

FINAL RECORD OF DECISION

**Final Site-wide Programmatic Environmental Impact Statement for
Wallops Flight Facility, Virginia**



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

JUNE 2019

RECORD OF DECISION

FINAL SITE-WIDE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT FOR WALLOPS FLIGHT FACILITY, VIRGINIA

Pursuant to the Council on Environmental Quality (CEQ) Regulations (40 CFR §1505.2), the National Aeronautics and Space Administration's (NASA's) regulations for implementing the National Environmental Policy Act (NEPA) (14 CFR Subpart 1216.311), and the NASA NEPA Desk Guide, NASA has prepared this Record of Decision (ROD) for the purpose of formally recording and announcing to the public which of the alternatives considered in the Wallops Flight Facility (WFF) Final Site-wide Programmatic Environmental Impact Statement (PEIS) has been selected for implementation.

A. Background

The Final PEIS has been prepared to evaluate the potential environmental consequences of constructing and operating new facilities and infrastructure at WFF in Accomack County, Virginia for foreseeable actions within a 20-year planning horizon. The PEIS considers a number of institutional support projects and several new operational missions and activities at various stages of conceptual maturity. Future tiered NEPA documents may be prepared for specific actions related to the Site-wide PEIS. The Final PEIS is intended to ensure that NASA is in compliance with applicable environmental statutes as it sets program priorities for future operations and activities.

NASA Goddard Space Flight Center (GSFC) manages WFF, the oldest active launch range in the continental United States (U.S.) and the only rocket testing and launch range owned and operated by NASA. WFF supports aeronautical research; and science, technology, engineering, and math (STEM) education programs by providing other NASA centers and other U.S. government agencies access to resources such as special use (i.e., controlled/restricted) airspace, runways, and launch pads. WFF regularly provides launch support for the emerging commercial launch industry, either directly or through the Mid-Atlantic Regional Spaceport, a commercial launch tenant on Wallops Island.

WFF facilitates a wide array of U.S. Department of Defense (DoD) research, development, testing, and evaluation and training missions, including target and missile launches, and aircraft development. The flight programs and projects conducted by WFF range from unmanned aerial and aqueous systems, manned aircraft, spacecraft, small sounding rockets and suborbital rockets, to unmanned scientific balloons, next generation launch vehicles (LVs), and small- and medium-classed LVs. Many of these programs are conducted from the WFF Research Airport or the WFF Launch Range.

WFF has developed a set of strategic management goals with a focus on providing GSFC's direction for the future. These strategic management goals include:

- Be the Nation's preferred provider of suborbital and small orbital research carriers and mission services.

- Develop and infuse technologies that increase capability and reduce risk or cost of WFF carriers and range systems.
- Conduct and support meaningful science that is appropriate to the carriers, location, special capabilities and partnerships that are available at or through WFF.
- Provide, through partnerships, hands-on authentic experiences in aerospace for students and educators to increase interest in STEM disciplines and careers.
- Provide quality training and leadership development for NASA's workforce, WFF employees, and education stakeholders.
- Provide a workforce and capabilities that can enable WFF and its tenants and partners to be leaders in the field.

The purpose of the proposed action is to continue to meet these goals and increase WFF's ability to support a growing mission base in the areas of civil, commercial, defense, and academic aerospace. A key component of the Proposed Action is to facilitate such growth while still enabling the safe conduct of WFF's historic lines of business. The need for the proposed action is to expand WFF's operational capacities in a manner that supports achievement of GSFC's direction for the future and WFF's strategic management goals in support of providing unique services to NASA, civil and commercial customers, defense, and academia.

In keeping with CEQ's guidance, the Final PEIS outlines and broadly describes actions associated with WFF's proposed institutional support and operational missions and activities. The actions considered in the Site-wide PEIS are at various stages of conceptual maturity. Therefore, the level of discussion, and subsequent impact summary, varies from project to project. In some cases, the level of discussion may be such that the environmental consequences could be adequately considered and an informed decision can be made, eliminating the need for additional NEPA documentation. For others, the actions are described and their potential environmental effects are assessed in fairly general terms. As such, the PEIS can serve as a master NEPA document to which future NEPA compliance documents may be "tiered." That is, having already been addressed at a programmatic level, the action or project can incorporate discussion from the broader PEIS by reference and focus on the issues specific to the subsequent tiered proposal. Ideally, this will serve to expedite the environmental review process of NASA or its Cooperating Agencies and facilitate project approval, funding, and implementation.

B. Introduction to the PEIS

A Notice of Intent (NOI) informing the public of NASA's intent to prepare a PEIS and conduct scoping was published in the *Federal Register* on July 11, 2011. Advertisements were placed in the local newspapers with information regarding the public scoping meeting. A display advertisement was published in the *Eastern Shore News* and *The Daily Times* on July 27, 2011, and in the *Chincoteague Beacon* on July 28, 2011. On July 29, 2011, NASA issued a press release that outlined the proposal, provided details for the public scoping meeting to be held at the NASA WFF Visitor Center on Wallops Island, and solicited public input on the proposal.

Two scoping meetings were conducted on August 3, 2011. The first scoping meeting was held from 1:00 to 3:00 p.m. with regulatory agency representatives (17 in attendance) and the second meeting was held from 6:00 to 8:00 p.m. for the general public (19 in attendance). Each meeting was held in an open house format to encourage discussion and information sharing and to ensure that the attendees had opportunities to speak with representatives of NASA. Attendees were welcomed at the entrance by NASA representatives, asked to sign in, provided a factsheet, and directed to the first of five poster displays. Displays were designed to describe the Proposed Action, present the purpose and need for the Proposed Action, and enhance public understanding of the NEPA process while emphasizing the public's role in shaping the proposal. NASA provided a brief presentation that described WFF's mission and goals, and an overview of the PEIS and the NEPA process.

Following the presentation, attendees were invited to deliver remarks in front of the audience and for the record. A court reporter transcribed the comments from the public. The PEIS scoping period extended from July 11, 2011, to September 2, 2011. A total of 16 comment letters were received during the PEIS scoping period. Commenters included federal, state, and local agencies; non-government organizations; and individual members of the public. Electronic versions of all information from the public meetings were uploaded to the public website https://code200-external.gsfc.nasa.gov/250-wff/site-wide_eis.

The Notice of Availability (NOA) for the Draft Site-wide PEIS was published in the *Federal Register* on May 4, 2018, commencing a 45-day comment period that extended to June 18, 2018. NOA advertisements were placed in the *Eastern Shore News*, *Chincoteague Beacon*, *Eastern Shore Post*, and *The Daily Times*. A public meeting was held at the NASA Wallops Flight Facility Visitor Center on May 23, 2018, from 6:00 to 8:00 p.m. One member of the public attended the meeting. A total of nine comment letters containing approximately 60 comments were received during the comment period. Commenters included federal, state, and local agencies; non-government organizations; and individual members of the public. A table summarizing NASA's response to each comment is included in Appendix I of the Final PEIS. Electronic versions of the Draft PEIS and appendices, as well as all information from the public meeting were uploaded to the public website https://code200-external.gsfc.nasa.gov/250-wff/site-wide_eis. Print copies of the Draft PEIS were made available for review at local public libraries.

The NOA announcing the availability of the Final Site-wide PEIS was published in the *Federal Register* on May 13, 2019, commencing a 30-day waiting period that extended to June 14, 2019. NOA advertisements were placed in the *Eastern Shore News*, *Chincoteague Beacon*, *Eastern Shore Post*, and *The Daily Times*. Electronic versions of the Final PEIS and appendices were uploaded to the public website https://code200-external.gsfc.nasa.gov/250-wff/site-wide_eis. Print copies of the Final PEIS were made available for review at local public libraries.

B.1. Alternatives Considered

NASA considered WFF's current abilities to support its mission in development of realistic alternatives that would enable WFF to support future requirements. Under the Proposed Action, there would be a number of institutional support projects ranging from new construction, demolition, and renovation throughout the installation. In addition to

continuing the existing operational missions, several new operational missions and activities would occur including expansion of DoD programs such as the Navy's standard missile rocket (SM-3); introduction of a new weapons system currently under development comprised of a high energy laser and high power microwave (Directed Energy); future opportunities within the Expanded Space Program involving vertical and horizontal launches and landings, the potential for Liquid Fueled Intermediate Class (LFIC) LVs and Solid Fueled Heavy Class (SFHC) LVs, and consideration of commercial human spaceflight missions from WFF.

Under the No Action Alternative, the activity level of institutional support projects and operational missions and activities at WFF would remain at present levels. Obsolete and inefficient facilities would not be replaced with new, energy efficient facilities and growth would not occur in WFF's historic lines of business.

Two alternatives were considered but eliminated from detailed consideration. These included relocating infrastructure on Wallops Island further inland to a location less susceptible to storm damage and sea-level rise or relocation to other regional sites. Relocating infrastructure on Wallops Island (including launch pads) farther inland or to another location requires consideration of many factors, including the condition and functions of Wallops Island facilities; employee and public safety; interrelationship among Wallops Island, Mainland, and Main Base facilities; and multiple mission support requirements. Since NASA WFF was established in 1945, its location on the Atlantic Ocean has been a critical factor in its continued ability to safely and successfully conduct science, technology, and educational flight projects aboard rockets, balloons, and unmanned aerial systems, by using the broad Atlantic waters for operations. With WFF's controlled airspace and its direct access to the open waters of the surface and subsurface operating area off the Virginia and North Carolina coasts, the locations provides a unique ability for WFF to perform all aspects of its mission (e.g., testing unproven flight vehicles, handling explosive and toxic materials, etc.) that could not be done elsewhere. As such, these alternatives were dismissed because of the potential safety risks such hazardous operations could have to the general public.

B.2. Key Environmental Issues Evaluated

The primary issues raised in scoping included potential impacts to wetlands, special-status species, sea-level rise, and human space flight. Each of these were addressed in the PEIS, along with numerous other environmental topics. The PEIS covered the following resources:

- Noise
- Air quality
- Hazardous materials, toxic substances, and hazardous waste
- Health and safety
- Water resources
- Land use
- Land resources
- Vegetation
- Terrestrial wildlife
- Special-status species

- Marine mammals and fish
- Airspace management
- Transportation
- Infrastructure and utilities
- Socioeconomics
- Environmental justice
- Visual resources and recreation
- Cultural resources

B.3. Environmental Consequences

The impacts from most institutional support projects and operational missions and activities under the Proposed Action would result in temporary, minor adverse impacts on noise, air quality, water resources, vegetation, terrestrial wildlife, special-status species; marine mammals and fish; and visual resources and recreation. Hazardous materials, toxic substances, and hazardous waste would continue to be managed in accordance with current procedures. Vertical and horizontal launches and landings may require temporary road closures. LFIC LVs and SFHC LVs would involve risks to safety similar to previously analyzed rocket launch activities; commercial human spaceflight missions would require new safety processes and procedures. Protective measures would be implemented to ensure risks to personnel and the general public from these operations are minimized. Noise from launch activities that may have adverse effects on architectural resources would be managed in accordance with the WFF Programmatic Agreement developed with Virginia Department of Historic Resources and Advisory Council on Historic Preservation.

Under the No Action Alternative, existing institutional support projects and operational missions and activities would occur in accordance with existing laws and permits. The No Action Alternative would not have any additional impacts on noise; air quality; hazardous materials, toxic substances, and hazardous waste; health and safety; water resources; land use; land resources; vegetation; terrestrial wildlife; special-status species; marine mammals and fish; airspace management; transportation; infrastructure and utilities; socioeconomics; environmental justice; visual resources and recreation; and cultural resources beyond those analyzed in previous WFF NEPA documents.

C. Assessment of the Analysis

The Site-wide PEIS broadly predicts and describes the potential environmental consequences resulting from the Proposed Action and No Action alternatives. The actions considered under the Proposed Action are at various stages of conceptual maturity. There would be a number of direct and indirect adverse impacts, but none that are considered to be significantly adverse.

The Proposed Action is NASA's preferred alternative. Under the Proposed Action, WFF would implement a suite of new construction and demolition projects and new operational missions and activities. The Proposed Action would ensure continued growth at WFF while also preserving the ability to safely conduct its historical baseline of operations.

The environmentally preferred alternative is the No Action Alternative because it would avoid impacts associated with facility construction with the potential to impact wetlands, the

floodplain, and natural habitats. This alternative was not selected because it would not allow for growth in WFF's historic lines of business.

D. Additional Information

The following agencies served as cooperating agencies in preparing the Site-wide PEIS: Federal Aviation Administration, Federal Highway Administration, National Oceanic and Atmospheric Administration National Environmental Satellite Data Information Service, U.S. Army Corps of Engineers, U.S. Coast Guard, U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service, U.S. Navy Naval Air Systems Command, U.S. Navy Naval Sea Systems Command, U.S. Navy U.S. Fleet Forces Command, U.S. Air Force Space Command/Space and Missile Systems Center, and Virginia Commercial Space Flight Authority.

NASA will continue to work closely with its partners at WFF, including state agencies such as Virginia Department of Environmental Quality and Virginia Marine Resources Commission; and local governments and agencies in Accomack County.

E. Mitigation

As presented in Chapter 4 of the Final PEIS, NASA would implement mitigation measures to reduce environmental impacts associated with noise; air quality; hazardous materials, toxic substances, and hazardous waste; health and safety; water resources; land resources; vegetation; special-status species; marine mammals and fish; transportation; and cultural resources. Adaptive management is a tool to help agencies and organizations make better decisions in a context of uncertainty as more information becomes available. Adaptive management utilizes ongoing data collection and analysis to assess and, if necessary, to modify existing processes. The results of project performance and the effectiveness of existing mitigation and monitoring measures could validate existing practices or reveal the need for alterations in project implementation or mitigation techniques. By monitoring and evaluating how measures are working, NASA would ensure that mitigation measures are optimized.

Decision

Based on all of the foregoing, and in consideration of all technical, environmental, and economic factors, NASA has decided to select the Proposed Action, which would allow WFF to support a growing mission base in the areas of civil, commercial, defense, and academic aerospace while also preserving NASA's ability to safely conduct its historical baseline of operations. Since the majority of projects described under the Proposed Action are in various stages of conceptual maturity, as project planning and design details become more developed, further NEPA analysis along with all relevant consultation and permitting will occur prior to initiation.



Daniel J. Tenney
Associate Administrator
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7/2/19

Date