

## Merritt Island National Wildlife Refuge

# NEPA Analysis of the Proposed Shiloh Launch Complex

### Introduction

Space Florida is proposing a private launch facility in the Shiloh area, which is on the National Aeronautics and Space Administration's (NASA's) Kennedy Space Center (KSC) and Merritt Island National Wildlife Refuge (NWR). The Federal Aviation Administration (FAA) is preparing an Environment Impact Statement (EIS) to evaluate the potential environmental impacts of the construction and operation of the proposed Shiloh Launch Complex. This proposed project would include vertical launch facilities and associated space vehicle processing, launch, and recovery operations on approximately 200 acres of the Merritt Island NWR. The proposed project would consist of one contiguous parcel, or two separate parcels, totaling no more than 200 gross acres. Up to 12 launches per year for each developed pad (for a total of up to 24 launches) and static on-pad engine firings would be planned for this proposed launch complex.



*Pine Flatwoods in the Shiloh area, credit USFWS/Jim Lyon*

### Background

The Shiloh area is part of Merritt Island NWR, which is managed by the U.S. Fish and Wildlife Service (Service) and was established in 1963 by agreement with NASA to manage the nonoperational areas of KSC for migratory birds and other wildlife. The refuge totals 140,000 acres with 34,000 acres co-managed with the National Park Service (NPS) as part of Canaveral National Seashore. More than one million people annually visit the refuge.

The Shiloh area is two miles north of Haulover Canal and includes a contiguous landscape containing a diversity of habitats with little infrastructure. Primarily consisting of hardwood hammocks, wetland forest, and coastal scrub, the area has high value for a wide variety of wildlife species. Archeological resources also occur in the vicinity, including significant and complex pre-Columbian and colonial sites, including the 18th century Elliott Plantation.

### U.S. Fish and Wildlife Service EIS Participation

The Service has multiple roles in relation to the EIS for the proposed Shiloh Launch Complex, including wildlife and habitat management, statutory and trust responsibilities, and as a cooperating agency.

At Merritt Island NWR, the Service has an interest in wildlife and habitat management activities on, adjacent to, and potentially impacted by the proposed project.

Beyond the refuge, the Service also has statutory and trust responsibilities related to this proposed project. As the FAA prepares the EIS, the agency will consult with the Service regarding the Endangered Species Act, Migratory Bird Treaty Act, Bald and Golden Eagle Protection Act, Section 106 of the National Historic Preservation Act, National Wildlife Refuge System Act, Fish and Wildlife Coordination Act, Section 4(f) of the Department of Transportation Act, and the Marine Mammal Protection Act.

The Service, U.S. Army Corps of Engineers, NASA, and the NPS are cooperating agencies with FAA on the EIS to analyze the proposed Shiloh Launch Complex. As a cooperating agency, the Service will have an increased level of collaboration and can help prepare, review, and comment on internal, preliminary draft documents.



*Bald eagle, credit © Jim Lyon*

## NEPA Alternatives

Under the National Environmental Policy Act, the Federal Aviation Administration is required to evaluate the environmental impacts of the proposed project and “rigorously explore and objectively evaluate all reasonable alternatives,” including the no action alternative.

As a cooperator, the Service has provided the Federal Aviation Administration with concerns about the proposed project. The Service believes that potentially unavoidable effects of the proposed project would be very difficult to mitigate. This is due to the potential adverse impacts of the proposed project on public use, as well as potential impacts to plants and wildlife, including federally-listed endangered, threatened, and candidate species, migratory birds, wetlands, and cultural resources.

For these and other reasons, the Service has recommended that the Federal Aviation Administration consider and evaluate not only the proposed project site, but alternative sites as well.

Constructing and operating a commercial launch facility on a developed area within either the Center’s security area or the Cape Canaveral Air Force Station could enhance the utilization of existing facilities, preserve the existing NASA buffer zone, and avoid adverse impacts to natural and cultural resources and visitors. The Service is willing to assist the Federal Aviation Administration as it engages this process.

## Direct, Indirect, and Cumulative Impacts

In addition to considering and evaluating reasonable alternatives in its Environmental Impact Statement, the Federal Aviation Administration also must address the direct, indirect, and cumulative impacts of the proposed project to the human environment, including natural resources, cultural resources, and public use and access.

## Summary

The proposed Shiloh Launch Complex could have many diverse direct and indirect impacts. Potential habitat impacts could include habitat loss, habitat degradation, and creation of barriers or conditions that result in loss of habitat value for fish, wildlife, and plant species; mitigation may be able to address potential impacts.

Space Florida’s application for a spaceport license should be rigorously analyzed and a wide-range of reasonable alternatives to the project as proposed and sited should be considered that would minimize, if not preclude, environmental impacts.

In the EIS, the FAA should consider the impacts of a catastrophic event in relation to operation of the proposed Shiloh Launch Complex in its analysis and develop clear contingencies to ameliorate short- and long-term environmental impacts from such incidents.

## U.S. Fish and Wildlife Service Mission

The mission of the U.S. Fish and Wildlife Service is working with others to conserve, protect, and enhance fish, wildlife, plants, and their habitats for the continuing benefit of the American people.

## National Wildlife Refuge System Mission

The mission of the National Wildlife Refuge System is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans.

<http://www.fws.gov/merrittisland/>

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Existing launch sites at Kennedy Space Center and Cape Canaveral Air Force Station

