

# Appendix A

## Agency Coordination

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**Appendix A Correspondence Index**

<b>DOCUMENT NUMBER</b>	<b>DATE</b>	<b>FROM</b>	<b>TO</b>	<b>SUBJECT</b>
001	January 11, 2013	Virginia Marine Resources Commission (VMRC)	NASA	Existing Permit Applicability
002	March 18, 2013	U.S. Army Corps of Engineers (USACE)	NASA	Existing Permit Applicability
003	March 20, 2013	Virginia Department of Historic Resources	NASA	Cultural Resources Compliance Protocol
004	March 20, 2013	U.S. Fish & Wildlife Service	NASA	Existing Programmatic Biological Opinion Applicability
005	March 21, 2013	National Marine Fisheries Service (NMFS) – Protected Resources Division	NASA	Existing Biological Opinion Applicability and Consideration of New Information
006	April 24, 2013	NMFS – Habitat Conservation Division (HCD)	NASA	Essential Fish Habitat (EFH) Conservation Recommendations
007	April 29, 2013	NASA	NMFS-HCD	Acceptance of EFH Conservation Recommendations
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009	May 20, 2013	VDEQ	NASA and USACE	Existing Permit Waiver Applicability
010	May 28, 2013	NASA	VMRC and USACE	Proposed Change in Permitted Project Design
011	June 11, 2013	VMRC	NASA	Authorization of Proposed Change in Project Design

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**Document 001**  
**Virginia Marine Resources Commission**  
**January 11, 2013**

Friday, March 1, 2013 9:32:55 AM ET

**Subject:** NASA 10-2003  
**Date:** Friday, January 11, 2013 12:58:00 PM ET  
**From:** Badger, Hank (MRC)  
**To:** Bundick, Joshua A. (WFF-2500)

Josh,

I've talked to Tony today and we both agree that your existing above permit gives NASA the authorization (from VMRC) to place sand on the beach on an as needed bases until February 22, 2016, provide NASA does not exceed the permitted footprint or heights. The permit may/could be renewed for an additional 5 years if NASA request it prior to Feb. 2016.

However, if NASA uses upland sand instead of the permitted dredge site, a permit modification would be required. We could handle that modification in house provided the sand used is >90% sand.

Let me know if you need anything else.  
Hank

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**Document 002**  
**U.S. Army Corps of Engineers**  
**March 18, 2013**

Monday, March 25, 2013 9:16:03 AM ET

**Subject:** Beach Repair (UNCLASSIFIED)  
**Date:** Monday, March 18, 2013 9:47:34 AM ET  
**From:** Cole, Robert H NAO  
**To:** Bundick, Joshua A. (WFF-2500)  
**CC:** Turner, Carolyn (WFF-2500), Bull, Paul C. (WFF-2280), Mears, George H NAO

Classification: UNCLASSIFIED  
Caveats: NONE

Josh,

The repair work you are proposing is within the scope and construction time frame for the permit the Corp issued last year. Since you are coordinating with all of the agencies, there is no requirement for any additional Department of the Army Permits at t his time. Please remember that any changes to the scope of the project will require a permit modification.

If you need any assistance or want to discuss the project, please give me a call.

Robert Cole  
Eastern Virginia Regulatory Section  
PO Box 125  
Greenbackville, VA 23356  
(757) 903- 1562

Classification: UNCLASSIFIED  
Caveats: NONE

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Document 003  
Virginia Department of Historic Resources  
March 20, 2013

received February 25, 2013

National Aeronautics and  
Space Administration  
**Goddard Space Flight Center**  
**Wallops Flight Facility**  
**Wallops Island, VA 23337**



Reply to Attn of: 228

February 25, 2013

Office of Review and Compliance  
Attn: Ms. Amanda Lee  
Virginia Department of Historic Resources  
2801 Kensington Avenue  
Richmond, VA 23221

Subject: Section 106 Consultation for Wallops Island Beach Renourishment  
NASA, Goddard Space Flight Center's Wallops Flight Facility, Wallops Island, VA

Pursuant to Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended, this letter serves to inform VDHR that NASA is proposing to renourish the Wallops Island beach in response to damages sustained during Hurricane Sandy.

Similar to the initial beachfill project conducted in 2012 (VDHR File #: 2007-0084), NASA would obtain the necessary sand from an offshore shoal in Federal waters and would require authorizations from both the U.S. Department of the Interior's Bureau of Ocean Energy Management (BOEM) and the U.S. Army Corps of Engineers (USACE).

The BOEM has jurisdiction over mineral resources on the Federal Outer Continental Shelf (OCS) and would enter into a negotiated agreement with NASA and USACE pursuant to section 8(k)(2)(d) of the OCS Lands Act. Under Section 404 of the Clean Water Act (CWA), the USACE Regulatory Program has jurisdiction over the disposal of dredged and fill material in Waters of the U.S. Similarly, under Section 10 of the Rivers and Harbors Act of 1899, the USACE has jurisdiction over the placement of structures and work, conducted in navigable waters of the U.S., and would issue a permit to enable the proposed project. Finally, in addition to its regulatory role in the project, the USACE Norfolk District is overseeing project design, construction, and monitoring on NASA's behalf.

To this end, NASA has assumed the role of Lead Federal Agency for NHPA compliance and both BOEM and USACE are participating in NASA's Section 106 process. The effects of their actions are considered in all project documents, including this correspondence.

Background

On December 13, 2010, NASA issued a *Record of Decision (ROD)* for its *Final Programmatic Environmental Impact Statement Wallops Flight Facility Shoreline Restoration and Infrastructure Protection Program (Final PEIS)*. In its *ROD*, NASA selected for implementation Alternative 1, Seawall Extension and Beach Fill.

As identified in the *Final PEIS* and *ROD*, the initial phase of the project entailed NASA extending its existing rock seawall approximately 1,415 feet (ft) south and then dredging and placing approximately 3.2 million cubic yards (CY) of sand from an offshore shoal referred to as Unnamed Shoal A.

After issuing its *ROD* and securing necessary permits, NASA and its technical partner, the USACE Norfolk District, oversaw the construction of the project between April and August 2012. Both during and after completing the initial beach fill cycle, the agencies have sponsored multiple topographic and hydrographic surveys of the project area. The most recent monitoring effort, conducted in November 2012 following Hurricane Sandy, identified the need to renourish the beach.

The survey data indicate the area that sustained the greatest damage is the southern half of the project site; behind which are some of NASA and the Commonwealth of Virginia's most critical launch assets, including Launch Complex 0 and five sounding rocket pads, are located. Of particular concern is the fact that the seaward half of the dune has been lost in most places and the beach berm has been lowered by at least several feet. Although it can be expected that some of the sand moved offshore will eventually move back into the intertidal zone on the beach, those areas of highest elevation (i.e., dune and berm) would require renourishment to regain their full functionality.

Description of the Undertaking

Upon receipt of the abovementioned authorizations, NASA would contract the dredging of up to 800,000 cubic yards of sand from the same borrow area that was the source of material for the initial beach fill. Given the distance of the borrow area from Wallops Island, it is expected that the contractor would again use one or more trailing suction hopper dredge(s) to obtain the material.

Nearshore, it is expected that the contractor would employ construction methods requiring one or more anchored pumpout station(s) approximately 2 miles east of Wallops Island in 25-30 feet of water. Up to several miles of submerged steel pipeline would be temporarily placed on the seafloor and would be the conduit by which the sand/water slurry would be pumped from the dredge to the beach. Once discharged onto the beach, mechanized equipment (e.g., bulldozers) would grade the material to the design template.

The linear extent of the proposed beachfill would be approximately 2.3 miles described generally as the shoreline between the Z-100 camera stand on the south up to just beyond the Horizontal Integration Facility located mid-island.

Following beachfill, NASA would re-plant the dunes with native vegetation and install sand fencing to trap windblown sand.

Depending upon the amount of funding available for the project, it is also possible that NASA would further extend its rock seawall to the south, however the additional distance would remain within the maximum 4,600 foot distance described in the *Final PEIS*.

In summary, with the exception of a shortened time between initial fill and the first renourishment cycle, the proposed undertaking is substantially equivalent to the renourishment component described in the *Final PEIS*, which estimated that approximately 806,000 CY of material would be needed every 3-7 years.

Area of Potential Effects (APE)

Similar to the initial beach fill cycle, the APE would consist of the offshore sand shoal, the generally defined nearshore zone within which the anchored pumpout station(s) and pipeline would be located, and the Wallops Island beach (see enclosed map).

Identification of Resources

In November 2003, URS Group, Inc. and EG&G prepared a Cultural Resources Assessment of Wallops Flight Facility, Accomack County, Virginia that examined each of the three land areas of the facility within WFF's property boundaries: Wallops Main Base, Wallops Mainland, and Wallops Island. This report established a predictive model for archaeological potential for the entire WFF property. VDHR concurred with the findings of this report in a letter dated December 3, 2003.

In December 2004, URS and EG&G prepared a Historic Resources Survey and Eligibility Report for Wallops Flight Facility that included an evaluation of buildings and structures at WFF built prior to 1956 for their eligibility for listing in the National Register of Historic Places (NRHP). Two resources—the Wallops Coast Guard Lifesaving Station (VDHR #001-0027-0100; WFF# V-065) and its associated Coast Guard Observation Tower (001-0027-0101; WFF# V-070)—were found to be eligible for listing in the NRHP and Virginia Landmarks Register. The other surveyed resources were determined not to be NREHP eligible because they lacked the historical significance or integrity necessary to convey significance. In a letter dated November 4, 2004, the VDHR concurred with the findings and determinations in the Historic Resources Survey and Eligibility Report.

In accordance with BOEM nautical archaeology guidelines, the proposed offshore borrow area was surveyed by URS Group, Inc., in 2009 and determined to be clear of submerged archaeological resources.

Onshore, NASA contracted with URS Group, Inc., in 2006, 2007, and 2009 to survey the Wallops Island beach for potential archaeological and architectural resources that could be affected by shoreline restoration work; none were identified. Subsequent to the shoreline-specific studies, in 2011 NASA commissioned a follow-on Historic Resources Eligibility Survey (DHR File No. 2010-2274), which continued the evaluation of multiple structures on Wallops Island for National Register eligibility. None were determined to meet the necessary criteria for eligibility.

In 2012, the prime contractor for initial beach fill project, Great Lakes Dredge & Dock Company, LLC, sub-contracted Gahagan & Bryant Associates to conduct marine remote sensing surveys of all proposed mooring locations. No obstructions or areas of archeological concern were identified within the proposed work areas (refer to VDHR File#: 2007-0084, letter from NASA dated March 8, 2012). However it is possible that the contractor for the proposed renourishment would anchor his equipment in different locations than those previously surveyed. Therefore, additional survey work may be necessary to fully assess the potential for resources within the APE.

Future Survey of APE and Chance Finds Protocol

Consistent with the approach taken during the initial beach fill cycle, NASA proposes to require its dredge contractor to survey proposed pumpout locations prior to anchoring them in previously unsurveyed areas. Though NASA would encourage the contractor to utilize nearshore areas that have already been surveyed, the ultimate decision would be left the contractor with the stipulation that if the proposed mooring location is outside of those areas already surveyed, a remote sensing survey (e.g., side scan sonar, magnetometer) shall be conducted prior to anchor placement. Any identified anomalies would be avoided to mitigate potential adverse effects.

Consistent with the other two terms of the agreement developed between VDHR and NASA for the initial beach fill cycle, should the dredge contractor discover a resource of potential archaeological significance, he shall be required to establish a 1,000-foot buffer around the discovery, establish the precise location of the discovery, and notify the NASA Historic Preservation Officer. NASA would immediately consult with VDHR regarding the National Register eligibility and treatment of the discovery, however work would continue outside the 1,000-foot buffer.

Determination of Effect

Given the lack of potential resources within areas already surveyed, and the above-summarized procedures that would be employed should new sites be identified for nearshore pumpout, NASA concludes that there would be "no historic properties affected" by the proposed undertaking.

Your concurrence with this determination is respectfully requested. For your convenience, a signature line is included at the bottom of this correspondence. If you have any questions, please contact me, Randall Stanley, at (757) 824-1309, or Josh Bundick at (757) 824-2319.

Sincerely,



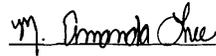
Randall M. Stanley  
WFF Historic Preservation Officer

Enclosure

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cc:  
228/Mr. G. Lilly  
250/Mr. J. Bundick  
BOEM/Mr. G. Wikel  
USACE/Mr. R. Cole

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Provided that NASA requires its dredge contractor to follow the above-described project conditions, the Virginia Department of Historic Resources concurs with NASA that the proposed undertaking (renourishment of the Wallops Island beach) would have no effect on National Register-eligible properties.

  
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Office of Review and Compliance  
Virginia Department of Historic Resources

March 20, 2013  
Date

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**Document 004**  
**U.S. Fish and Wildlife Service**  
**March 20, 2013**

Monday, March 25, 2013 9:18:34 AM ET

**Subject:** RE: Post-Hurricane Sandy beach renourishment Wallops Island Flight Facility  
**Date:** Wednesday, March 20, 2013 2:30:45 PM ET  
**From:** Mike Drummond  
**To:** Bundick, Joshua A. (WFF-2500)

Josh,

The proposed seawall work is also covered by the PBO as long as it is confined to the areas defined in the SRIPP BA and PBO.

Mike

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**From:** Bundick, Joshua A. (WFF-2500) [mailto:[joshua.a.bundick@nasa.gov](mailto:joshua.a.bundick@nasa.gov)]  
**Sent:** Wednesday, March 20, 2013 2:27 PM  
**To:** Mike Drummond  
**Subject:** Re: Post-Hurricane Sandy beach renourishment Wallops Island Flight Facility

Hi Mike, thanks for the response.

Quick question, as you may recall from the letter we sent, we are also considering, on a funds available basis, either some additional rock seawall extension or repair, which would be done prior to beachfill, and then covered with sand. All work would be confined to the 4,600 foot maximum length considered in the SRIPP BA and PBO.

Please confirm that this does not present any issues.

Best,

Josh

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Joshua Bundick  
Lead, Environmental Planning  
NASA Wallops Flight Facility  
Wallops Island, VA 23337  
O: (757) 824-2319  
F: (757) 824-1819  
[joshua.a.bundick@nasa.gov](mailto:joshua.a.bundick@nasa.gov)

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**From:** Mike Drummond <[mike\\_drummond@fws.gov](mailto:mike_drummond@fws.gov)>  
**Date:** Wednesday, March 20, 2013 2:16 PM  
**To:** "Bundick, Joshua A. (WFF-2500)" <[joshua.a.bundick@nasa.gov](mailto:joshua.a.bundick@nasa.gov)>  
**Cc:** "[troy\\_andersen@fws.gov](mailto:troy_andersen@fws.gov)" <[troy\\_andersen@fws.gov](mailto:troy_andersen@fws.gov)>, Cindy Schulz <[cindy\\_schulz@fws.gov](mailto:cindy_schulz@fws.gov)>  
**Subject:** Post-Hurricane Sandy beach renourishment Wallops Island Flight Facility

We have reviewed the project proposal dated February 25, 2013 for the proposed post-Hurricane Sandy beach nourishment at Wallops Island, Virginia. The following comments are provided under provisions of the Endangered Species Act of 1973 (16 U.S.C. 1531-1544, 87 Stat. 884), as amended.

The National Aeronautics and Space Administration (NASA) plans to obtain the necessary sand from an offshore shoal in Federal waters. This sand acquisition will require authorizations from both the U.S. Department of the Interior's Bureau of Ocean Energy Management and the U.S. Army Corps of Engineers. Upon receipt of the required authorizations, NASA will contract for the dredging and placement of up to

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800,000 cubic yards of sand from the borrow area (Unnamed Shoal A, sub-area A-1) off-shore. The linear extent of the proposed sand renourishment will be approximately 2.3 miles (the shoreline between the Z-100 camera stand on the south, to just beyond the Horizontal Integration Facility located mid-island). Work on the north end of the Wallops Island beach is not planned with the exception of the construction contractor potentially utilizing the area just north of the rock seawall terminus as a point of ingress/egress.

It is expected that the dredging and sand renourishment work will take 1.5 to 3 months to complete. The timing of the work will be dependent upon contractor availability; therefore the U.S. Fish and Wildlife Service is assuming that the project could be conducted at any time of year.

The U.S. Fish and Wildlife Service concurs with NASA's determination that the project, as proposed, is included in the July 30, 2010 Programmatic Biological Opinion (PBO) on the Wallops Flight Facility Shoreline Restoration and Infrastructure Protection Program. While the proposed project has a shortened time between initial fill and the first renourishment cycle, the proposed action is comparable to the renourishment component described in the PBO (approximately 806,000 cubic yards of material every 3-7 years).

Any anticipated incidental take of piping plover (*Charadrius melodus*), red knot (*Calidris canutus rufa*), loggerhead sea turtle (*Caretta caretta*), green sea turtle (*Chelonia mydas*), leatherback sea turtle (*Dermochelys coriacea*), or seabeach amaranth (*Amaranthus pumilus*) for the subject project is covered by the PBO. Should project plans change or if additional information on the distribution of listed species or critical habitat becomes available, this determination may be reconsidered.

This document should be appended to the July 30, 2010 PBO and maintained as part of the decision document and administrative record.

If you have any questions, please contact me.

**Mike Drummond**  
Endangered Species Biologist  
U.S. Fish and Wildlife Service  
Virginia Field Office  
6669 Short Lane  
Gloucester, VA 23061  
(804) 693 - 6694 x122  
(804) 654 - 1771 cell

**Document 005**  
**National Marine Fisheries Service – Protected Resources Division**  
**March 21, 2013**



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

MAR 21 2013

Carolyn Turner, Associate Chief  
National Aeronautics and Space Administration  
Goddard Space Flight Center  
Wallops Flight Facility  
Wallops Island, Virginia 23337-5099

Attn: 250.W

Dear Ms. Turner,

We have reviewed your March 7, 2013, letter regarding National Aeronautics and Space Administration's (NASA) proposed post-Hurricane Sandy beach renourishment at Wallops Flight Facility, Wallops Island, Virginia. Pursuant to section 7 of the Endangered Species Act (ESA) of 1973, as amended, we consulted previously on NASA's Wallops Flight Facility Shoreline Restoration and Infrastructure Protection Program (SRIPP), resulting in NOAA's, National Marine Fisheries Service (NMFS) issuance of a biological opinion (BO) to NASA on August 3, 2012.<sup>1</sup> As the action proposed to be undertaken does not differ significantly from the actions we considered in the 2012 SRIPP BO, we concur with your determination that the proposed beach renourishment does not trigger the need to reinitiate formal consultation pursuant to section 7 of the ESA, as amended. Our supporting analysis is provided below.

**Proposed Action and NMFS Consultation History**

The SRIPP is a 50 year plan of restoring and protecting NASA's Wallops Flight Facility's shoreline and infrastructure. Under the SRIPP, NASA proposes to extend an existing seawall, as well as restore, and maintain, the Wallops Flight Facility shoreline in order to move the zone of wave break away from launch pads, infrastructure, and testing and training facilities. Initial phases of the SRIPP include the extension of the seawall (landward of the shoreline), followed by dredging, via a hopper dredge, approximately 4.3 million cubic yards (cy) of sand from an offshore shoal (referred to as Unnamed Shoal A) and placing this material as beach nourishment along the Wallops Flight Facility Shoreline. Over the 50 year life of the SRIPP, NASA proposes to undertake subsequent beach renourishment operations approximately every 5 years. Per renourishment cycle, approximately 1,007,500 cy of sand will be removed, via a hopper dredge,

<sup>1</sup> NASA served as the lead Federal agency for the 2012 SRIPP BO; co-action agencies on the 2012 SRIPP BO included the U.S. Army Corps of Engineers (USACE) and the Bureau of Ocean Energy Management (BOEM). For the currently proposed beach renourishment, NASA will remain the lead Federal agency, with the USACE and BOEM serving as co-action agencies.



from Unnamed Shoal A and placed along the same area of the Wallops Flight Facility's shoreline.

Since 2007 we have consulted with NASA on the SRIPP, with NMFS issuing a BO to NASA on September 25, 2007 (Re: initial SRIPP proposal); July 22, 2010 (Re: modification to the SRIPP); and August 3, 2012 (Re: listing of Atlantic sturgeon). The August 3, 2012, BO concluded that the SRIPP is likely to adversely affect, but is not likely to jeopardize the continued existence of the Northwest Atlantic Ocean Distinct Population Segment (DPS) of loggerhead sea turtle; Kemp's ridley sea turtles; the Gulf of Maine (GOM) DPS of Atlantic sturgeon; New York Bight (NYB) DPS of Atlantic sturgeon; Chesapeake Bay (CB) DPS of Atlantic sturgeon; Carolina DPS of Atlantic sturgeon; or South Atlantic (SA) DPSs of Atlantic sturgeon, and is not likely to adversely affect leatherback or green sea turtles or North Atlantic right, humpback or fin whales. The Opinion included an Incidental Take Statement (ITS) exempting the incidental taking of no more than 1 sea turtle for approximately every 1.6 million cy of material removed from the shoal area, which over the life of the project exempted the take of 9 total sea turtles, with no more than 1 being Kemp's ridleys and the remainder being loggerheads. In addition, the ITS exempted the incidental take of no more than 1 Atlantic sturgeon for approximately every 9.4 million cy of material removed from the borrow areas, which over the life of the project exempted the take of 2 subadult Atlantic sturgeon, with the potential that the two sturgeon taken may come from the NYB, CB, GOM, Carolina, or SA DPS.

Seawall construction and initial phases of beach nourishment were completed in August 2012. Since this time, multiple topographic and hydrographic surveys of the project site have been undertaken. The most recent monitoring effort, conducted in November 2012, following Hurricane Sandy, identified the need to renourish the Wallops Flight Facility beach sooner than the projected 5 years. As a result, NASA is requesting authorization to dredge, via hopper dredge, approximately 1,000,000 cy of material from Unnamed Shoal A for placement of this material as beach renourishment along the same area of the Wallops Flight Facility Shoreline. It is estimated that dredging and beach fill work will take between 1.5 to 3 months to complete; however, the timing of the work will be dependent on contractor availability and thus, at this time, it is unknown during what time of year the work will be undertaken. All other components of the SRIPP would remain as described and analyzed in the August 3, 2012 BO.

#### **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). The action area for this consultation includes the Wallops Island offshore unnamed shoal, the waters between and immediately adjacent to these areas where project vessels will travel and dredged material will be transported, as well as an area extending 4,000 feet in all directions from the area to be dredged to account for the sediment plume generated during dredging activities. The action area also includes the portion of Wallops Island shoreline and nearshore waters that will be affected by beach fill (i.e., approximately 2.3 miles of shoreline). As dredging operations will also produce underwater noise levels that range between 120-160 dB re 1 $\mu$ P<sub>aRMS</sub> the action area will also include the area around the dredge where effects of increased underwater noise levels will



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. Throughout the initial phase of dredging and beach nourishment, there were no takes of any listed species. Since dredging was completed in August 2012, no additional dredge cycles have been undertaken and thus, to date, the amount of incidental take has not been exceeded. Additionally, no new species or critical habitat have been listed/designated. Also, while beach renourishment operations are occurring sooner than projected (i.e., sooner than 5 years), the renourishment operations themselves (e.g., type of dredge vessel, quantity of material removed, placement location) have remained the same as described in the August 2012, BO and therefore, this change will not affect listed species in a manner or to an extent not previously considered in the August 3, 2012, BO. Also, although you have provided new information on the underwater noise levels produced during dredging operations, this new information does not reveal effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered. In fact, the revised estimates of distances to the Marine Mammal Protection Act Harassment thresholds, as well as acoustic thresholds for sea turtles and Atlantic sturgeon, are comparable to those considered in the August 3, 2012 BO.

Based on this analysis of the re-initiation triggers, we have determined that the conclusions reached in our August 3, 2012, BO remain valid and thus, reinitiation of ESA section 7 formal consultation will not be necessary. Therefore, no further consultation pursuant to section 7 of the ESA is required. Should you have any questions about this correspondence please contact Danielle Palmer at (978) 282-8468 or by e-mail (Danielle.Palmer@noaa.gov).

Sincerely,



for John K. Bullard  
Regional Administrator

Ec: Bundick, NASA  
Dirk, BOEM  
Gibson, ACOE/Norfolk  
Palmer, NMFS/NER/PRD  
O'Brien, NMFS/HCD

File Code: NASA-2013 SRIPP No need to Reinitiate-Hurricane Sandy

**Document 006**  
**National Marine Fisheries Service – Habitat Conservation Division**  
**April 24, 2013**



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 24 2013

Mr. Joshua A. Bundick  
NEPA Program Manager  
Code 250.W  
National Aeronautics and Space Administration  
Goddard Space Flight Center, Wallops Flight Facility  
Wallops Island, Virginia 23337

Re: Supplemental Essential Fish Habitat Assessment; post-Hurricane Sandy beach nourishment,  
NASA Wallops Island, Virginia

Dear Mr. Bundick,

We have reviewed the National Aeronautics and Space Administration's (NASA) supplemental essential fish habitat (EFH) assessment for the proposed post-Hurricane Sandy beach renourishment at Wallops Island, Virginia which incorporates by reference the February 2010 *EFH Assessment Wallops Flight Facility Shoreline Restoration and Infrastructure Protection Program (SRIPP EFH Assessment)*. The initial 3.7 mile beach fill of the SRIPP was conducted between April and August 2012. However, the most recent monitoring effort conducted in November 2012 following Hurricane Sandy indicates the need to renourish the beach in order to provide the designed level of storm protection to NASA and the Commonwealth of Virginia's critical launch infrastructure located on the southern end of Wallops Island. The greatest damage to the seawall and beach occurred on the southern portion of the project site where the seaward half of the dune has been lost in most places and the beach profile was lowered at least several feet.

As you know, the Magnuson-Stevens Fishery Conservation and Management Act, as amended by the Sustainable Fisheries Act of 1996, requires all Federal agencies to consult with us on all actions, or proposed actions, permitted, funded, or undertaken, that may adversely affect EFH. As the lead Federal agency for this project, you are responsible for the EFH consultation. Based on our review of the supplemental EFH assessment for the post-Hurricane Sandy beach renourishment at Wallops Island, our comments and conservation recommendations are provided below.

**Renourishment of Dune and Beach Berm**

The proposed renourishment of the beach and dune would utilize the same offshore shoal as the initial beach fill, referred to as Unnamed Shoal A, located approximately 5 miles east of Assateague Island and dredged using a hydraulic hopper dredge. Assuming a conservative 25% loss of material during pump-out and placement, approximately 1,000,000 cubic yards (CY) of material is required to restore full functionality to the dune and beach berm. You have estimated it will take between 1.5-3 months to complete the work which may be conducted at any time of the year depending upon the availability of the dredging contractor. Dependent on available



funding, you may extend the existing rock seawall to the south, though within the maximum 4,600 ft. distance described in the *SRIPP EFH Assessment*.

With the exception of the shortened time frame, we acknowledge that this renourishment cycle is essentially equivalent to the project's renourishment component described in the 2010 *SRIPP EFH Assessment* and *Final PEIS* that estimated approximately 806,000 CY of material would be required every 3-7 years.

**Magnuson-Stevens Act Conservation Recommendations**

Section 305(b)(2) of the MSA requires you to consult with us on any action you authorize, fund, or undertake that may adversely affect EFH. As we have stated, the project area is designated as EFH for various life stages of 26 federally managed species including red hake (*Urophycis chuss*), windowpane flounder (*Scopthalmus aquosus*), Atlantic sea herring (*Clupea harengus*), bluefish (*Pomatomus saltatrix*), Atlantic butterfish (*Peprilus triacanthus*), summer flounder (*Paralichthys dentatus*), winter flounder (*Pleuronectes americanus*), witch flounder (*Glyptocephalus cynoglossus*) scup (*Stenotomus chrysops*), black sea bass (*Centropristus striata*), king mackerel (*Scomberomorus cavalla*), Spanish mackerel (*Scomberomorus maculatus*), cobia (*Rachycentron canadum*), sand tiger shark (*Odontaspis taurus*), Atlantic sharpnose shark (*Rhizopriondon terraenovae*), Atlantic angel shark (*Squatina dumerili*), dusky shark (*Charcharinus obscurus*), sandbar shark (*Charcharinus plumbeus*), scalloped hammerhead shark (*Sphyrna lewini*), tiger shark (*Galeocerdo cuvieri*), clearnose skate (*Raja eglanteria*), little skate (*Leucoraja erinacea*), monkfish (*Lophius americanus*), spiny dogfish (*Squalus acanthias*), surf clam (*Spisula solidissima*), and winter skate (*Leucoraja ocellata*). Therefore, pursuant to 305(b)(4)(A) of the MSA, we recommend that you adopt the following EFH conservation recommendations:

1. Unnamed Shoal A, sub-area A-1 (an accretion area) should be targeted for dredging to obtain the necessary beach fill material. Using the same area dredged during the initial beach fill will limit impacts where the benthic community has already been recently removed or disturbed.
2. Dredging should occur over a large area, though not over the entire length of the shoal and avoid creating deep pits. Depth of cut should not exceed 10 ft. and should be confirmed through post-dredge survey.
3. The reconstructed dune area should be stabilized with native vegetation and sand fencing should be installed to help reduce windblown sand loss and potentially reduce future offshore borrow requirements.

Provided the Conservation Recommendations listed above are accepted and implemented into the project, we concur with your determination that the proposed dune and beach renourishment on Wallops Island will not substantially adversely affect EFH.

Please note that Section 305(b)(4)(B) of the MSA requires you to provide us with written response to these EFH conservation recommendations including a description of measures you have adopted that avoid, mitigate or offset the impacts of the project on EFH. In the case where

your response is inconsistent with our recommendations, Section 305(b)(4)(B) of the MSA also indicates that you must provide reasons for not following our recommendations. Included in your response should be the scientific justification for your disagreement over the anticipated effects of the proposed project and the measures necessary to avoid, minimize, mitigate or offset such effects pursuant to 50 CFR 600.920(k). If new information becomes available or the project is revised in such a manner that affects the basis for our EFH conservation recommendations, consultation must be reinitiated with us pursuant to 50 CFR 600.920(1).

**Endangered Species Act**

Section 7 of the Endangered Species Act (16 U.S.C. § 1536(a)(2)) requires Federal agencies to consult with the Secretary of Commerce, through NOAA, to insure that "any action authorized, funded, or carried out by such agency . . . is not likely to jeopardize the continued existence of any endangered species or threatened species or adversely modify or destroy [designated] critical habitat . . ." See also 50 C.F.R. part 402. Please contact Ms. Christine Vaccaro of our Protected Resources Division at 978-281-9167 to discuss your consultation obligations under Section 7 of the ESA regarding potential impacts to the federally listed sea turtles.

**Conclusions**

Thank you for the opportunity to comment on the supplemental EFH assessment prepared for this important project. Please feel free to contact Mr. David O'Brien of our Gloucester Point, VA field office at 804-684-7828 (David.L.O'Brien@noaa.gov) if you have any questions regarding these comments or recommendations.

Sincerely,

  
LOZ Louis A. Chiarella  
Assistant Regional Administrator  
Habitat Conservation Division

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**Document 007**  
**National Aeronautics and Space Administration**  
**April 29, 2013**

National Aeronautics and  
Space Administration  
**Goddard Space Flight Center**  
**Wallops Flight Facility**  
**Wallops Island, VA 23337**



Reply to Attn of: 250.W

April 29, 2013

Mr. Louis Chiarella  
Assistant Regional Administrator  
Habitat Conservation Division  
National Marine Fisheries Service  
55 Great Republic Drive  
Gloucester, Massachusetts 01930

Dear Mr. Chiarella:

Thank you for the April 24, 2013 letter offering Conservation Recommendations (CRs) for the proposed Wallops Island Post-Hurricane Sandy Shoreline Repair project.

In accordance with Section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act, this correspondence serves as the National Aeronautics and Space Administration's (NASA) acceptance of the three CRs provided.

We appreciate the ongoing coordination with your agency as NASA continues its efforts to reduce storm damage to the launch assets on Wallops Island. If you have any questions or require additional information please contact Mr. Joshua Bundick of my staff at (757) 824-2319.

Sincerely,

A handwritten signature in cursive script that reads "Carolyn Turner".

Carolyn Turner  
Associate Chief, Medical and Environmental Management Division

cc:  
228/Mr. P. Bull  
250/Mr. J. Bundick  
250/Mr. E. Connell  
BOEM/Mr. G. Wikel  
NMFS/Mr. D. O'Brien  
USACE /Mr. R. Cole

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**Document 008**  
**Virginia Department of Environmental Quality**  
**May 9, 2013**

Monday, May 20, 2013 11:39:07 AM ET

**Subject:** RE: FCD for Wallops Shoreline Repair (DEQ 13-046F)  
**Date:** Thursday, May 9, 2013 10:45:50 AM ET  
**From:** Kattan, Sheri (DEQ)  
**To:** Bundick, Joshua A. (WFF-2500)  
**CC:** Fisher, John (DEQ), Cole, Robert H NAO, Badger, Hank (MRC)

The VMRC response provides the necessary documentation regarding their 10-2003 permit that I reference in my response below, but there is not enough detail in the Corps response (i.e. project name, permit references, project scope, etc.) for me make the same conclusion.

**Sheri Kattan**  
Team Leader/Project Manager  
Virginia Water Protection Permit Program  
DEQ - Tidewater Regional Office  
5636 Southern Blvd.  
Virginia Beach, VA 23462  
Phone 757-518-2156/Fax 757-518-2009  
[sheri.kattan@deq.virginia.gov](mailto:sheri.kattan@deq.virginia.gov)

---

**From:** Bundick, Joshua A. (WFF-2500) [<mailto:joshua.a.bundick@nasa.gov>]  
**Sent:** Thursday, May 09, 2013 10:29 AM  
**To:** Kattan, Sheri (DEQ)  
**Cc:** Fisher, John (DEQ); Cole, Robert H NAO; Badger, Hank (MRC)  
**Subject:** Re: FCD for Wallops Shoreline Repair (DEQ 13-046F)

Thanks Sheri for the quick reply. The Corps and VMRC responses are attached.

In consideration of the attached, it appears that no additional DEQ authorization would be needed for the proposed renourishment and repair. Can you please confirm this for us. Thanks.

Josh

-----  
Joshua Bundick  
Lead, Environmental Planning  
NASA Wallops Flight Facility  
Wallops Island, VA 23337  
O: (757) 824-2319  
F: (757) 824-1819  
[Joshua.A.Bundick@nasa.gov](mailto:Joshua.A.Bundick@nasa.gov)

---

**From:** <Kattan>, "Sheri (DEQ)" <[Sheri.Kattan@deq.virginia.gov](mailto:Sheri.Kattan@deq.virginia.gov)>  
**Date:** Thursday, May 9, 2013 10:07 AM  
**To:** "Bundick, Joshua A. (WFF-2500)" <[Joshua.A.Bundick@nasa.gov](mailto:Joshua.A.Bundick@nasa.gov)>  
**Cc:** "Fisher, John (DEQ)" <[John.Fisher@deq.virginia.gov](mailto:John.Fisher@deq.virginia.gov)>, "Cole, Robert H NAO" <[Robert.H.Cole@usace.army.mil](mailto:Robert.H.Cole@usace.army.mil)>, "Badger, Hank (MRC)" <[Hank.Badger@mrc.virginia.gov](mailto:Hank.Badger@mrc.virginia.gov)>  
**Subject:** RE: FCD for Wallops Shoreline Repair (DEQ 13-046F)

Hi Joshua,

Our existing waiver is tied to activities authorized by the Corps and VMRC permits associated with

Page 1 of 3

JPA#10-2003. If the Corps and VMRC have provided you written documentation that your proposed post-Sandy re-nourishment is covered under their 10-2003 respective permit authorizations, then our waiver is also still valid. If they require submittal of a new application and/or issuance of a new permit for the proposed activities, then we will need to re-evaluate the project and determine the appropriate permit action.

Thanks for checking with us and if you need any further clarification, do not hesitate to contact me.

Sincerely,

**Sheri Kattan**  
Team Leader/Project Manager  
Virginia Water Protection Permit Program  
DEQ - Tidewater Regional Office  
5636 Southern Blvd.  
Virginia Beach, VA 23462  
Phone 757-518-2156/Fax 757-518-2009  
[sheri.kattan@deq.virginia.gov](mailto:sheri.kattan@deq.virginia.gov)

---

**From:** Bundick, Joshua A. (WFF-2500) [<mailto:joshua.a.bundick@nasa.gov>]  
**Sent:** Thursday, May 09, 2013 9:53 AM  
**To:** Kattan, Sheri (DEQ); Badger, Hank (MRC)  
**Cc:** Fisher, John (DEQ); Cole, Robert H NAO  
**Subject:** FCD for Wallops Shoreline Repair (DEQ 13-046F)  
**Importance:** High

Hello,

After reading the state's Federal Consistency response to our proposed Post-Sandy Shoreline Repair project at Wallops Island, I was hoping that you could clarify a couple items...

1. DEQ-TRO's requirements 1(c) and conclusions 1(e) state that we should submit a Joint Permit Application to VMRC and that NASA should obtain the appropriate VWPP authorization and comply with that authorization.
2. VMRC's findings 2(b) do not indicate the need to submit a JPA for the proposed renourishment.

Requested Point to Clarify: For the initial 3.2 million cubic yard initial beach fill, DEQ waived its permitting authority for the project given that the Corps and VMRC were issuing permits to afford adequate protection of water quality. See attached letter. In the case of this proposed renourishment, both the Corps and VMRC have already provided written concurrence that all proposed work is within the scope of existing, valid authorizations (10-2003). In light of this, is there still a need to submit a JPA, and if so, does DEQ plan to re-assess its waiver position?

Thanks,

Josh

-----  
Joshua Bundick  
Lead, Environmental Planning

Page 2 of 3

**Document 009**  
**Virginia Department of Environmental Quality**  
**May 20, 2013**

Monday, May 20, 2013 11:39:46 AM ET

**Subject:** RE: Hurricane Sandy (UNCLASSIFIED)  
**Date:** Monday, May 20, 2013 10:40:22 AM ET  
**From:** Kattan, Sheri (DEQ)  
**To:** Cole, Robert H NAO  
**CC:** Bundick, Joshua A. (WFF-2500)

Thanks Robert, that was the message I had received before. I was just trying to confirm that that message was related to the Corps permit NAO-1992-1455 (VMRC 10-2003). As long as the work is covered under that permit (which we waived on), Joshua, you are good to go and our waiver still stands.

Sheri Kattan  
Team Leader/Project Manager  
Virginia Water Protection Permit Program  
DEQ - Tidewater Regional Office  
5636 Southern Blvd.  
Virginia Beach, VA 23462  
Phone 757-518-2156/Fax 757-518-2009  
[sherikattan@deq.virginia.gov](mailto:sherikattan@deq.virginia.gov)

-----Original Message-----

From: Cole, Robert H NAO [<mailto:Robert.H.Cole@usace.army.mil>]  
Sent: Monday, May 20, 2013 10:24 AM  
To: Kattan, Sheri (DEQ)  
Cc: Bundick, Joshua A. (WFF-2500)  
Subject: FW: Hurricane Sandy (UNCLASSIFIED)

Classification: UNCLASSIFIED  
Caveats: NONE

Sheri,

Here is the determination that NASA's Sandy beach restoration project is covered by the original permit.

Robert Cole  
Eastern Virginia Regulatory Section  
PO Box 125  
Greenbackville, VA 23356  
(757) 903- 1562

-----Original Message-----

From: Cole, Robert H NAO  
Sent: Thursday, February 07, 2013 9:14 AM  
To: 'Bundick, Joshua A. (WFF-2500)'  
Cc: Baggett, Kimberly A NAO; Gibson, Steven W NAO  
Subject: RE: Hurricane Sandy (UNCLASSIFIED)

Classification: UNCLASSIFIED  
Caveats: NONE

Josh,

The original permit for the Beach Project is still active. I did not see any issues with NASA repairing the beach

Page 1 of 4

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**Document 010**  
**National Aeronautics and Space Administration**  
**May 28, 2013**

National Aeronautics and  
Space Administration  
Goddard Space Flight Center  
Wallops Flight Facility  
Wallops Island, VA 23337



Reply to Attn of: 228

May 28, 2013

Mr. George H. Badger  
Environmental Engineer  
Virginia Marine Resources Commission  
2600 Washington Avenue, 3rd Floor  
Newport News, Virginia 23607

Mr. Robert Cole  
Environmental Scientist  
U.S. Army Corps of Engineers  
803 Front Street  
Norfolk, Virginia 23510

Dear Sirs:

This letter is intended to provide the National Aeronautics and Space Administration's (NASA's) official request for a permit modification from both the Virginia Marine Resources Commission (VMRC) and the U.S. Army Corps of Engineers (USACE) Regulatory Program.

Since obtaining permits from both agencies (VMRC #10-2003) and conducting the initial 3.2 million cubic yard beachfill and seawall extension in 2011 and 2012, Wallops Island has sustained notable storm damage, particularly from Hurricane Sandy in October 2012. To that end, NASA is currently proposing to renourish the beach and repair the southernmost section of its seawall in the coming year. The proposed shoreline repair was the subject of an April 2013 Draft Environmental Assessment that your agencies recently reviewed.

In consideration of the storm damage incurred during Hurricane Sandy, the project design team has recommended elevating the beach berm by an additional foot, which would change the berm's design template from +6 North American Vertical Datum of 1988 (NAVD '88) to +7 NAVD '88. A design drawing reflecting this change is enclosed. Aside from this modification, the design would not change from what is currently on file with VMRC and USACE. Of note is the fact that because the beach fill material has proven to be somewhat coarser than originally estimated, despite the proposed increase in berm elevation, the resultant steeper slope of the shoreface (>20:1) would keep the proposed footprint within the extent that has already been permitted.

2

Our initial discussions with you on this subject indicate that such a modification could be processed administratively and that this request is all you need from us. If this assumption has changed, we would appreciate your timely notification.

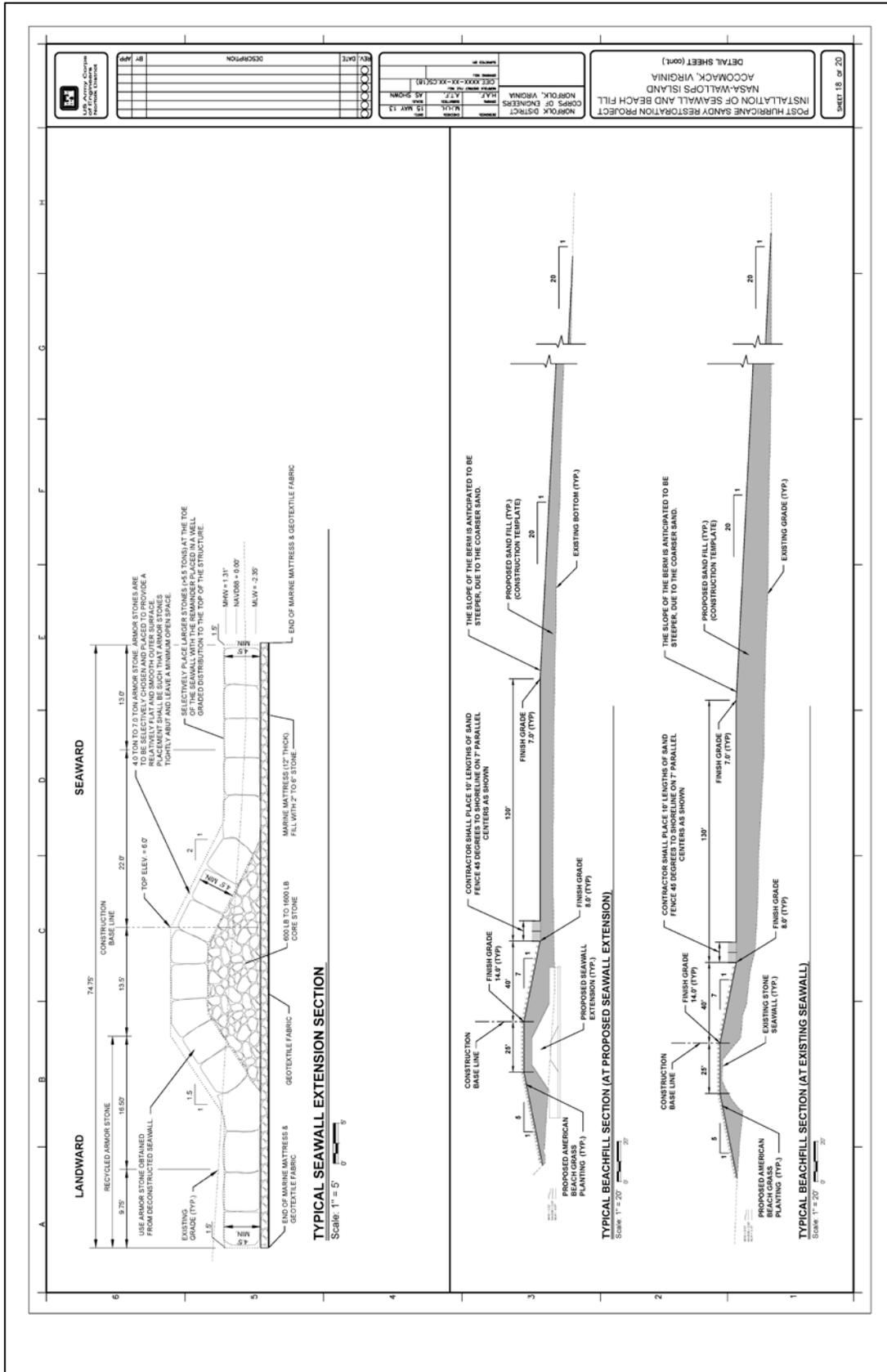
Thank you for your consideration of our request. Please contact me at (757) 824-1168 or [Paul.C.Bull@nasa.gov](mailto:Paul.C.Bull@nasa.gov) if you have any questions or require additional information.

Sincerely,



Paul C. Bull, P.E.  
Project Manager

Enclosure



<p>U.S. Army Corps of Engineers Wallops Island Station P.O. Box 1000 Wallops Island, VA 22081</p>	<table border="1"> <tr> <th>REV.</th> <th>DATE</th> <th>DESCRIPTION</th> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </table>	REV.	DATE	DESCRIPTION										<table border="1"> <tr> <td>PROJECT NO.</td> <td>CEC XXXX-XX-XX-XX(18)</td> </tr> <tr> <td>DATE</td> <td>15 MAY 13</td> </tr> <tr> <td>SCALE</td> <td>AS SHOWN</td> </tr> <tr> <td>DESIGNER</td> <td>L.F.F.</td> </tr> <tr> <td>CHECKER</td> <td>A.S.</td> </tr> <tr> <td>APPROVER</td> <td> </td> </tr> </table>	PROJECT NO.	CEC XXXX-XX-XX-XX(18)	DATE	15 MAY 13	SCALE	AS SHOWN	DESIGNER	L.F.F.	CHECKER	A.S.	APPROVER		<p>POST HURRICANE SANDY RESTORATION PROJECT INSTALLATION OF SEAWALL AND BEACH FILL KNSA-WALLOPS ISLAND ACCOMACK, VIRGINIA DETAIL SHEET (cont.)</p> <p>SHEET 18 OF 20</p>
REV.	DATE	DESCRIPTION																									
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**Document 011**  
**Virginia Marine Resources Commission**  
**June 11, 2013**



**COMMONWEALTH of VIRGINIA**

**Marine Resources Commission**

2600 Washington Avenue

Third Floor

Newport News, Virginia 23607

Douglas W. Domenech  
Secretary of Natural Resources

Jack G. Travelstead  
Commissioner

June 11, 2013

Mr. Paul Bull, P.E., Project Manger  
c/o National Aeronautics and Space Administration  
Wallops Flight Facility  
Building N-161, Code 228  
Wallops Island, VA 23337

Re: VMRC #10-2003

Dear Mr. Bull:

In accordance with your letter dated May 28, 2013, this is to authorize a modification to your above referenced permit which was originally issued by the Marine Resources Commission on February 22, 2011.

The authorized modification will increase the beach elevation from six (6.0) feet to seven (7.0) feet (NAVD 88). As stated in your request the resulting subaqueous slope will still be within the permitted footprint. All other conditions of your permit shall remain unchanged.

Please attach this letter and the revised drawing dated received June 3, 2013, to your previously issued permit as evidence of the authorization contained herein.

Should you have any questions regarding this matter, please do not hesitate to contact Mr. Hank Badger of my staff at (757) 414-0710.

Sincerely,

A handwritten signature in black ink, appearing to read "Tony Watkinson".

Tony Watkinson  
Chief, Habitat Management

TW/ghb:lra  
HM

Enclosure

cc: U.S. Army Corps of Engineers #6  
Accomack County Wetlands Board  
*An Agency of the Natural Resources Secretariat*  
[www.mrc.virginia.gov](http://www.mrc.virginia.gov)

Telephone (757) 247-2200 (757) 247-2292 V/TDD Information and Emergency Hotline 1-800-541-4646 V/TDD

