COASTAL RESOURCES PROGRAM

Louisiana
Department of Transportation and Development

POTENTIAL PRESERVATION AND RESTORATION AREAS

QH
76.5
.L8
P67
1977

POTENTIAL PRESERVATION AND RESTORATION AREAS in the LOUISIANA WETLANDS

prepared for

LOUISIANA STATE PLANNING OFFICE

COASTAL RESOURCES PROGRAM

by

BURK & ASSOCIATES, INC.

June 1977

Reprinted by

LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

The preparation of this report was financed in part through a grant from the U. S. Department of Commerce under the provisions of the Coastal Zone Management Act of 1972.

QH76.5.L8 B67 1977

NOTICE

This document is disseminated under the sponsorship of the Louisiana Department of Transportation and Development in the interest of information exchange. The State of Louisiana assumes no liability for its contents or the use thereof.

Table of Contents

	Page
Introduction	1
Standards and Criteria for Preservation and Restoration Areas	
Criteria for Preservation Areas	3
Criteria for Restoration Areas	9
Evaluation of Potential Preservation Areas	10
Priority Ranking of Preservation Areas	60
Potential Restoration Areas	63

Appendix

A. Potential Preservation Areas Map
B. Potential Restoration Areas Map

Introduction

The Coastal Zone Management Act of 1972 requires that states develop procedures whereby specific areas may be designated for the "purpose of preserving or restoring them for their conservation, recreation, ecological or esthetic values". (Section 923.16.) This report considers fifty potential areas in coastal Louisiana which have been evaluated as natural areas. The evaluation is based upon information collected in the field, topographic maps, infrared photographs and personal contacts. Published agency studies and previously prepared natural area studies in other states have also been used.

Rules and Regulations published in the Federal Register establish three requirements related to area designation for preservation and restoration. The Register states that:

"The state must develop procedures for the designation of areas with certain characteristics. The state, in doing so, must:

1) Establish standards and criteria for the possible designation of coastal areas intended for preservation or restoration because of their conservation, recreational, ecological or esthetic values,
2) Apply those standards and criteria to the state's coastal resources, and
3) Rank in order of relative priority areas of its coastal zone which have been designated for the purposes set forth in this section. As funds become available, such a ranking will provide a set of priorities for selecting areas to be preserved or restored" (Section 923.16).

Each of these requirements are addressed in this report under the headings of 1) Standards and Criteria for Preservation and Restoration Areas; 2) Evaluation of Potential Preservation Areas; and 3) Priority Ranking of Preservation Areas. In addition to consideration of preservation areas, a study was made of potential restoration areas, primarily those most affected by saltwater intrusion, erosion, and land-loss.

This study should be considered as a starting point in the determination of the most valuable natural areas along the Louisiana Coast. The areas evaluated represent the least altered regions of the coastal wetlands. Fifty potential natural areas were selected that provided a cross-section of all major physiographic types in coastal Louisiana. These areas are generally remote, relatively inaccessible, and show little or no physical alteration. Some, due to their isolation, are essentially wilderness. Each site has varying degrees of ecological, economic, recreational or aesthetic value. These values would be diminished should these areas be developed due to the sensitive nature of these lands. Pristine wetlands are vanishing at a rapid rate and it is hoped that this study will serve as a guide to acquisition or protection of the most valuable areas.

standards and criteria for preservation and restoration areas

Nine criteria have been selected for the purpose of evaluation of the fifty potential natural areas. A definition of each criterion is followed by an explanation of the weight scale. Those areas assigned the greatest number of points are considered the most important remaining completely natural portions of the coastal ecosystem; those with the least number of points are of lesser significance as natural areas.

1. Criteria and Weighting Scheme for Priority Ranking of Preservation Areas

1. Naturalness. Naturalness is a measure of the pristine quality or wilderness character of the area and the degree to which natural conditions have been affected. Unaltered areas of coastal wetlands that have had little or no human disturbance would be considered as prime natural areas.

Weight Scale	Points
No Alteration - Completely pristine area with wilderness characteristics	10
Slight Alteration - evidence of minor human disturbance	8
Moderate Alteration - Natural processes or landscape has been changed somewhat by man's activities	6
Severe Alteration - Natural qualities of area have been severely disturbed by several man-made activities	2

2. Diversity. Diversity refers to the number of different species or habitats in the biotic community of the area. Areas with a large number of species of plants and animals usually possess a variety of habitat types. Such diverse areas have more ecological value and scientific interest.

Weight Scale	Points
Great Diversity - four or more community types or habitats	10
Moderate Diversity - two or three community types	6
Low Diversity - single community type	2

3. Representativeness. A representative area is a typical example of a distinct wetland type or native biotic community. Some areas may represent transitional or zonal communities of several biotic types whereas others are examples of one community type. An area may be a typical example of deep fresh marsh, brackish marsh or cypress-tupelo swamp or may have characteristics of two or more community types. Such transitional areas are ecotones and have high community diversity.

Weight Scale	Points
Highly Representative - prime example of particular community types found in Coastal Louisiana.	10
Moderately Representative - has some characteristics of local community types as well as other types not native or representative of Coastal Louisiana.	6

Non-representative - does not represent typical Louisiana community types	2

4. Unique Ecological Value. An area has unique ecological value if it has zoological, botanical or geological features of the following types: critical habitat for endangered species; extremely high wildlife and/or fishery productivity; vitally important nesting, feeding, wintering, spawning or nursery areas for fish and wildlife; rare or unusual occurrences for a species that may be near the limits of its biogeographic range; vital to the maintenance of a coastal ecological process; or a unique physiographic feature or micro-environment.

Weight Scale	Points
Very High Ecological Value - an area that is rated to be of extreme ecological significance because of 4 or more unique ecological features	10
High Ecological Value - an area that has 2 or 3 unique ecological features	8
Moderate Ecological Value - an area that has 1 unique ecological feature	6
Low Ecological Value - an area that has no unique ecological features	2

5. Susceptibility to damage. Susceptibility to damage is a measure of how sensitive or fragile an area is and the ease with which natural conditions can be altered by natural or man-made changes. Some areas are more

tolerant to human intrusion than others. In a multiple-use environment such as Coastal Louisiana, it is often a question of how much human alteration can occur before the natural system is adversely affected rather than if human alteration has occurred. Few areas of the coastal zone exist that have not been modified by man-induced changes. Although coastal wetlands are fragile systems, they are highly resilient and adaptable to change. Often, man-induced changes benefit certain species while they are detrimental to others.

Weight Scale	Points
High vulnerability - areas where adverse changes occur due to the slightest alteration	10
Moderate vulnerability - areas where adverse and beneficial changes due to natural or man-induced alteration roughly counter-balance each other	6
Low vulnerability - areas which are highly tolerant to change and adapt easily to alteration	2

6. Degree of Threat. Degree of threat refers to the pressure for development and the likelihood that an area will be destroyed by draining, filling or other alteration. In wetland areas, development usually results in the irreversible loss of the natural features of the area. Degree of threat also refers to the danger of loss of a natural feature due to erosion, saltwater intrusion or some other natural process.

Weight Scale	Points
Threat is imminent - development or loss of the entire area is occurring or will occur shortly	10
Threat is imminent - development or loss of portions of the area is occurring or will occur shortly	8
Threat is moderate - future development or loss of the area is possible and will probably occur if the area is not protected or restored	6
Little threat - future alteration of the area is unlikely	2

7. Aesthetic Quality. Aesthetic quality is a ranking of the scenic value and natural beauty of an area. Areas of high aesthetic appeal offer good views of varying types of unobstructed natural landscapes. Most areas with high aesthetic quality also provide good opportunities for wildlife observation. Areas that have received minimal human disturbance have the highest aesthetic value.

Weight Scale	Points
Outstanding value - areas that have had little human disturbance and offer excellent views of several types of natural landscapes	10
Intermediate to high value - areas with above average aesthetic appeal	6
Moderate value - areas of average aesthetic appeal	2

8. Educational and Scientific Value. This is an indicator of the value of an area for environmental training, research or scientific interest. This would include possible tours or water trails for various conservation-orientated or school groups. Proximity to metropolitan areas and major colleges and universities should be considered.

Weight Scale	Points
Outstanding value - annually used by several schools or groups for both casual and educational activities; near metropolitan areas; extensive field station use or potential for extensive use	10
Intermediate value	6
Low value	2

9. Recreational Value. Recreational value is a rating of the quality and diversity of recreational uses such as hunting, fishing, camping, boating, swimming, etc. that an area offers. Accessibility of the area increases its recreational value.

Weight Scale	Points
Outstanding value - areas with adequate public access, and prime hunting and fishing areas	10
Intermediate value - areas having good potential value but lacking access	6
Low value - areas that offer little recreational opportunity	2

2. Criteria for Restoration Areas

Coastal areas recommended for restoration are those that have the greatest rates of land loss due to natural and man-made erosion. Two methods exist for restoration - 1) freshwater introduction from the Mississippi River which would enhance fish and wildlife production and 2) structural measures such as weirs, shell dams, rip-rap shore protection, vegetation transplants, artificial reefs, beach nourishment and salinity control structures such as locks or sills.

Erosion rates along the Louisiana coast are greatest in the more recently abandoned sub-delta marshes along either side of the Mississippi River, along the barrier islands, along shorelines of the larger bays and lakes and in marshes adjacent to large navigational channels. Areas to be restored by freshwater diversion from the Mississippi River must be adjacent to the river because it is not feasible to pump river water for long distances. The beneficial impact of freshwater diversion related to sediments, freshwater and nutrients would be felt for many miles away from the site of introduction. The zone of influence would be dependent on the volume of flow introduced and the physiography of the marsh area.

evaluation of potential preservation areas

SITE EVALUATION

Name of site Blind River Swamp
Site number 1 Hydrologic Basin I
Parish Livingston, Ascension, St. James Approximate acreage 9,791
Location Between U.S. Highway 61 and Lake Maurepas

CRITERIA	RATING				
	10	8	6	4	2
1. Naturalness		X			
2. Diversity			X		
3. Representativeness	X				
4. Unique Ecological Value		X			
5. Susceptibility to Damage	X				
6. Degree of Threat					X
7. Aesthetic Quality	X				
8. Educational and Scientific Value	X				
9. Recreational Value	X				

Total Rating 74

Character and Description of Area: A proposed registered natural landmark. An abandoned Mississippi River distributary about 20 miles in length containing about 25,000 acres of cypress-tupelo gum swamp forest. Affected by ebb and flow of tides through Lake Maurepas. This swamp supports a very rich and diverse faunal community. It has a high recreational and scenic value.

Priority Ranking (of a total of 50 potential areas): 7

SITE EVALUATION

Name of site Amite River Swamp
Site number 2 Hydrologic Basin 1
Parish Livingston Approximate acreage 7,148
Location From Lake Maurepas to just west of the river's junction with Bayou Barbary

CRITERIA	RATING				
	10	8	6	4	2
1. Naturalness		X			
2. Diversity			X		
3. Representativeness			X		
4. Unique Ecological Value		X			
5. Susceptibility to Damage	X				
6. Degree of Threat			X		
7. Aesthetic Quality			X		
8. Educational and Scientific Value			X		
9. Recreational Value	X				

Total Rating 66

Character and Description of Area: A proposed registered natural landmark. Lowland swamp along river surrounded by upland forest regions. Freshwater swamp: Bald cypress, tupelo gum, palmetto, swamp maple. Rich wildlife area. Typical of river swamp, upland forest and freshwater swamp. Breeding grounds of wading bird rookeries. Habitat of deer and bobcat. Wading bird rookeries.

Priority Ranking (of a total of 50 potential areas): 11

SITE EVALUATION

Name of site Tickfaw River Swamp
Site number 3 Hydrologic Basin I
Parish Livingston Approximate acreage 4,302
Location Between Highway 22 and Lake Maurepas

CRITERIA	RATING				
	10	8	6	4	2
1. Naturalness		X			
2. Diversity			X		
3. Representativeness			X		
4. Unique Ecological Value		X			
5. Susceptibility to Damage	X				
6. Degree of Threat			X		
7. Aesthetic Quality			X		
8. Educational and Scientific Value			X		
9. Recreational Value	X				

Total Rating 66

Character and Description of Area: Proposed registered natural landmark. River bank swamp along Tickfaw River, freshwater swamp: bald cypress, tupelo gum, swamp maple, palmetto, water ash. Rich wildlife habitat for swamp birds, fur animals, reptitles, deer and bobcat.

Priority Ranking (of a total of 50 potential areas): 11

SITE EVALUATION

Name of site Ponchatoula Marsh
Site number 4 Hydrologic Basin 1
Parish Tangipahoa Approximate acreage 1,694
Location Five miles south east of Ponchatoula, La.

CRITERIA	RATING				
	10	8	6	4	2
1. Naturalness		X			
2. Diversity			X		
3. Representativeness			X		
4. Unique Ecological Value			X		
5. Susceptibility to Damage			X		
6. Degree of Threat					X
7. Aesthetic Quality			X		
8. Educational and Scientific Value			X		
9. Recreational Value			X		

Total Rating 52

Character and Description of Area: Filled in and grown over lake bed surrounded by cypress swamp. Vegetation - water hyacinth, Scirpus, Typha, Panicium hemitomon; water plantain; Rumex. Wildlife - marsh area, Great egret, white ibis, killdeer, Louisiana heron, large concentration (200-300) of egrets.
Other comments: area is remote with high aesthetic appeal - one exception is a power line that crosses northwest corner.

Priority Ranking (of a total of 50 potential areas): 17

SITE EVALUATION

Name of site Manchac Swamp
Site number 5 Hydrologic Basin I
Parish St. John Approximate acreage 26,763
Location Southern end of Lake Maurepas, west to Mississippi Bayou, east to I-55 south to I-10

CRITERIA	RATING				
	10	8	6	4	2
1. Naturalness	X				
2. Diversity			X		
3. Representativeness	X				
4. Unique Ecological Value		X			
5. Susceptibility to Damage	X				
6. Degree of Threat		X			
7. Aesthetic Quality	X				
8. Educational and Scientific Value			X		
9. Recreational Value			X		
			Total Rating		74

Character and Description of Area: Along southern border of Lake Maurepas, freshwater swamp: bald cypress, tupelo gum, palmetto, swamp maple, water ash. Small patch of freshwater marsh along Lake Maidencane, water hyacinth, pickerelweed, pennywort, bulltongue, alligatorweed, cattail.
Rich wildlife area - Swamp and marsh habitat for many birds, fur animals, reptiles and deer. Area supports very large concentration of waterfowl in the winter. Area is in excellent condition with very little physical alteration.

Priority Ranking (of a total of 50 potential areas): 7

SITE EVALUATION

Name of site St. Charles Marsh and Swamp
Site number 6 Hydrologic Basin 1
Parish St. Charles Approximate acreage 17,684
Location Southwestern shore of Lake Pontchartrain, west to east levee of Bonnet Carre Spillway, east to Jefferson Parish line, south to Airline Highway.

CRITERIA	RATING				
	10	8	6	4	2
1. Naturalness			X		
2. Diversity	X				
3. Representativeness	X				
4. Unique Ecological Value		X			
5. Susceptibility to Damage	X				
6. Degree of Threat		X			
7. Aesthetic Quality	X				
8. Educational and Scientific Value	X				
9. Recreational Value			X		
			Total Rating		78

Character and Description of Area: Fresh and intermediate marsh grading into Cypress-tupelo gum swamp. Transitional wetland between Mississippi River and Lake Pontchartrain. Flanking alluvial ridge: cypress-tupelo gum swamp, palmetto, swamp red maple. Fresh Marsh: Maidencane, water hyacinth, bulltongue, pickerelweed, pennywort, alligatorweed, cattail. Intermediate Marsh: Wire grass, saw grass, bullwhip, bulltongue, wild millet. Wildlife typical of swamp and marsh. Powerlines cross from east to west between I-10 and lake railroad tracks run east to west along south side of I-10. Wading Bird rookery. This area is of prime importance as a nursery ground adjacent to Lake Pontchartrain.

Priority Ranking (of a total of 50 potential areas): 5

SITE EVALUATION

Name of site Big Oak Island
Site number 7 Hydrologic Basin I
Parish Orleans Approximate acreage 271
Location Two miles north Highway 90 and approximately one mile northwest of Blind Lagoon in New Orleans East

CRITERIA	RATING				
	10	8	6	4	2
1. Naturalness		X			
2. Diversity			X		
3. Representativeness			X		
4. Unique Ecological Value			X		
5. Susceptibility to Damage			X		
6. Degree of Threat			X		
7. Aesthetic Quality			X		
8. Educational and Scientific Value	X				
9. Recreational Value					X
			Total Rating		56

Character and Description of Area: Oak Island, remnant extension of barrier islands of the Miss. Gulf Coast beach ridge. Vegetation: Live oak, hackberry, chinaberry, black willow and pond cypress (Taxodium ascendens) along the extremities - Important Indian midden. Diverse wildlife habitat because of vegetation and geological features. Abundant in bird life, many fur animals and reptiles. Unique archaeological feature.

Priority Ranking (of a total of 50 potential areas): 16

SITE EVALUATION

Name of site Wild Celery Grass Beds - Lake Pontchartrain
Site number 8 Hydrologic Basin I
Parish St. Tammany Approximate acreage 4,472
Location Northeastern shore of Lake Pontchartrain between Green Point near Mandeville and Big Point near Slidell

CRITERIA	RATING				
	10	8	6	4	2
1. Naturalness		X			
2. Diversity			X		
3. Representativeness	X				
4. Unique Ecological Value			X		
5. Susceptibility to Damage	X				
6. Degree of Threat					X
7. Aesthetic Quality			X		
8. Educational and Scientific Value			X		
9. Recreational Value			X		

Total Rating 60

Character and Description of Area: Submerged grass beds along north shore of Lake Pontchartrain, wild celery (Vallisneria), Ruppia, Najas guadalupensis. Unique area for aquatic wildlife also prime habitat for fish and shellfish. Important waterfowl area because of submerged grass beds, combined with beaches and marsh.

Priority Ranking (of a total of 50 potential areas): 14

SITE EVALUATION

Name of site Proctor Point Marsh
Site number 9 Hydrologic Basin 1
Parish St. Bernard Approximate acreage 9,181
Location Southern perimeter of Lake Borgne north of Mississippi River Gulf Outlet

CRITERIA	RATING				
	10	8	6	4	2
1. Naturalness		X			
2. Diversity			X		
3. Representativeness	X				
4. Unique Ecological Value		X			
5. Susceptibility to Damage	X				
6. Degree of Threat					X
7. Aesthetic Quality			X		
8. Educational and Scientific Value			X		
9. Recreational Value	X				

Total Rating 66

Character and Description of Area: Typical brackish marsh in generally good condition except along southern end where it is being eroded by MR-GO. High nursery ground and waterfowl value. Site of wading bird rookery. Interior marsh shows little physical alteration. Area is a distinct unit and relatively isolated due to its being bisected by the MR-GO.

Priority Ranking (of a total of 50 potential areas): 11

SITE EVALUATION

Name of site Bayou la Loutre - St. Malo Alluvial Ridge Complex
Site number 10 Hydrologic Basin I
Parish St. Bernard Approximate acreage 4,912
Location Along Bayou la Loutre from Mississippi River Gulf Outlet to Stump Lagoon

CRITERIA	RATING				
	10	8	6	4	2
1. Naturalness	X				
2. Diversity			X		
3. Representativeness	X				
4. Unique Ecological Value		X			
5. Susceptibility to Damage			X		
6. Degree of Threat			X		
7. Aesthetic Quality	X				
8. Educational and Scientific Value			X		
9. Recreational Value			X		
			Total Rating		68

Character and Description of Area: Remote natural levee portion of an abandoned river distributary. Ridge vegetated by palmetto and live oak and some dying due to saltwater intrusion. Abundant rabbits on ridge. Several Indian mounds (including Magnolia mound) along the ridge. Prime example of an ancient alluvial ridge undergoing gradual deterioration. Ridge is important as a natural barrier to saltwater intrusion.

Priority Ranking (of a total of 50 potential areas): 10

SITE EVALUATION

Name of site Honey Island Swamp
Site number 11 Hydrologic Basin 1
Parish St. Tammany Approximate acreage 21,716
Location Between the West and East Pearl Rivers north of Little Lake to near English Bayou

CRITERIA	RATING				
	10	8	6	4	2
1. Naturalness	X				
2. Diversity			X		
3. Representativeness	X				
4. Unique Ecological Value	X				
5. Susceptibility to Damage	X				
6. Degree of Threat					X
7. Aesthetic Quality	X				
8. Educational and Scientific Value	X				
9. Recreational Value	X				
			Total Rating		78

Character and Description of Area: Proposed natural landmark. Unaltered overflow river swamp with three habitat zones - bottomland hardwoods, swamp and marsh. Ideal habitat for American Alligator, wild turkey, black bear, cougar, bobcat, many small mammals. Rich aquatic fauna, large population of freshwater fishes. Wading bird rookery present; large resident wood duck population. The freshwater and brackish marsh southward to Little Lake is some of the best waterfowl habitat in the state. Transect of coastal vegetational communities. From the north along W. Pearl River alluvial ridge vegetation: live oak, bottomland hardwoods. Along E. Pearl River, cypress-tupelo gum swamp. South to freshwater marsh: maidencane, water hyacinth, bulltongue, cattail. Small band of intermediate marsh: wiregrass, sawgrass, etc. Brackish marsh: Saltgrass, black rush.

Priority Ranking (of a total of 50 potential areas): 5

SITE EVALUATION

Name of site Biloxi Marsh
Site number 12 Hydrologic Basin I
Parish St. Bernard Approximate acreage 260,790
Location Bordered on west by Lake Borgne, north by Mississippi Sound, east by Chandeleur Sound and south by Bayou la Loutre

CRITERIA	RATING				
	10	8	6	4	2
1. Naturalness	X				
2. Diversity			X		
3. Representativeness	X				
4. Unique Ecological Value	X				
5. Susceptibility to Damage	X				
6. Degree of Threat		X			
7. Aesthetic Quality	X				
8. Educational and Scientific Value			X		
9. Recreational Value	X				

Total Rating 80

Character and Description of Area: Essentially a wilderness area, this brackish and saline marsh represents the remnants of the abandoned St. Bernard Subdelta of the Mississippi River. Area is of vital importance as a fishery nursery ground, waterfowl wintering and hunting area. Supports large population of furbearers, provides excellent saltwater fishing. Large commercial oyster fishery on eastern fringes. A portion of the area is leased by Louisiana as the Biloxi Wildlife Management Area.

Priority Ranking (of a total of 50 potential areas): 4

SITE EVALUATION

Name of site Chandeleur Islands
Site number 13 Hydrologic Basin I
Parish St. Bernard Approximate acreage 44,922
Location Bordered on west by Chandeleur Sound and on the east by the Gulf of Mexico

CRITERIA	RATING				
	10	8	6	4	2
1. Naturalness	X				
2. Diversity	X				
3. Representativeness	X				
4. Unique Ecological Value	X				
5. Susceptibility to Damage	X				
6. Degree of Threat			X		
7. Aesthetic Quality	X				
8. Educational and Scientific Value			X		
9. Recreational Value	X				
			Total Rating		82

Character and Description of Area: Remote beach and barrier island complex 20 miles east of the St. Bernard "mainland". The islands are part of the Breton Bird Refuge and the Breton Wilderness, and are extremely important nesting areas for a variety of sea-birds, waterfowl and the endangered loggerhead sea turtle. The islands consist of a beach zone, dunes, mangrove and wax myrtle and a band of saline marsh on the bay side. Submergent grasses such as turtle grass and manatee grass occur on the western side of main Chandeleur Island. The islands are a vital spawning area for many fishes. In Smack Channel near North Island, a rich and diverse fauna of certain small crustaceans, molluscs, invertebrates and fishes exists which represent a combination of temperate Northern Gulf species and tropical West Indian species. Surf fishing on the islands is very popular.

Priority Ranking (of a total of 50 potential areas): 3

SITE EVALUATION

Name of site South Breton Island
Site number 14 Hydrologic Basin II
Parish Plaquemines Approximate acreage 3,727
Location Bordered on west by Breton Sound and on east by Gulf of Mexico

CRITERIA	RATING				
	10	8	6	4	2
1. Naturalness	X				
2. Diversity			X		
3. Representativeness	X				
4. Unique Ecological Value		X			
5. Susceptibility to Damage	X				
6. Degree of Threat			X		
7. Aesthetic Quality	X				
8. Educational and Scientific Value			X		
9. Recreational Value	X				
			Total Rating		76

Character and Description of Area: A barrier island that is part of the Breton Wilderness. Gulf side sand beaches and mangrove and saline marsh on the sound side. The island is unaltered by man's activities but is vulnerable to considerable alteration from wave action and storms. Important seabird nesting colony, fishery nursery and spawning area. Surf fishing very popular.

Priority Ranking (of a total of 50 potential areas): 6

SITE EVALUATION

Name of site Baptiste Collette Transitional Marsh
Site number 15 Hydrologic Basin II
Parish Plaquemines Approximate acreage 5,217
Location North of Baptiste Collette Pass to Carencro Bay

CRITERIA	RATING				
	10	8	6	4	2
1. Naturalness			X		
2. Diversity	X				
3. Representativeness			X		
4. Unique Ecological Value		X			
5. Susceptibility to Damage	X				
6. Degree of Threat			X		
7. Aesthetic Quality			X		
8. Educational and Scientific Value			X		
9. Recreational Value			X		
			Total Rating		64

Character and Description of Area: A unique marsh area that provides a transition between fresh, intermediate, brackish and saline marsh within a distance of about 3 miles. Sub-delta and delta marshes represented. The marsh is fresh along the upper end of Baptiste Collette Pass and grades into saline marsh near Carencro Bay. Black mangrove occurs on shores of Carencro Bay.

Priority Ranking (of a total of 50 potential areas): 12

SITE EVALUATION

Name of site Spanish Lake Marsh
Site number 16 Hydrologic Basin 11
Parish Plaquemines Approximate acreage 7,385
Location Four miles northeast of Phoenix, La.

CRITERIA	RATING				
	10	8	6	4	2
1. Naturalness		X			
2. Diversity			X		
3. Representativeness	X				
4. Unique Ecological Value		X			
5. Susceptibility to Damage	X				
6. Degree of Threat					X
7. Aesthetic Quality	X				
8. Educational and Scientific Value			X		
9. Recreational Value			X		
			Total Rating		66

Character and Description of Area: Brackish marsh, mostly wiregrass, some Scirpus, Spartina alterniflora, Roseau, Palmetto, Paille fine, Dead oaks in Oak River. Remote, good example of brackish marsh type. Numbers of trappers seen in area trapping. Numbers of muskrat hills seen, much of marsh burned for trapping. Several trapper's camps. No visual man-made alterations except for 1 pipeline canal. Buckbrush on spoil of canal. Shell midden on 2 habitat types, abandoned alluvial ridge and brackish marsh. Land owned by Delacroix Corp.

Priority Ranking (of a total of 50 potential areas): 11

SITE EVALUATION

Name of site Mississippi Delta Marsh
Site number 17 Hydrologic Basin III
Parish Plaquemines Approximate acreage 88,895
Location Octave Pass south to Johnson Pass including Southeast Pass and Pass a Loutre

CRITERIA	RATING				
	10	8	6	4	2
1. Naturalness			X		
2. Diversity	X				
3. Representativeness	X				
4. Unique Ecological Value	X				
5. Susceptibility to Damage	X				
6. Degree of Threat		X			
7. Aesthetic Quality			X		
8. Educational and Scientific Value	X				
9. Recreational Value			X		
			Total Rating		76

Character and Description of Area: Deltaic marsh, passes and bays at the mouth of the Mississippi River. These marshes have been formed by active deltaic sedimentation and are rapidly changing. Primarily freshwater marsh with thin band of intermediate marsh along Gulf. Marsh constantly fluctuates due to freshwater inflow and sedimentation from river and tidal action from Gulf. Subsidence rates are very high, causing much of the area to open up into larger lagoons. Waterfowl usage very high. The marshes and adjacent bays produce a tremendous standing crop of fishes. Area also supports good herd of marsh deer, alligators and is heavily used for wading bird nesting. A unique geological feature, the mud lumps, are found at the ends of the passes. Sport fishing at the mouth of the passes and around the mud lumps is excellent. Oil drilling location canals have caused moderate modification of the natural marsh. Much of the area is within the Delta Refuge and Pass a Loutre Public Shooting Grounds.

Priority Ranking (of a total of 50 potential areas): 6

SITE EVALUATION

Name of site Bayou Citamon Swamp
Site number 18 Hydrologic Basin IV
Parish St. James Approximate acreage 3,693
Location From Assumption Parish line to junction with Bayou Chevreuil

CRITERIA	RATING				
	10	8	6	4	2
1. Naturalness		X			
2. Diversity			X		
3. Representativeness	X				
4. Unique Ecological Value			X		
5. Susceptibility to Damage			X		
6. Degree of Threat			X		
7. Aesthetic Quality			X		
8. Educational and Scientific Value			X		
9. Recreational Value			X		

Total Rating 60

Character and Description of Area: Typical interdistributary swamp forest along Bayou Citamon. Bayou banks lined with hardwoods which grade into cypress-tupelo gum swamp.

Priority Ranking (of a total of 50 potential areas): 14

SITE EVALUATION

Name of site Bayou Bois Piquant Crevasse Swamp
Site number 19 Hydrologic Basin IV
Parish St. Charles Approximate acreage 7,250
Location Ridge complex lies northwest of Lake Cataouatche, originates near Boutte and runs southeast for 5 miles to the lake

CRITERIA	RATING				
	10	8	6	4	2
1. Naturalness	X				
2. Diversity	X				
3. Representativeness	X				
4. Unique Ecological Value		X			
5. Susceptibility to Damage	X				
6. Degree of Threat		X			
7. Aesthetic Quality	X				
8. Educational and Scientific Value	X				
9. Recreational Value	X				

Total Rating 86

Character and Description of Area: Old crevasse. Distinct ridge - bayou swale pattern. Remote and completely natural. Habitat diversity is high: oak-hackberry ridge, interconnecting swamp between ridges, fresh marsh toward Lake Cataouatche
Wildlife - grey squirrels, deer, wood ducks, thousands of mallards; great egrets, nutria, rabbit, owl, otter, pileated woodpecker, armadillo.
Vegetation - ridge (oak, hackberry, palmetto).

Priority Ranking (of a total of 50 potential areas): 1

SITE EVALUATION

Name of site Avondale Swamp
Site number 20 Hydrologic Basin IV
Parish Jefferson Approximate acreage 610
Location North of Highway 90, west of Parish line, including swamp area west and north of Old Waggaman Ponds

CRITERIA	RATING				
	10	8	6	4	2
1. Naturalness			X		
2. Diversity					X
3. Representativeness			X		
4. Unique Ecological Value			X		
5. Susceptibility to Damage			X		
6. Degree of Threat		X			
7. Aesthetic Quality					X
8. Educational and Scientific Value			X		
9. Recreational Value					X
			Total Rating		44

Character and Description of Area: Second growth forest area; appears to be a transitional area, former swamp converting to hackberry - willow association. Subsidence and drainage have caused land to sink 6" to 1 foot.
Habitat evaluation - moderately heavy underbrush and thickets, briars.
Vegetation - some cypress, dominants are hackberry, black willow, red maple.

Priority Ranking (of a total of 50 potential areas): 18

SITE EVALUATION

Name of site Proposed Jean Lafitte Park swamp-marsh
Site number 21 Hydrologic Basin IV
Parish Jefferson Approximate acreage 7,792
Location Between Bayou des Familles and Lake Salvador, bordered on south by Bayou Barataria

CRITERIA	RATING				
	10	8	6	4	2
1. Naturalness		X			
2. Diversity	X				
3. Representativeness	X				
4. Unique Ecological Value		X			
5. Susceptibility to Damage	X				
6. Degree of Threat		X			
7. Aesthetic Quality	X				
8. Educational and Scientific Value	X				
9. Recreational Value	X				
				Total Rating	84

Character and Description of Area: Area has a natural transition from alluvial ridge, cypress swamp, palmetto swamp, fresh marsh and lakeshore. Area relatively unaltered with the exception of one pipeline canal, an oil well road and several old lumbering canals. Due to the four habitat zones, diversity of plant and animal life is very high. Area within 10 miles of large urban area. Proposed National Park. High recreational, cultural and scenic value.

Priority Ranking (of a total of 50 potential areas): 2

SITE EVALUATION

Name of site Gheens Fresh Marsh
Site number 22 Hydrologic Basin IV
Parish Lafourche Approximate acreage 13,348
Location South of Bayou Des Allemands, east of U.S. Highway 90 and north of Gheens, La.

CRITERIA	RATING				
	10	8	6	4	2
1. Naturalness	X				
2. Diversity			X		
3. Representativeness	X				
4. Unique Ecological Value		X			
5. Susceptibility to Damage	X				
6. Degree of Threat					X
7. Aesthetic Quality			X		
8. Educational and Scientific Value			X		
9. Recreational Value	X				
			Total Rating		68

Character and Description of Area: Typical freshwater marsh in Barataria Basin in excellent condition. Very good waterfowl and alligator habitat. Very little obvious physical alteration. Area owned by Golden Ranch. Bass fishing and duck hunting on this tract is very good. Old river distributary (Bayou Matherne) borders area.

Priority Ranking (of a total of 50 potential areas): 10

SITE EVALUATION

Name of site Bayou Matherne - Temple Bay Area
Site number 23 Hydrologic Basin IV
Parish Lafourche Approximate acreage 1,965
Location Southwest corner of Lake Salvador along Bayou Matherne

CRITERIA	RATING				
	10	8	6	4	2
1. Naturalness	X				
2. Diversity	X				
3. Representativeness	X				
4. Unique Ecological Value		X			
5. Susceptibility to Damage	X				
6. Degree of Threat					X
7. Aesthetic Quality	X				
8. Educational and Scientific Value			X		
9. Recreational Value			X		
			Total Rating		72

Character and Description of Area: Abandoned river distributary adjacent to Lake Salvador which forms a lacustrine delta. Vegetation along the bayou is largly cypress with some oaks. Submerged grass beds (mainly wild celery) along shore of Temple Bay. Shell deposits along Grosse Point. Fresh marsh exists between lake and Bayou Matherne. Area is completely natural with no physical alteration.

Priority Ranking (of a total of 50 potential areas): 8

SITE EVALUATION

Name of site Abandoned Channel of Bayou Barataria
Site number 24 Hydrologic Basin IV
Parish Jefferson Approximate acreage 1,897
Location Cypress Oak ridge south of Lafitte, La. and east of Bayou Rigolettes

CRITERIA	RATING				
	10	8	6	4	2
1. Naturalness		X			
2. Diversity			X		
3. Representativeness	X				
4. Unique Ecological Value		X			
5. Susceptibility to Damage	X				
6. Degree of Threat			X		
7. Aesthetic Quality	X				
8. Educational and Scientific Value			X		
9. Recreational Value			X		

Total Rating 70

Character and Description of Area: Southern terminus of the Bayou Barataria alluvial ridge. Very remote with wilderness characteristics. Ridge vegetation primarily oak, cypress and palmetto surrounded by intermediate and brackish marsh. Two active eagle nests on the ridge. Area represents a typical alluvial ridge in an unaltered state. Original channel between the subsiding banks of the ridge have filled in with marsh deposits and aquatic vegetation. Several Indian middens in vicinity.

Priority Ranking (of a total of 50 potential areas): 9

SITE EVALUATION

Name of site Brusle Lake Brackish Marsh
Site number 25 Hydrologic Basin IV
Parish Lafourche Approximate acreage 7,622
Location Southwest corner of Little Lake between Bay L'Ours and Bayou L'Ours

CRITERIA	RATING				
	10	8	6	4	2
1. Naturalness		X			
2. Diversity			X		
3. Representativeness	X				
4. Unique Ecological Value		X			
5. Susceptibility to Damage	X				
6. Degree of Threat			X		
7. Aesthetic Quality	X				
8. Educational and Scientific Value			X		
9. Recreational Value			X		
			Total Rating		70

Character and Description of Area: Transitional zones apparent form the West Fork of Bayou L'Ours to Little Lake that represents abandoned alluvial ridge, intermediate marsh and brackish marsh. Brusle Lake is a shallow brackish lake. Area supports a wading bird rookery and is excellent waterfowl habitat. The marsh area is also a prime low salinity nursery ground. Pipeline canal borders eastern side but marsh within the unit itself is in very good condition and essentially unaltered visually.

Priority Ranking (of a total of 50 potential areas): 9

SITE EVALUATION

Name of site Bayou Grande Cheniere - Bay Baptiste Saline Marsh
Site number 26 Hydrologic Basin IV
Parish Plaquemines Approximate acreage 6,471
Location South of Bayou Grande Cheniere and north of Bay Baptiste

CRITERIA	RATING				
	10	8	6	4	2
1. Naturalness	X				
2. Diversity	X				
3. Representativeness	X				
4. Unique Ecological Value		X			
5. Susceptibility to Damage	X				
6. Degree of Threat			X		
7. Aesthetic Quality	X				
8. Educational and Scientific Value			X		
9. Recreational Value			X		
			Total Rating		76

Character and Description of Area: Good representative example of Barataria Basin saline marsh type that shows a transition from abandoned alluvial ridge (Bayou Grande Cheniere) through brackish marsh into saline marsh north of Bay Baptiste. The marsh is in excellent condition and is prime nursery ground habitat. It shows virtually no physical or man-made alteration and is fairly remote.

Priority Ranking (of a total of 50 potential areas): 6

SITE EVALUATION

Name of site Cheniere Caminada Beach Ridges
Site number 27 Hydrologic Basin IV
Parish Lafourche Approximate acreage 6,132
Location South of La. 1, north of the Gulf of Mexico, just west of Caminada Pass

CRITERIA	RATING				
	10	8	6	4	2
1. Naturalness		X			
2. Diversity			X		
3. Representativeness	X				
4. Unique Ecological Value		X			
5. Susceptibility to Damage	X				
6. Degree of Threat			X		
7. Aesthetic Quality			X		
8. Educational and Scientific Value			X		
9. Recreational Value			X		
			Total Rating		66

Character and Description of Area: A series of beach ridges running parallel to the Gulf between Grand Isle and Bayou Moreau. The ridges are vegetated with oaks and smaller shrubs. Between the ridges are grassy swales, saline marsh and long linear lagoons. They are a unique geological formation, important as storm buffers and as resting areas for birds completing trans-Gulf migrations. The ridges are essentially unaltered with the exception of two pipeline canals and 1 shell road. One of the ridges, Cheniere Caminada, is important historically.

Priority Ranking (of a total of 50 potential areas): 11

SITE EVALUATION

Name of site Queen Bess Island
Site number 28 Hydrologic Basin IV
Parish Jefferson Approximate acreage 102
Location Southern Barataria Bay, Island just north of Grand Isle and Grand Terre Islands

CRITERIA	RATING				
	10	8	6	4	2
1. Naturalness	X				
2. Diversity			X		
3. Representativeness	X				
4. Unique Ecological Value		X			
5. Susceptibility to Damage	X				
6. Degree of Threat			X		
7. Aesthetic Quality			X		
8. Educational and Scientific Value			X		
9. Recreational Value					X
			Total Rating		64

Character and Description of Area: Small island composed of black mangrove and saline marsh in Southern Barataria Bay. The island is used extensively for nesting and roosting by Louisiana's only remaining colony of brown pelicans. The shoreline of the island is composed of sand and oyster shell.

Priority Ranking (of a total of 50 potential areas): 12

SITE EVALUATION

Name of site Grand Terre Island
Site number 29 Hydrologic Basin IV
Parish Jefferson Approximate acreage 949
Location Southern Barataria Bay on the Gulf of Mexico east of Grand Isle.

CRITERIA	RATING				
	10	8	6	4	2
1. Naturalness			X		
2. Diversity			X		
3. Representativeness			X		
4. Unique Ecological Value		X			
5. Susceptibility to Damage	X				
6. Degree of Threat			X		
7. Aesthetic Quality			X		
8. Educational and Scientific Value	X				
9. Recreational Value			X		
			Total Rating		64

Character and Description of Area: An important barrier island at the mouth of Barataria Bay. The island's Gulf shoreline is composed of sand and shell. The bay side of the island has saline marsh and mangrove. Island utilized heavily by brown pelicans and shorebirds. Flanking the island on the west and east are two important tidal passes - Barataria Pass and Pass Abel. Three pipeline canals cross the bay side of the island.

Priority Ranking (of a total of 50 potential areas): 12

SITE EVALUATION

Name of site Grassy Lake Swamp
Site number 30 Hydrologic Basin V
Parish Assumption - St. Martin Approximate acreage 5,285
Location North of Grassy Lake and south of Lake Verret

CRITERIA	RATING				
	10	8	6	4	2
1. Naturalness		X			
2. Diversity			X		
3. Representativeness	X				
4. Unique Ecological Value			X		
5. Susceptibility to Damage	X				
6. Degree of Threat					X
7. Aesthetic Quality			X		
8. Educational and Scientific Value			X		
9. Recreational Value			X		

Total Rating 60

Character and Description of Area: Typical cypress-tupelo gum swamp forest. Area is in very good condition with little physical alteration. Four mile bayou on the eastern side of the area has a number of camps along its course. A shell road borders the northern edge of the area along Bayou Magazille to the settlement of Bayou Geneve. North of Grassy Lake, the swamp is divided by numerous small dendritic natural channels.

Priority Ranking (of a total of 50 potential areas): 14

SITE EVALUATION

Name of site Bay Wallace Swamp
Site number 31 Hydrologic Basin V
Parish Terrebonne Approximate acreage 2,338
Location North of Intracoastal Waterway, south of Gibson and U.S. Highway 90

CRITERIA	RATING				
	10	8	6	4	2
1. Naturalness		X			
2. Diversity			X		
3. Representativeness	X				
4. Unique Ecological Value			X		
5. Susceptibility to Damage	X				
6. Degree of Threat					X
7. Aesthetic Quality			X		
8. Educational and Scientific Value			X		
9. Recreational Value			X		

Total Rating 60

Character and Description of Area: A unique swamp embayment with a narrow dead-end bayou extending through its middle. The swamp is in very good condition and provides excellent freshwater fishing. Thick growth of aquatic vegetation lines the bayou with cypress-tupelo gum along the banks of the bayou.

Priority Ranking (of a total of 50 potential areas): 14

SITE EVALUATION

Name of site Bayou Penchant fresh marsh
Site number 32 Hydrologic Basin V
Parish Terrebonne Approximate acreage 3,151
Location North of Bayou Penchant and south of Avoca Island

CRITERIA	RATING				
	10	8	6	4	2
1. Naturalness	X				
2. Diversity			X		
3. Representativeness	X				
4. Unique Ecological Value		X			
5. Susceptibility to Damage	X				
6. Degree of Threat		X			
7. Aesthetic Quality			X		
8. Educational and Scientific Value			X		
9. Recreational Value	X				
			Total Rating		74

Character and Description of Area: Shallow freshwater marsh dominated by small shrubs, water pennywort also common, some bulltongue, bullwhip, giant cutgrass, willow. Area is completely natural with no physical alteration except pipeline canals on east and north. Owned by Continental Land and Fur Co. of Gibson, La. Very large concentrations of ducks in area. Area borders nesting site of Bald Eagle. Area threatened by Boeuf, Black and Chene project.

Priority Ranking (of a total of 50 potential areas): 7

SITE EVALUATION

Name of site Creole Bayou fresh marsh
Site number 33 Hydrologic Basin V
Parish Terrebonne Approximate acreage 22,020
Location North of Fourleague Bay, east of Atchafalaya Bay

CRITERIA	RATING				
	10	8	6	4	2
1. Naturalness		X			
2. Diversity			X		
3. Representativeness	X				
4. Unique Ecological Value		X			
5. Susceptibility to Damage	X				
6. Degree of Threat			X		
7. Aesthetic Quality			X		
8. Educational and Scientific Value			X		
9. Recreational Value			X		

Total Rating 66

Character and Description of Area: Remote freshwater marsh in Southwestern Terrebonne Parish. Relatively unaltered; excellent waterfowl and alligator habitat. This area is affected by freshwater discharge through the Atchafalaya River. The freshwater marsh changes to brackish intermediate marsh and brackish marsh to the south of Creole Bayou around Big Carencro Bayou. Only physical alterations are two rig access canals and one pipeline canal.

Priority Ranking (of a total of 50 potential areas): 11

SITE EVALUATION

Name of site Bayou Mauvais Bois ridge
Site number 34 Hydrologic Basin V
Parish Terrebonne Approximate acreage 2,134
Location Bayou Mauvais Bois ridge, north of Lake de Cade

CRITERIA	RATING				
	10	8	6	4	2
1. Naturalness		X			
2. Diversity			X		
3. Representativeness	X				
4. Unique Ecological Value		X			
5. Susceptibility to Damage	X				
6. Degree of Threat			X		
7. Aesthetic Quality			X		
8. Educational and Scientific Value			X		
9. Recreational Value			X		
			Total Rating		66

Character and Description of Area: An ancient distributary of the Mississippi River isolated in the marshes of southern Terrebonne Parish. The ridge is vegetated primarily by cypress and live oak. A bald eagle nest is found on the ridge. Two wading bird rookeries exist nearby. The ridge is flanked on either side by freshwater marsh. A few camps exist on the Peoples Canal which transects the ridge.

Priority Ranking (of a total of 50 potential areas): 11

SITE EVALUATION

Name of site Felicity Island
Site number 35 Hydrologic Basin V
Parish Terrebonne Approximate acreage 1,592
Location West of Lake Felicity, north of Lake Raccourci

CRITERIA	RATING				
	10	8	6	4	2
1. Naturalness		X			
2. Diversity			X		
3. Representativeness	X				
4. Unique Ecological Value		X			
5. Susceptibility to Damage	X				
6. Degree of Threat			X		
7. Aesthetic Quality			X		
8. Educational and Scientific Value			X		
9. Recreational Value			X		

Total Rating 66

Character and Description of Area: This "island" is an isolated natural levee ridge at the seaward end of Bayou Pointe au Chien. It is vegetated by small trees and shrubs and is surrounded by saline marsh. The portion of the ridge north of the island has subsided to near sea level. A wading bird rookery is found on the island. The island is bisected by one pipeline canal and a rig access canal.

Priority Ranking (of a total of 50 potential areas): 11

SITE EVALUATION

Name of site Calumet Island
Site number 36 Hydrologic Basin V
Parish Lafourche Approximate acreage 339
Location Island in Timbalier Bay

CRITERIA	RATING				
	10	8	6	4	2
1. Naturalness	X				
2. Diversity			X		
3. Representativeness	X				
4. Unique Ecological Value	X				
5. Susceptibility to Damage	X				
6. Degree of Threat			X		
7. Aesthetic Quality			X		
8. Educational and Scientific Value			X		
9. Recreational Value			X		

Total Rating 70

Character and Description of Area: A small barrier island in Timbalier Bay. The island has three distinct habitat zones - an area of black mangrove on the island's backside, a narrow sand beach zone and an area of submergent marine grasses (largely shoalgrass and manatee grass) in shallow waters adjacent to the island. The island is an important seabird nesting area and is completely natural with no physical alteration.

Priority Ranking (of a total of 50 potential areas): 9

SITE EVALUATION

Name of site Isles Dernieres
Site number 37 Hydrologic Basin V
Parish Terrebonne Approximate acreage 8,673
Location Islands south of Lake Pelto on the Gulf of Mexico

CRITERIA	RATING				
	10	8	6	4	2
1. Naturalness		X			
2. Diversity	X				
3. Representativeness	X				
4. Unique Ecological Value	X				
5. Susceptibility to Damage	X				
6. Degree of Threat		X			
7. Aesthetic Quality	X				
8. Educational and Scientific Value			X		
9. Recreational Value			X		
			Total Rating		78

Character and Description of Area: Barrier islands and sand beaches on the Gulf of Mexico. These islands are remote and completely natural with the exception of one rig access canal across the marsh of the island's backside. Black mangrove, saline marsh and pockets of submergent marine grasses vegetate the backside of the islands with fine sand and shell beaches with low dunes rising 3 to 5 feet. The islands are broken by several tidal channels. They are heavily used by shorebirds, seabirds and wading birds for nesting. Boat camping and surf fishing are very popular recreational activities on the islands. The islands are also vital storm buffers and important in regulating water exchange and saltwater balance between the Gulf and the bays. They also help reduce wave action on the marshes to the north.

Priority Ranking (of a total of 50 potential areas): 5

SITE EVALUATION

Name of site Grand Lake Swamp
Site number 38 Hydrologic Basin VI
Parish Iberia - St. Martin Approximate acreage 99,160
Location From Lake Fausse Point east to Hog Island, south from Lake Long to Cypress Pass

CRITERIA	RATING				
	10	8	6	4	2
1. Naturalness	X				
2. Diversity	X				
3. Representativeness	X				
4. Unique Ecological Value	X				
5. Susceptibility to Damage	X				
6. Degree of Threat			X		
7. Aesthetic Quality	X				
8. Educational and Scientific Value	X				
9. Recreational Value	X				

Total Rating 86

Character and Description of Area: Largest remaining natural overflow swamp in the United States. This area is the most natural and unaltered portion of the Atchafalaya Basin. Southern portion of area has been proposed as a natural landmark. Area includes the central portion of the basin and possesses a complex interconnected braided stream channel and distributary network. Alternating low hardwood ridges and cypress sloughs. Numerous land-locked lakes surrounded by swamp. The basin is essentially wilderness, has tremendous recreational value for sport fishing and hunting and commercial value for crayfish and is outstanding habitat for wildlife including several endangered species. Among the rarer suspected and/or known species are ivory billed woodpecker, black bear, panther, bobcat, and virtually all other forest wildlife known in coastal Louisiana. The basin is extremely productive habitat supporting dense populations of terrestrial, avian and aquatic fauna.

Priority Ranking (of a total of 50 potential areas): 1

SITE EVALUATION

Name of site Big Hog Bayou swamp-marsh
Site number 39 Hydrologic Basin VI
Parish St. Mary Approximate acreage 18,565
Location North of Atchafalaya Bay, west of Lower Atchafalaya River

CRITERIA	RATING				
	10	8	6	4	2
1. Naturalness		X			
2. Diversity			X		
3. Representativeness	X				
4. Unique Ecological Value	X				
5. Susceptibility to Damage	X				
6. Degree of Threat			X		
7. Aesthetic Quality	X				
8. Educational and Scientific Value			X		
9. Recreational Value			X		
			Total Rating		72

Character and Description of Area: Remote freshwater marsh and swamp in the lower Atchafalaya Basin. Excellent waterfowl habitat and fisheries habitat. Very little physical alteration except for one long pipeline canal. Black bear known from area. Northern portion of area around Lake Salve is cypress swamp while area to the south toward Atchafalaya Bay is freshwater marsh. The entire area is affected by freshwater flow from the Atchafalaya River. The new Atchafalaya Delta is forming in the bay at the southern end of this area.

Priority Ranking (of a total of 50 potential areas): 8

SITE EVALUATION

Name of site Fearman Lake Marsh
Site number 40 Hydrologic Basin VII
Parish Vermilion Approximate acreage 20,293
Location West shore of Vermilion Bay, above Cheniere au Tigre, below Fearman Lake

CRITERIA	RATING				
	10	8	6	4	2
1. Naturalness	X				
2. Diversity			X		
3. Representativeness	X				
4. Unique Ecological Value		X			
5. Susceptibility to Damage	X				
6. Degree of Threat					X
7. Aesthetic Quality	X				
8. Educational and Scientific Value			X		
9. Recreational Value			X		

Total Rating 68

Character and Description of Area: Typical chenier plain prairies marshland consisting of brackish and intermediate marsh. Very remote marsh in excellent condition with very little alteration. Area is part of two refuges - the Rainey Audubon Refuge and State Refuge. It supports very high duck and geese populations and is the site of wading and seabird rookeries.

Priority Ranking (of a total of 50 potential areas): 10

SITE EVALUATION

Name of site Cote Blanche Island
Site number 41 Hydrologic Basin VII
Parish St. Mary Approximate acreage 1,389
Location North side of West Cote Blanche Bay, east of Cypremart Point

CRITERIA	RATING				
	10	8	6	4	2
1. Naturalness		X			
2. Diversity	X				
3. Representativeness	X				
4. Unique Ecological Value	X				
5. Susceptibility to Damage			X		
6. Degree of Threat		X			
7. Aesthetic Quality	X				
8. Educational and Scientific Value			X		
9. Recreational Value					X
			Total Rating		70

Character and Description of Area: Salt dome island privately owned. Leased by Domtar Salt Co., which has salt mine on island. Workers use central gravel road to get to mine. Dense upland hardwoods with thick understory. Unusual mosses and ferns. There are deer, armadillos, squirrels and formerly bear (which had been trapped). Big bear still on island as well as many deer, foxes, armadillo and abundant rattlesnakes and copperheads. Unique topography for coastal area (elevation up to 75 feet) slightly undulating, steep in places. Very diverse vegetation.

Priority Ranking (of a total of 50 potential areas): 9

SITE EVALUATION

Name of site Bayou Mascot Marsh
Site number 42 Hydrologic Basin VII
Parish St. Mary Approximate acreage 5,353
Location Northeast side of West Cote Blanche Bay below Intracoastal Waterway

CRITERIA	RATING				
	10	8	6	4	2
1. Naturalness	X				
2. Diversity			X		
3. Representativeness	X				
4. Unique Ecological Value			X		
5. Susceptibility to Damage	X				
6. Degree of Threat					X
7. Aesthetic Quality			X		
8. Educational and Scientific Value			X		
9. Recreational Value			X		

Total Rating 62

Character and Description of Area: Fresh and brackish marsh in good condition. Northern portion of area has scattered cypress and oak trees along some of the bayous. Very little physical alteration. Good waterfowl, furbearer and alligator habitat.

Priority Ranking (of a total of 50 potential areas): 13

SITE EVALUATION

Name of site Palmetto Island
Site number 43 Hydrologic Basin VIII
Parish Vermilion Approximate acreage 3,760
Location West of Vermilion River, east of Esther, south of Abbeville

CRITERIA	RATING				
	10	8	6	4	2
1. Naturalness		X			
2. Diversity	X				
3. Representativeness	X				
4. Unique Ecological Value	X				
5. Susceptibility to Damage	X				
6. Degree of Threat			X		
7. Aesthetic Quality	X				
8. Educational and Scientific Value	X				
9. Recreational Value	X				

Total Rating 84

Character and Description of Area: Unique bottomland hardwood and swamp area on the Vermilion River surrounded by prairie and rice fields. Swamp growing in old river channel meander scars. A prime natural area. Paved road through center. Enormous diversity in vegetation - various oak species (largely live oak), red maple, willow, cypress. Good wildlife population - variety of birds seen. Well preserved, good access. Oak ridge (island) through middle of swamp with small marshy areas between. Only a few camps on island.

Priority Ranking (of a total of 50 potential areas): 2

SITE EVALUATION

Name of site Clear Lake Marsh
Site number 44 Hydrologic Basin VIII
Parish Vermilion Approximate acreage 7,520
Location Northeast side of White Lake

CRITERIA	RATING				
	10	8	6	4	2
1. Naturalness		X			
2. Diversity			X		
3. Representativeness	X				
4. Unique Ecological Value		X			
5. Susceptibility to Damage	X				
6. Degree of Threat					X
7. Aesthetic Quality	X				
8. Educational and Scientific Value			X		
9. Recreational Value			X		
			Total Rating		66

Character and Description of Area: Deep fresh marsh - primarily bulltongue. Very remote and inaccessible. Essentially a wilderness area. No visible alteration other than mud boat trails. Excellent waterfowl habitat. Good alligator populations. Within Mermentau River Basin.

Priority Ranking (of a total of 50 potential areas): 11

SITE EVALUATION

Name of site Lake Misere Marsh
Site number 45 Hydrologic Basin VIII
Parish Cameron Approximate acreage 5,793
Location North of Lake Misere, southern portion of Lacassine National Wildlife Refuge

CRITERIA	RATING				
	10	8	6	4	2
1. Naturalness	X				
2. Diversity			X		
3. Representativeness	X				
4. Unique Ecological Value	X				
5. Susceptibility to Damage	X				
6. Degree of Threat					X
7. Aesthetic Quality	X				
8. Educational and Scientific Value			X		
9. Recreational Value	X				
			Total Rating		74

Character and Description of Area: An official wilderness area included in the National Wilderness System in 1976. Part of the Lacassine National Wildlife Refuge. Area consists of deep freshwater prairie marsh in excellent condition. At least four wading bird rookeries occur in this marsh. Excellent waterfowl and alligator habitat.

Priority Ranking (of a total of 50 potential areas): 7

SITE EVALUATION

Name of site Little Pecan Island - Marsh-Chenier Complex
Site number 46 Hydrologic Basin VIII
Parish Cameron Approximate acreage 8,944
Location South of Grand Lake, north of Hackberry Ridge

CRITERIA	RATING				
	10	8	6	4	2
1. Naturalness		X			
2. Diversity			X		
3. Representativeness	X				
4. Unique Ecological Value		X			
5. Susceptibility to Damage	X				
6. Degree of Threat					X
7. Aesthetic Quality	X				
8. Educational and Scientific Value			X		
9. Recreational Value	X				

Total Rating 70

Character and Description of Area: Area represents a transect through a chenier ridge, fresh and intermediate prairie marsh. Little Pecan Island is an ancient chenier ridge vegetated with oaks. Several smaller cheniers present surrounded by marsh. The marsh vegetation is primarily bulltongue, wiregrass, maidencane, water hyacinth, bullwhip. Only physical alterations are several pipeline canals off Little Pecan Bayou and mud boat ditches for trappers and duck hunters. Excellent waterfowl and alligator habitat.

Priority Ranking (of a total of 50 potential areas): 9

SITE EVALUATION

Name of site East Cove Marsh
Site number 47 Hydrologic Basin IX
Parish Cameron Approximate acreage 45,735
Location East of Calcasieu Lake, west of La. 27, south of Sweet Lake Canal and north of Back Ridge.

CRITERIA	RATING				
	10	8	6	4	2
1. Naturalness		X			
2. Diversity	X				
3. Representativeness	X				
4. Unique Ecological Value	X				
5. Susceptibility to Damage	X				
6. Degree of Threat		X			
7. Aesthetic Quality	X				
8. Educational and Scientific Value			X		
9. Recreational Value			X		
			Total Rating		78

Character and Description of Area: The east cove marshes represent one of the most productive natural prairie marshes in Southwestern Louisiana. Approximately half of the area is in the Sabine National Wildlife Refuge. The marsh is brackish along Calcasieu Lake grading into intermediate and fresh near Highway 27. There is virtually no man-made structures with the exception of a weir on Grand Bayou, fences along the refuge, one camp and some mud boat ditches. The marsh has undergone a change in vegetation from fresh to brackish due to the construction of the Calcasieu Ship Channel. Proposed as a possible wilderness area, the Grand Bayou system is an extremely important nursery ground for Calcasieu Lake. The area contains red wolf, alligator, and excellent waterfowl habitat.

Priority Ranking (of a total of 50 potential areas): 5

SITE EVALUATION

Name of site Wild Prairie
Site number 48 Hydrologic Basin IX
Parish Cameron Approximate acreage 508
Location North of the Intracoastal Waterway and east of the Vinton Drainage Canal

CRITERIA	RATING				
	10	8	6	4	2
1. Naturalness	X				
2. Diversity			X		
3. Representativeness	X				
4. Unique Ecological Value			X		
5. Susceptibility to Damage			X		
6. Degree of Threat					X
7. Aesthetic Quality	X				
8. Educational and Scientific Value			X		
9. Recreational Value			X		
			Total Rating		62

Character and Description of Area: An isolated heavily forested portion of the Pleistocene Terrace surrounded by fresh water marsh. Bottomland hardwoods are the dominant vegetative type. The area is slightly higher in elevation (5 feet) than the surrounding marsh. Excellent forest game habitat, probable red wolves.

Priority Ranking (of a total of 50 potential areas): 13

SITE EVALUATION

Name of site Sanders and Buck Ridges
Site number 49 Hydrologic Basin IX
Parish Cameron Approximate acreage 5,793
Location Just west of Johnson's Bayou and north of La. 27

CRITERIA	RATING				
	10	8	6	4	2
1. Naturalness		X			
2. Diversity			X		
3. Representativeness	X				
4. Unique Ecological Value		X			
5. Susceptibility to Damage			X		
6. Degree of Threat					X
7. Aesthetic Quality			X		
8. Educational and Scientific Value			X		
9. Recreational Value			X		

Total Rating 58

Character and Description of Area: Flat chenier plain marsh between low beach ridges. Low tree covered ridges occur in scattered patches through marsh. Vast and pure stands of threesquare. Signs of alteration - virtually none, a gas compressor station and few camps, one rig access canal. Vegetation - Abundant Olney's three-square, wiregrass, roseau cane, saltgrass. Wildlife - large number of blue wing teal. About 10 alligators seen in Madam Johnson's Bayou Lake. Abundant waterfowl. Sporadic muskrat hills. Prime muskrat marsh, as well as habitat for reddish egret, red wolf, roseate spoonbill.

Priority Ranking (of a total of 50 potential areas): 15

SITE EVALUATION

Name of site Pines Ridge
Site number 50 Hydrologic Basin IX
Parish Cameron Approximate acreage 2,338
Location On northeastern corner of Sabine Lake

CRITERIA	RATING				
	10	8	6	4	2
1. Naturalness		X			
2. Diversity			X		
3. Representativeness	X				
4. Unique Ecological Value		X			
5. Susceptibility to Damage			X		
6. Degree of Threat					X
7. Aesthetic Quality	X				
8. Educational and Scientific Value			X		
9. Recreational Value			X		
			Total Rating		62

Character and Description of Area: An isolated portion of the Pleistocene Terrace on the northeastern corner of Sabine Lake surrounded by brackish marsh of the Sabine Wildlife Refuge. The area is natural prairie and pine lands, and is remote and relatively unaltered. The area is important habitat for the endangered red wolf.

Priority Ranking (of a total of 50 potential areas): 13

priority ranking of preservation areas

Based on evaluation of the potential preservation areas, the following priority ranking has been determined.

Priority Group	Site	Rating
1	Grand Lake Swamp Bayou Bois Piquant Crevasse Swamp	86
2	Proposed Jean Lafitte Park Palmetto Island	84
3	Chandeleur Islands Wilderness	82
4	Biloxi Marsh	80
5	St. Charles Marsh and Swamp Honey Island Swamp Isles Dernieres East Cove Marsh	78
6	South Breton Island Mississippi Delta Marsh Bayou Grande Cheniere-Bay Baptiste Marsh	76
7	Blind River Swamp Manchac Swamp Bayou Penchant Marsh Lake Misere Marsh	74
8	Bayou Matherne - Temple Bay Big Hog Bayou Swamp and Marsh	72
9	Abandoned Channel of Bayou Barataria Brusle Lake Marsh Calumet Island Cote Blanche Island Little Pecan Island Marsh - Chenier	70
10	Bayou la Loutre Alluvial Ridge Gheens Marsh Freaman Lake Marsh	68
11	Amite River Swamp Tickfaw River Swamp Proctor Point Marsh Spanish Lake - Caskett Bayou Marsh	66

Priority Group	Site	Rating
11 (cont'd)	Cheniere Caminada Beach Ridges	
	Creole Bayou Marsh	
	Bayou Mauvais Bois Ridge	
	Felicity Island	
	Clear Lake Marsh	
12	Baptiste Collette Marsh	64
	Queen Bess Island	
	Grand Terre Barrier Island	
13	Bayou Mascot Marsh	62
	Sanders and Buck Ridges	
	Pines Ridge	
14	Wild Celery Grass Beds	60
	Bayou Citamon Swamp	
	Grassy Lake Swamp	
	Bay Wallace Swamp	
15	Wild Prairie	58
16	Big Oak Island	56
17	Pontchatoula Marsh	52
18	Avondale Swamp	44

It should be emphasized that all of these areas have unique or significant natural values. The method used for site evaluation was based on a combination of objective and subjective criteria. The final rankings applied to these areas are all fairly close numerically and reflect in most cases only minor differences between areas. If and when all or portions of these areas become available for public acquisition, other factors such as land availability, cost, and availability of funds should be considered along with the information presented in this report.

POTENTIAL SOURCES OF FUNDING

Several potential sources of funding exist for the acquisition of natural areas. Following is a list of possible state, federal and private organizations which might be contacted.

1. Conservation Fund - Louisiana Legislature
2. Land and Water Conservation Fund - U.S. Department of the Interior
3. Federal Aid in Fish and Wildlife Restoration Program - U.S. Department of the Interior
4. National Wilderness Preservation System
5. National Parks Service - National Registry of Natural Landmarks
6. Estuarine Sanctuaries Program - U.S. Department of Commerce, Office of Coastal Zone Management
7. Nature Conservancy, Arlington, Virginia
8. Trust for Public Lands, San Francisco, California

potential restoration areas

Natural and man-made erosion, land loss and salt water intrusion is a problem along most of Louisiana's coast. Only two areas, Atchafalaya Basin and the Mississippi Delta, are being built due to deltaic sedimentation. These are also the only two areas where the natural processes of freshwater flow and overbank flooding is occurring. Most of the rest of the coastal zone is experiencing land loss and saltwater intrusion at different rates due to the fact that the source of fresh river water and sediment has been eliminated by flood protection levees. Freshwater diversion is probably the single most beneficial action that could be taken to reduce marsh deterioration and enhance production. This is less of a problem in the chenier plain marshes of Southwest Louisiana where erosion and saltwater intrusion are more localized in a few areas and not as severe. The cheniers paralleling the coast act as a protective barrier to erosion and saltwater intrusion. The marsh around the East Cove of Calcasieu Lake and Freshwater Bayou and Schooner Bayou have the greatest problems in Southwest Louisiana.

In order to compare the nature of the problems and present possible solutions, the following table has been prepared which lists the most critical areas, the problem and suggested restoration techniques.

Area	Problem	Possible Solution
1. St. Bernard Delta		
a. Along the Mississippi River-Gulf Outlet	Erosion, saltwater intrusion	Rip rap shore stabilization and disposal of dredge spoil behind rip rap; lock at mouth freshwater diversion through Violet Canal.

b. Southern shoreline of Lake Borgne	Erosion, shoreline recession	Beach nourishment
c. "Mainland" Coast along Chandeleur Sound	Erosion of islands	Artificial reefs and vegetation transplants
2. Marsh on east side of Mississippi River south of Pointe a la Hache	Erosion, saltwater intrusion	Freshwater diversion from Mississippi River
3. Active Mississippi Delta	Subsidence of delta marsh	One major solution (which may not be feasible) is less maintenance dredging of the passes. Deeper passes carry more sediment and reduce the natural overflow and deposition of sediment onto the peripheral marshes.
4. Marsh on the west side of the Mississippi River between Empire and Boothville	Erosion	Freshwater diversion from Mississippi River
5. Mid Barataria Basin	Erosion, Saltwater intrusion	Freshwater diversion from Mississippi near Avondale, small impoundments, weirs, shell dams
6. Barrier islands, particularly East Timbalier and Isles Dernieres	Erosion, Dredging	Beach nourishment, vegetation stabilization, protection of dunes. Construction of artificial reefs seaward from islands.
7. Lake Decade - Theriot Cut	Erosion, saltwater intrusion	Shell dams, weirs
8. Houma Navigation Canal	Erosion, saltwater intrusion	Lock at lower end, shell dams at junction with canals and bayous.
9. Freshwater Bayou Schooner Bayou area	Saltwater intrusion	Weirs and dams
10. East Cove of Calcasieu Lake	Shoreline erosion, Saltwater intrusion, Marsh deterioration	Lock or sill in Calcasieu Ship Channel, rip rap and shell on lake shore, freshwater flap gates in Hwy. 27, closure of connection with Creole Canal.

CREDITS

Paul R. Wagner, Ph.D., Project Director

Gwen Dubus, Assistant author

Peggy Reily

Denis Beck, Graphics

NOAA COASTAL SERVICES CENTER LIBRARY
3 6668 14109 5200