 1997; Morrealle and Standora 2005). Sea turtles are not known to move into the James River to forage; however, they may occur near the confluence of the river and Chesapeake Bay.

Atlantic sturgeon

On February 6, 2012, we published two final rules listing five DPSs of Atlantic sturgeon. Atlantic sturgeon originating from the New York Bight, Chesapeake Bay, South Atlantic and Carolina DPSs were listed as endangered, while the Gulf of Maine DPS was listed as threatened

(77 FR 5880; 77 FR 5914). The marine range of all five DPSs extends along the Atlantic coast from Canada to Cape Canaveral, Florida.

Atlantic sturgeon spawn in their natal river[1], with spawning migrations generally occuring during February-March in southern systems, April-May in Mid-Atlantic systems, and May-July in Canadian systems (Murawski and Pacheco 1977; Smith, 1985; Bain 1997; Smith and Clugston 1997; Caron *et al.* 2002). Young remain in the river/estuary until approximately age 2 and at lengths of 30-36 inches before emigrating to open ocean as subadults (Holland and Yelverton 1973; Dovel and Berggen 1983; Dadswell 2006; ASSRT 2007). After emigration from the natal river/estuary, subadults and adult Atlantic sturgeon travel within the marine environment, typically in waters between 16 to 164 feet in depth, using coastal bays, sounds, and marine waters (Vladykov and Greeley 1963; Murawski and Pacheco 1977; Dovel and Berggren 1983; Smith 1985; Collins and Smith 1997; Welsh *et al.* 2002; Savoy and Pacileo 2003; Stein *et al.* 2004; Laney *et al.* 2007; Dunton *et al.* 2010; Erickson *et al.* 2011). However, the distribution of Atlantic sturgeon is strongly associated with prey availability, and as a result, Atlantic sturgeon may occur in small tributaries of larger rivers (such as Skiffles Creek) if suitable forage (e.g., benthic invertebrates such as mollusks and crustaceans) and appropriate habitat conditions are present.

Based on the best available information, Atlantic sturgeon originating from any of five DPSs could occur in the James River; however, the Chesapeake Bay DPS spawns in upstream reaches of this river. The 340 mile long James River is Virginia's largest river and the largest tributary to the Chesapeake Bay (Bushnoe *et al.*, 2005). Tidal waters extend from the mouth, west to Richmond, VA, at the river's fall line (Bushnoe *et al.*, 2005). Based on modeling work using features associated with spawning habitat (e.g., suitable substrate), Bushnoe *et al.* (2005) concluded that the Turkey Island oxbow and the James Neck oxbow were potential spawning sites for Atlantic sturgeon in the James River.

Environmental cues appear to play a strong role in use of the James River by adult, presumably Chesapeake Bay DPS, Atlantic sturgeon (Hager *et al.*, 2011). Adult sturgeon enter the river in spring when water temperatures are around 17° C, and occur from river mile 18 to river mile 67 before departing from the river in June when water temperatures are around 24° C (Hager *et al.*, 2011). Tracking data for 2010 demonstrated a congregation of sturgeon in freshwater areas at river mile 48, suggesting the possibility of suitable spawning habitat in this area (Hager *et al.*, 2011).

Adult sturgeon appear to be absent from the James River for most of the summer until late August when tagged fish are once again detected in the river (Hager *et al.*, 2011). During the late summer-early fall residency (August-October), fish ascend the river rapidly and congregate in upriver sites between rkm 48 and the fall line near Richmond, VA; possibly in response to physiologically stressful conditions (e.g., low dissolved oxygen and elevated water temperature)

[1] Known spawning (natal) rivers: Gulf of Maine DPS: Kennebec River; New York Bight DPS: Hudson and Delaware Rivers; Chesapeake Bay DPS: James River; and Carolina DPS: Roanoke, Tar-Pamlico, Cape Fear, Waccamaw, Great Pee Dee, and Santee-Cooper Rivers. Additional spawning rivers may exist; however, at this time these locations are unknown or have not yet been confirmed.

in the lower James River and Chesapeake Bay (Hager *et al.*, 2011). As temperature declines in late September or early October, adults disperse through downriver sites and begin to move out of the river (Hager *et al.*, 2011). By November, adults occupy only lower river sites (Hager *et al.*, 2011). By December, adults are undetected on the tracking array and, thus, are presumed to be out of the river (Hager *et al.*, 2011).

The spawning season for Chesapeake Bay DPS Atlantic sturgeon is April –May based on historical and current evidence that includes: (1) records of large harvests near the mouth of the Chesapeake Bay and in the lower James River in April; (2) incidental observations of adult-sized carcasses and incidental capture of adult-sized live fish in April; (3) detection of sonically tagged sturgeon in current scientific studies; and, (4) capture of a large female sturgeon in spawning condition within the James River in April 2011 (Hildebrand and Schroeder, 1928; Vladykov and Greeley, 1963; Bushnoe *et al.*, 2005; ASSRT; 2007; Blakenship, 2011a). Capture of another large female in post-spawning condition within the James River in September 2011 suggests the possibility of a second late-summer spawning run (Balazik, unpublished data). However, further analyses are needed to confirm whether fall spawning is occurring in the James River.

Effects of the Action

Dredging

Dredging operations have the potential to interact with listed species as well as reduce the forage base of these species via the alteration of existing biotic assemblages. A hydraulic cutterhead (pipeline) dredge will be used for this project. Sea turtles are not known to be vulnerable to entrainment in cutterhead dredges, presumably because they are able to avoid the relatively small intake and low intake velocity. Additionally, due to the timing of the project (finished by March of 2013 and subsequent years), sea turtles will not be present in the Chesapeake Bay at this time of year. April is the beginning of their seasonal movements into these waters, and it is unlikely that sea turtles would move 18 miles upstream into the James River near Skiffles Creek to forage even if they were seasonally present. Based on this information, we have determined that the likelihood of an interaction between a sea turtle and the hydraulic dredge is discountable and any effects to the prey base for sea turtles will also be discountable.

Similar to sea turtles, Atlantic sturgeon are not known to be vulnerable to cutterhead dredges. Cutterhead dredge heads are placed within the sediments at the dredge site, and fish that may be in the action area would be sub-adult and adult Atlantic sturgeon, which are quite large, thus further reducing the likelihood of any interaction. Early life stages (ELSs) including eggs and larvae (which do not move off the benthos) would not be present near Skiffles Creek, as spawning does not occur in the lower James River. A study by the Norfolk Corps (Cameron 2009) and a second study by the Philadelphia Corps (Environmental Research and Consulting, Inc. 2012) demonstrated through telemetry studies in the James River and Delaware River, respectively, that Atlantic sturgeon were unaffected by the noise associated with dredges, or the presence of cutterhead dredges themselves. They did not exhibit avoidance behavior, the cutterhead dredge in full-operation did not impede their passage in-river, and individuals were not entrained during dredging activities. Additionally, due to the timing of the project (January-March), Atlantic sturgeon are not expected to move into the James River to engage in spawning and foraging activities during this period. Adult Atlantic sturgeon begin their spawning migrations in the James River during April, and data suggest that adults move out of the river to

overwintering sites or into upper reaches of the Appomattox River by December , therefore the presence of Atlantic sturgeon in the lower James River during the proposed project time period is unlikely. Additionally, the Skiffles Creek area does not appear to be a major foraging area for Atlantic sturgeon due to the fact that it is a regularly maintained (i.e. disturbed) navigation channel, and the benthic community likely comprises organisms adapted to disturbance (e.g. annelid worms, amphipods). Atlantic sturgeon prefer mollusks and crustaceans. Based on the previous information, the likelihood of interaction between an Atlantic sturgeon and the hydraulic dredge is discountable, and any effects to foraging Atlantic sturgeon will be insignificant and/or discountable.

Water Quality Effects of Dredging

Dredging may cause a temporary increase in suspended sediment in the dredge area. If any sediment plume does occur, it is expected to be small and suspended sediment is expected to settle out of the water column within a few hours. Turbidity levels associated with hydraulic dredging activities produce sediment plumes typically ranging from 11.5 to 282.0 mg/L (ACOE 2007, Anchor Environmental 2003).

Studies of the effects of turbid waters on fish suggest that concentrations of suspended solids can reach thousands of milligrams per liter before an acute toxic reaction is expected (Burton 1993). The studies reviewed by Burton demonstrated lethal effects to fish at concentrations of 580.0 mg/L to 700,000.0 mg/L depending on species. Studies with striped bass adults showed that pre-spawners did not avoid concentrations of 954.0 to 1,920.0 mg/L to reach spawning sites (Summerfelt and Moiser 1976 and Combs 1979 in Burton 1993). While there have been no directed studies on the effects of total suspended solids (TSS) on Atlantic sturgeon, Atlantic sturgeon sub-adults and adults are often documented in turbid water and Dadswell (1984) reports that sturgeon are more active under lowered light conditions, such as those in turbid waters. As such, Atlantic sturgeon are assumed to be as least as tolerant to suspended sediment as other estuarine fish such as striped bass. The TSS levels expected for dredging (11.5 to 282.0 mg/L) are below those shown to have an adverse effect on fish (580.0 mg/L for the most sensitive species, with 1,000.0 mg/L more typical; see summary of scientific literature in Burton 1993) and benthic communities (390.0 mg/L (EPA 1986)). Based on this information, the effect on Atlantic sturgeon of suspended sediment resulting from dredging activities will be insignificant.

No information is available on the effects of turbidity or suspended sediment on juvenile and adult sea turtles. As noted above, studies of the effects of turbid waters on fish suggest that concentrations of suspended solids can reach thousands of milligrams per liter before an acute toxic reaction is expected (Burton 1993). TSS is most likely to affect sea turtles if a plume causes a barrier to normal behaviors or if sediment settles on the bottom affecting sea turtle prey. However, as detailed, sea turtles are not expected to be in the action area. Based on this information, the effect on sea turtles of suspended sediment resulting from dredging activities will be discountable.

Ongoing Maintenance Dredging

As the effects of maintenance dredging will be the same as those of this maintenance dredge cycle, the effects of an additional dredging cycle during the 15 year life of the permit will also be insignificant or discountable.

Conclusions

Based on the analysis that any effects to listed sea turtles and Atlantic sturgeon will be insignificant or discountable, we are able to concur with your determination that the proposed project is not likely to adversely affect any listed species under NMFS jurisdiction. Therefore, no further consultation pursuant to section 7 of the ESA is required. Reinitiation of consultation is required and shall be requested by the Federal agency or by the Service, where discretionary Federal involvement or control over the action has been retained or is authorized by law and: (a) If new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered in the consultation; (b) If the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the consultation; or (c) If a new species is listed or critical habitat designated that may be affected by the identified action. Should you have any questions about this correspondence please contact Chris Vaccaro at (978) 281-9167 or by e-mail (Christine.Vaccaro@Noaa.gov).

Sincerely,

Daniel S. Morris
Acting Regional Administrator

File Code: H:\S7ST\Section 7\Non-Fisheries\ACOE\Informal\2012\Norfolk District\INER201201006_ACOE_Skiffles Creek Dredging, VA
PCTS: I/NER/2012/01006

Ec: Rusanowsky, NMFS/HCD
Vaccaro, NMFS/NER
Nadel, ACOE/Norfolk

References

Anchor Environmental. 2003. Literature review of effects of resuspended sediments due to dredging. June. 140pp.

Army Corps of Engineers (ACOE). 1983. "Dredging and Dredged Material Disposal," Engineer Manual 1110-2-5025, Office, Chief of Engineers, Washington, DC.

ACOE. 2007. Winthrop Shores Reservation Restoration Program Endangered Species Biological Assessment. Prepared by Normandeau Associates. Submitted to NMFS Northeast Regional Office on February 7, 2007. 46 p.

Atlantic Sturgeon Status Review (ASSRT). 2007. http://www.nero.noaa.gov/prot_res/CandidateSpeciesProgram/AtlSturgeonStatusReviewReport.pdf

Bain, M. B. 1997. Atlantic and shortnose sturgeons of the Hudson River: Common and Divergent Life History Attributes. Environmental Biology of Fishes 48: 347-358.

Burton, W.H. 1993. Effects of bucket dredging on water quality in the Delaware River and the potential for effects on fisheries resources. Versar, Inc., 9200 Rumsey Road, Columbia, Maryland 21045.

Cameron, Sarah. 2009. ACOE Norfolk. Assessing the impacts of channel dredging on Atlantic sturgeon movement and behavior. Presentation. In press.

Caron, F., D. Hatin, and R. Fortin. 2002. Biological characteristics of adult Atlantic sturgeon (*Acipenser oxyrinchus*) in the Saint Lawrence River estuary and the effectiveness of management rules. Journal of Applied Ichthyology 18: 580-585. Dadswell, M.J. 1984. Status of the Shortnose Sturgeon, *Acipenser brevirostrum,* in Canada. The Canadian Field-Naturalist 98 (1): 75-79.

Collins, M. R. and T. I. J. Smith. 1997. Distribution of shortnose and Atlantic sturgeons in South Carolina. North American Journal of Fisheries Management. 17: 995-1000.

Dadswell, M. 2006. A review of the status of Atlantic sturgeon in Canada, with comparisons to populations in the United States and Europe. Fisheries 31: 218-229.

Dovel, W. L. and T. J. Berggren. 1983. Atlantic sturgeon of the Hudson River estuary, New York. New York Fish and Game Journal 30: 140-172.

Environmental Protection Agency (EPA). 1986. Quality Criteria for Water. EPA 440/5-86-001.

Dunton *et al.* 2010. Abundance and distribution of Atlantic sturgeon (*Acipenser oxyrinchus*)

within the Northwest Atlantic Ocean, determined from five fishery-independent surveys. *Fish. Bull. 108(4):450–465.*

Erickson *et al.* 2011. Use of pop-up satellite archival tags to identify oceanic-migratory patterns for adult Atlantic Sturgeon, Acipenser oxyrinchus oxyrinchus Mitchell, 1815. *J. Appl. Ichthyol. 27: 356–365.*

Holland, B.F., Jr. and G.F. Yelverton. 1973. Distribution and biological studies of anadromous fishes offshore North Carolina. North Carolina Department of Natural and Economic Resources, Division of Commercial and Sports Fisheries, Morehead City. Special Scientific Report 24:1-132.

Laney, R.W., J.E. Hightower, B.R. Versak, M.F. Mangold, W.W. Cole Jr., and S.E. Winslow. 2007. Distribution, Habitat Use, and Size of Atlantic Sturgeon Captured during Cooperative Winter Tagging Cruises, 1988-2006. American Fisheries Society Symposium 56: 000-000.

Morreale, S.J. 1999. Oceanic migrations of sea turtles. PhD Thesis. Cornell University.

Morreale, S.J. 2003. Assessing health, status, and trends in Northeasten sea turtle populations. Interim report: Sept. 2002-Nov. 2003.

Morreale, S. J. and V. J. Burke. 1997. Conservation and Biology of Sea Turtles in the Northeastern United States, p.41-46. In: T. Tyning (Editor), Status and Conservation of Turtles of the Northeastern United States. Serpents Tale Natural History Book Distributors, Lanesboro, Minnesota. V. Burke, School of Natural Resources, Univ. Missouri, 112 Stephens Hall, Columbia, Missouri 65211 USA.

Morreale, S.J. and E.A. Standora. 1990. Occurrence, movement, and behavior of the Kemp's ridley and other sea turtles in New York waters. Annual report for the NYSDEC, Return A Gift To Wildlife Program: April 1989 -April 1990.

Morreale, SJ., and E.A Standora. 1993. Occurrence, movement, and behavior of the Kemp's ridley and other sea turtles in New York waters. Okeanos Ocean Research Foundation Final Report April 1988-March 1993. 70 pp.

Morreale, SJ. and E.A Standora. 2005. Western North Atlantic waters: Crucial developmental habitat for Kemp's ridley and loggerhead sea turtles. Chel. Conserv. BioI. 4(4):872-882.

Murawski, S. A. and A. L. Pacheco. 1977. Biological and fisheries data on Atlantic Sturgeon, *Acipenser oxyrhynchus* (Mitchill). National Marine Fisheries Service Technical Series Report 10: 1-69.

Savoy, T. and D. Pacileo. 2003. Movements and important habitats of subadult Atlantic sturgeon in Connecticut waters. Transactions of the American Fisheries Society 132: 1-8.

Shoop, C.R. and R.D. Kenney. 1992. Seasonal distributions and abundances of loggerhead and leatherback sea turtles in waters of the northeastern United States. Herpetological Monographs 6: 43-67.

Smith, T. I. J. 1985. The fishery, biology, and management of Atlantic sturgeon, *Acipenser oxyrhynchus*, in North America. Environmental Biology of Fishes 14(1): 61-72.

Smith, T. I. J. and J. P. Clungston. 1997. Status and management of Atlantic sturgeon, *Acipenser oxyrinchus*, in North America. Environmental Biology of Fishes 48: 335-346.

Standora, E.A., S.J. Morreale, and V.J. Burke. 1992. Application of recent advances in satellite microtechnology: Integration with sonic and radio tracking of juvenile Kemp's ridleys from Long Island, New York. In: Salmon, M., and Wyneken, J. (Compilers). Proceedings of the Eleventh Annual Workshop on Sea Turtle Biology and Conservation. NOAA Tech. Memo. NMFS-SEFSC-302, pp. 111-113.

Stein, A. B., K. D. Friedland, and M. Sutherland. 2004. Atlantic sturgeon marine distribution and habitat use along the northeastern coast of the United States. Transactions of the American Fisheries Society 133: 527-537.

Vladykov, V.D. and J.R. Greeley. 1963. Order Acipenseroidea. Pages 24-60 in Fishes of the Western North Atlantic. Memoir Sears Foundation for Marine Research 1(Part III). xxi + 630 pp.

Welsh, Stuart A., Michael F. Mangold, Jorgen E. Skjeveland, and Albert J. Spells. 2002. Distribution and Movement of Shortnose Sturgeon (*Acipenser brevirostrum*) in the Chesapeake Bay. Estuaries Vol. 25 No. 1: 101-104.

DEPARTMENT OF THE ARMY
NORFOLK DISTRICT CORPS OF ENGINEERS
FORT NORFOLK 803 FRONT STREET
NORFOLK VIRGINIA 23510-1096

REPLY TO
ATTENTION OF:

May 29, 2013

Operations Branch

Ms. Mary Colligan, Assistant Regional Director for Protected Services
National Marine Fisheries Service
Northeast Regional Office
55 Great Republic Drive
Gloucester, Massachusetts 01930-2276

Dear Ms. Colligan:

The Norfolk District, U. S. Army Corps of Engineers, completed a Section 7 consultation in 2012 with the National Marine Fisheries Service (NMFS) of no adverse effect for sea turtles and Atlantic sturgeon for maintenance dredging of the Skiffes Creek Federal Navigation Project. Since the April 17, 2012 NMFS consultation determination, two additional actions are being evaluated for maintenance dredging of the Skiffes Creek Federal Navigation Project. These are the inclusion of mechanical dredging and dredged material placement at the Norfolk Ocean Disposal Site (NODS).

In order to comply with Section 7 of the Endangered Species Act (ESA) of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*), all major Federal actions that may affect listed species or species proposed to be listed must consult with the NMFS. The NMFS has listed the Chesapeake Bay distinct population segment (DPS) of the Atlantic sturgeon (*Acipenser oxyrinchus oxyrinchus*) as an endangered species. The final listing determination for the Chesapeake Bay DPS of Atlantic sturgeon was published in the Federal Register on February 6, 2012. I am requesting an informal Section 7 consultation to evaluate potential impacts from mechanical dredging and dredged material placement at NODS for the Skiffes Creek Federal Navigation Project on sea turtles and the Chesapeake Bay DPS of the Atlantic sturgeon.

The Skiffes Creek Federal Navigation Project is located at Fort Eustis, Newport News, Virginia. The creek is approximately 4 miles long, and has a surface area of 137 acres. Skiffes Creek is a tidal creek which empties into the east side of the lower James River, 18 miles above its mouth. The total project distance is approximately 1.7 miles in length. The dredging distance upstream is approximately 0.37 miles in length.

The NODS is located in the Atlantic Ocean approximately 17 miles east of Cape Henry and approximately 2 statute miles north/northwest of The Chesapeake Light Tower. The NODS is approximately 50 square nautical miles in size with a circular

radius of 4 nautical miles and water depths ranging from 43 to 85 feet. The center point coordinate of the site is north latitude 36° 59' and west longitude and 75° 39'.

The NODS was designated by the Environmental Protection Agency (EPA) pursuant to Section 102(c) of the Marine Protection, Research, and Sanctuaries Act of 1972, as amended, as suitable for ocean disposal of dredged material on July 2, 1993 (FR. Vol. 5a No. 126). The NODS is located in the Atlantic Ocean approximately 17 miles east of Cape Henry and is approximately 50 square nautical miles in size. The site is circular with a radius of 4 nautical miles and the water depth ranges from 43 to 85 feet. The NODS has seemingly unlimited capacity and was designated for use as a placement site for suitable materials from the Inner Harbor channels within the Port of Hampton Roads and other lower Chesapeake Bay dredged material. A Biological Opinion was issued by the NMFS for NODS on October 16, 2012.

Previous maintenance dredging of the Skiffes Creek Federal Navigation Project was completed in 2004. The average dredging frequency has been approximately every 7 years. Maintenance dredging of Skiffes Creek project will be conducted during a fifteen-year period. Dredging will be conducted by hydraulic dredge to the maximum depth for each area removing approximately 500,000 cubic yards of material each dredging cycle. An approximate total of 1,500,000 cubic yards will be dredged over a fifteen-year period. Dredging is expected to commence in 2014.

Following are the project depths:

a. One 7,800 foot long area, -19 feet below mean lower low water (station 0+00 - 77+64.16) variable in width.
b. One 690 foot long area, -17 feet below mean lower low water (station 77+64.16 - 83+52.69) variable in width.
c. One 715 foot long area, -11 feet below mean lower low water (station 83+52.69 - 90+67.69) variable in width.

There are four species of federally threatened or endangered sea turtles under the jurisdiction of the NMFS that may be found seasonally in the coastal waters of Virginia.

Leatherback sea turtle (*Dermochelys coriacea)*	Endangered
Loggerhead sea turtle (*Caretta caretta)*	Threatened
Kemp's ridley sea turtle (*Lepidochelys kempii)*	Endangered
Green sea turtle (*Chelonia mydas)*	Endangered

Leatherback sea turtles tend to frequent offshore habitats and are unlikely to be in the project area. The loggerhead sea turtle is the most abundant species of sea turtle in U.S. waters. In general, the listed sea turtles are seasonally distributed in the coastal U. S. Atlantic waters, migrating to and from habitats that extend from Florida to New England, with overwintering in southern waters.

Sea turtles are expected to be in the Virginia Chesapeake Bay during warmer months (April through November). Sea turtles are typically small juveniles with the most abundant species being the loggerhead followed by the Kemp's ridley sea turtle. Studies have examined the seasonal distribution of sea turtles in the mid-Atlantic, including Maryland and Virginia. Sea turtles begin appearing in nearshore habitats of the mid-Atlantic as water temperatures rise during spring and then remain in the region throughout the fall. As temperatures decline in the fall, sea turtles tend to leave their coastal habitats and join a larger contingent of other sea turtles migrating southward to overwinter in southern waters. By the end of November, the majority of sea turtles have left the waters of the Virginia.

Dredging of the Skiffes Creek Federal Navigation Channel may be performed with a hydraulic cutterhead dredge or a mechanical dredge. The dredged material is approximately 25% sand, 60% silt and 15% clay.

Cutterhead dredges previously used have been small, usually with a maximum pipe diameter of 18 inches. The dredged material will be pumped by hydraulic pipeline directly to the upland confined placement facility known as Fort Eustis Dredged Material Management Area (FEDMMA). The FEDMMA is an 80-acre facility located on the western portion of Fort Eustis, south of the Third Port facility.

A hydraulic cutterhead dredge uses a cutterhead to loosen or dislodge sediments to hydraulically capture the material. The slurried sediment is transported through a pipeline to the placement site. Because pipeline dredges pump directly to the placement site, they can operate continuously and can be very productive, and cost efficient. Sea turtles are not known to be vulnerable to entrainment in cutterhead dredges. Similar to sea turtles, adult Atlantic sturgeon are not known to be vulnerable to cutterhead dredges.

Mechanical dredges consist of clamshell type dredges or articulated mechanical (excavator) dredges. The dredged material will be transported by barge to the NODS or Shirley Plantation/Weanack facility.

Maintenance dredging of the Skiffes Creek Federal Navigation Project has the potential to impact the Atlantic sturgeon and sea turtles. These impacts include the following:

1) burial, removal, and/or alteration of benthic habitat at the dredging site;
2) physical injury or death of adults or sub-adults due to entrainment by the dredge;
3) physical or biological impacts to water quality via:
    a) decreased dissolved oxygen levels
    b) predator/prey interactions
    c) primary productivity and respiration
    d) loss of benthic prey species
4) noise and presence of the dredge and related equipment

Enclosed are drawings of the project site. The Skiffes Creek Federal Navigation Channel is located in a high traffic area utilized by military watercraft and other government agencies in cargo operations, logistics management, training and vessel operation. Additionally, Skiffes Creek is used by commercial vessels that require access to industrial complexes located upstream. It is unlikely that Atlantic sturgeon would be present in the project area. The site is not an area where spawning is known to occur. The incidence of Atlantic sturgeon in Skiffes Creek is low. Small juveniles are not likely using the area, but adults and sub-adults may transit the project area during migration or to forage. Atlantic sturgeon have the ability to leave the area prior to commencement of maintenance dredging. Likewise, any sea turtles that may be in the project area have the ability to leave the area prior to commencement of dredging. The effects of maintenance dredging of the Skiffes Creek Federal Navigation Project would be temporary in nature and are not likely to adversely affect Atlantic sturgeon or sea turtles in the project area. We are requesting your concurrence with this determination.

Should you have any questions or require further information on this submittal, please contact Ms. Teri Nadal of my staff at (757) 201-7299 or via email teresita.i.nadal@usace.army.mil. Thank you for your assistance.

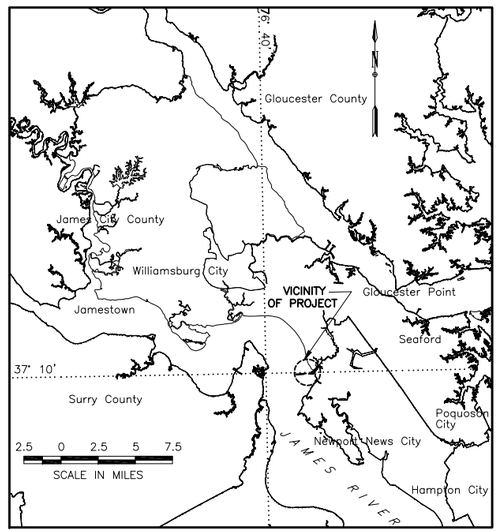
Sincerely,

Elizabeth G. Waring

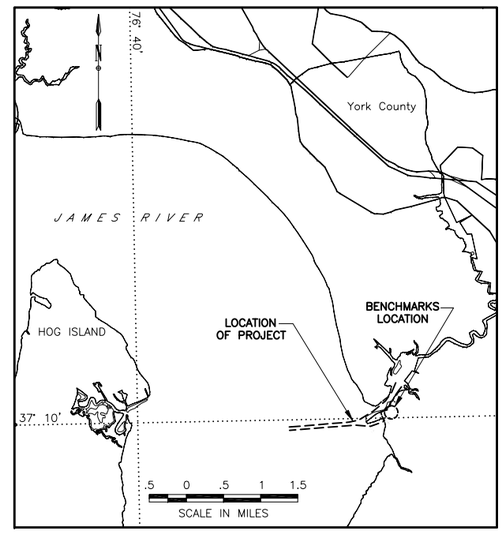
Elizabeth G. Waring
Chief, Operations Branch

Enclosure

SKIFFES CREEK
PROJECT CONDITION
SURVEY OF OCTOBER 2008
JAMES RIVER, VIRGINIA



VICINITY MAP

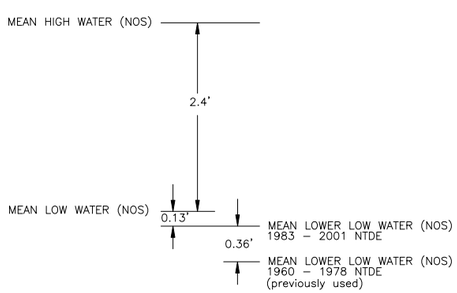


LOCATION MAP

– LEGEND –

CHANNEL LIMITS

CONCRETE DOLDHINS



DATUM DIAGRAM
1983 – 2001 Tidal Epoch
(not to scale)

– NOTES –

MEAN LOWER LOW WATER (MLLW), 1960–1978 National Tidal Datum Epoch (NTDE) was determined by interpolating between MLLW–NGVD differentials at Scotland and Burwell Bay based on National Ocean Service (NOS) tidal observations and Corps of Engineers leveling. The update to the 1983–2001 NTDE was determined to be 0.36 foot by interpolating the NOS NTDE differentials at Sewells Point and Claremont VA.

SOUNDINGS are in feet referenced to NOS MLLW and were taken on 8 October 2008.

MEAN RANGE OF TIDE is 2.4 feet at Mulberry Point, James River, Virginia based on NOS observations.

COORDINATES are in U.S. Survey feet, referred to the Virginia State Plane Coordinate System, South Zone and are based on North American Datum of 1983.

PLANIMETRIC FEATURES were developed by stereo–photogrammetric methods which included a layered digital database from aerial photographs flown on 25 March 1995.

LAST DREDGED by Hampton Roads Leasing during the period 1 July – 1 September 2004 under Contract No. W91236–04–C–0039 dated 11 and 15 March 2004.

BENCHMARKS
Elevations are relative to
NOS MLLW, 1983–2001 NTDE

VERTICAL DATUM TABLE

BENCHMARK	ELEVATION
CE "THIRD, 2001"	+9.94
CE "PORT, 2001"	+7.79
USE TBM "CHISELED SQUARE #1, 1991"	+7.24

The information depicted on this map represents the results of surveys made on the date(s) indicated and can only be considered as indicating the general conditions existing at that time.

SIGNATURES AFFIXED BELOW INDICATE OFFICIAL RECOMMENDATION AND APPROVAL OF ALL DRAWINGS IN THIS SET AS INDICATED ON INDEX TO DRAWINGS.

INDEX TO DRAWINGS

SHEET NO.	TITLE	FILE NUMBER
1	TITLE SHEET	FILE NO. H–29–16–41(1)
2	MAPPING SHEET	FILE NO. H–29–16–41(2)

COORDINATES OF CENTERLINE STATIONS

STATION	EAST (X)	NORTH (Y)
0+00.0	12,027,863.29	3,589,034.09
46+43.3	12,032,491.47	3,589,409.04
66+63.3	12,034,390,22	3,590,098.36
71+46.5	12,034,786.36	3,590,423.04
76+64.2	12,034,902.97	3,590,927.38
90+67.7	12,035,721.23	3,592,067.71

DEPARTMENT OF THE ARMY
NORFOLK DISTRICT, CORPS OF ENGINEERS
NORFOLK, VIRGINIA

REVIEWED: CHIEF, NAVIGATION SUPPORT AND SURVEY SECTION
APPROVED: CHIEF, OPERATIONS BRANCH
SUBMITTED: CHIEF, DESIGN SECTION
APPROVED: CHIEF, TECHNICAL SERVICES DIVISION

US Army Corps of Engineers Norfolk District

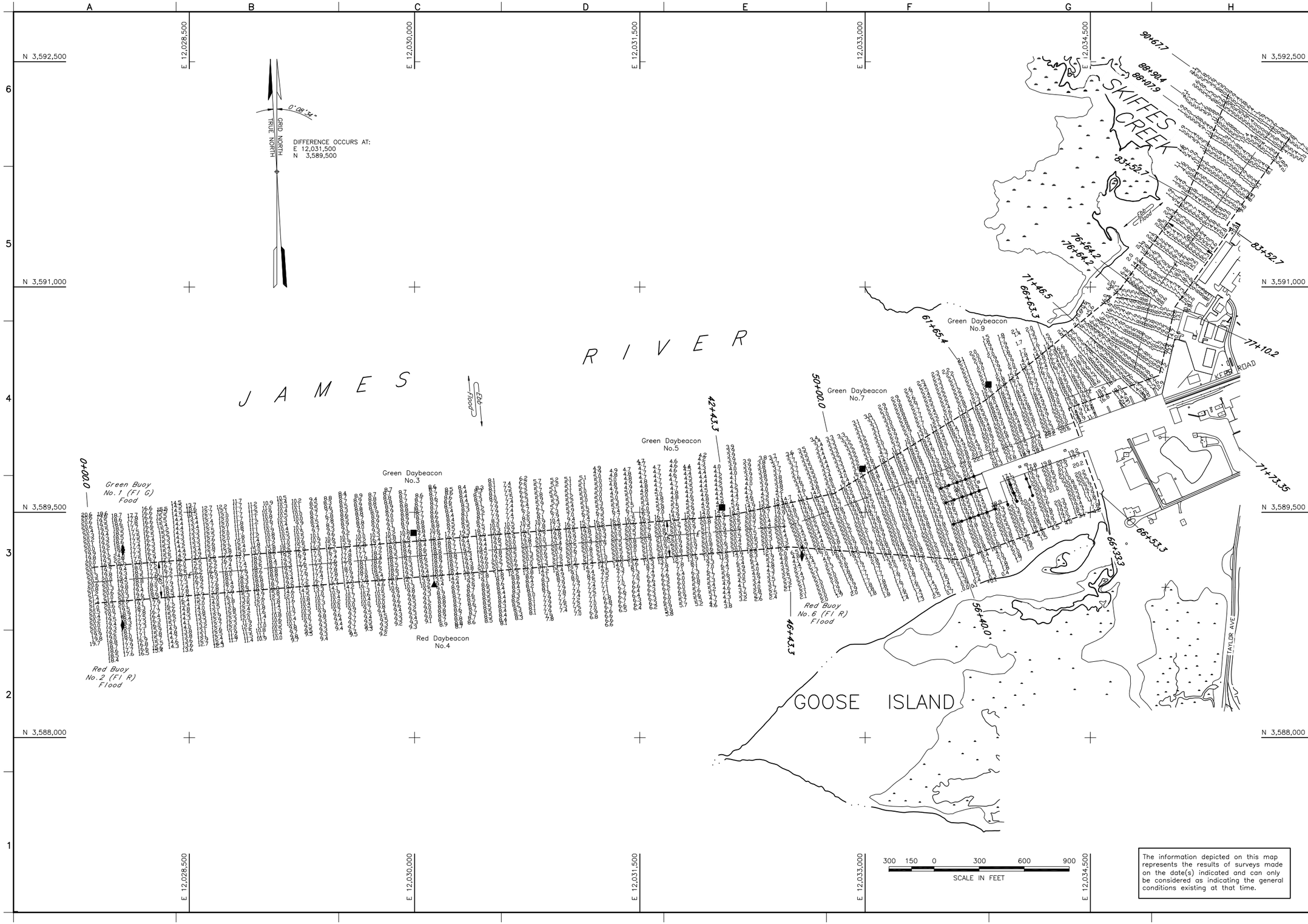
REV.	DATE	DESCRIPTION	BY	APP

DESIGNED: R.J.W.
DRAWN: M.L.M.
PROJECT NO.:
DATE: 13 AUG 09
SCALE: AS SHOWN
NORFOLK DISTRICT FILE NO.: H–29–16–41(1)
DRAWING NO.:
SUBMITTED: S.J.P.
SURVEYED BY: Waterway Surveys and Engineering, Ltd.

NORFOLK DISTRICT
CORPS OF ENGINEERS
NORFOLK, VIRGINIA

SKIFFES CREEK
PROJECT CONDITION
SURVEY OF OCTOBER 2008
JAMES RIVER, VIRGINIA

SHEET 1 OF 2



The information depicted on this map represents the results of surveys made on the date(s) indicated and can only be considered as indicating the general conditions existing at that time.

US Army Corps of Engineers
Norfolk District

REV.	DATE	DESCRIPTION	BY	APP

DATE: 13 AUG 09
SCALE: AS SHOWN
NORFOLK DISTRICT FILE NO.: H-29-16-41(2)

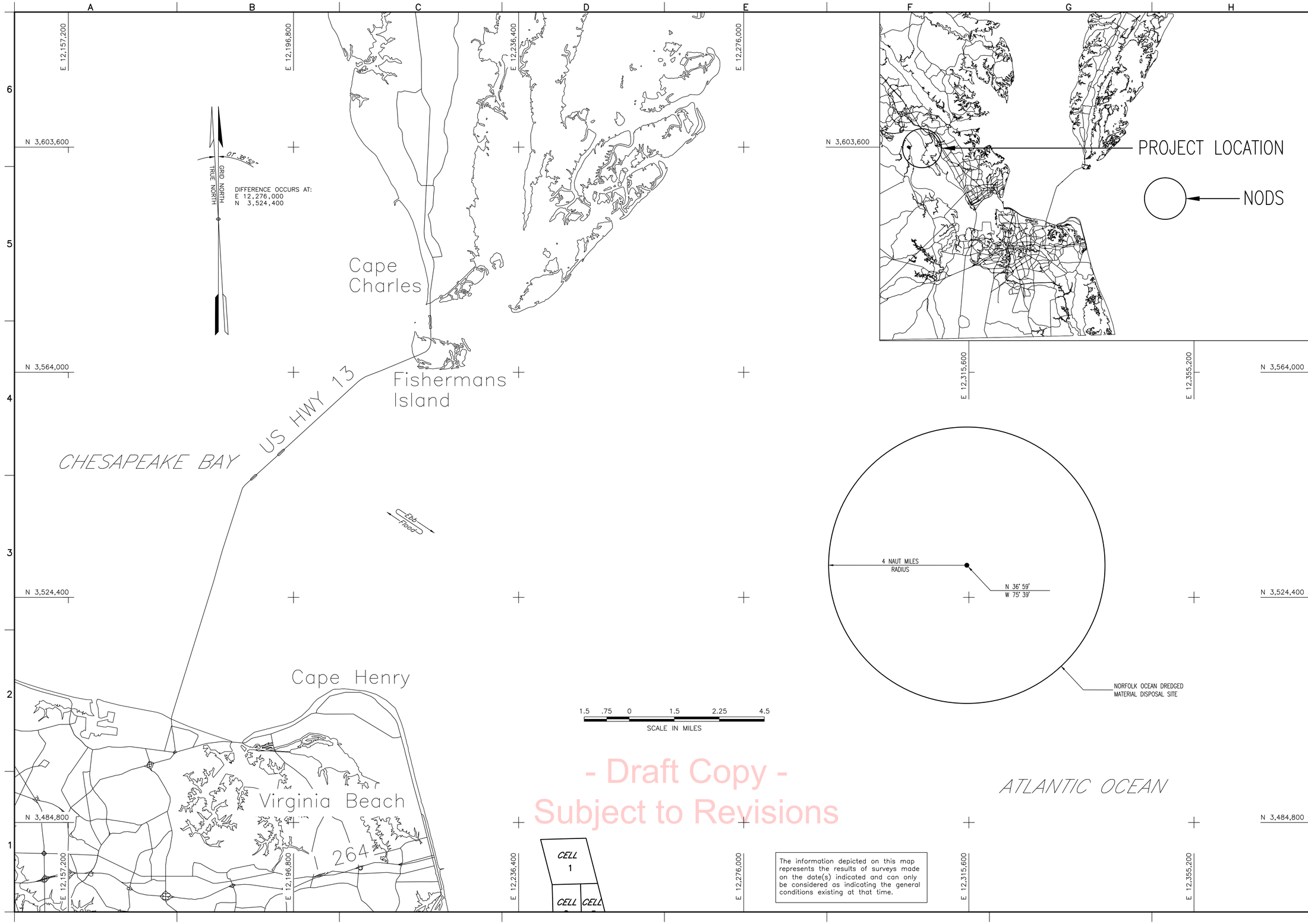
DESIGNED: R.J.W.
DRAWN: M.L.M.
SUBMITTED: S.J.P.
PROJECT NO.:
DRAWING NO.:

SURVEYED BY: Waterway Surveys and Engineering, Ltd.

NORFOLK DISTRICT
CORPS OF ENGINEERS
NORFOLK, VIRGINIA

SKIFFES CREEK
PROJECT CONDITION
SURVEY OF OCTOBER 2008
JAMES RIVER, VIRGINIA

SHEET 2 OF 2



US Army Corps of Engineers
Norfolk District

REV.	DATE	DESCRIPTION	BY	APP.

NORFOLK DISTRICT
CORPS OF ENGINEERS
NORFOLK, VIRGINIA

DESIGNED: | CHECKED: R.J.W. | DATE: 17 MAY 13
DRAWN: J.K.W. | SUPERVISED: C.W.T. | SCALE: AS SHOWN
NORFOLK DISTRICT FILE NO.: SKC.2012-08-21.CS(1)
DRAWING NO.:
SURVEYED BY: A.M.P. & M.A.W.

SKIFFES CREEK
PROJECT CONDITION
SURVEY OF AUGUST 2012
JAMES RIVER, VIRGINIA

SHEET 1 OF 1

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
NORTHEAST REGION
55 Great Republic Drive
Gloucester, MA 01930-2276

JUN 27 2013

Elizabeth G. Waring
Department of the Army
Norfolk District Corps of Engineers
Fort Norfolk 803 Front Street
Norfolk, VA 23510-1096
Attn: Operations Branch

RE: Skiffes Creek Dredging Modifications

Dear Ms. Waring,

Your May 29, 2013, correspondence requests our concurrence with your determination that the U.S. Army Corps of Engineer's modifications to the dredging of Skiffes Creek Federal Navigation Channel are not likely to adversely affect species listed by us under the Endangered Species Act (ESA) of 1973, as amended.

On April 17, 2012 we issued a letter to you consulting on the effects dredging within the Skiffes Creek Federal Navigation Channel, and we concurred with your determination that the proposed action was not likely to adversely affect several species of sea turtle including the Northwest Distinct Population Segment (DPS) of loggerhead sea turtles, as well as Kemp's ridley, leatherback, and green sea turtles. We also concurred that the action was not likely to adversely affect any of the five DPSs of Atlantic sturgeon.

Review of Reinitiation Triggers

Reinitiation of consultation is required and shall be requested by the Federal agency or by us where discretionary Federal involvement or control over the action has been retained or is authorized by law and: (a) if the amount or extent of incidental take is exceeded; (b) a new species is listed or critical habitat designated that may be affected by the identified action; (c) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the consultation; or (d) new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered.

We have reviewed the information provided by you to determine if any of these triggers for reinitiation have been met. As the April 2012 consultation was completed informally, there

was no incidental take statement, and no takes of any listed species have been observed to date. No new species or critical habitat has been designated that may be affected by the proposed action. Additionally, there is no new information regarding effects of the action that were not previously considered. While the proposed action will be modified to include mechanical dredging as well as disposal of dredged material at the Norfolk Ocean Disposal Site (NODS), the disposal of material at the NODS has previously been consulted on in the Chesapeake Bay Entrance Channel Biological Opinion (Opinion) on October 16, 2012. We concluded that any effects of the movement or disposal of dredged materials at the NODS are not likely to affect species listed by us under the ESA in that Opinion. We have no new information on the effects of cutterhead dredging or presence of listed species in Skiffes Creek that would cause us to reconsider the analysis conducted in the April, 2012 consultation. The modification to include mechanical dredging will not affect listed species in a manner or to an extent not previously considered, for the reasons explained below.

Effects of the Proposed Modifications

Entrainment in Mechanical Dredges

In our previous consultation of April 2012, we concurred with your determination that entrainment in dredge equipment would not be likely due to 1) the fact that Atlantic sturgeon and sea turtles are not likely to be foraging in the navigation channel of Skiffes Creek and 2) the proposed dredge machinery is not known to entrain sea turtles or Atlantic sturgeon.

Skiffes Creek is a small shallow waterway connected to the James River, located approximately 18 miles upstream from the confluence of the James River with Chesapeake Bay. Salinity levels drop drastically in the James River with upstream movement, and it is not likely that suitable prey would be available near the action area for sea turtles to forage on. It is therefore not likely that sea turtles would be present in the action area, as previously analyzed in the April, 2012, consultation. Additionally, the action area does not appear to be a major foraging area for Atlantic sturgeon adults and subadults (the only life stages likely to be present) due to the fact that the navigation channel is subject to shoaling, necessitating the need for dredging, and the benthic community likely comprises organisms adapted to disturbance (e.g. annelid worms, amphipods), which are not the preferred forage items of Atlantic sturgeon (*i.e.*, shellfish beds, seagrass beds, tidal flats, etc). As such, we previously concluded that Atlantic sturgeon were not likely to be present in the action area.

Furthermore, the dredge equipment used in the action (cutterhead dredges) has been previously demonstrated not to pose an entrainment risk to Atlantic sturgeon or sea turtles if one were to migrate through the action area en route to optimal foraging grounds. Clamshell mechanical dredging has been shown to similarly pose limited risk of entrainment, because of the manner in which the dredge is operated. Clamshell bucket dredges are slowly lowered through the water column and the dredge bucket is opened upon contact with the substrate. Both sea turtles and Atlantic sturgeon are thought to be able to avoid dredges that operate in this manner, especially since forage habitat is not present and neither species would be on the benthos. As such, the new modifications to the action will not produce any effects that have not previously been assessed in the April, 2012, consultation.

Water Quality Effects

Dredging may cause a temporary increase in suspended sediment in the dredge area. As we previously concurred, any sediment plume is expected to be small and suspended sediment is expected to settle out of the water column within a few hours. Turbidity levels associated with hydraulic dredging activities produce sediment plumes typically ranging from 11.5 to 282.0 mg/L (ACOE 2007, Anchor Environmental 2003). Turbidity levels associated with mechanical dredges typically range from 26-350mg/L (ACOE 2007; Anchor Environmental, 2003) with the highest levels detected adjacent to the dredge bucket and concentrations decreasing with greater distance from the dredge (see ACOE, 2007).

While there have been no directed studies on the effects of total suspended solids (TSS) on Atlantic sturgeon, Atlantic sturgeon sub-adults and adults are often documented in turbid water and Dadswell (1984) reports that sturgeon are more active under lowered light conditions, such as those in turbid waters. As such, Atlantic sturgeon are assumed to be as least as tolerant to suspended sediment as other estuarine fish such as striped bass. The TSS levels expected for dredging (for either type of dredge equipment) are below those shown to have an adverse effect on fish (580.0 mg/L for the most sensitive species, with 1,000.0 mg/L more typical; see summary of scientific literature in Burton 1993) and benthic communities (390.0 mg/L (EPA 1986)). TSS is most likely to affect sea turtles if a plume causes a barrier to normal behaviors or if sediment settles on the bottom affecting sea turtle prey, as these species are not affected directly by sediment in the water because they breathe air. Preferred foraging habitat for either sea turtles or Atlantic sturgeon does not occur within the action area. As such, the new modifications to the action will not produce any effects that have not previously been assessed in the April, 2012, consultation.

Based on this analysis of the re-initiation triggers, NMFS has determined that reinitiation of consultation is not necessary because the modifications to the action will not produce effects that have not already been consulted on in the previous consultation. As such, the conclusions reached in our April 17, 2012, letter remain valid and no further consultation is necessary at this time. Should you have any questions regarding this letter, please contact Chris Vaccaro of my staff, at (978)281-9167 or by e-mail (Christine.Vaccaro@noaa.gov).

Sincerely,

John K. Bullard
Regional Administrator

EC: Vaccaro, F/NER3
Nadal, ACOE
O'Brien, F/NER4

File Code: Sec 7 ACOE Norfolk—Skiffes Creek
PCTS I/NER/2012-1006

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
NORTHEAST REGION
55 Great Republic Drive
Gloucester, MA 01930-2276

OCT 16 2012

Mark T. Mansfield, Chief
Planning and Policy Branch
Department of the Amy
Norfolk District, Corps of Engineers
Fort Norfolk, 803 Front Street
Norfolk, Virginia 23510-1096

Elizabeth Waring, Chief
Operations Branch
Department of the Amy
Norfolk District, Corps of Engineers
Fort Norfolk, 803 Front Street
Norfolk, Virginia 23510-1096

Dear Mr. Mansfield and Ms. Waring,

Please find enclosed a copy of the Biological Opinion on the effects of the following projects:

- Cape Henry Channel;
- York Spit Channel;
- Rappahannock Shoal;
- York River Entrance Channel;
- Sandbridge Beach Nourishment and Hurricane Protection Project;
- Virginia Beach Hurricane Protection Project;
- Thimble Shoals Channel;
- Atlantic Ocean Channel;
- Norfolk Harbor Channels;
- Craney Island Eastward Expansion; and,
- Dredged Material Disposal Areas: Dam Neck Ocean Disposal Site, Wolf Trap Alternate Placement Site, Rappahannock Shoal Deep Alternate Open Water Site, Craney Island Dredged Material Management Area, and, Norfolk Ocean Dredged Material Disposal Site.

This work will be carried out by the U.S. Army Corps of Engineers (USACE) or their

contractors. Other Federal agencies with a role in authorizing, funding or carrying out the proposed actions are the Bureau of Ocean Energy Management, the U.S. Navy, and the U.S. Environmental Protection Agency (EPA). The USACE, Norfolk District, is the lead Federal agency for this consultation. In this Opinion, we conclude that the proposed actions are likely to adversely affect, but not likely to jeopardize the continued existence of the Northwest Atlantic Distinct Population Segment (DPS) of loggerhead sea turtles, or Kemp's ridley, green or leatherback sea turtles or the threatened Gulf of Maine DPS of Atlantic sturgeon or the endangered New York Bight, Chesapeake Bay, Carolina or South Atlantic DPSs of Atlantic sturgeon. We also conclude that the proposed actions may affect but are not likely to adversely affect shortnose sturgeon, hawksbill sea turtles, or North Atlantic right, humpback or fin whales.

This Opinion replaces the following Opinions which are hereby withdrawn: Thimble Shoals and Atlantic Ocean Channel (April 25, 2002), Virginia Beach Hurricane Protection Project – Thimble Shoals Surround and Atlantic Ocean Channel Borrow Area (December 2, 2005), Cape Henry, York Spit, York River Entrance Channel and Rappahanock Shoals (July 24, 2003), and Sandbridge Beach (April 2,1993, amended on August 20, 2001).

Our Opinion includes an Incidental Take Statement (ITS). Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. "Otherwise lawful activities" are those actions that meet all State and Federal legal requirements, including any state endangered species laws or regulations, except for the prohibition against taking in ESA Section 9. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited under the ESA provided that such taking is in compliance with the terms and conditions of this Incidental Take Statement. The ITS exempts the take of sea turtles due to entrainment in hopper dredges and capture in relocation trawls and exempts the take of Atlantic sturgeon due to entrainment in hopper and cutterhead dredges, capture in relocation trawls and capture in mechanical dredges. The take levels provided in the ITS cover the entire 50-year duration of the proposed action.

The ITS specifies reasonable and prudent measures necessary to minimize and monitor take of Atlantic sturgeon and listed sea turtles. The measures described in the ITS are non-discretionary and must be implemented for the exemption in section 7(o)(2) to apply. USACE, as the lead Federal agency, has a continuing duty to regulate the activity covered by this ITS. If you (1) fail to assume and implement the terms and conditions or (2) fails to require your contractors to adhere to the terms and conditions of the ITS through enforceable terms that are added to permits and/or contracts as appropriate, the protective coverage of section 7(o)(2) may lapse. In order to monitor the impact of incidental take, you must report the progress of the action and its impact on the species to us as specified in the Incidental Take Statement [50 CFR §402.14(i)(3)] (See U.S. Fish and Wildlife Service and National Marine Fisheries Service's Joint Endangered Species Act Section 7 Consultation Handbook (1998) at 4-49).

This Opinion concludes formal consultation for the proposed action as currently defined. Reinitiation of this consultation is required if: (1) the amount or extent of taking specified in the ITS is exceeded; (2) new information reveals effects of these actions that may affect listed

species or critical habitat in a manner or to an extent not previously considered; (3) project activities are subsequently modified in a manner that causes an effect to the listed species that was not considered in this Opinion; or (4) a new species is listed or critical habitat designated that may be affected by the identified action.

Depending on the circumstances associated with the cause for reinitiation, it may not be necessary to reinitiate consultation for all of the actions considered here. For example, if a new species is listed that may be affected by dredging activities, it would likely be necessary to reinitiate consultation on all of the activities considered here. However, if the cause for reinitiation has effects that are limited to one action (for example, a change in dredge type, dredge volume or disposal area), reinitiation of consultation on only that action would be necessary. We expect that determinations about the scope of any future reinitiation(s) will be made in cooperation between the USACE and us.

Should you have any questions regarding this Opinion please contact Julie Crocker of my staff at (978) 282-8480 or by e-mail (Julie.Crocker@noaa.gov). I look forward to continuing to work with you and your staff on issues related to listed species and Chesapeake Bay dredging projects.

Sincerely,

for John K. Bullard
Regional Administrator

ec: Crocker - F/NER3
O'Brien – F/NER4
Underwood, Pruhs – ACOE NAO
BOEM
EPA
Navy

File Code: Sec 7 ACOE Norfolk – Chesapeake Bay entrance 2012
PCTS: F/NER/2012/01586