

**JEFFERSON PARISH**

**THREATENED & ENDANGERED**

**FLOODPLAIN SPECIES ASSESSMENT**

**AUGUST 2021**

**Prepared by the Department of Floodplain  
Management and Hazard Mitigation**

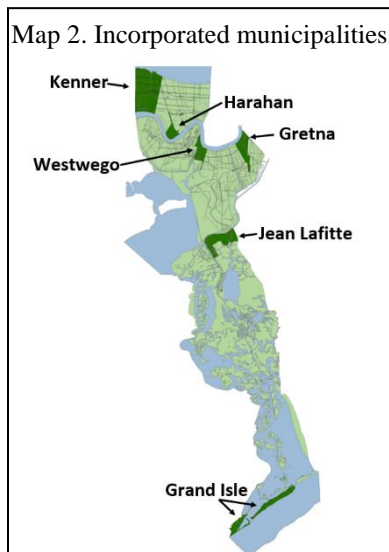
# Floodplain Species Assessment

## Jefferson Parish, Louisiana

### Introduction

Jefferson Parish is part of the metropolitan New Orleans area. It extends about 55 miles in a north-south direction from the southern shores of Lake Pontchartrain to the Gulf of Mexico (Map 1). The Parish is 641 square miles in size, of which 48% is land and 52% is water.

The Parish is comprised of dense urban development, small rural communities, and many square miles of open wetlands. Most of the Parish has been mapped as Special Flood Hazard Area. In the urban areas, a major investment in levees and pumps keep buildings and infrastructure dry.



“When looking at the following factors: history, potential for mitigation, susceptible areas, available data, and federal and local disaster declarations, flooding ranks as the parish’s top hazard.” – *Multijurisdictional Program for Public Information, Jefferson United Mitigation Professionals, 2015, page 3.*

Outside the urban areas, most of the Parish is undeveloped. The southern part of the Parish is less populated and is characterized by estuarine systems that lead in from the Gulf of Mexico. The coastal marshes, wetlands, and estuaries contain numerous bodies of shallow water. Making up 85 percent of the Parish, this habitat is exceedingly biodiverse containing numerous terrestrial and aquatic species. In sum, the majority of the Parish is both flood-prone and essential habitat.

Jefferson is the second largest parish in Louisiana by population and one of the fastest growing. The challenge is to balance the needs of human development, flooding hazards, and natural environment. The community does not want to allow development or flood protection infrastructure that destroys or degrades lush habitat, fisheries and other species populations that are vitally important both economically and culturally.

As noted in the box to the right, animals and plants listed as threatened or endangered by the U.S. Fish & Wildlife Service (FWS) or by the National Marine Fisheries Service (NMFS) require, under provisions in the Endangered Species Act (ESA), special and often urgent protection. They “are of esthetic, ecological, educational, historical, recreational, and scientific value to the Nation and its people.” (Endangered Species Act of 1973)

#### Why Save Endangered Species?

“None of these creatures exists in a vacuum. All living things are part of a complex, often delicately balanced network called the biosphere. The earth’s biosphere, in turn, is composed of countless eco- systems, which include plants and animals and their physical environments. No one knows how the extinction of organisms will affect the other members of its ecosystem, but the removal of a single species can set off a chain reaction affecting many others. This is especially true for “keystone” species, whose loss can transform or undermine the ecological process or fundamentally change the species composition of the wildlife community.” – FWS at [www.fws.gov/endangered](http://www.fws.gov/endangered)

## Federally Listed Species

A review of FEMA’s Flood Risk and Endangered Species Habitat (FRESH) website found ten federally-listed threatened or endangered species (Atlantic Green Sea Turtle – *Chelonia mydas* was not initially included, but added during the Assessment review process) and one species proposed for listing. These are shown in Table 1. The US Fish & Wildlife Service describes the status of these species in simple terms:

- Endangered species are at the brink of extinction now.
- Threatened species are likely to be at the brink of extinction in the near future.

<b>Species</b>	<b>Scientific Name</b>	<b>Status</b>	<b>Agency</b>
Atlantic Green Sea Turtle	<i>Chelonia mydas</i>	Endangered	FWS
Atlantic (Gulf) Sturgeon	<i>Acipenser oxyrinchus desotoi</i>	Threatened	NMFS
Eastern Black Rail	<i>Laterallus jamaicensis ssp. jamaicensis</i>	Proposed Threatened	FWS
Hawksbill Sea Turtle	<i>Eretmochelys imbricata</i>	Endangered	Joint
Kemp's Ridley Sea Turtle	<i>Lepidochelys kempii</i>	Endangered	Joint
Leatherback Sea Turtle	<i>Dermochelys coriacea</i>	Endangered	Joint
Loggerhead Sea Turtle	<i>Caretta caretta</i>	Threatened	Joint
Pallid Sturgeon	<i>Scaphirhynchus albus</i>	Endangered	FWS
Piping Plover	<i>Charadrius melodus</i>	Threatened	FWS
Red Knot	<i>Calidris canutus rufa</i>	Threatened	FWS
West Indian Manatee	<i>Trichechus manatus</i>	Threatened	FWS

These eleven species have range throughout all or most of the Parish. Two of the species have “critical habitat” in the Parish, the piping plover and the Atlantic sturgeon. These areas of critical habitat are discussed below.

**Definition: Range**

The “range” of a species is defined as the general geographical area within which that species can be found at the time either FWS or NMFS makes a status determination. This range includes those areas used throughout all or part of the species’ life cycle

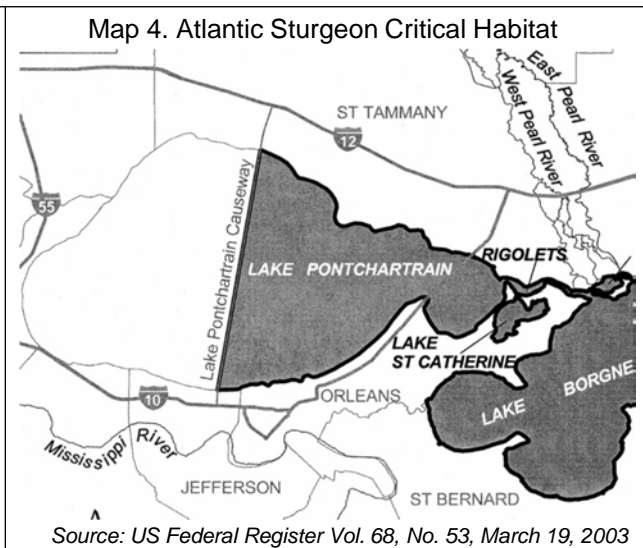
Actions to protect the listed species and help them recover are reviewed on the following pages. The actions discussed here are limited to those that can be implemented by the following participating jurisdictions: unincorporated Jefferson Parish, the City of Gretna, and the Town of Jean Lafitte. They do not include actions beyond local jurisdictions, such as restricting fishing practices, conducting scientific research, addressing international trade issues, and regulating actions in public waters like the Mississippi River and the Gulf of Mexico.

## Critical Habitat

The FRESH website notes that two of the eleven species have critical habitat in Jefferson Parish. The critical habitat for the piping plover is shown in Map 3 and for the Atlantic (Gulf) sturgeon on Map 4. This designation warrants a higher level of protection, so special attention should be provided to actions that can protect these areas.

**Definition: Critical Habitat**

“Critical habitat” are specific geographic areas that contain features essential to the conservation of an endangered or threatened species and that may require special management and protection. Critical habitat may also include areas that are not currently occupied by the species but will be needed for its recovery. – [FWS Environmental Conservation Online System](#)



The critical habitat for the piping plover is limited to the two islands that comprise the Town of Grand Isle, not part of the Community Ratings System (CRS), but it is still regulated under the Parish’s Coastal Zone Management Program.

The critical habitat for the Atlantic (Gulf) sturgeon is Lake Pontchartrain east of the Causeway. All of this habitat is in the lake and does not include any land areas within Jefferson Parish’s jurisdiction. The Parish can help protect this area by managing the quality of water that it discharges into Lake Pontchartrain.



Piping Plover

The Parish can also protect the habitat of all threatened and endangered species that live on land or in nearshore aquatic environments by keeping floodplains as natural areas.

### Community Rating System Credit for Conservation and Recovery

A significant percentage of conservation and recovery actions implemented or available to local governments can be credited under the [Community Rating System](#) (CRS). The CRS provides reduced flood insurance premiums in communities that undertake activities to prevent or reduce flood losses and protect natural floodplain functions. Jefferson Parish is currently a CRS Class 5, the City of Gretna is a Class 6, and the Town of Jean Lafitte is a Class 7. Collectively, these communities are saving all floodplain residents and businesses a total of approximately \$10.5 million each year on their flood insurance premiums.

Implementing more activities, such as threatened and endangered species recovery actions, could help these jurisdictions achieve better class ratings.

Table 2 reviews general CRS-credited recovery actions, in the three participating jurisdictions, that are applicable to most threatened and endangered species. The “Currently Implemented & Credits Awarded” column shows if an activity/element is being awarded, and the CRS credits awarded compared to the maximum credits available. The “Feasible” column identifies if it would be feasible to start an activity or increase the credit points.

Table 2. CRS Credited Recovery Actions for Threatened and Endangered Species						
Activity/Element	Current Implemented & Credits Awarded			Feasible		
	Unincorporated JP	Gretna	Jean Lafitte	Unincorporated JP	Gretna	Jean Lafitte
<b>300 Series Information Activities</b>						
320 – MI7 – Natural floodplain functions information	No	Yes (no credit)	No	Yes	Yes	Yes
330 – OP – Outreach projects	Yes	Yes	Yes	Yes, w/appropriate messages	Yes, with appropriate messages	Yes, with appropriate messages
330 – PPI – Program for Public Information	Yes	Yes	Yes	Yes, add appropriate messages	Yes, add appropriate messages	Yes, add appropriate messages
350 – LPD – Locally pertinent materials in library	Yes	Yes	Yes	Yes, add appropriate references	Yes, add appropriate messages	Yes, add appropriate messages
350 – WEB – Flood protection website	Unincorporated JP	City of Gretna	Town of Jean Lafitte	Unincorporated JP	City of Gretna	Town of Jean Lafitte
<b>Activity 420 (Open Space Preservation)</b>						
420 – OSP – Open space preservation	Yes - 1,044/1,450	Yes - 116/1450	Yes - 623.5/1450			
420 – NFOS – Open space parcels in natural state	Yes - 125/350	No	Yes - 77.90/190			
420 – CEOS – Coastal erosion open space *	Maybe	No	No	Needs research	N/A	Needs research
420 – OSI – Open space incentives	No	No	No	Yes	Yes	Needs research
420 – LZ – Low density zoning	No	No	No			
420 – NSP – Natural shoreline protection	Yes	No	No	Yes	N/A	Needs research
<b>Activity 430 (Higher Regulatory Standards)</b>						
430 – DL1a – Development limitations to prohibit fill	No	No	No	Unlikely	Unlikely	Unlikely
430 – CER – Coastal erosion regulations *	Maybe	No	No	Needs research	N/A	Needs research
430 – OHS – Other higher standards	No	No	No			
<b>Activity 450 (Stormwater Management)</b>						
450 – DS – Design storm w/volume control	Yes - 14/225	Yes - 14/225	No			
450 – LID – Low impact development	No	No	No	Yes, with ordinance amendment	Yes, with ordinance amendment	
450 – WMP – Watershed master plan	Underway	Underway	Underway	To be started in 2021	To be started in 2021	To be started in 2021
<b>Activity 510 (Floodplain Management Planning)</b>						
510 – NFP – Natural floodplain functions plan	No	Yes (no credit)	No	Yes	Yes	
510 – FSA – Floodplain Species Assessment & Plan	Yes	Yes	Yes	To be started in 2021	To be started in 2021	Yes
<b>Activity 540 (Drainage System Maintenance)</b>						
Activity 540 (Drainage System Maintenance)	Yes	Yes	Yes	Yes, add appropriate criteria	Yes, add appropriate criteria	Yes, add appropriate criteria

## Summary of CRS Actions

*Henceforth, unincorporated Jefferson Parish, the City of Gretna, and the Town of Jean Lafitte will be referred to as either “Jefferson Parish” or “the Parish.”*

**300 (Public Information Activities):** Jefferson Parish is implementing most of the public information activities and elements (Table 2). through their multijurisdictional Program for Public Information (PPI), of which all three communities are included. The multijurisdictional program will greatly facilitate all three communities having the same messages and outreach projects. Adjusting these activities so that they better address threatened and endangered species would not be substantially challenging. The FRESH maps could be used for credit under Activity 320 (Map Information Service), MI7.

The outreach projects, library references, and websites could also be revised or expanded to

provide more information on protecting threatened and endangered species. However, the Parish should first confer with the appropriate experts and agencies to identify the most appropriate messages, references, and websites in which to link.

**Activity 420 (Open Space Preservation) – Open Space Preservation (OSP):** The developable areas of Jefferson Parish are mostly built out but there is a lot of open space for which the Parish is getting credit. A large portion of the credit is for the property located within the “Urban Growth Limit Line” which is all in a Special Flood Hazard Area and consists of property located in the southern portion of Jefferson Parish. The majority of this property is privately owned. However, it is restricted from development by the “UGLL regulations.” These regulations also qualify this area for Natural Functions Open Space (NFOS) credit. The remaining, developed parcels do not qualify as open space.

**420 – Coastal Erosion Open Space (CEOS):** There are areas of the Parish subject to coastal erosion, much of it in open space, but CRS credit is dependent on specific land development regulations in those areas. Feasibility can be determined after a review of current Parish and State regulatory programs and requirements to meet the CRS credit criteria. The City of Gretna and the Town of Jean Lafitte do not have coastal areas, so CEOS credit would be applicable to unincorporated Jefferson Parish only.

**420 – Low Density Zoning (LZ):** No zoning districts currently qualify as low density. The remaining undeveloped and unzoned areas are already preserved as open space, so there would be no benefit to rezoning those areas.

**420 – Natural Shoreline Protection (NSP):** Credit for this element results from allowing coastal shorelines and stream channels to erode or meander naturally. It requires regulations (or policies for public lands) that prohibit construction of seawalls, armoring, or “hard” channel bank protection measures. There are areas in the undeveloped open spaces where such actions may not be allowed. Further work is needed to determine if the current regulations qualify. If so, a map of the affected areas would need to be prepared.

**Activity 430 (Higher Regulatory Standards):** The Parish has considered prohibiting fill in the floodplain, but not enacted any regulations thus far. Additional consideration could be given to see if this is feasible. Jefferson Parish may be able to set other higher standard(s) for development in the floodplain. Credit for coastal erosion regulations (CER) is discussed above with the credit for coastal erosion open space.

**Activity 450 (Stormwater Management) – Design storm (DS):** Jefferson Parish is receiving a total of 28 out of a possible 675 points for its requirement that detention basins be designed to handle the peak flow of the 10-year storm. For this credit, the regulatory language would need to require storage of the 10-year storm, which would mandate larger basins. Given the limited space in developed areas, this may not be feasible.

**450 – Low Impact Development (LID):** Jefferson Parish adopted the first update to the Parish’s Comprehensive Plan in December 2019 called *Envision Jefferson 2040: The Jefferson Parish Comprehensive Plan*. One objective of the plan is to promote low-impact development practices for construction, fill, drainage, landscaping, and parking. Also, the plan aims to encourage integrated storm water management, green infrastructure, and other low-impact development techniques to minimize flooding and mitigate impacts of climate change. The Jefferson Parish Hazard Mitigation Plan 2020 update expanded upon the incentives of adopting standards for integrated stormwater management and low-impact development.



Jefferson Parish is currently doing a study of integrated stormwater management that will evaluate enhancing existing incentives for low-impact development in the Parish's development regulations. The recommendations from this study will inform how the Parish will proceed with LID requirements and procedures.

**450 – Watershed Master Plan (WMP):** Jefferson Parish is developing a Watershed Master Plan with the goal of finalizing the plan by the end of 2021. The Parish plans to incorporate measures that protect natural floodplain functions, like preserving wetlands for storage. Such rules would help riparian and aquatic species that are listed as threatened or endangered. It should be noted that the watershed plan will be reviewed and revised every five years.

**Activity 540 (Drainage System Maintenance):** Jefferson Parish has not received credit under the new criteria regarding natural channels for this activity. The Parish does not have maintenance procedures in place that may be eligible for credit by the next CRS cycle visit. Before such procedures are implemented, they should be reviewed to ensure they do not adversely affect habitat.

### Comments on the Assessment Report

There are a number of federal and state agencies and private organizations that have goals and programs to protect and rehabilitate threatened and endangered species. These are listed below.

U.S. Fish and Wildlife Service  
Ecological Services Field Office (SE Region)  
200 Dulles Drive  
Lafayette, LA 70506  
(337) 291-3100

Audubon Louisiana  
3801 Canal Street  
New Orleans, LA 70119  
[lbourg@audubon.org](mailto:lbourg@audubon.org)

National Marine Fisheries Service  
Southeast Regional Office  
263 13<sup>th</sup> Avenue South  
St. Petersburg, FL 33701  
(727) 824-5301

The Nature Conservancy  
Louisiana Program  
PO Box 4125  
Baton Rouge, LA 70821  
(225) 338-1040  
[lafo@tnc.org](mailto:lafo@tnc.org)

Federal Emergency Management Agency  
FEMA Region VI  
FRC 800 North Loop 288  
Denton, TX 76209-3698  
940-898-5405

LA Dept. of Wildlife and Fisheries  
PO Box 98000  
2000 Quail Drive  
Baton Rouge, LA 70898  
(225) 765-2800

A conference call was held on April 20, 2020, to record comments and recommendations from the following reviewing agencies and private organizations for the Assessment. It was attended by representatives of the Louisiana Field Office of the US Fish & Wildlife Service, (FWS – Amy Trahan), Louisiana Department of Wildlife and Fisheries (LDWF – Julia Lightner and Michael Seymour), and The Nature Conservancy (TNC – Seth Blitch). A separate call was held with Joe Heublein of the National Marine Fisheries Service's Southeastern Regional Office (NMFS). The following five questions were sent to the Assessment review agencies and non-profit to be discussed over the phone. A general summary of the responses is listed under each question.

1. Is the list of threatened and endangered species in Table 1 on page 2 appropriate? Are

there any species that the community should not spend time on?

All: The eastern black rail is proposed for listing. It should be included. Actions for conservation of the eastern black rail will also help the red knot (agreed to by all on the conference call). Piping plover and red knots have similar habitat.

LDWF & NMFS: Add the green sea turtle to the list (making a total of five sea turtles).

With all the beach restoration projects underway, more can be expected to nest in the Parish.

2. For those species that deserve attention from the community, do you have additional information on their habitats and threats?

LDWF: With newer maps and more local information assistance can be provided to highlight important areas and provide more specific guidance than from looking at the whole Parish-wide range.

3. Are there any recovery actions that should be priorities to pursue?

FWS: public information and outreach – people need to know what the threatened and endangered species look like and the threats they face.

LDWF: Communities should be aware of species in the high marsh, particularly the eastern black rail. High marsh is drier and is more attractive to developers.

TNC: Increase public outreach initiatives.

NMFS: Take habitat into account when doing projects, like levee lifts, use soft approaches. General best practices are useful, especially when there are few critical habitats designated.

4. Would you be able to assist us in implementing any priority projects? FWS: has public information materials available.

TNC: contact other organizations doing outreach and festivals aimed at educating the public. The Nature Conservancy has tools and outreach material that can be utilized.

LDWF: Contact other organizations, including the Barataria-Terrebonne National Estuary Program, Master Naturalist Program, Audubon Louisiana, and the Orleans Audubon Society.

5. After hearing the comments from the others on the call, please identify what you think are the three most important actions the community should pursue?



FWS: focus on water quality, don't build in the marshes, and increase outreach efforts.

LDWF: maximize the use of natural functions, don't change the hydrology, conduct public outreach pertaining to the need to get permits.

LDWF (Julia): outreach can be done on state properties and wildlife management areas, the Parish can support restoration projects

TNC: Protect shorelines and wetlands

NMFS: Utilize more habitat-friendly measures, especially along the fringes of their habitats. Do things eco-system wide, especially where critical habitat has not been designated.

**Summary:** There were common threads in the comments received:

- A community can do good things with a program that addresses concerns that are important to several species.
- There are few critical habitat designations in the Parish. Attention should be given to all shorelines, wetlands, and high marshes.
- Public information and managing land development and construction projects should be priority actions that will help all the listed species.