

Decision Report
Proposed Minor Boundary Modification of
Bayou Sauvage National Wildlife Refuge
Orleans Parish, Louisiana

U.S. Fish and Wildlife Service
Interior Regions 2 and 4
Atlanta, GA

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I. OBJECTIVES

The U.S. Fish and Wildlife Service (Service) is proposing to modify Bayou Sauvage National Wildlife Refuge's (NWR, refuge) Approved Acquisition Boundary (AAB) by removing 1,331 acres from the current AAB and adding 2,220 acres (Figure 1). Upon approval of the minor boundary modification, the refuge would acquire the added acreage from willing sellers only. The purpose of this project is to remove land that is no longer available or compatible with the mission and goals of the refuge and the National Wildlife Refuge System (Refuge System) and add land to protect freshwater marshes and associated wetlands that provide valuable habitat for native species, including migratory birds. This boundary modification would also enable the refuge to expand its public use program.

The scope of this Decision Report is limited to the proposed expansion of the acquisition boundary of Bayou Sauvage NWR. The report is not intended to cover the specific method(s) of land acquisition that may be used, nor the development and implementation of detailed, specific programs for the administration and management of those lands. If the refuge is expanded and the needed lands or interests in lands are acquired, the Service will modify the refuge's existing management plans to incorporate the new lands and resources under its control. The updated management plans would be developed in accordance with the requirements set forth by the Department of the Interior and the National Environmental Policy Act.

Figure 1. Proposed Expansion Boundary for Bayou Sauvage National Wildlife Refuge



II. LOCATION AND SIZE

Bayou Sauvage NWR is located in east Orleans Parish, Louisiana, entirely within the corporate limits of the City of New Orleans. The property is traversed by U.S. Highway 90, U.S. Highway 11, and Interstate 10. The 24,651-acre refuge was authorized on November 10, 1986, under a provision of the Emergency Wetlands Resources Act of 1986. Virtually the entire site consists of wetlands bordered on three sides by water: Lake Pontchartrain on the north, Chef Menteur Pass on the east, and Lake Borgne on the south. Leveed and drained former wetlands border the western side of the refuge, west of the Maxent Canal. Over 60 percent of the refuge is freshwater emergent marsh and shrub/scrub forest enclosed by hurricane protection levees. The remaining unleveed portions of the refuge are estuarine tidal marshes and shallow water areas.

The Service established the refuge in April 1990 and it was expanded in 1998 with an additional 12,000 acres and again in 2007 with 2,200 acres. The current approved acquisition boundary for the refuge is 33,200 acres. Presently, the refuge owns fee title to 22,265 acres and manages another 445 under lease from the City of New Orleans. There are approximately 9,634 acres within the approved boundary that are still in private ownership.

III. DESCRIPTION OF SUBTRACTION AND ADDITION AREAS

Subtraction Area

The subtraction area consists of 1,331 acres of predominately fragmented saltwater marsh outside of the Hurricane Protection Levee System (HPLS). These tidal marshes are dominated by wiregrass. Land loss is occurring in this area and is expected to continue at a rapid rate due to subsidence, erosion, future storm events, and sea level rise (Glick et al. 2013, Mo et al. 2020, U.S. Fish and Wildlife Service [USFWS] 2008). The lands being subtracted are not owned by the Service but are privately owned and currently leased to a hunting club. The area is only accessible by boat and there is no foreseeable opportunity to purchase or manage this area as part of the refuge. Due to the rapid erosion of this area along the Louisiana coast, there is a loss of habitat within the proposed subtraction area. This loss of habitat results in the lands within the subtraction area no longer meeting the purposes of the refuge.

Addition Area

The addition area consists of 2,220 acres inside the HPLS and is protected from saltwater intrusion and storm impacts. It consists of swamp, impounded freshwater marsh, natural levee ridges, spoil banks, bayous and pond habitats that allow for good biological productivity and high species diversity of both terrestrial and aquatic organisms. These acres are owned by a willing seller and include multiple locations that are suitable for public use sites. This area would be a community asset supporting the Urban Wildlife Conservation Program and has great potential for fulfilling the purposes of the refuge and the mission of the Refuge System.

The leveed wetlands are diverse, with the dominant vegetation species being wiregrass, fall panicum, switchgrass, sprangletop, and coastal waterhyssop. The freshwater bodies are

characterized by coontail, water celery, and southern niad. Terrestrial vegetation, often characterized by native species such as live oak, black willow, and other mixed hardwoods as well as exotic species including Chinese tallow and Chinaberry, is associated with the higher levee ridges, which are well-drained and typically above the reach of saline waters. For more information on the habitat resources on Bayou Sauvage NWR, refer to pages 22-25 in the refuge's CCP (USFWS 2009).

IV. MAJOR FISH AND WILDLIFE VALUES

The listed threatened faunal species that use the refuge are Gulf sturgeon (*Acipenser oxyrinchus desotoi*) and West Indian manatee (*Trichechus manatus*, USFWS 2020). The proposed subtraction area borders areas of Lake Borgne, where both of these species may be found seasonally. Although the area to be removed may provide minimal aquatic habitat needed by these species, there will be no adverse impact to either species as no changes to the current land use practices are expected. The proposed addition area does not directly support either of these threatened species.

Located along the southwest border of Lake Borgne, the tidal marshes in the subtraction area serve as estuarine nurseries for various fish species, crabs, and shrimp (USFWS 2009). However, affected by saltwater intrusion and erosion, the subtraction area offers a less diverse habitat than the addition area to support native wildlife and migratory birds. The variety of vegetation, from freshwater marshes to upland ridges, in the addition area provides a diverse habitat for wildlife species. The trust species to benefit from the acquisition are waterfowl, shorebirds, wading birds, and neotropical migrants.

Comprising swamp, impounded freshwater marsh, natural levee ridges, spoil banks, bayous and ponds, the addition area provides habitat for nesting, roosting, and feeding for numerous species of birds. Wintering waterfowl are substantial at times, and tens of thousands of ducks stop at the refuge during their winter migration. Gadwall (*Mareca strepera*), blue-winged teal (*Spatula discors*), green-winged teal (*Anas crecca*), mallard (*Anas platyrhynchos*), Northern shoveler (*Spatula clypeata*), Northern pintail (*Anas acuta*), and lesser scaup (*Aythya affinis*) are the species most commonly seen in the winter, while wood duck (*Aix sponsa*), fulvous whistling-duck (*Dendrocygna bicolor*), black-bellied whistling-duck (*Dendrocygna autumnalis*), and mottled duck (*Anas fulvigula*) stay for longer periods and nest on the refuge (USFWS 2009). Thousands of shore birds, such as various plovers and sandpipers, willet (*Tringa semipalmata*), black-necked stilt (*Himantopus mexicanus*), American oystercatcher (*Haematopus palliatus*), and killdeer (*Charadrius vociferus*), flock to Bayou Sauvage NWR to indulge in the copious amounts of invertebrates. Wading birds are common on the refuge and include various species of herons, egrets, ibis, bitterns, terns, and gulls. The refuge is also home to several species of raptors, including bald eagles (*Haliaeetus leucocephalus*), northern harriers (*Circus hudsonius*), and numerous hawk species (USFWS 2013).

The addition area encompasses Lakes Michoud and Marseille and several smaller freshwater ponds that provide habitat for bass, catfish, crappie, minnows, and bream. This area has the

potential to provide bank fishing opportunities. Presently, most fishing on the refuge is by bank fishers.

V. RELATIONSHIP OF PROJECT TO ECOSYSTEM MANAGEMENT GOALS AND OBJECTIVES

Bayou Sauvage NWR lies within a physiographic region designated by the Service as the Lower Mississippi River Ecosystem (LMRE). The LMRE serves as the primary wintering habitat for mid-continent waterfowl populations, as well as breeding and migration habitat for migratory songbirds returning from Central and South America. The proposed addition of wetlands would help the refuge contribute to LMRE's goals (USFWS 2002) to:

- conserve, enhance, protect, and monitor migratory bird populations and their habitats in the LMRE;
- protect, restore, and manage the wetlands of the LMRE;
- protect, restore, and manage the fisheries and other aquatic resources historically associated with the wetlands and waters of the LMRE;
- restore, manage, and protect national wildlife refuges and national fish hatcheries; and
- increase public awareness and support for LMRE resources and their management.

Specifically, acquisition of the proposed area would enable the refuge to contribute to two main LMRE priorities. First, it would offer opportunities to continue to work with the Louisiana Coastal Wetlands Program Federal Task Force, (established in the 1990 Coastal Wetlands Planning, Protection and Restoration Act [[16 U.S.C. 3951-3956](#)]), private landowners, and other entities to protect and restore coastal wetlands, consistent with the Coast 2050 Plan to provide for a sustainable coastal ecosystem by the year 2050 (Reed and Wilson 2004). Secondly, the location of the proposed addition within the city limits of New Orleans, Louisiana, and adjacent to an already constructed exit off of Interstate 10 would provide excellent public access to the refuge to facilitate opportunities for priority, wildlife-dependent public uses identified in the National Wildlife Refuge System Improvement Act of 1997. According to the Improvement Act, the six priority uses—hunting, fishing, wildlife observation and photography, and environmental education and interpretation—are to receive enhanced consideration in refuge planning and management.

LMRE goals reflect the goals of numerous plans and initiatives, including the Partners in Flight Bird Conservation Plan, North American Waterfowl Management Plan, Gulf Coast Joint Venture-Mississippi River Coastal Wetlands Initiative, North American Waterbird Conservation Plan, United States Shorebird Conservation Plan, and the North American Bird Conservation Initiative. Local efforts that would be supported by the proposed action include the Coast 2050 Plan, Louisiana Coastal Area-Ecosystem Restoration Plan, Lake Pontchartrain Basin Foundation, New Directions 2025-Orleans Parish Conservation Plan, and the Lake Pontchartrain Estuary Conservation Planning Project.

VI. THREATS

The tract to be included in the AAB is adjacent to the refuge along the southwest border and is bordered on its southwest side by residential development in New Orleans East. The primary threat to this landscape is land-use conversion from wetlands to residential, commercial, and industrial development. The proposed area of addition is located adjacent to an exit off of Interstate 10 within the limits of the City of New Orleans and is protected within the HPLS. These attributes enhance the opportunity and or likelihood for construction within this tract. Inundation from sea level rise is the primary threat to the area to be removed from the AAB.

VII. ALTERNATIVES

In determining how to best protect the project lands identified in this document, the Service considered and evaluated two alternative actions (USFWS 2021).

Alternative A: Retention of Current Approved Acquisition Boundary [No Action Alternative]

Under Alternative A, the Service would not modify the AAB, accept donations, or acquire any land within the proposed addition areas. Permanent changes in land use on unacquired tracts are probable. The natural resources within the proposed addition area likely would not be protected. Private-owned tracts may be sold to other private or commercial entities that may manage or develop the land in a way that will result in a loss of marsh and other natural habitats and of public access. Public access to the refuge would not be improved or expanded. The 900 unacquired acres in the current AAB would remain within the boundary but are unlikely to be acquired.

Alternative B: Modification of Approved Acquisition Boundary [Proposed Action Alternative]

Under the Proposed Action, the refuge would remove 1,331 acres from its current AAB, which would result in those areas no longer being eligible for acquisition by the Service. The Service also would add 2,220 acres to its AAB. This is the preferred alternative, as it would enable the Service to protect valuable wetland habitats and associated wildlife. It also would provide an opportunity to expand public access to the refuge to help meet the challenge of getting people outside and connecting them with nature.

VIII. BENEFITS

This proposal offers increased opportunities for protection of natural resources and for expansion of priority public uses.

The proposed action would allow the Service to protect vulnerable wetland habitat, such as swamp, impounded freshwater marsh, bayous, and ponds, for the benefit of aquatic and wetland species, including migratory birds. It also would provide ecosystem services, such as flood

mitigation, hurricane protection, water quality improvement, and control of marsh subsidence and erosion (USFWS 2021).

Acquisition of the proposed area within New Orleans would provide an opportunity to expand public access to the refuge. The addition of these lands would support the Service's Urban Wildlife Conservation Program (USFWS 2019) initiative to strive to be a part of communities by developing refuges and programs near urban areas to inspire the next generation of outdoor enthusiasts and to ensure long-term conservation of our natural resources. It is anticipated that the proposed project lands would offer outstanding opportunities for wildlife-dependent public use and environmental education, including education about the importance of our natural resources specific to coastal Louisiana.

IX. ESTIMATED COST

The land acquisition costs would be based on the current fair market value assessed by the Service at the time of purchase. A recent appraisal commissioned in 2019 by the property owners, Little Pine, Inc., estimated value at \$2,243 per acre.

X. ENVIRONMENTAL CONTAMINANTS AND HAZARDOUS WASTE

A Level I contaminant survey was conducted on the entire area to be added, and no hazardous substances or other environmental problems were revealed.

XI. CULTURAL AND HISTORIC RESOURCE IMPACTS

Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended, and Section 14 of the Archaeological Resources Protection Act require the Service to evaluate the effects of any of its actions on cultural resources (e.g., historic, architectural, and archaeological) that are listed, or eligible for listing, in the National Register of Historic Places (NRHP). Section 110 of the NHPA ensures that historic preservation is fully integrated into the ongoing programs of all Federal agencies.

Sections 106 and 110 do not apply to the proposed subtraction area since the Service does not own or manage this area. The Service has completed a site file review of the proposed addition area as a first step in satisfying Section 110 responsibilities, and no adverse effects are expected on any known or yet-to-be identified NRHP-eligible cultural resources on the proposed acquisition of lands. Beneficial effects are expected in the form of protection by the Service of the cultural resources on lands that would be acquired. Information regarding recorded sites and survey areas will be included in the decision-making processes and appropriate management plans regarding any areas being brought into the refuge acquisition boundaries. If, in the future, the Service plans or permits any actions that might affect eligible cultural resources, appropriate

site identifications, evaluations, and protection measures, as specified in the regulations and in Service directives and manuals, would be carried out.

XII. REFERENCES

- Glick, P., J. Clough, A. Polaczyk, B. Couvillion, and B. Nunley. 2013. *Potential Effects of Sea-Level Rise on Coastal Wetlands in Southeastern Louisiana*. Journal of Coastal Research, 63(sp1), 211-233. <https://doi.org/10.2112/SI63-0017.1>
- Mo, Y., M. S. Kearney, R. E. Turner. 2020. *The resilience of coastal marshes to hurricanes: The potential impact of excess nutrients*. *Environment International*, Vol. 138. <https://doi.org/10.1016/j.envint.2019.105409>
- Reed, D. J., and L. Wilson. 2004. Coast 2050: *A New Approach to Restoration of Louisiana Coastal Wetlands*. *Physical Geography*, 25(1), 4-21. <https://doi.org/10.2747/0272-3646.25.1.4>
- U.S. Fish and Wildlife Service. 2002. *Final Draft Lower Mississippi River Ecosystem Plan*. Version 2.5. https://www.fws.gov/lmre/strategic_plan.htm
- U.S. Fish and Wildlife Service. 2008. SLAMM Analysis for Bayou Sauvage National Wildlife Refuge. Prepared by Delissa Padilla Nieves.
- U.S. Fish and Wildlife Service. 2009. *Bayou Sauvage National Wildlife Refuge Comprehensive Conservation Plan*. August 2009. U.S. Department of the Interior, U.S. Fish and Wildlife Service, Southeast Region. Atlanta, GA. 158 pp. https://www.fws.gov/refuge/Bayou_Sauvage/what_we_do/planning.html
- U.S. Fish and Wildlife Service. 2019. *Urban Wildlife Conservation Program*. <https://www.fws.gov/urban/index.php>
- U.S. Fish and Wildlife Service. 2020. Endangered, threatened, and candidate species of Louisiana. Retrieved on April 5, 2021, from <https://www.fws.gov/southeast/pdf/fact-sheet/louisiana-ecological-services-field-office-t-and-e-species.pdf>
- U.S. Fish and Wildlife Service. 2021. Draft Environmental Assessment for the Minor Boundary Modification of Bayou Sauvage National Wildlife Refuge.