APPENDIX G
FEDERAL CONSISTENCY DETERMINATION

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FEDERAL CONSISTENCY DETERMINATION FOR THE SITE-WIDE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
WALLOPS FLIGHT FACILITY
WALLOPS ISLAND, VA 23337

Introduction

The National Aeronautics and Space Administration (NASA) has prepared a Programmatic Environmental Impact Statement (PEIS) to evaluate the potential environmental impacts from proposed Site-wide projects at NASA's Goddard Space Flight Center Wallops Flight Facility (WFF), Wallops Island, Virginia. The Site-wide PEIS was prepared in accordance with the National Environmental Policy Act of 1969 (NEPA), as amended (42 U.S. Code 4321-4347), the Council on Environmental Quality (CEQ) regulations for implementing NEPA (40 Code of Federal Regulations [CFR] 1500-1508), NASA's regulations for implementing NEPA (14 CFR Subpart 1216.3), and the *NASA Procedural Requirements (NPR) for Implementing NEPA* and *Executive Order (EO) 12114* (NPR 8580.1).

This document provides the Commonwealth of Virginia with NASA's Consistency Determination under Coastal Zone Management Act Section 307(c)(1) and Title 15 CFR Part 930, Subpart C, for implementation of the Proposed Action analyzed in the NASA WFF Site-wide PEIS. The information in this Consistency Determination is provided pursuant to 15 CFR Section 930.39.

NASA requested the cooperation of multiple tenant and partner agencies in the preparation of the Site-wide PEIS. The Federal Aviation Administration, National Oceanic and Atmospheric Administration's National Environmental Satellite Data Information Service, United States (U.S.) Army Corps of Engineers (Norfolk District), U.S. Coast Guard, U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service (USFWS), U.S. Navy Fleet Forces Command, U.S. Navy Naval Sea Systems Command, U. S. Navy Naval Air Systems Command, U.S. Air Force's Space Command/Space and Missile Systems Center, Federal Highway Administration, and the Virginia Commercial Space Flight Authority served as Cooperating Agencies in preparing the Site-wide PEIS and this Consistency Determination, because they possess regulatory authority or specialized expertise pertaining to the Proposed Action. The PEIS is being developed to fulfill each Federal agency's obligations under NEPA and the Coastal Zone Management Act (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.

The Site-wide PEIS encompasses a 20-year planning horizon. The Proposed Action considered the impacts of a number of current and proposed institutional support projects ranging from routine and recurring activities, new construction, demolition, and renovation throughout the installation to include construction of a Commercial Space Terminal, the replacement of the Causeway Bridge, maintenance dredging between the boat docks at the Main Base and Wallops Island, and development of a deep-water

port and operations area on North Wallops Island. .Several of the institutional support projects would directly correlate with new operational missions and activities including the construction and operation of Launch Pad 0-C and Launch Pier 0-D to accommodate larger LVs, smaller launch pads to accommodate Department of Defense (DoD) initiatives, and construction of a Commercial Space Terminal and extension of Runway 04/22 for horizontal launch and landing vehicles in support of the Expanded Space Program. In addition to current operations, the Proposed Action also considered several new operational missions and activities including introduction and expansion of existing DoD programs such as the standard missile rocket (SM-3) and Directed Energy, a new weapons system proposal currently under development comprised of a high energy laser or high power microwave; future opportunities within the Expanded Space Program involving the potential for either horizontal or vertical launch and landing including the ability to return to the launch site of intermediate and heavy class launch vehicles capable of delivering supplies to the International Space Station; and consideration of commercial human spaceflight missions from WFF.

Effects to Resources

NASA has determined that implementing the Site-wide PEIS would affect resources of Virginia in the following manner:

Noise – Construction and transportation activities have the potential to generate temporary increases in noise levels from heavy equipment operations. Temporary localized impacts to marine mammals would occur during Causeway Bridge replacement, barge route maintenance dredging, and dredging for development of the North Wallops Island Deep-water Port and Operations Area; no adverse impacts are anticipated. Noise levels generated during the launch or return of a liquid fueled intermediate class (LFIC) launch vehicle/reusable launch vehicle (LV/RLV) or launch of a solid-fueled heavy class (SFHC) LV would affect a larger land area than current launch activities; however, there would be no increase in the number of occupied structures or estimated populations affected. The potential for a sonic boom during an LV launch or horizontal landing exists; however, no significant noise impacts would be anticipated. No more than 6 LFIC LV/RLVs or 12 SFHC LVs would be authorized in a rolling 12-month period.

Air Quality – Emissions from construction equipment, barge activities (dredging and transport), and new and expanded operational missions and activities are not anticipated to cause long-term adverse impacts on air quality; annual emissions of criteria pollutants would not exceed the 227 metric tons (250 tons) per year comparative threshold and would not result in significant impacts. Operational missions and activities have the potential to incrementally contribute to global levels of greenhouse gases; however, total emissions are anticipated to be insignificant in terms of global levels.

Hazardous Materials, Toxic Substances, and Hazardous Waste – Increased operational missions and activities could result in slight increases of hazardous materials, toxic substances and hazardous waste; however, no adverse impacts would be anticipated since the types of hazardous materials, toxic substances, and hazardous waste would be similar to those used or generated during existing operations at WFF. All hazardous materials, toxic substances and hazardous waste would be managed in accordance

with current and standard procedures.

Health and Safety – Established protocols and protective measures to ensure the health and safety of NASA personnel, contractors, civilians, and the general public would continue for institutional support projects and expanded operational missions and activities. These include adhering to established safety protocols; activation of launch site hazard arcs; issuance of Notice-to-Airmen and Notice to Mariners; activation of Restricted Area Airspace R-6604; U.S. Navy scheduling procedures to prevent potential impacts to personal, commercial, and DoD ships and aircraft; and temporary road closures during LV launches and landings.

Water Resources – NASA has determined that no long-term significant impacts to water resources from either institutional support projects or operational missions and activities would be anticipated. Several projects have the potential to impact wetlands: the Causeway Bridge replacement, barge route maintenance dredging, development of the North Wallops Island Deep-water Port and Operations Area, and construction of Launch Pad 0-C, and Launch Pier 0-D. Up to 2 hectares (5 acres) of tidal wetlands could be disturbed from construction of the new Causeway Bridge. Temporary impacts to wetlands could occur during maintenance dredging by the placement of the dredge pipe crossing wetlands along the route from the dredge to the upland disposal areas. Development of the North Wallops Island Deep-water Port and Operations Area has the potential to disturb tidal and non-tidal wetlands. Pad 0-C construction could impact up to 2 hectares (5 acres) of wetlands; Launch Pier 0-D (creekside) could impact tidal wetlands. All wetland impacts would be avoided to the greatest extent practicable during the design and permitting phase. If potential unavoidable wetland impacts are identified, NASA would implement wetland mitigation to ensure no net loss of wetlands. Additionally, site specific Stormwater Pollution Prevention Plans may be prepared and implemented to further reduce potential impacts from these and other institutional support projects. Wallops Island is located entirely within the 100-year and 500-year floodplains; there is no practicable alternative to avoid development within the floodplain. The functionality of the floodplain on Wallops Island, provided both by the wetlands on the island and the area of the island itself, would not be reduced under the Site-wide proposal.

Land Use and Land Resources – Construction projects would fall within compatible land uses. An increase in the noise and affected land areas associated with the Expanded Space Program would not require a change in land use within WFF boundaries since the launch vehicles would be operated in areas designated for such operations. An increase in noise and affected land areas surrounding WFF would also occur; however, the LV noise at sensitive receptors would not exceed OSHA noise standards that could result in land use changes. USFWS concurs with the determination that the Proposed Action would not be considered a physical or constructive use of surrounding Department of Transportation 4(f) properties. Land resources would be affected by construction activities and from LV exhaust plume; the impact would be limited to a small area adjacent to the launch pad resulting in no long-term or adverse impact.

Vegetation – Ground disturbance on the Main Base would not result in adverse impacts to vegetation; however, ground disturbance on the Mainland and Wallops Island may increase the spread of *Phragmites australis*. NASA has developed various management plans, including a Phragmites Control

Plan, which would be implemented in these areas reducing the potential spread. Tidal wetland vegetation would be affected from the replacement of the Causeway Bridge, barge route maintenance dredging, development of the North Wallops Island Deep-water Port and Operations Area, and construction of Launch Pad 0-C and Launch Pier 0-D (creekside); final design plans would avoid tidal wetland vegetation to the extent practicable. Adverse impacts to vegetation from the larger LVs proposed, would likely occur; however the launch events would be infrequent with impacts likely confined to an area adjacent to the launch pad. No long-term adverse impacts would be anticipated from new or expanded operational missions and activities on Wallops Island.

Terrestrial Wildlife, Special-Status Species and Marine Mammals and Fish – The majority of construction-related projects would not adversely impact wildlife species but the noise, vibration and turbidity generated during the Causeway Bridge replacement, barge route maintenance dredging and dredging for development of the North Wallops Island Deep-water Port and Operations Area, and construction of Launch Pier 0-D (oceanside) may adversely impact marine mammals and fish. However, no-long term impacts would be expected. Land based species would generally be disturbed through noise, vibration, and if near enough, mortality from heat due to rocket fuel combustion generated during LFIC LV and SFHC LV launches; marine mammals and fish would unlikely be affected. NASA consulted with the USFWS regarding potential impacts of Wallops Island's Antares and ongoing and proposed operations on special-status species. These consultations concluded that the ongoing and expanded orbital rocket program at WFF and other ongoing operations and use of the facility, as proposed, may affect, but are not likely to adversely affect the Northern long-eared bat, roseate tern, green sea turtle, leatherback sea turtle, or seabeach amaranth. Additionally, the consultations determined that the proposed and ongoing operations are not likely to jeopardize the continued existence of the piping plover, red knot or loggerhead sea turtle, and is not likely to destroy or adversely modify designated critical habitat. Although, the LFIC LV and SFHC LV are both larger launch vehicles than the Antares, launching of these larger vehicles would have similar impacts to special-status species and marine mammals and fish as vehicles currently launched from WFF.

Airspace Management – NASA's restricted airspace (R-6604 A-E) is comprised of five independent airspace units that may be activated individually or together, as needed, to safely segregate civilian air traffic from the flight testing of unproven and experimental aerial systems, including unmanned aerial systems (UAS) and LVs. NASA would activate only the airspace needed for operations associated with UAS, LVs, and U.S. Navy SM-3 and Directed Energy operations. When not in use, the entire R-6604 airspace unit would be available for all users.

Transportation – NASA would coordinate with Accomack County, the Virginia State Police, and the Virginia Department of Transportation Accomack Residency Office when it is anticipated that an LFIC LV/RLV, SFHC LV, or horizontal launch and landing event has the potential to impact the level of service on area roads; however, the overall impact to the level of service would be short-term and not significant. No adverse impact to rail would be expected. NASA would coordinate with the U.S. Coast Guard and issue Notices to Mariners when it is anticipated that a launch or landing event or in-water

construction for the Causeway Bridge replacement, barge route maintenance dredging, development of the North Wallops Island Deep-water Port and Operations Area, and construction of Launch Pier 0-D (oceanside) has the potential to impact water vessel traffic.

Infrastructure and Utilities – The current utility infrastructure has sufficient capacity. All new construction would adhere to the use of energy and resource efficient green building standards so that any spikes in demand generated during construction activities would be short-term and not adverse. Operational activities would also generate short-term spikes in demand but it is anticipated that no adverse impacts would occur.

Socioeconomics and Environmental Justice – Short-term beneficial impacts to the local economy would be expected during construction periods with longer term positive impacts anticipated from revenues generated during launch events. Long-term positive impacts are anticipated from the increase in personnel required to support new operational missions and activities, especially the Expanded Space Program. Disproportionate impacts to minority or low-income populations or children from institutional support projects or operational missions and activities would not be anticipated.

Visual Resources and Recreation – Institutional support projects and operational missions and activities would be similar in nature to those already occurring at WFF; negligible impacts to visual resources would be anticipated. Minor short-term impacts to boaters and fishermen during the Causeway Bridge replacement project, barge route maintenance dredging, development of the North Wallops Island Deep-water Port and Operations Area, and launch events would be expected.

Cultural Resources – With the exception of the Runway 04/22 extension, no archaeological (below ground or underwater) resources or above-ground historic properties are known to be present within any of the construction project areas. During consultation for the WFF Programmatic Agreement, the Virginia State Historic Preservation Officer concurred with NASA's determination that based upon the distance between the launch range and historic properties, WFF operations would have no impact on historic resources. NASA would continue to implement the WFF Programmatic Agreement and would consult with the Virginia Department of Historic Resources prior to extending Runway 04/22. Likewise, in the event that previously unrecorded historic properties are discovered during project activities, NASA would immediately stop work in the area and contact the Virginia Department of Historic Resources.

Cumulative Impacts – The resources that have been identified as having the potential to experience minor short-term adverse impacts by the cumulative effects of the Proposed Action include **noise** from the Expanded Space Program combined with the U.S. Navy's proposed Electromagnetic Railgun operations and Atlantic Fleet Forces training and testing activities; **air quality** from construction projects on the Main Base, Mainland and Island and new and expanded operational missions and activities; **water resources** from turbidity and erosion during WFF construction activities and from development in Accomack County; and **wetlands** and **terrestrial wildlife** during construction activities. No significant cumulative effects to **special-status species** and **marine mammals and fish** are anticipated with implementation of mitigation and monitoring measures. No cumulative impacts are anticipated on other resources.

Consistency Determination

The Virginia Coastal Resources Management Program contains the following applicable enforceable policies:

- **Fisheries Management**. Administered by Virginia Marine Resources Commission (VMRC) and the Virginia Department of Game and Inland Fisheries (VDGIF), this program stresses the conservation and enhancement of shellfish and finfish resources and the promotion of commercial and recreational fisheries.

  The State Tributyltin (TBT) Regulatory Program is also part of the Fisheries Management program. The TBT program monitors boating activities and boat painting activities to ensure compliance with TBT regulations promulgated pursuant to the amendment. The VMRC, VDGIF, and Virginia Department of Agriculture and Consumer Services share enforcement responsibilities.

- **Subaqueous Lands Management.** Administered by VMRC, this program establishes conditions for granting permits to use state-owned bottomlands.

- **Wetlands Management.** Administered by VMRC, Virginia Department of Environmental Quality (VDEQ), and the Accomack County Wetland Board, the wetlands management program preserves and protects both tidal and non-tidal wetlands.

- **Dunes and Beaches Management.** Administered by VMRC and the Accomack County Wetland Board, the purpose of this program is to prevent the destruction and/or alteration of primary dunes.

- **Non-point Source Water Pollution Control.** Administered by the Virginia Department of Environmental Quality, the Virginia Erosion and Sediment Control Law is intended to minimize 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.

- **Point Source Water Pollution Control.** Administered by the State Water Control Board, the Virginia Pollution Discharge Elimination System and Virginia Pollution Abatement permit programs regulate point source discharges to Virginia's waterways.

- **Shoreline Sanitation.** Administered by the Virginia Department of Health, this program regulates the installation of septic tanks to protect public health and the environment.

- **Point Source Air Pollution Control.** Administered by the State Air Pollution Control Board, this program implements the Federal Clean Air Act through a legally enforceable State Implementation Plan.

- **Coastal Lands Management.** Administered by VDEQ's Office of Ecology and the Chesapeake Bay Local Assistance Department, the Chesapeake Bay Preservation Act guides land development in coastal areas to protect the Chesapeake Bay and its tributaries.

Based upon the following information, data, and analysis, NASA finds that the proposed new institutional support projects and proposed new operational missions and activities evaluated under the Site-wide PEIS are consistent to the maximum extent practicable with the enforceable policies of the Virginia Coastal Resources Management Program. The table below summarizes NASA's analysis supporting this determination.

Virginia Policy	Consistent?	Analysis
Fisheries Management	Yes	There would be short-term site-specific adverse effects on fish habitat and increased levels of turbidity during the Causeway Bridge construction, barge route maintenance dredging, development of the North Wallops Island Deep-water Port and Operations Area, and construction of Launch Pad 0-C and Launch Pier 0-D. The Proposed Action would not violate the provisions outlined in Code of Virginia § 28.2-200 through 28.2-713 and Code of Virginia § 29.1-100 through 29.1-570.
Subaqueous Lands Management	Yes	Public and private oyster beds occur along portions of the maintained barge route and in the area for development of the North Wallops Island Deep-water Port and Operations Area and the Launch Pad 0-C. Dredging and construction in these areas, along with the Causeway Bridge Replacement and Launch Pier 0-D projects, would result in increased turbidity during operations. NASA would obtain any necessary permits required prior to implementing these actions.
Wetlands Management	Yes	Up to 4 hectares (10 acres) of tidal wetlands would be disturbed during the Causeway Bridge construction, barge route maintenance dredging, development of the North Wallops Island Deep-water Port and Operations Area, and construction of Launch Pad 0-C, and Launch Pier 0-D.Any necessary VDEQ, VMRC, and Accomack County Wetland Board permits would be obtained by NASA prior to implementing the action.
Dunes and Beaches Management	Yes	None of the activities under the Proposed Action would impact primary dunes.
Non-point Source Water Pollution Control	Yes	Activities under the Proposed Action have the potential to increase non-point source runoff to the Virginia waters and the Atlantic Ocean. NASA would implement appropriate best management practices to avoid these impacts.
Point Source Water Pollution Control	Yes	Construction of Launch Pad 0-C or Launch Pier 0-D could create new point sources for water pollution. These source would be added to NASA VPDES permit for WFF and all permitted controls would be implemented.
Shoreline Sanitation	Yes	The Proposed Action would not involve the construction of septic tanks.
Point Source Air Pollution Control	Yes	The Proposed Action would not create any new point sources for air pollution. Institutional support projects and operational missions and activities would contribute to the annual air emissions inventory; however, the emissions generated would not violate Federal or Virginia air quality standards.
Coastal Lands Management	Yes	The Proposed Action would not include land development activities that would impact the Chesapeake Bay or its tributaries. Moreover, although Accomack County has adopted the Chesapeake Bay Preservation Act restrictions for its seaside riparian areas, WFF is specifically excluded from this overlay area.

Pursuant to 15 CFR section 930.41, the Virginia Coastal Resources Management Program has 60 days from the receipt of this letter 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:

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