

U.S. FISH AND WILDLIFE SERVICE
Urban Transportation Connections Study



BAYOU SAUVAGE NATIONAL WILDLIFE REFUGE

New Orleans, LA

REFUGE ACCESS PLAN



U.S. Department of Transportation
Federal Highway Administration
Eastern Federal Lands
Highway Division

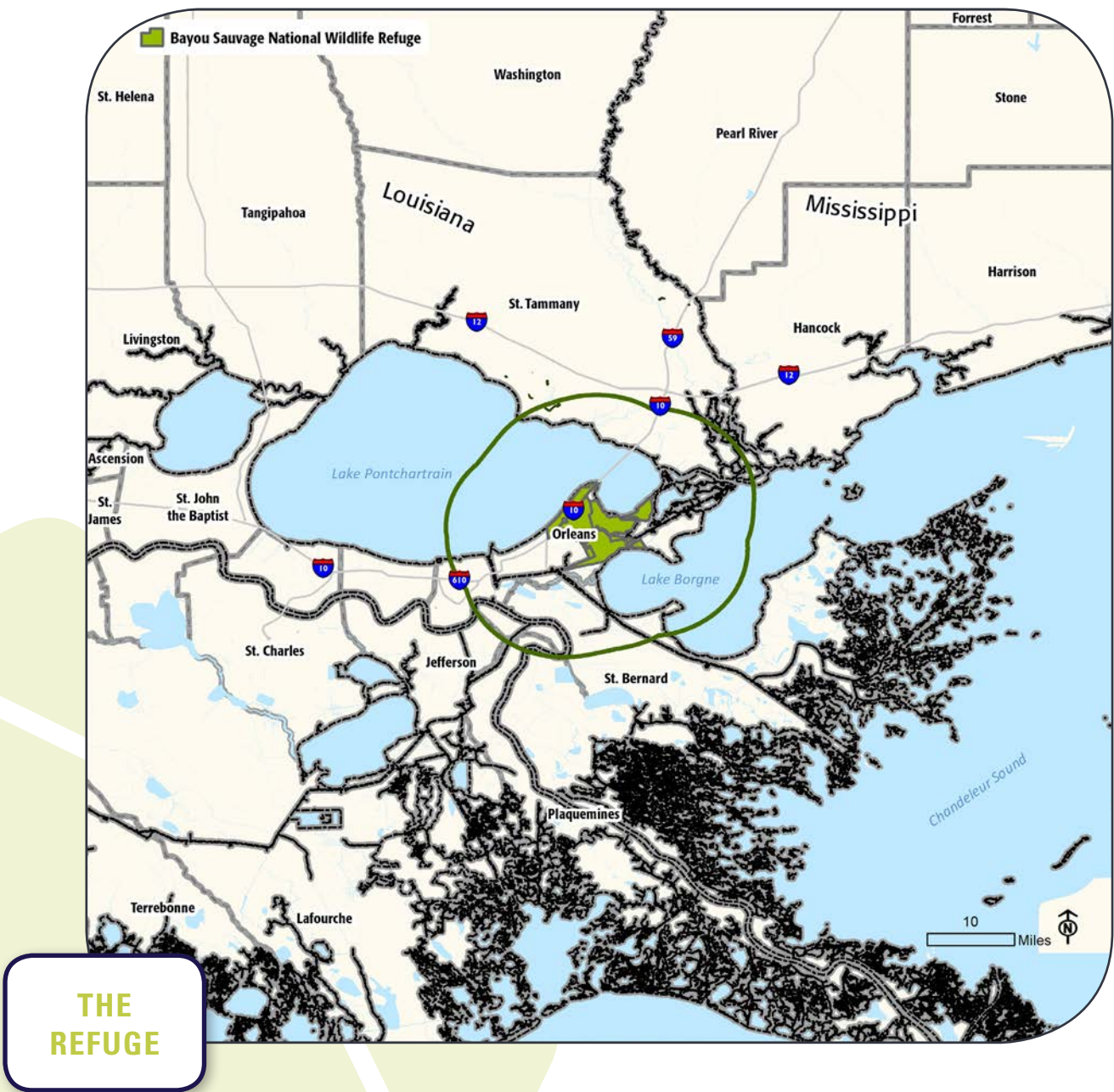
Kimley»Horn



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INTRODUCTION

The Bayou Sauvage Urban National Wildlife Refuge (NWR) is one of eight Refuges managed as a part of the Southeast Louisiana National Wildlife Refuges Complex. The Refuge, with more than 23,000 acres, is one of the largest urban wildlife Refuges in the country, and is on the east side of the City of New Orleans (NOLA East) adjacent to Lakes Pontchartrain and Borgne. The Refuge is approximately 18 miles east of the central business district of New Orleans. It is one of the 101 Urban Wildlife Refuges in the U.S. Fish and Wildlife Service's (U.S. FWS's) Urban Program and was one of the initial Refuges examined by the Urban Transportation Connections Study.





REGIONAL OVERVIEW

The New Orleans metropolitan area contains the state's largest city and largest metropolitan area home to more than 1 million people. Located in southeastern Louisiana, New Orleans has long-served as a major port in the United States given its direct connection to the Mississippi River, one of the country's most important commercial and biological waterways. Beyond its industrial identity, New Orleans is renowned for its multicultural heritage and cultural amenities and remains one of the most popular destinations in the United States.

New Orleans is served mainly by I-10, US 90, and US 11, roadways which provide critical east-west access across Lakes Pontchartrain and Borgne. I-10 and US 90 run parallel to each other and provide primary access to both the Refuge and neighboring historic Fort Macomb. The area is served by the New Orleans Regional Transportation Authority (NORTA), but the transit system does not offer direct service to the Bayou Sauvage NWR.

The New Orleans metropolitan area is home to several higher education institutions, such as Tulane University, Loyola University – New Orleans, Dillard University, and the University of New Orleans. Some of the universities, like Loyola, partner to conduct classes at the Refuge. The vast majority of public schools in New Orleans were converted to charter schools following the aftermath of Hurricane Katrina. Fifteen schools are located within a 10-mile radius of Bayou Sauvage.

In 2005, the Unified New Orleans Plan (UNOP) was organized to detail actions necessary to rebuild the city. The plan prioritized the building of active transportation networks—such as greenways and bikeways—to offer safe connections to activity centers across New Orleans. Several projects from UNOP are programmed and funded, one of which is the Lafitte Greenway, a greenway built on a former canal and rail line that will eventually connect neighborhoods from Armstrong Park to City Park.

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WHERE HAVE WE BEEN?

"Our Sigma Beta Club members and Advisors are grateful to the Administration of the U.S. Fish and Wildlife [Service] [...] for the opportunities [...] made possible for our Sigma Beta Club members here in the New Orleans and surrounding areas to obtain 'hands on' experiences related to wildlife conservation through education, awareness and future professional opportunities."

-Arthur Thomas, President of the National Sigma Beta Club Foundation, Inc.

REFUGE HISTORY

The Emergency Wetlands Resources Act of 1986 became the federal law that allowed the purchase of wetlands by the Federal Government. This Act acknowledged the importance of wetlands and the role they play in addressing food supply, flood control, and water quality among many others. Bayou Sauvage NWR, given its proximity to the City of New Orleans, was at the reaches of urban expansion and threatened by developmental pressures. The Refuge was authorized by the state in 1986 and signed into law by President Ronald Reagan in November of the same year. This legislation placed a high importance on the creation of Bayou Sauvage NWR by 1990, mandating the acquisition of more than 19,000 acres of land for the Refuge and a master plan for operations within just a few years of being signed into law.

The timeline on the next page includes a high-level look on the history of Bayou Sauvage NWR.





1970s

Vietnamese migration to the
New Orleans East community

1986

Refuge authorized by State Legislature
and Emergency Wetland Act authorized by
President Ronald Reagan

1990

Bayou Sauvage establishes coastal wetlands

2005

Hurricane Katrina storm surge submerges
much of the Refuge to depths of 6-8 feet
with salt water; loss of 90% of trees in the
bottomland hardwood forest and destruction
of more than 1,700 acres of fresh and brackish
marshes.

2008

Refuge begins a project to reforest the Bayou
Sauvage ridge and restore the lost habitat

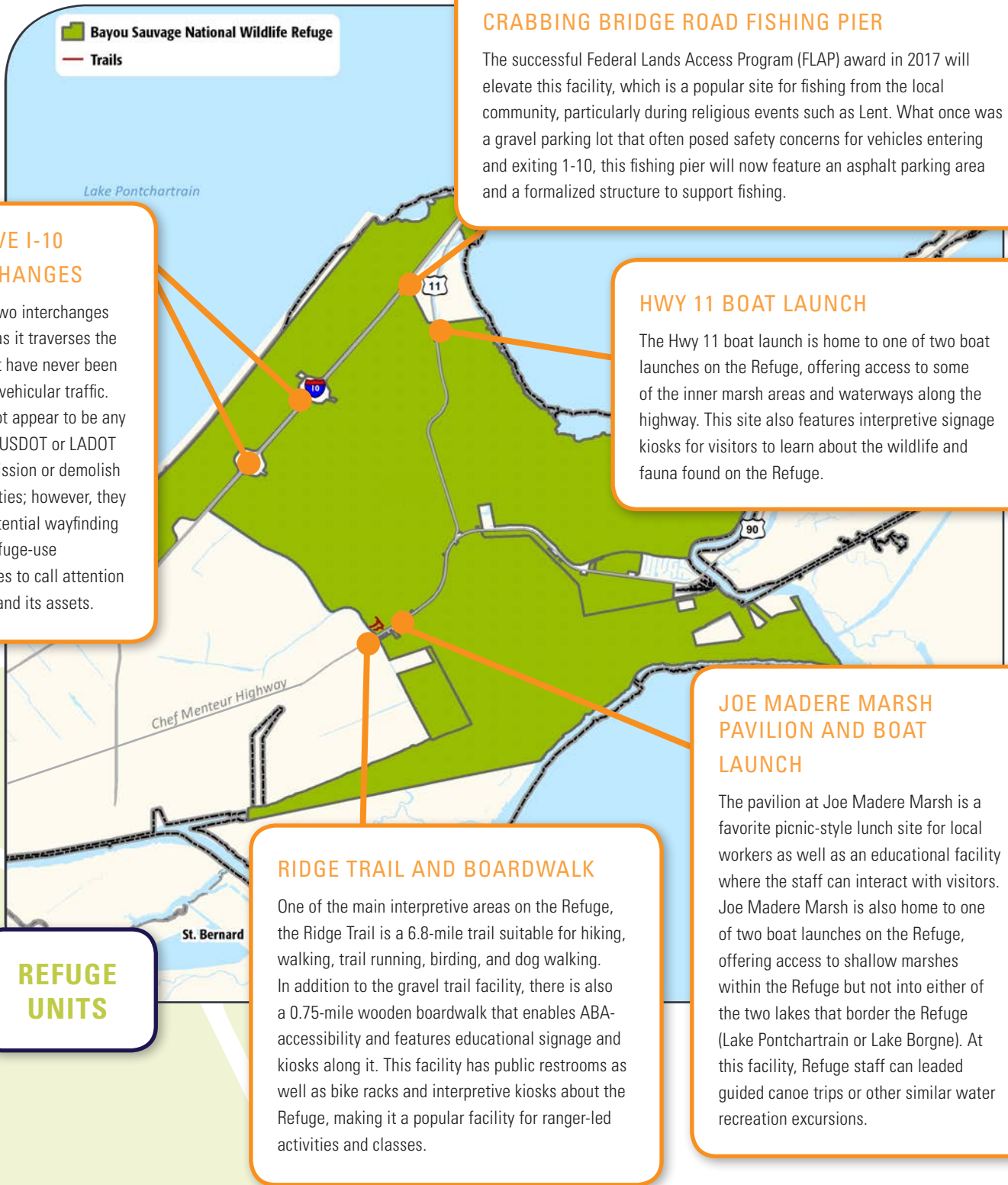
2009

Acquisition of Brazillier Island tract

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CRABBING BRIDGE ROAD FISHING PIER

The successful Federal Lands Access Program (FLAP) award in 2017 will elevate this facility, which is a popular site for fishing from the local community, particularly during religious events such as Lent. What once was a gravel parking lot that often posed safety concerns for vehicles entering and exiting 1-10, this fishing pier will now feature an asphalt parking area and a formalized structure to support fishing.

INACTIVE I-10 INTERCHANGES

There are two interchanges along I-10 as it traverses the Refuge that have never been utilized for vehicular traffic. There do not appear to be any plans from USDOT or LADOT to decommission or demolish these facilities; however, they do offer potential wayfinding or other Refuge-use opportunities to call attention to the site and its assets.

HWY 11 BOAT LAUNCH

The Hwy 11 boat launch is home to one of two boat launches on the Refuge, offering access to some of the inner marsh areas and waterways along the highway. This site also features interpretive signage kiosks for visitors to learn about the wildlife and fauna found on the Refuge.

JOE MADERE MARSH PAVILION AND BOAT LAUNCH

The pavilion at Joe Madere Marsh is a favorite picnic-style lunch site for local workers as well as an educational facility where the staff can interact with visitors. Joe Madere Marsh is also home to one of two boat launches on the Refuge, offering access to shallow marshes within the Refuge but not into either of the two lakes that border the Refuge (Lake Pontchartrain or Lake Borgne). At this facility, Refuge staff can lead guided canoe trips or other similar water recreation excursions.

RIDGE TRAIL AND BOARDWALK

One of the main interpretive areas on the Refuge, the Ridge Trail is a 6.8-mile trail suitable for hiking, walking, trail running, birding, and dog walking. In addition to the gravel trail facility, there is also a 0.75-mile wooden boardwalk that enables ABA-accessibility and features educational signage and kiosks along it. This facility has public restrooms as well as bike racks and interpretive kiosks about the Refuge, making it a popular facility for ranger-led activities and classes.

REFUGE UNITS



WHERE ARE WE GOING?

Bayou Sauvage NWR is positioned to serve as a resource in New Orleans. As one of the largest Refuges in the country, it offers a variety of recreational opportunities, including canoeing, hiking, biking, birdwatching, and fishing/crabbing/crawfishing. The Refuge has a strong desire to create stronger relationships with members and groups in the community; however, to do so, there is a clear need to increase its visibility and presence in the community. The lack of alternative transportation options beyond a car and a centralized visitors center also present challenges that the Refuge will need to continue to overcome. Bayou Sauvage NWR continues to engage the public and is working on initiatives that work on addressing these challenges to increase its presence and role in the larger New Orleans community.

REFUGE VISION

Bayou Sauvage NWR envisions securing additional lands surrounding the Refuge anchored by the addition of an innovative, sustainable Visitor Center near the highway. The Visitor Center would be the first contact point for visitors, offering self-guided tours and Refuge staff to help to communicate the vast resources and activities available at the site.

Beyond the Visitor Center, the Refuge has plans to continue to make both the Ridge Trail and the Joe Madere Area a more visitor-friendly area by continuously investing in attractive amenities, including trees, additional fishing facilities, and connections to trails outside the Refuge. Bayou Sauvage hopes to continue public awareness campaigns to strengthen its relationship with groups within the community—such as with the local school system—and encourage outdoors programs and other educational opportunities.

The Refuge understands the difficulty of accessing the site and is working on prioritizing alternative ways to travel to and from the Refuge. It has started to invest in bicycle racks at the Ridge Trail and is looking to further complement these by sharing the City's investment in the BikeShare program to offer the same amenity within the Refuge. Beyond bicycling and walking, the Bayou Sauvage is looking to work with NORTA for opportunities to provide additional access in the form of public transportation.



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ESTABLISHING THE NEED – COMMUNITY HIGHLIGHTS

Area Demographics

The Urban Transportation Connections study analyzed demographic data from the American Community Survey 2010-2014 to better understand the urban fabric surrounding the Bayou Sauvage IWR. This analysis evaluated five socioeconomic factors to establish a potential need for improved access to underrepresented communities: Hispanic/ Non-White Populations, School-aged Children, Households below the Poverty Level, Households without Access to Vehicles, and Households with Limited English Proficiency. For each factor, the area around the refuge was compared to the greater metropolitan area. The cumulative concentrations are combined in the composite map shown below with equal weight. The darkest color shows the highest concentration of the target populations, and the darker colors represent areas of focus when considering future connections to the refuge.

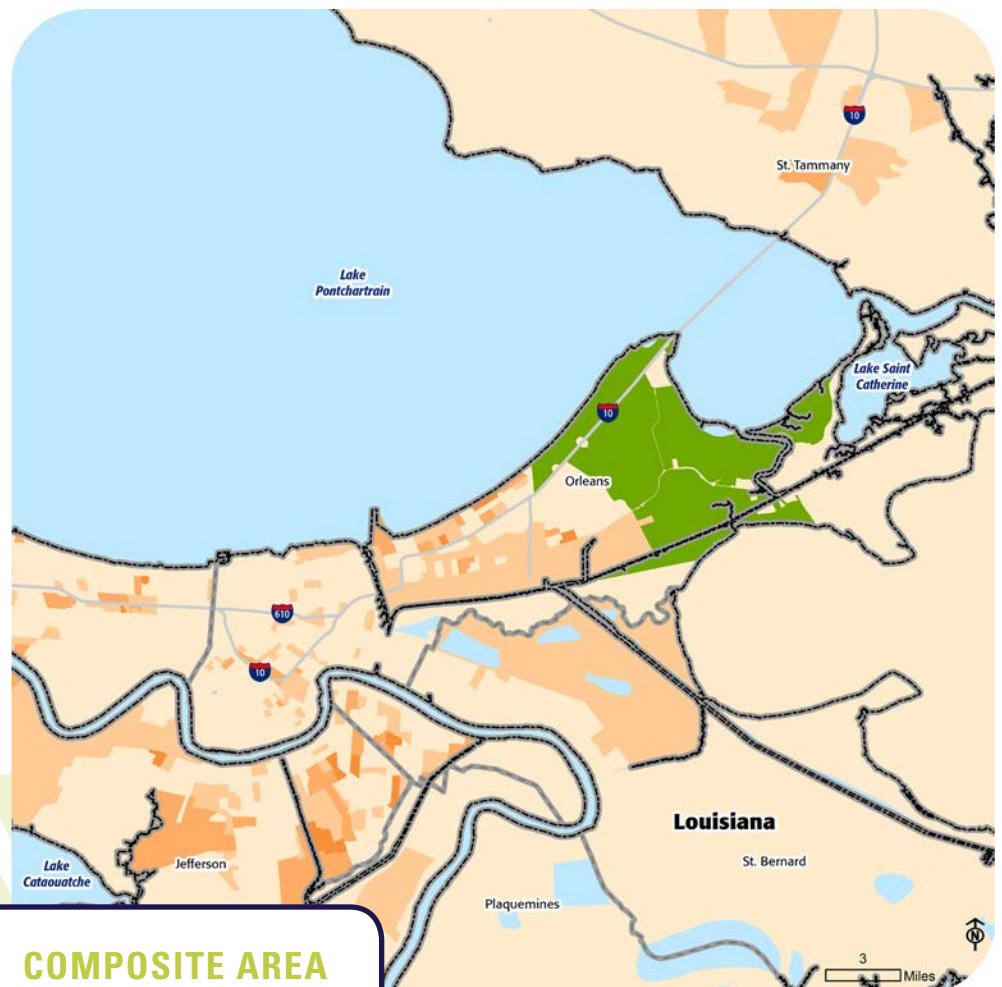
The greater New Orleans area has a large African American population and a notable Vietnamese population.

CONCENTRATION OF TARGET POPULATIONS*



 REFUGE

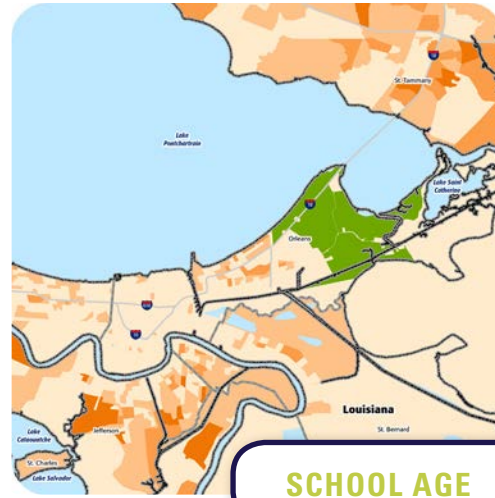
* Note: the darker the color, the greater the concentration of target populations and the greater the representation of multiple factors from the right-hand page



COMPOSITE AREA DEMOGRAPHICS

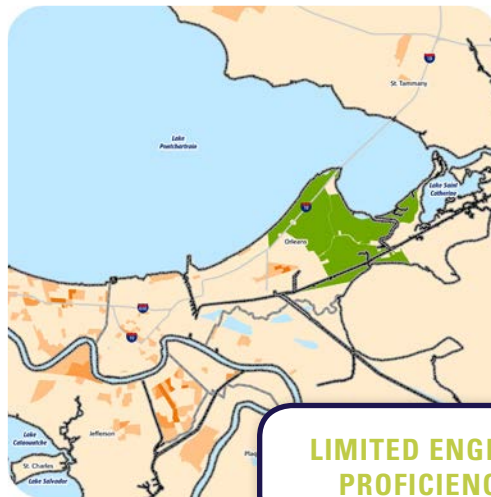
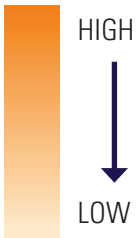


**HISPANIC/
NON-WHITE**

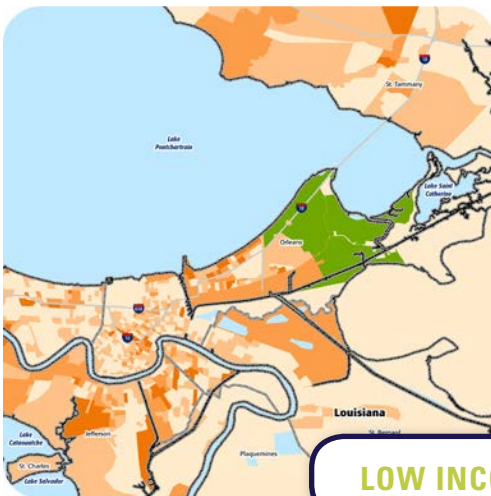


SCHOOL AGE

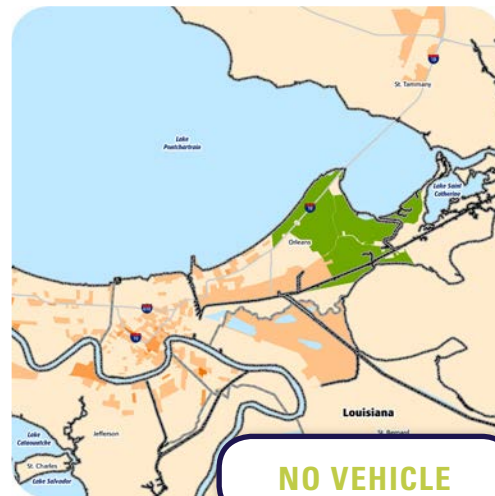
**CONCENTRATION OF
TARGET POPULATIONS**



**LIMITED ENGLISH
PROFICIENCY**



LOW INCOME



NO VEHICLE

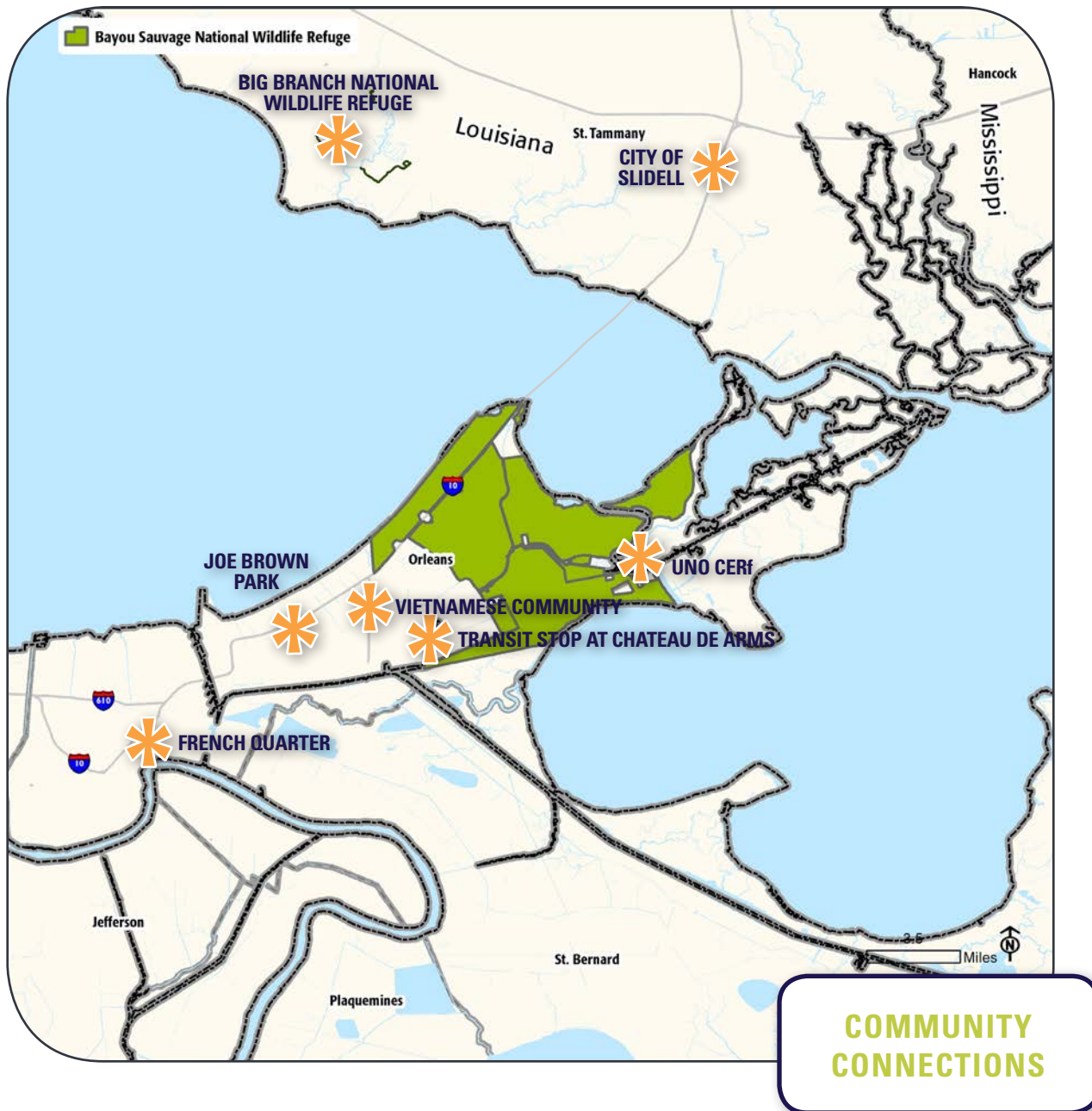
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Community Partners

Another aspect of a Refuge's context is the partnerships available in the community and nearby urban core. At Bayou Sauvage NWR, the U.S. FWS works with the City of New Orleans for an annual Christmas Tree Drop, a hugely successful effort in which the City collects used Christmas trees and brings them out to the Refuge where they are used to fortify the swamp area. Building from the success of this effort, the City is also starting a public awareness campaign to help get children out to the Refuge—AmeriCorps Vista is also helping with this campaign and LOOPNOLA, a bicycle advocacy organization has also expressed interest. The City of New Orleans recently partnered with the Refuge for the successful FLAP application for improvements at Crabbing Bridge Road. The Refuge also collaborates on and/or co-manages a number of facilities with other entities, including two railroad companies—CSX and LN, gas corporations, US ACE, Orleans Levee District, Mississippi River Gulf Outlet (MRGO), LADOT, and AT&T. Bayou Sauvage, through the Southeast Louisiana National Wildlife Refuges Complex, coordinated with the Youth Council of New Orleans to get bike racks at the Ridge Trail, which are the same racks used throughout the City. Nearby research institutions are also great partners to the Refuge, with Tulane University hosting a twice-weekly plant class at the Refuge, the University of New Orleans (UNO) Coastal Education and Research Facility (CERF) using the Refuge for in-field research, and Loyola University leveraging this asset for educational opportunities for more than three decades. Finally, the New Orleans Recreation Department (NORDC) hosts regularly events for developmentally disabled adults at the Ridge Trail as well as fishing educational programs for children and adults.





Community Connections

The Urban Transportation Connections Study aims to identify ways to better connect Urban Refuges to their community. To achieve this goal, the planning team identified places in the community that could be served by future multimodal connections to the Refuge. The following pages include details about projects that could provide these connections as well as non-infrastructure based projects or programs that can further increase awareness of the Refuge in the community.

Note: this Refuge Access Plan is a companion piece to an online tool that is being developed as part of this study. More information about partnerships, community connections, and projects will be available in this online tool.

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PROJECT RECOMMENDATIONS

Using feedback gathered from the site visit, stakeholder input, Refuge insight, and other analysis to understand Bayou Sauvage NWR's current and future accessibility needs, the planning team developed a list of recommended transportation projects to provide the community connections identified on the previous page. The projects were categorized into four major mode types: Roadway (RD-), Transit (TR-), Bicycle and Pedestrian (BP-), and Other (OT-).

To support the Refuge with implementing projects from the Urban Transportation Connections Study, these recommended projects were evaluated against a robust set of evaluation criteria and organized into three tiers: Top Priority, Second Priority, and Easy Wins (detailed on page 13). Top Priority projects are those projects deemed to be of either the greatest need or biggest impact to the Refuge's accessibility. Second Priority projects are projects that can increase the Refuge's accessibility, but do not have either as high of a need or potential impact as those in the First Priority category and/or they require significant Refuge time/ money or may be dependent on another project being implemented first. Easy Win projects require little time or money for implementation and may serve as catalysts for greater Refuge enhancements or improvements.

The prioritized transportation projects for Bayou Sauvage are listed below and featured in the map on the next page.

TOP PRIORITY

- **RD-2:** Improve connection to Crabbing Bridge Road and Pier
- **TR-3:** Establish a shuttle/bus-type service to site
- **TR-4:** Consider a Saturday-specific bus route to the Refuge
- **BP-2:** Re-establish a bike/ped facility on levee
- **BP-4:** Create a formal trailhead for community to access Refuge
- **BP-7:** Formalize bike/ped facilities on Chef Menteur Highway
- **BP-9:** Create a bicycle/pedestrian connection to Joe Brown Park, connecting to the bike lane on Lake Forest Blvd
- **OT-7:** Build more boat launches throughout Refuge
- **OT-11:** Partner with City of New Orleans' BikeShare program

Bayou Sauvage NWR's top priority projects focus on improving the connection to the new pier and getting alternative mode connections to the Refuge, with a focus on bicycle and pedestrian amenities and transit services. Bicycle and pedestrian priorities include re-establishing a trail facility on the levee, which was lost during Hurricane Katrina, as well as creating a formalized trailhead for the nearby Vietnamese community, adding bike lanes or other similar infrastructure to Chef Menteur Highway, and extending the bikeshare program that is found throughout the urban core of New Orleans out to the Refuge. Transit services include a shuttle or bus-type service to the Refuge as well as working with RTA to get a Saturday service established—in particular, with a special route stop at the Refuge. In addition, due to its location on Lake Pontchartrain and the Gulf of Mexico, adding more boat launches throughout the Refuge will facilitate water-based mobility.



Projects without a geographic location not mapped.

KEY

- **TOP PRIORITY**
- **SECOND PRIORITY**
- **EASY WINS**

- **TR:** Transit
- **RD:** Roadway
- **BP:** Bicycle and Pedestrian
- **OT:** Other

Projects Not Mapped

- **TR-3**
- **RD-1**
- **BP-1**
- **OT-4**
- **OT-5**
- **OT-7**
- **OT-8**
- **OT-9**
- **OT-11**

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SECOND PRIORITY

- **RD-1:** Add signage on I-10 (perhaps use “dead” interchanges), I-510, and Chef Menteur Highway
- **BP-3:** Connect to UNO when Chef Menteur Highway Bridge is redesigned
- **BP-5:** Extend boardwalk at Ridge Trail (or similar facility)
- **BP-8:** Widen shoulder on Route 11 for cycling
- **OT-1:** Add parking facilities at Recovery I (perhaps also at Illegal Road)

Additional priorities for Bayou Sauvage NWR include adding signage on major nearby roadways, connecting to the UNO research center when LADOT redesigns the bridge on Chef Menteur Highway, extending the boardwalk at the Ridge Trail, widening the shoulder on Route 11 to facilitate bicycling, and adding parking facilities at Recovery 1 to support birdwatching activities.

EASY WINS

The following projects are considered “Easy Wins” for the Bayou Sauvage NWR and should be sought for quick, low cost implementation.

- **RD-3:** Clear “green curtain” on I-10
- **BP-1:** Add a bike/ped counter at the Ridge Trail
- **OT-4:** Develop a wayfinding plan
- **OT-5:** Design an audio tour
- **OT-8:** Work with Google to get refuge location corrected
- **OT-9:** Promote regular coordination with local and regional planning agencies

ADDITIONAL RECOMMENDATIONS

While the focus of the Urban Transportation Connections Study was to identify ways to provide more equitable access to Urban Wildlife Refuges through alternative means of transportation, there are two other major categories of projects that surfaced during the Refuge site visits and the development of the Refuge Access Plans: Large-Scale and Community Awareness Projects. Large-Scale Projects are projects needed in the community and/or near the Refuge that are too big in scope for FWS to implement with their limited funding, but they should continue to get FWS and Refuge support. Community Awareness Projects are important for the Refuge to be a valued community asset and should be implemented, but these projects extend beyond the purpose of the Urban Transportation Connections Study.

The evaluation criteria developed for the Urban Transportation Connections Study considered these limitations—if a project was not a transportation-specific project, it was not given a score. This lack of scoring is not indicative of the project’s relative importance, but instead prevented non-transportation projects from being rated against evaluation



criteria that favored transportation-based characteristics. Similarly, if projects were too big for the Service on their own, either due to time or monetary constraints, these projects were not scored during the evaluation process to prevent unrealistic projects from scoring higher than more feasible projects.

The following projects have been determined to be too large for the Refuge to solely take on—instead, they should continue to support the development and implementation of these critical projects—or projects that will help to increase community awareness of the Refuge but do not further the Urban Transportation Connections Study goal of increasing equitable transportation-focused access.

LARGE-SCALE PROJECTS

- **TR-1:** Extend bus service beyond Chateau de Arms (to Refuge, if possible)
- **BP-6:** Consider future connections to Big Branch

COMMUNITY AWARENESS PROJECTS

- **OT-2:** Create an Observation Tower
- **OT-3:** Establish a formal Visitors Center
- **OT-6:** Build more fishing piers throughout Refuge
- **OT-10:** Contact ProBike/ProWalk and American Planning Associations about holding sessions at the refuge for their upcoming conferences
- **OT-12:** Determine partner schools and organizations (charter school and universities) and develop corresponding programs

NEXT STEPS

With the completion of this study, Bayou Sauvage staff should take on the following tasks to continue to advance the goals of the Urban Transportation Connections Study:

- Implement Easy Wins projects by self-identifying which project(s) to begin with and the necessary steps or partnerships needed for successful completion
- Work toward implementing Priority Projects by solidifying appropriate partnerships, identifying funding opportunities, and, to the degree possible, initiating early planning and concept design/development
- Identify high priority partnerships and determine what needs to be done to foster these relationships
- Seek out additional collaboration opportunities with regional transportation working groups at the Metropolitan Planning Organization (MPO)-level to promote the Refuge in big-picture planning efforts
- Incorporate more Community Awareness projects and programming into NWR's outreach efforts by identifying gaps, developing an execution plan, and delivering the project or program

ACKNOWLEDGEMENTS

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New Orleans Recreational Development Commission New Orleans Regional Planning Commission

Orleans Audubon Society | St. Tammany Parish | University of Loyola

Photo Credit:

Cover: "Bayou Sauvage National Wildlife Refuge" Kimley-Horn
Page 2: "Ridge Trail at Bayou Sauvage National Wildlife Refuge" Kimley-Horn
Page 3: "Irish Bayou Community at Bayou Sauvage" Kimley-Horn
Page 6: "John Madere Marsh" Kimley-Horn
Page 9: "Bayou Sauvage National Wildlife Refuge" Kimley-Horn