What is the Proposed Action?

The EA evaluated the potential environmental impacts from renourishing the beach along the Wallops Island shoreline infrastructure protection area (project area). Before the renourishment, NASA may construct a series of parallel nearshore breakwater structures that would reduce the intensity of wave action and slow sediment transport.

Alternatives Evaluated

Several alternative actions were evaluated in the EA. All Alternatives would include the placement of approximately 1.3 million cubic yards of sand material in the project area and dune grasses would be planted along the renourished dune. If work were conducted between April and September, NASA would ensure that the work site and adjacent areas would be surveyed for nesting birds and sea turtles by a biological monitor on a daily basis.

Alternative 1 would use sand from the existing beach at the northern end of Wallops Island, which has experienced significant accretion from longshore transport from the project area, to renourish the beach. Sand would be removed (outside of protected species nesting season) using a pan excavator, moved by dump truck to the project area, and spread using bulldozers.

Alternative 2 would use material dredged from the offshore outer continental shelf Unnamed Shoal A. Trailing suction hopper dredges would connect to a submerged pipeline to discharge dredged material as a sand/water slurry that would be pumped through the pipeline to the beach and graded using bulldozers.

Alternative 3 would use sand from either the north Wallops Island beach or from offshore Unnamed Shoal A as described for Alternatives 1 and 2. Additionally, a series of rubble mound breakwaters would be constructed approximately 200 feet offshore. Nearshore breakwaters reduce the amount of storm related wave energy reaching upland areas and slow the rate of predominantly northward longshore sediment transport, increasing the longevity of a beach fill project.

The No Action Alternative, required in National Environmental Policy Act analyses, serves as a baseline for comparing impacts of the Proposed Action. The No Action Alternative for this EA means that NASA would not restore the Wallops Island shoreline infrastructure protection area beach and dune system to their full functionality or construct nearshore breakwater structures.

Environmental Impacts and Permitting

The NASA WFF Shoreline Enhancement and Restoration Project EA analyzed the potential effects of the proposed action alternatives on the following resources:

Coastal Geology
Water Quality
Coastal Zone Management
Air Quality
Noise
Benthos
Wildlife
Fisheries and Essential Fish Habitat
Marine Mammals
Special Status Species
Cultural Resources
Recreation

The effects of past, present, and reasonable foreseeable future actions were analyzed on the resources in **bold.**

A number of permits and consultations are required for the project. Some are ongoing at this time but will be completed before publication of the Final EA. These include:

- Federal Coastal Zone Consistency Determination from Virginia Department of Environmental Quality
- Essential Fish Habitat Consultation with National Marine Fisheries Service (NMFS)
- Marine Mammal Protection Act Consultation with NMFS
- Endangered Species Act Consultation with NMFS and US Fish and Wildlife Service
- National Historic Preservation Act Consultation with Virginia State Historic Preservation Office
- Clean Water Act Individual Permit from US Army Corps of Engineers, Virginia Marine Resource Commission, and Accomack County Wetlands Board

Wallops Flight Facility Shoreline Enhancement and Restoration Project Environmental Assessment

FACT SHEET

The National Aeronautics and Space Administration (NASA) Goddard Space Flight Center's Wallops Flight Facility (WFF) in conjunction with the U.S. Army Corps of Engineers (USACE) and the Bureau of Ocean Energy Management (BOEM) prepared an Environmental Assessment (EA) to evaluate the impacts of renourishing the shoreline infrastructure protection area adjacent to NASA's Wallops Island launch range.

Why did WFF Need to Prepare an EA?

The project is needed because the shoreline beach berm and dune system, established to protect NASA's Wallops Island launch range infrastructure, has been eroded through storm wind and wave damage. This beach in this area was renourished in 2012 and 2014 using sand from an offshore shoal. Since the last renourishment, the beach adjacent to WFF's launch infrastructure experienced substantial sand loss from Hurricane Joaquin in 2015 and Winter Storms Jonas and Riley in 2016 and 2018. Therefore, the existing beach cannot provide the level of storm damage reduction for which it was originally designed.

The constructed beach system has served its intended purpose of reducing damage to the range assets. However, a notable portion of sand has been relocated by storm winds and waves with a majority of this sand volume transported to the north end of Wallops Island. The effects of storms are most apparent within the southern half of Wallops Island, where the majority of the most critical launch assets are located. Within this area, the seaward half of the beach berm has been lowered by 3 feet or more. As such, the beach berm and dune system can no longer provide the level of storm damage reduction to which it was originally intended and without being restored to regain full functionality.

The Draft EA evaluates the environmental consequences of a range of reasonable alternatives that would restore the Wallops Island shoreline infrastructure protection area in order to reduce the potential for damage to, or loss of, NASA, U.S. Navy, and Virginia Commercial Spaceflight Authority's Mid-Atlantic Regional Spaceport assets on Wallops Island from wave impacts associated with storm events.

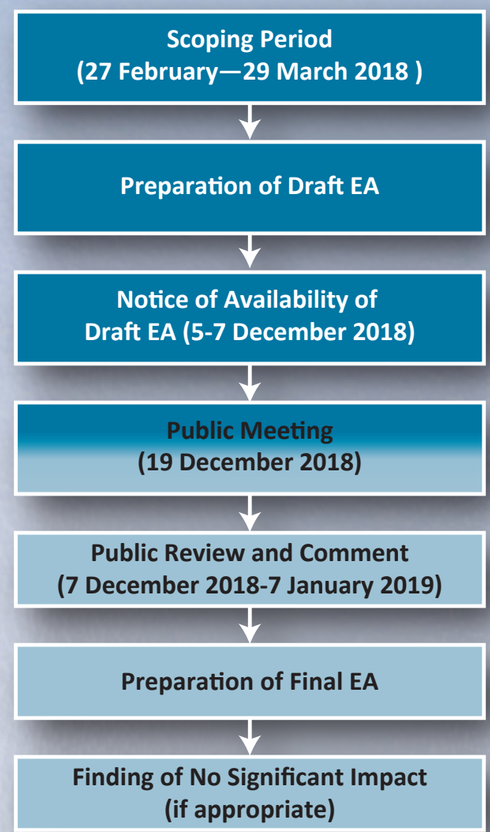
The U.S. Department of Interior Bureau of Ocean Energy Management (BOEM) and US Army Corps of Engineers (USACE) Norfolk District are cooperating agencies with NASA in preparation of this EA. NASA is serving as the lead agency.

The National Environment Policy Act

The National Environmental Policy Act (NEPA) establishes a framework for considering the scope of environmental issues and concerns early in the Federal decision making process. Public involvement is an essential part of the process. Through involving the public and completing detailed environmental analysis, the NEPA process helps the decision-maker arrive at the best possible informed decision.

During the Scoping Period, NASA sought input and suggestions from the public on proposed activities to be addressed in the EA. Following data collection and research, the potential effects of proposed action on resources were analyzed and the type and extent of impacts was identified.

The Draft Shoreline Enhancement and Restoration Project EA has been made available for public view. WFF is seeking public comments on the analysis and findings presented in the Draft EA during the 30-day public comment period. Written comments will be accepted throughout the public comment period. Responses to relevant comments on the Draft EA will be included in the preparation of the Final EA.



How Can You Be Involved?

Your involvement in the decision-making process is important to NASA. There are a number of ways to submit a comment on the Draft EA:

1. Fill out a comment form at the public meeting and give it to a NASA representative
2. Visit the project website:
   https://sites.wff.nasa.gov/code250/Tiered_Shoreline_Enhancement_and_Restoration_EA.html
3. Mail, email, or fax your comments:

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To ensure consideration in the Final EA, please provide comments no later than **January 7, 2019**