

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

NOTICE: 12-WFF-04

National Environmental Policy Act: North Wallops Island Unmanned Aerial Systems (UAS) Airstrip

AGENCY: National Aeronautics and Space Administration (NASA)

COOPERATING AGENCY: United States (U.S.) Army Corps of Engineers

ACTION: Finding of No Significant Impact (FONSI)

SUMMARY: Pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 U.S. Code 4321, *et seq.*); the Council on Environmental Quality Regulations for Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] §§ 1500 – 1508); and NASA NEPA policy and procedures (14 CFR § 1216, Subpart 1216.3); NASA is issuing this FONSI with respect to its proposal to construct and operate a UAS airstrip on the north end of Wallops Island at NASA Goddard Space Flight Center, Wallops Flight Facility (WFF), Virginia.

ADDRESS: Copies of the final North Wallops Island UAS Airstrip Environmental Assessment (EA) may be viewed at the following locations:

- (a) Island Library, 4077 Main Street, Chincoteague, Virginia 23336 (757-336-3460)
- (b) Eastern Shore Public Library, 23610 Front Street, Accomac, Virginia (757-787-3400)

On the internet at: http://sites.wff.nasa.gov/code250/UAS_FEA.html

A limited number of hard copies of the final EA are available by contacting:

Joel Mitchell
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NASA Wallops Flight Facility, Code 250.W
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FOR FURTHER INFORMATION CONTACT: Joel Mitchell, (757) 824-1127 (phone); (757) 824-1819 (fax); Joel.T.Mitchell@nasa.gov (email)

SUPPLEMENTAL INFORMATION: NASA has reviewed the EA prepared for the construction and operation of the UAS airstrip on the north end of Wallops Island and has concluded that the EA represents an accurate and adequate analysis of the scope and level of associated impacts. NASA hereby incorporates the EA by reference into this FONSI.

Public Involvement

NASA solicited public and agency review and comment on the environmental impacts of the Proposed Action through:

1. Publishing a notice of availability of the draft EA in the Chincoteague Beacon and Eastern Shore News;
2. Making available the draft EA at the Chincoteague Island Library and Eastern Shore Public Library;
3. Publication of the draft EA on the internet;
4. Consultations with federal, state, and local agencies; and
5. Mailing the draft EA directly to interested parties.

Comments received were taken into consideration in the Final EA. Concerns were raised by agencies and organizations about the potential for impacts on a rare plant species, a rare community and non-tidal wetlands. Based on these concerns, NASA further consulted with the concerned parties to identify mutually acceptable mitigation strategies. Consistent with the agency recommendations, NASA prepared a Rare Species and Community Action Plan for Northern Wallops Island, an Invasive Species Management Plan, is developing a North Wallops Island Avian Monitoring Plan, and has redesigned the staging pad for the UAS airstrip to avoid impacting 0.06 hectares (0.15 acres) of wetlands.

Purpose and Need for the Project

The purpose of the Proposed Action is to provide an adequately-sized UAS airstrip that would be capable of supporting the testing and deployment of existing and future UAS and UAS-based scientific instruments at WFF. UAS currently operate from a north-south oriented airstrip on the south end of Wallops Island; however, severe east/west cross winds, strong surf and flooding, and sand wash over during storm events limit UAS tests and UAS-based research opportunities. Additionally, mandatory safety constraints from rocket launch operations at the nearby Mid-Atlantic Regional Spaceport launch pads have further reduced UAS operations. Moreover, the existing airstrip is not large enough to support the next generation of UAS envisioned for regular use at WFF. Construction of a new airstrip on the north end of Wallops Island would alleviate these constraints on UAS operations currently experienced at the south Wallops Island site.

Alternatives Considered

The EA describes the potential impacts from the Proposed Action as well as the No Action alternative. Under the Proposed Action, WFF would construct an asphalt airstrip measuring approximately 900 meters (3,000 feet long [2,500 feet plus an additional 500 feet clear zone]). The width of the airstrip would be 25 meters (75 feet) wide; additional width would be provided by a grass buffer and cleared areas as needed for a clear line of sight for UAS operators. UAS and UAS-based operations would be conducted year round during WFF's normal Air Traffic Control Tower hours (Monday through Friday, 0600 to 1800). Under this proposal, WFF proposes to conduct, on average, four UAS sorties each day for a maximum of 1,040 UAS sortie operations each year. This total would include the transition of UAS flight operations from the existing south Wallops Island UAS airstrip. The number and frequency of operations would be dictated by the type of UAS test and UAS-based research being conducted in a given year. Night operations would be probable but infrequent, taking place under special circumstances (e.g., hurricane monitoring).

Under the No Action alternative, WFF would not construct or operate a UAS airstrip on north Wallops Island. UAS would continue to operate from the south Wallops Island airstrip; however, limitations on operations currently experienced would remain.

In addition to those alternatives analyzed in detail in the EA, NASA also considered both on-site and off-site alternative project locations, however, none were found to adequately meet the purpose and need for the project. At the request of resource agencies, NASA also considered "micro-siting" alternatives to the proposed design, a process that involved shifting the airstrip in multiple directions and distances to determine if such changes could reduce impacts on the rare plant species and community. The outcome of this process indicated that shifting the airstrip to avoid the rare plant and community would increase impacts on high value tidal and non-tidal wetlands. Accordingly, these micro-siting options were dismissed from further study.

SUMMARY OF ENVIRONMENTAL IMPACTS: The potential environmental impacts from implementation of the Proposed Action are summarized below.

Airspace Management: Minor, long-term impacts to airspace management could occur with an increase in UAS operations. UAS operations would continue to occur in WFFs restricted airspace, R-6604A/B and in Warning Area W-386. Conditions under which civilian pilots and general aviators need to request permission to enter R-6604A/B or W-386 when the airspace is active would remain unchanged.

Safety: UAS operations present potential ground or flight safety risks; however, with both an excellent safety record and the continued adherence to the WFF pre-flight risk assessment

process, including the establishment of mandatory safety buffers between UAS activities and people, aircraft, and property, the potential for adverse safety impacts would be very minor.

Noise: Minor, short-term impacts to the noise environment could occur during construction activities. Sound exposure levels could exceed background levels under the UAS flight track and near the airstrip, representing a minor, long-term impact, however sound levels would not be substantially different from those sound levels currently experienced at the project site.

Biological Resources: Minor, short-term and long-term impacts to biological resources would be anticipated under the Proposed Action. The introduction of new noise from airstrip construction and UAS overflight operations would be anticipated to startle wildlife. Construction occurring during breeding seasons (for most species, spring through mid-summer) would be the most disruptive to both terrestrial and avian species, as it could interfere with courtship and nesting activities. However, the extent of potential effects is limited, and the duration of construction would not span more than one breeding season; therefore impacts would not be substantial.

Minor, long-term impacts to upland and non-tidal wetland communities would occur. Approximately 3.26 hectares (ha) (8.05 acres [ac]) of upland vegetation would be cleared resulting in minor, long-term impacts; however, the loss of habitat would not adversely impact wildlife species abundance or population sustainability as equivalent habitat types are prevalent adjacent to the project site and elsewhere on Wallops Island. A site-specific Invasive Species Management Plan has been prepared to address principally the non-native invasive species common reed (*Phragmites australis*). Roughly 0.92 ha (2.28ac) of non-tidal wetlands would be filled; the Proposed Action would affect no tidal wetlands.

NASA consulted with NOAA Fisheries Service regarding potential impacts on Essential Fish Habitat (EFH); the agency concurred with NASA's determination that the project would not significantly affect EFH.

Construction would remove approximately 0.93 ha (2.3 ac) of maritime dune woodland; this ecosystem is considered rare by the Commonwealth of Virginia. Florida thoroughwort (*Eupatorium anomalum*), a plant ranked locally and globally as vulnerable, is found both within and outside the project footprint; the area within the footprint would be cleared. To address this concern, NASA consulted with the Virginia Department of Conservation and Recreation and prepared both a Rare Species and Community Action Plan for Northern Wallops Island and an Invasive Species Management Plan. The plans include mutually acceptable measures to protect the remaining Florida thoroughwort and Maritime Dune Woodland community during and after construction.

NASA consulted with the U.S. Fish and Wildlife Service (USFWS) regarding potential effects of the project on federally listed species. USFWS concurred with NASA's determination that the project would not likely adversely affect piping plover (*Charadrius melodus*) provided that at least a 300 meter (1,000 foot) horizontal and vertical "no-fly" buffer is established around all active nests. USFWS also found that it would be unlikely for the project to adversely affect nesting loggerhead sea turtles (*Caretta caretta*) provided that airstrip and UAS lighting is kept to a minimum and that UAS flights over nests would be redirected or suspended until nesting activity has ceased or nestlings have emerged. The project would have no effect on other federally listed species in Accomack County.

A bald eagle nest is located approximately 215 m (700 ft) from the east end of the proposed UAS airstrip; NASA would employ a 200 m (660 ft) buffer around the eagle nest within which no clearing or construction activities would occur. The establishment of such a buffer is consistent with recommendations of the National Bald Eagle Management Guidelines.

NASA has committed to developing and implementing monitoring plans to assess the impact of UAS operations on avian behavior. As such, NASA will consult with USFWS and Virginia Department of Game and Inland Fisheries in developing a protocol for monitoring the effects of UAS overflights on all federally listed and selected non-listed avian species adjacent to the airstrip.

Topography and Soils: Localized and very minor impacts to the topography from grading and fill activities could occur. Spill or leaks from construction vehicles and later from UAS refueling or personnel vehicles could adversely affect soils; site-specific best management practices addressing spill prevention and control measures would be implemented.

Water Resources: All activities would occur within Virginia's Coastal Zone Management area. NASA has determined that the Proposed Action is consistent with the enforceable policies of the Coastal Zone Management Program; the Virginia Department of Environmental Quality (VDEQ) concurred with NASA's determination.

During construction, NASA would ensure that its contractors strictly adhere to the requirements of the Virginia Stormwater Management Program to ensure minimal impact to adjacent surface waters. To mitigate the long-term effects of stormwater runoff on aquatic resources, NASA would incorporate an infiltration trench into the project design.

The project would be constructed within the 100-year floodplain and minor, long-term impacts to wetlands would occur; approximately 0.92 ha (2.28 ac) of non-tidal wetlands would be filled. Accordingly, NASA has ensured that the project complies with Executive Order 11988, *Floodplain Management*, and 14 CFR 1216.2 (NASA Regulations on Floodplain and Wetland

Management) to the maximum extent possible. NASA would obtain the necessary permits to secure authorization for wetland impacts and to identify appropriate compensatory mitigation measures. In parallel with preparing the EA, NASA consulted with the U.S. Army Corps of Engineers, the VDEQ, and The Nature Conservancy in Virginia for use of the Virginia Aquatic Resources Trust Fund for wetland mitigation. Functionality of the floodplain would not be measurably affected by the Proposed Action.

Cultural and Traditional Resources: No impacts are anticipated to archaeological site 44AC0089 (Revolutionary War earthworks) with implementation of avoidance and mitigation measures approved by the Virginia Department of Historic Resources. No impacts are anticipated to architectural resources or traditional cultural properties.

Land Use, Visual, and Recreation Resources: No adverse impact to land use under the current designation would occur. Minor adverse impacts to visual resources would occur with the change in the viewshed; however, natural vegetation along the beachfront and tidal wetlands would shield much of the airstrip from view. No impact to recreation resources would occur from implementing the Proposed Action.

Air Quality: Negligible impacts to air quality from construction and operational activities would occur; annual emissions would not exceed the Clean Air Act's Major Source Threshold of 227 tonnes (250 tons) per year for any criteria pollutant. Greenhouse gas emissions would remain far below the U.S. Environmental Protection Agency's reporting threshold of 25,000 tonnes (27,500 tons) per year.

Hazardous Materials, Hazardous Systems, and Hazardous Waste Management: The potential for minor adverse impacts exists due to the use of hazardous materials during construction and UAS flight; however, the impacts would be localized and measures to ensure the safety of people and the environment would be implemented. During construction activities, NASA or the U.S. Army Corps of Engineers would provide personnel with education and oversight on the proper procedures to follow should Munitions and Explosives of Concern be discovered. Hazardous waste generated at the site would be managed in compliance with federal, state, and local regulations.

Socioeconomics: Minor, short-term positive impacts to the local economy could occur during the construction phase. Minor long-term positive impacts to the local economy would occur each year from the purchase of food, supplies, and lodging by research scientists and students conducting UAS operations at WFF.

Transportation: Minor, short-term adverse impacts to the local area roads from construction traffic would be anticipated. Vehicular traffic from UAS operations would be expected to

increase under the Proposed Action; however, the impact to transportation resources would be negligible.

Cumulative Effects: Minor cumulative impacts would be expected due to loss of upland vegetation and non-tidal wetlands. Mitigation would be provided to compensate for all wetland losses.

Conclusion: WFF has identified no other issues of potential environmental concern. Based on the findings in the final EA for the North Wallops Island UAS Airstrip, and review of underlying reference documents, NASA has determined that the environmental impacts associated with the Proposed Action will not individually or cumulatively have a significant impact on the quality of the human environment. Therefore, an environmental impact statement will not be required.



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29 JUNE 2012

Date