Appendix A

Agency Coordination
and
Public Comments Received on
Draft EA and
NASA's Responses

Appendix A

Agency Coordination Correspondence Index

DATE	FROM	SUBJECT
September 26, 2019	National Oceanic and Atmospheric Administration – Protected Resources Division	Response to Request for Consultation under Section 7 of the ESA
September 21, 2020	U.S. Fish and Wildlife Service	Updated Concurrence of Effects under Section 7 of the ESA
September 27, 2019	U.S. Fish and Wildlife Service	Concurrence of Effects under Section 7 of the ESA
October 10, 2019	National Oceanic and Atmospheric Administration – Habitat Conservation Division	Response to Essential Fish Habitat Submittal under the Magnuson Stevens Fishery Conservation Management Act
September 25, 2020	Virginia Department of Historic Resources	Updated Concurrence of Effects to Historic Properties
June 16, 2020	Virginia Department of Historic Resources	Updated Concurrence of Effects to Historic Properties
October 16, 2019	Virginia Department of Historic Resources	Concurrence of Effects to Historic Properties

WFF Marsh Fiber Environmental Assessment

Appendix A
Agency Coordination

NOAA NMFS Response

Suzie Richert

From: Brian D Hopper - NOAA Federal <brian.d.hopper@noaa.gov>
Sent: Thursday, September 26, 2019 9:45 AM
To: Bruner, Douglas W. (WFF-2500)
Cc: nmfs.gar.esa.section7@noaa.gov; kimberly.damon-randall@noaa.gov; David.L.Obrien@noaa.gov; Miller, Shari A. (WFF-2500); Simko, Marianne F. (WFF-200.C)[LJT AND ASSOCIATES, INC.]; Suzie Richert; Doug Fraser; Carver, Craig
Subject: Re: NASA_Marsh Fiber_NOAA Section 7 Consultation letter

Hi Doug,

Your email and attached letter dated September 17, 2019, regarding NASA's proposal to install a fiber optic cable from the U.S. Fish and Wildlife Service (USFWS) Wallops National Wildlife Refuge (Wallops NWR) to Wallops Island requested concurrence with a determination regarding potential effects on federally listed threatened and endangered species under our jurisdiction.

Although four species of sea turtles and Atlantic sturgeon originating from five listed Distinct Population Segments (DPS) are known to occur along the coastal waters of Virginia, based on the activities associated with the project, the location of the project, and information you provided in your email and letter, we believe that these species will not be exposed to any direct or indirect effects of the action. Therefore, we do not believe a consultation in accordance with section 7 of the Endangered Species Act (ESA) is necessary. As such, no further coordination on this activity with the NMFS Protected Resources Division is necessary at this time. Should there be additional changes to the project plans or new information become available that changes the basis for this determination, further coordination should be pursued. Please contact me (brian.d.hopper@noaa.gov), should you have any questions regarding these comments.

Regards,
-Brian

On Tue, Sep 17, 2019 at 9:14 AM Bruner, Douglas W. (WFF-2500) <douglas.w.bruner@nasa.gov> wrote:

> Dear Ms. Damon-Randall,
>
> The National Aeronautics and Space Administration (NASA) Wallops Flight Facility (WFF) proposes to install a fiber optic cable, referred to as the “Marsh Fiber,” from the U.S. Fish and Wildlife Service (USFWS) Wallops National Wildlife Refuge (Wallops NWR) to Wallops Island. NASA is preparing an Environmental Assessment (EA) in compliance with NEPA to analyze the potential effects of the proposed action on the environment.
>
> Attached to this correspondence is a letter that provides information about the proposed project and to request your concurrence with our determination regarding potential effects on federally listed threatened and endangered species under NOAA jurisdiction in the proposed project area.
>
> Please feel free to contact Shari Miller or me if you have questions regarding the project or effects determination.

Very respectfully,

Doug Bruner

Environmental Engineer

Code 250, Medical and Environmental Management Division

NASA Wallops Flight Facility

Building F-160, Rm C-166

Wallops Island, Virginia 23337

douglas.w.bruner@nasa.gov

Office (757) 824-2441

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Brian D. Hopper
Protected Resources Division
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WFF Marsh Fiber Environmental Assessment

Appendix A
Agency Coordination

USFWS Response

Suzie Richert

From: Case, Rachel L <rachel_case@fws.gov>
Sent: Monday, September 21, 2020 3:20 PM
To: Miller, Shari A. (WFF-2500)
Subject: Re: [EXTERNAL] NASA_USFWS Section 7 Consultation Letter - Marsh Fiber Project

Hi, Sheri.

Thanks for checking in. I do not have any questions or concerns regarding the revised project package. I have completed my review.

I hope you enjoy the rest of your week!

Regards,

Rachel Case
Biological Science Technician
Virginia Field Office
6669 Short Lane
Gloucester, VA 23061
804-824-2416

From: Miller, Shari A. (WFF-2500) <shari.a.miller@nasa.gov>
Sent: Friday, September 18, 2020 4:14 PM
To: Case, Rachel L <rachel_case@fws.gov>
Cc: Springle, Karalyn J. (WFF-7800) <karalyn.j.springle@nasa.gov>; Suzanne Wilder Richert - AECOM (srichert@eee-consulting.com) <srichert@eee-consulting.com>; Argo, Emily E <emily_argo@fws.gov>
Subject: RE: [EXTERNAL] NASA_USFWS Section 7 Consultation Letter - Marsh Fiber Project

Good afternoon, Rachel,

Do you need any additional information or have any questions regarding the updated information sent for this project?

Thanks so much.

Shari A. Miller
Center NEPA Manager &
Environmental Planning Lead
NASA GSFC Wallops Flight Facility
Wallops Island, VA 23337
(757) 824-2327
Shari.A.Miller@nasa.gov
https://code200-external.gsfc.nasa.gov/250-wff/
"Be kind whenever possible. It is always possible." - Dalai Lama

From: Miller, Shari A. (WFF-2500)
Sent: Monday, August 24, 2020 12:17 PM
To: 'Case, Rachel L' <rachel_case@fws.gov>
Subject: RE: [EXTERNAL] NASA_USFWS Section 7 Consultation Letter - Marsh Fiber Project

Rachel, I attached the key but forgot to include the latest SCT. Please see attached. Sorry for the oversight.

Shari A. Miller
Center NEPA Manager &
Environmental Planning Lead
NASA GSFC Wallops Flight Facility
Wallops Island, VA 23337
(757) 824-2327
Shari.A.Miller@nasa.gov
https://code200-external.gsfc.nasa.gov/250-wff/
"Be kind whenever possible. It is always possible." - Dalai Lama

---

From: Miller, Shari A. (WFF-2500)
Sent: Monday, August 24, 2020 12:01 PM
To: Case, Rachel L <rachel_case@fws.gov>
Subject: RE: [EXTERNAL] NASA_USFWS Section 7 Consultation Letter - Marsh Fiber Project

Good morning, Rachel,

Attached is the northern long-eared bat determination key for the proposed NASA Marsh Fiber Project. Please let me know if you need any additional information or have remaining questions.

Thank you.

Shari A. Miller
Center NEPA Manager &
Environmental Planning Lead
NASA GSFC Wallops Flight Facility
Wallops Island, VA 23337
(757) 824-2327
Shari.A.Miller@nasa.gov
https://code200-external.gsfc.nasa.gov/250-wff/
"Be kind whenever possible. It is always possible." - Dalai Lama

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From: Case, Rachel L <rachel_case@fws.gov>
Sent: Friday, August 21, 2020 2:22 PM
To: Miller, Shari A. (WFF-2500) <shari.a.miller@nasa.gov>
Subject: Re: [EXTERNAL] NASA_USFWS Section 7 Consultation Letter - Marsh Fiber Project

Hi Shari,

Thank you for submitting the updated information. We have an updated our process for the northern long-eared bat. There is now an assisted determination key available for this species in IPaC. Please complete this key, and submit the verification letter.

Please let me know if you have any questions.

Regards,
RACHEL

Rachel Case
Biological Science Technician
Virginia Field Office
6669 Short Lane
Gloucester, VA 23061
804-824-2416

From: Miller, Shari A. (WFF-2500) <shari.a.miller@nasa.gov>
Sent: Tuesday, August 18, 2020 12:27 PM
To: Case, Rachel L <rachel_case@fws.gov>
Cc: Argo, Emily E <emily_argo@fws.gov>; Springle, Karalyn J. (WFF-7800) <karalyn.j.springle@nasa.gov>; Suzanne Wilder Richert - AECOM (srichert@eee-consulting.com) <srichert@eee-consulting.com>
Subject: [EXTERNAL] NASA_USFWS Section 7 Consultation Letter - Marsh Fiber Project

Dear Rachel,

Please find attached an updated Species Conclusions Table for the Marsh Fiber project under the existing Consultation Code 05E2VA00-2019-SLI-4880. The attached PDF also includes the updated Official Species List for this project, which did not change from the original September 2019 Official Species List.

There have been two changes in the project since we coordinated with the Virginia Field Office about this project and since the release of the Draft EA:

1. New limits of disturbance at the Wallops Island National Wildlife Refuge
2. Surveying and temporary placement of steering guidance wire on ground to guide the borehole drilling.

1. New LOD at Wallops Island NWR

There has been a change in the project limits of disturbance due to the need to avoid private property. I've also attached two maps that show the shift in project footprint between the original submittal to your office in September 2019 and now. The original Species Conclusions Table stated there would be no tree removal (as noted in the Northern long-eared bat notes). The modification to the Proposed Action would result in

tree removal. However, since NASA is already implementing an April 1 – August 31 TOYR for the Eastern black rail, no project activities, including tree removal, would occur in the NLEB pup season of June 1 – July 31. Given the TOYR, NASA's initial determination of "No effect" to the NLEB remains the same.

2. Surveying and Temporary Coil Wire

In addition to the change in footprint on the Wallops Island NWR, the project may also include surveying and laying a coil wire on the ground outside of the LOD shown in the attached maps. Because of the magnitude (depth and length) of the HDD cable from the Main Base to Walker Marsh and from the UAS Airstrip to Walker Marsh, the construction contractor may employ a temporary coil wire steering system at the Maxi HDD entry and exit pits to ensure the borehole alignment is correct.

At the two borehole entry pits (one on Wallops Island NWR and one near UAS Airstrip), a pedestrian survey crew of two would survey the bore centerline and points 100 feet on each side of the centerline between the bore entry pit and the Watts Bay waterline. Coil wires less than ½" in diameter would be manually laid on the ground by technicians in a rectangular configuration 100' along each side of centerline. The same would be true on Wallops Island between the UAS Airstrip borehole entry pit and the waterline (Ballast Narrows). Similar coil configurations would be required at the exit pits with the coil wires set up in the water leading up to the exit pits. A small direct current will be applied to the grid that will greatly improve the horizontal and vertical accuracy of the HDD borehole.

No mechanized equipment would be used, and no ground disturbance will occur other than temporary survey stakes. The survey stakes would be removed upon completion of the borehole. The surveying and temporary placement of coil would not result in impacts to protected species or their habitats, and these actions do not change the determinations in the attached Species Conclusions Table.

NASA contacted the Virginia Marine Resources Commission (VMRC) to notify them of this new action surveying and laying coil wire. In an email response dated 8/17/20 Ms. Allison Lay stated that the Joint Permit Application did not need to be changed "*Since there will be no additional temporary or permanent impacts to tidal wetlands or subaqueous bottom…*"

Conclusion

We respectfully request your review and concurrence with the determinations in the updated SCT. Please email or call me at 757.824.2327 if you have any questions or would like to discuss this further.

Thanks so much.

Shari A. Miller

Center NEPA Manager &
Environmental Planning Lead
NASA GSFC Wallops Flight Facility
Wallops Island, VA 23337

(757) 824-2327
Shari.A.Miller@nasa.gov
https://code200-external.gsfc.nasa.gov/250-wff/
"Be kind whenever possible. It is always possible." - Dalai Lama

From: Case, Rachel <rachel_case@fws.gov>
Sent: Friday, September 27, 2019 11:35 AM
To: Miller, Shari A. (WFF-2500) <shari.a.miller@nasa.gov>
Subject: Re: [EXTERNAL] NASA_USFWS Section 7 Consultation Letter

Good morning,

Thank you, Shari. We have no further comments or concerns regarding this project.

Have a great weekend.

On Fri, Sep 27, 2019 at 11:07 AM Miller, Shari A. (WFF-2500) <shari.a.miller@nasa.gov> wrote:

> Good morning, Rachel.
>
> Please find attached the revised Species Conclusion Table for NASA's proposed Marsh Fiber project. Please call me at 757.824.2327 if you have any question or would like to discuss this further.
>
> *Shari A. Miller*
> Center NEPA Manager &
> Environmental Planning Lead
> NASA GSFC Wallops Flight Facility
> Wallops Island, VA 23337
> (757) 824-2327
> Shari.A.Miller@nasa.gov
> https://code200-external.gsfc.nasa.gov/250-wff/
>
> *"There is nothing better than a friend. Unless it is a friend with chocolate." — Linda Grayson*
>
> **From:** rachel_case@fws.gov <rachel_case@fws.gov> **On Behalf Of** Virginia Field Office, FW5
> **Sent:** Thursday, September 26, 2019 11:09 AM
> **To:** Bruner, Douglas W. (WFF-2500) <douglas.w.bruner@nasa.gov>
> **Subject:** Re: [EXTERNAL] NASA_USFWS Section 7 Consultation Letter
>
> Douglas,
>
> I attempted to send an e-mail to you on the September 23rd regarding your project submission. It appears that there has been some difficulties with delivery. The previous e-mail stated:
>
> Thank you for your project submission. After reviewing your documents, I did have a question about the Species Conclusion Table (SCT). You have made a may affect determination for the piping plover and red knot; however, it appears from the notes/documentation column of the SCT that you believe this project is not likely to adversely affect these species. I wanted to clarify these determinations.
>
> Please disregard this e-mail if this information has reached you.
> Regards,

Rachel

On Tue, Sep 17, 2019 at 9:16 AM Bruner, Douglas W. (WFF-2500) <douglas.w.bruner@nasa.gov> wrote:

> Dear Virginia Field Office Staff,
>
> The National Aeronautics and Space Administration (NASA) Wallops Flight Facility (WFF) proposes to install a fiber optic cable, referred to as the "Marsh Fiber," from the U.S. Fish and Wildlife Service (USFWS) Wallops National Wildlife Refuge (Wallops NWR) to Wallops Island. NASA is preparing an Environmental Assessment (EA) in compliance with NEPA to analyze the potential effects of the proposed action on the environment.
>
> Attached to this correspondence is a letter that provides information about the proposed project and the species and critical habitat considered in our review and our determination of effects on federally listed threatened and endangered species in the proposed project area. The purpose of this letter is to inform your office of the project and to request your concurrence with our determination.
>
> Please feel free to contact Shari Miller or me if you have questions regarding the project or effects determinations.
>
> Very respectfully,
>
> Doug Bruner
> Environmental Engineer
> Code 250, Medical and Environmental Management Division
> NASA Wallops Flight Facility
> Building F-160, Rm C-166
> Wallops Island, Virginia 23337
> douglas.w.bruner@nasa.gov
> Office (757) 824-2441

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Rachel Case
Biological Science Technician
Virginia Field Office
U.S. Fish and Wildlife Service
6669 Short Lane
Gloucester, Virginia 23061
804-824-2416

UPATED Species Conclusions Table

Project Name: NASA Wallops Flight Facility Fiber Optic Cable Installation ("Marsh Fiber")

Consultation Code: 05E2VA00-2019-SLI-4880

Date: 08/06/2020

Notes: No change to determinations. Update was made to NLEB notes, which is shown in yellow, to document modification to project since original Species Conclusions Table was submitted in September 2019. Originally the project stated no tree removal and now includes up to 1.3 acres of tree removal.

Species / Resource Name	Conclusion	ESA Section 7	Notes / Documentation
Northern long-eared bat (*Myotis septentrionalis)*	Suitable habitat potentially present	May affect	Relying upon the findings of the 1/5/2018 Programmatic Biological Opinion for the Final 4(d) Rule on the Northern long-eared bat and Activities Excepted from Take Prohibitions to fulfill project-specific Section 7 responsibilities. Up to 1.3 acres of trees would be removed as part of the Proposed Action. Noise levels from Horizontal Directional Drilling (HDD) operations and equipment would increase during project activities with disturbances to mature trees adjacent to the boresight antenna. No Myotis guild detected during 2017-2018 bat acoustic and netting surveys (Barr, 2018.) Due to a time of year restriction (TOYR) that NASA will implement on the project for other species, no work would be done between March 15 and August 31, which includes the Northern long-eared bat pup season (June 1 to July 31). NASA anticipates that the project may affect but is not likely to adversely affect the Northern long-eared bat.
Eastern black rail (*Laterallus jamaicensis jamaicensis*)	Species not present Suitable habitat present	Not likely to adversely affect	Species has recently been documented at WFF and suitable habitat is present at and near the facility (Walker Marsh) (NASA 2019). As the species is proposed by USFWS for listing as threatened, NASA has included the Eastern black rail in the Species Conclusions Table for the proposed project. Through informal conference with USFWS conducted on 8/16/2019, NASA will incorporate a TOYR between April 1 and August 31 into the proposed project to avoid potentially adverse effects on the species. Therefore, NASA anticipates that the species would not be present during project activities.

Species / Resource Name	Conclusion	ESA Section 7	Notes / Documentation
Bald eagle (*Haliaeetus leucocephalus*)	No bald eagle nests within 660 feet of project area (CCB 2019) No bald eagle roosts within 3 miles of the project area (CCB 2019)	No effect	Two active bald eagle nests exist on Wallops Island (NASA 2018). Multiple other documented bald eagle nests are in the vicinity of WFF and the project area (CCB 2019). The closest bald eagle nest to the project area is on Wallops Island more than 0.5 mile southeast of the proposed project's eastern terminus. The next closest bald eagle nest is in Wallops Island NWR more than 0.5 mile northeast of the proposed project's western terminus. Other bald eagle nests at or in the vicinity of WFF are more than 1 mile from the project area. NASA holds permit number MB50674C-0 (12/01/2017 - 11/30/2019) for eagle nest take on the east end of the Wallops Island unmanned aerial system (UAS) airstrip.
Piping plover (*Charadrius melodus*)	Species not present Suitable habitat potentially present	Not likely to adversely affect	Regularly nests and forages on Wallops, Assateague, and Assawoman Island beaches (NASA 2018; USFWS 2016, USFWS 2019). No beaches would be directly disturbed by the proposed action; NASA proposes to use HDD under the shoreline of the Wallops National Wildlife Refuge and the west side of Wallops Island (HDD is not likely to affect species). Therefore, proposed activities would not occur near documented piping plover nests on Wallops Island. Due to TOYR that NASA will implement on the project for the Eastern black rail, no work would be done between April 1 and August 31. Therefore, NASA anticipates that the species would not be present during project activities.
Red knot (*Calidris canutus rufa)*	Species not present Suitable habitat present	Not likely to adversely affect	Regularly forages on Wallops, Assateague, and Assawoman Island beaches during northerly spring migration (NASA 2018, USFWS 2019). Activities in the proposed action would not occur on beaches at or near red knot habitat. No beaches would be directly disturbed by the proposed action; NASA proposes to use HDD under the shoreline of the Wallops National Wildlife Refuge and the west side of Wallops Island (HDD is not likely to affect species). Therefore, proposed activities would not occur near documented red knot foraging areas on Wallops Island. Due to TOYR that NASA will implement on the project for the Eastern black rail, no work would be done between April 1 and August 31. Therefore, NASA anticipates that the species would not be present during project activities.

Species / Resource Name	Conclusion	ESA Section 7	Notes / Documentation
Roseate tern (*Sterna dougallii dougallii*)	Species not present Suitable habitat present	No effect	Rarely observed along the U.S. coast south of New Jersey; may transit through oceanic areas east of the action area during seasonal migration (Nisbet 1984).
Green sea turtle (*Chelonia mydas)*	No suitable habitat present	No effect	HDD unlikely to affect species; bore pits and equipment access to handholes not located in nesting habitat. NMFS Protected Species Division responded via email on 9/26/19 to NASA's request for Section 7 consultation for the Marsh Fiber Project with the following: "*Although four species of sea turtles and Atlantic sturgeon originating from five listed Distinct Population Segments (DPS) are known to occur along the coastal waters of Virginia, based on the activities associated with the project, the location of the project, and information you provided in your email and letter, we believe that these species will not be exposed to any direct or indirect effects of the action. Therefore, we do not believe a consultation in accordance with section 7 of the Endangered Species Act (ESA) is necessary.*"
Hawksbill sea turtle (*Eretmochelys imbricata)*	No suitable habitat present	No effect	Most unlikely sea turtle species in ROI; only two observations in Virginia since 1979 (Mansfield 2006). HDD unlikely to affect species; bore pits and equipment access to handholes not located in nesting habitat. NMFS Protected Species Division responded via email on 9/26/19 to NASA's request for Section 7 consultation for the Marsh Fiber Project with the following: "*Although four species of sea turtles and Atlantic sturgeon originating from five listed Distinct Population Segments (DPS) are known to occur along the coastal waters of Virginia, based on the activities associated with the project, the location of the project, and information you provided in your email and letter, we believe that these species will not be exposed to any direct or indirect effects of the action. Therefore, we do not believe a consultation in accordance with section 7 of the Endangered Species Act (ESA) is necessary.*"

Species / Resource Name	Conclusion	ESA Section 7	Notes / Documentation
Kemp's Ridley sea turtle (*Lepidochelys kempii*)	No suitable habitat present	No effect	Second most prevalent sea turtle species in ROI. Traditionally nests in Mexico; however, first Virginia nest discovered in 2012 at Virginia Beach (USFWS 2012); with a second nest at False Cape in summer 2014 (Virginia Department of Game & Inland Fisheries, unpublished data). Generally found in more sheltered, shallower water habitats than other sea turtle species (Ogren 1989). HDD unlikely to affect species; bore pits and equipment access to handholes not located in nesting habitat. NMFS Protected Species Division responded via email on 9/26/19 to NASA's request for Section 7 consultation for the Marsh Fiber Project with the following: "*Although four species of sea turtles and Atlantic sturgeon originating from five listed Distinct Population Segments (DPS) are known to occur along the coastal waters of Virginia, based on the activities associated with the project, the location of the project, and information you provided in your email and letter, we believe that these species will not be exposed to any direct or indirect effects of the action. Therefore, we do not believe a consultation in accordance with section 7 of the Endangered Species Act (ESA) is necessary.*"
Leatherback sea turtle (*Dermachelys coriacea)*	No suitable habitat present	No effect	Nesting unlikely; only one individual demonstrating nesting behavior documented on Assateague Island in 1996 (Rabon et al. 2003); generally considered oceanic, however will forage in coastal areas if prey species are available in high densities (Eckert et al. 2006). HDD unlikely to affect species; bore pits and access routes to bore pits not in nesting habitat. NMFS Protected Species Division responded via email on 9/26/19 to NASA's request for Section 7 consultation for the Marsh Fiber Project with the following: "*Although four species of sea turtles and Atlantic sturgeon originating from five listed Distinct Population Segments (DPS) are known to occur along the coastal waters of Virginia, based on the activities associated with the project, the location of the project, and information you provided in your email and letter, we believe that these species will not be exposed to any direct or indirect effects of the action. Therefore, we do not believe a consultation in accordance with section 7 of the Endangered Species Act (ESA) is necessary.*"

Species / Resource Name	Conclusion	ESA Section 7	Notes / Documentation
Loggerhead sea turtle (*Caretta caretta*)	No Suitable habitat present	No effect	Most prevalent sea turtle species in ROI; periodically nests on Wallops and Assateague Island beaches (NASA 2018; USFWS 2016). Loggerhead nests have been observed on Wallops Island beaches as recently as 2016 (NASA 2019). Greatest in-water concentrations over continental shelf (Shoop and Kenney 1992); however, species is also found in deeper waters (Mansfield et al. 2009). HDD unlikely to affect species; bore pits and equipment access to handholes not located in nesting habitat. NMFS Protected Species Division responded via email on 9/26/19 to NASA's request for Section 7 consultation for the Marsh Fiber Project with the following: "*Although four species of sea turtles and Atlantic sturgeon originating from five listed Distinct Population Segments (DPS) are known to occur along the coastal waters of Virginia, based on the activities associated with the project, the location of the project, and information you provided in your email and letter, we believe that these species will not be exposed to any direct or indirect effects of the action. Therefore, we do not believe a consultation in accordance with section 7 of the Endangered Species Act (ESA) is necessary.*"
Seabeach amaranth (*Amaranthus pumilus*)	Species not documented at NASA WFF No suitable habitat present	No effect	No documented occurrences on Wallops Island (NASA 2017); closest documented occurrence has been at Assateague Island (USWFS 2012) north of the action area.
Critical Habitat	No critical habitat	No effect	

References:

Barr, E. 2018. Post-WNS Survey of Bats at NASA Wallops Island Flight Facility: Contract/Grant G16AC00327, 2018 Final Report. November.

Center for Conservation Biology (CCB). 2019. CCB Mapping Portal. Accessed on August 26, 2019 at https://ccbbirds.org/maps/#eagles.

Eckert, S. A., D. Bagley, S. Kubis, L. Ehrhart, C. Johnson, K. Stewart, and D. DeFreese. 2006. Internesting and postnesting movements and foraging habitats of leatherback sea turtles (Dermochelys coriacea) nesting in Florida. Chelonian Conservation and Biology, 5(2): 239- NASA. 2018. Wallops Island protected species monitoring report. WFF Environmental Office, Wallops Island, VA.

National Aeronautics and Space Administration (NASA). 2017. *Environmental Resources Document (External Version – Redacted) for National Aeronautics and Space Administration Goddard Space Flight Center, Wallops Flight Facility, Wallops Island, Virginia*. Accessed on July 25, 2019 at https://code200-external.gsfc.nasa.gov/250-wff/documents.

Mansfield, K.L. 2006. Sources of Mortality, Movements and Behavior of Sea Turtles in Virginia. Doctoral Dissertation. College of William and Mary School of Marine Science.

Mansfield, K. L., V.S. Saba, J.A. Keinath, & J.A. Musick. 2009. Satellite tracking reveals a dichotomy in migration strategies among juvenile loggerhead turtles in the Northwest Atlantic. Marine Biology, 156(12), 2555-2570.

National Aeronautics and Space Administration (NASA). 2018. Wallops Island Protected Species Monitoring Report. WFF Environmental Office, Wallops Island, VA.

National Aeronautics and Space Administration (NASA), 2019. Wallops Flight Facility Site-wide Programmatic Environmental Impact Statement, Final. May. https://code200-external.gsfc.nasa.gov/250-wff/site-wide_eis.

National Marine Fisheries Service. 2019. Email from Mr. Brian Hopper, NMFS Protected Resources Division to Mr. Doug Bruner, NASA WFF on September 26. Email provided in response to NASA's request for NMFS review of protected species under Section 7 of the Endangered Species Act.

Nisbet, I. C. 1984. Migration and winter quarters of North American Roseate Terns as shown by banding recoveries. Journal of Field Ornithology, 1-17.

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Rabon Jr., D. R., Johnson, S. A., Boettcher, R., Dodd, M., Lyons, M., Murphy, S., and Stewart, K. 2003. Confirmed leatherback turtle (*Dermochelys coriacea*) nests from North Carolina, with a summary of leatherback nesting activities north of Florida. Marine Turtle Newsletter, 101, 4-8.

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, 43-67.

U.S. Air Force (USAF). 2017. Environmental Assessment for Construction and Operation of an Instrumentation Tower at Wallops Island, Virginia. Prepared by AECOM.

U.S. Fish and Wildlife Service (USFWS). 2012. Back Bay National Wildlife Refuge Annual Sea Turtle Program Report.

USFWS. 2016. Revised Biological Opinion Wallops Flight Facility Proposed and Ongoing Operations and Shoreline Restoration. June.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Virginia Ecological Services Field Office
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http://www.fws.gov/northeast/virginiafield/

In Reply Refer To: August 21, 2020
Consultation Code: 05E2VA00-2019-TA-4880
Event Code: 05E2VA00-2020-E-15883
Project Name: Marsh Fiber

Subject: Verification letter for the 'Marsh Fiber' project under the January 5, 2016, Programmatic Biological Opinion on Final 4(d) Rule for the Northern Long-eared Bat and Activities Excepted from Take Prohibitions.

Dear Leah Potts:

The U.S. Fish and Wildlife Service (Service) received on August 21, 2020 your effects determination for the 'Marsh Fiber' (the Action) using the northern long-eared bat (*Myotis septentrionalis*) key within the Information for Planning and Consultation (IPaC) system. This IPaC key assists users in determining whether a Federal action is consistent with the activities analyzed in the Service's January 5, 2016, Programmatic Biological Opinion (PBO). The PBO addresses activities excepted from "take"[1] prohibitions applicable to the northern long-eared bat under the Endangered Species Act of 1973 (ESA) (87 Stat.884, as amended; 16 U.S.C. 1531 et seq.).

Based upon your IPaC submission, the Action is consistent with activities analyzed in the PBO. The Action may affect the northern long-eared bat; however, any take that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR §17.40(o). Unless the Service advises you within 30 days of the date of this letter that your IPaC-assisted determination was incorrect, this letter verifies that the PBO satisfies and concludes your responsibilities for this Action under ESA Section 7(a)(2) with respect to the northern long-eared bat.

Please report to our office any changes to the information about the Action that you submitted in IPaC, the results of any bat surveys conducted in the Action area, and any dead, injured, or sick northern long-eared bats that are found during Action implementation. If the Action is not completed within one year of the date of this letter, you must update and resubmit the information required in the IPaC key.

This IPaC-assisted determination allows you to rely on the PBO for compliance with ESA Section 7(a)(2) only for the northern long-eared bat. It **does not** apply to the following ESA-protected species that also may occur in the Action area:

- Eastern Black Rail, *Laterallus jamaicensis ssp. jamaicensis* (Proposed Threatened)
- Green Sea Turtle, *Chelonia mydas* (Threatened)
- Hawksbill Sea Turtle, *Eretmochelys imbricata* (Endangered)
- Kemp's Ridley Sea Turtle, *Lepidochelys kempii* (Endangered)
- Leatherback Sea Turtle, *Dermochelys coriacea* (Endangered)
- Loggerhead Sea Turtle, *Caretta caretta* (Threatened)
- Piping Plover, *Charadrius melodus* (Threatened)
- Red Knot, *Calidris canutus rufa* (Threatened)
- Roseate Tern, *Sterna dougallii dougallii* (Endangered)
- Seabeach Amaranth, *Amaranthus pumilus* (Threatened)

If the Action may affect other federally listed species besides the northern long-eared bat, a proposed species, and/or designated critical habitat, additional consultation between you and this Service office is required. If the Action may disturb bald or golden eagles, additional coordination with the Service under the Bald and Golden Eagle Protection Act is recommended.

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[1]Take means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct [ESA Section 3(19)].

Action Description
You provided to IPaC the following name and description for the subject Action.

1. Name

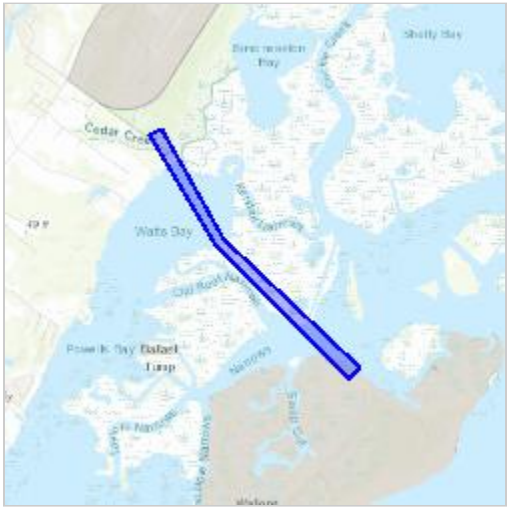
Marsh Fiber

2. Description

The following description was provided for the project 'Marsh Fiber':

Wallops Island

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/37.90231956192561N75.45920900208435W



Determination Key Result

This Federal Action may affect the northern long-eared bat in a manner consistent with the description of activities addressed by the Service's PBO dated January 5, 2016. Any taking that may occur incidental to this Action is not prohibited under the final 4(d) rule at 50 CFR §17.40(o). Therefore, the PBO satisfies your responsibilities for this Action under ESA Section 7(a)(2) relative to the northern long-eared bat.

Determination Key Description: Northern Long-eared Bat 4(d) Rule

This key was last updated in IPaC on May 15, 2017. Keys are subject to periodic revision.

This key is intended for actions that may affect the threatened northern long-eared bat.

The purpose of the key for Federal actions is to assist determinations as to whether proposed actions are consistent with those analyzed in the Service's PBO dated January 5, 2016.

Federal actions that may cause prohibited take of northern long-eared bats, affect ESA-listed species other than the northern long-eared bat, or affect any designated critical habitat, require ESA Section 7(a)(2) consultation in addition to the use of this key. Federal actions that may affect species proposed for listing or critical habitat proposed for designation may require a conference under ESA Section 7(a)(4).

Determination Key Result

This project may affect the threatened Northern long-eared bat; therefore, consultation with the Service pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (87 Stat.884, as amended; 16 U.S.C. 1531 et seq.) is required. However, based on the information you provided, this project may rely on the Service's January 5, 2016, *Programmatic Biological Opinion on Final 4(d) Rule for the Northern Long-Eared Bat and Activities Excepted from Take Prohibitions* to fulfill its Section 7(a)(2) consultation obligation.

Qualification Interview

1. Is the action authorized, funded, or being carried out by a Federal agency?

   Yes

2. Have you determined that the proposed action will have "no effect" on the northern long-eared bat? (If you are unsure select "No")

   No

3. Will your activity purposefully **Take** northern long-eared bats?

   No

4. [Semantic] Is the project action area located wholly outside the White-nose Syndrome Zone?

   Automatically answered
   No

5. Have you contacted the appropriate agency to determine if your project is near a known hibernaculum or maternity roost tree?

   Location information for northern long-eared bat hibernacula is generally kept in state Natural Heritage Inventory databases – the availability of this data varies state-by-state. Many states provide online access to their data, either directly by providing maps or by providing the opportunity to make a data request. In some cases, to protect those resources, access to the information may be limited. A web page with links to state Natural Heritage Inventory databases and other sources of information on the locations of northern long-eared bat roost trees and hibernacula is available at www.fws.gov/midwest/endangered/mammals/nleb/nhisites.html.

   Yes

6. Will the action affect a cave or mine where northern long-eared bats are known to hibernate (i.e., hibernaculum) or could it alter the entrance or the environment (physical or other alteration) of a hibernaculum?

   No

7. Will the action involve Tree Removal?

   Yes

8. Will the action only remove hazardous trees for the protection of human life or property?

   No

9. Will the action remove trees within 0.25 miles of a known northern long-eared bat hibernaculum at any time of year?

   No

10. Will the action remove a known occupied northern long-eared bat maternity roost tree or any trees within 150 feet of a known occupied maternity roost tree from June 1 through July 31?

    No

Project Questionnaire

If the project includes forest conversion, report the appropriate acreages below. Otherwise, type ‘0’ in questions 1-3.

1. Estimated total acres of forest conversion:

0.83

2. If known, estimated acres of forest conversion from April 1 to October 31

0

3. If known, estimated acres of forest conversion from June 1 to July 31

0

If the project includes timber harvest, report the appropriate acreages below. Otherwise, type ‘0’ in questions 4-6.

4. Estimated total acres of timber harvest

0

5. If known, estimated acres of timber harvest from April 1 to October 31

0

6. If known, estimated acres of timber harvest from June 1 to July 31

0

If the project includes prescribed fire, report the appropriate acreages below. Otherwise, type ‘0’ in questions 7-9.

7. Estimated total acres of prescribed fire

0

8. If known, estimated acres of prescribed fire from April 1 to October 31

0

9. If known, estimated acres of prescribed fire from June 1 to July 31

0

If the project includes new wind turbines, report the megawatts of wind capacity below. Otherwise, type ‘0’ in question 10.

10. What is the estimated wind capacity (in megawatts) of the new turbine(s)?

0

United States Department of the Interior

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

In Reply Refer To: August 06, 2020
Consultation Code: 05E2VA00-2019-SLI-4880
Event Code: 05E2VA00-2020-E-15027
Project Name: Marsh Fiber

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

To Whom It May Concern:

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

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

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

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

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

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

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

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

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

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

Attachment(s):

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

Official Species List

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

This species list is provided by:

Virginia Ecological Services Field Office
6669 Short Lane
Gloucester, VA 23061-4410
(804) 693-6694

Project Summary

Consultation Code: 05E2VA00-2019-SLI-4880

Event Code: 05E2VA00-2020-E-15027

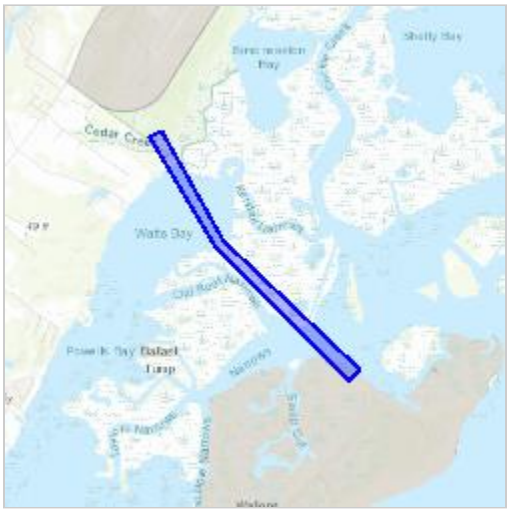
Project Name: Marsh Fiber

Project Type: ** OTHER **

Project Description: Wallops Island

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/37.90231956192561N75.45920900208435W



Counties: Accomack, VA

Endangered Species Act Species

There is a total of 11 threatened, endangered, or candidate species on this species list.

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

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

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

---

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

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

Birds

NAME	STATUS
Eastern Black Rail *Laterallus jamaicensis ssp. jamaicensis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10477	Proposed Threatened
Piping Plover *Charadrius melodus* Population: [Atlantic Coast and Northern Great Plains populations] - Wherever found, except those areas where listed as endangered. There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6039	Threatened
Red Knot *Calidris canutus rufa* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1864	Threatened
Roseate Tern *Sterna dougallii dougallii* Population: Northeast U.S. nesting population No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2083	Endangered

Reptiles

NAME	STATUS
Green Sea Turtle *Chelonia mydas* Population: North Atlantic DPS There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6199	Threatened
Hawksbill Sea Turtle *Eretmochelys imbricata* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3656	Endangered
Kemp's Ridley Sea Turtle *Lepidochelys kempii* There is **proposed** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/5523	Endangered
Leatherback Sea Turtle *Dermochelys coriacea* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1493	Endangered
Loggerhead Sea Turtle *Caretta caretta* Population: Northwest Atlantic Ocean DPS There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1110	Threatened

Flowering Plants

NAME	STATUS
Seabeach Amaranth *Amaranthus pumilus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8549	Threatened

Critical habitats

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

USFWS National Wildlife Refuge Lands And Fish Hatcheries

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

The following FWS National Wildlife Refuge Lands and Fish Hatcheries lie fully or partially within your project area:

FACILITY NAME	ACRES
Wallops Island National Wildlife Refuge **Wallops Island National Wildlife Refuge** C/o Chincoteague Nwr P.O. Box 62 Chincoteague Island, VA 23336-0062 (757) 336-6122 https://www.fws.gov/refuges/profiles/index.cfm?id=51571	372

Suzie Richert

From: Case, Rachel <rachel_case@fws.gov>
Sent: Friday, September 27, 2019 11:35 AM
To: Miller, Shari A. (WFF-2500)
Subject: Re: [EXTERNAL] NASA_USFWS Section 7 Consultation Letter

Good morning,

Thank you, Shari. We have no further comments or concerns regarding this project.

Have a great weekend.

On Fri, Sep 27, 2019 at 11:07 AM Miller, Shari A. (WFF-2500) <shari.a.miller@nasa.gov> wrote:

> Good morning, Rachel.
>
> Please find attached the revised Species Conclusion Table for NASA's proposed Marsh Fiber project. Please call me at 757.824.2327 if you have any question or would like to discuss this further.
>
> *Shari A. Miller*
>
> Center NEPA Manager &
>
> Environmental Planning Lead
> NASA GSFC Wallops Flight Facility
> Wallops Island, VA 23337
> (757) 824-2327
> Shari.A.Miller@nasa.gov
>
> https://code200-external.gsfc.nasa.gov/250-wff/
>
> *"There is nothing better than a friend. Unless it is a friend with chocolate." — Linda Grayson*
>
> **From:** rachel_case@fws.gov <rachel_case@fws.gov> **On Behalf Of** Virginia Field Office, FW5
> **Sent:** Thursday, September 26, 2019 11:09 AM
> **To:** Bruner, Douglas W. (WFF-2500) <douglas.w.bruner@nasa.gov>
> **Subject:** Re: [EXTERNAL] NASA_USFWS Section 7 Consultation Letter

Douglas,

I attempted to send an e-mail to you on the September 23rd regarding your project submission. It appears that there has been some difficulties with delivery. The previous e-mail stated:

Thank you for your project submission. After reviewing your documents, I did have a question about the Species Conclusion Table (SCT). You have made a may affect determination for the piping plover and red knot; however, it appears from the notes/documentation column of the SCT that you believe this project is not likely to adversely affect these species. I wanted to clarify these determinations.

Please disregard this e-mail if this information has reached you.

Regards,

Rachel

On Tue, Sep 17, 2019 at 9:16 AM Bruner, Douglas W. (WFF-2500) <douglas.w.bruner@nasa.gov> wrote:

> Dear Virginia Field Office Staff,
>
> The National Aeronautics and Space Administration (NASA) Wallops Flight Facility (WFF) proposes to install a fiber optic cable, referred to as the "Marsh Fiber," from the U.S. Fish and Wildlife Service (USFWS) Wallops National Wildlife Refuge (Wallops NWR) to Wallops Island. NASA is preparing an Environmental Assessment (EA) in compliance with NEPA to analyze the potential effects of the proposed action on the environment.
>
> Attached to this correspondence is a letter that provides information about the proposed project and the species and critical habitat considered in our review and our determination of effects on federally listed threatened and endangered species in the proposed project area. The purpose of this letter is to inform your office of the project and to request your concurrence with our determination.
>
> Please feel free to contact Shari Miller or me if you have questions regarding the project or effects determinations.
>
> Very respectfully,

Doug Bruner

Environmental Engineer

Code 250, Medical and Environmental Management Division

NASA Wallops Flight Facility

Building F-160, Rm C-166

Wallops Island, Virginia 23337

douglas.w.bruner@nasa.gov

Office (757) 824-2441

--

Rachel Case
Biological Science Technician
Virginia Field Office
U.S. Fish and Wildlife Service
6669 Short Lane
Gloucester, Virginia 23061
804-824-2416

Species Conclusions Table

Project Name: NASA Wallops Flight Facility Fiber Optic Cable Installation ("Marsh Fiber")

Date: 09/26/2019

Species / Resource Name	Conclusion	ESA Section 7	Notes / Documentation
Northern long-eared bat (*Myotis septentrionalis)*	Suitable habitat potentially present	No effect	Relying upon the findings of the 1/5/2018 Programmatic Biological Opinion for the Final 4(d) Rule on the Northern long-eared bat and Activities Excepted from Take Prohibitions to fulfill project-specific Section 7 responsibilities. No trees would be removed as part of the Proposed Action. Noise levels from Horizontal Directional Drilling (HDD) operations and equipment would increase during project activities with disturbances to mature trees adjacent to the boresight antenna. No Myotis guild detected during 2017-2018 bat acoustic and netting surveys (Barr, 2018.) Due to a time of year restriction (TOYR) that NASA will implement on the project for other species, no work would be done between April 1 and August 31, which includes the Northern long-eared bat pup season (June 1 to July 31).
Eastern black rail (*Laterallus jamaicensis jamaicensis*)	Species not present Suitable habitat present	Not likely to adversely affect	Species has recently been documented at WFF and suitable habitat is present at and near the facility (Walker Marsh) (NASA 2019). As the species is proposed by USFWS for listing as threatened, NASA has included the Eastern black rail in the Species Conclusions Table for the proposed project. Through informal conference with USFWS conducted on 8/16/2019, NASA will incorporate a TOYR between April 1 and August 31 into the proposed project to avoid potentially adverse effects on the species. Therefore, NASA anticipates that the species would not be present during project activities.

Species / Resource Name	Conclusion	ESA Section 7	Notes / Documentation
Bald eagle (*Haliaeetus leucocephalus*)	No bald eagle nests within 660 feet of project area (CCB 2019) No bald eagle roosts within 3 miles of the project area (CCB 2019)	No effect	Two active bald eagle nests exist on Wallops Island (NASA 2018). Multiple other documented bald eagle nests are in the vicinity of WFF and the project area (CCB 2019). The closest bald eagle nest to the project area is on Wallops Island more than 0.5 mile southeast of the proposed project's eastern terminus. The next closest bald eagle nest is in Wallops Island NWR more than 0.5 mile northeast of the proposed project's western terminus. Other bald eagle nests at or in the vicinity of WFF are more than 1 mile from the project area. NASA holds permit number MB50674C-0 (12/01/2017 - 11/30/2019) for eagle nest take on the east end of the Wallops Island unmanned aerial system (UAS) airstrip.
Piping plover (*Charadrius melodus*)	Species not present Suitable habitat potentially present	Not likely to adversely affect	Regularly nests and forages on Wallops, Assateague, and Assawoman Island beaches (NASA 2018; USFWS 2016, USFWS 2019). No beaches would be directly disturbed by the proposed action; NASA proposes to use HDD under the shoreline of the Wallops National Wildlife Refuge and the west side of Wallops Island (HDD is not likely to affect species). Therefore, proposed activities would not occur near documented piping plover nests on Wallops Island. Due to TOYR that NASA will implement on the project for the Eastern black rail, no work would be done between April 1 and August 31. Therefore, NASA anticipates that the species would not be present during project activities.
Red knot (*Calidris canutus rufa)*	Species not present Suitable habitat present	Not likely to adversely affect	Regularly forages on Wallops, Assateague, and Assawoman Island beaches during northerly spring migration (NASA 2018, USFWS 2019). Activities in the proposed action would not occur on beaches at or near red knot habitat. No beaches would be directly disturbed by the proposed action; NASA proposes to use HDD under the shoreline of the Wallops National Wildlife Refuge and the west side of Wallops Island (HDD is not likely to affect species). Therefore, proposed activities would not occur near documented red knot foraging areas on Wallops Island. Due to TOYR that NASA will implement on the project for the Eastern black rail, no work would be done between April 1 and August 31. Therefore, NASA anticipates that the species would not be present during project activities.

Species / Resource Name	Conclusion	ESA Section 7	Notes / Documentation
Roseate tern (*Sterna dougallii dougallii*)	Species not present Suitable habitat present	No effect	Rarely observed along the U.S. coast south of New Jersey; may transit through oceanic areas east of the action area during seasonal migration (Nisbet 1984).
Green sea turtle (*Chelonia mydas)*	No suitable habitat present	No effect	HDD unlikely to affect species; bore pits and equipment access to handholes not located in nesting habitat. NMFS Protected Species Division responded via email on 9/26/19 to NASA's request for Section 7 consultation for the Marsh Fiber Project with the following: "*Although four species of sea turtles and Atlantic sturgeon originating from five listed Distinct Population Segments (DPS) are known to occur along the coastal waters of Virginia, based on the activities associated with the project, the location of the project, and information you provided in your email and letter, we believe that these species will not be exposed to any direct or indirect effects of the action. Therefore, we do not believe a consultation in accordance with section 7 of the Endangered Species Act (ESA) is necessary.*"
Hawksbill sea turtle (*Eretmochelys imbricata)*	No suitable habitat present	No effect	Most unlikely sea turtle species in ROI; only two observations in Virginia since 1979 (Mansfield 2006). HDD unlikely to affect species; bore pits and equipment access to handholes not located in nesting habitat. NMFS Protected Species Division responded via email on 9/26/19 to NASA's request for Section 7 consultation for the Marsh Fiber Project with the following: "*Although four species of sea turtles and Atlantic sturgeon originating from five listed Distinct Population Segments (DPS) are known to occur along the coastal waters of Virginia, based on the activities associated with the project, the location of the project, and information you provided in your email and letter, we believe that these species will not be exposed to any direct or indirect effects of the action. Therefore, we do not believe a consultation in accordance with section 7 of the Endangered Species Act (ESA) is necessary.*"

Species / Resource Name	Conclusion	ESA Section 7	Notes / Documentation
Kemp's Ridley sea turtle (*Lepidochelys kempii*)	No suitable habitat present	No effect	Second most prevalent sea turtle species in ROI. Traditionally nests in Mexico; however, first Virginia nest discovered in 2012 at Virginia Beach (USFWS 2012); with a second nest at False Cape in summer 2014 (Virginia Department of Game & Inland Fisheries, unpublished data). Generally found in more sheltered, shallower water habitats than other sea turtle species (Ogren 1989). HDD unlikely to affect species; bore pits and equipment access to handholes not located in nesting habitat. NMFS Protected Species Division responded via email on 9/26/19 to NASA's request for Section 7 consultation for the Marsh Fiber Project with the following: "*Although four species of sea turtles and Atlantic sturgeon originating from five listed Distinct Population Segments (DPS) are known to occur along the coastal waters of Virginia, based on the activities associated with the project, the location of the project, and information you provided in your email and letter, we believe that these species will not be exposed to any direct or indirect effects of the action. Therefore, we do not believe a consultation in accordance with section 7 of the Endangered Species Act (ESA) is necessary.*"
Leatherback sea turtle (*Dermachelys coriacea)*	No suitable habitat present	No effect	Nesting unlikely; only one individual demonstrating nesting behavior documented on Assateague Island in 1996 (Rabon et al. 2003); generally considered oceanic, however will forage in coastal areas if prey species are available in high densities (Eckert et al. 2006). HDD unlikely to affect species; bore pits and access routes to bore pits not in nesting habitat. NMFS Protected Species Division responded via email on 9/26/19 to NASA's request for Section 7 consultation for the Marsh Fiber Project with the following: "*Although four species of sea turtles and Atlantic sturgeon originating from five listed Distinct Population Segments (DPS) are known to occur along the coastal waters of Virginia, based on the activities associated with the project, the location of the project, and information you provided in your email and letter, we believe that these species will not be exposed to any direct or indirect effects of the action. Therefore, we do not believe a consultation in accordance with section 7 of the Endangered Species Act (ESA) is necessary.*"

Species / Resource Name	Conclusion	ESA Section 7	Notes / Documentation
Loggerhead sea turtle (*Caretta caretta*)	No Suitable habitat present	No effect	Most prevalent sea turtle species in ROI; periodically nests on Wallops and Assateague Island beaches (NASA 2018; USFWS 2016). Loggerhead nests have been observed on Wallops Island beaches as recently as 2016 (NASA 2019). Greatest in-water concentrations over continental shelf (Shoop and Kenney 1992); however, species is also found in deeper waters (Mansfield et al. 2009). HDD unlikely to affect species; bore pits and equipment access to handholes not located in nesting habitat. NMFS Protected Species Division responded via email on 9/26/19 to NASA's request for Section 7 consultation for the Marsh Fiber Project with the following: "*Although four species of sea turtles and Atlantic sturgeon originating from five listed Distinct Population Segments (DPS) are known to occur along the coastal waters of Virginia, based on the activities associated with the project, the location of the project, and information you provided in your email and letter, we believe that these species will not be exposed to any direct or indirect effects of the action. Therefore, we do not believe a consultation in accordance with section 7 of the Endangered Species Act (ESA) is necessary.*"
Seabeach amaranth (*Amaranthus pumilus*)	Species not documented at NASA WFF No suitable habitat present	No effect	No documented occurrences on Wallops Island (NASA 2017); closest documented occurrence has been at Assateague Island (USWFS 2012) north of the action area.
Critical Habitat	No critical habitat	No effect	

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National Marine Fisheries Service. 2019. Email from Mr. Brian Hopper, NMFS Protected Resources Division to Mr. Doug Bruner, NASA WFF on September 26. Email provided in response to NASA's request for NMFS review of protected species under Section 7 of the Endangered Species Act.

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WFF Marsh Fiber Environmental Assessment

Appendix A
Agency Coordination

NOAA Fisheries Response

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

October 10, 2019

Mr. Douglas Bruner
Environmental Engineer
National Aeronautics and Space Administration
Goddard Space Flight Center
Wallops Island Facility
Attn; 250.W
Wallops Island, Virginia 23337

Re. Wallops Island Underground Fiber Optic Cable, Marsh Cable, EFH Assessment

Dear Mr. Bruner:

We have reviewed your essential fish habitat assessment (EFH) for the installation of an underground fiber optic cable from the Wallops Flight Facility (WFF) across Ware Bay and its associated marsh islands to Wallops Island, located in Accomack County, Virginia.

Magnuson Stevens Fishery Conservation and Management Act (MSA)
The Magnuson-Stevens Fishery Conservation and Management Act (MSA) requires federal agencies such as NASA to consult with us on any action or proposed action authorized, funded, or undertaken by the agency that may adversely affect EFH identified under the MSA. The EFH regulations, 50 CFR Section 600.920, outline that consultation procedure.

EFH is defined by the MSA as "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity". The designation and conservation of EFH seeks to minimize adverse effects on habitat caused by fishing and non-fishing activities. The WFF and Wallops Island project area is designated as EFH for various life stages of eleven (11) federally managed species including: Atlantic butterfish (*Peprilus triacanthus*), Atlantic sea herring (*Clupea harengus*), black sea bass (*Centopristis striata*) bluefish, (*Pomatomus saltatrix*), clearnose skate (*Raja eglanteria*), winter skate (*Leucoraja ocellata*), summer flounder (*Paralichthys dentatus*), windowpane flounder (*Scopthalmus aquosus*), sandbar shark (*Carcharhinus plumbeus*), Atlantic smoothhound shark complex (*Mustelus spp.*) and sand tiger shark (*Carcharias taurus*).

Although the HDD portions of the project are not likely to directly affect EFH, there are other project elements that may. The excavation of open trenches for the installation of 3 ft. long by 3 ft. wide by 3 ft. deep concrete-polymer hand hole enclosures, used to connect the HDD portions of the cable to the vibratory trenched portion of cable, excavating to -7 ft. below the marsh surface, to connect the cable installed via vibratory trenching with the cable to be jetted below the three tidal guts, and the temporary placement of excavated sediment on marsh substrate all

have the potential to impact the marsh and water quality including increased turbidity and reduced dissolved oxygen levels.

Proposed Best Management Practices

NASA has proposed to incorporate several best management practices (BMPs) into the project to minimize direct and secondary impacts to aquatic resources. We support the proposed BMPs and request that the following are incorporated into the project design and implementation:

1. Contain sediment and drilling mud with turbidity curtains and other erosion and sediment control measures in areas the HDD drill surfaces.
2. Develop a frac-out contingency plan outlining emergency procedures to follow should drilling muds escape the bore hole.
3. Restore pre-construction contours and re-establish appropriate native vegetation at the two hand hole and three tidal gut excavation areas and temporary storage areas on Walker marsh following NASA WFF vegetation management policies, including the monitoring and adaptive management of re-established vegetation areas.
4. Use upstream and downstream turbidity curtains during hand jetting of the cable across the three tidal guts to contain resuspended sediment in the immediate work area.

Provided these BMPs are incorporated into the project design and implementation we have no objections to the proposed installation of the fiber optic cable and have no conservation recommendations to provide.

Please note that a distinct and further EFH consultation must be initiated pursuant to 50 CFR 600.920(j) if new information becomes available or if the project is revised in such a manner that affects the basis of our determination above.

This EFH determination does not address threatened and endangered species under the purview of NOAA Fisheries Service. We understand you received an email response from Mr. Brian Hopper, NOAA Protected Resources Division (brian.d.hopper@noaa.gov, 410-573-4592) that due to the proposed construction activities and location of the project, consultation with us under Section 7 of the endangered species act is not necessary.

Thank you for the opportunity to review the EFH assessment for the Wallops Island Underground Fiber Optic Cable project. If you have any questions please do not hesitate to contact David O'Brien in our Gloucester Point, VA field office at 804-684-7828 (david.l.o'brien@noaa.gov).

Sincerely,

Karen M. Greene
Mid-Atlantic Field Offices Supervisor

Cc: B. Denson, NAO Corps
H. Badger, VMRC
L. Varnell, VIMS
J. Gironda- NESDIS

WFF Marsh Fiber Environmental Assessment

Appendix A
Agency Coordination

VDHR Response

COMMONWEALTH of VIRGINIA

Matthew Strickler
Secretary of Natural Resources

Department of Historic Resources
2801 Kensington Avenue, Richmond, Virginia 23221

Julie V. Langan
Director

Tel: (804) 367-2323
Fax: (804) 367-2391
TDD: (804) 367-2386
www.dhr.virginia.gov

September 25, 2020

Shari Miller
National Aeronautic and Space Administration
34200 Fulton St.
Wallops Island, VA 23337

Re: NASA Wallops Flight Facility- Marsh Fiber Project
Accomack County, Virginia.
DHR Project No. 2019-3371

Dear Ms. Miller:

The undertaking, as described in the draft environmental assessment (EA) (received May, 2020), consists of the installation of new fiber optic cable in three segments between the NASA Boresight Antenna on the Wallops NWR and the Mid-Atlantic Regional Spaceport (MARS) Unmanned Aerial Systems (UAS) Airstrip on Wallops Island. On August 31, 2020, DHR received updated information regarding the proposed undertaking: 1) a new limits of disturbance (LOD) for a Maxi HDD entrance site, 2) temporary placement of steering guidance wire, and 3) the possibility of a phased approach to the installation. Our comments are provided as assistance to NASA in meeting its responsibilities under Section 106 of the National Historic Preservation Act.

The new LOD will be located within the Wallops Island National Wildlife Refuge, and appears to be relatively undisturbed by previous construction activities. This new LOD has not been surveyed for archaeological resources. Given the 2003 predictive model defines the areas just outside of the new LOD as having a high probability for archaeological resources, we recommend that a Phase I archaeological survey be conducted within the proposed LOD. This survey must be conducted by qualified professionals in accordance to the *Archeology and Historic Preservation: Secretary of the Interior's Standards and Guidelines* (48 FR 44716-42) and DHR's *Guidelines for Conducting Historic Resources Survey in Virginia* (2017). One bound copy and one digital copy of the resulting report should be submitted to our office for review prior to any ground-disturbing project activities.

Thank you for seeking our comments on this project. If you have any questions at this time, please do not hesitate to contact me at jennifer.bellville-marrion@dhr.virginia.gov.

Sincerely,

Jenny Bellville-Marrion, Project Review Archaeologist
Review and Compliance Division

Western Region Office
962 Kime Lane
Salem, VA 24153
Tel: (540) 387-5443
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5357 Main Street
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Eastern Region Office
2801 Kensington Avenue
Richmond, VA 23221
Tel: (804) 367-2323
Fax: (804) 367-2391

Suzie Richert

From: Laura Lavernia <Laura.Lavernia@dhr.virginia.gov>
Sent: Tuesday, June 16, 2020 3:17 PM
To: Miller, Shari A. (WFF-2500)
Subject: [EXTERNAL] Geotechnical Borings for Marsh Fiber - review of Draft EA (DHR File No. 2019-3371) | e-Mail #03544

Dear Shari Miller,

Thank you for requesting comments from the Department of Historic Resources on the referenced project. Based upon the documentation provided, it is our opinion that no historic properties will be affected by the proposed undertaking.

Implementation of the undertaking in accordance with the finding of No Historic Properties Affected as documented fulfills the Federal agency's responsibilities under Section 106 of the National Historic Preservation Act. If for any reason the undertaking is not or cannot be conducted as proposed in the finding, consultation under Section 106 must be reopened.

If you have any questions or if we may provide any further assistance at this time, please do not hesitate to contact me.

Sincerely,

Laura Lavernia, Architectural Historian
Office of Review and Compliance
Division of Resource Services and Review
Phone: (804) 482-8097
Laura.Lavernia@dhr.virginia.gov

Suzie Richert

From: Laura Lavernia <Laura.Lavernia@dhr.virginia.gov>
Sent: Wednesday, October 16, 2019 12:41 PM
To: Miller, Shari A. (WFF-2500)
Subject: [EXTERNAL] Geotechnical Borings for Marsh Fiber (DHR File No. 2019-3371) | e-Mail #03586

Dear Shari Miller,

Thank you for requesting comments from the Department of Historic Resources on the referenced project. Based upon the documentation provided, it is our opinion that no historic properties will be affected by the proposed undertaking.

Implementation of the undertaking in accordance with the finding of No Historic Properties Affected as documented fulfills the Federal agency's responsibilities under Section 106 of the National Historic Preservation Act. If for any reason the undertaking is not or cannot be conducted as proposed in the finding, consultation under Section 106 must be reopened.

If you have any questions or if we may provide any further assistance at this time, please do not hesitate to contact me.

Sincerely,

Laura Lavernia, Architectural Historian
Office of Review and Compliance
Division of Resource Services and Review
Phone: (804) 482-8097
Laura.Lavernia@dhr.virginia.gov

Appendix A

Public Comments Received on
Draft EA and
NASA's Responses

NASA received comments on the Draft EA from the following parties:

1. Virginia Institute of Marine Sciences
2. U.S. Environmental Protection Agency
3. NASA Goddard Sustainability Program Office
4. Virginia Space/Mid-Atlantic Regional Spaceport
5. Virginia Department of Historic Resources

#	Topic	Commenter	Commenter Affiliation	Comment	Change Needed in EA?	Section of EA Revised	Response
1	Design Plans	Daryl Moore	Virginia Space/MARS	Virginia Space / MARS requests detailed design drawings for work to be performed at UAS site to alleviate any conflicts. The sections which detail design drawings will be needed: Page 64, section 3.3.22 – Maxi HDD depth under UAS Page 81, section 3.7.2.2 – Dewatering discharge if necessary Page 84, section Figure 3.2 - Map of UAS	No	N/A	WFF Environmental (Code 250) has provided the detailed design plans, which include the areas noted in the comment, to Virginia Space/MARS. WFF Engineering (Code 780) will include Virginia Space/MARS in project plans and meetings moving forward with construction planning and project implementation.
2	Cultural Resources	Daryl Moore	Virginia Space/MARS	We request the removal of the statement on Page 124, section 3.16.1 that AEP has been previously disturbed during construction of air strip. Virginia Space / MARS did not disturb the AEP during air strip construction and installed a fence to protect the AEP.	Yes	3.16.1	We note that "AEP" was intended to mean "APE." EA text has been updated to state: "*Site 44AC0089 has been protected by fencing since its discovery. The entire proposed project APE near the UAS Airstrip, with the exception of Site 44AC0089, has been previously disturbed during construction of the airstrip."*
3	Alternatives	Carrie Traver	EPA	The EA would benefit from a brief discussion of how the proposed route was selected, including any input from the landowners (i.e. USFWS and the Commonwealth of Virginia), siting criteria, or any alternative alignments that may have been considered. For example, was the route of the "old" inoperable Marsh Fiber line (as shown in Figure 1-2) considered for the new cable; if so, would this route potentially have more impacts than the proposed? Likewise, was routing the cable north to Chincoteague and along VA175 (Chincoteague Road) evaluated to attempt to reduce impacts to waters?	Yes	2.2.2	The following text has been added to Section 2.2.2: "*NASA initially considered numerous routes for the fiber optic cable from the WFF Main Base to northern Wallops Island. In addition to applying the screening criteria above, NASA considered how the project maycould affect and required involvement from various landowners and stakeholders (e.g. the Commonwealth of Virginia, Virginia Department of Transportation, USFWS, USACE, USCG, and private). Based on early stakeholder involvement, Sseveral routes, such as running the cable north to Chincoteague and across Chincoteague Inlet, were not developed past this initial phase and dismissed early in the NEPA process. The reasons for early dismal were due to the complexity and number of landowners, inability to secure permits or permission requirements, distance that would need to be installed resulting in unacceptable costs , and/or likely substantial delays in schedule.* "
4	Water Quality	Carrie Traver	EPA	While the Essential Fish Habitat Assessment Worksheet indicates that turbidity curtains would be used as a best management practice (BMP) to minimize potential impacts from suspended sediment, the EA indicates that the NASA's contractor "may" install turbidity curtains or will "consider" their use "if needed". Given NMFS's recommendation, we advise that the final EA clearly state that the contractor will use turbidity curtains to minimize impacts in areas the HDD drill surfaces as well as upstream and downstream across the tidal guts during hand jetting and disturbance by the marsh buggy.	Yes	2.2.3.2; 3.7.1; 3.9.2.2; 3.11.2.2; Table 4-1	NASA is committing to installing turbidity curtains. Wording in the EA that indicates they may or might be installed has been changed to definitively state they would be installed.
5	Wildlife	Carrie Traver	EPA	The project's time of year restriction for the Eastern Black Rail would limit the construction time frame to September to March. As noted, this restriction may also avoid impacts to other species. However, it would be helpful if the EA included a discussion of potential impacts to species that may be overwintering or seasonally using the marsh at that time, particularly for those species that may potentially be in hibernation, brumation, or torpor in the project area such as the northern diamondback terrapin.	Yes	"	Section 3.9.2.2 has been updated with the following text: *"In some cases, slower-moving or less-mobile terrestrial individuals may be inadvertently destroyed by construction vehicles and equipment, resulting in direct adverse impacts on individuals. This could include individuals in a state of hibernation, brumation, or torpor, such as the northern diamondback terrapin. ...Overall, the number of individuals and areas of habitat that would be affected by the Proposed Action would be small, relative to the individuals and the quantity of available suitable habitat in the surrounding area that would remain undisturbed."*
6	Vegetation	Carrie Traver	EPA	Regarding invasive species, Section 3.8.2.2. states "Contractors would adhere to applicable NASA and/or USFWS policies to prevent the introduction of invasive species by vehicles and equipment during construction activities." It would be helpful to expand this discussion to reference the specific policies or list example practices that may be used. Also, would post-project monitoring include invasive species management, if necessary?	Yes	3.8.2.2	The NASA WFF Site-wide Final PEIS Section 3.8 (page 3-122) states that of the approximately 320 acres of invasive species identified in a 2008 survey, Phragmites australis accounted for 88% of that acreage.Section 3.8.2 (Vegetation) of the EA has been updated with the following text: "*Phragmites are especially prevalent in wetland environments. Because a substantial portion of the proposed project occurs at Walker Marsh, which is characterized by wetlands, NASA would follow the policies and practices contained in the 2014 WFF Wallops Island Phragmites Control Plan. During construction activities, any heavy equipment used in Phragmites-infested areas would be restricted from use in areas prone to invasion. Prior to use, all heavy equipment would be cleaned of any visible dirt and plant debris and cleaned again prior to leaving the construction site. During the three years of bi-annual post-construction monitoring, NASA would monitor and report Phragmites growth and conduct hand herbicidal spraying to treat any small stands of Phragmites that occur."*

7	Groundwater	Kelly Busquets	NASA Goddard	In accordance with EO 13843 and NASA's sustainability goals, Goddard is required to reduce our potable water consumption 20% from the FY07 baseline and 0.5% each year. Table 3-3 indicates that no potable water will be used for the proposed alternative, but how will the drilling mud be made? Will the contractor use WFF water to prepare the mud on site, or will it be delivered to the site? If the drilling fluids will be prepared on site, how much water will be used for the project and has there been any consideration to use non-potable water instead?	Yes	Table 3-1; 3.7.2	The WFF Environmental Office discussed the use of water in drilling operations with the engineering consultant that has helped develop the project plans and the Sustainability Program Manager at NASA Goddard. Potable water would be used for HDD. Table 3-1 has been updated accordintly and the text in Groundwater section has been updated to include the following paragraph: "*NASA would use potable water in the HDD drilling operations. NASA conservatively estimates that approximately 240,000 gallons would be used in total for the duration of the project installation. For the largest HDD boring (under Watts Bay), NASA anticipates approximately 160,000 gallons would be required, and approximately 80,000 for the HDD operation under Ballast Narrows. These estimates include a 50 percent loss rate even through the construction contractor would be recycling the drilling mud. Water used for the HDD operations at the UAS Airstrip would likely come from a fire hydrant, and for the HDD operations at the Boresight Antenna could come from a combination of potable sources and non-potable water from an irrigation pond. These estimates do not adversely affect NASA's sustainability goals for water use in accordance with EO 13834 Efficient Federal Operations."*
8	Vegetation	Lyle Varnell	Virginia Institute of Marine Sciences	The document refers to Spartina cordifolia as a species in the area of the projects. This is a mis-identification as there is no such species of Spartina. And as a side not for future reference, the "Spartina" genus is now officially "Sporobolus", but your use of Spartina is fine as it still is considered relational nomenclature.	Yes	3.7.3.1	Thank you for the feedback. Text has been changed from *Spartina cordifolia* to *Spartina spp.*

From: Lyle M. Varnell
To: Miller, Shari A. (WFF-2500)
Subject: [EXTERNAL] Re: Availability of NASA WFF Marsh Fiber Project Draft Environmental Assessment
Date: Monday, April 20, 2020 11:08:27 AM

Hello Shari:

I hope you are doing well, and coping well with our new working environment. I'll provide "official" comments later, but I wanted to share one small item with you that you may wish to correct. The document refers to Spartina cordifolia as a species in the area of the projects. This is a mis-identification as there is no such species of Spartina. And as a side not for future reference, the "Spartina" genus is now officially "Sporobolus", but your use of Spartina is fine as it still is considered relational nomenclature.

The rest of the EIS looks good. VIMS will comment positively on your plan during the permitting process. Let me know if you have any questions.

Best.

Lyle

From: Miller, Shari A. (WFF-2500) <shari.a.miller@nasa.gov>
Sent: Wednesday, April 15, 2020 11:39 AM
To: Miller, Shari A. (WFF-2500)
Subject: Availability of NASA WFF Marsh Fiber Project Draft Environmental Assessment

Dear Sir/Madam:

On behalf of NASA Goddard Space Flight Center's Wallops Flight Facility (WFF), I am pleased to announce the availability of the Draft Marsh Fiber Project Environmental Assessment (EA) for installation of a new fiber optic cable between the U.S. Fish and Wildlife Service's (USFWS) Wallops Island National Wildlife Refuge (NWR) and the Mid-Atlantic Regional Spaceport (MARS) Unmanned Aerial Systems (UAS) Airstrip on NASA's Wallops Island in Accomack County, Virginia.

The Draft EA is being prepared to satisfy NASA's obligations under the National Environmental Policy Act of 1969 (NEPA) and will also serve as a means for ensuring compliance with a variety of other Federal statutes, including the Endangered Species Act, Marine Mammal Protection Act, Clean Water Act, National Historic Preservation Act, Coastal Zone Management Act, and the Magnuson-Stevens Fishery Conservation and Management Act. Because a portion of the proposed Marsh Fiber path would be installed in the Wallops Island NWR, the USFWS is a cooperating agency on this EA, and, as such, has assisted NASA in preparing the EA

and has participated in all regulatory consultations during the NEPA process.

The Draft EA evaluates the environmental consequences of a range of reasonable alternatives that meet NASA's needs. Currently, a single fiber optic cable system along Atlantic Road provides communications and command data from the WFF Main Base to Wallops Island. Damage or failure of the single cable system would put NASA, its tenants, and the public at risk for disruptions to launch command and information technology services. The project is needed to provide a redundant, geographically diverse, and reliable means of highspeed fiber optic communications for NASA, Department of Defense, and commercial systems on Wallops Island. The existing cable system would remain in operation to complete the communications loop between the Main Base, Mainland, and Wallops Island. NASA proposes to use a combination of horizontal directional drilling and vibratory trenching methods to install the fiber optic cable under waterways and across the saltmarsh. The Draft EA evaluates the environmental consequences of the Proposed Action and No Action Alternative.

An electronic version of the Draft EA, video presentation of the project, and additional project information are available on the project website at: https://code200-external.gsfc.nasa.gov/250-WFF/Marsh_Fiber_EA

This EA is tiered from the May 2019 NASA WFF Site-wide Programmatic Environmental Impact Statement (PEIS). In the Site-wide PEIS, NASA evaluated the potential environmental effects from various alternatives, including upgrades or replacement of utility infrastructure. The Site-wide PEIS available at https://code200-external.gsfc.nasa.gov/250-wff/site-wide_eis.

This Draft EA has been sent to you because public involvement is a very important part of the NEPA process. We respectfully request your written comments by **May 18, 2020**. Comments should be as specific as possible and should address distinct aspects of the Draft EA document including alternatives or the adequacy of the environmental analysis. We will consider all comments received in preparing the Final EA. All comments and questions should be submitted via one of the following options:

Mail: Ms. Shari Miller
NASA Wallops Flight Facility
Mailstop: 250.W
Wallops Island, VA 23337
Phone: (757) 824-2327
Email: shari.a.miller@nasa.gov
Online comment form: https://code200-external.gsfc.nasa.gov/250-WFF/Marsh_Fiber_EA

Due to the current situation with COVID19, Governor Northam's resulting Temporary Stay at Home Order (Executive Order 55), and in the interest of public safety, there will not be a public meeting for this Draft EA. However, a presentation of the project is available at the project website listed above.

Thank you for your participation in this process!

Shari A. Miller

Center NEPA Manager &
Environmental Planning Lead
NASA GSFC Wallops Flight Facility
Wallops Island, VA 23337
(757) 824-2327
Shari.A.Miller@nasa.gov
https://code200-external.gsfc.nasa.gov/250-wff/

"Be kind whenever possible. It is always possible." - Dalai Lama

Suzie Richert

From: Traver, Carrie <Traver.Carrie@epa.gov>
Sent: Monday, May 18, 2020 4:21 PM
To: Miller, Shari A. (WFF-2500)
Cc: Rudnick, Barbara; Kubico, Stephanie
Subject: [EXTERNAL] Draft Marsh Fiber Project Environmental Assessment

Dear Ms. Miller:

Thank you for providing National Aeronautics and Space Administration (NASA) Wallops Flight Facility (WFF) draft Environmental Assessment (EA) for the proposed installation of an underground fiber optic cable in Accomack County, Virginia. This EA is tiered from the May 2019 NASA WFF Site-Wide Programmatic Environmental Impact Statement (Final Site-wide PEIS). The primary purpose of the Proposed Action is to provide a redundant and geographically diverse means of reliable fiber optic communications on Wallops Island. The proposed cable would be installed between Wallops Main Base and Wallops Island along a route that crosses the U.S. Fish and Wildlife Service (USFWS) Wallops National Wildlife Refuge (NWR).

Generally, we found that the EA was thorough, clear, and addressed potential impacts from the project in an appropriate level of detail. However, we had several questions and have recommendations to improve the completeness and clarity of the final EA:

<u>Alternatives</u>
The description of alternatives included a detailed discussion of installation options (Alternatives 3-7) for the proposed cable route, which was helpful to understand the logistical constraints and how the installation methods were selected to minimize impacts. Alternatives 1 and 2 would install the fiber optic cable along the same route as the existing cable, which would not meet the need for geographic diversity and redundancy. The EA would benefit from a brief discussion of how the proposed route was selected, including any input from the landowners (i.e. USFWS and the Commonwealth of Virginia), siting criteria, or any alternative alignments that may have been considered. For example, was the route of the "old" inoperable Marsh Fiber line (as shown in Figure 1-2) considered for the new cable; if so, would this route potentially have more impacts than the proposed? Likewise, was routing the cable north to Chincoteague and along VA175 (Chincoteague Road) evaluated to attempt to reduce impacts to waters?

<u>Affected Environment and Environmental Consequences</u>
Under the Proposed Action, NASA would use "Maxi" horizontal directional drilling (HDD) to install the fiber optic cable under Watts Bay and under Ballast Narrows, vibratory trenching using low-pressure equipment across the saltmarsh, and "Mini" HDD beneath three open water guts in Walker Marsh. As noted in the EA, localized turbidity may occur from activities such as HDD drilling as well as the marsh buggy crossing of the guts. National Marine Fisheries Service (NMFS) requested that use of turbidity curtains (and other erosion and sediment control measures) be incorporated into the project design and implementation to contain sediment and drilling mud in areas that the HDD drill surfaces and upstream and downstream of the tidal guts during hand jetting of the cable.

While the Essential Fish Habitat Assessment Worksheet indicates that turbidity curtains would be used as a best management practice (BMP) to minimize potential impacts from suspended sediment, the EA indicates that the NASA's contractor "may" install turbidity curtains or will "consider" their use "if needed". Given NMFS's recommendation, we advise that the final EA clearly state that the contractor will use turbidity curtains to minimize impacts in areas the HDD drill surfaces as well as upstream and downstream across the tidal guts during hand jetting and disturbance by the marsh buggy.

The project's time of year restriction for the Eastern Black Rail would limit the construction time frame to September to March. As noted, this restriction may also avoid impacts to other species. However, it would be

helpful if the EA included a discussion of potential impacts to species that may be overwintering or seasonally using the marsh at that time, particularly for those species that may potentially be in hibernation, brumation, or torpor in the project area such as the northern diamondback terrapin.

Invasive species

Regarding invasive species, Section 3.8.2.2. states "Contractors would adhere to applicable NASA and/or USFWS policies to prevent the introduction of invasive species by vehicles and equipment during construction activities." It would be helpful to expand this discussion to reference the specific policies or list example practices that may be used. Also, would post-project monitoring include invasive species management, if necessary?

Again, we thank you for providing this for our review. We note that the EA includes consideration of a number of appropriate BMPs to minimize impacts including use of a marsh buggy with low-pressure tracks, use of synthetic composite mats, a frac-out contingency plan, a time of year restriction, restoration and monitoring of vegetation, and others. We support such measures to ensure that the impacts to the sensitive marsh habitat are minimized and to ensure full restoration is achieved.

We appreciate your coordination with our office and look forward to continuing to work with you in the future. If the project changes or additional information comes to light, we may have additional comments. Please do not hesitate to reach out to me if you would like to discuss this project or others.

Thank you,
Carrie

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Suzie Richert

From: Miller, Shari A. (WFF-2500) <shari.a.miller@nasa.gov>
Sent: Thursday, April 30, 2020 10:53 AM
To: Suzie Richert; Springle, Karalyn J. (WFF-7800)
Subject: FW: [EXTERNAL] Your form, Comment Form: Draft Marsh Fiber Environmental Assessment, has new responses.

We have one response so far from Kelly Busquets, the Goddard Sustainability Manager:

In accordance with EO 13843 and NASA's sustainability goals, Goddard is required to reduce our potable water consumption 20% from the FY07 baseline and 0.5% each year. Table 3-3 indicates that no potable water will be used for the proposed alternative, but how will the drilling mud be made? Will the contractor use WFF water to prepare the mud on site, or will it be delivered to the site? If the drilling fluids will be prepared on site, how much water will be used for the project and has there been any consideration to use non-potable water instead?

Shari A. Miller
Center NEPA Manager &
Environmental Planning Lead
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Shari.A.Miller@nasa.gov
https://code200-external.gsfc.nasa.gov/250-wff/

"Be kind whenever possible. It is always possible." - Dalai Lama

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From: Google Forms <forms-receipts-noreply@google.com>
Sent: Wednesday, April 29, 2020 3:28 PM
To: wff.envir.comments@gmail.com
Subject: [EXTERNAL] Your form, Comment Form: Draft Marsh Fiber Environmental Assessment, has new responses.

1 new response

Hi,

Your form Comment Form: Draft Marsh Fiber Environmental Assessment has a new response.

Response 1
VIEW SUMMARY

Virginia Space Comments on Draft WFF Fiber Optic Cable EA

May 14, 2020

Shari,

Virginia Space / MARS requests detailed design drawings for work to be performed at UAS site to alleviate any conflicts. The sections which detail design drawings will be needed:

Page 64, section 3.3.22 – Maxi HDD depth under UAS

Page 81, section 3.7.2.2 – Dewatering discharge if necessary

Page 84, section Figure 3.2 - Map of UAS

We request the removal of the statement on Page 124, section 3.16.1 that AEP has been previously disturbed during construction of air strip. Virginia Space / MARS did not disturb the AEP during air strip construction and installed a fence to protect the AEP.

If you have any questions about our comments, please feel free to contact me.

Daryl Moore