

Merritt Island National Wildlife Refuge

Proposed Shiloh Launch Complex; Potential Issues

Introduction

The U.S. Fish and Wildlife Service (Service) has already identified multiple potential issues related to the proposed Shiloh Launch Complex, including wildlife, habitat, wetlands, fisheries resources, cultural resources, recreational use, and operations at the Merritt Island National Wildlife Refuge (NWR). Mitigation may, however, be able to address these issues.

Overview of Natural Resource Issues

Upland, wetland, and coastal scrub habitat and its wildlife could be destroyed, degraded, or displaced during construction of proposed launch pads, access roads, and utility right-of-ways, and during launch operations. A catastrophic event could have severe long-term impacts on refuge resources.



Pintail ducks, credit © Jim Lyon

Rocket payloads are highly sensitive to smoke and particulate matter. A typical launch requires a five-mile burn restriction for 14-21 days prior to planned launches. Under the proposal, potential launch-related prescribed burn restrictions could adversely impact management of habitat for fire-dependent species and increase fuel loads for wildfires.



Bald eagle nest, credit NASA/Russ Lowers

Bald Eagles

The proposed project is less than two miles from nine bald eagle nesting territories. The disturbance from the construction of space launch facilities and the supporting infrastructure and operation of the launch facilities may cause eagles to abandon their nests or nesting territories.

Threatened and Endangered Species

Sixteen federally-listed threatened or endangered species could be impacted by the construction and operation of the

proposed launch complex, including: Florida scrub-jay, eastern indigo snake, piping plover, roseate tern, Southeastern beach mouse, Atlantic salt marsh snake, loggerhead sea turtle, green sea turtle, leatherback sea turtle, Kemp's ridley sea turtle, hawksbill sea turtle, West Indian manatee, wood stork, smalltooth sawfish, shortnose sturgeon, and Atlantic sturgeon.



Florida scrub-jay, credit USFWS/Jim Lyon



Fire management, credit USFWS/Jim Lyon

Cultural Resources

Construction and operation of the proposed launch site could adversely impact Native American and historic period archeological sites. Cultural resources in the area include Native American burial mounds and a shell midden, a British sugar plantation, two slave villages, and an African American cemetery from the Clifton community.

Wetlands and Lagoon

The proposed launch site is adjacent to the Indian River Lagoon, which is North America's most diverse estuary with more than 685 species of fish, 370 species of birds, 2,100 species of plants, and 2,200 species of animals. The Indian River Lagoon system is designated an estuary of national significance. The potential additive adverse impacts of the proposed project are of particular concern given that the Indian River Lagoon and Mosquito Lagoon are currently under stress from several years of algal blooms.

Public Access

Merritt Island NWR receives approximately 1.2 million visitors annually, of which an estimated 200,000-300,000 visitors use the area north of Haulover Canal each year.

Recreational uses within a five-mile radius of the proposed project include waterfowl hunting, fishing, boating, beach activities, and wildlife observation. The Service has proposed to open approximately 6,000 acres of Merritt Island NWR, north of Haulover Canal, to upland hunting for deer and feral hog beginning in 2015. Launch-related closures could impact scheduled and proposed hunts, boating and fishing activity in the Indian River Lagoon and Mosquito Lagoon, and hiking and biking access to refuge trails, and could require the closure of the Intracoastal Waterway, navigable waters of the Indian River and Mosquito lagoons, and Kennedy Parkway (SR 3).

Economics

According to the Service's recent Banking on Nature report, the refuge generated more than \$60.4 million in economic benefit for the counties of Brevard, Orange, and Volusia in Fiscal Year 2011. Visitors to Canaveral National Seashore in 2010 contributed \$67.6 million to the local economy. An average of 50 commercial harvesters and 80 commercial guides annually utilize the Mosquito Lagoon.



Boating, credit USFWS



Shiloh 5 Impoundment, credit USFWS/Jim Lyon

A visitor use study conducted in 2010/2011 found that 37 percent of Merritt Island NWR visitors were from the local area, whereas 63 percent were nonlocal. Nonlocal visitors spent an average of \$91/person/day in the local area and local visitors spent an average of \$52/person/day in the local area.

Launch-related operations and closures could reduce access and impact economic benefits generated by recreational and

commercial activities on Merritt Island NWR and Canaveral National Seashore

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