APPENDIX C –

FEDERAL CONSISTENCY DETERMINATION

Kisak, Natalie

From: Martin, Amy (DWR) <Amy.Martin@dwr.virginia.gov>
Sent: Thursday, March 23, 2023 1:45 PM
To: Miller, Shari (WFF-2500); Boettcher, Ruth (DWR)
Cc: Brittingham, Alan L. (WFF-013.0)[Virginia Commercial Space Flight Authority]
Subject: [EXTERNAL] RE: NASA Wallops Flight Facility Island Northern Development, DEQ 21-164F

Shari,
Sorry for the delay in responding. We are generally supportive of the EA updates. Assuming the conservation measures to avoid impacts upon wildlife included in those updates are implemented fully, we agree that this project is consistent. Any deviations from the conservation measures may take NASA our of compliance with the CZM enforceable policies for which we are responsible.

Will we get a copy of the updated EA for review – either from you or DEQ's Office of Environmental Impact Review?

Thanks, Amy

Amy Martin
(she/her/hers)
Manager, Wildlife Information and Environmental Services
P 804.481.5296
Virginia Department of Wildlife Resources
CONSERVE. CONNECT. PROTECT.
A 7870 Villa Park Drive, P.O. Box 90778, Henrico, VA 23228-0778
www.dwr.virginia.gov

From: Miller, Shari (WFF-2500) <shari.a.miller@nasa.gov>
Sent: Friday, March 17, 2023 9:36 AM
To: Martin, Amy (DWR) <Amy.Martin@dwr.virginia.gov>; Boettcher, Ruth (DWR) <Ruth.Boettcher@dwr.virginia.gov>
Cc: Brittingham, Alan L. (WFF-013.0)[Virginia Commercial Space Flight Authority] <alan.brittingham@vaspace.org>
Subject: FW: NASA Wallops Flight Facility Island Northern Development, DEQ 21-164F

Good morning, Amy and Ruth.

I'm checking to see if you need any additional information or have any questions on the attached.

Thanks so much.

Shari A. Miller
Center NEPA Manager and
Environmental Planning Lead
NASA GSFC Wallops Flight Facility
Wallops Island, VA 23337

(757) 824-2327
Shari.A.Miller@nasa.gov
Environmental Planning & Impact Assessment (nasa.gov)

"A single act of kindness throws out roots in all directions and the roots spring up and make new trees." – Amelia Earhart

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From: Miller, Shari (WFF-2500)
Sent: Thursday, March 2, 2023 3:04 PM
To: amy.martin@dwr.virginia.gov; Ruth Boettcher <ruth.boettcher@dwr.virginia.gov>
Cc: Finch, Kimberly (GSFC-2500) <kimberly.s.finch@nasa.gov>; Meyer, T J (WFF-2500) <theodore.j.meyer@nasa.gov>; Finio, Alan (MARAD) <alan.finio@dot.gov>; Bahnson, Sara E CIV USARMY CENAO (USA) <sara.e.bahnson@usace.army.mil>; Brittingham, Alan L. (WFF-013.0)[Virginia Commercial Space Flight Authority] <alan.brittingham@vaspace.org>
Subject: NASA Wallops Flight Facility Island Northern Development, DEQ 21-164F

Dear Ms. Martin,

Based your agency's comments in a letter dated February 7, 2022, which was incorporated into the Federal Consistency Conditional Concurrence provided by the Virginia Department of Environmental Quality (DEQ) on February 28, 2022, regarding the draft Wallops Island Northern Development Environmental Assessment (WIND EA), NASA Wallops Flight Facility and the Virginia Commercial Space Flight Authority (VCSFA, VA Space) are resubmitting the attached consultation. NASA and VA Space propose to construct of a pier for barge access and berthing and to dredge a vessel approach area connecting to the Chincoteague Inlet Federal Channel. NASA is the lead agency for the National Environmental Policy Act (NEPA) process and for Virginia's Coastal Zone Management (CZM) Federal Consistency Determination. As the Department of Transportation's Maritime Administration (MARAD) and the U.S. Army Corps of Engineers (USACE) are serving as Cooperating Agencies on this project, this consultation also serves to fulfil their requirements.

NASA believes that, given consideration of VDWR's comments and updates to the EA reflecting these recommendations, the proposed project should now be considered consistent to the maximum extent practicable with the enforceable policies of Virginia's CZM Program.

If you have any questions or require additional information, please contact me at Shari.A.Miller@nasa.gov or (757) 824-2327.

Shari A. Miller
Center NEPA Manager and
Environmental Planning Lead
NASA GSFC Wallops Flight Facility
Wallops Island, VA 23337
(757) 824-2327
Shari.A.Miller@nasa.gov
Environmental Planning & Impact Assessment (nasa.gov)

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COMMONWEALTH of VIRGINIA

Marine Resources Commission
380 Fenwick Road
Bldg 96
Fort Monroe, VA 23651-1064

Travis A. Voyles
Secretary of Natural and Historic Resources

Jamie L. Green
Commissioner

March 20, 2023

National Aeronautics and Space Administration
Attn: Shari A. Miller
Goddard Space Flight Center
Wallops Flight Facility
Wallops Island, VA 23337

Re: NASA Wallops Island Northern Development Project, Federal Consistency Determination (DEQ 21-164F)

Dear Ms. Miller,

This will respond to your March 2, 2023, request for our revised comments regarding the Environmental Assessment (EA) and Federal Consistency Determination for the NASA Wallops Island Northern Development Project (DEQ 21-164F), prepared by the National Aeronautics and Space Administration (NASA). Specifically, NASA has proposed to impact tidal wetlands and subaqueous bottom habitat for the construction of a fixed pier and turning basin, a hangar at the Unmanned Aerial Systems (UAS) Airstrip, installation of new utility infrastructure, installation of airstrip lighting, hardening/reinforcement of a section of the airstrip, improvements to the airstrip access road, construction of a new pier access road adjacent to the UAS Airstrip, construction of a new 20 to 30 vehicle parking lot, construction of a project support building, and channel dredging (vessel approach channel). The project is located in Accomack County, Virginia.

We reviewed the revised project documents received on March 2, 2023, that propose jurisdictional impacts to State-owned submerged lands and tidal wetlands within the purview of the Virginia Marine Resources Commission (VMRC) and the local Accomack County Wetlands Board.

Please be advised that the VMRC pursuant to Chapters 12, 13, and 14 of Title 28.2 of the Code of Virginia administers permits required for submerged lands, tidal wetlands, and beaches and dunes. Additionally, the VMRC administers the enforceable policies of fisheries management, subaqueous lands, tidal wetlands, and coastal primary sand dunes and beaches, which comprise key components of Virginia's Coastal Zone Management Program. VMRC staff has reviewed the submittal and offers the following comments:

Fisheries and Shellfish: Private shellfish leases and public clam grounds are situated directly adjacent to the proposed channel. To mitigate for turbidity impacts, NASA and the Virginia Commercial Space Flight Authority will use turbidity curtains when dredging operations approach leased shellfish lands. If the use of turbidity curtains is not possible due to current velocities, dredging would be conducted during slack tides or currents carry suspended sediment away from shellfish resources.

Submerged Lands: The project as proposed will require the dredging of 94,000 cubic yards of State-owned bottom material. This will require a permit from VMRC. The applicant now proposes utilizing the sandy dredged material for onshore sand renourishment on Wallops Island in lieu of the previous request to dispose of this valuable State resource in the Atlantic Ocean.

Tidal Wetlands: A wetlands board permit with compensatory mitigation will be required from the Accomack County Wetlands Board for all proposed impacts to tidal wetlands.

Beaches and Coastal Primary Sand Dunes: No adverse impacts to jurisdictional beaches and dunes are anticipated. The sandy dredged material will be used for onshore sand renourishment on Wallops Island.

While we have no objection to the consistency findings provided by the applicant, our final consistency recommendation cannot be reached until completion of the permit review process by both the Accomack County Wetlands Board and VMRC. Any permit issued by the Board or VMRC will specify necessary special conditions for the project.

Please contact me at (757) 247-2251 or by email at randy.owen@mrc.virginia.gov if you have any questions. Thank you for the opportunity to comment.

Sincerely,

Randy Owen
Chief, Habitat Management Division

RO/cg
HM

Kisak, Natalie

From: Miller, Shari (WFF-2500) <shari.a.miller@nasa.gov>
Sent: Thursday, March 2, 2023 3:04 PM
To: amy.martin@dwr.virginia.gov; Ruth Boettcher
Cc: Finch, Kimberly (GSFC-2500); Meyer, T J (WFF-2500); Finio, Alan (MARAD); Bahnson, Sara E CIV USARMY CENAO (USA); Brittingham, Alan L. (WFF-013.0)[Virginia Commercial Space Flight Authority]
Subject: NASA Wallops Flight Facility Island Northern Development, DEQ 21-164F
Attachments: NASA WFF ND - VDWR Consistency Ltr_updated_20230328.pdf

Dear Ms. Martin,

Based your agency's comments in a letter dated February 7, 2022, which was incorporated into the Federal Consistency Conditional Concurrence provided by the Virginia Department of Environmental Quality (DEQ) on February 28, 2022, regarding the draft Wallops Island Northern Development Environmental Assessment (WIND EA), NASA Wallops Flight Facility and the Virginia Commercial Space Flight Authority (VCSFA, VA Space) are resubmitting the attached consultation. NASA and VA Space propose to construct of a pier for barge access and berthing and to dredge a vessel approach area connecting to the Chincoteague Inlet Federal Channel. NASA is the lead agency for the National Environmental Policy Act (NEPA) process and for Virginia's Coastal Zone Management (CZM) Federal Consistency Determination. As the Department of Transportation's Maritime Administration (MARAD) and the U.S. Army Corps of Engineers (USACE) are serving as Cooperating Agencies on this project, this consultation also serves to fulfil their requirements.

NASA believes that, given consideration of VDWR's comments and updates to the EA reflecting these recommendations, the proposed project should now be considered consistent to the maximum extent practicable with the enforceable policies of Virginia's CZM Program.

If you have any questions or require additional information, please contact me at Shari.A.Miller@nasa.gov or (757) 824-2327.

Shari A. Miller
Center NEPA Manager and
Environmental Planning Lead
NASA GSFC Wallops Flight Facility
Wallops Island, VA 23337
(757) 824-2327
Shari.A.Miller@nasa.gov
Environmental Planning & Impact Assessment (nasa.gov)

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National Aeronautics and Space Administration

Goddard Space Flight Center
Wallops Flight Facility
Wallops Island, VA 23337

Reply to Attn of: 250.W

March 2, 2023

Ms. Amy Martin
Manager, Wildlife Information and Environmental Services
Virginia Department of Wildlife Resources
7870 Villa Park Drive
P.O. Box 90778
Henrico, VA 23228

Re: NASA Wallops Island Northern Development Project, Federal Consistency Determination (DEQ 21-164F)

Dear Ms. Martin:

This letter is in response to your correspondence dated February 7, 2022, which was incorporated into the Federal Consistency Conditional Concurrence provided by the Virginia Department of Environmental Quality (DEQ) on February 28, 2022. The National Aeronautics and Space Administration (NASA) is providing a written response to the comments and recommendations contained within that letter.

As described in the Environmental Assessment (EA) and Federal Consistency Determination prepared for the NASA Wallops Island Northern Development Project, NASA Wallops Flight Facility (WFF) and the Virginia Commercial Space Flight Authority (VCSFA) propose to construct a pier for barge access and berthing and to dredge a vessel approach area connecting to the Chincoteague Inlet Federal Channel. NASA is the lead agency for the National Environmental Policy Act (NEPA) process and for this Federal Consistency consultation. As the Department of Transportation's Maritime Administration (MARAD) and the U.S. Army Corps of Engineers (USACE) are serving as Cooperating Agencies on this project, this consultation also serves to fulfill their requirements.

The proposal by NASA generally includes the following actions: channel dredging; construction of a new pier; construction of a second hangar at the UAS Airstrip; installation of new utility infrastructure; installation of new airstrip lighting and hardening of a section of runway; improvements to the UAS Airstrip access road; construction of a new pier access road; construction of a new project support building; and construction of a new vehicle parking lot. These actions would be completed in phases. Phase 1 would include construction of all onshore components and infrastructure. Phase 2 would include extension of the fixed pier and dredging of

a turning basin at the end of the pier. Phase 3 would include additional dredging of the turning basin as well as a vessel approach channel from Chincoteague Inlet Channel. All dredged material would be placed at the North Wallops Island beach borrow area to support ongoing shoreline enhancement and restoration.

NASA has prepared an EA in accordance with NEPA to analyze the potential effects of the proposed action on the environment. The EA has been tiered from the May 2019 *NASA WFF Site-Wide Programmatic Environmental Impact Statement* (Site-wide PEIS), in which NASA evaluated the environmental consequences of constructing and operating new facilities and infrastructure at WFF. As part of the EA process, NASA also prepared a Federal Consistency Determination in accordance with the Coastal Zone Management Act (CZMA) of 1972 (15 Code of Federal Regulations Part 930, Subpart C) to evaluate the reasonably foreseeable effects of the proposed project on Virginia's coastal uses or resources. The Consistency Determination was submitted to DEQ by NASA on December 16, 2021, and concluded that the proposed project would be consistent to the maximum extent practicable with the enforceable policies of Virginia's Coastal Zone Management (CZM) Program; however, in a response dated February 28, 2022, DEQ conditionally concurred with NASA's determination. DEQ received comments from various agencies within Virginia's CZM Program and provided a conditional concurrence based on NASA addressing the recommendations and obtaining necessary authorizations. Since the issuance of the conditional concurrence, NASA has revised the EA to include such considerations.

In addition, NASA has previously consulted with the U.S. Fish and Wildlife Service (USFWS) and National Oceanic and Atmospheric Administration (NOAA) Fisheries Service under Section 7 of the Endangered Species Act (ESA) regarding potential impacts to listed species. NASA has also continued consultation with NOAA Fisheries under the Magnuson Stevens Fishery Conservation and Management Act regarding potential impacts to Essential Fish Habitat (EFH). The recommendations provided by USFWS and NOAA Fisheries have also been incorporated into the EA.

The following section describes how NASA has incorporated the Virginia Department of Wildlife Resources' (VDWR) comments and recommendations into the EA. The original comments provided by VDWR, and NASA's responses, are included in **Attachment 1**.

VDWR Comments on the Consistency Determination

As described above, VDWR provided comments on NASA's Consistency Determination that was submitted to the DEQ in accordance with the Virginia CZM Program. As a result of VDWR's and others' comments on the Consistency Determination, DEQ issued a conditional concurrence dependent on NASA's acceptance of the recommendations and obtainment of the necessary authorizations.

VDWR submitted multiple comments regarding potential impacts to special status species during construction. NASA has revised the EA to eliminate mention of hydraulic dredging, as this type of dredging is not feasible in the waters within the action area, and would therefore not occur under the proposed project. Information provided by VDWR and USFWS regarding the potential

presence of sea turtles until January has been incorporated. Additionally, the placement of beach-quality, sandy dredged material from Phase 1 of the Proposed Action at the North Wallops Island beach borrow area would be restricted from March 15 to August 31 to minimize impacts to shorebirds, and the restriction would be extended to November 30 if a sea turtle nest were discovered. To the greatest extent possible, NASA and VCSFA would endeavor to coordinate dredging operations and material placement from Phase 2 and Phase 3 with ongoing WFF shoreline renourishment actions, but may be limited due to the availability of funding. These potential impacts from dredge material placement were evaluated in a Biological Opinion issued by the USFWS in 2019, and NASA would comply with all terms and conditions of the Biological Opinion. To minimize the potential for take of sea turtles during dredge operations and other construction activities, an onboard observer would be present to identify any listed species in the vicinity. Such observers would not be present during normal vessel operation occurring in the area.

Moreover, no construction activities would occur within 600 feet or a peregrine falcon nest, as the nearest artificial nesting platform is located over 3,150 feet from the action area. Additionally, since the submittal of the Consistency Determination, USFWS has proposed listing the tricolored bat (*Perimyotis subflavus*) as an endangered species under ESA and the status of the northern long-eared bat (*Myotis septentrionalis*) has been elevated from threatened to endangered. NASA and VCSFA are consulting with USFWS on ways to minimize potential impacts to these bat species from tree clearing associated with the project (approximately 1 acre) and have currently proposed a time of year restriction of April 1 to November 14.

VDWR also submitted comments regarding special status species during operation, specifically related to vessel traffic. NASA updated the EA to include the anticipated annual number of vessel trips to the MARS Port, as well as the size of the vessels transiting the action area. NASA has estimated the total number of vessel trips to be 99 trips per year. For comparison, the nearby Chincoteague Inlet port supports over 3,000 vessels per year. Potential impacts from the operational vessel trips have been assessed, and determined to be insignificant.

Finally, due to the comments submitted and uncertainty regarding the implementation of Best Management Practices (BMPs) to minimize species impacts, VDWR determined that the proposed project was not consistent with the enforceable policies over which VDWR has jurisdiction. Since receiving these comments, NASA has continued to consult with USFWS and NOAA Fisheries, and has included those agencies' and VDWR's recommendations in the EA. NASA believes that, given new updates to the EA incorporating impact minimization measures, the proposed project should now be considered consistent to the maximum extent practicable with the enforceable policies of Virginia's CZM Program.

Best Management Practices Summary

In addition to implementing minimization and mitigation measures discussed above, NASA and VCSFA have developed a list of BMPs to further reduce the potential for adverse impacts. This list of BMPs was developed based on routine construction best practices as well as on the results

of consultation and recommendations provided by other agencies. The complete list of BMPs is included within the EA and is copied below (**Table 1**).

Table 1. Summary of BMPs, Mitigation and Monitoring Measures

Resource Area	Measures
Noise	• Construction activities associated with institutional support projects may be limited to normal daytime working hours except for certain activities (e.g., continuous dredging operation). • Time of year restrictions for pile driving activities could be employed to reduce impacts on spawning marine animals or nesting seabirds, if required by NOAA Fisheries or USFWS. • Pile driving associated with construction of the pier may require the use of mitigation measures (e.g., bubble curtains, use of a soft-start procedure) to minimize underwater noise impacts.
Munitions and Explosives of Concern	• A munition response plan would be developed. • Trained unexploded ordnance (UXO) Technician would be available during geophysical survey of construction areas and/or during construction.
Health and Safety	• Safety Plans would be prepared, implemented, and followed. • If applicable, contractors would follow regulations defined in Federal Acquisition Regulation 52.236-13, Accident Prevention.
Land Resources	• Stormwater Pollution Prevention Plan (SWPPP), erosion and sediment control (ESC), and stormwater management BMPs could include using silt fencing; soil stabilization blankets; and matting construction entrances, material laydown areas, and around areas of land disturbance during construction. Bare soils would be vegetated after construction to reduce erosion and stormwater runoff velocities. • WFF Integrated Contingency Plan (ICP) would be implemented and followed to prevent or swiftly respond to petroleum or chemical spills or releases. • Heavy equipment, located in temporarily impacted wetland areas, would be placed on mats, geotextile fabric, or other suitable measures to minimize soil disturbance to the maximum extent practicable.

Table 1. Summary of BMPs, Mitigation and Monitoring Measures

Resource Area	Measures
Water Resources	• Machinery and construction vehicles would be operated outside of streambeds and wetlands to the greatest extent practicable; synthetic mats, low-pressure tires, and/or other best practices may be used when in-stream work or wetland work is unavoidable. • The top 30 centimeters (12 inches) of material removed from wetlands would be preserved for use as wetland seed and rootstock in the excavated area unless the material contains phragmites. • ESC would be designed in accordance with the most current edition of the Virginia Erosion and Sediment Control Handbook. Controls would be in place prior to clearing and grading and maintained in good working order to minimize impacts to state waters. The controls would remain in place until the area stabilizes. • WFF ICP and project specific SWPPP would be implemented to reduce impacts of stormwater runoff and fueling and maintenance of vehicles and equipment. • Wetland ground and vegetation disturbance would be returned to pre-construction conditions, in accordance with permit requirements. • Compensate for permanent wetland impacts in accordance with the USACE/USEPA 2008 Compensatory Mitigation Rule. • In accordance with Section 438 of the Energy Independence and Security Act of 2007, low impact development measures would be incorporated to the maximum extent feasible to manage and minimize stormwater runoff onsite. • Monitoring of wetlands, streambeds, channels, etc. in construction areas would occur in accordance with all project permits. • Sediment curtains would be used, if necessary, for open water work on the pier and during dredging activities. • Dredging rate could be reduced to slow down the dredging operation, especially bucket speed when approaching the sediment surface and bucket removal from the surface after closing. • Bucket over-penetration could be reduced to minimize or eliminate sediment from be expelled from the bucket vents and/or piling on top of the bucket and eroding during bucket retrieval. • Overflow from barges during dredging or transport could be eliminated. • Dredge operation methods would change based on site conditions such as tides, waves, currents, and wind. • Descent or hoist speed of a wire-supported bucket could be modified. • Dredging could be sequenced by moving upstream to downstream. • Number of dredging passes (vertical cuts) could vary to increase sediment capture. • Properly sized tugs and support equipment would be used. • GPS location technology would be used on dredging equipment to avoid over dredge.
Vegetation	• Construction and post-construction monitoring would be conducted to identify and document if and when disturbed areas achieve final stabilization as specified in any permits; corrective action measures would be implemented such that permit requirements are met. • Mitigation of invasive species (e.g., *Phragmites*) would occur in accordance with the *WFF Phragmites Control Plan*.

Table 1. Summary of BMPs, Mitigation and Monitoring Measures

Resource Area	Measures
Wildlife and Special Status Species	• Implementation of time-of-day and/or seasonal restrictions of land and water-based construction to mitigate impacts to special-status species may occur. Specifically, comply with time-of-year tree clearing restrictions from April 1 to November 14, and restrictions on dredge material beach placement from March 15 to August 31, or to November 30 if a sea turtle nest is discovered. • Onboard observers would be present during pile driving and dredging activities, and all activity may be temporarily suspended if a threatened or endangered species is identified in the vicinity of pile-driving activities. • NOAA Fisheries and Commonwealth of Virginia dredging guidelines would be followed. Dredging activity may also be subject to time-of-day and seasonal restrictions and/or qualified observers. • Restrictions may be placed on the number of trips taken by each vessel and shallow-draft vessels may be used for water-related projects. • Adherence of and monitoring consistent with the ICP, SWPPP, and other applicable permits and plans. • Sediment curtains could be utilized during dredging and pier construction, if necessary. • Bubble curtains could be utilized for noise attenuation during pile driving. • Special-status species (e.g., eastern black rail) habitat would be revegetated and restored, if necessary. • Vegetation maintenance would be conducted periodically, as necessary.
Essential Fish Habitat	• Measures may be implemented to ensure no net loss of EFH due to construction activity. • NOAA Fisheries and Commonwealth of Virginia dredging guidelines would be followed. Dredging activity may also be subject to time of day and seasonal restrictions. • All dredging would be conducted during stages of the tide that allows the sandy dredge material to settle quickly from the water column; e.g., slack tide or when tidal currents will carry resuspended sediment away from shellfish resources. • In locations where dredging during slack tide is not practical, other means would be employed to reduce turbidity moving away from the dredge such as turbidity curtains or operational BMPs (i.e., reduced bucket ascent rates) to help protect shellfish resources. • Impact hammer 'soft-start' procedure would use reduced hammer energy when installing 24-inch square, pre-stressed concrete piles during pier construction. • All Phase 1 beach-quality, sandy dredge material would be placed at the North Wallops Island beach borrow area for beneficial use as proposed. • Every effort would be made to coordinate Phase 2 and Phase 3 dredging operations with ongoing WFF shoreline renourishment actions; however, the ability to do so would be contingent on the availability of funding for each phase of the proposed project. • NASA and VCSFA would compensate for 1,500 square meter (0.37 acres) of tidal wetland (permanent) impacts in accordance with the USACE/USEPA 2008 Compensatory Mitigation Rule as proposed. • 0.66 hectares (1.64 acres) of tidal wetland (temporary) impacts would be restored to pre-construction conditions and revegetated, if necessary. Wetland revegetation would be monitored to ensure successful restoration of these areas.
Transportation	• All transportation activities, including road closures, traffic control, safety issues, etc. would be coordinated with Accomack County and Virginia Department of Transportation (VDOT) Accomack Residency Office. • Coordination with the US Coast Guard (USCG) would occur for any required waterway closures during dredging and dredged material placement operations. • Notices to Mariners would be issued for all in-water work and in-water signage of construction area would be posted.

Table 1. Summary of BMPs, Mitigation and Monitoring Measures	
Resource Area	**Measures**
Infrastructure and Utilities	• No mitigations are anticipated.
Archaeological Resources	• Work would halt and WFF Historic Preservation Officer would be contacted immediately if cultural resources are discovered during ground disturbing activities.

Conclusions

NASA requests your agency's concurrence with our revisions to the EA and that these revisions sufficiently address VDWR's concerns regarding federal consistency with the enforceable policies of Virginia's CZM Program.

If you have any questions or require additional information, please contact me at Shari.A.Miller@nasa.gov or (757) 824-2327.

Sincerely,

Shari A. Miller
Center NEPA Manager and
Environmental Planning Lead

Attachments:
Attachment 1 – NASA's Responses to VDWR Comments

cc:
250/Ms. K. Finch
250/Mr. T. Meyer
MARAD/Mr. A. Finio
USACE/Mr. S. Bahnson
VCSFA/Mr. A. Brittingham

Virginia Department of Wildlife Resources (VDWR)
Comments Received on NASA Wallops Island Northern Development Project, Federal Consistency Determination

Comment	Agency	Commenter	Topic	Recommended Changes (Exact wording of suggested Change)	Incorporated (yes/no)	How Comment was incorporated
1	VDWR (FCD)	Amy Martin	FCD - special status species	A re-evaluation of potential impacts upon sea turtles based on information provided in the attached that these animals may remain in Virginia's waters through January.	Yes	This is a follow up on a USFWS comment, which has been cited when revising the text to refer to the possibility that sea turtles could rarely be present as late as Dec – Jan
2	VDWR (FCD)	Amy Martin	FCD - special status species	To best protect sea turtles, we recommend no hydraulic hopper dredging from April 1 through November 30 of any year and no work on suitable sea turtle nesting beaches from May 1 through November 15 or until the last nest hatches or is determined unviable by an approved nest searching crew.	Yes	References to hydraulic dredging have been deleted from Section 2.3.2. as hydraulic dredging is not feasible in these shallow waters. Text has been added to Section 3.9.2.2, and other relevant sections, to explain that the proposed dredged material placement site would be within the Shoreline Enhancement and Restoration Project (SERP) area on northern Wallops Island, including the former sand borrow area at the north end of the SERP area and the renourishment areas to the south. The potential impacts from the ongoing SERP activities on sea turtles, as well as other species, were evaluated in the 2019 SERP EA and in a USFWS 2019 Biological Opinion. All Terms and Conditions of the Biological Opinion would be followed.
3	VDWR (FCD)	Amy Martin	FCD - special status species	If hopper dredges are used to deepen the channel and turning basin, we recommend that onboard environmental/biological observers are present to monitor the potential entrainment (take) of sea turtles during dredging operations, irrespective of the time of year. Transport vessels that take up a large portion of the channel may also require an onboard observer to alert the captain to the presence of sea turtles or marine mammals so that he/she can take measures to avoid a vessel strike.	Yes	References to hydraulic dredging have been deleted from Section 2.3.2. as hydraulic dredging is not feasible in these shallow waters. Onboard observers would be used during dredging and construction activities but not for normal vessel operation.
4	VDWR (FCD)	Amy Martin	FCD - special status species	We recommend close coordination with us, USFWS and NOAA Fisheries regarding the protection of sea turtles associated with all phases of this project and any future build out.	No	Comment noted. NASA and MARS will be submitting a JPA for USACE, VMRC, and DEQ permitting.
5	VDWR (FCD)	Amy Martin	FCD - special status species	We recommend that the location of any active Peregrine Falcon nests, to include the artificial nesting platform, be mapped and that no construction activities occur within 600 ft of the nest during the nesting season from February 15 through July 15 of any year.	No	Section 3.9.1.1 and Table 3.9-1 "Peregrine Falcon" state that the existing artificial nesting platform is over 3,150 ft from the Action Area. Nest platform is mapped on Figure 3.9-1.
6	VDWR (FCD)	Amy Martin	FCD - special status species	We are concerned about future development of Wallops Island and adjacent areas. These areas are known to support a number of listed species and are slowly being made unsuitable to these species because of continued expansion and shoreline stabilization activities at Wallops Flight Facility. Because the EA offers no information on how many vessels of what size will travel to and from the north end pier annually, it is difficult for us to determine what, if any, impacts upon marine animals and their habitats result from operation of the proposed facility.	Yes	Section 2.3.5 and Table 2-3 iterate the anticipated size and number of each vessel trip on an annual basis. Vessel impacts to species are addressed in Sections 3.7.2.2., 3.8.2.2, 3.9.2.2. For comparison, according to the USACE Norfolk District about the Chincoteague Inlet Federal Navigation Project, Chincoteague Inlet serves as the entrance from the Atlantic Ocean to the largest commercial port on the Eastern Shore and supports more than 3,000 vessels a year and the project supports all types of commercial fishing and tourism vessels.

Virginia Department of Wildlife Resources (VDWR)
Comments Received on NASA Wallops Island Northern Development Project, Federal Consistency Determination

Comment	Agency	Commenter	Topic	Recommended Changes (Exact wording of suggested Change)	Incorporated (yes/no)	How Comment was incorporated
7	VDWR (FCD)	Amy Martin	FCD - vessels and special status species	We are concerned that the port and operations area would become part of th **e** M-95 Marine Highway Corridor, allowing for transport of large space assets and related cargo via water vessel to the north end port. While we understand the value of this facility and the need to ensure it's security and capabilities, we must ensure that any impacts upon wildlife and their habitats, including threatened or endangered species, are fully considered, that all actions are taken to avoid and minimize impacts upon them, and that any unavoidable impacts are fully compensated.	Yes	See response to Comment # 6.
8	VDWR (FCD)	Amy Martin	FCD - BMPs	We cannot make a determination of consistency until we have reviewed the Final EA for the project that includes updates to Table 4.1 *Summary of BMPs, Mitigation, and Monitoring Measures* to clearly state which time of year restrictions will be adhered to and what specific minimization methods will be employed during construction to avoid and minimize impacts upon wildlife and their habitats OR until we receive commitment from the applicant to adhere to the above recommendations and/or those offered by NOAA or the USFWS.	Yes	NASA and MARS commit to adhering to all federal and state permit and consultation-driven monitoring and mitigation. Any completed consultation and/or permit requirements will be added to Table 4.1 Additionally, see responses to Comments # 2 and 5.

Kisak, Natalie

From: Miller, Shari (WFF-2500) <shari.a.miller@nasa.gov>
Sent: Thursday, March 2, 2023 3:04 PM
To: Randy Owen
Cc: Stagg, Robert; Nettleton, Benjamin; Finch, Kimberly (GSFC-2500); Meyer, T J (WFF-2500); Finio, Alan (MARAD); Bahnson, Sara E CIV USARMY CENAO (USA); Brittingham, Alan L. (WFF-013.0)[Virginia Commercial Space Flight Authority]
Subject: NASA Wallops Flight Facility Island Northern Development, DEQ 21-164F
Attachments: NASA WFF ND - VMRC Consistency Ltr_updated_20230302.pdf

Dear Mr. Owen,

Based your agency's comments in a letter dated February 8, 2022, which was incorporated into the Federal Consistency Conditional Concurrence provided by the Virginia Department of Environmental Quality (DEQ) on February 28, 2022, regarding the draft Wallops Island Northern Development Environmental Assessment (WIND EA), NASA Wallops Flight Facility and the Virginia Commercial Space Flight Authority (VCSFA, VA Space) are resubmitting the attached consultation. NASA and VA Space propose to construct of a pier for barge access and berthing and to dredge a vessel approach area connecting to the Chincoteague Inlet Federal Channel. NASA is the lead agency for the National Environmental Policy Act (NEPA) process and for Virginia's Coastal Zone Management (CZM) Federal Consistency Determination. As the Department of Transportation's Maritime Administration (MARAD) and the U.S. Army Corps of Engineers (USACE) are serving as Cooperating Agencies on this project, this consultation also serves to fulfil their requirements.

NASA believes that, given consideration of VMRC's comments and updates to the EA reflecting these recommendations, the proposed project should now be considered consistent to the maximum extent practicable with the enforceable policies of Virginia's CZM Program.

If you have any questions or require additional information, please contact me at Shari.A.Miller@nasa.gov or (757) 824-2327.

Shari A. Miller
Center NEPA Manager and
Environmental Planning Lead
NASA GSFC Wallops Flight Facility
Wallops Island, VA 23337
(757) 824-2327
Shari.A.Miller@nasa.gov
Environmental Planning & Impact Assessment (nasa.gov)

"A single act of kindness throws out roots in all directions and the roots spring up and make new trees." – Amelia Earhart

National Aeronautics and Space Administration

Goddard Space Flight Center
Wallops Flight Facility
Wallops Island, VA 23337

Reply to Attn of: 250.W

March 2, 2023

Mr. Randy Owen
Chief, Habitat Management Division
Virginia Marine Resources Commission
380 Fenwick Road
Building 96
Fort Monroe, Virginia 23651

Re: NASA Wallops Island Northern Development Project, Federal Consistency Determination (DEQ 21-164F)

Dear Mr. Owen:

This letter is in response to your letter dated February 8, 2022, which was incorporated into the Federal Consistency Conditional Concurrence provided by the Virginia Department of Environmental Quality (DEQ) on February 28, 2022. The National Aeronautics and Space Administration (NASA) is providing a written response to the comments and recommendations contained within that letter.

As described in the Environmental Assessment (EA) and Federal Consistency Determination prepared for the NASA Wallops Island Northern Development Project, NASA Wallops Flight Facility (WFF) and the Virginia Commercial Space Flight Authority (VCSFA) propose to construct a pier for barge access and berthing and to dredge a vessel approach area connecting to the Chincoteague Inlet Federal Channel. NASA is the lead agency for the National Environmental Policy Act (NEPA) process and for this Federal Consistency consultation. As the Department of Transportation's Maritime Administration (MARAD) and the U.S. Army Corps of Engineers (USACE) are serving as Cooperating Agencies on this project, this consultation also serves to fulfill their requirements.

The proposal by NASA generally includes the following actions: channel dredging; construction of a new pier; construction of a second hangar at the UAS Airstrip; installation of new utility infrastructure; installation of new airstrip lighting and hardening of a section of runway; improvements to the UAS Airstrip access road; construction of a new pier access road; construction of a new project support building; and construction of a new vehicle parking lot. These actions would be completed in phases. Phase 1 would include construction of all onshore components and infrastructure. Phase 2 would include extension of the fixed pier and dredging of

a turning basin at the end of the pier. Phase 3 would include additional dredging of the turning basin as well as a vessel approach channel from Chincoteague Inlet Channel. All dredged material would be placed at the North Wallops Island beach borrow area to support ongoing shoreline enhancement and restoration.

NASA has prepared an EA in accordance with NEPA to analyze the potential effects of the proposed action on the environment. The EA has been tiered from the May 2019 *NASA WFF Site-Wide Programmatic Environmental Impact Statement* (Site-wide PEIS), in which NASA evaluated the environmental consequences of constructing and operating new facilities and infrastructure at WFF. As part of the EA process, NASA also prepared a Federal Consistency Determination in accordance with the Coastal Zone Management Act (CZMA) of 1972 (15 Code of Federal Regulations Part 930, Subpart C) to evaluate the reasonably foreseeable effects of the proposed project on Virginia's coastal uses or resources. The Consistency Determination was submitted to DEQ by NASA on December 16, 2021, and concluded that the proposed project would be consistent to the maximum extent practicable with the enforceable policies of Virginia's Coastal Zone Management (CZM) Program; however, in a response dated February 28, 2022, DEQ conditionally concurred with NASA's determination. DEQ received comments from various agencies within Virginia's CZM Program and provided a conditional concurrence based on NASA addressing the recommendations and obtaining necessary authorizations. Since the issuance of the conditional concurrence, NASA has revised the EA to include such considerations.

In addition, NASA has continued consultation with the U.S. Fish and Wildlife Service (USFWS) and National Oceanic and Atmospheric Administration (NOAA) Fisheries Service under Section 7 of the Endangered Species Act (ESA) regarding potential impacts to listed species. NASA has also continued consultation with NOAA Fisheries under the Magnuson Stevens Fishery Conservation and Management Act regarding potential impacts to Essential Fish Habitat (EFH). The recommendations provided by USFWS and NOAA Fisheries have also been incorporated into the EA.

The following section describes how NASA has incorporated the Virginia Marine Resources Commission's (VMRC) comments and recommendations into the EA. The original comments provided by VMRC, and NASA's responses, are included in **Attachment 1**.

VMRC Comments on the Consistency Determination

As described above, VMRC provided comments on NASA's Consistency Determination that was submitted to the DEQ in accordance with the Virginia CZM Program. As a result of VMRC's and others' comments on the Consistency Determination, DEQ issued a conditional concurrence dependent on NASA's acceptance of the recommendations and obtainment of the necessary authorizations.

VMRC submitted a comment regarding tidal wetlands, suggesting that a wetlands permit would be required from the Accomack County Wetlands Board for impacts to tidal wetlands. VMRC also submitted a comment regarding submerged lands and dredging of Commonwealth-owned bottom material. VCSFA is still seeking appropriations and finalizing in-water design work for the pier

and channel dredging. In accordance with applicable regulations under the Clean Water Act, once funding is secured and designs have progressed sufficiently for permitting, NASA and VCSFA will submit a Joint Permit Application (JPA) to VMRC to facilitate the necessary permitting for impacts to tidal wetlands and other water resources. NASA and VCSFA would comply with minimization and mitigation measures included within the permit to address impacts to wetlands, submerged lands, and other water resources throughout the project area.

VMRC submitted a comment on general permits and policies. NASA and VCSFA acknowledge the participation of state and local agencies in managing environmental resources and administering the enforceable policies of Virginia's CZM Program. NASA and VCSFA are coordinating with agencies as applicable, and will submit a JPA to VMRC to facilitate water resources permitting

VMRC submitted multiple comments on fisheries and shellfish. In order to address potential direct and indirect impacts to shellfish leases and public clam grounds, NASA and VCSFA would mitigate turbidity impacts from dredging by conducting dredging during stages of the tide that allow dredge material to settle quickly from the water column, such as during slack tide or when currents carry suspended sediment away from shellfish resources. Additionally, dredging would maintain buffers of twice the dredge cut (2x buffer) from non-vegetated tidal wetlands and four times the dredge cut (4x buffer) from vegetated tidal wetlands. NASA and VCSFA have revised their channel design impact plates to include the location of the 2x buffer and 4x buffer adjacent to shellfish leases as requested. In locations where recommended dredging during slack tide is not practical, NASA and VCSFA would employ other means to reduce turbidity moving away from the dredge such as turbidity curtains or operational Best Management Practices (BMPs) (e.g., reduced bucket ascent rates) to help protect shellfish resources.

VMRC submitted multiple comments on beaches and coastal primary sand dunes. In response to a comment on the placement location of dredged material, NASA and VCSFA have determined that all beach-quality, sandy dredged material from Phase 1 of the Proposed Action would be placed at the north Wallops Island beach borrow area to support ongoing shoreline enhancement and restoration. To the greatest extent possible, NASA and VCSFA would endeavor to coordinate dredging operations and material placement from Phase 2 and Phase 3 with ongoing WFF shoreline renourishment actions, but may be limited due to appropriations and the availability of funding. NASA has updated species tables in the EA to identify all species potentially present within the existing beach and sand dune habitat at Wallops Island.

Finally, due to the comments submitted, VMRC determined that the proposed project was not consistent with the enforceable policies over which VMRC has jurisdiction. NASA believes that, given consideration of VMRC's comments and updates to the EA reflecting these recommendations, the proposed project should now be considered consistent to the maximum extent practicable with the enforceable policies of Virginia's CZM Program.

Best Management Practices Summary

In addition to implementing minimization and mitigation measures discussed above, through EFH consultation with NOAA Fisheries, NASA and VSCFA have developed a list of BMPs to further reduce the potential for adverse impacts. This list of BMPs was developed based on routine construction best practices as well as on the results of consultation and recommendations provided by other agencies. The complete list of BMPs is included within the EA and is copied below (**Table 1**).

Table 1. Summary of BMPs, Mitigation and Monitoring Measures

Resource Area	Measures
Noise	• Construction activities associated with institutional support projects may be limited to normal daytime working hours except for certain activities (e.g., continuous dredging operation). • Time of year restrictions for pile driving activities could be employed to reduce impacts on spawning marine animals or nesting seabirds, if required by NOAA Fisheries or USFWS. • Pile driving associated with construction of the pier may require the use of mitigation measures (e.g., bubble curtains, use of a soft-start procedure) to minimize underwater noise impacts.
Munitions and Explosives of Concern	• A munition response plan would be developed. • Trained unexploded ordnance (UXO) Technician would be available during geophysical survey of construction areas and/or during construction.
Health and Safety	• Safety Plans would be prepared, implemented, and followed. • If applicable, contractors would follow regulations defined in Federal Acquisition Regulation 52.236-13, Accident Prevention.
Land Resources	• Stormwater Pollution Prevention Plan (SWPPP), erosion and sediment control (ESC), and stormwater management BMPs could include using silt fencing; soil stabilization blankets; and matting construction entrances, material laydown areas, and around areas of land disturbance during construction. Bare soils would be vegetated after construction to reduce erosion and stormwater runoff velocities. • WFF Integrated Contingency Plan (ICP) would be implemented and followed to prevent or swiftly respond to petroleum or chemical spills or releases. • Heavy equipment, located in temporarily impacted wetland areas, would be placed on mats, geotextile fabric, or other suitable measures to minimize soil disturbance to the maximum extent practicable.

Table 1. Summary of BMPs, Mitigation and Monitoring Measures

Resource Area	Measures
Water Resources	• Machinery and construction vehicles would be operated outside of streambeds and wetlands to the greatest extent practicable; synthetic mats, low-pressure tires, and/or other best practices may be used when in-stream work or wetland work is unavoidable. • The top 30 centimeters (12 inches) of material removed from wetlands would be preserved for use as wetland seed and rootstock in the excavated area unless the material contains phragmites. • ESC would be designed in accordance with the most current edition of the Virginia Erosion and Sediment Control Handbook. Controls would be in place prior to clearing and grading and maintained in good working order to minimize impacts to state waters. The controls would remain in place until the area stabilizes. • WFF ICP and project specific SWPPP would be implemented to reduce impacts of stormwater runoff and fueling and maintenance of vehicles and equipment. • Wetland ground and vegetation disturbance would be returned to pre-construction conditions, in accordance with permit requirements. • Compensate for permanent wetland impacts in accordance with the USACE/USEPA 2008 Compensatory Mitigation Rule. • In accordance with Section 438 of the Energy Independence and Security Act of 2007, low impact development measures would be incorporated to the maximum extent feasible to manage and minimize stormwater runoff onsite. • Monitoring of wetlands, streambeds, channels, etc. in construction areas would occur in accordance with all project permits. • Sediment curtains would be used, if necessary, for open water work on the pier and during dredging activities. • Dredging rate could be reduced to slow down the dredging operation, especially bucket speed when approaching the sediment surface and bucket removal from the surface after closing. • Bucket over-penetration could be reduced to minimize or eliminate sediment from be expelled from the bucket vents and/or piling on top of the bucket and eroding during bucket retrieval. • Overflow from barges during dredging or transport could be eliminated. • Dredge operation methods would change based on site conditions such as tides, waves, currents, and wind. • Descent or hoist speed of a wire-supported bucket could be modified. • Dredging could be sequenced by moving upstream to downstream. • Number of dredging passes (vertical cuts) could vary to increase sediment capture. • Properly sized tugs and support equipment would be used. • GPS location technology would be used on dredging equipment to avoid over dredge.
Vegetation	• Construction and post-construction monitoring would be conducted to identify and document if and when disturbed areas achieve final stabilization as specified in any permits; corrective action measures would be implemented such that permit requirements are met. • Mitigation of invasive species (e.g., *Phragmites*) would occur in accordance with the *WFF Phragmites Control Plan*.

Table 1. Summary of BMPs, Mitigation and Monitoring Measures

Resource Area	Measures
Wildlife and Special Status Species	• Implementation of time-of-day and/or seasonal restrictions of land and water-based construction to mitigate impacts to special-status species may occur. Specifically, comply with time-of-year tree clearing restrictions from April 1 to November 14, and restrictions on dredge material beach placement from March 15 to August 31, or to November 30 if a sea turtle nest is discovered. • Onboard observers would be present during pile driving and dredging activities, and all activity may be temporarily suspended if a threatened or endangered species is identified in the vicinity of pile-driving activities. • NOAA Fisheries and Commonwealth of Virginia dredging guidelines would be followed. Dredging activity may also be subject to time-of-day and seasonal restrictions and/or qualified observers. • Restrictions may be placed on the number of trips taken by each vessel and shallow-draft vessels may be used for water-related projects. • Adherence of and monitoring consistent with the ICP, SWPPP, and other applicable permits and plans. • Sediment curtains could be utilized during dredging and pier construction, if necessary. • Bubble curtains could be utilized for noise attenuation during pile driving. • Special-status species (e.g., eastern black rail) habitat would be revegetated and restored, if necessary. • Vegetation maintenance would be conducted periodically, as necessary.
Essential Fish Habitat	• Measures may be implemented to ensure no net loss of EFH due to construction activity. • NOAA Fisheries and Commonwealth of Virginia dredging guidelines would be followed. Dredging activity may also be subject to time of day and seasonal restrictions. • All dredging would be conducted during stages of the tide that allows the sandy dredge material to settle quickly from the water column; e.g., slack tide or when tidal currents will carry resuspended sediment away from shellfish resources. • In locations where dredging during slack tide is not practical, other means would be employed to reduce turbidity moving away from the dredge such as turbidity curtains or operational BMPs (i.e., reduced bucket ascent rates) to help protect shellfish resources. • Impact hammer 'soft-start' procedure would use reduced hammer energy when installing 24-inch square, pre-stressed concrete piles during pier construction. • All Phase 1 beach-quality, sandy dredge material would be placed at the North Wallops Island beach borrow area for beneficial use as proposed. • Every effort would be made to coordinate Phase 2 and Phase 3 dredging operations with ongoing WFF shoreline renourishment actions; however, the ability to do so would be contingent on the availability of funding for each phase of the proposed project. • NASA and VCSFA would compensate for 1,500 square meter (0.37 acres) of tidal wetland (permanent) impacts in accordance with the USACE/USEPA 2008 Compensatory Mitigation Rule as proposed. • 0.66 hectares (1.64 acres) of tidal wetland (temporary) impacts would be restored to pre-construction conditions and revegetated, if necessary. Wetland revegetation would be monitored to ensure successful restoration of these areas.
Transportation	• All transportation activities, including road closures, traffic control, safety issues, etc. would be coordinated with Accomack County and Virginia Department of Transportation (VDOT) Accomack Residency Office. • Coordination with the US Coast Guard (USCG) would occur for any required waterway closures during dredging and dredged material placement operations. • Notices to Mariners would be issued for all in-water work and in-water signage of construction area would be posted.

Table 1. Summary of BMPs, Mitigation and Monitoring Measures	
Resource Area	**Measures**
Infrastructure and Utilities	• No mitigations are anticipated.
Archaeological Resources	• Work would halt and WFF Historic Preservation Officer would be contacted immediately if cultural resources are discovered during ground disturbing activities.

Conclusions

NASA requests your agency's concurrence with our revisions to the EA and that these revisions sufficiently address VMRC's concerns regarding federal consistency with the enforceable policies of Virginia's CZM Program.

If you have any questions or require additional information, please contact me at Shari.A.Miller@nasa.gov or (757) 824-2327.

Sincerely,

Shari A. Miller
Center NEPA Manager and
Environmental Planning Lead

Attachments:
Attachment 1 – NASA's Responses to VMRC Comments

cc:
250/Ms. K. Finch
250/Mr. T. Meyer
MARAD/Mr. A. Finio
USACE/Mr. S. Bahnson
VCSFA/Mr. A. Brittingham

Virginia Marine Resources Commission (VMRC)
Comments Received on NASA Wallops Island Northern Development Project, Federal Consistency Determination

Comment	Agency	Commenter	Topic	Recommended Changes (Exact wording of suggested Change)	Incorporated (yes/no)	How Comment was incorporated
1	VMRC (FCD)	Randy Owen	FCD - Tidal Wetlands	A wetlands board permit with compensatory mitigation will be required from the Accomack County wetlands board for all proposed impacts to tidal wetlands.	No	Comment noted. A JPA will be filed.
2	VMRC (FCD)	Randy Owen	FCD - Submerged Lands	The project as proposed will require the dredging of 94,000 cubic yards of State-owned bottom material. The federal act of dredging, however, is not jurisdictional to VMRC based on past guidance from the Office of the Attorney General.	No	Project will be submitting a JPA for USACE, VMRC, and DEQ permitting.
3	VMRC (FCD)	Randy Owen	FCD - Fisheries and Shellfish	Private shellfish leases and public clam grounds are situated directly adjacent to the proposed channel. We cannot verify with the provided project drawings that the side slopes of the dredged channel will not directly impact lease number 22062. We have also verified that the adjacent shellfish leases 17290 and 19696 are active leases and have reported harvest.	Yes	Added to Sections 3.5.1.2 and 3.7.2.2, "Turbidity curtains could be employed when dredging operations approach leased shellfish lands. The only leased land that may be affected by turbidity could be the northwest corner of Oyster Lease 17290. If the use of turbidity curtains is not possible due to current velocities, dredging would be conducted during slack tides, i.e., on the western portion of the channel during flood tide and the eastern portion of the channel during ebb tides." Change 3.7.2.2. under Benthic, delete "Once specific information about dredging activities becomes available, impacts to these leased beds would need to be quantified to determine if mitigation or possible remediation measures would be required." Change to "Dredging activities would follow the existing deep water channel. As shellfish beds are limited to YY ft depth, no direct impacts would be anticipated to leased shellfish beds. Indirect impacts from turbidity would be short term and transient. Turbidity impacts would be mitigated by dredging during slack tides: dredging the western portion of the channel during flood tide, and dredging the eastern portion of the channel during ebb tides. Additionally, dredging would maintain buffers of a minimum of twice the dredge cut from nonvegetated tidal wetlands and four times the dredge cut from vegetated tidal wetlands."
4	VMRC (FCD)	Randy Owen	FCD - Fisheries and Shellfish	Virginia Institute of Marine Science (VIMS) comments on this project report that the sandy plume from dredging is most likely to settle in areas adjacent to the channel quickly and that mitigation for sediment settling within the shellfish resource areas is needed. For this reason, we do not agree with the conclusion in the consistency report that “none of the Proposed Action Alternative activities involving disturbance of the subaqueous bottom would permanently disturb shellfish beds or affect their continued viability”. Therefore, the project as proposed is not consistent with our fisheries and shellfish enforceable policies. To comply with the policies a turbidity mitigation plan is required that includes dredging on slack tides and considers turbidity curtains.	Yes	No revision to the EA is necessary. Email from E. Hein/VIMS dated 4/11/2022 stated "At this point, the hydrodynamic modeling has been done and indicates that the new dredging for the WIND project is unlikely to cause much shoaling of the existing navigation channels. Let me touch base with the modeling team and my office to figure out the best way to get that information to the appropriate regulators and also the timeline for the sediment modeling (though after seeing the results from the hydrodynamic modeling, we're not anticipating concerning results from the sediment model either). It may end up that we incorporate that information into our review of the JPA."

Virginia Marine Resources Commission (VMRC)
Comments Received on NASA Wallops Island Northern Development Project, Federal Consistency Determination

Comment	Agency	Commenter	Topic	Recommended Changes (Exact wording of suggested Change)	Incorporated (yes/no)	How Comment was incorporated
5	VMRC (FCD)	Randy Owen	FCD - Fisheries and Shellfish	Surveyed channel designs that include the location of the 2x buffer and 4x buffer adjacent to the shellfish leases are needed to understand potential direct impacts to the leases.	Yes	Change 3.7.2.2. under Benthic, change to "Dredging activities would follow the existing deep water channel. As shellfish beds are limited to YY ft depth, no direct impacts would be anticipated to leased shellfish beds. Indirect impacts from turbidity would be short term and transient. Turbidity impacts would be mitigated by dredging during slack tides: dredging the western portion of the channel during flood tide, and dredging the eastern portion of the channel during ebb tides. Additionally, dredging would maintain buffers of a minimum of twice the dredge cut from nonvegetated tidal wetlands and four times the dredge cut from vegetated tidal wetlands." Impact plates have been revised to show 2x and 4x buffers.
6	VMRC (FCD)	Randy Owen	FDC- general permits and policies	The proposed project is within the jurisdictional areas of the Virginia Marine Resources Commission (VMRC) and the local Accomack County wetlands board. Please be advised that the VMRC pursuant to Chapters 12, 13, and 14 of Title 28.2 of the Code of Virginia administers permits required for submerged lands, tidal wetlands, and beaches and dunes. Additionally, the VMRC administers the enforceable policies of fisheries management, subaqueous lands, tidal wetlands, and coastal primary sand dunes and beaches, which comprise key components of Virginia's Coastal Zone Management Program.	No	Comment noted. NASA and MARS will be submitting a JPA for USACE, VMRC, and DEQ permitting.
7	VMRC (FCD)	Randy Owen	FCD - Beaches and Coastal Primary Sand Dunes	Section 10.1-704 of the Code of Virginia provides that the beaches of the Commonwealth shall be given priority consideration as sites for the disposal of that portion of dredged material determined to be suitable for beach nourishment. This is further supported by VMRC's "Criteria for the Placement of Sandy Dredged Material along Beaches in the Commonwealth," Regulation 4 VAC 20-400-10 ET SEQ. The project, however, proposes to dispose approximately 94,0000 cubic yards of State-owned sandy bottom material into the Atlantic Ocean. This Commonwealth of Virginia resource has a market value of between $2.35 and $3.29 million dollars, and should be utilized as nourishment material for the ongoing Wallops Island Shoreline Enhancement Restoration project at the Wallops Flight Facility. This would then offset certain of the adverse environmental impacts raised by VIMS, the Department of Wildlife Resources (DWR) and The Nature Conservancy, associated with past projects (VMRC #18-1590 and #20-1745) and future plans to excavate sandy beach material from the north end of Wallops Island.	Yes	NASA and MARS propose utilizing dredged material for onshore sand renourishment on Wallops Island. Initial dredge materials would be placed in the NASA north Wallops Island mining area (NASA, 2019). This would speed the recovery of the mined area for shoreline habitat. For future maintenance dredging, NASA and MARS may work dredge maintenance cycles to coincide with shoreline renourishment actions. Therefore, an MPRSA permit is not required.
8	VMRC (FCD)	Randy Owen	FCD - Beaches and Coastal Primary Sand Dunes	According to DWR, the beach along this segment of Wallops Island supports nesting federally Endangered Piping Plovers and American Oystercatchers, designated a Tier IIa Species of Greatest Conservation Need (SGCN). In addition, this area is believed to provide nesting habitat for state Threatened Wilson's Plovers, federally Threatened Loggerhead Sea Turtles, Diamondbacked Terrapins (Tier ll SGCN), and other species identified in Virginia's Wildlife Action Plan as SGCNs.	Yes	American oystercatcher has been added to Table 3.7-1.

Virginia Marine Resources Commission (VMRC)
Comments Received on NASA Wallops Island Northern Development Project, Federal Consistency Determination

Comment	Agency	Commenter	Topic	Recommended Changes (Exact wording of suggested Change)	Incorporated (yes/no)	How Comment was incorporated
9	VMRC (FCD)	Randy Owen	FCD - General	Given the cumulative concerns noted above, this project is viewed as not consistent with Virginia's fisheries and shellfish enforceable policies and our beaches and dunes enforceable policies.	Yes	NASA and MARS commit to adhering to all federal and state permit and consultation driven monitoring and mitigation. Any completed consultation and/or permit requirements will be added to Table 4.1

Commonwealth of Virginia

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

1111 E. Main Street, Suite 1400, Richmond, Virginia 23219
P.O. Box 1105, Richmond, Virginia 23218
(800) 592-5482 FAX (804) 698-4178
www.deq.virginia.gov

Andrew R. Wheeler
Secretary of Natural and Historic Resources

Michael S. Rolband, PE, PWD, PWS Emeritus
Director
(804) 698-4000

February 28, 2022

Shari A. Miller
Center NEPA Manager & Environmental Planning Lead
NASA GSFC Wallops Flight Facility
Wallops Island, VA 23337
Via email: Shari.A.Miller@nasa.gov

RE: Comments on the Draft Environmental Assessment and Federal Consistency Determination for the Wallops Flight Facility Wallops Island Northern Development, National Aeronautics and Space Administration, DEQ #21-164F

Dear Ms. Miller:

The Commonwealth of Virginia has completed its review of the above-referenced documents. The Department of Environmental Quality (DEQ) is responsible for coordinating Virginia's review of federal environmental documents submitted under the National Environmental Policy Act (NEPA) and responding to appropriate federal officials on behalf of the Commonwealth. DEQ is also responsible for coordinating Virginia's review of federal consistency documents submitted pursuant to the Coastal Zone Management Act (CZMA) and providing the state's response. This is in response to the December 2021 Draft Environmental Assessment (EA) and Federal Consistency Determination (FCD) included as Appendix D submitted by the National Aeronautics and Space Administration (NASA) for the above referenced project. The following agencies participated in the review of this proposal:

Department of Environmental Quality
Department of Wildlife Resources (DWR)
Department of Historic Resources (DHR)
Department of Aviation (DOAV)
Department of Conservation and Recreation (DCR)
Department of Health (VDH)

Virginia Marine Resources Commission (VMRC)
Virginia Institute of Marine Sciences (VIMS)

In addition, the Department of Transportation, Department of Agriculture and Consumer Services, Accomack County and the Accomack-Northampton Planning District Commission were invited to comment on the proposal.

PROJECT DESCRIPTION

The National Aeronautics and Space Administration (NASA) proposes to conduct the Wallops Flight Facility Wallops Island Northern Development project on Wallops Island, Virginia. The proposed project would establish a new facility at Wallops Island as part of the Department of Transportation's Maritime Administration (MARAD) M-95 "Marine Highway Project" designed to expand the use of American's navigable waters. The new infrastructure would include a port and operations area, including enhanced operational capabilities for NASA and the Mid-Atlantic Regional Spaceport (MARS). The MARS Port, including a 398-meter fixed pier and turning basin, would be constructed on (and within the vicinity of) the Unmanned Aerial Systems (UAS) Airstrip located at the north end of Wallops Island. A variety of shallow draft manned and unmanned vessels would be serviced by the port. The project would include the dredging of a new and existing channel for enhanced vessel approach purposes. The proposed channel would have a length of approximately 3,900m and a final depth of 3.7m below mean lower low water (MLLW). The proposed width of the approach channel 30.5m is consistent with the dimensions of the Chincoteague Inlet Federal Channel. Onshore components of the project include a Project Support Building, a second hangar adjacent to the UAS airstrip, utility infrastructure, airstrip lighting, airstrip access road improvements, a vehicle parking lot, runway hardening for port access, and a new access road to the port.

In addition to the draft EA, a Federal Consistency Determination was included as Appendix D to the document. The FCD finds the proposed action consistent to the maximum extent practicable with the enforceable policies of the Virginia Coastal Zone Management Program.

FEDERAL CONSISTENCY UNDER THE COASTAL ZONE MANAGEMENT ACT

Pursuant to the Coastal Zone Management Act of 1972 (§ 1456(c)), as amended, and the federal consistency regulations implementing the CZMA (15 CFR Part 930, Subpart C, § 930.30 *et seq*.), federal actions that can have reasonably foreseeable effects on Virginia's coastal uses or resources must be conducted in a manner which is consistent, to the maximum extent practicable, with the Virginia Coastal Zone Management (CZM) Program. The CZM Program is comprised of a network of programs administered by several agencies. In order to be consistent with the CZM Program, the federal agency must obtain all the applicable permits and approvals listed under the enforceable policies of the CZM Program prior to commencing the project.

Federal Consistency Public Participation
In accordance with 15 CFR § 930.2, public notice of the proposed action was published on the DEQ website and in the OEIR Program Newsletter from December 27, 2021 to January 14, 2022. No public comments were received in response to the notice.

Federal Consistency Determination
A Federal Consistency Determination for the Wallops Flight Facility Wallops Island Northern Development project was submitted by NASA and received by DEQ on December 16, 2021. The document provided an analysis of the project's impact on the enforceable policies. According to the FCD, the project will be consistent to the maximum extent practicable with Virginia's Coastal Zone Management Program. NASA is encouraged to consider the Advisory Polices of the CZM Program as well.

The project is expected to affect the following enforceable policies: Tidal and Non-Tidal Wetlands, Wildlife and Inland Fisheries, Non-Point Source Water Pollution, Subaqueous Lands, Dunes and Beaches, Marine Fisheries, Plant Pests and Noxious Weeds, and Point Source Air Pollution. These impacts and jurisdictional agency comments, recommendations, and requirements are discussed below in the "Environmental Impacts and Mitigation" section of this document.

Federal Consistency Conditional Concurrence
Based on our review of the FCD and the comments submitted by agencies administering the enforceable policies of the CZM Program, DEQ **conditionally concurs** that the proposal will be consistent to the maximum extent practicable with the CZM Program provided all applicable permits and approvals are obtained as described below.

If, prior to construction, the project should change significantly and any of the enforceable policies of the Virginia CZM Program would be affected, pursuant to 15 CFR 930.46, the applicant must submit supplemental information to DEQ for review and approval. Additionally, other state approvals which may apply to this project are not included in this consistency concurrence. Therefore, NASA must ensure that this project is operated in accordance with all applicable federal, state and local laws and regulations.

Conditions of Concurrence with the FCD
The conditions of the Commonwealth's concurrence include the following authorizations/requirements under the Virginia CZM Program:

- In accordance with Item F. of the Marine Fisheries Enforceable Policy, any activity in the Commonwealth's tidal waters must not encroach upon the lawful use and occupation of previously leased ground for the term of the lease unless exercising riparian rights or the right of fishing. To comply with the policy a turbidity mitigation plan is required that includes dredging on slack tides and considers turbidity curtains. Additionally, surveyed channel designs that include

the location of the 2x buffer and 4x buffer adjacent to the shellfish leases (22062, 17290, and 19696) are needed to understand potential direct impacts to the leases. Coordinate with VMRC to provide this necessary information. (*Va. Code Ann. §§ 28.2-101, -201, -203, -203.1, -225, -551, -600, -601, -603 -618, and -1103, -1203 and the Constitution of Virginia, Article XI, Section 3*).

- In accordance with the Threatened and Endangered Species section of the Wildlife and Inland Fisheries Enforceable Policy, "No person shall harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, possess, collect, transport, sell or offer to sell, or attempt to do so, any species of fish or wildlife listed as threatened or endangered by the Board of Game and Inland Fisheries…" To comply with the policy NASA must make updates to Table 4-1 *Summary of BMPs, Mitigation, and Monitoring Measures* to clearly state which time of year restrictions will be adhered to and what specific minimization methods will be employed during construction to avoid and minimize impacts upon wildlife and their habitats. Alternatively, NASA may coordinate with DWR to make a commitment to adhere to DWR's recommendations and/or those offered by the National Oceanic and Atmospheric Administration (NOAA) or the U.S. Fish and Wildlife Service (USFWS). (*Va. Code Ann. §§ 29.1-501, -564, -566, -567, and -568; 4 Va. Admin. Code §§ 15-20-130 and – 140).*

- In accordance with the Subaqueous Lands Enforceable Policy that states any activity affecting the subaqueous lands, including the taking and use of material from the bottomland, "…shall be guided by the Commonwealth's General Policy to conserve, develop, and utilize its natural resources, its public lands, and its historical sites and buildings and to protect its atmosphere, lands, and waters from pollution, impairment, or destruction, for the benefit, enjoyment, and general welfare of the people of the Commonwealth," the 94,000 cubic yards of subaqueous lands proposed for dredging are a State-owned resource with an approximate market value of between $2.35 and $3.29 million dollars and must be beneficially reused. The dredged material should be beneficially reused as nourishment material for the ongoing Wallops Island Shoreline Enhancement Restoration project at the Wallops Flight Facility. Coordinate with VMRC to discuss the beneficial reuse of the dredged material. (*Va. Code Ann. §§ 28.2-1200, -1203, -1204 and -1205).*

In accordance with the *Federal Consistency Regulations* 15 CFR Part 930, section 930.4, this conditional concurrence is based on the applicant obtaining the necessary authorizations prior to initiating project activities. If the requirements of section 930.4, sub-paragraphs (a)(1) through (a)(3) are not met, this conditional concurrence becomes an objection under 15 CFR Part 930, section 930.43

ENVIRONMENTAL IMPACTS AND MITIGATION

1. Surface Waters and Wetlands. The draft EA (page 3-27) notes that wetlands delineations for the study area have been completed and U.S. Army Corps of Engineers (Corps) preliminary jurisdictional determinations have been received for all wetlands. The FCD (page 16) states that the project will permanently impact 0.59 acre of tidal wetlands and temporarily impact 1.74 acre of tidal wetlands from the construction of inland support infrastructure including the proposed vehicle parking lot, culvert improvements, port access road, and the approach pier. Non-tidal wetlands will not be affected.

1(a) Agency Jurisdiction.

1(a)(i) Surface Water and Non-Tidal Wetlands. The State Water Control Board promulgates Virginia's water regulations covering a variety of permits to include the Virginia Pollutant Discharge Elimination System Permit (VPDES) regulating point source discharges to surface waters, Virginia Pollution Abatement Permit regulating sewage sludge, storage and land application of biosolids, industrial wastes (sludge and wastewater), municipal wastewater, and animal wastes, the Surface and Groundwater Withdrawal Permit, and the Virginia Water Protection (VWP) Permit regulating impacts to streams, wetlands, and other surface waters. The VWP permit is a state permit which governs wetlands, surface water, and surface water withdrawals and impoundments. It also serves as §401 certification of the federal Clean Water Act §404 permits for dredge and fill activities in waters of the U.S. The VWP Permit Program is under the Office of Wetlands and Stream Protection, within the DEQ Division of Water Permitting. In addition to central office staff that review and issue VWP permits for transportation and water withdrawal projects, the six DEQ regional offices perform permit application reviews and issue permits for the covered activities:

- Clean Water Act, §401;
- Section 404(b)(i) Guidelines Mitigation Memorandum of Agreement (2/90);
- State Water Control Law, Virginia Code section 62.1-44.15:20 *et seq*.; and
- State Water Control *Regulations*, 9 VAC 25-210-10.

1(a)(ii) Tidal Wetlands. The Virginia Marine Resources Commission (VMRC) regulates encroachments in, on or over state-owned subaqueous beds as well as tidal wetlands pursuant to Virginia Code §28.2-1200 through 1400. For nontidal waterways, VMRC states that it has been the policy of the Habitat Management Division to exert jurisdiction only over the beds of perennial streams where the upstream drainage area is 5 square miles or greater. The beds of such waterways are considered public below the ordinary high water line.

1(b) DEQ Findings. The VWP program at the DEQ Tidewater Regional Office (TRO) did not indicate that non-tidal wetlands will be affected.

1(c) VMRC Findings. VMRC reviewed the project documents and found the proposed project to be within the jurisdictional areas of the agency and the local Accomack County wetlands board.

VMRC notes that NASA has proposed to impact tidal wetlands and subaqueous bottom habitat for the construction of a fixed pier and turning basin, a hangar at the Unmanned Aerial Systems (UAS) Airstrip, installation of new utility infrastructure, installation of airstrip lighting, hardening/reinforcement of a section of the airstrip, improvements to the airstrip access road, construction of a new pier access road adjacent to the UAS Airstrip, construction of a new 20 to 30 vehicle parking lot, construction of a project support building, and channel dredging (vessel approach channel).

1(d) VIMS Comments. VIMS scientists from the departments of Physical Sciences and Fisheries Science and the Office of Research and Advisory Services contributed to a review of the proposed project.

The proposed pier will be constructed during project phases one and two, with 624 feet constructed during the first phase, and an additional 676 feet in phase two. The pier will require 400 24-foot-square pre-stressed concrete piles that will be installed with an impact hammer. The project will permanently and temporarily impact tidal wetlands.

1(e) Recommendations. VIMS recommends the development of monitoring and replanting plans for the areas of temporary impacts to vegetated tidal wetlands to ensure their recovery following construction. A *Phragmites* control plan is already in place for Wallops Island and can be applied to the proposed project.

1(f) Requirements. A wetlands board permit with compensatory mitigation will be required from the Accomack County wetlands board for all proposed impacts to tidal wetlands.

1(g) CZMA Federal Consistency. Provided the required permit(s) are obtained and complied with, this project will be consistent to the maximum extent practicable with the Tidal and Non-tidal Wetlands enforceable policy of the Virginia Coastal Zone Management (CZM) Program (see Federal Consistency under the CZMA section above (page 2) for additional information).

2. Subaqueous Lands. The draft EA (page 3-51) notes that subaqueous bottom will be disturbed during dredging, boat anchoring, and pile driving. This could deposit sediment over nearby oyster beds and interfere with respiration. Maintenance dredging in the project area would occur approximately every five years over the 30-year project life.

The FCD (page 17) states that the subaqueous bottom of surrounding tidal waters, specifically the Ballast Narrows and Chincoteague Inlet, would be disturbed during proposed construction activities. Dredging activities for the turning basin and vessel turning channel would remove up to 94,200 cubic yards of subaqueous material. The

FCD notes that the disturbance to the subaqueous bottom is temporary and that contractors would implement mitigation measures as necessary during construction to avoid and/or minimize impacts, and would incorporate and adhere to applicable BMPs, such as the use of sediment curtains, to minimize effects from subaqueous bottom disturbance.

2(a) Agency Jurisdiction. The Virginia Marine Resources Commission regulates encroachments in, on or over state-owned subaqueous beds as well as tidal wetlands pursuant to Virginia Code §28.2-1200 through 1400. For non-tidal waterways, VMRC states that it has been the policy of the Habitat Management Division to exert jurisdiction only over the beds of perennial streams where the upstream drainage area is 5 square miles or greater. The beds of such waterways are considered public below the ordinary high water line.

2(b) Agency Finding. VMRC states that the project as proposed will require the dredging of 94,000 cubic yards of State-owned bottom material with disposal of the sandy bottom into the Atlantic Ocean. The disposal of this valuable sand resource is not consistent with Virginia's Subaqueous Lands Enforceable Policy. It states any activity affecting the subaqueous lands, including the taking and use of material from the bottomland, "…shall be guided by the Commonwealth's General Policy to conserve, develop, and utilize its natural resources, its public lands, and its historical sites and buildings and to protect its atmosphere, lands, and waters from pollution, impairment, or destruction, for the benefit, enjoyment, and general welfare of the people of the Commonwealth." The dredge material has an approximate market value of between $2.35 and $3.29 million dollars, and should be utilized as nourishment material for the ongoing Wallops Island Shoreline Enhancement Restoration project at the Wallops Flight Facility.

Consistency with Virginia's Subaqueous Lands Enforceable Policy is conditioned upon the beneficial use of the 94,000 cubic yards of state owned resource as recommended by the Virginia Institute of Marine Science in their January 27, 2022 EA comments.

The federal act of dredging is not jurisdictional to VMRC based on past guidance from the Office of the Attorney General. Therefore, a VMRC subaqueous permit will not be required.

2(c) VIMS Comments. Dredging will occur during phases one and three, with the initial dredging of the channel and turning basin to nine feet below mean lower low water (MLLW). Phase three operations will extend the channel depth to 12 feet MLLW and dredge a new turning basin to coincide with the end of the extended pier (constructed during phase two). The total volume of dredged material is estimated to be 94,000 cubic yards and the geotechnical investigation indicates it is approximately 95% sand. Dredging the new channel will provide an additional path for tidal exchange between Chincoteague Inlet and the marshes and lagoons landward of Wallops and Chincoteague islands. Consequently, the flow through Chincoteague Channel (federal

channel authorized to 12 feet, maintained to 9 feet) will be reduced and the channel may therefore shoal and require more frequent maintenance dredging. Hydrodynamic modeling is required to estimate the extent of this potential shoaling. VIMS is the lead institution on the Commonwealth-funded *Chincoteague Inlet Modeling Study (CIMS)*, which is developing a wave, hydrodynamic, and multi-class sediment-transport numerical model of the Inlet and adjacent barrier islands, including the area to be impacted by the proposed NASA channel. Modeled scenarios incorporate the proposed dredging activities.

2(d) Recommendations.

2(d)(i) VMRC Recommendations. Of the five placement sites in the EA, VMRC recommends the material be placed on the shoreline of Wallops Island.

2(d)(ii) VIMS Recommendations. VIMS notes that the sandy material is anticipated to settle quickly, so the use of a turbidity curtain around the dredging operations is recommended only when they are in close proximity to shellfish resources. If the use of turbidity curtains is not possible due to current velocities, VIMS recommends consideration of dredging the during slack tides and the western portion of the channel during flood tide and the eastern portion of the channel during ebb tides.

VIMS recommends adherence to the standard dredge buffers of a minimum of twice the dredge cut from non-vegetated tidal wetlands and four times the dredge cut from vegetated tidal wetlands.

VIMS expects preliminary results of CIMS within the next couple of months, and can share those findings with NASA and the regulatory community. The results of CIMS should provide information regarding the full impacts from this project and VIMS recommends consideration of delaying action until these results are available.

2(e) CZMA Federal Consistency. Beneficial reuse of the dredged subaqueous lands, a state-owned resource, is required in order for the project to be consistent to the maximum extent practicable with the Subaqueous Lands enforceable policy of the Virginia CZM Program (see Federal Consistency **Conditional Concurrence** under the CZMA section above (page 3) for additional information).

3. Air Pollution. The FCD (page 20) states that minor air pollution increases would result from the operation of construction equipment. Short-term effects would be minimized by using best management practices (BMPs) to control fugitive dust, minimize equipment and vehicle idling, and properly maintaining equipment in optimal condition. No open burning is proposed.

The draft EA (page 1-6) notes that the reducing air emissions by removing potentially hazardous and less efficient transportation operations off of roadways is part of the

purpose of the project. Table 3-1 indicates that temporary emissions from the project will not have a significant impact on regional air quality.

3(a) Agency Jurisdiction. The DEQ Air Division, on behalf of the State Air Pollution Control Board, is responsible for developing regulations that implement Virginia's Air Pollution Control Law (Virginia Code §10.1-1300 *et seq.*). DEQ is charged with carrying out mandates of the state law and related regulations as well as Virginia's federal obligations under the Clean Air Act as amended in 1990. The objective is to protect and enhance public health and quality of life through control and mitigation of air pollution. The division ensures the safety and quality of air in Virginia by monitoring and analyzing air quality data, regulating sources of air pollution, and working with local, state and federal agencies to plan and implement strategies to protect Virginia's air quality. The appropriate DEQ regional office is directly responsible for the issuance of necessary permits to construct and operate all stationary sources in the region as well as monitoring emissions from these sources for compliance. In the case of certain projects, additional evaluation and demonstration must be made under the general conformity provisions of state and federal law.

The Air Division regulates emissions of air pollutants from industries and facilities and implements programs designed to ensure that Virginia meets national air quality standards. The most common regulations associated with major projects are:

- Open burning: 9 VAC 5-130 *et seq.*
- Fugitive dust control: 9 VAC 5-50-60 *et seq.*
- Permits for fuel-burning equipment: 9 VAC 5-80-1100 *et seq.*

3(b) Agency Findings. According to the DEQ Air Division, the project site is located in a designated ozone non-attainment area and an emission control area for oxides of nitrogen (NOx) and volatile organic compounds (VOCs).

3(c) Requirements.

3(c)(i) Fugitive Dust. During land-disturbing activities, fugitive dust must be kept to a minimum by using control methods outlined in 9VAC5-50-60 *et seq*. of the Regulations for the Control and Abatement of Air Pollution. These precautions include, but are not limited to, the following:

- Use, where possible, of water or suitable chemicals for dust control during the proposed demolition and construction operations and from material stockpiles;
- Installation and use of hoods, fans and fabric filters to enclose and vent the handling of dusty materials;
- Covering of open equipment for conveying materials; and
- Prompt removal of spilled or tracked dirt or other materials from paved streets and removal of dried sediments resulting from soil erosion.

3(c)(ii) Fuel-Burning Equipment. Fuel-burning equipment (boilers, generators, compressors, etc.) or any other air-pollution-emitting equipment may be subject to registration or permitting requirements under 9 VAC5-80, Article 6, Permits for New and Modified Sources.

3(c)(iii) Open Burning. If project activities include the open burning of construction material or the use of special incineration devices, this activity must meet the requirements under 9 VAC 5-130 *et seq.* of the *Regulations* for open burning, and may require a permit. The *Regulations* provide for, but do not require, the local adoption of a model ordinance concerning open burning. The applicant should contact local fire officials to determine what local requirements, if any, exist.

3(c)(iv) Asphalt Paving. A precaution, which typically applies to road construction and paving work (9 VAC 5-45-780 *et seq*.), places limitations on the use of "cut-back" (liquefied asphalt cement, blended with petroleum solvents), and may apply to the project. The asphalt must be "emulsified" (predominantly cement and water with a small amount of emulsifying agent) except when specified circumstances apply. Moreover, there are time-of-year restrictions on its use from April through October in VOC emission control areas.

3(d) Agency Recommendation. Take precautions to limit the emissions of VOCs and NOx during construction, principally by controlling or limiting the burning of fossil fuels.

3(e) CZMA Federal Consistency. The project will be consistent to the maximum extent practicable with the Point Source Air Pollution enforceable policy of the CZM Program, provided adherence to the above requirements (see Federal Consistency under the CZMA section above (page 2) for additional information).

4. Solid and Hazardous Wastes and Materials. Table 3-1 in the draft EA (page 3-2) indicates that the project will not generate significant amounts of hazardous waste such that human health or the environment will be affected. Any waste generated will be properly handled.

4(a) Agency Jurisdiction. On behalf of the Virginia Waste Management Board, the DEQ Division of Land Protection and Revitalization is responsible for carrying out the mandates of the Virginia Waste Management Act (Virginia Code §10.1-1400 *et seq*.), as well as meeting Virginia's federal obligations under the Resource Conservation and Recovery Act (RCRA) and the Comprehensive Environmental Response Compensation Liability Act (CERCLA), commonly known as Superfund. The DEQ Division of Land Protection and Revitalization (DLPR) also administers those laws and regulations on behalf of the State Water Control Board governing Petroleum Storage Tanks (Virginia Code §62.1-44.34:8 *et seq*.), including Aboveground Storage Tanks (9VAC25-91 *et seq*.) and Underground Storage Tanks (9VAC25-580 *et seq*. and 9VAC25-580-370 *et seq*.), also known as 'Virginia Tank Regulations', and § 62.1-44.34:14 et seq. which covers oil spills.

Virginia:

- Virginia Waste Management Act, Virginia Code § 10.1-1400 *et seq.*
- *Virginia Solid Waste Management Regulations*, 9 VAC 20-81
  - (9 VAC 20-81-620 applies to asbestos-containing materials)
- *Virginia Hazardous Waste Management Regulations*, 9 VAC 20-60
  - (9 VAC 20-60-261 applies to lead-based paints)
- *Virginia Regulations for the Transportation of Hazardous Materials*, 9 VAC 20-110.

Federal:

- Resource Conservation and Recovery Act (RCRA), 42 U.S. Code sections 6901 *et seq.*
- U.S. Department of Transportation *Rules for Transportation of Hazardous Materials*, 49 *Code of Federal Regulations*, Part 107
- Applicable rules contained in Title 40, *Code of Federal Regulations*.

4(b) Agency Finding. The DEQ TRO states that DEQ records do not indicate any reported petroleum releases within the proposed project footprint. The DLPR staff conducted a search (200 ft radius) of the project areas of solid and hazardous waste databases (including petroleum releases) to identify waste sites in close proximity to the project areas. DLPR identified one RCRA Large Quantity Generator, one RCRA Small Quantity Generator, one Voluntary Remediation Program (VRP) site, and 26 petroleum release sites within the project area which might impact the project.

RCRA Large Quantity Generator and RCRA Small Quantity Generator located at Wallops Flight Facility:

1. Registry ID: 110000607488, US NASA GSFC WALLOPS FLIGHT FACILITY, WALLOPS FLIGHT FACILITY, WALLOPS ISLAND, VA 23337.

2. Registry ID: 110070828367, U.S. NASA GSFC WALLOPS FLIGHT FACILITY, 34200 FULTON STREET, WALLOPS FLIGHT FACILITY, WALLOPS ISLAND, VA 23337.

Voluntary Remediation Program Site located at Wallops Flight Facility:
Site Number: VRP00662, NASA Wallops WFF Pad 0A, Wallops Island, Virginia, 23337.
Primary Status: Certificate Issued. Secondary Status: Refer to Certificate Status.

Petroleum Release Sites: Twenty-six petroleum release sites were identified at NASA Wallops Flight Facility. Refer to the attached memorandum dated January 10, 2022 for a list of the sites.

The petroleum release cases identified should be further evaluated by the project engineer or manager to establish the exact location, nature and extent of the petroleum release and the potential to impact the proposed project. In addition, the project engineer or manager should contact the DEQ's Tidewater Regional Office at (757) 518-2000 (Tanks Program) for further information about the cases.

4(c) Requirements.

4(c)(i) Waste Management. Any soil that is suspected of contamination or wastes that are generated during construction must be tested and disposed of in accordance with applicable federal, state, and local laws and regulations. All construction and demolition debris must be characterized in accordance with the *Virginia Hazardous Waste Management Regulations* prior to disposal at an appropriate facility. It is the generator's responsibility to determine is a solid waste meets the criteria of a hazardous waste and to manage the waste appropriately.

4(c)(ii) Petroleum Releases and Storage Tanks. If evidence of a petroleum release is discovered, it must be reported to DEQ, as authorized by Virginia Code § 62.1-44.34.8 through 9 and 9 VAC 25-580-10 *et seq*.

Installation and operation of any regulated petroleum storage tank(s) either aboveground storage tanks (AST) or underground storage tanks (UST) must also be conducted in accordance with the Virginia Regulations 9 VAC 25-91-10 *et seq.* and / or 9 VAC 25-580-10 *et seq*.

4(c)(iii) Asbestos Containing Materials and Lead-based Paint. All structures being demolished/renovated/removed must be checked for asbestos-containing materials (ACM) and lead-based paint (LBP) prior to demolition. If ACM or LBP materials are identified all federal and state requirements must be followed.

4(d) Pollution Prevention Recommendation. DEQ recommends that NASA implement pollution prevention principles, including the reduction, reuse, and recycling of all solid wastes generated. All generation of hazardous wastes should be minimized and handled appropriately.

5. Natural Heritage Resources. The draft EA (page 3-45) states that the proposed project will have minor, short-term impacts on terrestrial wildlife resulting from the removal of habitat as well as disturbance and displacement by construction activities. Following the cessation of construction activities, it is expected that many species would return to the remaining habitats in and around the project area. The phased implementation of the project would distribute potential impacts on wildlife over multiple years.

5(a) Agency Jurisdiction.

5(a)(i) The Virginia Department of Conservation and Recreation's (DCR) Division of Natural Heritage (DNH). DNH's mission is conserving Virginia's biodiversity through inventory, protection and stewardship. The Virginia Natural Area Preserves Act (Virginia Code §10.1-209 through 217), authorized DCR to maintain a statewide database for conservation planning and project review, protect land for the conservation of biodiversity, and the protect and ecologically manage the natural heritage resources of Virginia (the habitats of rare, threatened and endangered species, significant natural communities, geologic sites, and other natural features).

5(a)(ii) Virginia Department of Agriculture and Consumer Services (VDACS): The Endangered Plant and Insect Species Act of 1979 (Virginia Code Chapter 39 §3.1-1020 through 1030) authorizes VDACS to conserve, protect and manage endangered and threatened species of plants and insects. Under a Memorandum of Agreement established between VDACS and the DCR, DCR represents VDACS in comments regarding potential impacts on state-listed threatened and endangered plant and insect species.

5(b) Agency Findings. DCR's Division of Natural Heritage (DNH) searched its Biotics Data System (Biotics) for occurrences of natural heritage resources from the area outlined on the submitted map. According to the information currently in Biotics, the Wallops – Assawoman Islands Conservation Site is located within the project site. Wallops – Assawoman Islands Conservation Site has been given a biodiversity significance ranking of B2, which represents a site of very high significance. The natural heritage resources of concern at this site are: A Eupatorium (*Eupatorium maritimum*, G2?/S1?/SOC/NL) and Black Cherry Xeric Dune Woodland (G1G2/S1/NL/NL).

A Eupatorium is a rare plant that occurs in interdunal swales in coastal Virginia and the Outer Banks region of North Carolina. The Maritime Dune Woodland is a tall, deciduous, maritime shrubland or scrub forest of the mid-Atlantic coast, although physiognomy can vary dramatically, ranging from open woodland to stunted forest to dense nearly impenetrable thicket. Occurrences are naturally small (a few acres), confined to the oceanward portion of barrier islands. Potential or historic habitat has been reduced by extensive human development such as residential or commercial building, recreation, or road expansion. Refer to the attached memorandum dated January 14, 2022 for more details about these resources.

As stated on page 3-39 of the "*Draft Wallops Island Northern Development Environmental Assessment*" dated December 2021, the Black Cherry Xeric Dune Woodland significant natural community would be impacted by the permanent removal of approximately 0.59 acre of woodland for the proposed construction of Hangar 2.

5(b)(i) State-listed Plant and Insect Species. DCR found that the proposed project will not affect any documented state-listed plants or insects.

5(b)(ii) State Natural Area Preserves. There are no State Natural Area Preserves under DCR's jurisdiction in the project vicinity.

5(c) Recommendations. DCR recommends limiting impacts to the Black Cherry Xeric Dune Woodland significant natural community to the greatest extent possible.

Due to the documented occurrence of A Eupatorium within the project area and the potential for additional occurrences of A Eupatorium to occur within the project site, DCR recommends an inventory for the resource in the runway margins and also recommends surveying the known occurrence at the east end of the existing runway to determine the current extent of the population. DCR-Division of Natural Heritage biologists are qualified to conduct inventories for rare, threatened, and endangered species.

Contact DCR-DNH to secure updated information on natural heritage resources if the scope of the project changes and/or six months has passed before it is utilized. New and updated information is continually added to the Biotics Data System.

6. Floodplain Management. The Draft EA (page 3-31) indicates that all of Wallops Island is within a special flood hazard area subject to inundation by the 1 percent annual chance flood. The functionality of the floodplain would not be reduced by implementation of the proposed project.

6(a) Agency Jurisdiction. The DCR Division of Dam Safety and Floodplain Management (DSFM) is the lead coordinating agency for the Commonwealth's floodplain management program and the National Flood Insurance Program (Executive Oder 45). The National Flood Insurance Program (NFIP) is administered by the Federal Emergency Management Agency (FEMA), and communities who elect to participate in this voluntary program manage and enforce the program on the local level through that community's local floodplain ordinance. Each local floodplain ordinance must comply with the minimum standards of the NFIP, outlined in 44 CFR 60.3; however, local communities may adopt more restrictive requirements in their local floodplain ordinance, such as regulating the 0.2% annual chance flood zone (shaded Zone X).

6(b) Requirements. All development within a Special Flood Hazard Area (SFHA) or floodplain, as shown on the locality's Flood Insurance Rate Map (FIRM), must be permitted and comply with the requirements of the local floodplain ordinance. Projects conducted by federal agencies within the SFHA must comply with federal Executive Order 11988: Floodplain Management.

DCR's Floodplain Management Program does not have regulatory authority for projects in the SFHA. NASA is encouraged reach out to the local floodplain administrator to ensure compliance with the local floodplain ordinance.

6(c) Recommendation. DCR recommends NASA access the Virginia Flood Risk Information System (VFRIS) to find flood zone information.

7. Wildlife and Inland Fisheries. The draft EA (page 3-40) notes that both terrestrial and aquatic species occur in and around the project area. The impact on terrestrial wildlife would be minor and short-term associated with disturbance from construction. Following completion of construction it is expected that many species would return to the remaining habitats in and around the project area. The draft EA notes that the phases approach to construction would distribute impacts to wildlife over multiple years.

The FCD (page 19) states that the project area provides potential habitat for 18 federal or state-listed species. Construction and operation activities would not involve the intentional disturbance, harassment, or "take" of any listed species, nor would activities occur in areas of Wallops Island offering suitable nesting or breeding habitat for listed birds, sea turtles, or fish.

7(a) Agency Jurisdiction. DWR, as the Commonwealth's wildlife and freshwater fish management agency, exercises enforcement and regulatory jurisdiction over wildlife and freshwater fish, including state- or federally-listed endangered or threatened species, but excluding listed insects (Virginia Code, Title 29.1). DWR is a consulting agency under the U.S. Fish and Wildlife Coordination Act (16 U.S. Code §661 *et seq*.) and provides environmental analysis of projects or permit applications coordinated through DEQ and several other state and federal agencies. DWR determines likely impacts upon fish and wildlife resources and habitat, and recommends appropriate measures to avoid, reduce or compensate for those impacts. For more information, see the DWR website at *www.dwr.virginia.gov*.

7(b) DWR Findings. DWR reviewed the Environmental Assessment/FCD for proposed activities at the north end of Wallops Flight Facility in Accomack County. The proposed alternative, which is broken into three phases, includes development of an up to 1305-foot pier and turning basin along with the development of onshore infrastructure. DWR documents federal-listed Threatened Loggerhead Sea Turtles, federal-listed Threatened Piping Plovers, state-listed Threatened Peregrine Falcons, and state-listed Threatened Gull-billed Terns from the project area. Depending on the habitat available on site these species may be present within proposed work areas, at least during certain times of year. It appears the listed species potentially present have been correctly captured in Table 3.9.1 *Federally and State Listed Species with Potential to Occur in the Project Area and Determination of Effects*. However, DWR notes that Table 3.7.1 *Terrestrial Wildlife Species with Potential to Occur in the Project Area* and Table 3.9.1 is missing these species and others that may occur in the project area.

DWR is concerned about future development of Wallops Island and adjacent areas. These areas are known to support a number of listed species and are slowly being made unsuitable to these species because of continued expansion and shoreline stabilization activities at Wallops Flight Facility. Because the EA offers no information on

how many vessels of what size will travel to and from the north end pier annually, it is difficult for DWR to determine what, if any, impacts upon marine animals and their habitats result from operation of the proposed facility. In addition, DWR is concerned that the port and operations area would become part of the M-95 Marine Highway Corridor, allowing for transport of large space assets and related cargo via water vessel to the north end port. While DWR understands the value of this facility and the need to ensure its security and capabilities, we must ensure that any impacts upon wildlife and their habitats, including threatened or endangered species, are fully considered, that all actions are taken to avoid and minimize impacts upon them, and that any unavoidable impacts are fully compensated.

In accordance with the Threatened and Endangered Species section of the Wildlife and Inland Fisheries Enforceable Policy "No person shall harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, possess, collect, transport, sell or offer to sell, or attempt to do so, any species of fish or wildlife listed as threatened or endangered by the Board of Game and Inland Fisheries…" To comply with the policy NASA must make updates to Table 4-1 *Summary of BMPs, Mitigation, and Monitoring Measures* to clearly state which time of year restrictions will be adhered to and what specific minimization methods will be employed during construction to avoid and minimize impacts upon wildlife and their habitats. Alternatively, NASA may coordinate with DWR to make a commitment to adhere to DWR's recommendations and/or those offered by the National Oceanic and Atmospheric Administration (NOAA) or the U.S. Fish and Wildlife Service (USFWS).

7(c) DWR Recommendations.

7(c)(i) Species Search. DWR recommends that NASA and/or its agents conduct a preliminary desktop analysis to evaluate potential impacts upon the Commonwealth's wildlife resources by accessing DWR's online information system, the Virginia Fish and Wildlife Information Service (VAFWIS) and using the Geographic Search function to generate an Initial Project Assessment (IPA) report and use the species list generated to fill out this table. One may access VAFWIS at https://vafwis.DWR.virginia.gov/fwis/.

Alternatively, NASA may contact DWR's Geographic Information Systems (GIS) Coordinator, Jay Kapalczynski (Jay.Kapalczynski@DWR.virginia.gov) to request access to the Wildlife Mapping and Environmental Review Map Service (WERMS) that allows one to download GIS data into your own system.

DWR recommends accessing information about the location of bat hibernacula and roosts and Bald Eagle nest locations from the following:

- Northern Long-Eared Bats: https://www.dwr.virginia.gov/wildlife/bats/northern-long-eared-bat-application/;
- Little Brown Bats and Tricolored Bats: https://www.dwr.virginia.gov/wildlife/bats/little-brown-bat-tri-colored-bat-winter-

habitat-roosts-application/; and
- The Center for Conservation Biology's Eagle Nest Locator: https://ccbbirds.org/what-we-do/research/species-of-concern/virginia-eagles/nest-locator/.

7(c)(ii) Sea Turtles. The draft EA states that sea turtles are only likely to be present in the Project Area from May through November of any year. While that may historically have been true, Virginia's coastal waters now remain warm enough long enough for sea turtles to still be present well into December and January. This is evidenced by the increasing numbers of cold-stunned turtle strandings reported by the Virginia Aquarium Stranding Response Program during these months. DWR recommends consideration of this information and a re-evaluation of potential impacts upon sea turtles in light of this information.

DWR also recommends no hydraulic hopper dredging in the project area from April 1 through November 30 of any year. In addition, DWR recommends no work on suitable sea turtle nesting beaches from May 1 through November 15 or until the last nest hatches or is determined unviable by an approved nest searching crew.

If hopper dredges are used to deepen the channel and turning basin, DWR recommends that on board environmental/biological observers are present to monitor the potential entrainment (take) of sea turtles during dredging operations, irrespective of the time of year. Transport vessels that take up a large portion of the channel may also require an onboard observer to alert the captain to the presence of sea turtles or marine mammals so that he/she can take measures to avoid a vessel strike.

DWR recommends close coordination with this agency, the USFWS (Troy Andersen, troy_andersen@fws.gov) and NOAA Fisheries (Christine Vaccaro, christine.vaccaro@noaa.gov) regarding the protection of sea turtles associated with all phases of this project and any future build out.

7(c)(iii) Peregrine Falcon. DWR recommends that the location of any active Peregrine Falcon nests, to include the artificial nesting platform, be mapped and that no construction activities occur within 600 feet of the nest during the nesting season from February 15 through July 15 of any year.

7(c)(iv) Beneficial Use of Dredged Materials. It appears NASA proposes to place their dredged materials in the Open Ocean Dredge Material Placement Area, at least for initial dredging. DWR strongly recommends that NASA work with this agency and its conservation partners to find a beneficial use for that material and perhaps material surfaced by future dredging onsite. NASA has, over the years as the result of many projects, adversely impacted shoreline and nearshore habitats. Using dredged materials to restore some of that impacted habitat or other similarly impacted habitats would be of great benefit to the region and the species that use these impacted habitats.

7(c)(v) General Recommendations. DWR recommends that NASA update Table 4.*1 Summary of BMPs, Mitigation, and Monitoring Measures* to indicate what time of year restrictions they will adhere to, what specific minimization methods will be employed during construction to avoid and minimize impacts upon wildlife and their habitats, and what types of vessel restrictions will be in place. Currently this table only speaks very generally to what mitigation measures may be in place.

DWR recommends:

- Conducting any in-stream activities during low or no-flow conditions, using non-erodible cofferdams or turbidity curtains to isolate the construction area, blocking no more than 50% of the streamflow at any given time (minimal overlap of construction footprint notwithstanding);
- Stockpiling excavated material in a manner that prevents reentry into the stream.
- Restoring original streambed and streambank contours, and revegetating barren areas with native vegetation;
- Implementing strict erosion and sediment control measures;
- Designing and performing instream work in a manner that minimizes impacts upon natural streamflow and movement of resident aquatic species;
- If a dam and pump-around must be used, DWR recommends it be used for as limited a time as possible and that water returned to the stream be free of sediment and excess turbidity.
- Utilizing matting made from natural/organic materials such as coir fiber, jute, and/or burlap, to minimize potential wildlife entanglements resulting from use of synthetic/plastic erosion and sediment control matting.

To minimize harm to the aquatic environment and its residents resulting from use of the Tremie method to install concrete, installation of grout bags, and traditional pouring of concrete, DWR recommends that such activities occur only in the dry, allowing all concrete to harden and cure prior to contact with open water. Due to future maintenance costs associated with culverts, and the loss of riparian and aquatic habitat, DWR prefers stream crossings to be constructed via clear-span bridges. However, if this is not possible, DWR recommends countersinking any culverts below the streambed at least 6 inches, or the use of bottomless culverts, to allow passage of aquatic organisms. DWR also recommends the installation of floodplain culverts to carry bankfull discharges.

Additionally, DWR offers the following recommendations to minimize overall impacts of development activities to wildlife and natural resources:

- Avoid and minimize impacts to undisturbed forest, wetlands, and streams to the fullest extent practicable. Avoidance and minimization of impact may include relocating stream channels, as opposed to filling or channelizing, as well as using and incorporating into the development plan, a natural stream channel design and forested riparian buffers.

- Maintain undisturbed naturally vegetated buffers of at least 100 feet in width around all on-site wetlands and on both sides of all perennial and intermittent streams.
- Maintain wooded lots to the fullest extent possible.
- Adhere to a time-of-year restriction for tree removal and ground clearing that is protective of resident and migratory songbird nesting from March 15th through August 15th of any year.
- Adhere to erosion and sediment controls during ground disturbance.
- Design stormwater controls to replicate and maintain the hydrographic condition of the sites prior to the change in landscape. This should include, but not be limited to, utilizing bioretention areas, and minimizing the use of curb and gutter in favor of grassed swales. Bioretention areas (also called rain gardens) and grass swales are components of Low Impact Development (LID). They are designed to capture stormwater runoff as close to the source as possible and allow it to slowly infiltrate into the surrounding soil. They benefit natural resources by filtering pollutants and decreasing downstream runoff volumes.

7(d) CZMA Federal Consistency. Further coordination with DWR and submission of additional information regarding which time of year restrictions will be adhered to and what specific minimization methods will be employed during construction to avoid and minimize impacts upon wildlife and their habitats is required in order for the project to be consistent to the maximum extent practicable with the Wildlife and Inland Fisheries enforceable policy of the Virginia CZM Program (see Federal Consistency **Conditional Concurrence** under the CZMA section above (page 3) for additional information).

8. Marine Fisheries. The draft EA (page 3-46) states that the Proposed Action would have minor short-term impacts on aquatic species resulting from construction of the pier/port, including in-water pile driving as well as initial dredging of the channel and turning basins and periodic maintenance dredging during long-term operation of the MARS Port. Mobile species are likely to avoid the project area during construction activities. Less-mobile species (e.g., benthic organisms) could be destroyed by pile driving and/or dredging. Impacts would occur at the individual rather than population or species level and would not prevent or delay the continued propagation of any species.

The draft EA (page 3-51) notes that a portion of the proposed channel east of the turning basin adjoins the border of a private oyster ground lease area along the northern tip of Wallops Island. Dredging or pier construction would not occur directly through any of the nearby oyster beds, preventing direct impacts. Potential temporary disturbances to the subaqueous bottom and shellfish grounds could result from the dredging of the vessel approach channel and turning basin. Temporarily increased turbidity and sedimentation from disturbance of the subaqueous bottom during dredging, boat anchoring, and pile driving would occur, which could deposit sediment over nearby oyster beds and interfere with respiration. There are also possible temporary restrictions on accessing the oyster beds for harvesting while construction is occurring, and project-related vessels are operating in the area.

Long-term impacts could occur from sediments disturbed during periodic maintenance dredging of the access channel, and access restrictions during that dredging and/or when MARS Port-related vessels transporting spacecraft components or other sensitive cargo are transiting the area. Maintenance dredging in the project area would occur approximately every five years over the 30-year project life and none of the long-term operational activities associated with the project would prevent or impede the continued viability of the nearby oyster beds.

The FCD (page 18) notes that both construction and operation have the potential to affect commercial and recreational marine fisheries by disturbing fish populations and interfering with local fishing and harvesting activities. Various commercial fishing entities are located north of Wallops Island, and likely fish in the waters adjacent to the project site, along with recreational fishermen.

8(a) Agency Jurisdiction. The policy stresses the conservation and promotion of seafood and marine resources of the Commonwealth, including fish, shellfish and marine organisms, and manage the fisheries to maximize food production and recreational opportunities within the Commonwealth's territorial waters. The policy is administered by VMRC (*Virginia Code §§ 28.2-101, -201, -203, -203.1, -225, -551, -600, -601, -603 -618, and -1103, -1203 and the Constitution of Virginia, Article XI, Section 3*).

8(b) Agency Finding. VMRC states that rivate shellfish leases and public clam grounds are situated directly adjacent to the proposed channel. VMRC cannot verify with the provided project drawings that the side slopes of the dredged channel will not directly impact lease number 22062. VMRC has also verified that the adjacent shellfish leases 17290 and 19696 are active leases and have reported harvest. Additionally, Virginia Institute of Marine Science (VIMS) comments on this project report that the sandy plume from dredging is most likely to settle in areas adjacent to the channel quickly and that mitigation for sediment settling within the shellfish resource areas is needed.

For this reason, VMRC does not agree with the conclusion in the consistency report that "none of the Proposed Action Alternative activities involving disturbance of the subaqueous bottom would permanently disturb shellfish beds or affect their continued viability". Therefore, the project as proposed is not consistent with Marine Fisheries enforceable policy.

In accordance with Item F. of the Marine Fisheries Enforceable Policy, any activity in the Commonwealth's tidal waters must not encroach upon the lawful use and occupation of previously leased ground for the term of the lease unless exercising riparian rights or the right of fishing. To comply with the policy a turbidity mitigation plan is required that includes dredging on slack tides and considers turbidity curtains. Additionally, surveyed channel designs that include the location of the 2x buffer and 4x buffer adjacent to the shellfish leases (22062, 17290, and 19696) are needed to understand potential direct impacts to the leases.

8(c) CZMA Federal Consistency. Further coordination with VMRC and submission of additional information regarding a turbidity mitigation plan and surveyed channel deigns with buffer locations is required in order for the project to be consistent to the maximum extent practicable with the Marine Fisheries enforceable policy of the Virginia CZM Program (see Federal Consistency **Conditional Concurrence** section above (page 3) for additional information).

9. Dunes and Beaches. According to the FCD (page 17), no sand dunes or beaches are present within the project area and would not be affected by proposed construction or operation activities associated with the project. Depending on which placement site is selected, dredge material could be placed along the sandy shoreline in the southern portion of Wallops Island to serve as beach replenishment material and to protect the beach from tidal impacts (Placement Option 4: Wallops Island Shoreline Protection Placement).

However, the draft EA (page 2-10) discusses five placement options, with Option 1 Wallops Open Ocean Dredge Material Placement Area, being the selected option for the initial dredging. When compared to Options 2-5, Option 1 is the most economical solution as it offers the lowest estimated mobilization costs as well as the lowest unit costs for dredging, transport, and placement (page 2-12). The Open Ocean site is also the fastest path towards construction as it is already permitted by the Corps and has capacity for the proposed initial dredge material.

9(a) Agency Jurisdiction. The policy promotes the preservation and protection of coastal primary sand dunes and beaches, to prevent their despoliation and destruction, and whenever practical, to accommodate necessary economic development in a manner consistent with the protection of such features. Dune and beach protection is carried out pursuant to the Coastal Primary Sand Dune Protection Act as administered by VMRC (*Virginia Code §§ 28.2-1401 and -1408*).

9(b) Agency Finding. No impacts to jurisdictional beaches and dunes are proposed; however, as noted in the Subaqueous Lands section above, VMRC recommends that any sandy dredged material be used beneficially. Beaches of the Commonwealth should be given priority consideration as sites for the disposal of that portion of dredged material determined to be suitable for beach nourishment. This is supported by Section 10.1-704 of the Code of Virginia, which states that beaches of the Commonwealth shall be given priority consideration as sites for the disposal of that portion of dredged material determined to be suitable for beach nourishment. This is further supported by VMRC's "Criteria for the Placement of Sandy Dredged Material along Beaches in the Commonwealth," Regulation 4 VAC 20-400-10 *et seq*.

The use of dredged sandy material from this project as beach nourishment at the south end of the island would offset certain of the adverse environmental impacts raised by VIMS, DWR, and The Nature Conservancy, associated with past projects (VMRC #18-

1590 and #20-1745) and future plans to excavate sandy beach material from the north end of Wallops Island.

According to DWR, the beach along this segment of Wallops Island supports nesting federally Endangered Piping Plovers and American Oystercatchers, designated a Tier IIa Species of Greatest Conservation Need (SGCN). In addition, this area is believed to provide nesting habitat for state Threatened Wilson's Plovers, federally Threatened Loggerhead Sea Turtles, Diamondbacked Terrapins (Tier ll SGCN), and other species identified in Virginia's Wildlife Action Plan as SGCNs.

9(c) VMRC Recommendation. VMRC recommends that any sandy dredged material be beneficially reused, preferably on the shoreline of Wallops Island.

9(d) VIMS Comments and Recommendations. The dredged material is proposed to be placed in the Wallops Open Ocean Disposal site primarily because it is the least expensive alternative of the five evaluated in the EA. However, the costs considered are only those related to dredging and placement of the sediment, and discounted any future costs of continued erosion control and resilience activities that may be postponed or prevented should the dredged material be used beneficially. Of the five sites in the EA, VIMS recommends the material be placed on the shoreline of Wallops Island. This sand could be used to nourish the beach in general and/or specifically the area of recent beach sand removal at the northern end of the beach and landward of the large breakwaters (as we recommended during the review of that project). This sand would help stabilize Wallops Island and serve as a sediment source to the downdrift barrier islands, thereby benefiting this entire coastal system. VIMS considers placement at Chincoteague National Wildlife Refuge Swan Cove a second choice for the beneficial use of the dredged material should beach placement not be possible.

An alternative not discussed in the EA, and the VIMS highest recommended option, is to rebuild Chincoteague Point, a small marsh island across the channel southwest of Curtis Merritt Harbor at the south end of Chincoteague Island. This island provides some protection to the harbor and southern Chincoteague and has eroded significantly over the past 15 years, thereby increasing exposure of southern Chincoteague to high-energy waves from Chincoteague Inlet. Restoring the island would require marsh plantings and shoreline stabilization (e.g. a stone sill) in addition to the dredged sediment. While considering an additional beneficial placement site, particularly one involving restoration of part of an island, is complicated and must be done with care, the benefits of restoring the protection provided by this island may prove beneficial to the longer-term resilience of Chincoteague. VIMS recommends that the impacts of restoring this island are modeled as part of an alternatives analysis for determining a placement site.

9(e) CZMA Federal Consistency. This project is consistent to the maximum extent practicable with the Dunes and Beaches Enforceable Policy of the Virginia CZM Program (see Federal Consistency under the CZMA section above (page 2) for additional information).

10. Public Water Supply. The draft EA (page 3-25) notes that Wallops Flight Facility receives its potable water from seven groundwater supply wells that are located at the Main Base and the Mainland. There are no groundwater supply wells within or near the project area. With the implementation of spill prevention measures, no adverse short-term or long-term effects to groundwater resources are anticipated.

10(a) Agency Jurisdiction. The Virginia Department of Health (VDH) Office of Drinking Water (ODW) reviews projects for the potential to impact public drinking water sources (groundwater wells, springs and surface water intakes). VDH administers both federal and state laws governing waterworks operation.

10(b) Agency Findings. VDH ODW reviewed the project and determined that there are no apparent impacts to public drinking water sources due to this project.

11. Chesapeake Bay Preservation Areas. The FCD (page 15) states that the project is not located within Chesapeake Bay Preservation Areas or Atlantic Protection Areas in Accomack County.

11(a) Agency Jurisdiction. The policy is intended to protect and improve the water quality of the Chesapeake Bay, its tributaries, and other state waters by ensuring that land use and development performance criteria and standards are implemented in Chesapeake Bay Preservation Areas, which if improperly used or developed may result in substantial damage to the water quality of the Chesapeake Bay and its tributaries. The program is administered by DEQ and 84 Bay Act localities through the Chesapeake Bay Preservation Act (*Virginia Code §§ 28.2-104.1, 62.1-44.15:24, -44.15:51, -44.15:67, -44.15:68, -44.15:69, -44.15:73, -44.15:74, and -44.15:78*) and Chesapeake Bay Preservation Area Designation and Management Regulations (*9 VAC §§ 25-830-30, -40, -80, -90, -100, -120, -130, -140, and -150*).

11(b) Agency Findings. The DEQ Office of Local Governmental Assistance Programs reviewed the Environmental Assessment / Federal Consistency Determination submittal for the proposed project and determined that the proposed project is located outside of the Chesapeake Bay watershed and therefore not subject to the *Chesapeake Bay Preservation Area Designation and Management Regulations.*

11(c) CZMA Federal Consistency. The Chesapeake Bay Preservation Areas enforceable policy of the Virginia CZM Program does not apply to this project (see Federal Consistency under the CZMA section above (page 2) for additional information).

12. Non-point Source Water Pollution. The draft EA states (page 3-22) construction activities would result in both short-and long-term impacts to stormwater conveyance due to raising the site elevation and removing vegetation. Short-term construction activities have the potential to cause soil erosion, potentially leading to elevated turbidity levels. However, given that site soils are sandy, the risk of turbid runoff is low.

Construction of the second hangar would require modifications of the existing subsurface drainage system that surrounds the UAS Airstrip. Additionally, the proposed parking area would result in a long-term increase in surface water runoff to the surrounding area because of the new impervious surface.

The FCD (page 21) states that the project will involve more than 10,000 square feet of land disturbance. The construction contractor would be required to prepare and implement an Erosion and Sediment Control Plan in accordance with the Virginia Erosion and Sediment Control Regulations (9 VAC 25-840-40). Because the project would disturb more than 1 acre, the construction contractor would also obtain coverage under Virginia's General Permit for Discharges of Stormwater from Construction Activities (9 VAC 25-260-50).

12(a) Agency Jurisdiction. The policy addresses the control stormwater runoff to protect the quality and quantity of state waters from the potential harm of unmanaged stormwater. Virginia's Erosion and Sediment Control Law requires soil-disturbing projects to be designed to reduce soil erosion and to decrease inputs of chemical nutrients and sediments to the Chesapeake Bay, its tributaries, and other rivers and waters of the Commonwealth. This program is administered by DEQ (*Virginia Code §§ 62.1-44.15:25, 62.1-44.15:52; 9 VAC §§ 25-840-30, 25-870-20*).

12(b) Requirements.

12(b)(i) Erosion and Sediment Control and Stormwater Management Plans. NASA and its authorized agents conducting regulated land-disturbing activities on private and public lands in the state must comply with *Virginia Erosion and Sediment Control Law and Regulations* (VESCL&R) and *Virginia Stormwater Management Law and Regulations* (VSWML&R), including coverage under the general permit for stormwater discharge from construction activities, and other applicable federal nonpoint source pollution mandates (e.g. Clean Water Act-Section 313, federal consistency under the Coastal Zone Management Act). Clearing and grading activities, installation of staging areas, parking lots, roads, buildings, utilities, borrow areas, soil stockpiles, and related land-disturbing activities that result in the total land disturbance of equal to or greater than 10,000 square feet would be regulated by VESCL&R. Accordingly, the Applicant must prepare and implement an erosion and sediment control (ESC) plan to ensure compliance with state law and regulations. Land-disturbing activities that result in the total land disturbance of equal to or greater than 1 acre would be regulated by VSWML&R. Accordingly, NASA must prepare and implement a Stormwater Management (SWM) plan to ensure compliance with state law and regulations. The ESC/SWM plan is submitted to the DEQ Regional Office that serves the area where the project is located for review for compliance. NASA is ultimately responsible for achieving project compliance through oversight of on-site contractors, regular field inspection, prompt action against non-compliant sites, and other mechanisms consistent with agency policy.

12(b)(ii) General Permit for Stormwater Discharges from Construction Activities (VAR10). The operator or owner of construction activities involving land-disturbing activities equal to or greater than 1 acre are required to register for coverage under the General Permit for Discharges of Stormwater from Construction Activities and develop a project-specific stormwater pollution prevention plan (SWPPP). The SWPPP must be prepared prior to submission of the registration statement for coverage under the general permit and address water quality and quantity in accordance with the VSMP Permit Regulations. General information and registration forms for the general permit are available on DEQ's website at https://www.deq.virginia.gov/water/stormwater.

DEQ is the review authority for state and federal plan review and approval, within the Tidewater Region, to coincide with permit application processing.

12(c) CZMA Federal Consistency. Provided the project adheres to the above requirements for erosion and sediment control and stormwater management, as applicable, it will be consistent to the maximum extent practicable with the Non-point Source Water Pollution enforceable policy of the Virginia CZM Program (see Federal Consistency under the CZMA section above (page 2) for additional information).

13. Historic Resources. The draft EA (page 3-110) states that the results of a V-CRIS search did not indicate the presence of known archaeological resources within the proposed project Area of Potential Effect (APE). The results of Phase I surveys for archaeological resources within the terrestrial project APE in 2009 and 2021 were negative for artifacts, features, or cultural deposits. Section 106 coordination with the State Historic Preservation Officer will be completed.

13(a) Agency Jurisdiction. The Virginia Department of Historic Resources (DHR) conducts reviews of both federal and state projects to determine their effect on historic properties. Under the federal process, DHR is the State Historic Preservation Office, and ensures that federal undertakings - including licenses, permits, or funding - comply with Section 106 of the National Historic Preservation Act of 1966, as amended, and its implementing regulation at 36 CFR Part 800. Section 106 requires federal agencies to consider the effects of federal projects on properties that are listed or eligible for listing on the National Register of Historic Places. Please see DHR's website for more information about applicable state and federal laws and how to submit an application for review: http://www.dhr.virginia.gov/StateStewardship/Index.htm.

13(b) Agency Finding. NASA previously consulted with DHR on this undertaking pursuant to Section 106 of the National Historic Preservation Act, as amended, and its implementing regulation 36 CFR Part 800. DHR concurred that the undertaking will have no effect on historic properties listed in or eligible for listing in the National Register of Historic Places or the Virginia Landmarks Register. The DHR reiterates this determination.

14. Aviation. The draft EA (page 3-95) states there are no commercial airports in the region. However, Norfolk International Airport is located 95 km (60 mi) to the south; Salisbury Airport is located approximately 95 km (60 mi) to the north. There are three general aviation airports in the region. The report does not indicate that general aviation will be affected.

14(a) Agency Jurisdiction. The Virginia Department of Aviation is a state agency that plans for the development of the state aviation system; promotes aviation; grants aircraft and airports licenses; and provides financial and technical assistance to cities, towns, counties and other governmental subdivisions for the planning, development, construction and operation of airports, and other aviation facilities.

14(b) Agency Findings. The Virginia Department of Aviation has reviewed the documents provided. The Department believes that, as presented, the development should not present any significant impacts to aviation, given the existing operations at this facility.

REGULATORY AND COORDINATION NEEDS

1. Surface Waters and Wetlands. Contact VMRC (Randy Owen, 757-247-2251) with questions regarding the required wetlands board permit for impacts to tidal wetlands for this project.

2. Subaqueous Lands. Coordinate with VMRC (Randy Owen, 757-247-2251) regarding the condition that the dredged state-owned bottomlands must be beneficially reused in order for the project to be consistent with the Subaqueous Lands Enforceable Policy of the Virginia CZM Program.

Coordinate with VIMS (Emily Hein, 804-684-7482) with questions regarding its recommendations related to the dredging activities.

3. Air Pollution. Activities associated with this project may be subject to air regulations administered by DEQ. The state air pollution regulations that may apply to the project are:

- fugitive dust and emissions control (9VAC5-50-60 *et seq*.);
- open burning (9VAC5-130 *et seq.*);
- asphalt paving operations (9VAC5-45-760 *et seq*.); and
- permits for fuel-burning equipment (9VAC5-80-1100 *et seq*.).

For more information, questions, and coordination related to air pollution control requirements, contact DEQ TRO, John Brandt (757-407-2341).

4. Solid and Hazardous Wastes. All solid waste, hazardous waste, and hazardous materials must be managed in accordance with all applicable federal, state, and local environmental regulations. For additional information concerning location and

availability of suitable waste management facilities in the project area contact DEQ TRO, Sean Priest at (757) 518-2141.

Contact Melinda Woodruff at (757) 518-2174 if free product, discolored soils, evidence of petroleum releases, or other evidence of contaminated soils are encountered. Documentation and / or questions related to ASTs/USTs should be submitted to TRO Tanks tro.tanks@deq.virginia.gov.

5. Natural Heritage Resources. Contact Anne Chazal, Natural Heritage Chief Biologist, at anne.chazal@dcr.virginia.gov or 804-786-9014 to discuss availability and rates for field work related to the recommended surveying for occurrences of A Eupatorium within the project site.

Contact DCR-DNH, Rene Hypes at (804) 371-2708, to secure updated information on natural heritage resources if the scope of the project changes and/or six months has passed before the project is implemented, since new and updated information is continually added to the Biotics Data System.

6. Floodplain Management. NASA is encouraged reach out to the local floodplain administrator and comply with the community's local floodplain ordinance. To find flood zone information, use the Virginia Flood Risk Information System (VFRIS): www.dcr.virginia.gov/vfris. To find community NFIP participation and local floodplain administrator contact information, use DCR's Local Floodplain Management Directory: www.dcr.virginia.gov/dam-safety-and-floodplains/floodplain-directory.

7. Wildlife and Inland Fisheries. Contact Amy Martin (804-367-2211) with questions related to the necessary information that is required in order for the project to comply with the Wildlife and Inland Fisheries Enforceable Policy of the Virginia CZM Program. NASA must make updates to Table 4-1 *Summary of BMPs, Mitigation, and Monitoring Measures* to clearly state which time of year restrictions will be adhered to and what specific minimization methods will be employed during construction to avoid and minimize impacts upon wildlife and their habitats. Alternatively, NASA may coordinate with DWR to make a commitment to adhere to DWR's recommendations and/or those offered by the National Oceanic and Atmospheric Administration (NOAA) or the U.S. Fish and Wildlife Service (USFWS).

Coordinate with DWR's Eastern Shore Biologist, Ruth Boettcher (Ruth Boattcher@dwr.virginia.gov, 757-709-0766) to discuss the beneficial use of the dredged materials.

8. Marine Fisheries. Coordinate with VMRC (Randy Owen, 757-247-2251) regarding the turbidity mitigation plan and surveyed channel designs including buffer areas adjacent to shellfish leases which are required for consistency with the Marine Fisheries Enforceable Policy of the Virginia CZM Program.

9. Dunes and Beaches. Coordinate with VMRC (Randy Owen, 757-247-2251) and VIMS (Emily Hein, 804-684-7482) regarding the strongly recommended beneficial reuse of dredged materials for beach nourishment.

10. Non-Point Source Water Pollution.

10(a) Erosion and Sediment Control and Stormwater Management. This project must comply with Virginia's *Erosion and Sediment Control Law* (Virginia Code § 62.1-44.15:61) and *Regulations* (9 VAC 25-840-30 *et seq*.) and *Stormwater Management Law* (Virginia Code § 62.1-44.15:31) and *Regulations* (9 VAC 25-870-210 *et seq*.) as administered by DEQ. Contact DEQ TRO (Courtney Smith, Courtney.Smith@deq.virginia.gov) with questions.

10(b) Virginia Stormwater Management Program General Permit for Stormwater Discharges from Construction Activities (VAR10). For projects involving land-disturbing activities of equal to or greater than one acre the project owner is required to register for coverage under the Virginia Stormwater Management Program General Permit for Discharges of Stormwater from Construction Activities (9 VAC 25-870-1 *et seq.*). Specific questions regarding the Stormwater Management Program requirements should be directed to Contact DEQ TRO (Courtney Smith, Courtney.Smith@deq.virginia.gov) with questions.

Thank you for the opportunity to review and respond to the Draft EA and Federal Consistency Determination for the Wallops Flight Facility Wallops Island Northern Development project. Detailed comments of reviewing agencies are attached for your review. Please contact me at (804) 659-1915 or Janine Howard at (804) 659-1916 for clarification of these comments.

Sincerely,

Bettina Rayfield, Program Manager
Environmental Impact Review

Ec: Amy Martin, DWR
Keith Tignor, VDACS
Robbie Rhur, DCR
Arlene Warren, VDH
Roger Kirchen, DHR
Randy Owen, VMRC
Claire Gorman, VMRC

Emily Hein, VIMS
Heather Williams, VDOT
Rusty Harrington, DOAV
Elaine Meil, Accomack-Northampton Planning District Commission
Michael T. Mason, Accomack County

DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF AIR PROGRAM COORDINATION

ENVIRONMENTAL REVIEW COMMENTS APPLICABLE TO AIR QUALITY

TO: Janine Howard

We thank **OEIR** for providing DEQ-AIR an opportunity to review the following project:

Document Type: Environmental Assessment/Federal Consistency Determination
Project Sponsor: National Aeronautics and Space Administration
Project Title: Wallops Flight Facility Wallops Island Northern Development Project
Location: Accomack County
Project Number: DEQ #21-164F

Accordingly, I am providing following comments for consideration.

PROJECT LOCATION: **X OZONE NON ATTAINMENT AND EMISSION CONTROL AREA FOR NOX & VOC**

REGULATORY REQUIREMENTSMAY BE APPLICABLE TO: **X CONSTRUCTION** ☐ OPERATION

STATE AIR POLLUTION CONTROL BOARD REGULATIONS THAT MAY APPLY:

1. ☐ 9 VAC 5-40-5200 C & 9 VAC 5-40-5220 E – STAGE I
2. ☐ 9 VAC 5-45-760 et seq. – Asphalt Paving operations
3. **X 9 VAC 5-130 et seq. – Open Burning**
4. **X 9 VAC 5-50-60 et seq. Fugitive Dust Emissions**
5. ☐ 9 VAC 5-50-130 et seq. - Odorous Emissions; Applicable to_____
6. ☐ 9 VAC 5-60-300 et seq. – Standards of Performance for Toxic Pollutants
7. ☐ 9 VAC 5-50-400 Subpart_____, Standards of Performance for New Stationary Sources, designates standards of performance for the_____
8. ☐ 9 VAC 5-80-1100 et seq. of the regulations – Permits for Stationary Sources
9. ☐ 9 VAC 5-80-1605 et seq. Of the regulations – Major or Modified Sources located in PSD areas. This rule may be applicable to the _____
10. ☐ 9 VAC 5-80-2000 et seq. of the regulations – New and modified sources located in non-attainment areas
11. ☐ 9 VAC 5-80-800 et seq. Of the regulations – State Operating Permits. This rule may be applicable to _____

COMMENTS SPECIFIC TO THE PROJECT:

All precautions are necessary to restrict the emissions of volatile organic compounds (VOC) and oxides of nitrogen (NO_x).

(Kotur S. Narasimhan)
Office of Air Data Analysis **DATE: December 17, 2021**

Ann Jennings
Secretary of Natural and Historic Resources and Chief Resilience Officer

Clyde E. Cristman
Director

COMMONWEALTH of VIRGINIA
DEPARTMENT OF CONSERVATION AND RECREATION

MEMORANDUM

DATE: January 14, 2022

TO: Janine Howard, DEQ

FROM: Roberta Rhur, Environmental Impact Review Coordinator

SUBJECT: DEQ 21-164F, Wallops Flight Facility, Wallops Island Northern Development

Division of Natural Heritage

The Department of Conservation and Recreation's Division of Natural Heritage (DCR) has searched its Biotics Data System for occurrences of natural heritage resources from the area outlined on the submitted map. Natural heritage resources are defined as the habitat of rare, threatened, or endangered plant and animal species, unique or exemplary natural communities, and significant geologic formations.

According to the information currently in our files, the Wallops – Assawoman Islands Conservation Site is located within the project site. Conservation sites are tools for representing key areas of the landscape that warrant further review for possible conservation action because of the natural heritage resources and habitat they support. Conservation sites are polygons built around one or more rare plant, animal, or natural community designed to include the element and, where possible, its associated habitat, and buffer or other adjacent land thought necessary for the element's conservation. Conservation sites are given a biodiversity significance ranking based on the rarity, quality, and number of element occurrences they contain; on a scale of 1-5, 1 being most significant. Wallops – Assawoman Islands Conservation Site has been given a biodiversity significance ranking of B2, which represents a site of very high significance. The natural heritage resources of concern at this site are:

Eupatorium maritimum	A Eupatorium	G2?/S1?/SOC/NL
	Black Cherry Xeric Dune Woodland	G1G2/S1/NL/NL

A Eupatorium is a rare plant that occurs in interdunal swales in coastal Virginia and the Outer Banks region of North Carolina and resembles *Eupatorium mohrii* and *E. anomalum*, but distinguished from the former by broader leaves and taller stature, and from both by the shortly petiolate leaves, the tuberous rhizomes often pinkish in color, rather than whitish or tan, and some heads with more than five flowers. This species is known only from coastal Virginia and the Outer Banks of North Carolina. Its interdunal swale habitat is fairly restricted, and it is threatened by human development (Schilling and Grubbs 2016).

The Maritime Dune Woodland is a tall, deciduous, maritime shrubland or scrub forest of the mid-Atlantic coast, although physiognomy can vary dramatically, ranging from open woodland to stunted forest to dense nearly impenetrable thicket. Individual trees tend to be wind-pruned and multi-stemmed. It generally occurs on the lee side of sand dunes along the coast and is subject to salt spray and winds. The substrate varies from pure sand

directly adjacent to the ocean to loamy sands in more sheltered areas of the coast. At the southern end of the range in Virginia, this community occurs as a woodland variably dominated by *Prunus serotina, Sassafras albidum, Diospyros virginiana*, and *Malus angustifolia var. angustifolia*. Vine tangles are patchy and interspersed with areas of open sand dominated by *Schizachyrium littorale* and also containing *Opuntia humifusa, Conyza canadensis, Nuttallanthus canadensis, Cirsium horridulum var. horridulum*, and other xerophytic herbs at lower cover. This maritime shrubland community is restricted to a narrow range on coastal dunes of barrier islands on the mid-Atlantic coast. It does not occur north of southern New Jersey or south of Virginia. Occurrences are naturally small (a few acres), confined to the oceanward portion of barrier islands. Potential or historic habitat has been reduced by extensive human development such as residential or commercial building, recreation, or road expansion.

As stated on page 3-39 of the "*Draft Wallops Island Northern Development Environmental Assessment*" dated December 2021, the Black Cherry Xeric Dune Woodland significant natural community would be impacted by the permanent removal of approximately 0.59 acre of woodland for the proposed construction of Hangar 2. DCR recommends limiting impacts to the Black Cherry Xeric Dune Woodland significant natural community to the greatest extent possible. Due to the documented occurrence of A Eupatorium within the project area and the potential for additional occurrences of A Eupatorium to occur within the project site, DCR recommends an inventory for the resource in the runway margins and also recommends surveying the known occurrence at the east end of the existing runway to determine the current extent of the population.

DCR-Division of Natural Heritage biologists are qualified to conduct inventories for rare, threatened, and endangered species. Please contact Anne Chazal, Natural Heritage Chief Biologist, at anne.chazal@dcr.virginia.gov or 804-786-9014 to discuss availability and rates for field work.

There are no State Natural Area Preserves under DCR's jurisdiction in the project vicinity.

Under a Memorandum of Agreement established between the Virginia Department of Agriculture and Consumer Services (VDACS) and the DCR, DCR represents VDACS in comments regarding potential impacts on state-listed threatened and endangered plant and insect species. The current activity will not affect any documented state-listed plants or insects.

New and updated information is continually added to Biotics. Please re-submit project information and map for an update on this natural heritage information if the scope of the project changes and/or six months has passed before it is utilized.

The Virginia Department of Wildlife Resources (VDWR) maintains a database of wildlife locations, including threatened and endangered species, trout streams, and anadromous fish waters that may contain information not documented in this letter. Their database may be accessed from http://vafwis.org/fwis/ or contact Amy Martin at (804-367-2211) or amy.martin@dwr.virginia.gov. A documented occurrence of a state listed animal is located within the submitted project boundary including a 100-foot buffer. Therefore, DCR recommends coordination with the VDWR, Virginia's regulatory authority for the management and protection of this species to ensure compliance with the Virginia Endangered Species Act **(**VA ST §§ 29.1-563 – 570).

Division of Dam Safety and Floodplain Management

Floodplain Management Program:

The National Flood Insurance Program (NFIP) is administered by the Federal Emergency Management Agency (FEMA), and communities who elect to participate in this voluntary program manage and enforce the program on the local level through that community's local floodplain ordinance. Each local floodplain

ordinance must comply with the minimum standards of the NFIP, outlined in 44 CFR 60.3; however, local communities may adopt more restrictive requirements in their local floodplain ordinance, such as regulating the 0.2% annual chance flood zone (Shaded X Zone).

All development within a Special Flood Hazard Area (SFHA), as shown on the locality's Flood Insurance Rate Map (FIRM), must be permitted and comply with the requirements of the local floodplain ordinance.

State Agency Projects Only

Executive Order 45, signed by Governor Northam and effective on November 15, 2019, establishes mandatory standards for development of state-owned properties in Flood-Prone Areas, which include Special Flood Hazard Areas, Shaded X Zones, and the Sea Level Rise Inundation Area. These standards shall apply to all state agencies.

1. Development in Special Flood Hazard Areas and Shaded X Zones
    A. All development, including buildings, on state-owned property shall comply with the locally-adopted floodplain management ordinance of the community in which the state-owned property is located and any flood-related standards identified in the Virginia Uniform Statewide Building Code.
    B. If any state-owned property is located in a community that does not participate in the NFIP, all development, including buildings, on such state-owned property shall comply with the NFIP requirements as defined in 44 CFR §§ 60.3, 60.4, and 60.5 and any flood-related standards identified in the Virginia Uniform Statewide Building Code.
        (1) These projects shall be submitted to the Department of General Services (DGS), for review and approval.
        (2) DGS shall not approve any project until the State NFIP Coordinator has reviewed and approved the application for NFIP compliance.
        (3) DGS shall provide a written determination on project requests to the applicant and the State NFIP Coordinator. The State NFIP Coordinator shall maintain all documentation associated with the project in perpetuity.
    C. No new state-owned buildings, or buildings constructed on state-owned property, shall be constructed, reconstructed, purchased, or acquired by the Commonwealth within a Special Flood Hazard Area or Shaded X Zone in any community unless a variance is granted by the Director of DGS, as outlined in this Order.

The following definitions are from Executive Order 45:

Development for NFIP purposes is defined in 44 CFR § 59.1 as "Any man-made change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials."

The Special Flood Hazard Area may also be referred to as the 1% annual chance floodplain or the 100-year floodplain, as identified on the effective Flood Insurance Rate Map and Flood Insurance Study. This includes the following flood zones: A, AO, AH, AE, A99, AR, AR/AE, AR/AO, AR/AH, AR/A, VO, VE, or V.

The Shaded X Zone may also be referred to as the 0.2% annual chance floodplain or the 500- year floodplain, as identified on the effective Flood Insurance Rate Map and Flood Insurance Study.

The Sea Level Rise Inundation Area referenced in this Order shall be mapped based on the National Oceanic and Atmospheric Administration Intermediate-High scenario curve for 2100, last updated in 2017, and is intended to denote the maximum inland boundary of anticipated sea level rise.

"State agency" shall mean all entities in the executive branch, including agencies, offices, authorities, commissions, departments, and all institutions of higher education.

"Reconstructed" means a building that has been substantially damaged or substantially improved, as defined by the NFIP and the Virginia Uniform Statewide Building Code.

Federal Agency Projects Only

Projects conducted by federal agencies within the SFHA must comply with federal Executive Order 11988: Floodplain Management.

DCR's Floodplain Management Program does not have regulatory authority for projects in the SFHA. The applicant/developer must contact the local floodplain administrator for an official floodplain determination and comply with the community's local floodplain ordinance, including receiving a local permit. Failure to comply with the local floodplain ordinance could result in enforcement action from the locality. For state projects, DCR recommends that compliance documentation be provided prior to the project being funded. For federal projects, the applicant/developer is encouraged reach out to the local floodplain administrator and comply with the community's local floodplain ordinance.

To find flood zone information, use the Virginia Flood Risk Information System (VFRIS): www.dcr.virginia.gov/vfris

To find community NFIP participation and local floodplain administrator contact information, use DCR's Local Floodplain Management Directory: www.dcr.virginia.gov/dam-safety-and-floodplains/floodplain-directory

The remaining DCR divisions have no comments regarding the scope of this project. Thank you for the opportunity to comment.

CC: Troy Andersen, USFWS
Amy Martin, VDWR

Literature Cited

NatureServe. 2009. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia. Available http://www.natureserve.org/explorer. (Accessed: August 9, 2010).

Schilling, E.E. and K.C. Grubbs. 2016. Systematics of the *Eupatorium mohrii* Complex (Asteraceae). Systematic Botany 41(3): 9 pp.

Commonwealth of Virginia

Howard, Janine <janine.howard@deq.virginia.gov>

NASA Wallops Flight Facility (WFF) – Wallops Island Northern Development (WIND)--DHR #2021-4540/DEQ #21-164F

1 message

Holma, Marc <marc.holma@dhr.virginia.gov> Wed, Dec 22, 2021 at 10:33 AM
To: "Howard, Janine" <janine.howard@deq.virginia.gov>

Janine,

Please accept this email as DHR's official response to DEQ's request for our review and comment on the above referenced project. NASA previously consulted with DHR on this undertaking pursuant to Section 106 of the National Historic Preservation Act, as amended, and its implementing regulation 36 CFR Part 800. We concurred that the undertaking will have no effect on historic properties listed in or eligible for listing in the National Register of Historic Places or the Virginia Landmarks Register. The DHR reiterates this determination.

Sincerely,
Marc

--
Marc Holma
Architectural Historian
Division of Review and Compliance
(804) 482-6090
marc.holma@dhr.virginia.gov

Commonwealth of Virginia

Howard, Janine <janine.howard@deq.virginia.gov>

Re: NEW PROJECT NASA Wallops Island Northern Development Project, DEQ 21-164F

1 message

Rusty Harrington <rusty.harrington@doav.virginia.gov> Tue, Jan 25, 2022 at 12:50 PM
To: "Howard, Janine" <janine.howard@deq.virginia.gov>

Good a. ernoon, Janine,

Thank you for reques ng our comments regarding the Federal Consistency Determina on for Wallops Flight Facility Wallops Island Northern Development Project, Project Number 21-164F.

The Virginia Department of Avia on has reviewed the documents provided. The Department believes that, as presented, the development should not present any significant impacts, given the exis ng opera ons at this facility.

The Department appreciates the considera on you have given to us by reques ng our comments on this project. Please do not hesitate to contact me should you have any ques ons or require further assistance regarding the Department's review of this project.

On Tue, Jan 25, 2022 at 11:15 AM Howard, Janine <janine.howard@deq.virginia.gov> wrote:

> Good Morning,
>
> As a reminder, if you have comments on this project please submit them ASAP.
>
> Thank you,
>
> *Janine Howard*
>
> Environmental Impact Review Coordinator
> Virginia Department of Environmental Quality
> 1111 East Main Street, Suite 1400
> Richmond, VA 23219
> *NEW PHONE NUMBER:* 804-659-1916
>
> For program updates and public notices please subscribe to Constant Contact.
>
> On Fri, Dec 17, 2021 at 2:25 PM Fulcher, Valerie <valerie.fulcher@deq.virginia.gov> wrote:
>
> > **Good a. ernoon - this is a new OEIR review request/project:**
> >
> > **Document Type: Environmental Assessment/Federal Consistency Determina on**
> > **Project Sponsor: Na onal Aeronau cs and Space Administra on**
> > **Project Title: Wallops Flight Facility Wallops Island Northern Development Project**
> > **Loca on: Accomack County**
> > **Project Number: DEQ #21-164F**
> >
> > **The document is available at https://public.deq.virginia.gov/OEIR/ in the NASA folder.**

Commonwealth of Virginia

Howard, Janine <janine.howard@deq.virginia.gov>

Re: ESSLog# 40924_21-164F_Wallops North End_DWR_AEM20220207

1 message

Martin, Amy <amy.martin@dwr.virginia.gov> Tue, Feb 15, 2022 at 2:55 PM
To: "Howard, Janine" <janine.howard@deq.virginia.gov>

Janine,
Thanks, that looks great!

Amy

Amy Martin
Manager
Wildlife Information and Environmental Services
she/her/hers
P 804.367.2211
Department of Wildlife Resources
CONSERVE. CONNECT. PROTECT.
A 7870 Villa Park Drive, P.O. Box 90778, Henrico, VA 23228
www.VirginiaWildlife.gov

On Tue, Feb 15, 2022 at 10:20 AM Howard, Janine <janine.howard@deq.virginia.gov> wrote:

> Hi Amy,
>
> Take a look at the below condition and let me know what you think. Feel free to make edits as you see fit. I've attached the enforceable policies for your reference.
>
> - In accordance with the Threatened and Endangered Species section of the Wildlife and Inland Fisheries Enforceable Policy "No person shall harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, possess, collect, transport, sell or offer to sell, or attempt to do so, any species of fish or wildlife listed as threatened or endangered by the Board of Game and Inland Fisheries…" To comply with the policy NASA must make updates to Table 4.1 *Summary of BMPs, Mitigation, and Monitoring Measures* to clearly state which time of year restrictions will be adhered to and what specific minimization methods will be employed during construction to avoid and minimize impacts upon wildlife and their habitats. Alternatively, NASA may coordinate with DWR to make a commitment to adhere to DWR's recommendations and/or those offered by the National Oceanic and Atmospheric Administration (NOAA) or the U.S. Fish and Wildlife Service (USFWS). (*Va. Code Ann. §§ 29.1-501, -564, -566, -567, and -568; 4 Va. Admin. Code §§ 15-20-130 and – 140)*
>
> *Janine Howard*
>
> Environmental Impact Review Coordinator
> Virginia Department of Environmental Quality
> 1111 East Main Street, Suite 1400
> Richmond, VA 23219
> *NEW PHONE NUMBER:* 804-659-1916
>
> For program updates and public notices please subscribe to Constant Contact.

On Tue, Feb 8, 2022 at 8:38 AM Martin, Amy <amy.martin@dwr.virginia.gov> wrote:

Hi Janine,
Yes, a conditional concurrence would be ok. We just need something more than to assume they will adhere to our recommendations, like we would if we had seen permit applications for the project.

Thanks, Amy

Amy Martin
Manager
Wildlife Information and Environmental Services
she/her/hers
P 804.367.2211
Department of Wildlife Resources
CONSERVE. CONNECT. PROTECT.
A 7870 Villa Park Drive, P.O. Box 90778, Henrico, VA 23228
www.VirginiaWildlife.gov

On Tue, Feb 8, 2022 at 8:05 AM Howard, Janine <janine.howard@deq.virginia.gov> wrote:

Thank you Amy. I will share these comments with NASA and see if we get a response. If they don't provide the commitment you are asking for in a timely manner, how do you feel about a possible conditional concurrence based on the Wildlife and Inland Fisheries policy?

We are working with VMRC currently on conditional language based on the Subaqueous Lands and Marine Fisheries policy.

Thanks,

Janine Howard

Environmental Impact Review Coordinator
Virginia Department of Environmental Quality
1111 East Main Street, Suite 1400
Richmond, VA 23219
NEW PHONE NUMBER: 804-659-1916

For program updates and public notices please subscribe to Constant Contact.

On Mon, Feb 7, 2022 at 4:10 PM Martin, Amy <amy.martin@dwr.virginia.gov> wrote:

Janine,
We recently reviewed and provided comments on the Draft EA for the subject project and have now reviewed the federal consistency determination prepared for the activities proposed to develop the north end of Wallops Island. As indicated in our comments on the Draft EA, we have concerns for the protection of listed species potentially present within the work area. To avoid and minimize impacts upon such species, we recommended the following:

- A re-evaluation of potential impacts upon sea turtles based on information provided in the attached that these animals may remain in Virginia's waters through January.
- To best protect sea turtles, we recommend no hydraulic hopper dredging from April 1 through November 30 of any year and no work on suitable sea turtle nesting beaches from May 1 through November 15 or until the last nest hatches or is determined unviable by an approved nest searching crew.
- If hopper dredges are used to deepen the channel and turning basin, we recommend that onboard environmental/biological observers are present to monitor the potential entrainment (take) of sea turtles during dredging operations, irrespective of the time of year. Transport vessels that take up a large portion of the channel may also require an

onboard observer to alert the captain to the presence of sea turtles or marine mammals so that he/she can take measures to avoid a vessel strike.
- We recommend close coordination with us, the USFWS and NOAA Fisheries regarding the protection of sea turtles associated with all phases of this project and any future build out.
- We recommend that the location of any active Peregrine Falcon nests, to include the artificial nesting platform, be mapped and that no construction activities occur within 600 ft of the nest during the nesting season from February 15 through July 15 of any year.

As indicated in our comments on the EA, we are concerned about future development of Wallops Island and adjacent areas. These areas are known to support a number of listed species and are slowly being made unsuitable to these species because of continued expansion and shoreline stabilization activities at Wallops Flight Facility. Because the EA offers no information on how many vessels of what size will travel to and from the north end pier annually, it is difficult for us to determine what, if any, impacts upon marine animals and their habitats result from operation of the proposed facility. In addition, we are concerned that the port and operations area would become part of th**e** M-95 Marine Highway Corridor, allowing for transport of large space assets and related cargo via water vessel to the north end port. While we understand the value of this facility and the need to ensure it's security and capabilities, we must ensure that any impacts upon wildlife and their habitats, including threatened or endangered species, are fully considered, that all actions are taken to avoid and minimize impacts upon them, and that any unavoidable impacts are fully compensated.

We cannot make a determination of consistency until we have reviewed the Final EA for the project that includes updates to Table 4.1 *Summary of BMPs, Mitigation, and Monitoring Measures* to clearly state which time of year restrictions will be adhered to and what specific minimization methods will be employed during construction to avoid and minimize impacts upon wildlife and their habitats OR until we receive commitment from the applicant to adhere to the above recommendations and/or those offered by NOAA or the USFWS.

Thanks, Amy

Amy Martin
Manager
Wildlife Information and Environmental Services
she/her/hers
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Commonwealth of Virginia

Howard, Janine <janine.howard@deq.virginia.gov>

ESSLog# 40924_21-164F_Wallops North End_DWR_AEM20220207

1 message

Martin, Amy <amy.martin@dwr.virginia.gov> Mon, Feb 7, 2022 at 4:09 PM
To: Janine Howard <janine.howard@deq.virginia.gov>
Cc: "Boettcher, Ruth" <ruth.boettcher@dwr.virginia.gov>

Janine,
We recently reviewed and provided comments on the Draft EA for the subject project and have now reviewed the federal consistency determination prepared for the activities proposed to develop the north end of Wallops Island. As indicated in our comments on the Draft EA, we have concerns for the protection of listed species potentially present within the work area. To avoid and minimize impacts upon such species, we recommended the following:

- A re-evaluation of potential impacts upon sea turtles based on information provided in the attached that these animals may remain in Virginia's waters through January.
- To best protect sea turtles, we recommend no hydraulic hopper dredging from April 1 through November 30 of any year and no work on suitable sea turtle nesting beaches from May 1 through November 15 or until the last nest hatches or is determined unviable by an approved nest searching crew.
- If hopper dredges are used to deepen the channel and turning basin, we recommend that onboard environmental/biological observers are present to monitor the potential entrainment (take) of sea turtles during dredging operations, irrespective of the time of year. Transport vessels that take up a large portion of the channel may also require an onboard observer to alert the captain to the presence of sea turtles or marine mammals so that he/she can take measures to avoid a vessel strike.
- We recommend close coordination with us, the USFWS and NOAA Fisheries regarding the protection of sea turtles associated with all phases of this project and any future build out.
- We recommend that the location of any active Peregrine Falcon nests, to include the artificial nesting platform, be mapped and that no construction activities occur within 600 ft of the nest during the nesting season from February 15 through July 15 of any year.

As indicated in our comments on the EA, we are concerned about future development of Wallops Island and adjacent areas. These areas are known to support a number of listed species and are slowly being made unsuitable to these species because of continued expansion and shoreline stabilization activities at Wallops Flight Facility. Because the EA offers no information on how many vessels of what size will travel to and from the north end pier annually, it is difficult for us to determine what, if any, impacts upon marine animals and their habitats result from operation of the proposed facility. In addition, we are concerned that the port and operations area would become part of the M-95 Marine Highway Corridor, allowing for transport of large space assets and related cargo via water vessel to the north end port. While we understand the value of this facility and the need to ensure it's security and capabilities, we must ensure that any impacts upon wildlife and their habitats, including threatened or endangered species, are fully considered, that all actions are taken to avoid and minimize impacts upon them, and that any unavoidable impacts are fully compensated.

We cannot make a determination of consistency until we have reviewed the Final EA for the project that includes updates to Table 4.1 *Summary of BMPs, Mitigation, and Monitoring Measures* to clearly state which time of year restrictions will be adhered to and what specific minimization methods will be employed during construction to avoid and minimize impacts upon wildlife and their habitats OR until we receive commitment from the applicant to adhere to the above recommendations and/or those offered by NOAA or the USFWS.

Thanks, Amy

Amy Martin

Manager
Wildlife Information and Environmental Services
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Commonwealth of Virginia

Howard, Janine <janine.howard@deq.virginia.gov>

ESSLog# 40924_21-164F_Wallops North End Developments_DWR_AEM20220121

1 message

Martin, Amy <amy.martin@dwr.virginia.gov> Fri, Jan 21, 2022 at 5:41 PM
To: Janine Howard <janine.howard@deq.virginia.gov>
Cc: "Boettcher, Ruth" <ruth.boettcher@dwr.virginia.gov>

Janine,
We have reviewed the Environmental Assessment for proposed activities at the north end of Wallops Flight Facility in Accomack County. The proposed alternative, which is broken into 3 phases, includes development of an up to 1305 ft pier and turning basin along with the development of onshore infrastructure. We document federal Threatened Loggerhead Sea Turtles, federal Threatened Piping Plovers, state Threatened Peregrine Falcons, and state Threatened Gull-billed Terns from the project area. Depending on the habitat available on site these species may be present within proposed work areas, at least during certain times of year. It appears the listed species potentially present have been correctly captured in Table 3.9.1 *Federally and State Listed Species with Potential to Occur in the Project Area and Determination of Effects*. However, we note that table 3.7.1 *Terrestrial Wildlife Species with Potential to Occur in the Project Area and Table 3.9.1*is missing these species and others that may occur in the project area. We recommend that the applicant and/or their agents conduct a preliminary desktop analysis to evaluate potential impacts upon the Commonwealth's wildlife resources by accessing our online information system, the Virginia Fish and Wildlife Information Service (VAFWIS) and using the Geographic Search function to generate an Initial Project Assessment (IPA) report and use the species list generated to fill out this table. One may access VAFWIS at https://vafwis.DWR.virginia.gov/fwis/ . Alternatively, one may contact our Geographic Information Systems (GIS) Coordinator, Jay Kapalczynski, at Jay.Kapalczynski@DWR.virginia.gov to request access to the Wildlife Mapping and Environmental Review Map Service (WERMS) which allows one to download GIS data into your own system. Further, we recommend accessing information about the location of bat hibernacula and roosts and Bald Eagle nest locations from the following: Northern Long-Eared Bats: https://www.dwr.virginia.gov/wildlife/bats/northern-long-eared-bat-application/ ; Little Brown Bats and Tricolored Bats: https://www.dwr.virginia.gov/wildlife/bats/little-brown-bat-tri-colored-bat-winter-habitat-roosts-application/; and the Center for Conservation Biology's Eagle Nest Locator at https://ccbbirds.org/what-we-do/research/species-of-concern/virginia-eagles/nest-locator/ .

The EA states that sea turtles are only likely to be present in the Project Area from May through November of any year. While that may historically have been true, Virginia's coastal waters now remain warm enough long enough for sea turtles to still be present well into December and January. This is evidenced by the increasing numbers of cold-stunned turtle strandings reported by the Virginia Aquarium Stranding Response Program during these months. We recommend consideration of this information and a re-evaluation of potential impacts upon sea turtles in light of this information. We also recommend no hydraulic hopper dredging in the project area from April 1 through November 30 of any year. In addition, we recommend no work on suitable sea turtle nesting beaches from May 1 through November 15 or until the last nest hatches or is determined unviable by an approved nest searching crew. We recommend that environmental/biological monitors be present to support the avoidance of vessel strikes with sea turtles and/or other marine wildlife. We recommend close coordination with us, the USFWS and NOAA Fisheries regarding the protection of sea turtles associated with all phases of this project and any future build out.

We recommend that the location of any active Peregrine Falcon nests, to include the artificial nesting platform, be mapped and that no construction activities occur within 600 ft of the nest during the nesting season from February 15 through July 15 of any year.

It appears NASA proposes to place their dredged materials in the Open Ocean Dredge Material Placement Area, at least for initial dredging. We strongly recommend that NASA work with us and our conservation partners to find a beneficial use for that material and perhaps material surfaced by future dredging on site. NASA has, over the years as the result of many projects, adversely impacted shoreline and nearshore habitats. Using dredged materials to restore some of that impacted habitat or other similarly

impacted habitats would be of great benefit to the region and the species that use these impacted habitats.

We recommend that NASA update Table 4.1 *Summary of BMPs, Mitigation, and Monitoring Measures* to indicate what time of year restrictions they will adhere to, what specific minimization methods will be employed during construction to avoid and minimize impacts upon wildlife and their habitats, and what types of vessel restrictions will be in place. Currently this table only speaks very generally to what mitigation measures may be in place.

We recommend conducting any in-stream activities during low or no-flow conditions, using non-erodible cofferdams or turbidity curtains to isolate the construction area, blocking no more than 50% of the streamflow at any given time (minimal overlap of construction footprint notwithstanding), stockpiling excavated material in a manner that prevents reentry into the stream, restoring original streambed and streambank contours, revegetating barren areas with native vegetation, and implementing strict erosion and sediment control measures. We recommend that instream work be designed and performed in a manner that minimizes impacts upon natural streamflow and movement of resident aquatic species. If a dam and pump-around must be used, we recommend it be used for as limited a time as possible and that water returned to the stream be free of sediment and excess turbidity. To minimize potential wildlife entanglements resulting from use of synthetic/plastic erosion and sediment control matting, we recommend use of matting made from natural/organic materials such as coir fiber, jute, and/or burlap. To minimize harm to the aquatic environment and its residents resulting from use of the Tremie method to install concrete, installation of grout bags, and traditional pouring of concrete, we recommend that such activities occur only in the dry, allowing all concrete to harden and cure prior to contact with open water. Due to future maintenance costs associated with culverts, and the loss of riparian and aquatic habitat, we prefer stream crossings to be constructed via clear-span bridges. However, if this is not possible, we recommend countersinking any culverts below the streambed at least 6 inches, or the use of bottomless culverts, to allow passage of aquatic organisms. We also recommend the installation of floodplain culverts to carry bankfull discharges.

To minimize overall impacts to wildlife and our natural resources, we offer the following comments about development activities: we recommend that the applicant avoid and minimize impacts to undisturbed forest, wetlands, and streams to the fullest extent practicable. Avoidance and minimization of impact may include relocating stream channels as opposed to filling or channelizing as well as using, and incorporating into the development plan, a natural stream channel design and forested riparian buffers. We recommend maintaining undisturbed naturally vegetated buffers of at least 100 feet in width around all on-site wetlands and on both sides of all perennial and intermittent streams. We recommend maintaining wooded lots to the fullest extent possible. We generally do not support proposals to mitigate wetland impacts through the construction of stormwater management ponds, nor do we support the creation of in-stream stormwater management ponds.

We recommend that the stormwater controls for this project be designed to replicate and maintain the hydrographic condition of the site prior to the change in landscape. This should include, but not be limited to, utilizing bioretention areas, and minimizing the use of curb and gutter in favor of grassed swales. Bioretention areas (also called rain gardens) and grass swales are components of Low Impact Development (LID). They are designed to capture stormwater runoff as close to the source as possible and allow it to slowly infiltrate into the surrounding soil. They benefit natural resources by filtering pollutants and decreasing downstream runoff volumes.

We recommend that all tree removal and ground clearing adhere to a time of year restriction (TOYR) protective of resident and migratory songbird nesting from March 15 through August 15 of any year.

We recommend adherence to erosion and sediment controls during ground disturbance. To minimize potential wildlife entanglements resulting from use of synthetic/plastic erosion and sediment control matting, we recommend use of matting made from natural/organic materials such as coir fiber, jute, and/or burlap.

Thanks, Amy

Amy Martin
Manager, Wildlife Information and Environmental Services

she/her/hers
P 804.367.2211
Department of Wildlife Resources
CONSERVE. CONNECT. PROTECT.
A 7870 Villa Park Drive, P.O. Box 90778, Henrico, VA 23228
www.VirginiaWildlife.gov

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

MEMORANDUM

TO: Janine Howard, DEQ/EIR Environmental Program Planner

FROM: Carlos A. Martinez, Division of Land Protection & Revitalization Review Coordinator

DATE: January 10, 2022

COPIES: Sanjay Thirunagari, Division of Land Protection & Revitalization Review Manager; file

SUBJECT: Environmental Impact Review: 22-164F Wallops Flight Facility Wallops Island Northern Development Project in Accomack County, Virginia.

The Division of Land Protection & Revitalization (DLPR) has completed its review of the National Aeronautics and Space Administration's December 17, 2021 EIR for Wallops Flight Facility Wallops Island Northern Development Project in Accomack County, Virginia.

DLPR staff conducted a search (200 ft. radius) of the project area of solid and hazardous waste databases (including petroleum releases) to identify waste sites in close proximity to the project area. DLPR identified one (1) RCRA Large Quantity Generator, one (1) RCRA Small Quantity Generator, one (1) VRP site, and twenty-six (26) petroleum release sites within the project area which might impact the project.

DLPR staff has reviewed the submittal and offers the following comments:

Hazardous Waste/RCRA Facilities – One (1) RCRA Large Quantity Generator and one (1) RCRA Small Quantity Generator in close proximity to the project area

1. ***Registry ID: 110000607488, US NASA GSFC WALLOPS FLIGHT FACILITY, WALLOPS FLIGHT FACILITY, WALLOPS ISLAND, VA 23337.***

2. ***Registry ID: 110070828367, U.S. NASA GSFC WALLOPS FLIGHT FACILITY, 34200 FULTON STREET, WALLOPS FLIGHT FACILITY, WALLOPS ISLAND, VA 23337.***

***CERCLA Sites* – none in close proximity to the project area**

***Formerly Used Defense Sites (FUDS)* – none in close proximity to the project area.**

***Solid Waste* – none in close proximity to the project area**

***Virginia Remediation Program (VRP)* - One (1) VRP site in close proximity to the project area**

1. ***Site Number: VRP00662, NASA Wallops WFF Pad 0A, Wallops Island, Virginia, 23337. Primary Status: Certificate Issued. Secondary Status: Refer to Certificate Status.***

***Petroleum Releases* – Twenty-six (26) found in close proximity to the project area.**

1. ***PC Number 19992348, NASA Wallops Earth Station Runway 10-28, 34200 Fulton St, Wallops Island, Virginia, Release Date: 03/07/1999, Status: Closed.***

2. ***PC Number 19992209, NASA Wallops Flight Facility – NOAA Facility, 34200 Fulton St, Wallops Island, Virginia , Release Date: 07/20/1998, Status: Closed.***

3. ***PC Number 19992282, NASA Wallops Flight Facility – Satan Radar Antenna, 34200 Fulton St, Wallops Island, Virginia, Release Date: 11/16/1998, Status: Closed.***

4. ***PC Number 20165134, NASA WFF – Pipeline and Jet Fuel Receiving Area, 34200 Fulton St, Wallops Island, Virginia, Release Date: 01/06/2016, Status: Closed.***

5. ***PC Number 19920576, NASA Wallops Flight Facility – Visitor Center, 34200 Fulton St, Wallops Island, Virginia, Release Date: 10/01/1991, Status: Closed.***

6. ***PC Number 19921558, NASA Wallops Flight Facility – Bldg M-1, 34200 Fulton St, Wallops Island, Virginia, Release Date: 03/05/1992, Status: Closed.***

7. ***PC Number 19910470, NASA Wallops Flight Facility – Control Tower, 34200 Fulton St, Wallops Island, Virginia , Release Date: 09/23/1990, Status: Closed.***

8. ***PC Number 19920783, NASA Wallops Flight Facility – Bldg D-1, 34200 Fulton St, Wallops Island, Virginia, Release Date: 10/28/1991, Status: Closed.***

9. ***PC Number 20155141, Former Navy A-7 Auxiliary Power Station, 34200 Fulton St, Wallops Island, Virginia, Release Date: 01/11/2015, Status: Closed.***

10. ***PC Number 19962241, NASA Wallops Flight Facility – New Fuel Farm, 34200 Fulton St, Wallops Island, Virginia, Release Date: 09/17/1995, Status: Closed.***

11. ***PC Number 19931193, NASA Wallops Flight Facility – NOAA, 34200 Fulton St, Wallops Island, Virginia, Release Date: 12/16/1992, Status: Closed.***

12. ***PC Number 19930400, NASA Wallops Flight Facility D-102/103, 34200 Fulton St, Wallops Island, Virginia, Release Date: 02/17/1992, Status: Closed.***

13. ***PC Number 19922027, NASA Wallops Flight Facility – Site D8, 34200 Fulton St, Wallops Island, Virginia, Release Date: 04/30/1992, Status: Closed.***

14. ***PC Number 19900039, NASA Wallops Flight Facility – Old Aviation Fuel Farm, 34200 Fulton St, Wallops Island, Virginia , Release Date: 07/10/1989, Status: Open.***

15. ***PC Number 19910580, NASA Wallops Flight Facility – Bldg Y-30, 34200 Fulton St, Wallops Island, Virginia, Release Date: 07/08/1990, Status: Closed.***

16. ***PC Number 20015022, NASA Wallops Flight Facility – AST 448, 34200 Fulton St, Wallops Island, Virginia, Release Date: 08/30/2000, Status: Closed.***

17. ***PC Number 19922008, NASA Wallops Flight Facility – Site U-30, 34200 Fulton St, Wallops Island, Virginia, Release Date: 06/01/1992, Status: Closed.***

18. ***PC Number 19952405, NASA Wallops Flight Facility – Bldg V10, 34200 Fulton St, Wallops Island, Virginia, Release Date: 05/02/1995, Status: Closed.***

19. ***PC Number 20005119, NASA Wallops Flight Facility – Bldg X-76, 34200 Fulton St, Wallops Island, Virginia, Release Date: 10/25/1999, Status: Closed.***

20. ***PC Number 19922026, NASA Wallops Flight Facility – Bldg X-75, 34200 Fulton St, Wallops Island, Virginia, Release Date: 06/01/1992, Status: Closed.***

21. ***PC Number 19930913, NASA Wallops Flight Facility – Bldgs X-5 & X-15, 34200 Fulton St, Wallops Island, Virginia, Release Date: 11/03/1992, Status: Closed.***

22. ***PC Number 20085052, NASA Wallops Flight Facility – Power Plant-Site 5,12, 34200 Fulton St, Wallops Island, Virginia, Release Date: 12/03/2007, Status: Closed.***

23. ***PC Number 20015044, NASA Wallops Flight Facility – Bldg X-5, Island Facility, Accomack, Virginia, Release Date: 10/17/2000, Status: Closed.***

24. ***PC Number 19910363, NASA Wallops Flight Facility – Bldg Y-40, 34200 Fulton St, Wallops Island, Virginia, Release Date: 09/10/1990, Status: Closed.***

25. ***PC Number 199100396, Z-65 & Y305, 34200 Fulton St, Wallops Island, Virginia, Release Date: 07/08/1990, Status: Closed.***

26. ***PC Number 20135070, MARS - Wallops Island – Pad 0-A – Hurricane Sandy, Island Facility, Accomack, Virginia, Release Date: 01/13/2013, Status: Closed.***

Please note that the DEQ's Pollution Complaint (PC) cases identified should be further evaluated by the project engineer or manager to establish the exact location, nature and extent of the petroleum release and the potential to impact the proposed project. In addition, the project engineer or manager should contact the DEQ's Tidewater Regional Office at (757) 518-2000 (Tanks Program) for further information about the PC cases.

PROJECT SPECIFIC COMMENTS

None

GENERAL COMMENTS

Soil, Sediment, Groundwater, and Waste Management

Any soil, sediment or groundwater that is suspected of contamination or wastes that are generated must be tested and disposed of in accordance with applicable Federal, State, and local laws and regulations. Some of the applicable state laws and regulations are: Virginia Waste Management Act, Code of Virginia Section 10.1-1400 *et seq.*; Virginia Hazardous Waste Management Regulations (VHWMR) (9VAC 20-60); Virginia Solid Waste Management Regulations (VSWMR) (9VAC 20-81); Virginia Regulations for the Transportation of Hazardous Materials (9VAC 20-110). Some of the applicable Federal laws and regulations are: the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. Section 6901 *et seq.*, and the applicable regulations contained in Title 40 of the Code of Federal Regulations; and the U.S. Department of Transportation Rules for Transportation of Hazardous Materials, 49 CFR Part 107.

Asbestos and/or Lead-based Paint

All structures being demolished/renovated/removed should be checked for asbestos-containing materials (ACM) and lead-based paint (LBP) prior to demolition. If ACM or LBP are found, in addition to the federal waste-related regulations mentioned above, State regulations 9VAC 20-81-620 for ACM and 9VAC 20-60-261 for LBP must be followed. Questions may be directed to Melinda Woodruff at the DEQ's Tidewater Regional Office at (757) 518-2000.

Pollution Prevention – Reuse - Recycling

Please note that DEQ encourages all construction projects and facilities to implement pollution prevention principles, including the reduction, reuse, and recycling of all solid wastes generated. All generation of hazardous wastes should be minimized and handled appropriately.

If you have any questions or need further information, please contact Carlos A. Martinez by phone at (804) 698-4575 or email carlos.martinez@deq.virginia.gov.

Commonwealth of Virginia

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

1111 E. Main Street, Suite 1400, Richmond, Virginia 23219
P.O. Box 1105, Richmond, Virginia 23218
(800) 592-5482
www.deq.virginia.gov

Ann F. Jennings
Secretary of Natural and Historic Resources

David K. Paylor
Director
(804) 698-4000

MEMORANDUM

TO: Janine Howard, DEQ Office of Environmental Impact Review

FROM: Amber Foster, DEQ Principal Environmental Planner

DATE: December 30, 2021

SUBJECT: DEQ #21-164F - Wallops Flight Facility Wallops Island Northern Development Project, Accomack County

We have reviewed the Environmental Assessment / Federal Consistency Determination submittal for the proposed project and offer the following comments regarding consistency with the provisions of the *Chesapeake Bay Preservation Area Designation and Management Regulations*.

The proposed project is located outside of the Chesapeake Bay watershed and therefore not subject to the *Chesapeake Bay Preservation Area Designation and Management Regulations.*

Commonwealth of Virginia

Howard, Janine <janine.howard@deq.virginia.gov>

Re: NEW PROJECT NASA Wallops Island Northern Development Project, DEQ 21-164F

1 message

Gavan, Lawrence <larry.gavan@deq.virginia.gov> Mon, Dec 20, 2021 at 2:32 PM
To: Janine Howard <janine.howard@deq.virginia.gov>

(a) Agency Jurisdiction. The Department of Environmental Quality (DEQ) administers the *Virginia Erosion and Sediment Control Law and Regulations* (*VESCL&R*) and *Virginia Stormwater Management Law and Regulations* (*VSWML&R*).

(b) Erosion and Sediment Control and Stormwater Management Plans. The Applicant and its authorized agents conducting regulated land-disturbing activities on private and public lands in the state must comply with *VESCL&R* and *VSWML&R*, including coverage under the general permit for stormwater discharge from construction activities, and other applicable federal nonpoint source pollution mandates (e.g. Clean Water Act-Section 313, federal consistency under the Coastal Zone Management Act). Clearing and grading activities, installation of staging areas, parking lots, roads, buildings, utilities, borrow areas, soil stockpiles, and related land-disturbing activities that result in the total land disturbance of equal to or greater than 10,000 square feet (2,500 square feet in Chesapeake Bay Preservation Area) would be regulated by *VESCL&R*. Accordingly, the Applicant must prepare and implement an erosion and sediment control (ESC) plan to ensure compliance with state law and regulations. Land-disturbing activities that result in the total land disturbance of equal to or greater than 1 acre (2,500 square feet in Chesapeake Bay Preservation Area) would be regulated by *VSWML&R*. Accordingly, the Applicant must prepare and implement a Stormwater Management (SWM) plan to ensure compliance with state law and regulations. The Applicant is ultimately responsible for achieving project compliance through oversight of on-site contractors, regular field inspection, prompt action against non-compliant sites, and other mechanisms consistent with agency policy. [Reference: VESCL 62.1-44.15 et seq.]

(c) General Permit for Stormwater Discharges from Construction Activities (VAR10). DEQ is responsible for the issuance, denial, revocation, termination and enforcement of the Virginia Stormwater Management Program (VSMP) General Permit for Stormwater Discharges from Construction Activities related to municipal separate storm sewer systems (MS4s) and construction activities for the control of stormwater discharges from MS4s and land disturbing activities under the Virginia Stormwater Management Program.

The owner or operator of projects involving land-disturbing activities of equal to or greater than 1 acre is required to register for coverage under the General Permit for Discharges of Stormwater from Construction Activities and develop a project-specific Stormwater Pollution Prevention Plan. Construction activities requiring registration also include land disturbance of less than one acre of total land area that is part of a larger common plan of development or sale if the larger common plan of development will collectively disturb equal to or greater than one acre The SWPPP must be prepared prior to submission of the registration statement for coverage under the general permit and the SWPPP must address water quality and quantity in accordance with the *VSMP Permit Regulations*.
[Reference: Virginia Stormwater Management Act 62.1-44.15 et seq.; VSMP Permit Regulations *9*VAC25-880 *et seq.]*

Larry Gavan

DEPARTMENT OF ENVIRONMENTAL QUALITY
TIDEWATER REGIONAL OFFICE

Environmental Impact Review
Coordination Review

To: Office of Environmental Impact Review

From: Jeff Hannah, Regional VWPP Program Manager

Date: January 7, 2022

Project: NASA Wallops Island Northern Development Project, DEQ #21-164F

As requested, the DEQ Tidewater Regional Office has reviewed the supplied information and offers the following comments:

Air Compliance Program :
The following air regulations may be applicable: Virginia Administrative Code 9 VAC 5-50-60 *et seq*. which addresses the abatement of visible emissions and fugitive dust emissions, and Virginia Administrative Code 9 VAC 5-130-10 et *seq*. which addresses open burning. For additional information, contact John Brandt, DEQ-TRO at (757)407-2341.

Land Program (Solid and Hazardous Waste):
All construction and demolition waste, including any excess soil, must be characterized in accordance with the Virginia Hazardous Waste Management Regulations and disposed of at an appropriate facility as applicable.
For additional information, contact Melinda Woodruff, DEQ-TRO at melinda.woodruff@deq.virginia.gov .

Stormwater:
A construction general permit (CGP) is required prior to commencement of land disturbing activities greater than 1 acre for the discharge of sediment from construction activities. An approved Erosion and Sediment Control Plan (<1 acre of land disturbance) or an approved Stormwater Management Plan (>1 acre of land disturbance) is required prior to commencement of any land disturbing activities. In addition, DEQ is the review authority for state and federal plan review and approval, within the Tidewater Region, to coincide with permit application processing. For additional information, contact Courtney Smith, DEQ-TRO at (757)493-1072.

Virginia Water Protection Permit Program (VWPP):
Potential adverse impacts to water quality and wetlands resulting from surface runoff due to construction activities must be minimized. This can be achieved by using Best Management Practices (BMPs). Permanent or temporary impacts to surface waters and wetlands require DEQ authorization under §401 of the Clean Water Act, Virginia Code §62.1-44.15:20, and Virginia Administrative Code 9 VAC 25-210-10 *et seq*. Provided that any and all necessary permits are obtained and complied with, the project will be consistent with DEQ program requirements. For additional information, contact Jeff Hannah, DEQ-TRO at (757)407-2510.

Water Permit Program (VPDES):

No comments as there does not appear to be any point source discharges of process water or wastewater associated with this project that would necessitate a VPDES permit.

Petroleum Storage Tank Program:

DEQ records do not indicate any reported petroleum releases along the proposed project footprint. If evidence of a petroleum release is discovered during implementation of this project, it must be reported to DEQ, as authorized by CODE # 62.1-44.34.8 through 19 and 9 VAC 25-580-10 et seq. Contact Ms. Melinda Woodruff at (757)407-2516. Petroleum-contaminated soils and ground water generated during implementation of this project must be properly characterized and disposed of properly.

Installation and operation of any regulated petroleum storage tank(s) either AST or UST must also be conducted in accordance with the Virginia Regulations 9 VAC 25-91-10 et seq and / or 9 VAC 25-580-10 et seq. Documentation and / or questions should be submitted to TRO Tanks at Tidewater Regional Office – 5636 Southern Blvd., Virginia Beach, VA 23462. tro.tanks@deq.virginia.gov.

Based on the submitted information, it appears the proposed project will result in a *[Level of impact]* environmental impact.

Commonwealth of Virginia

Howard, Janine <janine.howard@deq.virginia.gov>

Re: NEW PROJECT NASA Wallops Island Northern Development Project, DEQ 21-164F

1 message

Warren, Arlene <arlene.warren@vdh.virginia.gov> Mon, Jan 10, 2022 at 10:36 AM
To: Janine Howard <janine.howard@deq.virginia.gov>
Cc: rr Environmental Impact Review <eir@deq.virginia.gov>

Project Name: Wallops Flight Facility Wallops Island Northern Development
Project #: 21-164 F
UPC #: N/A
Location: Accomack County

VDH – Office of Drinking Water has reviewed the above project. Below are our comments as they relate to proximity to **public drinking water sources** (groundwater wells, springs and surface water intakes). Potential impacts to public water distribution systems or sanitary sewage collection systems **must be verified by the local utility.**

There are no public groundwater wells within a 1-mile radius of the project site.

There are no surface water intakes located within a 5-mile radius of the project site.

The project is not within the watershed of any public surface water intakes.

There are no apparent impacts to public drinking water sources due to this project.

The Virginia Department of Health – Office of Drinking Water appreciates the opportunity to provide comments. If you have any questions, please let me know.

Best Regards,

Arlene Fields Warren

GIS Program Support Technician

Office of Drinking Water

Virginia Department of Health

109 Governor Street

Richmond, VA 23219

(804) 864-7781

On Fri, Dec 17, 2021 at 2:25 PM Fulcher, Valerie <valerie.fulcher@deq.virginia.gov> wrote:

> **Good afternoon - this is a new OEIR review request/project:**

27 January 2022

Ms. Janine Howard
Office of Environmental Impact Review
Dept. of Environmental Quality
P.O. Box 1105
Richmond, VA 23218

Dear Ms. Howard:

We have reviewed the Wallops Island Northern Development (WIND) Project Environmental Assessment (EA) submitted by the National Aeronautics and Space Administration (NASA) as part of the federal consistency determination (DEQ #21-164F). The portions of the project in the intertidal and subaqueous areas include dredging a channel and turning basins and constructing a new pier and ramp for the purpose of securing vessel access to the island for transporting spacecraft, equipment, and experiments and to allow vessels to dock for research, testing, and training. Scientists from the departments of Physical Sciences and Fisheries Science and the Office of Research and Advisory Services contributed to this review.

The proposed pier will be constructed during project phases one and two, with 624 feet constructed during the first phase, and an additional 676 feet in phase two. The pier will require a total of 400, 24-foot-square pre-stressed concrete piles that will be installed with an impact hammer. The project will permanently impact 2.33 acres of tidal wetlands and temporarily impact an additional 1.74 acres. We recommend monitoring and replanting plans be developed for the areas of temporary impacts to vegetated tidal wetlands to ensure their recovery following construction. A *Phragmites* control plan is already in place for Wallops Island and can be applied to the proposed project.

Dredging will occur during phases one and three, with the initial dredging of the channel and turning basin to nine feet below mean lower low water (MLLW). Phase three operations will extend the channel depth to 12 feet MLLW and dredge a new turning basin to coincide with the end of the extended pier (constructed during phase two). The total volume of dredged material is estimated to be 94,000 cubic yards and the geotechnical investigation indicates it is approximately 95% sand. The sandy material is anticipated to settle quickly, so we recommend use of a turbidity curtain around the dredging operations only when they are in close proximity to shellfish resources. If the use of turbidity curtains is not possible due to current velocities, we recommend consideration of dredging the during slack tides and the western portion of the channel during flood tide and the eastern portion of the channel during ebb tides. We further recommend consultation with the Virginia Marine Resources Commission's Shellfish Management Division for additional information regarding shellfish bed locations and mitigation strategies. We also recommend adherence to the standard dredge buffers of a minimum of twice the dredge cut from nonvegetated tidal wetlands and four times the dredge cut from vegetated tidal wetlands.

Dredging the new channel will provide an additional path for tidal exchange between Chincoteague Inlet and the marshes and lagoons landward of Wallops and Chincoteague islands. Consequently, the flow through Chincoteague Channel (federal channel authorized to 12 feet,

maintained to 9 feet) will be reduced and the channel may therefore shoal and require more frequent maintenance dredging. Hydrodynamic modeling is required to estimate the extent of this potential shoaling. VIMS is the lead institution on the Commonwealth-funded *Chincoteague Inlet Modeling Study (CIMS)*, which is developing a wave, hydrodynamic, and multi-class sediment-transport numerical model of the Inlet and adjacent barrier islands, including the area to be impacted by the proposed NASA channel. Modeled scenarios incorporate the proposed dredging activities. We expect preliminary results within the next couple of months, and can share those findings with NASA and the regulatory community. The results of CIMS should provide information regarding the full impacts from this project and we recommend consideration of delaying action until these results are available.

The dredged material is proposed to be placed in the Wallops Open Ocean Disposal site primarily because it is the least expensive alternative of the five evaluated in the EA. However, the costs considered are only those related to dredging and placement of the sediment, and discounted any future costs of continued erosion control and resilience activities that may be postponed or prevented should the dredged material be used beneficially. Of the five sites in the EA, we recommend the material be placed on the shoreline of Wallops Island. This sand could be used to nourish the beach in general and/or specifically the area of recent beach sand removal at the northern end of the beach and landward of the large breakwaters (as we recommended during the review of that project). This sand would help stabilize Wallops Island and serve as a sediment source to the downdrift barrier islands, thereby benefiting this entire coastal system. We consider placement at Chincoteague National Wildlife Refuge Swan Cove a second choice for the beneficial use of the dredged material should beach placement not be possible.

An alternative not discussed in the EA, and our highest recommended option, is to rebuild Chincoteague Point, a small marsh island across the channel southwest of Curtis Merritt Harbor at the south end of Chincoteague Island. This island provides some protection to the harbor and southern Chincoteague and has eroded significantly over the past 15 years, thereby increasing exposure of southern Chincoteague to high-energy waves from Chincoteague Inlet. Restoring the island would require marsh plantings and shoreline stabilization (e.g. a stone sill) in addition to the dredged sediment. While considering an additional beneficial placement site, particularly one involving restoration of part of an island, is complicated and must be done with care, the benefits of restoring the protection provided by this island may prove beneficial to the longer-term resilience of Chincoteague. We recommend that the impacts of restoring this island are modeled as part of an alternatives analysis for determining a placement site.

Please let me know if you have any questions or require additional information.

Sincerely,

Emily Hein
Assistant Director for Advisory Services

Copy:
NASA, VMRC, NOAA, Accomack County

P. O. Box 1346 • 1370 Greate Road • Gloucester Point, Virginia 23062 USA
804.684.7381 • www.vims.edu

COMMONWEALTH of VIRGINIA

Marine Resources Commission
380 Fenwick Road
Building 96
Fort Monroe, VA 23651

Andrew R. Wheeler
Secretary of Natural and Historic Resources

Justin D. Worrell
Acting Commissioner

Department of Environmental Quality

Attn: Janine Howard
1111 East Main Street
Richmond, VA 23219

Re: NASA Wallops Island Northern Development Project, DEQ 21-164F

Dear Ms. Howard,

This will respond to the request for comments regarding the Environmental Assessment and Federal Consistency Determination for the NASA Wallops Island Northern Development Project (DEQ 21-164F), prepared by the National Aeronautics and Space Administration (NASA). Specifically, NASA has proposed to impact tidal wetlands and subaqueous bottom habitat for the construction of a fixed pier and turning basin, a hangar at the Unmanned Aerial Systems (UAS) Airstrip, installation of new utility infrastructure, installation of airstrip lighting, hardening/reinforcement of a section of the airstrip, improvements to the airstrip access road, construction of a new pier access road adjacent to the UAS Airstrip, construction of a new 20 to 30 vehicle parking lot, construction of a project support building, and channel dredging (vessel approach channel). The project is located in Accomack County, Virginia.

We reviewed the provided project documents and found the proposed project to be within the jurisdictional areas of the Virginia Marine Resources Commission (VMRC) and the local Accomack County wetlands board. Please be advised that the VMRC pursuant to Chapters 12, 13, and 14 of Title 28.2 of the Code of Virginia administers permits required for submerged lands, tidal wetlands, and beaches and dunes. Additionally, the VMRC administers the enforceable policies of fisheries management, subaqueous lands, tidal wetlands, and coastal primary sand dunes and beaches, which comprise key components of Virginia's Coastal Zone Management Program. VMRC staff has reviewed the submittal and offers the following comments:

Fisheries and Shellfish: Private shellfish leases and public clam grounds are situated directly adjacent to the proposed channel. We cannot verify with the provided project drawings that the side slopes of the dredged channel will not directly impact lease number 22062. We have also verified that the adjacent shellfish leases 17290 and 19696 are active leases and have reported

harvest. Additionally, Virginia Institute of Marine Science (VIMS) comments on this project report that the sandy plume from dredging is most likely to settle in areas adjacent to the channel quickly and that mitigation for sediment settling within the shellfish resource areas is needed. For this reason, we do not agree with the conclusion in the consistency report that “none of the Proposed Action Alternative activities involving disturbance of the subaqueous bottom would permanently disturb shellfish beds or affect their continued viability”. Therefore, the project as proposed is not consistent with our fisheries and shellfish enforceable policies. To comply with the policies a turbidity mitigation plan is required that includes dredging on slack tides and considers turbidity curtains. Additionally, surveyed channel designs that include the location of the 2x buffer and 4x buffer adjacent to the shellfish leases are needed to understand potential direct impacts to the leases.

Submerged Lands: The project as proposed will require the dredging of 94,000 cubic yards of State-owned bottom material. The federal act of dredging, however, is not jurisdictional to VMRC based on past guidance from the Office of the Attorney General.

Tidal Wetlands: A wetlands board permit with compensatory mitigation will be required from the Accomack County wetlands board for all proposed impacts to tidal wetlands.

Beaches and Coastal Primary Sand Dunes: Section 10.1-704 of the Code of Virginia provides that the beaches of the Commonwealth shall be given priority consideration as sites for the disposal of that portion of dredged material determined to be suitable for beach nourishment. This is further supported by VMRC's "Criteria for the Placement of Sandy Dredged Material along Beaches in the Commonwealth," Regulation 4 VAC 20-400-10 ET SEQ. The project, however, proposes to dispose approximately 94,0000 cubic yards of State-owned sandy bottom material into the Atlantic Ocean. This Commonwealth of Virginia resource has a market value of between $2.35 and $3.29 million dollars, and should be utilized as nourishment material for the ongoing Wallops Island Shoreline Enhancement Restoration project at the Wallops Flight Facility. This would then offset certain of the adverse environmental impacts raised by VIMS, the Department of Wildlife Resources (DWR) and The Nature Conservancy, associated with past projects (VMRC #18-1590 and #20-1745) and future plans to excavate sandy beach material from the north end of Wallops Island. According to DWR, the beach along this segment of Wallops Island supports nesting federally Endangered Piping Plovers and American Oystercatchers, designated a Tier IIa Species of Greatest Conservation Need (SGCN). In addition, this area is believed to provide nesting habitat for state Threatened Wilson's Plovers, federally Threatened Loggerhead Sea Turtles, Diamondbacked Terrapins (Tier ll SGCN), and other species identified in Virginia's Wildlife Action Plan as SGCNs.

Given the cumulative concerns noted above, this project is viewed as not consistent with Virginia's fisheries and shellfish enforceable policies and our beaches and dunes enforceable policies. If you have any questions please contact me at (757) 247-2251 or by email at randy.owen@mrc.virginia.gov. Thank you for the opportunity to comment.

Sincerely,

Randy Owen
Chief, Habitat Management Division

RO/cg
HM

COMMONWEALTH of VIRGINIA

Marine Resources Commission
380 Fenwick Road
Bldg 96
Fort Monroe, VA 23651-1064

Andrew R. Wheeler
Secretary of Natural and Historic Resources

Justin D. Worrell
Acting Commissioner

February 8, 2022

Department of Environmental Quality
Attn: Janine Howard
1111 East Main Street
Richmond, VA 23219

Re: NASA Wallops Island Northern Development Project, DEQ 21-164F

Dear Ms. Howard,

This will respond to the request for comments regarding the Environmental Assessment (EA) and Federal Consistency Determination for the NASA Wallops Island Northern Development Project (DEQ 21-164F), prepared by the National Aeronautics and Space Administration (NASA). Specifically, NASA has proposed to impact tidal wetlands and subaqueous bottom habitat for the construction of a fixed pier and turning basin, a hangar at the Unmanned Aerial Systems (UAS) Airstrip, installation of new utility infrastructure, installation of airstrip lighting, hardening/reinforcement of a section of the airstrip, improvements to the airstrip access road, construction of a new pier access road adjacent to the UAS Airstrip, construction of a new 20 to 30 vehicle parking lot, construction of a project support building, and channel dredging (vessel approach channel). The project is located in Accomack County, Virginia.

We reviewed the provided project documents and found the proposed project to be within the jurisdictional areas of the Virginia Marine Resources Commission (VMRC) and the local Accomack County wetlands board.

Please be advised that the VMRC pursuant to Chapters 12, 13, and 14 of Title 28.2 of the Code of Virginia administers permits required for submerged lands, tidal wetlands, and beaches and dunes. Additionally, the VMRC administers the enforceable policies of fisheries management, subaqueous lands, tidal wetlands, and coastal primary sand dunes and beaches, which comprise key components of Virginia's Coastal Zone Management Program. VMRC staff has reviewed the submittal and offers the following comments:

Fisheries and Shellfish: In accordance with Item F of the Marine Fisheries Enforceable Policy, any activity in the Commonwealth's tidal waters must not encroach upon the lawful use and occupation of previously leased ground for the term of the lease unless exercising riparian rights or the right of fishing. To comply with the policy a turbidity mitigation plan is required that includes dredging on slack tides and considers turbidity curtains. Additionally, surveyed channel designs that include the location of the 2x buffer and 4x buffer adjacent to the shellfish leases (22062, 17290, and 19696) are

needed to understand potential direct impacts to the leases. Coordinate with VMRC to provide this necessary information.

Submerged Lands: The project as proposed will require the dredging of 94,000 cubic yards of State-owned bottom material with disposal of the sandy bottom into the Atlantic Ocean. The disposal of this valuable sand resource is not consistent with Virginia's Subaqueous Lands Enforceable Policy. It states “any activity affecting the subaqueous lands, including the taking and use of material from the bottomland, shall be guided by the Commonwealth's General Policy to conserve, develop, and utilize its natural resources, its public lands, and its historical sites and buildings and to protect its atmosphere, lands, and waters from pollution, impairment, or destruction, for the benefit, enjoyment, and general welfare of the people of the Commonwealth”. The dredge material has an approximate market value of between $2.35 and $3.29 million dollars, and should be utilized as nourishment material for the ongoing Wallops Island Shoreline Enhancement Restoration project at the Wallops Flight Facility. Of the five sites in the EA, we recommend the material be placed on the shoreline of Wallops Island. Consistency with Virginia's Subaqueous Lands Enforceable Policy is, therefore, conditioned upon the beneficial use of the 94,000 cubic yards of state owned resource as recommended by the Virginia Institute of Marine Science in their January 27, 2022 EA comments.

Tidal Wetlands: A wetlands board permit with compensatory mitigation will be required from the Accomack County wetlands board for all proposed impacts to tidal wetlands.

Beaches and Coastal Primary Sand Dunes: No impacts to jurisdictional beaches and dunes are proposed; however, as noted in the submerged lands section above, we would recommend that any sandy dredged material be used beneficially. Beaches of the Commonwealth should be given priority consideration as sites for the disposal of that portion of dredged material determined to be suitable for beach nourishment. This is supported by Section 10.1-704 of the Code of Virginia, which states that beaches of the Commonwealth shall be given priority consideration as sites for the disposal of that portion of dredged material determined to be suitable for beach nourishment. This is further supported by VMRC's "Criteria for the Placement of Sandy Dredged Material along Beaches in the Commonwealth," Regulation 4 VAC 20-400-10 ET SEQ.

The use of dredged sandy material from this project as beach nourishment at the south end of the island would offset certain adverse environmental impacts raised by VIMS, the Department of Wildlife Resources (DWR) and The Nature Conservancy associated with past projects (VMRC #18-1590 and #20-1745), and future plans to excavate sandy beach material from the north end of Wallops Island. According to DWR, the beach along the northern segment of Wallops Island supports nesting federally Endangered Piping Plovers and American Oystercatchers, designated a Tier IIa Species of Greatest Conservation Need (SGCN). In addition, this area is believed to provide nesting habitat for state Threatened Wilson's Plovers, federally Threatened Loggerhead Sea Turtles, Diamondbacked Terrapins (Tier ll SGCN), and other species identified in Virginia's Wildlife Action Plan as SGCNs.

Given the cumulative concerns noted above, this project is viewed as not consistent with Virginia's Marine Fisheries and Subaqueous Lands enforceable policies.

Please contact me at (757) 247-2251 or by email at randy.owen@mrc.virginia.gov if you have any questions. Thank you for the opportunity to comment.

Sincerely,

Randy Owen
Chief, Habitat Management Division

RO/cg
HM

Federal Consistency Determination
Wallops Island Northern Development
National Aeronautics and Space Administration Wallops Flight Facility
Accomack County, Virginia

Introduction

The National Aeronautics and Space Administration (NASA) Wallops Flight Facility (WFF) and the Virginia Commercial Space Flight Authority (VCSFA, VA Space) propose to construct a pier for barge access and berthing and to dredge a vessel approach area connecting to the Chincoteague Inlet Federal Channel (**Figures 1 and 2**). Pursuant to Section 307 of the Coastal Zone Management Act (CZMA) of 1972, as amended, and 15 Code of Federal Regulations (CFR) Subpart C, NASA has prepared this Federal Consistency Determination (FCD) to analyze potential effects on Virginia's coastal zone resources from the proposed implementation of onshore and in-water infrastructure improvements on the north end of Wallops Island and adjacent waters (Proposed Action) at WFF in Accomack County, Virginia. Federal actions occurring at WFF that could have reasonably foreseeable effects on coastal zone resources, such as the Proposed Action, must be consistent to the maximum extent practicable with the Enforceable Policies of the Virginia Coastal Zone Management Program (VCP). This FCD represents an analysis of the Proposed Action in light of established VCP Enforceable Policies and Programs, which were recently updated as part of a program change that was approved by the National Oceanic and Atmospheric Administration (NOAA) on October 2, 2020.

NASA is preparing an Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA) of 1969 to analyze the potential effects of the proposed action on the environment. The EA will be tiered from the May 2019 *NASA WFF Site-Wide Programmatic Environmental Impact Statement* (PEIS), in which NASA evaluated the environmental consequences of constructing and operating new facilities and infrastructure at WFF. The analysis presented herein is based on the more extensive analysis provided in the tiered EA. As the Lead Agency, NASA requested the cooperation of the Department of Transportation's Maritime Administration (MARAD) and the United States (U.S.) Army Corps of Engineers (USACE), Norfolk District in preparing the Wallops Island Northern Development (WIND) EA and this FCD, because they possess regulatory authority or specialized expertise pertaining to the Proposed Action. The EA and this FCD are being developed to fulfill each Federal agency's obligations under NEPA and the CZMA. NASA, as the WFF property owner and project proponent, is the lead agency and responsible for ensuring overall compliance with applicable environmental statutes, including NEPA and the CZMA.

Submission of this FCD reflects NASA's and VCSFA's commitment to comply to the maximum extent practicable with VCP Enforceable Policies and Programs. NASA has determined that the effects of the Proposed Action would be less than significant on land and water uses as well as natural resources of the Commonwealth of Virginia's coastal zone and is consistent to the maximum extent practicable with the enforceable policies of the VCP.

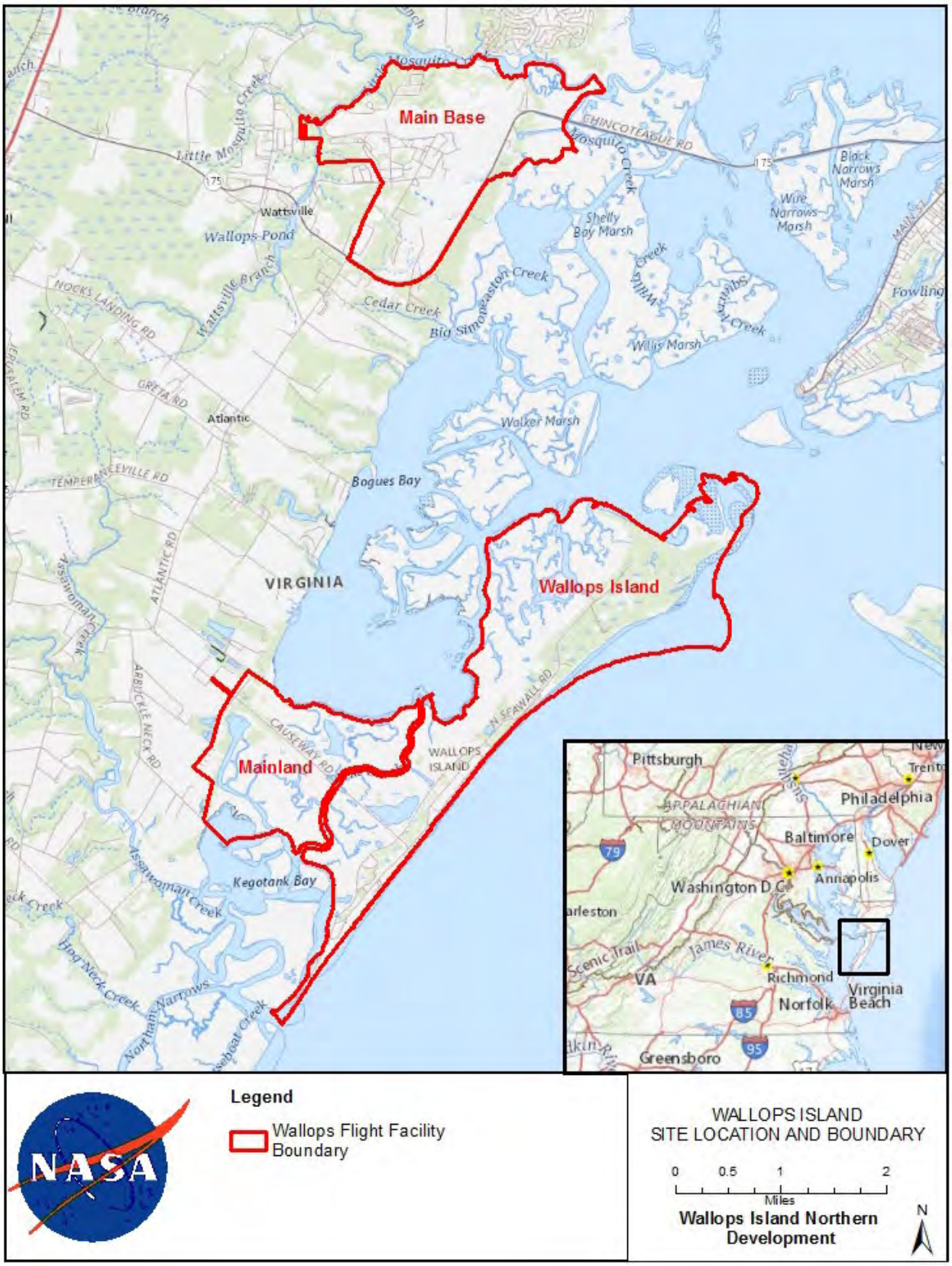

Figure 1. NASA WFF Location Map

Proposed Action

The Proposed Action would establish a new facility at Wallops Island as part of the MARAD M-95 "Marine Highway Project" designed to expand the use of America's navigable waters. The proposed infrastructure developments included in the Proposed Action would provide a port and operations area, including enhanced operational capabilities for NASA and the Mid-Atlantic Regional Spaceport (MARS). As a tenant of WFF, VCSFA owns and operates MARS, which consists of launch pads on the south end of Wallops Island as well as the Unmanned Aerial Systems (UAS) Airstrip and the Payload Processing Facility (PPF) on the north end of Wallops Island. The location of WFF and Wallops Island is shown on **Figure 1**.

Components of the Proposed Action are shown on **Figures 2**, **3**, and **4**, and further described below. Additional information about the Proposed Action and its individual components is provided in the Draft EA, which is being made available for a 30-day public review and comment period concurrently with the Virginia Department of Environmental Quality's (VDEQ) 60-day review of this FCD. The Draft EA is available on NASA WFF's website at: https://code200-external.gsfc.nasa.gov/250-WFF/WIND-EA.

Proposed Action In-Water Components

The MARS Port, including a 398-meter (m) (1,305-foot [ft]) fixed pier and turning basin, would be constructed on (and within the vicinity of) the UAS Airstrip located at the north end of Wallops Island (**Figure 2**). The MARS Port would provide a port and operations area along with associated capabilities for VCSFA, NASA WFF, and other customers. The MARS Port would also serve as a new part of the MARAD M-95 Marine Highway Corridor. Infrastructure (new facilities and improvements to the existing access road, airstrip, and utilities) would likewise be constructed or installed as part of the Proposed Action.

A variety of shallow draft (0.6- to 1.2-m [2- to 4-ft]) manned and unmanned vessels would be serviced by the Port. The major navigational service would be a tug and barge configuration of an approximately 45-m by 12-m (150-ft by 40-ft) deck barge propelled by a tugboat requiring approximately 2 m (8 ft) of draft. The Proposed Action would also include the dredging of a new and existing channel for enhanced vessel approach purposes (**Figure 3**). The new vessel approach channel (red line) would intersect with two Federal waterways, the Chincoteague Inlet Channel (orange line) and the Chincoteague Inlet to Bogues Bay connecting waters (blue line). Ultimately, the proposed channel would have a length of approximately 3,900 m (12,800 ft) and a final depth of 3.7 m (12 ft) below mean lower low water (MLLW). The proposed width of the approach channel (30.5-m [100-ft]) is consistent with the dimensions of the Chincoteague Inlet Federal Channel. Components of the Proposed Action are further described below.

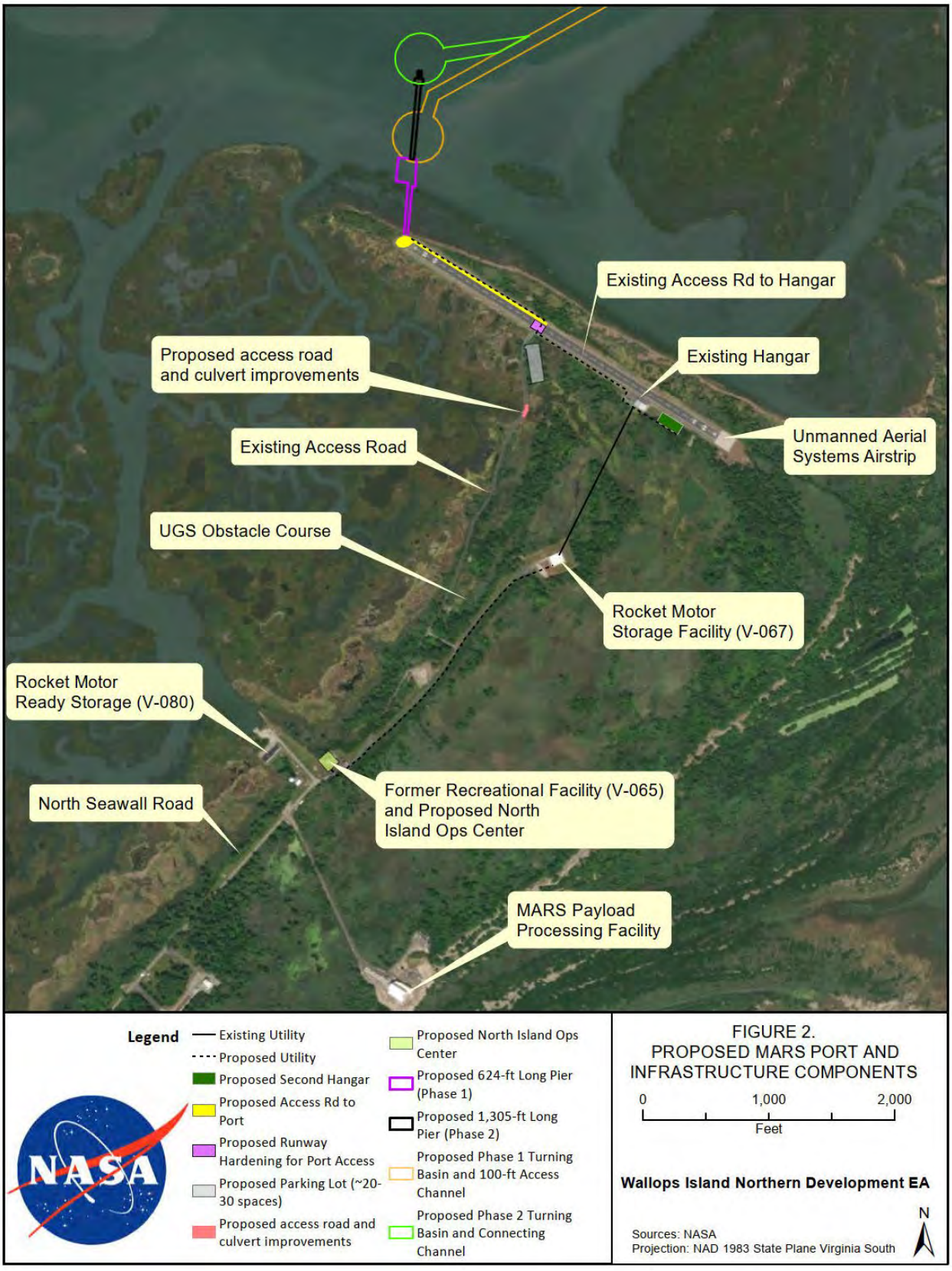

Figure 2. Proposed Mars Port and Infrastructure Components

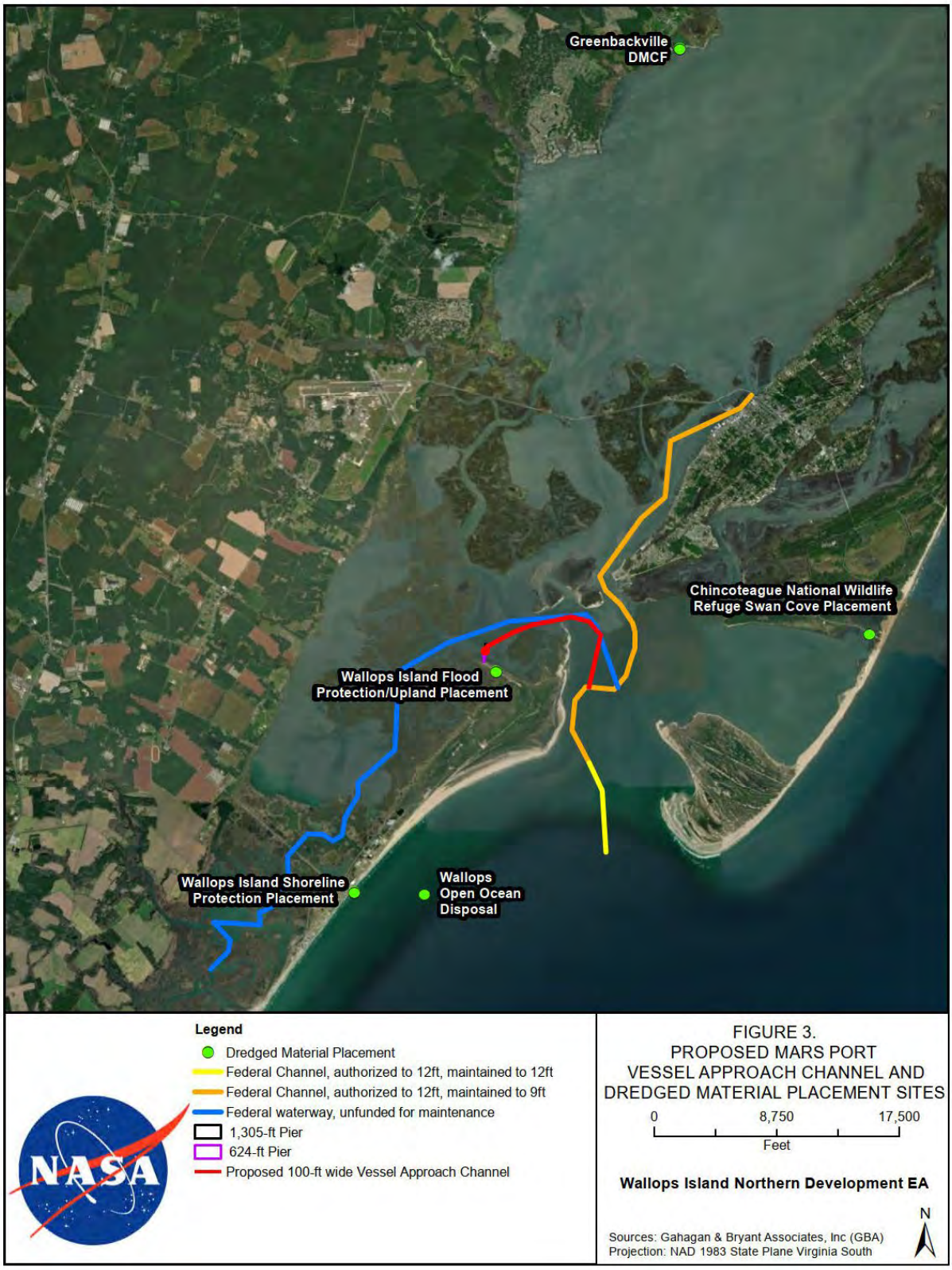

Figure 3. Proposed Mars Port Vessel Approach Channel and Dredged Material Placement Sites

Construction of the pier, dredging activities, and onshore facilities and infrastructure under the Proposed Action would be carried out in three (3) separate phases:

- Phase 1 would be construction of a 190-m (624-ft) long fixed pier, a 61-m (200-ft) radius turning basin (2.7 m [9 ft] deep below MLLW) and dredging of the vessel approach channel to a final depth of 1.5-m to 2.7-m (5-ft to 9-ft) below MLLW (red outline on **Figure 4**);
- Phase 2 would be construction of a 206-m (676-ft) long extension of the fixed pier to a total length of 398 m (1,305 ft) and dredging of a 61-m (200-ft) radius turning basin (located at the end of the pier extension; shaded pink on **Figure 4**) to a final depth of 2.7 m (9 ft) below MLLW; and
- Phase 3 of construction would be additional dredging to a final depth of 3.7 m (12 ft) below MLLW of the turning basin and the vessel approach channel, specifically the portion of the channel from the Phase 2 turning basin to where it meets with the Chincoteague Inlet Federal Channel (shaded blue on **Figure 4**).

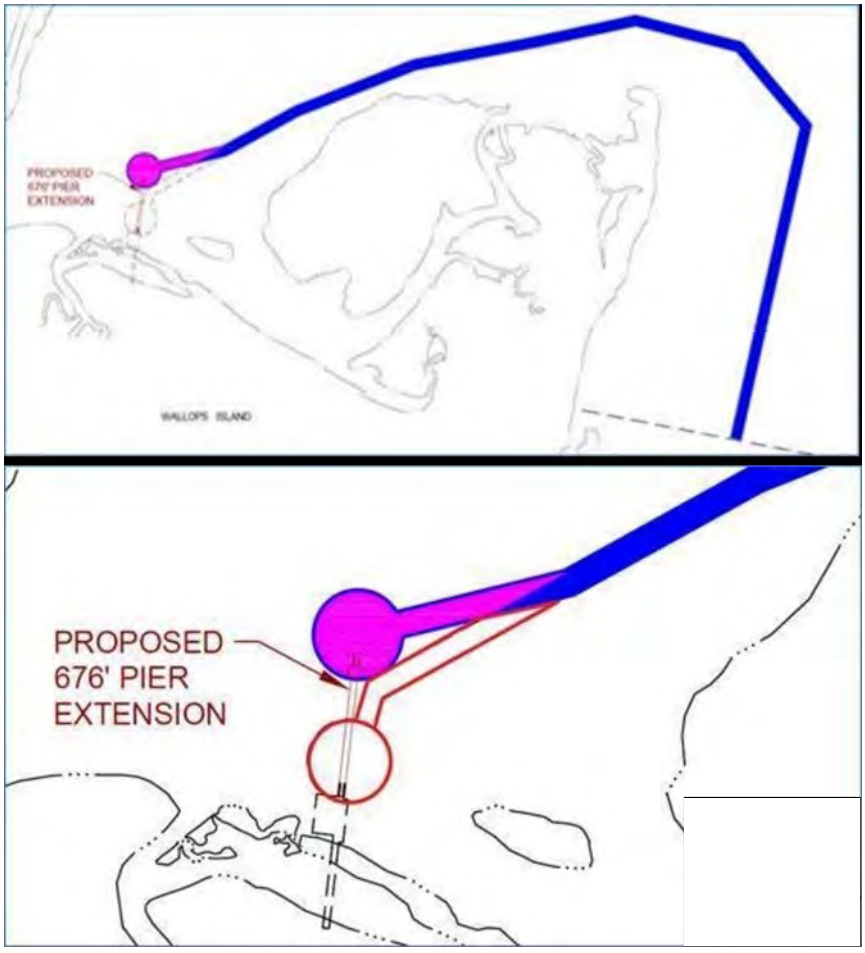

Figure 4. Diagram of Proposed Phased Construction

Estimated dredging volumes for the vessel approach channel and turning basin are provided in **Table 1**. The estimated timeframe for construction of the Proposed Action would have Phase 1 beginning in 2022 and being completed by 2024, with approximately 1 to 2 years between subsequent phases. Additional information about the proposed pier and other port components is provided in Chapter 2 of the Draft EA.

Five potential sites for the placement of dredged material are summarized in **Table 2** and shown on **Figure 3**. Further geotechnical investigation and associated physical and chemical laboratory analysis of sediment samples in the areas to be dredged is ongoing to determine the viability of the placement sites. The results of the geotechnical investigation and analysis is scheduled to be complete in 2021, prior to the dredged material placement. The analysis will also include an evaluation of suitability of reuse of the material for shoreline renourishment.

Table 1. Channel Dimensions and Estimated Dredging Volumes

	Phase 1	**Phase 2**	**Phase 3**
Channel depth	2.7 meters (m) (9 feet [ft]) deep below MLLW	2.7 m (9 ft) deep below MLLW	3.6 m (12 ft) deep below MLLW
Channel length	3,900 m (12,800 ft)	3,600 m (11,800 ft)	3,600 m (11,800 ft)
Channel dredging volume	11,500 cubic meters (m^3) (15,100 cubic yards [yd^3])	0	26,500 m^3 (34,600 yd^3)
Turning Basin dredging volume	31,000 m^3 (40,500 yd^3)	600 m^3 (800 yd^3)	2,500 m^3 (3,200 yd^3)
Total volume per phase	42,500 m3 (55,600 yd^3)	600 m^3 (800 yd^3)	28,900 m^3 (37,800 yd^3)
		Total Volume (Phases 1–3):	**72,000 m3 (94,200 yd^3)**

yd^3 = cubic yards

Table 2. Potential Dredged Material Placement Sites							
Option	**Site**	**Description**	**Sail Distance from Basin[1]**	**Pipe Distance from Basin[2]**	**Sail Distance from Channel**	**Pipeline Distance from Channel**	**Description**
1	Wallops Open Ocean Dredge Material Placement Area	Open water placement site, closer than Lewis Creek or Norfolk Ocean disposal sites	9.8 km (6.1 mi)	--	7.1 km (4.4 mi)	--	This area is located just offshore of Wallops Island with a transportation distance of the dredged material of approximately 7 km (4 nautical mi). Open water placement options typically present the lowest cost dredging option and allow for the widest array of dredging equipment ranging from clamshell dredges to barge mounted excavators supplying dump barges or specially modified deck barges that are towed by tugboats to the dredged material placement site. Open water placement locations are controlled by USACE and a permit would be required for the use of this site.
2	Wallops Island Flood Protection/ Upland Placement	Reuse of material for flood mitigation through upland placement at site identified by NASA	--	853.4 m (2,800 ft)	--	3,669.8 m (12,040 ft)	This option involves the beneficial reuse of material for flood mitigation through upland placement in low lying areas on Wallops Island. For example, there are low lying areas in the vicinity of the culvert crossing the main access road to the UAS Airstrip. This option was evaluated based on having a cutter suction dredge pump the material into this area. This option would also require development of containment measures for the dredged material in the form of containment dikes and the channeling of the effluent and its return into Bogues Bay. This effluent is the water that is used in the dredging process to transport the dredged material in slurry form to the placement location. Other alternatives could include thin layer placement for marsh enhancement in areas a similar distance to the dredging location, or the use of geotubes, or synthetic membranes, for containing the dredged material.

Table 2. Potential Dredged Material Placement Sites							
Option	**Site**	**Description**	**Sail Distance from Basin[1]**	**Pipe Distance from Basin[2]**	**Sail Distance from Channel**	**Pipeline Distance from Channel**	**Description**
3	Greenbackville Dredged Material Containment Facility (DMCF)	Upland DMCF run by USACE, requires both navigation of Chincoteague Channel and pumping on location	18.2 km (11.3 mi)	--	15.3 km (9.5 mi)	198.1 m (650 ft)	The third dredged material placement option identified is the use of the upland DMCF owned and managed by USACE. USACE places material dredged from the upper reaches of the Chincoteague Channel into this DMCF. This option would require using a mechanical dredge to load the dredged material removed from the approach channel into barges. These barges would then be towed approximately 18 km (10 nautical mi) to the DMCF. A specialized hydraulic unloader would be required to discharge the dredged material from the transport barges and pump the material into the DMCF. This option would require USACE to verify that there is sufficient capacity at the placement site for the dredged materials and would not interfere with existing agreements at the site. This option may also require additional permits.
4	Wallops Island Shoreline Protection Placement	Reuse of material for shoreline protection and beach repair	12.1 km (7.5 mi)	--	11 km (6 mi)	--	This option would involve the beneficial reuse of clean, compatible sand from the dredged material to repair and protect areas of the shoreline within the Launch Range area on Wallops Island. If dredged material is determined to be compatible with the current shoreline sand, the material would be placed along the seawall to protect the beach from tidal impacts or ocean overwash from coastal storms such as hurricanes and Nor'easters. This option would require using a mechanical dredge to load the dredged material removed from the approach channel into barges. These barges would then be towed approximately 11 km (6 nautical mi) to the shoreline.

Table 2. Potential Dredged Material Placement Sites							
Option	**Site**	**Description**	**Sail Distance from Basin[1]**	**Pipe Distance from Basin[2]**	**Sail Distance from Channel**	**Pipeline Distance from Channel**	**Description**
							A specialized hydraulic unloader would be required to discharge the dredged material from the transport barges and pump the material onto the placement areas.
5	Chincoteague National Wildlife Refuge Swan Cove Placement	Reuse of material for habitat restoration	-	9 km (5.6 mi)	-	6.9 km (4.3 mi)	This option would involve the beneficial reuse of the dredged material for the Swan Cove Pool Restoration Project located in the Chincoteague National Wildlife Refuge (NWR). If dredged material is determined to be compatible, it would be used by the U.S. Fish and Wildlife Service (USFWS) to create berms and enhance and/or restore currently degraded areas of the estuarine-salt marsh habitat that have been negatively impacted by an under sized culvert restricting sediment deposition and tidal flow. Although USFWS would prefer material with a high proportion of sand, they will also accept dredge material containing high organic matter content. This option was evaluated based on having a cutter suction dredge pump the material to this area. Once pumped, USFWS will assume responsibility for sediment placement and is in the process of securing appropriate permits.

[1]"Sail distance" corresponds to the length of the path via water required to reach the placement site from the centroid of dredging in the proposed turning basin or approach channel, in statute miles.
[2]"Pipe distance" refers to the length of pipe required to reach the placement site from the centroid of dredging or from the anchorage for a vessel loaded with dredged material.

Proposed Action Onshore Components

Onshore facilities and infrastructure that would be constructed or upgraded under the Proposed Action are summarized in **Table 3**. Their proposed locations are shown on **Figure 2**. Proposed upgrades within the scope of this project apply only to existing roads and utilities. No expansion beyond the proposed MARS Port and onshore facilities are anticipated at this time. Any future proposed changes would be addressed in additional NEPA and CZMA documentation.

Table 3. Onshore Proposed Action Components

Facility or Element	Description
Project Support Building	A new, approximately 740-square meter (m^2) (8,000-square foot [ft^2]) building may be constructed on at the site of the former Wallops Employee Morale Association Recreational Facility (V-065) (Old Wallops Beach Lifeboat Station) on the southwest end of the access road to the UAS Airstrip. Once the existing facility is removed or demolished, the new facility may be constructed and would serve as a new North Island Operations Center. The new building would have a maximum height of 12-m (40-ft) to avoid interference with a nearby air surveillance radar.
Second Hangar	A new, approximately 660-m^2 (7,125-ft^2) hangar would be constructed adjacent to the runway, east of the existing UAS Airstrip hangar. The new hangar would be a secure facility to support operations, store vehicles and equipment when not in use, accommodate vehicle maintenance as required, and provide a small meeting area for client usage. The new hangar would have a maximum height of 12-m (40-ft) to avoid interference with a nearby air surveillance radar. This proposed second, secure hangar would provide an additional area for MARS clients without hindering usage of the existing hangar for UAS Airfield operations.
Utility Infrastructure	Electricity, potable water, wastewater, and communications utilities may be extended to the Project Support Building from existing nearby infrastructure. Potable water would be supplied from the elevated north end tank (V-090), which has a 189,271-liter (50,000-gallon) capacity. Potable water supply piping would be placed in existing conduit that runs along North Seawall Road and extends from Building V-067 to the existing hangar at the UAS Airstrip. New conduit for electrical and communication utilities would be extended from the existing hangar to the proposed hangar at the UAS Airstrip. New utility conduit would also be installed along the new port access road to provide electrical and communication utilities to the pier. Wastewater from the hangars may be conveyed to a proposed temporary holding tank where it would be periodically collected and pumped into the NASA wastewater system for treatment.

Table 3. Onshore Proposed Action Components	
Facility or Element	**Description**
Airstrip Lighting	New airstrip lighting meeting applicable Federal Aviation Administration (FAA) airfield standards may be installed at the UAS Airstrip. The lights would be located along the edge of the runway (one white light every 61 m [200 ft]). Lights would only be turned on when required by an airfield operation (i.e., night-time aircraft takeoffs or landings) and turned off when the operation is completed.
Airstrip Access Road Improvements (culvert widening)	The existing access road at the culvert crossing is not wide enough for two-way traffic or to accept trailered loads from the proposed MARS Port. This creates a pinch point and safety/operational hazard. A 40-m (130-ft) segment of the existing paved access road would be widened from 4.5 m (15 ft) to approximately 9 m (30 ft), which would widen the culvert crossing for the drainage channels to Cow Gut. Although the culvert will be longer, the diameter of the culvert will remain the same.
Vehicle Parking Lot	A new parking area with spaces for up to 30 vehicles would be constructed near the northwest intersection of the UAS Airstrip access road and runway. Use of permeable material for the parking lot surface may be a design consideration.
Runway Hardening for Port Access	A 30.5-m (100-ft) wide section of runway would be reinforced to accommodate heavy equipment and vehicles traversing the airfield between the proposed pier and the equipment parking/storage areas.
Access Road to Port	A new asphalt access road would be constructed along the north side of the existing UAS Airstrip from the intersection with the access road to the new MARS Port pier area.

Summary of Proposed Action Construction Activities

Construction of the Proposed Action would involve: (1) construction of the pier components that would make up the MARS Port; (2) dredging of the vessel approach channel, turning basin, and placement of dredged material; and (3) construction or improvement of the proposed onshore facilities and infrastructure.

The estimated timeframe for construction of the Proposed Action would have Phase 1 beginning in 2022 and being completed by 2024, with approximately 1 to 2 years between subsequent phases. It is assumed that construction of all proposed onshore project components and infrastructure would be completed during Phase 1 (although the North Island Operations Center may be constructed at a later date). With two crews (10 persons each), working 5 days per week (10-hour days), construction of the 190-m (624-ft) long pier under Phase 1 would take approximately 12 months to complete and construction of the 206-m (676-ft) long pier extension under Phase 2 (for a total pier length 398 m [1,305 ft]) would take approximately 9.5 months to complete.

Phase 1 dredging activities (turning basin and channel) would take approximately 30 days to complete; Phase 2 dredging (turning basin) would take approximately 7 days, and Phase 3 dredging (turning basin and channel) would take 30 days. Work would be performed 24 hours a day, seven days a week with two crews each working 12-hour shifts.

Typical equipment used during construction would include crane barges, material barges, tugboat, vibratory pile hammer, diesel impact hammer, concrete truck, concrete pump truck, concrete vibrator, generator, welding machines, cutting torches, and various small tools.

Summary of Proposed Action Operational Activities

VCSFA/MARS currently has a facilities team that mows grass once per week, monitors for eagles twice per week during nesting season, periodically removes tree and weed growth, and inspects the infiltration trench and fencing around the Revolutionary War Earthworks. During summer months, a mosquito fogging service truck sprays the Airfield once every 2 weeks. The pier structure would also require quarterly structural inspections.

Potential facility usage associated with the MARS Port is provided in **Table 4**.

Table 4. Potential MARS Port Operations/Facility Usage

Potential Facility Usage	Vessel Type	Quantity Assumptions	Total Barge / Vessel Trips	Phase Associated with Usage
Medium Class ELV 1st Stage (Core) and 2nd stage	Shallow Draft Deck Barge & Inland Pushboat	3 launches per year; Each comes w/ ~4-6 truckloads of parts and equipment plus 2 heavy haulers	3	1
Venture Class ELV	Shallow Draft Deck Barge & Inland Pushboat	Potential for 12 launches per year; 3 trucks per launch	12	1
Venture Class 2 ELV	Shallow Draft Deck Barge & Inland Pushboat	9 launches per year; 1 truck per stage, 3-5 trucks for equipment	9	1
Venture Class Heavy ELV	Deck Barge & 1000-1200 HP Tugboat	3 launches per year, 3 first stage cores per launch w/ 1 truck each plus 3-5 trucks for equipment	3	2
Minotaur Class	Deck Barge & 1000-1200 HP Tugboat	4 launches per year, 3 stage/cores per launch w/ 1 truck each; 3-5 additional trucks for equipment	4	2
Recovery Effort	Shallow Draft Deck Barge & Inland Pushboat	1 per Venture Class ELV launch	12	1

Table 4. Potential MARS Port Operations/Facility Usage				
Potential Facility Usage	**Vessel Type**	**Quantity Assumptions**	**Total Barge / Vessel Trips**	**Phase Associated with Usage**
Autonomous Surface Vehicle (ASV)	Trailered Vessel	1 deployment per month; each deployment has 5-10 vehicles included	12	1
Autonomous Underwater Vehicle (AUV)	Trailered Vessel	1 deployment every other month; each deployment has 5-10 vehicles included	6	1
Miscellaneous Usage	Shallow draft vessel	1 deployment every other month	6	2
Research Usage	Small Research Vessel	1 deployment every 4 months; each deployment has 5-10 vehicles included	3	2
Other Government Research & Testing	Trailered Vessel	1 deployment every other month	12	2
Other Site-wide PEIS Construction/Expansion	Deck Barge & Ocean Tug	2 large/oversized deliveries per year	1	2
Commodity Delivery	Deck Barge & Ocean Tug	16 total barges	16	3
		Total Barge / Vessel Trips	**99**	

Alternatives

NASA is considering three alternatives for implementation of the Proposed Action: the Proposed Action Alternative, which would implement Phases 1, 2, and 3 as described above; Alternative 1, which would consist of the implementation of Phase 1 only; and Alternative 2, which would consist of the implementation of Phases 1 and 2 only. Alternatives 1 and 2 would include the construction and operation of the onshore components described in **Table 3,** although the North Island Operations Center may be constructed at a later date.

The Proposed Action Alternative represents the most extensive set of potential effects on Virginia coastal zone resources and, as such, is the Alternative analyzed in detail in this FCD. The extent, duration, and intensity of potential effects from either Alternative 1 or Alternative 2 would be less relative to the Proposed Action Alternative due to their reduced scope of activities. Therefore, potential effects from the implementation of either Alternative 1 or Alternative 2 would not exceed those of the Proposed Action Alternative and are not addressed in the analysis presented in this FCD.

Enforceable Policies

The Commonwealth of Virginia has developed and implemented a federally approved VCP encompassing twelve enforceable policies, which were updated as part of a program change approved by NOAA on October 2, 2020. The VCP is administered by VDEQ and consists of a network of state agencies and local governments that regulate Virginia's coastal zone lands and resources. **Table 5** summarizes the Proposed Action Alternative's applicability to or consistency with these enforceable policies. The full text of the enforceable policies is provided in the Virginia Federal Consistency Manual prepared by the VDEQ Office of Environmental Impact Review dated October 2020.

Enforceable policies that NASA has determined are not applicable to the Proposed Action Alternative are not addressed further in this FCD. A summary analysis of the Proposed Action Alternative's consistency with the applicable Enforceable Policies follows **Table 5**. This analysis is based on the more detailed analyses presented in the Draft EA for the Proposed Action Alternative.

Table 5. VCP Enforceable Policies Applicability to or Consistency with the Proposed Action

Enforceable Policy	Applicability or Consistency[1]	Rationale if Not Applicable (N/A)
I. Tidal and Non-Tidal Wetlands	Consistent	--
II. Subaqueous Lands	Consistent	--
III. Dunes and Beaches	Consistent	--
IV. Chesapeake Bay Preservation Areas	N/A	The Proposed Action Alternative would not be implemented within or have the potential to affect lands designated as Chesapeake or Atlantic Protection Areas in Accomack County.
V. Marine Fisheries	Consistent	--
VI. Wildlife and Inland Fisheries	Consistent	--
VII. Plant Pests and Noxious Weeds	Consistent	--
VIII. Commonwealth Lands	N/A	The Proposed Action Alternative would not be implemented within or have the potential to affect Commonwealth Lands owned, operated, or otherwise under the jurisdiction of Virginia Department Wildlife Resources (VDWR) and/or Virginia Department of Conservation and Recreation (VDCR).
IX. Point Source Air Pollution	Consistent	--

Table 5. VCP Enforceable Policies Applicability to or Consistency with the Proposed Action		
Enforceable Policy	**Applicability or Consistency[1]**	**Rationale if Not Applicable (N/A)**
X. Point Source Water Pollution	N/A	The Proposed Action Alternative would not involve the establishment or modification of a new or existing point source discharge, respectively, to Virginia waters or asphalt paving within a Volatile Organic Compounds (VOC) Emission Control Area.
XI. Nonpoint Source Water Pollution	Consistent	--
XII. Shoreline Sanitation	Consistent	--
[1]"Consistent" indicates consistent, to the maximum extent practicable, with the Enforceable Policy.		

I. Tidal Wetlands and Non-Tidal Wetlands

***Consistent to the Maximum Extent Practicable*? YES**

Analysis

The Proposed Action Alternative would impact a total of 0.95 hectare (ha) (2.33 acres) of tidal wetlands from the construction of inland support infrastructure including the proposed vehicle parking lot, culvert improvements, port access road, and the approach pier. Of the 0.95 ha (2.33 acres), approximately 0.24 ha (0.59 acres) would be permanently impacted from permanent removal of the affected wetland area, while the remaining 0.71 ha (1.74 acres) would be temporarily impacted from activities such as rutting, soil compaction, vegetation damage from the placement and removal of matting, along with equipment movement and use during construction activities. The Proposed Action Alternative would have no effects on non-tidal wetlands because none are located in the Project Area.

Prior to beginning construction, NASA, VCSFA, and their contractors would obtain applicable permits required under the Clean Water Act (CWA) from USACE, Virginia Marine Resources Commission (VMRC), VDEQ, and/or the Accomack County Wetlands Board. NASA and VCSFA would comply with the monitoring, avoidance, and mitigation requirements specified by these permits. In addition, NASA and VCSFA would restore temporarily impacted tidal wetlands (vegetated and un-vegetated) to pre-construction condition and revegetate to the extent feasible. Consistent with the CWA mitigation final rule, NASA and VCSFA would compensate for permanent impacts to wetlands through wetland mitigation credit purchase, wetland creation, wetland restoration, wetland enhancement, and/or acquisition of wetland credits through an in-lieu fee fund such as the Virginia Aquatic Resources Trust Fund. Additional best management practices (BMPs) would be implemented to reduce impacts on tidal wetlands, which are described further in the Draft EA.

Adherence to the requirements of applicable permitting, BMPs, and restoration and mitigation measures would minimize short-term and long-term effects on tidal wetlands from implementation of the Proposed Action Alternative. Therefore, the Proposed Action Alternative is consistent to the maximum extent practicable with this enforceable policy.

II. Subaqueous Lands

***Consistent to the Maximum Extent Practicable*? YES**

Analysis

The subaqueous bottom of surrounding tidal waters, specifically the Ballast Narrows and Chincoteague Inlet, would be disturbed during proposed construction activities. Construction of the fixed pier and pier extension would require in-water work that would disturb underlying sediment and impact the subaqueous bottom. Dredging activities for the turning basin and vessel access channel would also impact the subaqueous bottom by removing up to approximately 72,000 cubic meters (m^3) (94,200 cubic yards [yd^3]) of dredge material under the Proposed Action Alternative. Operation of the Proposed Action Alternative is not likely to affect or disturb subaqueous lands, except for periodic maintenance dredging activities of the turning basin and access channel.

Disturbance of the subaqueous bottom during both construction and operation maintenance activities may result in sediment suspension and increased turbidity within Ballast Narrows and Chincoteague Inlet. Any effects on the subaqueous bottom would be temporary, and the extent, intensity, and duration would vary throughout the phases of the Proposed Action Alternative. None of the Proposed Action Alternative activities involving disturbance of the subaqueous bottom would permanently disturb shellfish beds or affect their continued viability. It is anticipated that the temporarily disturbed subaqueous bottom areas would return to pre-construction conditions through normal tide cycles and the settling of silt and sediment. Contractors would implement mitigation measures as necessary during construction to avoid and/or minimize impacts, and would incorporate and adhere to applicable BMPs, such as the use of sediment curtains, to minimize effects from subaqueous bottom disturbance. NASA would also obtain and adhere to the requirements of applicable permits issued by the VMRC.

Due to the temporary nature of potential effects on the subaqueous bottom, and through adherence to applicable compliance measures, the Proposed Action Alternative is consistent to the maximum extent practicable with this enforceable policy.

III. Dunes and Beaches

***Consistent to the Maximum Extent Practicable*? YES**

Analysis

No sand dunes or beaches are present within the Project Area and would not be affected by proposed construction or operation activities associated with the Proposed Action Alternative. Depending on which placement site is selected, dredge material could be placed along the sandy

shoreline in the southern portion of Wallops Island to serve as beach replenishment material and to protect the beach from tidal impacts (Placement Option 4: Wallops Island Shoreline Protection Placement). Such placement of dredge materials would physically alter the beach, but only clean and compatible dredged sand would be used to repair the shoreline and would likely have a beneficial effect on beach function and stability. Additional analysis of the dredge material would be performed before selecting a location for placement.

Should dredge material be used for Wallops Island Shoreline Protection, this action would benefit the beach area by restoring and repairing it. Therefore, the Proposed Action Alternative would be consistent to the maximum extent practicable with this enforceable policy.

V. Marine Fisheries

***Consistent to the Maximum Extent Practicable*? YES**

Analysis

Construction of the Proposed Action Alternative would involve in-water work and dredging in Ballast Narrows and Chincoteague Inlet, and during operation, marine vessels would routinely use the surrounding waters and new access channel. Both construction and operation have the potential to affect commercial and recreational marine fisheries by disturbing fish populations and interfering with local fishing and harvesting activities. Various commercial fishing entities are located north of Wallops Island, and likely fish in the waters adjacent to the Project Site, along with recreational fishermen.

The Proposed Action Alternative would have temporary effects on marine fisheries, as in-water construction and dredging activities could disturb fish habitat, disturb or displace individuals, and/or involve temporary closures of waters adjacent to Wallops Island to minimize safety risks to transiting private or commercial vessels in the area. In the long term, vessel traffic associated with port operations may also disturb or displace fish populations, and could alter fishery activity, such as changing where fishing occurs or temporarily closing waters adjacent to Wallops Island to transiting private and commercial vessels to minimize safety risks and avoid vessel conflict. To address these potential effects, NASA and VCSFA would obtain the appropriate permits from VMRC, USACE, and Accomack County that would include measures to avoid adverse effects on aquaculture and ensure that long-term viability of oyster beds would not be affected by dredging activities. Bottom disturbances or disruptions from vessel use of the channel may affect individuals, but would not affect entire species or populations, or permanently degrade habitat. Implementation of the Proposed Action Alternative would not result in an increase in fishing and would have no potential to lead to overfishing.

The Proposed Action Alternative would not permanently impact fisheries management or conservation and, therefore, is consistent to the maximum extent practicable with this enforceable policy.

VI. Wildlife and Inland Fisheries

***Consistent to the Maximum Extent Practicable*? YES**

Analysis

Construction of the Proposed Action Alternative would have minor, short-term effects on terrestrial wildlife, resulting primarily from the removal of habitat as well as disturbance and displacement by construction activities, including associated noise, light, and increased human activity. Mobile or faster-moving species would be anticipated to avoid the Project Area and relocate into areas offering similar habitat in or near the Project Area that would remain undisturbed by project activities. Slower-moving or less-mobile species may be inadvertently injured or destroyed by construction equipment and vehicles, resulting in adverse impacts; however, the number of individuals injured or destroyed during construction activities would be anticipated to remain small. Operation of the Proposed Action Alternative would involve increased vehicle traffic and human activity associated with the proposed MARS Port, which would have the potential to disturb terrestrial wildlife in nearby areas. Generally, common wildlife species displaced by the proposed facilities would be expected to relocate to other areas in and around the Project Area offering similar habitat conditions.

Similarly, aquatic species would experience minor, short-term effects resulting from proposed in-water construction work. Periodic dredging and pier/port construction, including in-water pile driving, is anticipated to cause mobile species to avoid to the area due to the increase in human and vessel activity and noise. Less-mobile species (e.g., benthic organisms) could be inadvertently destroyed by pile driving and/or dredging. In the long-term, increased human and vessel activity, as a result of the Proposed Action Alternative, would likely cause mobile aquatic species to avoid the area. There would be an increased potential for vessel strikes that could result in mortality or injury corresponding to the increased vessel traffic. However, increased vessel traffic would be small in the context of existing vessel traffic in the area. Periodic maintenance dredging of the channels would also have the potential to affect aquatic species, particularly benthic organisms.

Overall, effects on wildlife would primarily occur from habitat disturbance, and mobile wildlife would likely relocate to suitable habitat areas in or near the Project Area that would remain undisturbed by project activities. Effects on wildlife from the Proposed Action Alternative would occur at the individual level and would not prevent or delay the continued propagation of any population, community, or species.

The Project Area provides potential habitat for 18 federally or state-listed species and one species that is a candidate for federal listing. Construction and operation activities associated with the Proposed Action Alternative would not involve the intentional disturbance, harassment, or "take" of any listed species, nor would activities occur in areas of Wallops Island offering suitable nesting or breeding habitat for listed birds, sea turtles, or fish. The effects of the Proposed Action Alternative on listed species are evaluated in detail in concurrence letters submitted to the USFWS

and NOAA Fisheries as part of the informal consultation process in accordance with Section 7 of the Endangered Species Act.

The Proposed Action Alternative would not involve administration of any drug to wildlife, nor does it include any actions related to predatory or undesirable species, or species designated as a nonindigenous aquatic nuisance.

For these reasons, the Proposed Action Alternative is consistent to the maximum extent practicable with this enforceable policy.

VII. Plant Pests and Noxious Weeds

***Consistent to the Maximum Extent Practicable*? YES**

Analysis

Under the Proposed Action Alternative, all temporarily disturbed areas that would not be developed or otherwise built on would be replanted with native vegetation in accordance with NASA WFF and USFWS Wallops National Wildlife Refuge vegetation management policies or maintained in a permeable condition. In accordance with the 2014 *WFF Wallops Island Phragmites Control Plan*, all tracked equipment involved in earth work would be inspected and cleaned to remove any rhizomes and seeds prior to arrival on the construction site. If proposed earth work requiring tracked equipment would occur in an area where *Phragmites* is known to occur, this portion of earthwork would be conducted last, or the equipment would be cleaned prior to use on another portion of the Project Area. Measures designed to prevent the spread of *Phragmites* would also prevent the spread of plant pests and noxious weeds (e.g., mowing of small infestations and restricting construction equipment from areas prone to invasion).

The Proposed Action Alternative would not involve violation of any quarantine established by the Board of Agriculture and Consumer Services or the Commissioner of Agriculture and Consumer Services, nor would it involve the importation of any infested regulated articles that could endanger public health.

Therefore, the Proposed Action Alternative would be consistent to the maximum extent practicable with this enforceable policy.

IX. Point Source Air Pollution

***Consistent to the Maximum Extent Practicable*? YES**

Analysis

Construction activities associated with the Proposed Action Alternative would temporarily generate increased emissions from construction equipment, workers' commuting vehicles, and fugitive dust. Short-term effects on air quality would be minimized by using BMPs such as wetting exposed soils to minimize fugitive dust, minimizing idling equipment and vehicles, and maintaining construction vehicle and equipment exhaust systems in optimal condition. The construction contractor would adhere to applicable air pollution control regulations and BMPs to

minimize air pollution emissions during asphalt paving operations. In the long-term, the Proposed Action Alternative would lead to a reduction in air emissions by removing potentially hazardous and less efficient transportation operations off of roadways.

The location of the Proposed Action Alternative is not within a VOC Emissions Control Area and the area is in attainment for all criteria pollutants regulated by the Clean Air Act. As such, short-term and long-term emissions from the Proposed Action Alternative would have no potential to substantially degrade or change the area's attainment status.

The Proposed Action Alternative would not involve open burning, the establishment of new stationary sources of pollutant emissions, or the construction, reconstruction, relocation, or modification of regulated stationary sources.

For these reasons, the Proposed Action Alternative would be consistent to the maximum extent practicable with this enforceable policy.

XI. Nonpoint Source Water Pollution

***Consistent to the Maximum Extent Practicable*? YES**

Analysis

The Proposed Action Alternative would involve more than 929 m^2 (10,000 ft^2) of land disturbance. The construction contractor would be required to prepare and implement an Erosion and Sediment Control Plan (ESCP) in accordance with the Virginia Erosion and Sediment Control Regulations (9 VAC 25-840-40). Because the Proposed Action would disturb more than 0.4 ha (1 acre), the construction contractor would also obtain coverage under Virginia's General Permit for Discharges of Stormwater from Construction Activities (Construction General Permit [CGP]) in accordance with Virginia Water Quality Standards (9 VAC 25-260-50). Coverage under the CGP would require the construction contractor to prepare and adhere to a site-specific Stormwater Pollution Prevention Plan (SWPPP). Adherence to the requirements of the CGP and the ESCP would manage the quantity and quality of stormwater discharged from land-disturbing activities associated with the Proposed Action and would minimize adverse effects on water quality in receiving water bodies. NASA would review construction and development plans involving land disturbance and would conduct periodic inspections and any necessary enforcement in accordance with the terms of the ESCP, CGP, and SWPPP. In addition, in accordance with Section 438 of the Energy Independence and Security Act of 2007, Low Impact Development measures would be incorporated to the maximum extent feasible to manage and minimize stormwater runoff on-site. Following the completion of construction activities, disturbed areas of the Project Area not built on or otherwise developed would be returned to their pre-development hydrology, to the maximum extent technically feasible. The Proposed Action would not establish new nonpoint sources of water pollution. As such, the Proposed Action would be consistent to the maximum extent practicable with this enforceable policy.

XII. Shoreline Sanitation

Consistent to the Maximum Extent Practicable? N/A

Analysis

Wastewater generated at the proposed onshore facilities may either be conveyed to existing sanitary sewer infrastructure on Wallops Island, or to a temporary holding tank where it would be periodically collected and pumped for treatment into the existing NASA wastewater system. Sewage generated by the Proposed Action at these onshore facilities would ultimately be treated at WFF's existing wastewater treatment plant on the Main Base to meet applicable regulatory criteria prior to discharge. Temporary facilities used during construction may also be used in the short-term; however, these facilities would not be connected to the existing sanitary sewer infrastructure. Any wastewater and sewage generated from construction facilities would likely be collected and transported for treatment off-site. The Proposed Action would neither involve the installation of new septic tanks nor the modification or alternation of existing septic tanks, as none are located on or in the vicinity of the Project Area. Therefore, the Proposed Action would be consistent to the maximum extent practicable with this enforceable policy.

Certification

Based on the analysis presented above, and the more detailed analysis presented in the Draft EA, NASA has determined that the Proposed Action described herein would be consistent with the Enforceable Policies of the VCP. Pursuant to 15 CFR Section 930.41, the VCP has 60 days from the receipt of this document in which to concur with or object to this Consistency Determination, or to request an extension under 15 CFR section 930.41(b). Virginia's concurrence will be presumed if its response is not received by NASA on the 60th day from receipt of this determination. The Commonwealth's response should be sent to:

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