

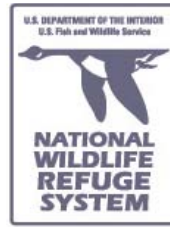
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November 2008



Delta and Breton National Wildlife Refuges Comprehensive Conservation Plan

# Delta and Breton National Wildlife Refuges

## Comprehensive Conservation Plan



USFWS Photo



**Comprehensive Conservation Plans provide long-term guidance for management decisions; set forth goals, objectives, and strategies needed to accomplish refuge purposes; and identify the Fish and Wildlife Service's best estimate of future needs. These plans detail program planning levels that are sometimes substantially above current budget allocations and, as such, are primarily for Service strategic planning and program prioritization purposes. The plans do not constitute a commitment for staffing increases, operational and maintenance increases, or funding for future land acquisition.**

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# Delta and Breton National Wildlife Refuges

## Comprehensive Conservation Plan



**U.S. Department of the Interior  
Fish and Wildlife Service  
Southeast Region**

November 2008

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**COMPREHENSIVE CONSERVATION PLAN**

**DELTA AND BRETON NATIONAL WILDLIFE REFUGES**

*ST. BERNARD AND PLAQUEMINES PARISHES, LOUISIANA*

**U.S. Department of the Interior  
Fish and Wildlife Service**

*Southeast Region*  
**Atlanta, Georgia**

**November 2008**

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# *I. Background*

## **INTRODUCTION**

This Comprehensive Conservation Plan (CCP) for Delta and Breton National Wildlife Refuges (NWRs) was prepared to guide management actions and direction for the refuges. Fish and wildlife conservation will receive first priority in refuge management; wildlife-dependent recreation will be allowed and encouraged as long as it is compatible with, and does not detract from, the mission of the refuges or the purposes for which they were established.

A planning team developed a range of alternatives that best met the goals and objectives of the refuges and that could be implemented within the 15-year planning period. The draft of this CCP was made available to state and federal government agencies, conservation partners, and the general public for review and comment. The comments from each entity were considered in the development of this CCP, describing the Fish and Wildlife Service's (Service) preferred plan.

## **PURPOSE AND NEED FOR THE PLAN**

The purpose of this CCP is to identify the role that Delta and Breton NWRs will play in support of the mission of the National Wildlife Refuge System (Refuge System), and to provide long-term guidance to the refuges' management programs and activities for the next 15 years.

The CCP will:

- provide a clear statement of the desired future conditions when refuge purposes and goals are accomplished;
- provide refuge neighbors, visitors, and government officials with an understanding of Service management actions on and around the refuges;
- ensure that Service management actions, including land protection and recreation/education programs, are consistent with the mandates of the Refuge System; and
- provide a basis for the development of budget requests for operations, maintenance, and capital improvement needs.

## **FISH AND WILDLIFE SERVICE**

The Service traces its roots to 1871 and the establishment of the Commission of Fisheries involved with research and fish culture. The once independent Commission was renamed the Bureau of Fisheries and placed in the Department of Commerce and Labor in 1903.

The Service also traces its roots to 1886 and the establishment of a Division of Economic Ornithology and Mammalogy in the Department of Agriculture. Research on the relationship of birds and animals to agriculture shifted to delineation of the range of plants and animals so the name was changed to the Division of the Biological Survey in 1896.

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The Department of Commerce, Bureau of Fisheries was combined with the Department of Agriculture, Bureau of Biological Survey on June 30, 1940 and transferred to the Department of the Interior as the Fish and Wildlife Service. The name was changed to the Bureau of Sport Fisheries and Wildlife in 1956, and finally to the U.S. Fish and Wildlife Service in 1974.

The Service is responsible for conserving, enhancing, and protecting fish and wildlife and their habitats for the continuing benefit of the American people through federal programs relating to wild birds, endangered species, certain marine mammals, inland sport fisheries, and specific fishery and wildlife research activities (142 DM 1.1).

As part of its mission, the Service manages more than 540 national wildlife refuges, covering over 95 million acres. These areas comprise the National Wildlife Refuge System, the world's largest collection of lands set aside specifically for fish and wildlife. The majority of these lands, 77 million acres, is in Alaska. The remaining acres are spread across the other 49 states and several U.S. territories. In addition to refuges, the Service manages thousands of small wetlands, national fish hatcheries, 64 fishery resource offices, and 78 ecological services field stations. The Service enforces federal wildlife laws, administers the Endangered Species Act, manages migratory bird populations, restores nationally significant fisheries, conserves and restores wildlife habitat, and helps foreign governments with their conservation efforts. It also oversees the Federal Aid program that distributes hundreds of millions of dollars in excise taxes on fishing and hunting equipment to state fish and wildlife agencies.

## **NATIONAL WILDLIFE REFUGE SYSTEM**

The mission of the Refuge System, as defined by the National Wildlife Refuge System Improvement Act of 1997 is:

“...to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife and plant resources and their habitats within the United States for the benefit of present and future generations of Americans.”

The National Wildlife Refuge System Improvement Act of 1997 (Improvement Act) established, for the first time, a clear legislative mission of wildlife conservation for the Refuge System. Actions were initiated in 1997 to comply with the direction of this new legislation, including an effort to complete comprehensive conservation plans for all refuges. These plans, which are completed with full public involvement, help guide the future management of refuges by establishing natural resources and recreation/education programs. Consistent with the Improvement Act, approved plans will serve as the guidelines for refuge management for the next 15 years. The Improvement Act states that each refuge shall be managed to:

- Fulfill the mission of the Refuge System;
- Fulfill the individual purposes of each refuge;
- Consider the needs of wildlife first;
- Fulfill requirements of comprehensive conservation plans that are prepared for each unit of the Refuge System;
- Maintain the biological integrity, diversity, and environmental health of the Refuge System; and

- 
- Recognize that wildlife-dependent recreation activities including hunting, fishing, wildlife observation, wildlife photography, and environmental education and interpretation are legitimate and priority public uses; and allow refuge managers authority to determine compatible public uses.

The following are just a few examples of your national network of conservation lands. Breton National Wildlife Refuge, the second oldest refuge, was established in 1904 for the protection of colonial nesting birds in Louisiana, such as sandwich and royal terns, and the brown pelican. Western refuges were established for American bison (1906), elk (1912), prong-horned antelope (1931), and desert bighorn sheep (1936) after over-hunting, competition with cattle, and natural disasters decimated once-abundant herds. The drought conditions of the 1930s Dust Bowl severely depleted breeding populations of ducks and geese. Refuges established during the Great Depression focused on waterfowl production areas (i.e., protection of prairie wetlands in America's heartland). The emphasis on waterfowl continues today but also includes protection of wintering habitat in response to a dramatic loss of bottomland hardwoods. By 1973, the Service began to focus on establishing refuges for endangered species.

Each year approximately 40 million visitors enjoy wildlife refuges, most to observe wildlife in their natural habitats, and that number continues to grow. As the number of visitors grows, there are significant economic benefits to local communities. In 2001, 82 million people, 16 years and older, either fished, hunted, or observed wildlife, generating \$108 billion. In a study completed in 2002 on 15 refuges, visitation had grown 36 percent in 7 years. At the same time, the number of jobs generated in surrounding communities grew to 120 per refuge, up from 87 jobs in 1995, pouring more than \$2.2 million into local economies. The 15 refuges in the study were Chincoteague (Virginia); National Elk (Wyoming); Crab Orchard (Illinois); Eufaula (Alabama); Charles M. Russell (Montana); Umatilla (Oregon); Quivira (Kansas); Mattamuskeet (North Carolina); Upper Souris (North Dakota); San Francisco Bay (California); Laguna Atacosa (Texas); Horicon (Wisconsin); Las Vegas (Nevada); Tule Lake (California); and Tensas River (Louisiana) -- the same refuges identified for the 1995 study. Other findings also validate the belief that communities near refuges benefit economically. Expenditures on food, lodging, and transportation grew to \$6.8 million per refuge, up 31 percent from \$5.2 million in 1995. For each federal dollar spent on the Refuge System, surrounding communities benefited with \$4.43 in recreation expenditures and \$1.42 in job-related income (Caudill and Laughland, unpubl. data).

Volunteers continue to be a major contributor to the success of the Refuge System. In 2005, 37,996 volunteers contributed more than 1.5 million hours on refuges nationwide, a service valued at more than \$26 million.

The wildlife and habitat vision for national wildlife refuges stresses that wildlife comes first; that ecosystems, biodiversity, and wilderness are vital concepts in refuge management; that refuges must be healthy and growth must be strategic; and that the Refuge System serve as a model for habitat management with broad participation from others.

The Improvement Act stipulates that comprehensive conservation plans be prepared in consultation with adjoining federal, state, and private landowners, and that the Service develop and implement a process to ensure an opportunity for active public involvement in the preparation and revision (every 15 years) of the plans.

All lands of the Refuge System will be managed in accordance with an approved CCP that will guide management decisions and set forth strategies for achieving refuge unit purposes. The CCP will be consistent with sound resource management principles, practices, and legal mandates, including Service compatibility standards, policies, guidelines, and planning documents (602 FW 1.1).

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## LEGAL AND POLICY CONTEXT

### Legal Mandates, Administrative and Policy Guidelines, and Other Special Considerations

Administration of national wildlife refuges is guided by the mission and goals of the Refuge System, congressional legislation, presidential executive orders, and international treaties. Policies for management options of refuges are further refined by administrative guidelines established by the Secretary of the Interior and by policy guidelines established by the Director of the Fish and Wildlife Service. Select legal summaries of treaties and laws relevant to administration of the Refuge System and management of the Delta and Breton NWRs are provided in Appendix C.

Treaties, laws, administrative guidelines, and policy guidelines assist the refuge manager in making decisions pertaining to soil, water, air, flora, fauna, and other natural resources; historical and cultural resources; research and recreation on refuge lands; and provide a framework for cooperation between Delta and Breton NWRs and other partners, such as the Louisiana Department of Wildlife and Fisheries, Louisiana Department of Natural Resources, U.S. Army Corps of Engineers, and private landowners, etc.

Lands within the Refuge System are closed to public use unless specifically and legally opened. No refuge use may be allowed unless it is determined to be appropriate and compatible. The refuge manager determines if a use is appropriate based on sound professional judgment; uses that are illegal, inconsistent with existing policy, or unsafe may not be found appropriate. When a use is found appropriate, it must then be determined to be compatible before it is allowed on a refuge. A compatible use is a use that, in the sound professional judgment of the refuge manager, will not materially interfere with or detract from the fulfillment of the mission of the Refuge System or the purposes of the refuge. All programs and uses must be evaluated based on mandates set forth in the Improvement Act. Those mandates are to:

- contribute to ecosystem goals, as well as refuge purposes and goals;
- conserve, manage, and restore fish, wildlife, and plant resources and their habitats;
- monitor the trends of fish, wildlife, and plants;
- manage and ensure appropriate visitor uses as those uses benefit the conservation of fish and wildlife resources and contribute to the enjoyment of the public; and
- ensure that visitor activities are compatible with refuge purposes.

The Improvement Act further identifies six priority wildlife-dependent recreational uses: hunting, fishing, wildlife observation, wildlife photography, and environmental education and interpretation. As priority public uses of the Refuge System, they receive priority consideration over other public uses in planning and management.

### Biological Integrity, Diversity, and Environmental Health Policy

The Improvement Act directs the Service to ensure that the biological integrity, diversity, and environmental health of the Refuge System are maintained for the benefit of present and future generations of Americans. The policy is an additional directive for refuge managers to follow while achieving refuge purpose(s) and Refuge System mission. It provides for the consideration and protection of the broad spectrum of fish, wildlife, and habitat resources found on refuges and associated ecosystems. When evaluating the appropriate management direction for refuges, refuge managers will use sound professional judgment to determine their refuges' contribution to biological integrity, diversity, and environmental health at multiple landscape scales. Sound professional

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judgment incorporates field experience, knowledge of refuge resources, the refuge's role within an ecosystem, applicable laws, and best available science, including consultation with others both inside and outside the Service.

### **The Coastal Barrier Resources Act of 1982**

The Coastal Barrier Resources Act of 1982 (CBRA) identifies undeveloped coastal barrier lands along the Atlantic and Gulf coasts and includes them in a coastal barrier resource system. Objectives of CBRA are to restrict most federal expenditures that encourage development within the system to minimize loss of human life, reduce wasteful federal expenditures, and minimize damage to natural resources. Breton NWR is located in Unit LA-03P under the CBRA and is classified as an "otherwise protected area."

### **The Energy Policy Act of 2005**

The Energy Policy Act of 2005 (Public Law 109-58) was signed into law by President Bush on August 8, 2005. Section 384 of the Act establishes the Coastal Impact Assistance Program (CIAP), which authorizes funds to be distributed to Outer Continental Shelf oil and gas producing states to mitigate the impacts of Outer Continental Shelf oil and gas activities. States to share these funds are Alabama, Alaska, California, Louisiana, Mississippi, and Texas.

## **NATIONAL AND INTERNATIONAL CONSERVATION PLANS AND INITIATIVES**

Multiple partnerships have been developed among government and private entities to address the environmental problems affecting regions. There is a large amount of conservation and protection information that defines the role of the refuge at the local, national, international, and ecosystem levels. Conservation initiatives include broad-scale planning and cooperation between affected parties to address declining trends of natural, physical, social, and economic environments. The conservation guidance described below, along with issues, problems, and trends, was reviewed and integrated where appropriate into this CCP.

This CCP supports, among others, the Partners in Flight Plan, the North American Waterfowl Management Plan, the Western Hemisphere Shorebird Reserve Network, and the National Wetlands Priority Conservation Plan.

### **North American Bird Conservation Initiative**

Started in 1999, the North American Bird Conservation Initiative (NABCI) is a coalition of government agencies, private organizations, academic institutions, and private industry leaders in the United States, Canada, and Mexico, working to ensure the long-term health of North America's native bird populations by fostering an integrated approach to bird conservation to benefit all birds in all habitats. The international and national bird initiatives include the North American Waterfowl Management Plan, Partners In Flight, Waterbird Conservation for the Americas, and the U.S. Shorebird Conservation Plan.

### **North American Waterfowl Management Plan**

The North American Waterfowl Management Plan is an international action plan to conserve migratory birds throughout the continent. The plan's goal is to return waterfowl populations to their 1970s levels by conserving wetland and upland habitat. Canada and the United States signed the Plan in 1986 in reaction to critically low numbers of waterfowl. Mexico joined in 1994

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making it a truly continental effort. The plan is a partnership of federal, provincial/state and municipal governments, non-governmental organizations, private companies, and many individuals, all working towards achieving better wetland habitat for the benefit of migratory birds, other wetland-associated species and people. Plan projects are international in scope, but implemented at regional levels. These projects contribute to the protection of habitat and wildlife species across the North American landscape.

### **Partners in Flight Bird Conservation Plan**

Managed as part of the Partners in Flight Plan, the Coastal Prairies physiographic area represents a scientifically based land bird conservation planning effort that ensures long-term maintenance of healthy populations of native land birds, primarily non-game land birds. Non-game land birds have been vastly under-represented in conservation efforts, and many are exhibiting significant declines. This plan is voluntary and non-regulatory, and focuses on relatively common species in areas where conservation actions can be most effective, rather than the frequent local emphasis on rare and peripheral populations.

### **U.S. Shorebird Conservation Plan**

The U.S. Shorebird Conservation Plan is a partnership effort throughout the United States to ensure that stable and self-sustaining populations of shorebird species are restored and protected. The plan was developed by a wide range of agencies, organizations, and shorebird experts for separate regions of the country, and identifies conservation goals, critical habitat conservation needs, key research needs, and proposed education and outreach programs to increase awareness of shorebirds and the threats they face.

### **Northern American Waterbird Conservation Plan**

This plan provides a framework for the conservation and management of 210 species of waterbirds in 29 nations. Threats to waterbird populations include destruction of inland and coastal wetlands, introduced predators and invasive species, pollutants, mortality from fisheries and industries, disturbance, and conflicts arising from abundant species. Particularly important habitats of the southeast region include pelagic areas, marshes, forested wetlands, and barrier and sea island complexes. Fifteen species of waterbirds are federally listed, including breeding populations of wood storks, Mississippi sandhill cranes, whooping cranes, interior least terns, and Gulf coast populations of brown pelicans. A key objective of this plan is the standardization of data collection efforts to better recommend effective conservation measures.

### **Coastal Impact Assistance Program (CIAP)**

A Federal law, signed in 2005, authorizes the Secretary of the Interior to distribute \$250 million for each of the fiscal years 2007 through 2010 to oil and gas producing states (Alabama, Alaska, California, Louisiana, Mississippi, and Texas) and coastal political subdivisions to be used for one or more of the following purposes:

- Projects and activities for the conservation, protection, or restoration of coastal areas, including wetlands;
- Mitigation of damage to fish, wildlife, or natural resources;
- Planning assistance and the administrative costs of complying with this section;



- 
- Implementation of a federally approved marine, coastal, or comprehensive conservation management plan;
  - Mitigation of the impact of Outer Continental Shelf activities through funding or onshore infrastructure projects and public service needs.

In a Continuing Resolution dated February 16, 2007, Congress approved a three percent appropriation of the CIAP funds to be used by Minerals Management Service (MMS) to administer the CIAP program. MMS will lead the CIAP by establishing an environment that will enhance partner communications and an effective business relationship. Each eligible state will be allocated their share based on the state's Qualified Outer Continental Shelf Revenue generated off of its coast in proportion to total revenue generated off the coasts of all eligible states. MMS will respond to recipient needs and provide advice through guidance, direction, training, and by ensuring that monitoring and evaluation are incorporated into a system of accountability designed to accomplish the results intended by the Energy Policy Act of 2005.

## **RELATIONSHIP TO STATE WILDLIFE AGENCY**

A provision of the Improvement Act, and subsequent agency policy, is that the Service shall ensure timely and effective cooperation and collaboration with state fish and game agencies and tribal governments during the course of acquiring and managing refuges. State wildlife management areas and national wildlife refuges provide the foundation for the protection of species, and contribute to the overall health and sustainment of fish and wildlife populations in the State of Louisiana.

The Louisiana Department of Wildlife and Fisheries (LDWF) (<http://www.wlf.louisiana.gov>) is vested with responsibility for conservation and management of wildlife in the state, including aquatic life. LDWF is authorized to execute the laws enacted for the control and supervision of programs relating to the management, protection, conservation, and replenishment of wildlife, fish, and aquatic life, and the regulation of the shipping of wildlife fish, furs, and skins. LDWF's mission is to manage, conserve, and promote wise utilization of Louisiana's renewable fish and wildlife resources and their supporting habitats through replenishment, protection, enhancement, research, development, and education for the social and economic benefit of current and future generations; to provide opportunities for knowledge of and use and enjoyment of these resources; and to promote a safe and healthy environment for the users of the resources. LDWF is divided into seven divisions for management of the state's resources: Enforcement, Fur and Refuge, Public Information, Inland Fisheries, Marine Fisheries, Management and Finance, and Wildlife.

The participation of LDWF throughout this comprehensive conservation planning process has been valuable. Not only have LDWF personnel participated in the biological reviews, they are also active partners in annual hunt coordination, planning, and various wildlife and habitat surveys. A key part of the planning process is the integration of common objectives between the Service and LDWF. Both Delta and Breton NWRs are located adjacent to or in close proximity to lands managed by LDWF; a Memorandum of Understanding between LDWF and the Service exists relating to management of some of the state-owned barrier islands as part of Breton NWR.

The state's participation and contribution throughout this planning process will provide for ongoing opportunities and open dialogue to improve the ecological sustainment of fish and wildlife in the State of Louisiana. An essential part of comprehensive conservation planning is integrating common mission objectives where appropriate.



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## *II. Refuge Overview*

### **INTRODUCTION**

Delta NWR is in Plaquemines Parish, in extreme southeast Louisiana, at the mouth of the Mississippi River (Figure 1). Access to the refuge is by boat only; the nearest town is Venice, across the Mississippi River from refuge lands. The refuge office is located in Venice, Louisiana.

Breton NWR consists of a chain of barrier islands in Plaquemines and St. Bernard Parishes in southeast Louisiana (Figure 2). Access is limited to seaplanes or to boats that are able to venture offshore.

Both Delta and Breton NWRs are administered by the Southeast Louisiana NWR Complex, Lacombe, Louisiana.

### **DELTA REFUGE HISTORY AND PURPOSE**

Delta Migratory Waterfowl Refuge was established by Executive Order No. 7229 on November 19, 1935, under the authority of the Migratory Bird Conservation Act. The initial acres forming Delta NWR were purchased from Joseph Leiter and the Delta Duck Club in 1935, to provide sanctuary and habitat for wintering and migrating waterfowl. The name was changed from Delta Migratory Waterfowl Refuge to Delta National Wildlife Refuge in 1940. Subsequent land purchases enlarged the refuge to its current acreage of 48,799.

The land development of the area began in 1862 when a breach in the natural levee of the Mississippi River occurred approximately 100 miles below New Orleans. The breach, called a crevasse, was supposedly cut in a narrow portion of the levee by three daughters of a man named Cubit, and is called Cubits Gap. The crevasse was cut to permit access to a large open water area known as Bay Rhondo and to attract fish to nets set in the cut. Tons of sediment were carried through the cut into Bay Rhondo, forming huge splays. Splay in biological terms is a vegetated, emergent marsh that develops from sediments deposited in open water as a result of overflow of the natural banks or levees of a river or channel or as the result of a natural or created crevasse or sediment diversion. As it expanded, the Cubits Gap delta attracted large concentrations of wintering and migratory waterfowl; peak populations in excess of 400,000 ducks and 500,000 geese have been recorded. Drawn by the abundant wildlife resources, the area has attracted waterfowl hunters for many years. Today, the primary public use remains hunting, with less significant use by anglers.

The purposes of Delta NWR, based upon land acquisition documents and its establishing authority, are as follows:

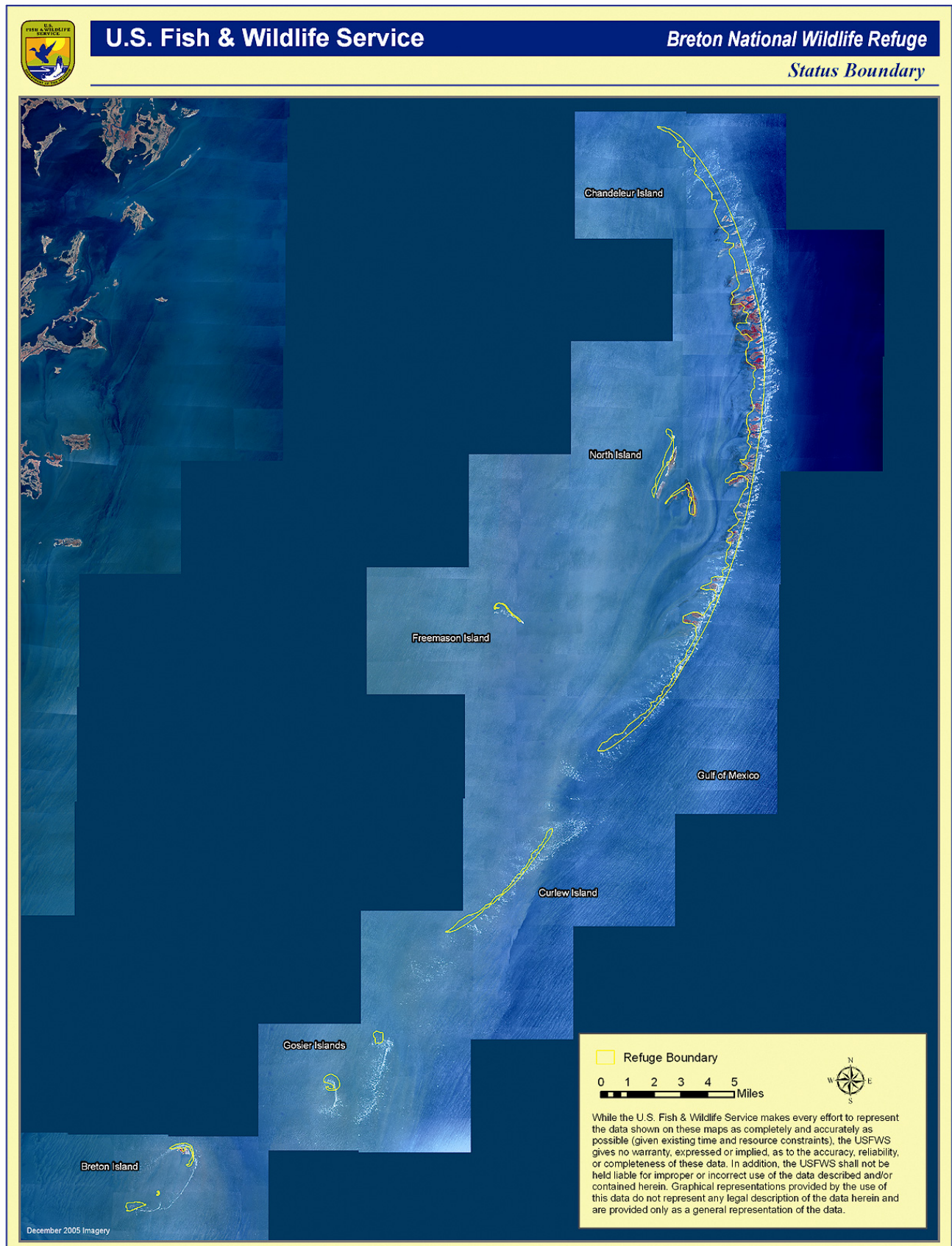
**Executive Order 7229, dated November 19, 1935** - as a refuge and breeding ground for migratory birds and other wildlife.

**Executive Order 7383, dated June 5, 1936** - as a migratory waterfowl refuge, is subject to the use...for quarantine purposes;





Figure 2. Boundaries of Breton NWR, Plaquemines and St. Bernard Parishes, Louisiana 2005



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**Executive Order 7538, dated January 19, 1937** - for waterfowl refuge purposes, is subject to use... with the improvement of navigation in the Mississippi River and the uses thereof, and the administration of the area for wildlife conservation purposes by the Department of Agriculture (now Interior) shall be without interference with any existing or future uses or regulations of the War Department (now Army Corps of Engineers).

**Migratory Bird Conservation Act** - for use as an inviolate sanctuary, or for any other management purpose, for migratory birds. 16 U.S.C.

## **BRETON REFUGE HISTORY AND PURPOSE**

Breton NWR, established on October 4, 1904 by an unnumbered Executive Order signed by President Theodore Roosevelt, is the second oldest refuge in the United States. It encompasses Breton Island and the Chandeleur Island chain. Executive Order 369-A, signed on November 11, 1905, established the Breton Island Reservation. The name was changed to Breton Island National Wildlife Refuge on October 4, 1938, by Executive Order 7938 signed by Franklin D. Roosevelt. Throughout history, the islands have been continually reconfigured due to tidal action, winds, and tropical storms. The islands were once home to a fishing community that included a school until 1915, when a hurricane forced residents to evacuate the settlement. Then an unnamed hurricane destroyed the settlement and it was never rebuilt. More recently, a series of storms starting in the late 1990s have caused devastating erosion to the islands. Hurricane Katrina destroyed the historic lighthouse located on the northern end of the Chandeleurs. Subsidence, tropical storms, and hurricanes have drastically reduced the dune and beach habitat that formerly supported thousands of colonial nesting seabirds.

The purposes of Breton NWR are as follows:

**Executive Order 7983, dated October 4, 1938** - as a refuge and breeding ground for migratory birds, and other wildlife; Provided, that nothing herein shall affect the recovery of the oil and gas deposits from any of the island areas under the mineral leasing act....or the necessary operations pertaining to such recovery.

**Public Law 93-632, dated January 3, 1975** - designated all of the federally owned lands in Breton NWR, with the exception of North Breton Island, as part of the National Wilderness Preservation System.

Refuge management objectives are to provide sanctuary for nesting and wintering seabirds; protect and preserve the wilderness character of the islands; and, provide sandy barrier beach habitat for a variety of wildlife species.

Public use centers on fishing from the beaches and in the shallow water surrounding the islands.

## **SPECIAL DESIGNATIONS**

Delta NWR has no special designations.

Breton NWR, except for North Breton, has been designated as part of the National Wilderness Preservation System; all of the refuge is designated as part of the critical habitat for wintering piping plovers, and as a Globally Important Bird Area by the American Bird Conservancy in association with The Nature Conservancy.

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## ECOSYSTEM CONTEXT

In the mid-1990s, the Service developed a landscape level approach to natural resource management based on watersheds named the Ecosystem Approach to Fish and Wildlife Conservation. Delta and Breton NWRs are located within the Lower Mississippi River Ecosystem (LMR). The dominant land forms of the LMR ecosystem are the alluvial plain of the Mississippi River and the deltaic plain and associated marshes and swamps created by the meanderings of the Mississippi River and its distributaries. Refuge management projects reflect and support ecosystem goals.

A team of resource managers assigned to the LMR ecosystem developed the following resource goals to address the natural resources and their habitats of concern to the Service:

- Conserve, enhance, protect, and monitor migratory bird populations and their habitats;
- Protect, restore, and manage the wetlands;
- Protect and/or restore imperiled habitats and viable populations of all threatened, endangered, and candidate species and species of concern;
- Protect, restore, and manage the fisheries and other aquatic resources historically associated with the wetlands and waters of the ecosystem;
- Restore, manage, and protect national wildlife refuges and national fish hatcheries.

The following are support goals which are essential to the overall accomplishment of the ecosystem resource goals listed above:

- Increase public awareness and support for the LMR ecosystem resources and their management;
- Enforce natural resource laws;
- Protect, restore, and enhance water and air quality.

## REGIONAL CONSERVATION PLANS AND INITIATIVES

In the Louisiana Comprehensive Wildlife Conservation Strategy, developed by LDWF, Delta and Breton NWRs are located in the Gulf Coast Prairies and Marshes ecoregion. Delta NWR is situated in the fresh and intermediate marshes of the Mississippi management basin; Breton NWR is located in the Pontchartrain basin, constituting the most rapidly eroding area along the Louisiana coast. Although no specific strategies for partnering with the Service are listed for the habitats on Delta and Breton NWRs, more general strategies on which the Service can partner with LDWF include:

- partner to promote protection and support efforts for shoreline stabilization and habitat restoration of barrier islands;
- work with interested groups to promote appropriate use of dredge material and to develop improved management techniques for vegetated pioneer emerging delta habitat.

The Coastal Wetlands Planning, Protection, and Restoration Act program (CWPPRA or “Breux Act”) provides for targeted funds to be used for planning and implementing projects that create, protect, restore, and enhance wetlands in coastal Louisiana. Passed in 1990, and authorized until 2019, the federal funds created by this Act are managed by the CWPPRA Task Force, a group composed of five federal agencies, including the Service and the State of Louisiana.

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To address larger wetland restoration projects with more ecosystem-scale impacts than CWPPRA, the Louisiana Coastal Area Ecosystem Restoration Study (LCA) began in 2001. LCA seeks future Water Resources Development Act (WRDA) authorization and funding to identify critical human and natural ecological needs for coastal Louisiana, seeks alternatives to meet the needs including restoration priorities, and presents long-term large-scale strategies named the LCA Plan. Delta and Breton NWRs are located in the Deltaic Plain area of LCA. Neither Delta nor Breton NWRs are included directly in the five critical restoration areas. The refuges may be affected by long-term studies such as the Mississippi River Hydrodynamic Study and the Mississippi River Delta Management Study. Presently, the LCA emphasis is on areas west of Delta and Breton NWRs.

Coast 2050: Toward a Sustainable Coastal Louisiana was approved in 1998 by the State of Louisiana and its federal partners. Coast 2050 is a joint planning initiative among the Louisiana Wetland Conservation and Restoration Authority, Louisiana Department of Natural Resources Coastal Zone Management (CZM) Authority, and the CWPPRA Task Force for protecting and sustaining the state's coastal resources for future generations in a manner consistent with the welfare of the people. In this plan, Delta and Breton NWRs are located in Region 2 (Breton, Barataria, and the Mississippi River). The plan emphasizes that immediate attention should be placed in the Barataria Basin, an area west of the refuges.

In 1989, the Louisiana State Legislature passed Act 6 (LA R.S. 49:213.1 *et seq.* of the Second Extraordinary Session of the Legislature, Appendix A), recognizing the catastrophic nature of Louisiana's coastal land loss and expanded the state's capacity to respond to the crisis by creating the Wetlands Conservation and Restoration Authority (State Wetlands Authority); the Wetlands Conservation and Restoration Fund (the Fund); the Governor's Office of Coastal Activities (GOCA); and the Office of Coastal Restoration and Management. The State Wetlands Authority is a policy level decision-making group made up of the Governor's Executive Assistant for Coastal Activities, the Commissioner of the Division of Administration, and the secretaries of five state agencies - the Department of Wildlife and Fisheries, Environmental Quality, Natural Resources, Transportation and Development, and Agriculture and Forestry. The State Wetlands Authority is the sponsor and official author of the State Plan, an annual summary of coastal restoration projects and recommendations for funding from the Fund. The Fund's income is from a portion of the state's mineral income and severance taxes from oil and gas production on state lands and is dedicated to state-sponsored coastal restoration projects. The GOCA coordinates policy among the many agencies involved in Louisiana's coastal restoration effort while the Office of Coastal Restoration and Management within DNR handles day-to-day implementation of coastal restoration in coordination with the Coastal Zone Management Office.

## **ECOLOGICAL THREATS AND PROBLEMS**

Several major ecological threats that cause land loss and damage to both Delta and Breton NWRs are tropical storms, subsidence, sea level rise, and oil and gas development. Both refuges are in an area frequently in the path of tropical storms and hurricanes. Out of the 92 major hurricanes (category 3 or higher) recorded making landfall between Texas and Maine from 1851 through 2004, 85 entered the Gulf of Mexico. Even storms coming onshore in states other than Louisiana can affect Breton and the Chandeleur Islands, which are located off the mainland in the Gulf of Mexico. The marshes of Delta NWR absorb frequent storm surges not affecting the higher elevated lands. Although even tropical storms can cause impacts, such as nest loss of ground nesting birds, much vegetation and land loss have been caused by such notable hurricanes as the unnamed storm of 1947, Camille in 1969, Georges in 1998, Ivan in 2004, and Katrina and Rita in 2005.



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A comparison of images of the Bulls Bay area of Delta NWR taken before and after the summer of 2005 depicts the alteration and loss of land (Figure 3). No studies are yet complete to give exact wetland loss on Delta NWR caused by Hurricane Katrina, but the satellite imagery illustrates it is substantial.

Breton NWR was slowly rebuilding after a series of hurricanes and tropical storms that began occurring in the late 1990s. Several storms affected the islands during 2005, especially hurricanes Katrina and Rita. Some estimates calculate up to 70 percent of the islands existing land form was lost. The storms' effects on Breton NWR are depicted in satellite imagery taken in 2004 and 2005 (Figures 4 and 5).

The land that forms Delta and Breton NWRs is located in a delta lobe created 3,000-4,000 years ago in the St. Bernard deltaic plain of the Mississippi River. Approximately 2,000 years ago, the Mississippi River abandoned the St. Bernard delta complex and moved to the west, forming the LaFourche delta complex. As the cycle of land loss changes progressed in the abandoned delta, the Chandeleur Islands started to form. This land loss continues today and threatens the existence of the Chandeleur Islands and other lands located in the relic deltaic plain not presently receiving sediment input. The natural processes of land formation, subsidence, and sea level rise have been accelerated and altered by man's activities, such as building levees, digging canals, and our use of fossil fuels.

Active oil and gas development and exploration occur on Delta NWR and in areas adjacent to both refuges. Mineral rights are owned by both private companies and the government. While impacts on the riverine and marine ecosystems are minimized and mitigated when possible, accidents do occur that cause biological and ecological damage. Waterfowl and other water birds are susceptible to oiling and are especially vulnerable during nesting. Vegetation and soil soak up oil and, depending on type, severity and amount of oiling, have to be removed from the site. Assess to structures and facilities cause loss of habitat and hydrological changes to the ecosystem.

One emerging threat to Delta NWR is the proposed abandonment of the current birds foot delta (so named because of its shape) in favor of sediment diversions and other restoration activities closer to New Orleans. While the Service certainly understands the need for restoration activities throughout the coastal zone, and that the abandonment of the current delta may be in the best interest of the resource, many factors must be considered. Of primary importance to the Service is that current refuge resource values be compensated/mitigated for if lost due to activities upstream from the refuge. Consideration should be given to the establishment of a new national wildlife refuge if Delta NWR is sacrificed in the name of coastal restoration. This would ensure that resource values are not only replaced, but that they remain available for use by the public.

## **PHYSICAL RESOURCES**

### *CLIMATE*

The climate in southeast Louisiana is relatively mild due to the subtropical influence of the Gulf of Mexico and cooler, drier air from the central plains. Summers tend to be hot and humid, and winters are mild. Average yearly precipitation is 66 inches. Louisiana is impacted by tropical weather disturbances with an average frequency of one tropical storm every 1.6 years, one hurricane every 3.3 years, and a major hurricane every 14 years (Roth 1998).

Figure 3. Satellite imagery of Delta NWR taken before and after Hurricane Katrina struck on August 29, 2005

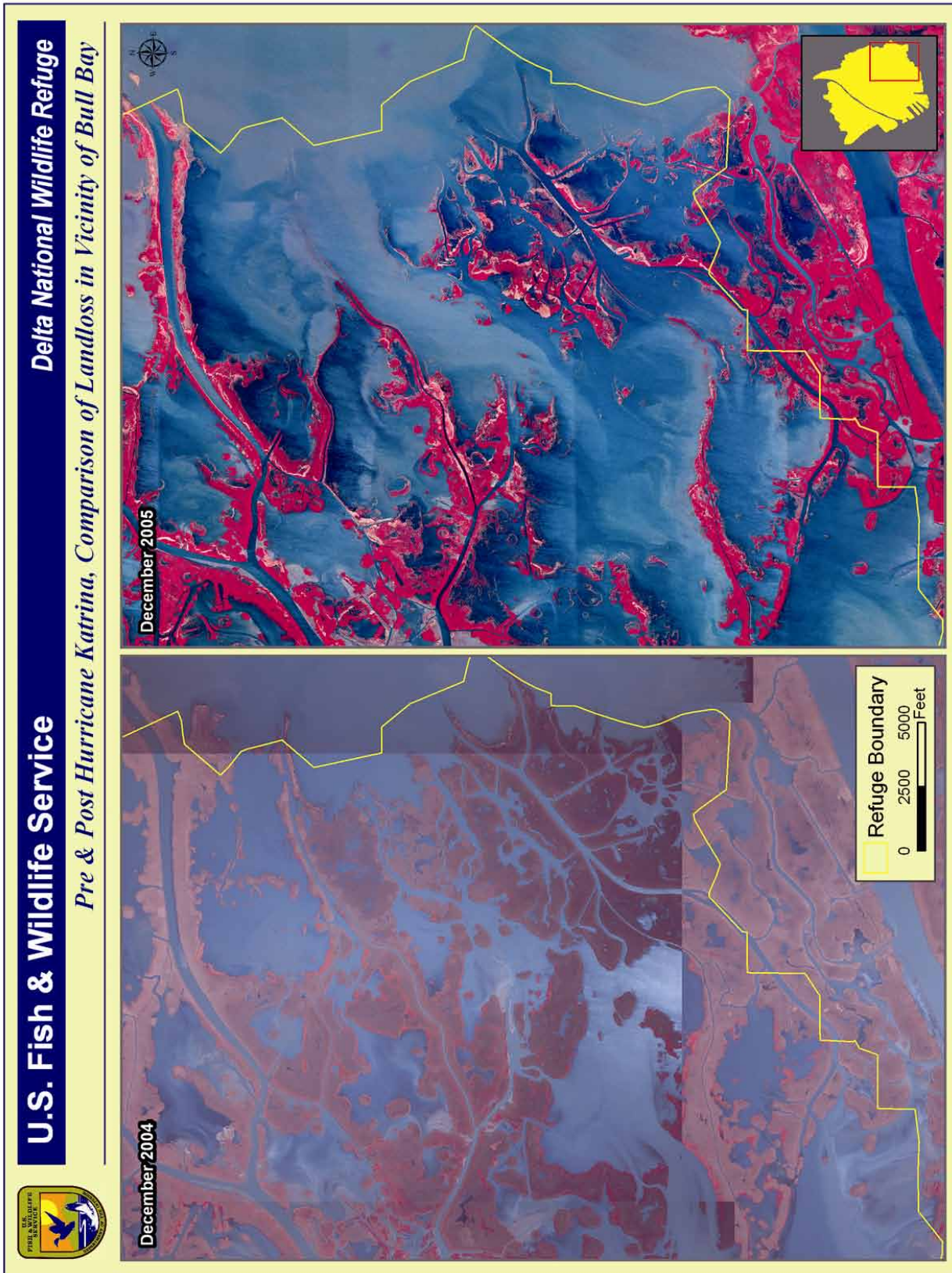


Figure 4. Satellite imagery of the northern islands in Breton NWR in 2004 and after the hurricanes in 2005

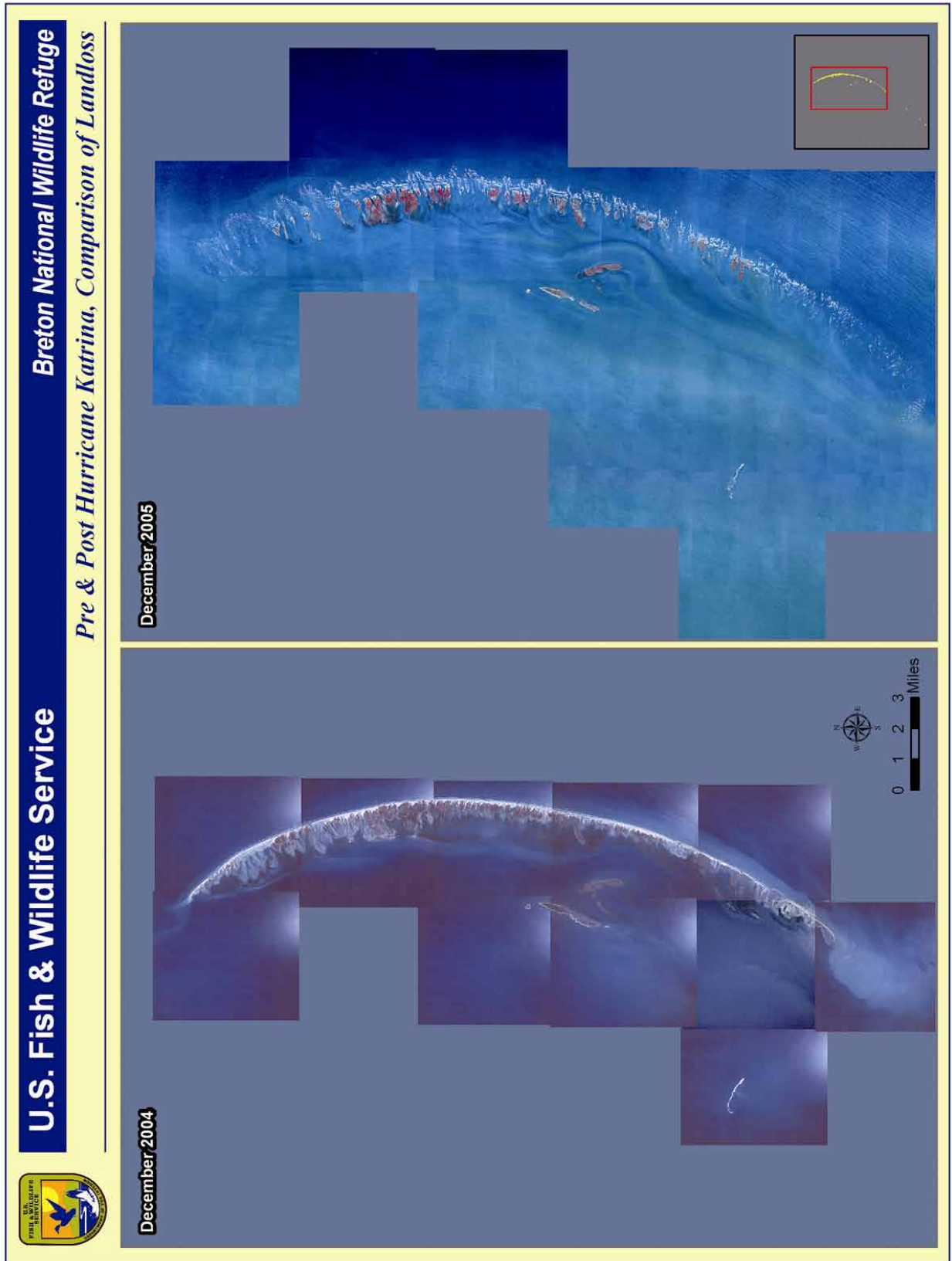
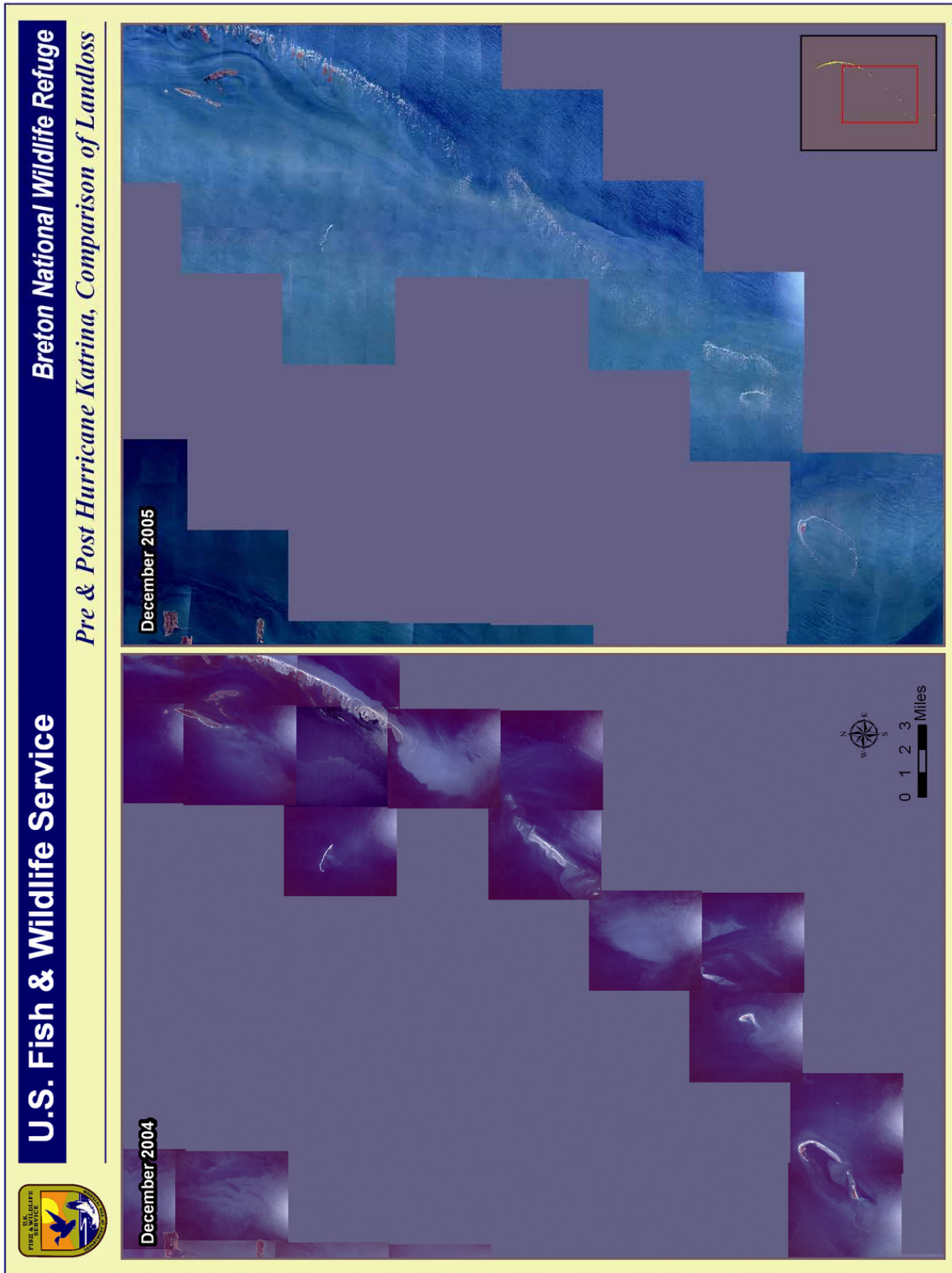




Figure 5. Satellite imagery of the southern islands in Breton NWR in 2004 and after the hurricanes in 2005



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The Intergovernmental Panel on Climate Change (IPCC) recently concluded that warming of the climate is undeniable and could cause changes in our stewardship of land. Examples of potential changes are altered fire regimes, rain and snowfall patterns, access to water resources, hydrology in rivers and wetlands, frequency of extreme weather events, and rising sea levels at coastal refuges.

### *GEOLOGY AND TOPOGRAPHY*

Geologic processes creating the current landform were built by the Mississippi River as it shaped its deltaic plain. The northern boundary of the St. Bernard delta complex coincided with the south shore of the modern day Lake Pontchartrain. The Mississippi River abandoned the St. Bernard delta complex about 2,000 years ago. Development slowed and the natural progression of coastal land loss began in the abandoned delta.

Delta NWR consists of low-lying marshlands formed by sediments deposited by the current of the Mississippi River as it flowed through Cubits Gap and breached its natural levee. Remnants of natural ridges can be found along the existing or abandoned courses of river distributaries or abandoned coastlines. Breton NWR consists of the barrier islands created at the edge of the old St. Bernard delta. These islands are dynamic and are constantly altered and worn down by tropical storms, wind, and tidal action. Early literature on Breton and the Chandeleur Islands mentions trees and a generally higher elevation than exists today. Present elevations of the existing islands are not much higher than sea level.

### *HYDROLOGY*

The marshes and ponds of Delta NWR range from fresh where influenced by the Mississippi River to brackish closer to the shoreline with the Gulf of Mexico and Breton Sound. The system is open and not managed by any control structures on the refuge. Breton and the Chandeleur Islands are surrounded by shallow sea water and contain interior ponds that can be somewhat fresher from rainfall.

### *AIR QUALITY*

Breton NWR's status as a Class I Wilderness Area confers additional protection for air quality. Air quality issues are coordinated with and overseen by the Service's Air Quality Branch in Denver, Colorado.

## **BIOLOGICAL RESOURCES**

### *HABITAT*

The marshes, shallow ponds, and mud flats of Delta NWR attract large concentrations of wintering and migratory waterfowl, other wetland dependent birds, and reptiles and amphibians. Two basic marsh zones occur within the marsh habitat - fresh marsh nearest the main tributaries and the brackish marsh zone nearest the Gulf of Mexico. The fresh marsh zone is located primarily on mineral soil and to a very limited extent on flotant (floating mats of emergent vegetation). Approximately 60 percent of the refuge consists of the fresh marsh zone. The predominant plants are delta duck potato, elephant ear, wild millet, and three-square. The marsh is tidally flooded in depths ranging from a few inches to a foot. The fertile soil, vegetative composition, and shallow water environment result in a highly productive habitat for fish and wildlife. Land loss causes the conversion of marsh into open freshwater ponds. A few hundred acres of forested wetlands occur on Delta NWR on the Mississippi River natural levees. Soils are very coarse and are less frequently flooded, resulting in vegetation communities dominated by

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trees and low shrubs. Predominant trees are black willow and red maple. Low shrubs include groundsel, wax myrtle, and marsh elder. Scattered throughout the understory where sunlight reaches the forest floor is a herbaceous community of elephant ear and sedges. This habitat is valuable for cover for deer and small mammals. The trees provide an important staging area for migratory birds because of the proximity to the Gulf of Mexico.

Most of the islands of Breton NWR provide sandy beach habitat. Islands wide enough to receive some protection from Gulf-side wind and tides provide vegetative cover of black mangrove, grousel bush, and wax myrtle. Shallow bay waters around the islands support beds of manatee grass, shoalgrass, turtlegrass, and widgeongrass.

## *WILDLIFE*

Both Delta and Breton NWRs are in an extremely rich estuary system that is important to wading, sea and shore birds, migratory waterfowl and songbirds, crabs, shrimp, and both fresh and saltwater fish.

Wintering waterfowl populations begin building on Delta NWR in the fall and peak in mid-December and January. Recent surveys document 30,000 to 50,000 snow geese and 80,000 to 150,000 ducks. The most common species observed are gadwall, northern pintail, American wigeon, green-winged teal, and snow geese. The most common resident marsh and waterbirds are great blue heron, little blue heron, white ibis, glossy /white-faced ibis, great egrets, snowy egrets, tricolored herons, yellow-crowned night-herons, and black-crowned night-herons. The refuge serves as a staging area for many passerine birds during migration, and large concentrations of shorebirds are sometimes observed feeding in the mudflats.

Because of the lack of high ground, no large numbers of mammals exist on Delta, but a few white-tailed deer, rabbits, and raccoons survive the harsh environment. Nutria is probably the most abundant mammal on the refuge.

In the past, Breton NWR has supported large colonies of colonial nesting seabirds and still provides some nesting habitat, although very limited in comparison to previous years. Before hurricane Katrina, terns numbered 35,000 to 50,000 nests; brown pelicans averaged 6,000 to 8,000 nests and peaked at approximately 12,000 nests; and black skimmers averaged 3,000 nests. In the nesting seasons following Katrina, terns numbered 7,000 nests; brown pelicans produced 2,500 nests; and black skimmers numbered 450-500 nests in 2007.

## **CULTURAL RESOURCES**

There are no known cultural resources on Delta or Breton NWRs. Geologically, Delta NWR is relatively young and since formation little to no human habitation or development has occurred. Infrastructure has been associated with the oil and gas industry. Early settlements and a lighthouse that were constructed on the Chandeleur Islands were destroyed by past severe weather events.

## **SOCIOECONOMIC ENVIRONMENT**

Delta NWR is not located near any urban centers; the closest town is Venice, which is across the Mississippi River from actual refuge lands. The refuge is in Plaquemines Parish, Louisiana's most southern parish, where the Mississippi River meets the Gulf of Mexico. There are no incorporated communities anywhere within the parish. The parish is bisected by the Mississippi River. Most of the population is distributed along a narrow band of land on each bank of the river. Sources of income are the seafood industry, the off-shore oil industry, shipping, and citrus groves. Millions of pounds of

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shrimp, oysters, crab, and fish are produced annually by the commercial fishing industry. The parish is also considered a “sportsman’s paradise” for sports fishing. Encompassing seventy miles of the Mississippi River, Plaquemines Parish is the eighth largest port in the United States and is noted for exporting coal, petro-chemicals, and grain. In 2005, the parish population was 28,995 and the 2003 median income was \$38,173 for a household. In August 2005, the entire parish was devastated by Hurricane Katrina which caused extensive structural damages and flooding, major losses to the commercial fishing industry, and a substantial decrease in population. The decrease is not from hurricane-related deaths so much as from people not returning to the area after evacuating. Residents are trickling back as housing and other infrastructure are repaired or replaced, but major questions remain about levee protection and the viability of local communities.

Breton NWR is a remote chain of islands off the Louisiana and Mississippi mainland and is considered part of Plaquemines and St. Bernard Parishes. St. Bernard Parish contains no incorporated communities, but is immediately adjacent to New Orleans. Many of the communities have rich historical backgrounds which began as large sugar cane plantations. Seventy-four percent of the parish is some form of wetland and approximately two-thirds of the parish is surrounded by water. In the past, economic activities were associated with wildlife, fisheries, and agricultural pursuits, but within the past thirty to forty years, economic development has become based more on suburban and industrial activities in support of New Orleans. The 2005 population of the parish was 65,364 and in 2003 the median household income was \$36,156. Later in 2005, Hurricane Katrina flooded the entire parish when the massive 25’ storm surge coursed through Lake Borgne and the Mississippi River Gulf Outlet, a shipping channel. The 14- to 15-foot high levees were destroyed and every structure in the parish was affected. In 2006, because of the effects of Hurricane Katrina, its population was estimated to be 25,489. The parish is presently in a phase of rebuilding and growth.

## **REFUGE ADMINISTRATION AND MANAGEMENT**

### *LAND PROTECTION AND CONSERVATION*

The major management activities on Delta and Breton NWRs include wetland restoration projects, law enforcement, wildlife monitoring, and monitoring oil and gas operations. Marsh restoration projects on Delta NWR mainly rely on creating emergent marsh through crevasses (breaches in the natural levee). Water flowing through the crevasse carries sediments which are deposited in the shallow ponds behind the levee. Over time, the splays created by the deposited sediments become vegetated. The majority of the crevasses are funded by mitigation dollars paid by oil and gas companies in compensation for loss of wetlands. No sediment carrying currents are available for restoration on the islands. Beach nourishment is possible only if dredged materials from a nearby source are available because transportation costs are prohibitive.

At present, no law enforcement position exists for Delta and Breton NWRs, although law enforcement staff from the Southeast Louisiana NWR Complex patrol the areas periodically and partner with LDWF agents for coverage. Law enforcement issues involve oil and gas concerns, illegal hunting and commercial fishing, general trespassing, and controlled substance use. Monitoring of wildlife is restricted to winter waterfowl surveys, summer bird colony and production assessments, periodic alligator surveys, and coordination with universities in conducting specific wildlife related studies. Monitoring oil and gas activities requires diligence and is very time consuming. Duties involve not only emergency procedures and supervision during spills, but dealing with legal matters after spill events, and constant permitting and mitigation actions for ongoing activities such as flowline routes (installation and removal), night activities, equipment use, drilling, seismic exploration, and plugging and abandonment of structures.

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## *VISITOR SERVICES*

Both refuges are accessible by boat only. Hunting and fishing are the primary public uses on these refuges. Delta NWR is open to waterfowl, archery deer, and rabbit hunting. Sport fishing is permitted year-round during day-light hours, and only after 12 p.m. in the waterfowl hunting areas during the state waterfowl hunting season. Species caught most are freshwater catfish, largemouth bass, and sunfish during the spring and speckled trout and redfish in the fall.

Public use on the islands centers on fishing for speckled trout and redfish from the beaches and in the shallow waters, and primitive camping associated with fishing. Both refuges offer excellent bird watching opportunities, but due to inaccessibility, few bird and other wildlife observation visits are made.

## *PERSONNEL, OPERATIONS, AND MAINTENANCE*

Refuge personnel are not assigned solely to Delta or Breton NWRs, but rather support all eight refuges in the Southeast Louisiana NWR Complex. Six positions share responsibility for Delta, Breton, and Bayou Sauvage NWRs. The Complex staff consists of 27 permanent full-time employees (see staffing chart, Chapter V). The refuges also benefit from the help of interns and volunteers. Most Complex staff work out of the headquarters office in Lacombe, Louisiana. A satellite office for Delta and Breton NWRs is located in Venice, Louisiana. One maintenance staff position works out of the Venice office.



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## *III. Plan Development*

### **SUMMARY OF ISSUES, CONCERNS, AND OPPORTUNITIES**

The planning team identified a number of issues, concerns, and opportunities related to fish and wildlife protection, habitat restoration, recreation, and management of threatened and endangered species. Additionally, the planning team considered federal and state mandates, as well as applicable local ordinances, regulations, and plans. The team also directed the process of obtaining public input through public scoping meetings and personal comments. All public and advisory team comments were considered; however, some issues important to the public fall outside the scope of the decisions to be made within this planning process. The team has considered all issues that arose through this planning process, and has developed a CCP that attempts to balance the competing opinions regarding important issues. The team identified those issues that, in the team's best professional judgment, are most significant to the refuge. A summary of the significant issues for Delta and Breton NWRs follows.

#### *FISH AND WILDLIFE POPULATION MANAGEMENT - DELTA NWR*

Delta NWR is recognized as an important area for migratory birds. For migratory waterfowl, an average of 35,000 (peaks of 60-80,000) snow geese and 80-90,000 (peaks of 100-150,000) ducks have historically used the area during winter. Many more ducks, especially blue-winged teal, migrate through in fall and spring. Snow geese and northern pintail are the most numerous of the high-priority wintering waterfowl species utilizing the refuge. About 65 percent of the refuge provides sanctuary that is critical in an area that is heavily hunted for waterfowl. A portion of the refuge is open for waterfowl hunting four mornings a week during the state waterfowl season. It is possible that the snow geese wintering on the Mississippi River delta are a subpopulation that may have unique morphological features and perhaps remain somewhat isolated from the large population during reproduction and migration as it does on the wintering grounds. Delta NWR is an open system with no controlled water management. Wintering populations are closely tied to availability of natural food resources; no direct waterfowl management other than habitat management is possible.

Delta NWR is an important area in the eastern half of Louisiana for mottled ducks. Nesting is reportedly boom or bust depending on river stages in the spring. Although mottled ducks are common on the refuge in summer, there are few documented nests. Delta NWR could be a contributor to mottled duck population management efforts by participating in the preseason banding program and by managing vegetation on the spoil banks and dredge spoil sites to develop and maintain better mottled duck nesting habitat.

The shallow water and mudflat habitats of Delta NWR attract shorebirds, marsh birds, and wading birds. The location of the refuge makes it one of the first and last land forms available to trans-Gulf migratory songbirds. Management to encourage the development of trees would be beneficial and could be replanted following devastating hurricanes.

The Mississippi River delta is one of the largest, most productive estuaries in the world. The area supports a wide variety of fish from fresh to salt tolerant depending on the time of the year, and is an important nursery area.

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Currently, a small number of wildlife surveys and monitoring programs are implemented on the refuge. Waterfowl surveys are conducted during winter months and occasionally alligator surveys are accomplished in the fall. Specific knowledge of wildlife resources, including migratory songbirds, fish resources, and mottled ducks, has been gained through research conducted in cooperation with universities and the U.S. Geological Survey.

#### *FISH AND WILDLIFE POPULATION MANAGEMENT - BRETON NWR*

Breton NWR, including the Chandeleur Island chain, has been designated as a Globally Important Bird Area by the American Bird Conservancy in association with The Nature Conservancy. Historically, Breton NWR has supported thousands of colonial nesting birds. Large nesting colonies of brown pelicans; laughing gulls; and royal, Caspian and sandwich terns used the islands. Less abundant, but still in impressive numbers, were nesting black skimmers and sooty terns, with occasional common, least, Forster's, and gullbilled terns within the colonies. Hurricanes and tropical storms have been devastating to the fragile island chain. In the past, the storms and hurricanes would significantly rearrange the islands, but usually the bird colonies would rebound as the dynamic islands rebuilt after storms. After the destructive 2005 hurricane season, which included Katrina and Rita, it is doubtful the islands will ever regain enough land above the waterline to provide safe nesting sites for significant numbers of birds. All nesting colonies are posted as closed areas where they occur.

The Eastern and Caribbean subspecies of the brown pelican remain endangered in California, Louisiana, Mississippi, Oregon, Puerto Rico, Texas, Virgin Islands, Washington, and Central and South America. It was extirpated from Louisiana during the 1960s and later reintroduced at three sites, one of which was North Island of the Chandeleurs. The Louisiana population grew exponentially after the reintroductions and Breton NWR had the largest number of nesting pelicans in the state for a period of time. In order to learn more about nesting site fidelity and migratory movements of the Breton NWR brown pelicans, 6,700 juvenile brown pelicans were banded from 2000 through 2004. Several adults were monitored by satellite telemetry placed on them in 2004. Both the banding and satellite telemetry studies were discontinued after the devastation of nesting habitat by hurricanes in 2005.

Wading birds, such as reddish and snowy egrets, clapper rails, white ibis, and herons, such as Louisiana, black-crowned night, and little blue, have been observed in small rookeries in the past. Red-winged blackbirds also nest on the islands. A non-breeding group of magnificent frigate birds persistently resides near North Island.

Waterfowl, primarily redhead and scaup, use the islands as a wintering and migration stop-over site. The Chandeleur Islands are one of only four Gulf of Mexico wintering grounds for redheads, which primarily winter where they can feed in the seagrass beds. Aerial survey records from 1992 through 2004 document a high of 166,000 ducks, which were primarily scaup. Average numbers for redheads have been approximately 10,000, with highs of up to 20,000. A small number of buffelhead, gadwall, and blue-winged teal have been observed using the shallows and sounds adjacent to the islands and interior marshes for feeding and protection during inclement weather.

There is never a time when small shorebirds are absent from the sandy beaches which supply foraging habitat. Federally listed in 1985, the piping plover is considered threatened throughout its wintering range along the south Atlantic and Gulf coasts, and Caribbean beaches and barrier islands. Breton NWR is internationally recognized as a critically important wintering site for the piping plover by the Western Hemisphere Shorebird Reserve Network. Presently, no special management considerations are made on Breton NWR because of the remoteness and lack of visitation during

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winter. Shorebirds of interest observed on Breton NWR are Wilson's plover, American oystercatcher, snowy plover, dowitchers, sanderling, dunlin, red knot, and least and western sandpipers.

#### *HABITAT MANAGEMENT - DELTA NWR*

Located at the mouth of the Mississippi River, Delta NWR is part of the active delta, a dynamic system that is vulnerable to natural forces, including salinity fluctuation, seasonally high volumes of fresh water and sediment, subsidence, and frequent and sometimes very severe storms. The most critical issue facing the refuge is land loss due to subsidence, erosion, major storm events, sea level rise, salt-water intrusion, and the proposed abandonment of the existing delta from restoration projects upriver.

For the past several decades, the refuge staff has implemented the crevasse program to counter the land loss. Cuts (crevasses) in the natural levee are strategically located so that water from the Mississippi River and its distributaries spills through the cuts and deposits sediment in shallow bays. The sediment builds to form splays or mudflats that are quickly vegetated and become emergent marsh. Opportunities to use this method have been largely exhausted for the most effective locations. Other options, methods, or locations should be explored. Beneficial deposition of dredged materials from the Mississippi River is one option to be investigated.

#### *HABITAT MANAGEMENT - BRETON NWR*

During the past decade, vegetative plantings, sand fencing, and beach nourishment using materials dredged from the Mississippi River Gulf Outlet (MRGO) were methods used to assist rebuilding of the islands. Results were positive with accumulations of up to 4' of sand in some locations. Although the long-term projection for the future of the islands was still problematic, the success of these management actions gave hope for short-term elevation increases, creating safer nesting areas. Based on early analyses, it is believed that so much material was permanently removed from the island system with the strong hurricanes in 2005, that there is not enough material to rebuild the islands, which is what occurred after storms in the past. A source of dredged materials for island rebuilding has been the MRGO, however, it is generally thought that the MRGO increased the velocity of Hurricane Katrina's storm surge, thus increasing damages to infrastructure in its path. All dredging has been halted and the opposition to its existence as a shipping channel has increased significantly. This source of beneficial spoil for future nourishment of Breton NWR is doubtful.

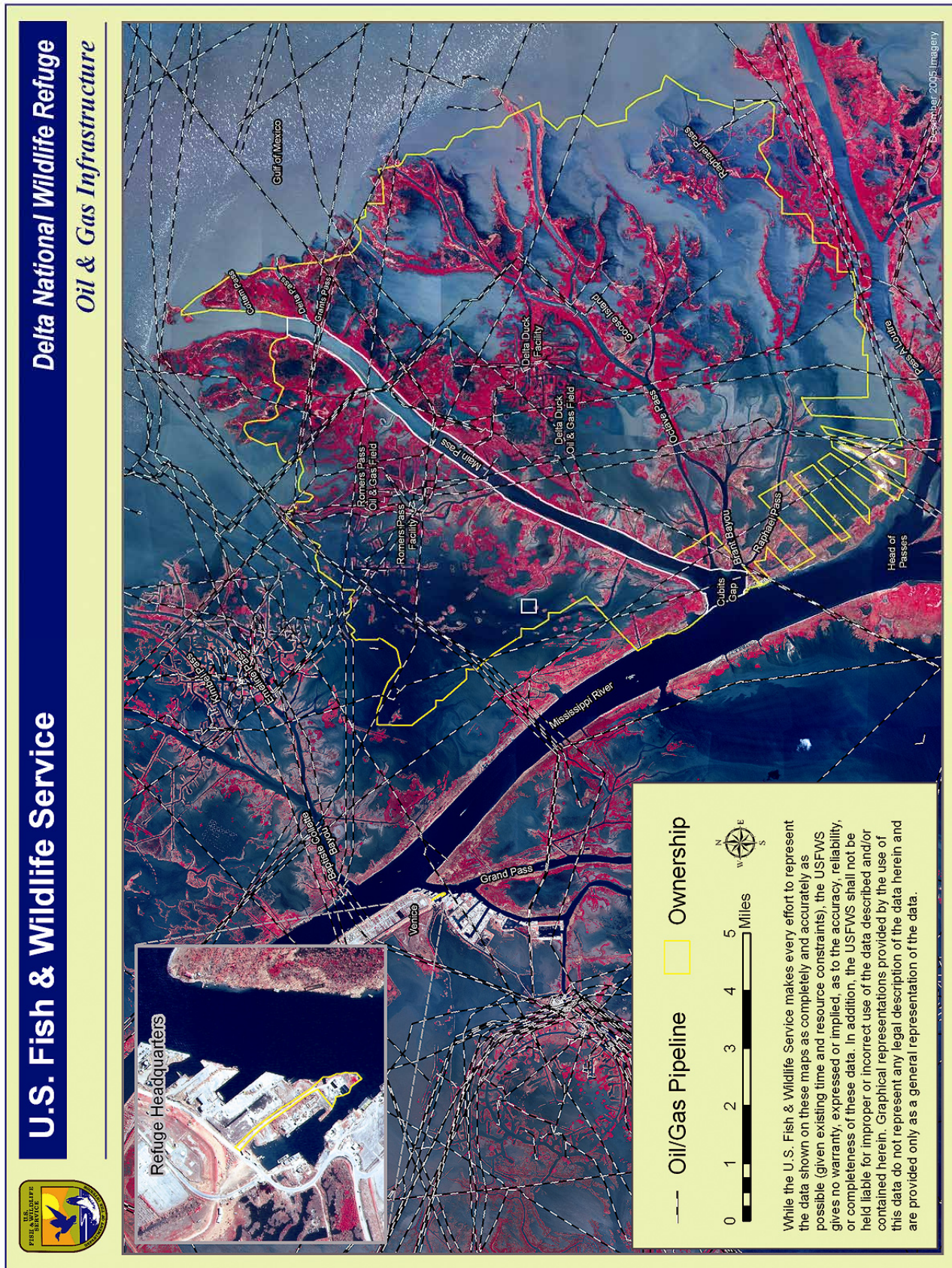
Given the current circumstances, future habitat management depends on the amount and sources of sediment and funding available, and any new technologies which can be developed. The Service has contracted with U.S. Geological Survey to obtain information on sediment loss at the Chandeleurs and the availability of suitable dredge material for restoration. This information will be used to determine the feasibility of restoration options and the sustainability of restoration efforts.

#### *RESOURCE PROTECTION - DELTA NWR*

The oil and gas operations on the refuge began in 1942, and continue today with five operators and three major pipelines (Figure 6). The fields producing the oil and gas have considerable age on the equipment and flowlines. This requires constant monitoring by refuge staff. Releases or spill events have occurred numerous times and have the potential to impact huge numbers of waterfowl and large expanses of habitat if not controlled immediately. Working with the Coast Guard, refuge staff must determine the best approach to clean up spills. In addition, violations pertaining to illegal hunting and fishing, general trespassing, and controlled substances are prosecuted.



Figure 6. Location of oil and gas pipelines on Delta NWR



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## *RESOURCE PROTECTION - BRETON NWR*

Law enforcement is involved with every release or spill event involving oil and gas on the refuge. They work cooperatively with the State of Louisiana and federal agencies to investigate each event to determine if charges will be filed. Other violations involve illegal fishing.

## *VISITOR SERVICES - DELTA NWR*

Hunting and fishing are traditional recreational uses in Louisiana and are the primary reasons the public visits the refuge. The refuge is accessible by boat only and travel may be hazardous due to the required crossing of the Mississippi River channel where rough water, fog, and swells from ships and crew boats are common. Most hunting is for waterfowl. Deer hunting is minimal since the deer population is small and limited small game hunting is attempted. A portion of the refuge is open to waterfowl hunting until noon on Wednesday, Thursday, Saturday, and Sunday during the state teal, general waterfowl, and special "light" goose conservation seasons (Figure 7).

An archery deer either sex hunting season is offered during October and after the close of the waterfowl season. Rabbits can be hunted using shotguns and dogs during the state season after the end of the waterfowl season. These hunts have been offered for many years and presently there are no critical issues or reasons for any changes. This CCP includes discontinuing primitive camping because no adequate areas exist.

Sport fishing is allowed year-round during daylight hours except in the area open for waterfowl hunting; in the refuge waterfowl hunting area, fishing is permitted only after noon during the state waterfowl hunting seasons. Most months, the refuge waters are muddy with only bass and catfish being caught. When the Mississippi River is low and brackish water flows into the refuge during fall and early winter, speckled trout and redfish come into the refuge. No commercial fishing is allowed.

The headquarters for Delta NWR is located in Venice, Louisiana. The headquarters consists of office space, boat and equipment storage, and a maintenance area, all located inside a security fence. There are no public restrooms or visitor center. A kiosk offering general information was located outside the gate, but was destroyed by Hurricane Katrina in 2005. Developing an outdoor visitor contact area at the Venice site would provide important outreach information.

## *VISITOR SERVICES - BRETON NWR*

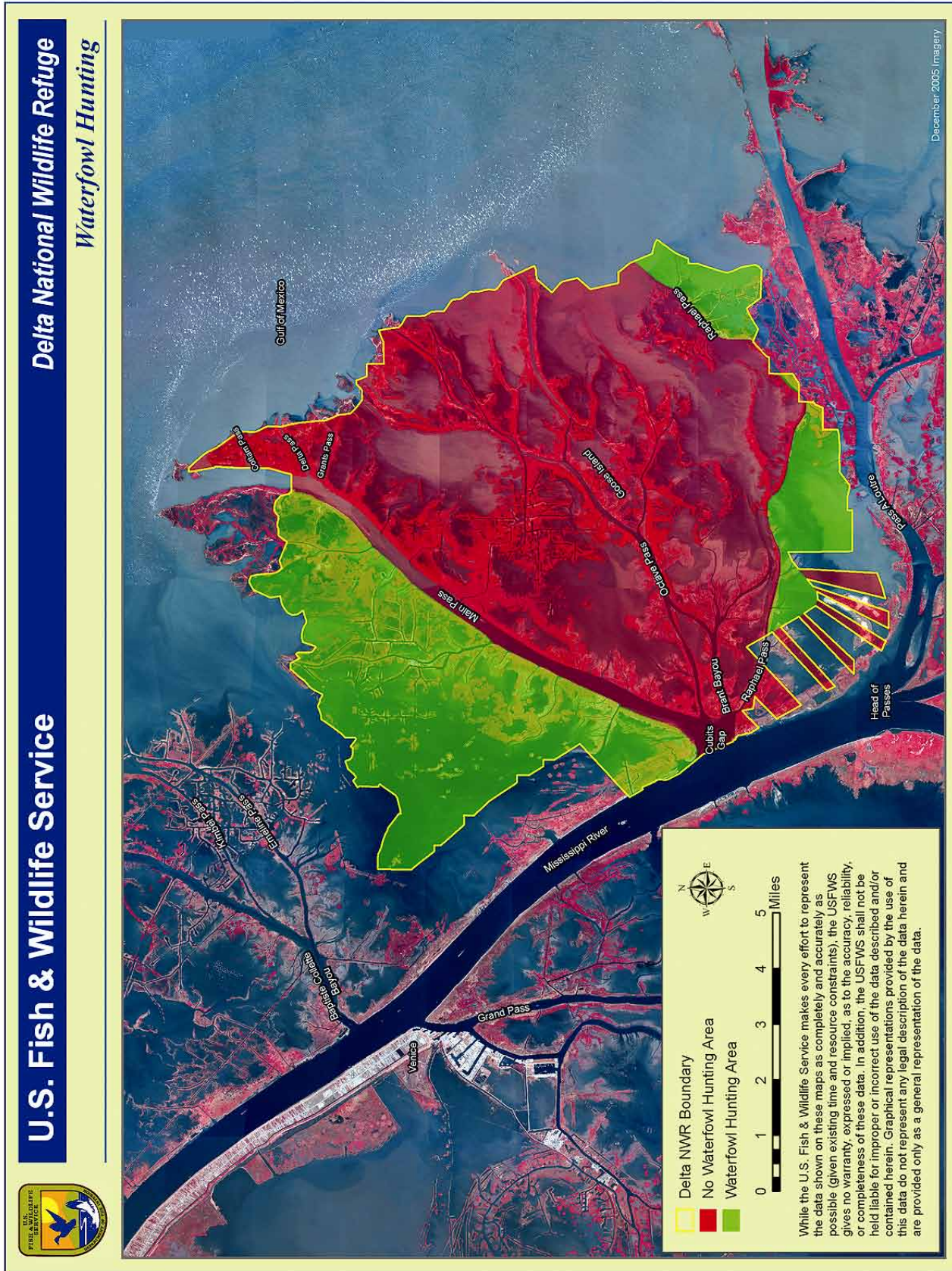
Due to the remoteness of the islands, public use opportunities are limited. The primary public use is recreational fishing. Charter fishing boats are available for users to visit the refuge. Adjacent state waters are open for waterfowl hunting, but the number of waterfowl hunters is minimal. A small number of visitors enjoy bird watching and photography; the number of trips for these uses is very few. This CCP includes discontinuing primitive camping on the islands. Primitive camping has been permitted in the past. Due to the extreme loss of land and the critical need for feeding, loafing, and nesting areas by colonial seabirds on the remaining land above water, camping will not be allowed until sufficient land area is available to accommodate the needs of wildlife and camping.

## *REFUGE ADMINISTRATION - DELTA AND BRETON NWRs*

Presently, six positions cover the administration of Delta, Breton, and Bayou Sauvage NWRs with support from other staff of Southeast Louisiana NWR Complex. All Delta NWR staff but one are stationed at the Complex headquarters in Lacombe, Louisiana, a two-hour drive from the Venice sub-office. A maintenance worker works full-time out of the Venice sub-office.



Figure 7. Location of areas open to waterfowl hunting on Delta NWR



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Funding is administered through the Southeast Louisiana NWR Complex; neither Delta NWR nor Breton NWR have separate budgets. Mitigation funds based on payments by private companies for loss of wetlands during oil and gas operations occurring on Delta NWR provide partial financing for habitat restoration and monitoring efforts on Delta NWR.

**Wilderness Review**

Refuge planning policy requires a wilderness review as part of the comprehensive conservation planning process. The results of the wilderness review are included in Appendix H.





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## *IV. Management Direction*

### **INTRODUCTION**

The Service manages fish and wildlife habitats considering the needs of all resources in decision-making. But first and foremost, fish and wildlife conservation assumes priority in refuge management. A requirement of the Improvement Act is for the Service to maintain the ecological health, diversity, and integrity of refuges. Public uses are allowed if they are appropriate and compatible with wildlife and habitat conservation. The Service has identified six priority wildlife-dependent public uses. Hunting, fishing, wildlife observation, wildlife photography, and environmental education and interpretation are therefore emphasized in this CCP.

Described below is the CCP for managing the refuges over the next 15 years. This management direction contains the goals, objectives, and strategies that will be used to achieve the vision of each refuge.

Three alternatives for managing each refuge were considered. Because different alternatives were considered for Delta and Breton NWRs, these alternatives will be listed and discussed separately. Each set of alternatives was described in the Alternatives section of the Environmental Assessment, which was Section B of the Draft Comprehensive Conservation Plan.

### **ALTERNATIVES FOR MANAGING DELTA NWR**

The three alternatives considered for managing Delta NWR are as follows:

A - No Action (Current Management)

B - User-Focused Management

C - Improved Habitat Restoration and Public Outreach Management (Preferred)

Implementing the preferred alternative will result in expanding current habitat restoration efforts to include not only interior marsh, but also Gulf shoreline; activities open to the public will remain at present levels with the exception of eliminating the primitive camping location; public outreach will be improved with kiosks and a wayside exhibit, updated brochures and maps, and establishing communication with and providing information within the school systems and in surrounding parishes.

### **VISION FOR DELTA NWR**

Delta NWR will continue to serve as a haven of prime habitat managed for the conservation of migratory birds and other wildlife. The refuge will serve as a showcase of land management stewardship and coastal habitat restoration, demonstrating a balance between intensive wildlife management strategies and safeguarding the refuge's ecological integrity. Visitors to the refuge will enjoy a quality outdoor experience centered on the traditional uses of hunting and fishing, while cultivating a conservation ethic that promotes stewardship of this and other important wildlife habitat.

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## GOALS, OBJECTIVES, AND STRATEGIES FOR DELTA NWR

The goals, objectives, and strategies presented for Delta NWR are the Service's response to the issues, concerns, and needs expressed by the planning team, the refuge staff and partners, and the public and are presented in hierarchical format. Chapter V, Plan Implementation, identifies the projects associated with the various strategies.

These goals, objectives, and strategies reflect the Service's commitment to achieve the mandates of the Improvement Act, the mission of the Refuge System, and the purposes and vision of Delta NWR. With adequate resources, as outlined in Chapter V, the Service intends to accomplish these goals, objectives, and strategies within the next 15 years.

### *HABITAT MANAGEMENT (DELTA NWR)*

#### **Goal 1. Manage, conserve, and restore the physical and ecological functions of coastal wetland habitats for fish and wildlife resources.**

*Discussion:* Delta NWR is located in the active Mississippi River delta and contains marsh, shallow ponds, channels, and bayous. Trees and scrub/shrub habitat exist on the higher ground along the banks of passes and the river. These lands are formed from sediments deposited from the water as it drains toward the Gulf of Mexico. The natural levees and embankments slope gradually away from the water flow and quickly give way to large, open water ponds and mudflats.

**Objective 1.1:** Continue to maintain quality interior emergent marsh, and initiate a restoration program that focuses on restoration of the Gulf shoreline, which will aid in protecting interior marsh.

*Discussion:* The land forming Delta NWR is new geologically. This dynamic system is vulnerable to natural forces, such as salinity fluctuation, seasonally high volumes of fresh water and sediment, subsidence, and frequent and sometimes very severe storms. Water within the river system is fresh, but becomes more brackish toward Breton Sound and the Gulf of Mexico. The most critical issue facing the refuge is land loss due to subsidence, erosion, major storm events, sea level rise, and salt-water intrusion. Refuge staff has been effectively countering these natural forces by strategically locating crevasses (cuts) through the natural levees. During high river stages, water from the Mississippi River spills through the crevasses and deposits sediment in shallow bays, creating first submerged mud flats that are quickly vegetated by submerged aquatics and later by emergent marsh plants as elevation increases. Creation of delta splays has been a very effective technique to build interior marsh, but opportunities to use this method have largely been exhausted. The refuge continues to search for other locations and options for marsh creation and protection, one of which is to use beneficial deposition of dredged materials along the Breton Sound and Gulf of Mexico shoreline. This area is experiencing rapid erosion and subsidence since it is further from the river's sediment source and bears the brunt of severe weather events.

#### *Strategies:*

- Proactively seek funding and partners, and explore new technologies for restoration projects such as dedicated dredge disposal to rebuild the Gulf shoreline.
- Continue to monitor existing crevasses, reconstruct vital crevasses that have silted in, and identify potential sites for new crevasses.

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- Develop a Habitat Management Plan by 2018.
  - Seek research opportunities through universities, conservation agencies, and other interested parties.

#### *FISH AND WILDLIFE POPULATION MANAGEMENT (DELTA NWR)*

### **Goal 2. Manage, conserve, and protect coastal fish and wildlife species with special emphasis on migratory birds and threatened and endangered species.**

*Discussion:* Based on its location and habitat, Delta NWR is recognized as an important area for migratory birds, including many species of waterfowl, shorebirds, marsh birds, wading birds, gulls and terns, and songbirds. The refuge is one of the first and last land forms available to trans-Gulf migratory birds. Refuge resources provide critical cover and foraging areas to resident species such as mottled ducks, nesting marsh and wading birds such as rails, bitterns, herons and ibis.

**Objective 2.1:** Protect and monitor federal trust species and targeted species of management concern and interest.

*Discussion:* The Service is the principle federal agency charged with protecting and enhancing more than 800 species of migratory birds that spend all or part of their lives in the United States. In addition, the Service and the National Oceanic and Atmospheric Administration (NOAA) Fisheries share responsibility for administration of the Endangered Species Act of 1973, which combines both U.S. and foreign species. “Trust species” for the Service are those covered by the many laws and mandates designating federal responsibility for their protection and conservation. In addition, plans such as bird conservation plans for waterfowl, shorebirds, songbirds, etc., contain lists of birds of concern which are targeted for management purposes. Management programs on Delta NWR target those migratory and resident birds that depend on marsh, mud-flats, and other habitats occurring on the refuge. No critical habitat or federally listed threatened or endangered species reside on the refuge, although some species may use the area temporarily.

#### *Strategies:*

- Continue monthly waterfowl surveys during November through February, and the mid-winter waterfowl survey.
- Continue to maintain a closed area “sanctuary” to provide protection and rest for wintering and migrating waterfowl.
- Provide nesting, brood rearing, and molting habitat for mottled ducks with material from dedicated dredging and protect nests from predators.
- Partner with LDWF in surveying, monitoring nesting and broods, and banding mottled ducks.
- Continue to monitor bird rookeries.
- Initiate secretive marsh bird surveys.
- Initiate predator control to protect nesting birds.
- Monitor shorebirds and other neotropical migratory birds during peak migration periods.
- Continue monitoring and research projects on alligators, deer, and other endemic species.
- Continue to monitor exotic species such as nutria and assess any related environmental damage.
- Create and maintain data bases on research and monitoring projects.
- Monitor any occurrences or reports of threatened or endangered species.
- Periodically monitor fisheries.
- Revise the Wildlife Inventory Plan by 2022.

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VISITOR SERVICES (DELTA NWR)

**Goal 3. Provide the public with quality recreation activities, environmental education and interpretation, and outreach opportunities that lead to enjoyment and greater understanding of and appreciation for the fish, wildlife, cultural resources, and natural systems of the Mississippi River delta system.**

*Discussion:* Other than the office in Venice, access to the refuge is restricted to boat and can be hazardous due to rough water, fog, and the wakes caused by other large vessels, such as ships and crew boats, traveling the Mississippi River. After navigating the busy Mississippi River to reach the refuge, the visitor must travel an intricate and often confusing network of canals, passes, and marshes. Most visitor use centers on hunting and fishing. While Delta NWR attracts waterfowl hunters from a wide geographic area, fishing is more limited. During most months refuge waters are muddy and mainly bass and catfish are caught. However, in the fall, when the Mississippi River is low and brackish water flows into the refuge, speckled trout and redfish can be caught and fishing visits increase. Non-consumptive uses are offered during daylight hours, but because of difficult access, few visits are made specifically for wildlife observation and photography. Wildlife observation is an incidental use that occurs in association with hunting and fishing and while traveling through the refuge to the Gulf. No roads or hiking trails exist on the refuge.

**Objective 3.1:** Offer visitors fresh and salt water recreational fishing, recreational crabbing, wildlife observation and photography, and hunting for waterfowl, deer, rabbit, and hogs. (Hogs may be taken with bow and arrow during deer archery season.)

*Discussion:* Hunting and fishing regulations specific to the Refuge are available in a brochure that is obtainable online, at the Lacombe and Venice offices, and can be mailed by request. Hunters are required to have in their possession a signed refuge hunting regulations brochure which serves as a refuge hunt permit. Sport fishing is allowed year-round during daylight hours with the exception that during the State waterfowl hunting season, fishing is only permitted after 12:00 pm in the hunting areas.

*Strategies:*

- Continue waterfowl hunting on Wednesday, Thursday, Saturday, and Sunday mornings; archery deer hunting; marsh bird harvest; and rabbit hunting.
- Review and update hunt plans as required.
- Maintain the recreational fishing program with additional outreach on kiosks at area marinas to promote fishing opportunities on the refuge and familiarize anglers with species found seasonally.

**Objective 3.2:** Improve visitor services and the outreach program.

*Discussion:* Because of the lack of access to the refuge and the limited facilities on site, environmental education and outreach activities involve refuge staff going to schools and providing materials, exhibits, etc., to the public. All informational facilities at the Venice office were destroyed by Hurricane Katrina. Historically, little to no staff is present at the refuge; it is 8 miles from the Venice office and a 2-hour drive from the Lacombe headquarters. Presently, one person works out of the Venice office. For security purposes, the building is located behind a fence with the gate locked when staff is not present. Improving methods of communication and accessibility to refuge information within limited options is desirable.

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*Strategies:*

- Write a Visitor Services Plan by 2013.
- Initiate an environmental education/outreach program in the form of classroom presentations about Delta NWR to be offered in Plaquemines and surrounding parishes. Augment with items such as a “traveling trunk” which teachers can arrange to borrow and which would feature hands-on items such as furs, skulls, water and silt samples, duck wings, etc., to illustrate refuge resources.
- Complete the Delta NWR interactive CD Rom project and distribute copies to area schools and teachers.
- Install interpretive and orientation kiosk and wayside exhibits at the Venice headquarters building to orient visitors to Delta NWR and the primary resources
- Place visitor information kiosks with Delta NWR information at the commercial marinas in the Venice area; consider partnering with LDWF at Pass-a-Loutre Wildlife Management Area.
- Develop a Delta NWR brochure and/or tear sheet with map.
- Regularly update and improve refuge information on the web site.
- Explore web-based interaction methods between visitors and law enforcement such as wildlife sightings, bag reports, or current refuge conditions and regulations.
- Explore setting up and offering a special wildlife viewing tour or opportunity, possibly in conjunction with the Friends of Louisiana Refuges, LDWF, or sponsored by a local oil field related business that might have boats available.

*REFUGE ADMINISTRATION AND PROTECTION (DELTA NWR)*

**Goal 4: Provide sufficient administration and protection to conserve trust resources on Delta NWR.**

*Discussion:* Delta NWR is administered as one of eight refuges under the Southeast Louisiana Refuge Complex. Presently six staff members share direct responsibility for Delta, Breton, and Bayou Sauvage NWRs, with assistance from approximately 20 other staff members working on the Complex of refuges. One of the six positions, a maintenance position, is located out of the Venice office and the rest work out of the Complex headquarters in Lacombe, Louisiana. Law enforcement is an important tool for protection of the natural resources of the refuge as is supervision of the intensive oil and gas activities occurring on the refuge. To develop and increase outreach, environmental education, and interpretation is time consuming; improved communication with the public will require consistency and follow-up.

**Objective 4.1:** Enforce all federal and state laws applicable to the refuge.

*Discussion:* No law enforcement position is dedicated to patrolling the refuge. The four refuge officers working on the Southeast Louisiana NWR Complex, along with assistance from agents of LDWF, intermittently check Delta NWR. Most violations involve hunting out of season, using lead shot, over possession, and controlling commercial activities.

*Strategies:*

- Update the Law Enforcement Plan by 2012.
- Hire a full-time law enforcement officer and share position with Breton NWR.
- Continue to partner with LDWF to provide protection to resources and visitors.
- Maintain refuge boundaries by posting or inspecting 20 percent of the boundary annually.

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**Objective 4.2:** Follow national Service policies for managing oil and gas activities on a national wildlife refuge.

*Discussion:* Oil and gas activities on Delta NWR are among the most complex of any national wildlife refuge, with an active and spread-out field of operations and aging infrastructure. The issue is further complicated by the existence of a mix of mineral ownerships, which change frequently. Monitoring and permitting these activities claim a significant portion of management time and resources. Spills and other accidents only complicate an already challenging responsibility.

*Strategies:*

- Work with the Service Regional Office Realty personnel and Bureau of Land Management to clarify federal mineral ownership and authorities.
- Monitor oil and gas activities; use special use permits to set conditions in area of non-federal mineral ownership.
- Use mitigation to lessen impacts.
- Continue to work with the U.S. Coast Guard, the Louisiana Oil Spill Coordinators Office, and the legal system in the event of oil spills.

**Objective 4.3:** Maintain refuge equipment in good condition and appearance.

*Discussion:* More than \$3,000,000 worth of capitalized equipment exists for the complex of eight refuges to be used in all aspects of refuge administration, including habitat, wildlife, public use, and protection projects and management. Equipment is shared among the refuges instead of being assigned solely to one refuge. Project efficiency depends largely on age, condition, and maintenance of the equipment needed to accomplish projects.

*Strategies:*

- Maintain a current data base of all capitalized equipment and a maintenance schedule.
- Replace or purchase additional equipment as needed in order to have well-maintained and working equipment for all force account work planned

## **ALTERNATIVES FOR MANAGING BRETON NWR**

The three alternatives considered for managing Breton NWR are as follows:

A - No Action (Current Management)

B - Custodial Management

C - Large-scale Habitat Restoration and Improved Public Outreach Management (Preferred)

Each of these alternatives was described in the Alternatives section of the Environmental Assessment, which was Section B of the draft comprehensive conservation plan. The Service chose Alternative C (Large-scale Habitat Restoration and Improved Public Outreach Management) as the preferred management direction.

Implementing the preferred alternative will result in partnering with other conservation agencies and large corporations to carry out restoration projects based on dedicated dredging, vegetation

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restoration, and exploring landscape scale efforts to restore the barrier islands. Activities open to the public will remain at present levels with the exception of eliminating primitive camping. Public outreach will be improved with kiosks and a wayside exhibit at the Venice headquarters, updated brochures and maps, and establishing communication with and providing information within the school system and surrounding parishes.

## **VISION FOR BRETON NWR**

Breton NWR was the second national wildlife refuge established by President Roosevelt and the only refuge that he actually visited. It will continue to serve the purpose for which it was established, which is to provide habitat for the conservation of colonial nesting seabirds and other wildlife. The wilderness character of the refuge will be maintained. The refuge will partner with other agencies, organizations, and individuals to protect and restore the fragile and dynamic coastal barrier island habitat. Public use activities will emphasize fishing, wildlife observation, and wildlife photography; outreach will focus on environmental education and interpretation; environmental education programs will be based on the refuge's natural resources. Visitors to the refuge will enjoy a quality outdoor experience resulting in an enhanced appreciation for wildlife and their habitats and for the Refuge System.

## **GOALS, OBJECTIVES, AND STRATEGIES FOR BRETON NWR**

The goals, objectives, and strategies presented for Breton NWR are the Service's response to the issues, concerns, and needs expressed by the planning team, the refuge staff and partners, and the public and are presented in hierarchical format. Chapter V identifies the projects associated with the various strategies.

These goals, objectives, and strategies reflect the Service's commitment to achieve the mandates of the Improvement Act, the mission of the Refuge System, and the purposes and vision of Breton NWR. With adequate resources, as outlined in Chapter V, the Service intends to accomplish these goals, objectives, and strategies within the next 15 years.

### *HABITAT MANAGEMENT (BRETON NWR)*

#### **Goal 5. Manage, conserve, and, if feasible, restore the physical and ecological functions of barrier island habitats for fish and wildlife resources.**

*Discussion:* The islands are highly dynamic and constantly evolving. The most influential effect on the islands is their transformations resulting from strong storms and overwash. Over the years, hurricanes and severe storms have changed the face of the islands in both dramatic and subtle ways. Severe storms in recent history have resulted in significant loss of the land existing above water such as Hurricane Andrew (1992), Hurricane Danny (1998), Hurricane Georges (1998), Tropical Storm Isidore (2002), Hurricane Lili (2002), and Hurricanes Katrina and Rita (2005). Usually, there is post-storm recovery to some extent. After the devastating 2005 storm season, serious concerns now exist regarding the amount of recovery possible. The Intergovernmental Panel on Climate Change (IPCC) recently concluded that warming of the climate is undeniable and could cause changes in our stewardship of land. Examples of potential changes are frequency of extreme weather events and rising sea levels at coastal refuges. Refuge staff has learned from the past that small-scale restoration projects can no longer achieve lasting benefits. It will take working in partnership with others to achieve large-scale and costly restoration of the barrier islands. Information to be provided by U.S. Geological Survey on sediment loss and the availability of suitable dredge material will be used to determine the feasibility of restoration options.



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**Objective 5.1:** Monitor and maintain island habitat with large-scale restoration projects.

*Strategies:*

- Develop and maintain partners such as USGS, TNC, UNO, Gulf of Mexico Foundation, Conoco Phillips, Shell Oil, and local schools for conservation projects.
- Seek funding and partners for dedicated dredge disposal projects to create 2,000 acres of restored sandy beach and bayside emergent habitat.
- If restoration is successful or land rebuilds, proactively search for funding and partners for sand fencing and vegetative planting projects. Construct approximately 1,000 linear feet of sand fencing and plant 20,000 plants of species such as sea oats, bitter panicum, seaside blue stem, and additional appropriate species for the site.
- Participate in landscape level coastal initiatives such as CWPPRA, LCA, CIAP, and Coast 2050

**Objective 5.2:** Protect the islands that are under Wilderness status in accordance with the laws and regulations of the Wilderness Act of 1954.

*Discussion:* On January 3, 1975, Chandeleur and the west Breton Islands became part of the National Wilderness Preservation System. The Breton Wilderness, according to the Clean Air Act, is listed as a Class 1 Prevention of Significant Deterioration Area. This means that the islands are given special consideration and protection from pollutants. The main result of this designation is the responsibility of new point sources to consult with the Service on proposed releases and how these releases will impact the overall air quality 'budget' for the area of the refuge. Refuge personnel work closely with the Air Quality Branch of the Service, located in Lakewood, Colorado, on this issue.

The 1964 Wilderness Act, directly and by reference in subsequent wilderness legislation, generally prohibits commercial activities, motorized access, and roads, structures, and facilities in units of the National Wilderness Preservation System.

**Objective 5.3:** Seek research possibilities with universities and conservation agencies.

*Discussion:* The Service has partnered in the past with such agencies as Louisiana Department of Natural Resources, Corps of Engineers, and the Coastal Research Lab at the University of New Orleans for restoration projects and resource information needs, and will continue in the future to seek partners to sponsor and support beneficial projects.

**Objective 5.4:** Develop a Habitat Management Plan by 2018.

*Discussion:* A Habitat Management Plan (HMP) is one of several step-down plans developed in conjunction with a CCP. The HMP provides a detailed description of all refuge habitats; identifies refuge priority species, species groups, and communities, and their habitat requirements; assesses the refuge's potential contribution to the habitat needs of the resources of concern and reconciles conflicts among them; and, develops desired habitat goals and objectives.

*FISH AND WILDLIFE POPULATION MANAGEMENT (BRETON NWR)*

**Goal 6. Manage, conserve, and protect coastal fish and wildlife species with special emphasis on migratory birds, colonial nesting waterbirds, and threatened and endangered species.**

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*Discussion:* Because of their location, the islands serve as habitat for many migratory bird species either for an entire season or only a matter of hours or days. The islands give refuge to migratory birds on a regular basis or may serve as a haven to birds blown off course and not following normal migration patterns. Breton NWR, including the Chandeleur Islands chain, has been designated as a Globally Important Bird Area by the American Bird Conservancy in association with The Nature Conservancy. The refuge is used by ducks, primarily redhead and scaup, as a wintering and migration stop-over site. The Chandeleur Islands are one of only four Gulf of Mexico wintering grounds for redhead, which primarily winter where they can feed in the seagrass beds.

In the past, large colonies of nesting brown pelicans; laughing gulls; black skimmers; and royal, Caspian, sandwich, sooty, common, least Forster's, and gullbilled terns used the islands. It is unknown if the islands will rebuild or be restored to the extent that the colonies can return.

Threatened and endangered species using the refuge are the eastern brown pelican (nesting) and the piping plover (wintering). Several species of sea turtles are commonly observed in the vicinity of the refuge and are considered threatened or endangered, depending on the species. The most common of these is the loggerhead, but other species occur including green, leatherback, and Kemp's ridley.

**Objective 6.1:** Depending on the quantity and success of habitat restoration and recovery, continue to protect and monitor colonial nesting seabirds, federally listed threatened and endangered species, and other targeted species and species of federal responsibility.

*Discussion:* The amount of biological projects that can be accomplished on the islands largely depends on whether or not any of the land and bird populations rebound after hurricanes Katrina and Rita. If restoration is attempted and is successful, on-going projects underway before the storms can be resumed and expanded. Until that unknown issue is resolved, refuge staff will continue to monitor developments.

*Strategies:*

- If the brown pelican nesting population increases in response to habitat recovery and restoration, resume banding juveniles and begin a telemetry study on adult brown pelicans.
- If the nesting population of terns increases in response to habitat recovery and restoration, begin a banding program to determine migration patterns.
- Continue to conduct winter surveys of piping plover.
- Continue surveys of colonial nesting birds.
- Continue aerial waterfowl survey of wintering diving ducks.
- Monitor shore bird populations during peak migration periods.
- Monitor wading birds during peak breeding season.
- Record observations of sea turtles and any nesting activity.
- Develop and maintain a data base of survey information.
- Determine effective methods of and initiate predator control in ground nesting bird colonies.
- Revise Breton NWR's wildlife inventory plan as part of Delta NWR's plan by 2022

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## VISITOR SERVICES (BRETON NWR)

**Goal 7. Provide the public with quality recreational activities, environmental education, interpretation, and outreach opportunities that lead to enjoyment and greater understanding of, and appreciation for, fish, wildlife, and barrier islands.**

*Discussion:* Recreational activities on Breton NWR revolve around fishing, principally wade fishing in the shallow waters. Access is either by boat or float plane. Disturbance to the nesting colonies is discouraged by posting them as closed to prevent anglers and other visitors from walking through the nesting birds. Wildlife observation and photography are allowed but are not common because of the harshness of the environment, remoteness, insects, and rapidly changing weather patterns. The refuge does not offer transportation to the islands for any of the uses open to the public; visitors must rely on privately owned boats and charter fishing businesses.

**Objective 7.1:** Maintain current visitor services and programs of fishing, wildlife observation, and photography, except in certain portions identified with “Area Closed” signs to protect bird nesting areas. Primitive camping will be discontinued.

*Discussion:* Breton NWR was established over 100 years ago. At this time, there are no plans to change management of the recreational uses other than the elimination of primitive camping because so little of the islands remain above water.

### *Strategies:*

- Maintain existing fishing program; partner with LDWF for enforcement of regulations.
- Explore possibilities of providing a tour of the islands for wildlife observation and interpretation as part of a Delta NWR special event.
- Develop a visitor services’ plan as part of Delta NWR’s visitor service’s plan within six years of CCP implementation.

**Objective 7.2:** Improve the quality and quantity of information about Breton NWR offered to the public.

*Discussion:* No facilities or staff exist on the islands and, as already discussed, access is limited. Therefore, most of the public does not experience the refuge and what it has to offer. Information can be presented in association with Delta NWR. Although the two refuges are dissimilar in habitat, hydrology, and priority species, they are logistically close. Improving methods of communication and accessibility to refuge information within limited options is desirable

### *Strategies:*

- Include information about Breton NWR at wayside panels and kiosk at Venice headquarters.
- Improve and maintain current information on the web page and make it interactive so that information is two-way; include interpretive information.
- Update the Breton NWR general brochure as needed.
- Include maps on kiosks; place fishing information and maps at local marinas; place small kiosk or panel at marina to include fish identification.
- Include information about the Refuge System, colonial nesting birds, and wading birds on kiosks.

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- Ensure staff located at the Delta/Breton NWR office receive appropriate training to properly represent the Service to the public.
  - Communicate key issues in articles in local newspapers, Plaquemines Parish special events and festivals, and Southeast Louisiana Refuge Headquarters special events.

**Objective 7.3:** Improve environmental education program in conjunction with Delta NWR's environmental education program.

*Discussion:* Because of the lack of staff and access to the refuge, environmental education and outreach activities involve refuge staff going to schools and providing materials, exhibits, etc., to the public in venues such as festivals and other special events.

*Strategies:*

- Develop classroom programs for students in Plaquemines and St. Bernard Parishes.
- Conduct teacher workshops.
- Partner with corporations for funding of specific programs.
- Create a power point program on a CD with lesson plans for teachers.

**Objective 7.4:** Build a volunteer program.

*Discussion:* In the past, Plaquemines Parish 4-H, school groups, corporations, and individuals assisted refuge staff with restoration projects, banding pelicans, and beach sweeps; however, all volunteer contacts ended when Hurricanes Katrina and Rita devastated the islands and adjacent parishes. The volunteer program needs to be rebuilt.

*Strategies:*

- Detail Southeast Louisiana NWR Complex volunteers to Breton NWR.
- Explore the possibility of asking retired teachers to assist with environmental education in schools.
- Orient Friends of Louisiana Wildlife Refuges, Inc., to Breton NWR and identify projects for the group.
- Use students, youth groups, and college interns to develop Grade Level Expectations-linked lesson plans and other projects.
- Continue to develop corporate sponsors to partner with in creating environmental education educator kits.

#### *REFUGE ADMINISTRATION AND PROTECTION (BRETON NWR)*

**Goal 8. Provide sufficient administration and protection to conserve trust resources on Breton NWR.**

*Discussion:* Breton NWR is administered as one of eight refuges under the Southeast Louisiana NWR Complex. Presently six staff members share direct responsibility for Delta, Breton, and Bayou Sauvage NWRs, with assistance from approximately 20 other staff members working on the Complex. All personnel work out of the Complex headquarters in Lacombe, Louisiana. Law enforcement is an important tool for protection of the natural resources of the refuge.

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**Objective 8.1:** Enforce all federal and state laws applicable to the refuge.

*Discussion:* No law enforcement position is dedicated to patrolling the refuge. The four refuge officers working on the Southeast Louisiana NWR Complex, along with assistance from agents of LDWF, intermittently check Breton NWR. Most violations involve fishing violations.

*Strategies:*

- Update Law Enforcement Plan by 2012.
- Hire a full-time law enforcement officer to share with Delta NWR.
- Partner with LDWF to provide protection to resources and visitors.
- Maintain refuge boundaries by posting or inspecting 20 percent of the boundary annually.

**Objective 8.2:** Follow national Service policies for managing oil and gas activities as they relate to national wildlife refuges.

*Discussion:* Compared to Delta NWR, oil and gas issues are not as complicated on Breton NWR. Ownership of minerals under the federally owned islands belongs to the Service. Occasionally, requests are received regarding seismic and other exploratory methods in the area. Monitoring and enforcement is involved with every release or spill event that affects or potentially will affect the refuge and its resources.

*Strategies:*

- Monitor oil and gas activities; use special use permits to set conditions.
- Use mitigation to lessen impacts.
- Continue to work with the U.S. Coast Guard, the Louisiana Oil Spill Coordinators Office, and the legal system in the event of oil spills.

**Objective 8.3:** Maintain refuge equipment in good condition and appearance.

*Discussion:* More than \$3,000,000 worth of capitalized equipment exists for the Complex of eight refuges to be used in all aspects of administration, including habitat, wildlife, public use, and protection projects and management. Equipment is shared among the refuges of the Complex instead of being assigned solely to one refuge. Project efficiency depends largely on age, condition, and maintenance of the equipment needed to get work projects accomplished.

*Strategies:*

- Maintain a current data base containing all capitalized equipment and a maintenance schedule.
- Replace or purchase additional equipment as needed in order to have well-maintained and working equipment for all force account (staff) work planned.

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## V. Plan Implementation

### INTRODUCTION

Refuge lands are managed as defined under the Improvement Act. Congress has distinguished a clear legislative mission of wildlife conservation for all national wildlife refuges. National wildlife refuges, unlike other public lands, are specifically dedicated to the conservation of the Nation's fish and wildlife resources and wildlife-dependent recreational uses. Priority projects emphasize the protection and enhancement of fish and wildlife species first and foremost, but considerable emphasis is placed on balancing the needs and demands for wildlife-dependent recreation and environmental education.

To accomplish the purpose, vision, goals, and objectives contained in this CCP for Delta and Breton NWRs, this section identifies specific projects, funding and personnel needs, along with partnership opportunities, and required step-down management plans.

This CCP focuses on the importance of funding the operations and maintenance needs of the refuges to ensure the staff can achieve the goals and objectives identified and are crucial to fulfill the purpose for which each refuge was established. The refuge's role in protecting and providing habitat for migratory waterfowl, birds, and endangered species is critical. Proposed priority public use programs will establish and expand opportunities for wildlife-dependent recreation, but not without specialized staff and resources for operations and maintenance.

### PROPOSED PROJECTS

Listed below are the proposed project summaries and their associated costs for fish and wildlife population management, habitat management, resource protection, visitor services, and refuge administration over the next 15 years. This proposed project list reflects the priority needs identified by the public, planning team, and refuge staff based upon available information. These projects were generated for the purpose of achieving refuge-specific objectives and strategies. The primary linkages of these projects to those planning elements are identified in each summary.

#### *FISH AND WILDLIFE POPULATION MANAGEMENT - DELTA NWR*

The refuge attracts 15 species of waterfowl, of which mottled ducks nest on the refuge. Over 400,000 waterfowl have been documented to use the refuge for resting and feeding during peak migrations. Shorebirds, wading birds, neotropical migratory songbirds, raptors, mammals, reptiles and amphibians, and numerous fisheries exist on the refuge. Threatened species occurring on the refuge include the Gulf sturgeon and piping plovers. Endangered species occurring on the refuge include eastern brown pelicans and interior least terns. The refuge marsh wetlands are spawning, nursery, and feeding grounds for many aquatic species.

#### **Project 1 – Monitor waterfowl use on refuge**

Hunting is offered on a portion of the refuge four days a week until noon during the State of Louisiana State Waterfowl Season. Another portion of the refuge area remains closed to public entry during the waterfowl season and it is the only designated area closed to hunting within the Mississippi River delta area. This provides "safe" habitat for resting and feeding to thousands of migratory waterfowl without hunting pressure. Refuge staff will monitor migrating and wintering waterfowl use.



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- Conduct annual waterfowl aerial surveys consisting of four to six aerial surveys contingent on weather conditions. Initial survey will be performed before the state waterfowl hunting season begins and last survey will be conducted after the state waterfowl hunting season ends.
  - Coordinate with LDWF on migration numbers on the refuge.

One Service biologist will be required to conduct aerial surveys on the refuge. The annual cost will be \$20,000, most of which is for airplane flight-time rental.

**Project 2 – Monitor species of concern, targeted species, and species of federal responsibility.**

National wildlife refuges are mandated to manage for threatened and endangered species if they occur on the refuge. However, refuges are also responsible for management of other wildlife species if the action does not negatively impact the threatened or endangered species. Refuge management is geared toward managing the ecosystem as a whole.

- A faunal species list will be compiled from surveys conducted by Service biologists and other researchers. This list will be made available to the public through the refuge website. Within the list, staff will prioritize species based on regional and state lists of species of concern, at risk/target species identified by Partners in Flight, and other plans.
- Develop a wildlife inventory plan based on species selected as priority species.
- Secretive marsh birds will be surveyed and monitored as species of concern. Adaptive management actions will reflect data collected.
- Partner with college and university researchers to record micro and macro invertebrate use associated with crevasse work and established splay sites.

The initial cost for researchers and planning documents will be approximately \$75,000. The annual survey cost for one biologist's time is \$5,000.

*FISH AND WILDLIFE POPULATION MANAGEMENT - BRETON NWR*

The refuge attracts twenty-three species of shore and sea birds, of which thirteen species nest on the refuge. Historically, over twelve thousand brown pelican nests were documented annually on the refuge. Shorebirds, sea birds, reptiles, and numerous fish exist on and around the refuge. Threatened species occurring on the refuge are piping plovers. Endangered species occurring on the refuge include eastern brown pelicans and interior least terns. The sandy beach habitat is crucial for many species of sea and shore birds' nesting, resting, and feeding activities.

**Project 3 – Perform banding on juvenile brown pelicans.**

The refuge provides important nesting habitat for endangered brown pelicans. They use the refuge because of the abundant food resource in nearby waters and the high elevation of the islands that provide small woody or grassy areas desirable for nesting. Important research is gathered by the banding of juvenile brown pelicans to determine if the birds return to the islands for nesting and to monitor their travels. Refuge staff will:

- Conduct annual monitoring and nest counts prior to banding activities.
- Conduct banding activities with no fewer than one hundred juveniles banded yearly.
- Coordinate with LDWF on nesting numbers on the refuge.

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Staff required will be a minimum of six to perform bandings and two to conduct nest counts. Annual costs are estimated to be \$5,000 for banding and \$2,000 for nest counts.

**Project 4** – Monitor species of concern, targeted species, and species of federal responsibility.

National wildlife refuges are mandated to manage for threatened and endangered species if they occur on the refuge. However, refuges are also responsible for management of other wildlife species if the action does not negatively impact the threatened or endangered species. Refuge management is geared toward managing the ecosystem as a whole.

- Develop a wildlife inventory plan based on species selected as priority species.
- Partner with local colleges or universities to conduct research concerning remaining available nesting habitat since Hurricane Katrina, with carrying capacity estimates provided for nesting usage per species.
- Threatened and endangered species will be surveyed and monitored. Adaptive refuge management actions will reflect data collected.

The initial cost for researchers and planning documents will be approximately \$75,000. The annual survey cost for one biologist's time is \$5,000.

#### *HABITAT MANAGEMENT - DELTA NWR*

Refuge wetlands are highly productive and they offer a lush vegetative habitat that is important to wildlife resources. The palustrine emergent marsh offers fresh and brackish habitats for many resident and migratory species. It also provides important aquatic habitat for many sport and commercial fish species. The primary purpose of the refuge is to provide sanctuary and habitat for wintering waterfowl. This purpose is threatened by the loss of coastal Louisiana wetlands. The rate of marsh loss due to erosion and subsidence is increasing each year and the following projects will greatly reduce marsh habitat loss.

**Project 5** – Construction of ten crevasses at key locations to allow sediment-loaded water to flow into ponds or bays formerly closed off to sediment flow that will build new splays allowing these areas to become vegetated habitat. Refuge staff will:

- Identify ten areas with sufficient water flow nearby that have been closed off or a levee is prohibiting the influx of sediment-enriched water into an open bay or pond.
- Ensure these ponds or bays have access for the sediment enriched water to exit the pond or bay to increase flow through the area which increases sediment stacking elevations.
- Seek creative funding through partnerships or work within mitigation circumstances to accomplish these crevasses.

Each crevasse established will be designed so that it will continue to produce elevated marsh for a period of twenty years minimum. The coastline will continue to subside and these crevasses will help compensate for the natural loss and increase beneficial vegetation resources for waterfowl and other wildlife and fish on the refuge. The size of splay and acres of emergent marsh created by each crevasse will depend on location, water sediment load, and river flows.

The one-time construction of these smaller crevasses will cost an estimated \$700,000

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**Project 6** – Use beneficial dredged materials from the Mississippi River to fill an open water bay and create new emergent marsh on the refuge just north of Pass-a-loutre. This partnership with the Army Corps of Engineers can create and restore hundreds of acres lost to erosion and subsidence on the refuge with no cost to the refuge.

- Partner with the Army Corps of Engineers to plan location and elevation of material to be stacked on the refuge.
- Stack sediment at elevation of 7' +MLG to ensure compaction does not put sediment under water, allowing it to become vegetated.
- Plan locations of sediment to ensure tidal movement will reach all areas. No areas of stagnated water shall exist.
- Monitor areas for vegetation growth and inventory species.
- Once new lands are formed, plant desired marsh grass if necessary.
- Identify wildlife use and monitor their use of the new area.

The cost for sediment placement will be \$20,000,000; the funds will be through the Army Corps of Engineers navigation projects and no immediate cost to the refuge. The inventory of plants and wildlife can be accomplished by one Service biologist for \$5,000 annually. Planting can be accomplished using volunteers and a one-time cost of \$40,000 for plants, travel, and supplies.

The reduction or attempted halt of marsh subsidence and marsh loss is considered critical through marsh creation projects and plantings for marsh stabilization.

**Project 7** – Dredge Main Pass to increase flow of sediment to canals and crevasses on the refuge to build marsh and create beneficial splays.

These splays are critical habitat and the filling in of the open bays and ponds will generate new vegetation growth needed by migratory waterfowl and other species of wildlife on the refuge.

- Propose Main Pass dredge as a CWPRA project.
- Dredge the first eight miles of the pass from the Mississippi River to a depth of twenty feet and a width of two hundred feet.
- Stack sediment at elevation of 7' +MLG to ensure compaction does not put sediment under water, allowing it to become vegetated.
- Use spoil generated from a suction dredge and place the spoil as beneficial fill in available open ponds or bays, creating hundreds of acres of new emergent marsh and reducing erosion.
- Plan locations of sediment to ensure tidal movement will reach all areas. No areas of stagnated water shall exist.
- Monitor areas for vegetation growth and inventory species.
- Once new lands are formed, plant desired marsh grass if necessary.
- Identify wildlife and monitor their use of the new area.

The cost of this project would be an estimated \$40,000,000, but would increase new emergent marsh for a minimum of twenty years, creating potentially hundreds or more acres of marsh. The inventory of plants and wildlife can be accomplished by one Service biologist for \$5,000 annually. Marsh planting can be accomplished with volunteers and \$20,000 for the cost of plants and supplies.

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**Project 8** – Dredge Pass-a-loutre and place mined sediment on refuge to fill open bay and create hundreds of acres of new emergent marsh.

- Plan placement of sediment to the east side of the bay away from the area used by the Corps of Engineers for dredge work in the Mississippi River.
- Stack sediment at elevation of 7' +MLG to ensure compaction does not put sediment under water, allowing it to become vegetated.
- Use generated spoil from suction dredge and place as beneficial fill in available open ponds or bays, creating hundreds of acres of new emergent marsh and reducing erosion.
- Plan locations of sediment to ensure tidal movement will reach all areas. No areas of stagnated water shall exist.
- Monitor areas for vegetation growth and inventory species.
- Once new lands are formed, plant desired marsh grass if necessary.
- Identify wildlife use and monitor their use of the new lands.
- Improve flow for the area south of the refuge to create hundreds of acres of emergent marsh on the State WMA that could provide stability to the marsh area and have benefits for the refuge.

Although there is no immediate cost to the refuge for the sediment placement, the cost is \$30,000,000 for the sediment work. The inventory of plants and wildlife can be accomplished by one Service biologist for \$5,000 annually. Marsh planting can be accomplished with volunteers and \$20,000 for the cost of plants and supplies.

The inventory of plants and wildlife can be accomplished by one Service biologist for \$50,000. Planting can be accomplished using volunteers and \$20,000 for the cost of plants and supplies.

**Project 9** – Dredge section of Main Pass in bend of the pass that is restricting flow of sediment to established crevasses and canals approximately 7 miles west of the Mississippi River.

- Use Tennessee Valley Authority to plan and perform placement of dredged sediment to the south side of Main Pass in an open bay to create beneficial fill and establish new emergent marsh habitat. Also create one new crevasse to the east of the dredged site.
- Use spoil generated from suction dredge and place it as beneficial fill in available open ponds or bays, creating several acres of new emergent marsh and reducing erosion.
- Stack sediment at elevation of 7' +MLG to ensure compaction does not put sediment under water, allowing it to become vegetated.
- Plan locations of sediment to ensure tidal movement will reach all areas. No areas of stagnated water shall exist.
- Monitor areas for vegetation growth and inventory species.
- Once new lands are formed, plant desired marsh grass if necessary.
- Identify wildlife and monitor their use of the new marsh.
- Improve flow for a new crevasse east and south of the dredged site to create a minimum of twenty acres of emergent marsh on the refuge over the next twenty years.

The immediate cost to the refuge for the sediment placement is \$5,000,000 for the sediment work and crevasse creation. The inventory of plants and wildlife can be accomplished by one Service biologist for \$5,000. Planting can be accomplished using volunteers and \$10,000 for the cost of plants and supplies.

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**Project 10** – Shoreline protection along the Breton Sound and Gulf of Mexico—propose as a CWPPRA project.

- Plan and construct a reef block around perimeter of the refuge to establish erosion barrier.
- Fill behind barrier to the vegetated marsh with dredged material to a height of 5 to 6 feet, which will support the reef block.
- Plant area behind reef block to provide additional erosion protection.

Erosion from the Breton Sound and the Gulf of Mexico is a serious threat to protection of the delta marsh. The outer boundaries of the refuge have eroded and water depths have increased, making any regeneration of vegetation impossible. These areas are a priority to address or the refuge will continue to shrink in size until the refuge is absorbed by the Gulf of Mexico.

The cost to the refuge for the reef block and dredge stacking will be significant, estimated at \$75,000,000.

**Project 11** – Develop monitoring programs for marsh loss, change in water depths, submerged aquatic plants, and the impacts of public use activities on the resources. Evaluate long-term effects of restoration and shoreline fortification projects.

- Develop historic GIS maps of soils, habitats, and boundaries.
- Establish salinity monitoring points and monitor monthly by taking readings, develop a spreadsheet database, and evaluate changes. Coordinate with marsh survivability plots and vegetation composition changes.
- Map vegetation types with the use of GPS and GIS to inventory special and unique areas of the refuge requiring special management or protection.
- Implement a marsh subsidence monitoring plan to monitor the effects of refuge habitat manipulations and the encouragement of wildlife plants, such as three-square and duck potato in the marsh. These plans will show impacts of higher salinity to freshwater marsh resources and impacts to resources for wildlife on the refuge.

Operational funds should be dedicated for trained personnel performing basic wildlife inventorying and monitoring. One biologist and one technician are needed to perform inventorying and monitoring, and to manage restoration programs. Sampling schemes will use photo points and transects to monitor changes resulting from management actions. These monitoring programs will employ the use of field computers, data collectors, boats, and GIS technology for documentation. A cost estimate per year of \$120,000 will be required for this work to be achieved. This is primarily salary costs.

#### *HABITAT MANAGEMENT - BRETON NWR*

The refuge is valuable as important habitat to several species of threatened and endangered species. The sandy beach habitat is used for nesting by sea and shore birds and it provides abundant food sources year-round. The primary purposes of the refuge are to provide sanctuary for nesting and wintering seabirds, protect and preserve the wilderness character of the islands, and provide sandy beach habitat for a variety of wildlife species. Through natural succession, these islands were estimated to disappear in 300 years. However, the rate of island loss due to erosion and subsidence was greatly increased from Hurricane Katrina. It is estimated that unless action can be undertaken to restore the islands, they may be lost permanently in ten years.

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**Project 12** – Plan and coordinate a research project that will determine if the islands are able to be saved and restored. Refuge staff will:

- Develop a scope of work and contract with the U.S. Geological Survey and the University of New Orleans to determine current status of islands and the ability to rebuild without restoration; if unable to recover without restoration efforts, address recommendations or actions that would be proposed, if any.
- Work within mitigation circumstances to accomplish restoration work with no cost to Service.

A beneficial use of dredged material was used on north Breton Island three times from dredge work nearby of the Mississippi River Gulf Outlet (MRGO) by the Army Corps of Engineers. However the MRGO has been closed and no future maintenance is planned. Other sources of dredge material will be explored.

**Project 13** – Perform dedicated dredge disposal and restore the refuge to pre-Hurricane Katrina levels. This restoration will greatly benefit sea and shore birds in regard to nesting, loafing, and feeding habitat into the future.

- Propose dredge and placement as a CWPPRA project.
- Stack sediment at elevation of 5' +MLG to ensure compaction does not put sediment under water, allowing it to become vegetated.
- Plan locations of sediment to ensure tidal movement will reach all areas.
- Monitor areas for vegetation growth and inventory species.
- Once new lands are formed, plant desired marsh grass if needed

The estimated cost is \$150,000,000 for the dedicated dredging and placement work. This is a one time rebuilding of the entire Chandeleur Island chain. Individual islands based on priority use of migratory birds can be rebuilt for less. Project #12 will better determine if the life expectancy and natural process of building and declining will make this project feasible. Once the islands have rebuilt, planting beach and dune plant species along with sand fencing can be accomplished using volunteers and \$90,000 for the cost of plants and supplies.

#### *RESOURCE PROTECTION AND REFUGE ADMINISTRATION – DELTA NWR AND BRETON NWR*

**Project 14** – Provide adequate law enforcement protection for refuge resources, federal trust species, personnel, and the visiting public.

Annually, Delta NWR hosts approximately 12,000 visitors for hunting, fishing, and other wildlife-dependent recreation while Breton NWR hosts approximately 9,000 visitors. Visitation has been down for the last two years but is expected to increase as recovery from Hurricane Katrina occurs. General services are now returning to the area, such as restaurants, lodging, marinas, and grocery stores. The refuge will conduct a law enforcement program review and revise the Law Enforcement Plan. A full-time law enforcement position is needed to cooperate with state wildlife officers, the local sheriff and city officers to:

- Protect hunters, fishermen, and other visitors and otherwise provide a safe experience while they are on the refuges.
- Enforce refuge regulations and reduce unapproved and illegal activities.
- Rescue lost or stranded hunters, fishermen, and aid visitors in need.
- Protect refuge infrastructure, equipment, and cultural and natural resources.
- Conduct patrols in the refuge-owned bays or ponds for illegal commercial fishing activities.



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One refuge officer is needed to achieve goals and perform law enforcement duties on both refuges. Cost would be \$90,000 per year for salary, equipment and supplies.

**Project 15** – Maintain marked refuge boundary and other identifying and regulating signs.

- Conduct refuge boundary surveys on all lands and any new lands acquired and post accordingly.
- All existing refuge boundaries will be inspected and reposted by annually inspecting and reposting 20 percent of the boundary.
- Signs will be placed at all refuge entrance points along trails, water courses, and roads.
- Post signs to mark the portions of the refuge as “closed” so they are visible at all entrances.
- Replace all faded or damaged signs as observed.

The one time cost for boundary surveys will be \$100,000 due to travel constraints and logistics. The annual boundary maintenance cost will be \$5,000.

**Project 16** – Maintain Wilderness designation on Breton NWR.

- Ensure all actions on Breton NWR are in compliance with the Wilderness Act.

**Project 17** – Meet current and expanded ability to maintain infrastructure for public use and management capabilities of the refuge.

A maintenance and field headquarters for both refuges is located in Venice, Louisiana. From the office, it is an 8-mile boat ride to Delta NWR and a 16-mile boat ride to Breton NWR. There is only one maintenance employee stationed in Venice. All other employees are stationed at Southeast Louisiana NWR Complex in Lacombe, Louisiana.

- The staff shares responsibilities with other refuges for equipment, office space, roads, boat launch, parking areas, refuge facilities, equipment, boats, and vehicles—all which must be maintained regularly through a maintenance management system.

**Project 18** – Administer oil and gas program with efforts guided to protect surface habitat and wildlife on the refuges.

Delta NWR has one of the oldest oil and gas programs on any national wildlife refuge with 489 wells drilled since 1942. Many of these wells are inactive but reserved for future potential and have been shut in but not plugged and abandoned. Numerous flowlines are located throughout the refuge, some have been cleaned and some are still active. Spill events and releases are common occurrences.

Breton NWR has several oil and gas transmission lines under the refuge from off-shore activities. The minerals are federally owned and currently have a moratorium against drilling. However, the refuge is within miles of several platforms and facilities and can be greatly impacted with any release or spill event.

All activities relating to oil and gas on the refuges must be requested as a special use permit for review.

- Ensure all companies operating on the refuges are permitted, identified, and in compliance with refuge, state, and industry regulations.
- All activities are submitted for review and a determination is made by the refuge manager if a special use permit is required for activities requested or performed.

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- Issue special use permits and assess mitigation for impacts to the surface of the refuges if they cannot be avoided.
  - Response to all spill events and releases are conducted immediately after located; however, before work is performed, the response/clean-up company must consult with the refuge manager to ensure methods are approved.
  - Conduct routine inspections of field and facility to ensure proper operating procedures are in place and no releases are occurring.
  - Provide guidance for wildlife-oriented protection methods such as bird cannons, mylar steamers, and predator eyes during spill events.

#### *VISITOR SERVICES – DELTA NWR AND BRETON NWR:*

Access to both refuges is by boat only. The Delta/Breton NWR office has been repaired since Hurricane Katrina and is open for use by visitors. Plaquemines Parish was hit hard by Hurricane Katrina, and many residents have relocated and will not return. The infrastructure of the parish is still recovering, and it will be a slow recovery due to the high cost of living and lack of confidence in the levee system. Two of the schools have reopened and have minimal attendance due to low population numbers. The area is known across the United States as one of the premier waterfowl and fishing destinations that will continue to draw visitors from out of Louisiana for opportunities for outdoor recreation.

#### **Project 19** – Maintain facilities at the Delta/Breton NWR facility.

The Delta/Breton NWR facility was moved from the refuge to the new location in Venice, Louisiana, in 1979. It was severely damaged by Hurricane Georges and the decision was made to replace it in 2001. The building was complete and had a staff of three employees before Hurricane Katrina hit in August 2005 and severely damaged the facility. It has been repaired but only one maintenance position remains for maintenance items at the facility. The facility is used for lodging of staff members who conduct work on the refuge and require overnight accommodations. The office has established a visitor parking area and viewing area of the historic Mississippi River. It offers a viewing area of the river at the south foremost point. A large kiosk offers information about the Service, wildlife on the refuges, and information about hunting permits.

- Maintenance of facilities and all equipment located at site is performed by one maintenance employee.
- Continue managing the refuge from the Southeast Louisiana NWR Complex.

A refuge operations' specialist is needed to be stationed at Venice, Louisiana. The cost will be \$90,000 per year for salary, benefits, equipment, and supplies.

#### **Project 20** – Improve visitor services and interpretation.

Established in 1935, Delta NWR, due to its remoteness, has never been able to reach its potential regarding programs, facilities, and staff to best support visitor services and wildlife-dependent recreation.

Established in 1904, Breton NWR is the second oldest refuge and the only one known to have been visited by President Theodore Roosevelt. However, due to its remoteness, it, too, has never been able to reach its potential regarding programs, facilities, and staff to best support visitor services and wildlife-dependent recreation.

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One of the first and primary duties is to develop a step-down Visitor Services' Plan with services that include wildlife-dependent recreation and education. Refuge staff will:

- Post visitor hours and contact information; have a staff person available throughout those hours to assist the visiting public. At a minimum, this could be accomplished by telephone.
- Staff will develop, maintain, and improve interpretive exhibits for the new kiosk and develop interpretive talks specific to each refuge.
- Interactive CD-ROM will be developed and distributed to educate students about the Mississippi River Delta Region and the refuge.
- Volunteers will be used to supplement the education programs and visitor contact centers.
- Local public events held within Plaquemines Parish will be attended by refuge staff, promoting or identifying the refuge as needed.
- Develop a self-guided boat tour of the refuges and distribute brochures at local marinas.
- Plan and construct new kiosk or information sites with maps at local marinas in Venice, Louisiana.
- Improve visitor contact stations, kiosks, parking areas, and maintain refuge entrance sign quality and appearance.

**Project 21** – Improve and enhance hunting and fishing opportunities while minimizing conflicts between consumptive and non-consumptive users.

Quality fishing opportunities may be promoted with initiatives. Fishing opportunities at the Delta Office have been minimal and only opportunistic. The refuge staff will provide:

- Maintain the road to the refuge office.
- The refuge will construct and maintain kiosks at the Venice Office and local marinas to promote safe hunting and fishing opportunities.
- Provide hunting and fishing brochures with maps.

**Project 22** – Provide opportunities for wildlife observation and photography.

Wildlife observation and photography opportunities on the refuges will be promoted. Delta NWR provides emergent marsh habitats for viewing waterfowl, shorebirds, wading birds, and a variety of other fauna and flora. Breton NWR offers sandy beach habitats for viewing shore and sea birds.

- Offer occasional birding tours led by refuge staff or volunteers.
- Provide temporary photo blinds in designated areas.
- Provide a viewing area at office with interpretive panels and benches.
- Develop a self-guided boat tour with information for visitors as to what they might expect to see on the refuge.

**Project 23** – Increase public outreach and environmental education to emphasize resource management practices.

Marsh and beach restoration, the crevasse program, and other habitat management programs can be a source of information for educating the public about refuge resources and management. Education on refuge management will be focused on first-hand observations where possible. Interpretation of refuge resources will promote understanding, appreciation, and stewardship of refuge resources.

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- Develop a formal, curriculum-based environmental education program for students in Plaquemines and surrounding parishes that, through first-hand experiences, promotes understanding, appreciation, and stewardship of refuge resources and support for refuge management practices. Small group tours can be achieved when properly planned.
  - To complement on-site programming, provide relevant classroom educational programming with the same goals of promoting understanding and stewardship of refuge resources.
  - Maintain liaison contacts with area school systems and curriculum coordinators to continuously upgrade refuge education programs in the classroom and on the refuge to match curriculum needs.
  - Establish schedule of tours available for refuge visitors who request tours in advance.
  - Develop and distribute general brochures on the refuges.
  - Supply refuge brochures, including hunt brochures, bird lists, general brochures, and quarterly events calendars, to parish convention centers, state welcome centers, and other tourist hubs.
  - Provide schedules of planned programs to local newspapers and use volunteers, members of local bird groups, interns, and refuge staff.
  - Establish times at the facility office to have environmental education programs available for the public or groups upon request to be held at the viewing area. Provide guided outings schedules to local newspapers.
  - Recruit full-time volunteer interns to supplement refuge staff in delivering school curriculum-based environmental education programs, refuge interpretive programs, and to assist refuge personnel in refuge management, while providing developmental experiences that allow students to explore future career opportunities with the Service.
  - Recruit volunteers and volunteer groups, such as recreational vehicle campers, to supplement and assist refuge staff, and to provide education, visitor services, maintenance, and clerical duties.
  - Maintain and develop agreements with the Friends of Louisiana Wildlife Refuges, Inc., to cooperate on projects and provide refuge support.
  - Support refuge volunteers of all types by providing recreational vehicle spaces at the office site.
  - Issue press releases on important events on the refuge, including public events and changes to public use programs (e.g., hunting and fishing).
  - Update and maintain an interactive refuge website with links to hunt brochures, bird lists, trail maps and guides, refuge maps, tear sheets, contacts for refuge assistance, signup for programs, etc.
  - Develop refuge education programs for adults through civic groups and for neighborhood groups surrounding the refuge.
  - Develop a monitoring plan with schools to evaluate educational program results and effectiveness relative to Grade Learning Expectations.
  - Develop a portion of the office in Venice, Louisiana, to a visitor center, featuring information on visitor service opportunities on the refuges, audio-visual interpretive exhibits and displays, and environmental education resources for visiting school groups and teachers.
  - Visit school career fairs to promote Student Career Employment and Student Temporary Employment Programs and Youth Conservation Corps Programs to increase the Service's career awareness within the nearby communities.

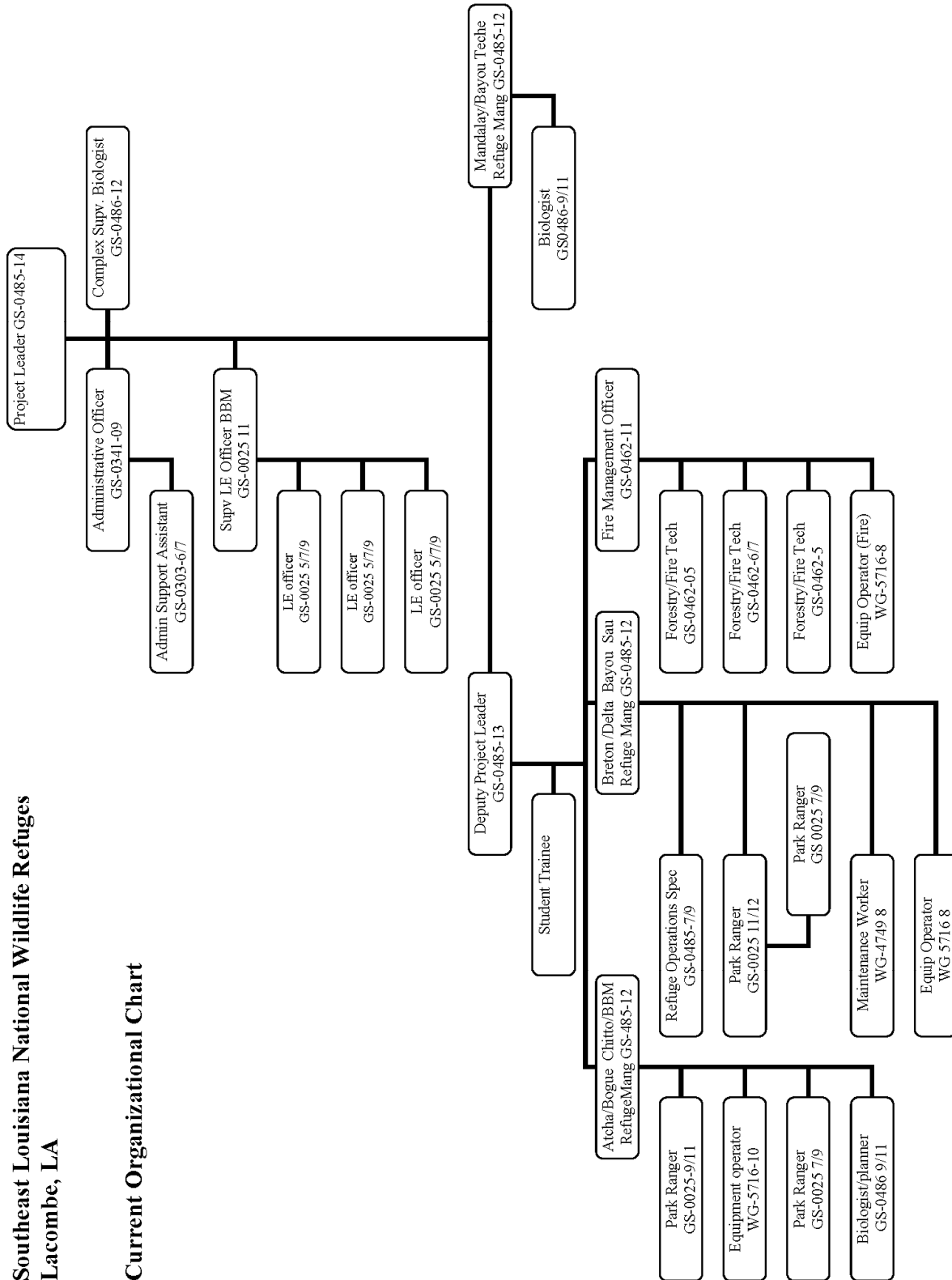
## **FUNDING AND PERSONNEL**

The current Complex staffing chart includes staff identified for Delta and Breton NWRs (Figure 8). The proposed staffing chart (Figure 9) will utilize identified staff to accomplish the proposed projects (Table 1).

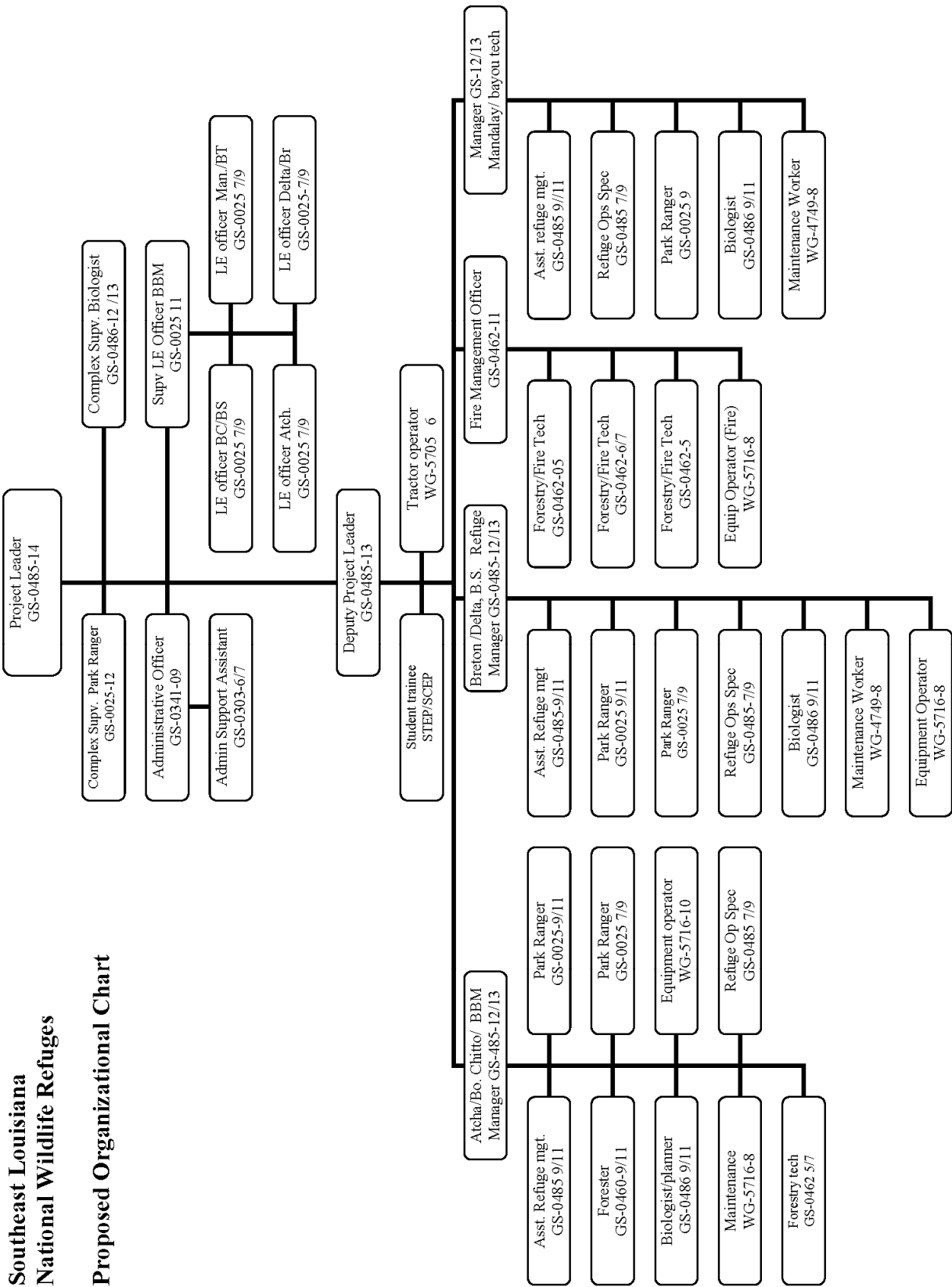
**Figure 8. Current staffing chart for Delta and Breton NWRs and Southeast Louisiana NWR Complex**

**Southeast Louisiana National Wildlife Refuges  
Lacombe, LA**

**Current Organizational Chart**



**Figure 9. Proposed staffing chart for Delta and Breton NWRs and Southeast Louisiana MWR Complex**





**Table 1. Summary of projects (Delta NWR- Breton NWR)**

<b>PROJECT NUMBER</b>	<b>REFUGE</b>	<b>PROJECT TITLE</b>	<b>FIRST YEAR COST *</b>	<b>RECURRING ANNUAL COST</b>
1	Delta	Aerial surveys of waterfowl on refuge	\$20,000	\$20,000
2	Delta	Monitor and manage other trust resource populations	\$75,000	\$5,000
3	Breton	Banding Brown Pelicans	\$5,000	\$2,000
4	Breton	Monitor and manage other trust resource populations	\$75,000	\$5,000
5	Delta	Crevasse construction	\$700,000	0
6	Delta	Marsh restoration from beneficial dredge	\$20,020,000	\$5,000
7	Delta	Main Pass dedicated dredge project	\$40,020,000	\$5,000
8	Delta	Pass-a-loutre dedicated dredge project	\$30,020,000	\$5,000
9	Delta	Main Pass dedicated dredge with TVA	\$5,000,000	\$5,000
10	Delta	Shoreline protection, CWPRRA proposal	\$75,000,000	\$0
11	Delta	Monitoring program for marsh loss	\$120,000	\$120,000
12	Breton	Plan and coordinate study of island loss and potential restoration	\$1,000,000	0
13	Breton	Perform dedicated dredge restoration	\$150,000,000	unknown
14	Delta & Breton	Provide adequate LE for refuge resources, species, and visitors	\$90,000	\$90,000

PROJECT NUMBER	REFUGE	PROJECT TITLE	FIRST YEAR COST *	RECURRING ANNUAL COST
15	Delta & Breton	Maintain marked boundary and signs	\$100,000	\$5,000
16	Delta & Breton	Wilderness determination	\$5,000	\$5,000
17	Delta & Breton	Maintain current and expanded infrastructure for public use and management capabilities	\$100,000	\$100,000
18	Delta & Breton	Administer oil and gas program	\$70,000	\$70,000
19	Delta & Breton	Maintain facilities at Venice	\$90,000	\$90,000
20	Delta & Breton	Improve visitor services and interpretation	\$60,000	\$20,000
21	Delta & Breton	Improve hunting and fishing opportunities	\$10,000	\$10,000
22	Delta & Breton	Provide opportunities for wildlife observation and photography	\$10,000	\$10,000
23	Delta & Breton	Increase public outreach and environmental outreach	\$60,000	\$20,000

*\* cost estimates are rough undocumented and funding sources would be various and not all FWS funding.*

## **PARTNERSHIP/VOLUNTEER OPPORTUNITIES**

A key element of this CCP is to establish partnerships with local volunteers, landowners, private organizations, and state and federal natural resource agencies. Partnerships are critically important to achieve refuge goals, leverage funds, minimize costs, reduce redundancy, and bridge relationships. In the immediate vicinity of the refuges, opportunities exist to establish and maintain partnerships with LDWF in managing the Pass-a-loutre WMA, local marinas, Plaquemines Parish and St. Bernard Parish organizations, U.S. Customs, and the U.S. Coast Guard.

The refuge staff can work with neighboring private landowners through the Partners program or through agreements for managing neighboring land to compliment the refuge management program.

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## STEP-DOWN MANAGEMENT PLANS

A CCP is a strategic plan that guides the future direction of the refuges. A step-down management plan provides more specific guidance on activities, such as habitat and visitor services management. Step-down plans (Tables 2 and 3) are developed in accordance with NEPA, which requires the identification and evaluation of alternatives and public review and involvement prior to their implementation.

**Table 2. Delta NWR step-down management plans related to the goals and objectives of the CCP**

Step-down Plans	Completion Date	Revision Date
Fisheries Management	1994	2009
Visitor Use	1994	2009
Station Safety	2003	2008
Disease Contingency	1993	2008
Hunting Plan	1994	2009
Sign Plan	2015	2030
Law Enforcement	1988	2008
Wildlife Inventory	1996	2011
Habitat Management	2012	2027

**Table 3. Breton NWR step-down management plans related to the goals and objectives of the CCP**

Step-down Plans	Completion Date	Revision Date
Fisheries Management	1994	2011
Visitor Use	1994	2011
Sign	2015	2030
Law Enforcement	1985	2008
Wildlife Inventory	1996	2011
Habitat Management	2012	2027

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## **MONITORING AND ADAPTIVE MANAGEMENT**

Adaptive management is a flexible approach to long-term management of biotic resources that is directed over time by the results of ongoing monitoring activities and other information. More specifically, adaptive management is a process by which projects are implemented within a framework of scientifically driven experiments to test the predictions and assumptions outlined within a plan.

To apply adaptive management, specific survey, inventory, and monitoring protocols will be adopted for the refuges. The habitat management strategies will be systematically evaluated to determine management effects on wildlife populations. This information will be used to refine approaches and determine how effectively the objectives are being accomplished. Evaluations will include ecosystem team and other appropriate partner participation. If monitoring and evaluation indicate undesirable effects for target and non-target species and/or communities, then alterations to the management projects will be made. Subsequently, the CCP will be revised. Specific monitoring and evaluation activities will be described in the step-down management plans.

## **PLAN REVIEW AND REVISION**

The CCP will be reviewed annually in development of refuge annual work plans and budget. It will also be reviewed to determine the need for revision. A revision will occur if and when conditions change or significant information becomes available, such as a change in ecological conditions or a major refuge expansion. The CCP will be augmented by detailed step-down management plans to address the completion of specific strategies in support of goals and objectives. Revisions to the CCP and the step-down management plans will be subject to public review and NEPA compliance.



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## Appendix A. Glossary

<b>Adaptive Management:</b>	Refers to a process in which policy decisions are implemented within a framework of scientifically driven experiments to test predictions and assumptions inherent in management plan. Analysis of results helps managers determine whether current management should continue as is or whether it should be modified to achieve desired conditions.
<b>Alluvial:</b>	Sediment transported and deposited in a delta or riverbed by flowing water.
<b>Alternative:</b>	1. A reasonable way to fix the identified problem or satisfy the stated need (40 CFR 1500.2). 2. Alternatives are different sets of objectives and strategies or means of achieving refuge purposes and goals, helping fulfill the Refuge System mission, and resolving issues (Service Manual 602 FW 1.6B).
<b>Anadromous:</b>	Migratory fishes that spend most of their lives in the sea and migrate to fresh water to breed.
<b>Beneficial Dredging</b>	Using the spoil for restoring and building elevation from dredging that would take place regardless of the use of the spoil (see dedicated dredging).
<b>Biological Diversity:</b>	The variety of life and its processes, including the variety of living organisms, the genetic differences among them, and the communities and ecosystems in which they occur (Service Manual 052 FW 1. 12B). The system's focus is on indigenous species, biotic communities, and ecological processes. Also referred to as biodiversity.
<b>Carrying Capacity:</b>	The maximum population of a species able to be supported by a habitat or area.
<b>Categorical Exclusion (CE,CX, CATEX, CATX):</b>	A category of actions that do not individually or cumulatively have a significant effect on the human environment and have been found to have no such effect in procedures adopted by a federal agency pursuant to NEPA (40 CFR 1508.4).
<b>CFR:</b>	Code of Federal Regulations.
<b>Compatible Use:</b>	A proposed or existing wildlife-dependent recreational use or any other use of a national wildlife refuge that, based on sound professional judgment, will not materially interfere with or detract from the fulfillment of the Refuge System mission or the purpose(s) of the national wildlife refuge [50 CFR 25.12 (a)]. A compatibility determination supports the selection of compatible uses and identifies stipulations or limits necessary to ensure compatibility.

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<b>Comprehensive Conservation Plan (CCP):</b>	A document that describes the desired future conditions of a refuge or planning unit and provides long-range guidance and management direction to achieve the purposes of the refuge; helps fulfill the mission of the Refuge System; maintains and, where appropriate, restores the ecological integrity of each refuge and the Refuge System; helps achieve the goals of the National Wilderness Preservation System; and meets other mandates (Service Manual 602 FW 1.6 E).
<b>Concern:</b>	See Issue
<b>Cover Type:</b>	The present vegetation of an area.
<b>Crevasse</b>	Relatively small opening or breach in levee or embankment
<b>Cultural Resource Inventory:</b>	A professionally conducted study designed to locate and evaluate evidence of cultural resources present within a defined geographic area. Inventories may involve various levels, including background literature search, comprehensive field examination to identify all exposed physical manifestations of cultural resources, or sample inventory to project site distribution and density over a larger area. Evaluation of identified cultural resources to determine eligibility for the National Register follows the criteria found in 36 CFR 60.4 (Service Manual 614 FW 1.7).
<b>Cultural Resource Overview:</b>	A comprehensive document prepared for a field office that discusses, among other things, its prehistory and cultural history, the nature and extent of known cultural resources, previous research, management objectives, resource management conflicts or issues, and a general statement on how program objectives should be met and conflicts resolved. An overview should reference or incorporate information from a field offices background or literature search described in Section VIII of the Cultural Resource Management Handbook (Service Manual 614 FW 1.7).
<b>Cultural Resources:</b>	The remains of sites, structures, or objects used by people in the past.
<b>Dedicated Dredging</b>	Dredging for the purpose of restoring and building elevation (see beneficial dredge).
<b>Designated Wilderness Area:</b>	An area designated by the United States Congress to be managed as part of the National Wilderness Preservation System (Draft Service Manual 610 FW 1.5).
<b>Disturbance:</b>	Significant alteration of habitat structure or composition. May be natural (e.g., fire) or human-caused events (e.g., aircraft overflight).
<b>Ecosystem:</b>	A dynamic and interrelating complex of plant and animal communities and their associated non-living environment.



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<b>Ecosystem Management:</b>	Management of natural resources using system-wide concepts to ensure that all plants and animals in ecosystems are maintained at viable levels in native habitats and basic ecosystem processes are perpetuated indefinitely.
<b>Emergent Marsh</b>	Wetlands dominated by erect, rooted, herbaceous plants.
<b>Endangered Species (Federal):</b>	A plant or animal species listed under the Endangered Species Act that is in danger of extinction throughout all or a significant portion of its range.
<b>Endangered Species (State):</b>	A plant or animal species in danger of becoming extinct or extirpated in the state within the near future if factors contributing to its decline continue. Populations of these species are at critically low levels or their habitats have been degraded or depleted to a significant degree.
<b>Environmental Assessment (EA):</b>	A concise public document, prepared in compliance with NEPA, that briefly discusses the purpose and need for an action, alternatives to such action, and provides sufficient evidence and analysis of impacts to determine whether to prepare an environmental impact statement or finding of no significant impact (40 CFR 1508.9).
<b>Environmental Impact Statement (EIS):</b>	A detailed written statement required by section 102(2)(C) of NEPA, analyzing the environmental impacts of a proposed action, adverse effects of the project that cannot be avoided, alternative courses of action, short-term uses of the environment versus the maintenance and enhancement of long-term productivity, and any irreversible and irretrievable commitment of resources (40 CFR 1508.11).
<b>Estuary:</b>	The wide lower course of a river into which the tides flow. The area where the tide meets a river current.
<b>Finding of No Significant Impact (FONSI):</b>	A document prepared in compliance with NEPA, supported by an environmental assessment, that briefly presents why a federal action will have no significant effect on the human environment and for which an environmental impact statement, therefore, will not be prepared (40 CFR 1508.13).
<b>Goal:</b>	Descriptive, open-ended, and often broad statement of desired future conditions that conveys a purpose but does not define measurable units (Service Manual 620 FW 1.6J).
<b>Habitat:</b>	Suite of existing environmental conditions required by an organism for survival and reproduction. The place where an organism typically lives.
<b>Habitat Restoration:</b>	Management emphasis designed to move ecosystems to desired conditions and processes, and/or to healthy ecosystems.
<b>Habitat Type:</b>	See Vegetation Type.

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<b>Improvement Act:</b>	The National Wildlife Refuge System Improvement Act of 1997.
<b>Informed Consent:</b>	The grudging willingness of opponents to “go along” with a course of action that they actually oppose (Bleiker).
<b>Issue:</b>	Any unsettled matter that requires a management decision, e.g., an initiative, opportunity, resource management problem, threat to the resources of the unit, conflict in uses, public concern, or other presence of an undesirable resource condition (Service Manual 602 FW 1.6K).
<b>Management Alternative:</b>	See Alternative.
<b>Management Concern:</b>	See Issue.
<b>Management Opportunity:</b>	See Issue.
<b>Migration:</b>	The seasonal movement from one area to another and back.
<b>Mission Statement:</b>	Succinct statement of the unit’s purpose and reason for being.
<b>Monitoring:</b>	The process of collecting information to track changes of selected parameters over time.
<b>National Environmental Policy Act of 1969 (NEPA):</b>	Requires all agencies, including the Service, to examine the environmental impacts of their actions, incorporate environmental information, and use public participation in the planning and implementation of all actions. Federal agencies must integrate NEPA with other planning requirements, and prepare appropriate NEPA documents to facilitate better environmental decision-making (40 CFR 1500).
<b>National Wildlife Refuge System Improvement Act of 1997 (Public Law 105-57):</b>	Under the Improvement Act, the Service is required to develop 15-year comprehensive conservation plans for all national wildlife refuges. The Act also describes the six public uses given priority status within the NWRS (e.g., hunting, fishing, wildlife observation, wildlife photography, and environmental education and interpretation).
<b>National Wildlife Refuge System Mission:</b>	The mission is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans.

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<b>National Wildlife Refuge System:</b>	Various categories of areas administered by the Secretary of the Interior for the conservation of fish and wildlife, including species threatened with extinction; all lands, waters, and interests therein administered by the Secretary as wildlife refuges; areas for the protection and conservation of fish and wildlife that are threatened with extinction; wildlife ranges; games ranges; wildlife management areas; or waterfowl production areas.
<b>National Wildlife Refuge:</b>	A designated area of land, water, or an interest in land or water within the Refuge System.
<b>Native Species:</b>	Species that normally live and thrive in a particular ecosystem.
<b>Notice of Intent (NOI):</b>	A notice that an environmental impact statement will be prepared and considered (40 CFR 1508.22). Published in the Federal Register.
<b>Noxious Weed:</b>	A plant species designated by federal or state law as generally possessing one or more of the following characteristics: aggressive or difficult to manage; parasitic; a carrier or host of serious insect or disease; or non-native, new, or not common to the United States, according to the Federal Noxious Weed Act (PL 93-639), a noxious weed is one that causes disease or had adverse effects on man or his environment and therefore is detrimental to the agriculture and commerce of the United States and to the public health.
<b>Objective:</b>	A concise statement of what we want to achieve, how much we want to achieve, when and where we want to achieve it, and who is responsible for the work. Objectives derive from goals and provide the basis for determining strategies, monitoring refuge accomplishments, and evaluating the success of strategies. Making objectives attainable, time-specific, and measurable (Service Manual 602 FW 1.6N).
<b>Plant Association:</b>	A classification of plant communities based on the similarity in dominants of all layers of vascular species in a climax community.
<b>Plant Community:</b>	An assemblage of plant species unique in its composition; occurs in particular locations under particular influences; a reflection or integration of the environmental influences on the site, such as soils, temperature, elevation, solar radiation, slope, aspect, and rainfall; denotes a general kind of climax plant community.
<b>Preferred Alternative:</b>	This is the alternative determined (by the decision-maker) that best achieves the refuge purpose, vision, and goals; contributes to the Refuge System mission; addresses the significant issues; and is consistent with principles of sound fish and wildlife management.

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<b>Prescribed Fire:</b>	The application of fire to wildland fuels to achieve identified land use objectives (Service Manual 621 FW 1.7). May be from natural ignition or intentional ignition.
<b>Priority Species:</b>	Fish and wildlife species that require protective measures and/or management guidelines to ensure their perpetuation. Priority species include the following: (1) State-listed and candidate species; (2) species or groups of animals susceptible to significant population declines within a specific area or statewide by virtue of their inclination to aggregate (e.g., seabird colonies); and (3) species of recreation, commercial, and/or tribal importance.
<b>Public Involvement Plan:</b>	Broad long-term guidance for involving the public in the comprehensive planning process.
<b>Public Involvement:</b>	A process that offers impacted and interested individuals and organizations an opportunity to become informed about, and to express their opinions on, Service actions and policies. In the process, these views are studied thoroughly and thoughtful consideration of public views is given in shaping decisions for refuge management.
<b>Public:</b>	Individuals, organizations, and groups; officials of federal, state, and local government agencies; Indian tribes; and foreign nations. It may include anyone outside the core planning team. It includes those who may or may not have indicated an interest in service issues and those who do or do not realize that Service decisions may affect them.
<b>Purposes of the Refuge:</b>	“The purposes specified in or derived from the law, proclamation, executive order, agreement, public land order, donation document, or administrative memorandum establishing, authorizing, or expanding a refuge, refuge unit, or refuge sub-unit.” For refuges that encompass congressionally designated wilderness, the purposes of the Wilderness Act are additional purposes of the refuge (Service Manual 602 FW 106 S).
<b>Recommended Wilderness:</b>	Areas studied and found suitable for wilderness designation by both the Director and Secretary, and recommended for designation by the President to Congress. These areas await only legislative action by Congress in order to become part of the Wilderness System. Such areas are also referred to as “pending in Congress” (Draft Service Manual 610 FW 1.5).

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<b>Record of Decision (ROD):</b>	A concise public record of decision prepared by the federal agency, pursuant to NEPA, that contains a statement of the decision, identification of all alternatives considered, identification of the environmentally preferable alternative, a statement as to whether all practical means to avoid or minimize environmental harm from the alternative selected have been adopted (and, if not, why they were not), and a summary of monitoring and enforcement where applicable for any mitigation (40 CFR 1505.2).
<b>Refuge Goal:</b>	See Goal.
<b>Refuge Purposes:</b>	See Purposes of the Refuge
<b>Songbirds:</b> (Also Passerines)	A category of birds that are medium to small, perching landbirds. Most are territorial singers and migratory.
<b>Splay</b>	Splay in biological terms is a vegetated, emergent marsh that develops from sediments deposited in open water as a result of overflow of the natural banks or levees of a river or channel or as the result of a natural or created crevasse or sediment diversion.
<b>Step-down Management Plan:</b>	A plan that provides specific guidance on management subjects (e.g., habitat, public use, fire, safety) or groups of related subjects. It describes strategies and implementation schedules for meeting CCP goals and objectives (Service Manual 602 FW 1.6 U).
<b>Strategy:</b>	A specific action, tool, technique, or combination of actions, tools, and techniques used to meet unit objectives (Service Manual 602 FW 1.6 U).
<b>Study Area:</b>	The area reviewed in detail for wildlife, habitat, and public use potential. For purposes of this CCP the study area includes the lands within the currently approved refuge boundary and potential refuge expansion areas.
<b>Threatened Species (Federal):</b>	Species listed under the Endangered Species Act that are likely to become endangered within the foreseeable future throughout all or a significant portion of their range.
<b>Threatened Species (State):</b>	A plant or animal species likely to become endangered in the state within the near future if factors contributing to population decline or habitat degradation or loss continue.
<b>Tiering:</b>	The coverage of general matters in broader environmental impact statements with subsequent narrower statements of environmental analysis, incorporating by reference, the general discussions and concentrating on specific issues (40 CFR 1508.28).

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<b>U.S. Fish and Wildlife Service Mission:</b>	The mission of the Service is working with others to conserve, protect, and enhance fish and wildlife and their habitats for the continuing benefit of the American people.
<b>Unit Objective:</b>	See Objective.
<b>Vegetation Type, Habitat Type, Forest Cover Type:</b>	A land classification system based upon the concept of distinct plant associations.
<b>Vision Statement:</b>	A concise statement of what the planning unit should be, or what we hope to do, based primarily upon the Refuge System mission and specific refuge purposes, and other mandates. We will tie the vision statement for the refuge to the mission of the Refuge System; the purpose(s) of the refuge; the maintenance or restoration of the ecological integrity of each refuge and the Refuge System; and other mandates (Service Manual 602 FW 1.6 Z).
<b>Wilderness Study Areas:</b>	<p>Lands and waters identified through inventory as meeting the definition of wilderness and undergoing evaluation for recommendation for inclusion in the Wilderness System. A study area must meet the following criteria:</p> <ul style="list-style-type: none"> <li>▪ Generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable.</li> <li>▪ Has outstanding opportunities for solitude or a primitive and unconfined type of recreation.</li> <li>▪ Has at least 5,000 contiguous roadless acres or is sufficient in size as to make practicable its preservation and use in an unimpaired condition (Draft Service Manual 610 FW 1.5).</li> </ul>
<b>Wilderness:</b>	See Designated Wilderness.
<b>Wildfire:</b>	A free-burning fire requiring a suppression response; all fire other than prescribed fire that occurs on wildlands (Service Manual 621 FW 1.7).
<b>Wildland Fire:</b>	Every wildland fire is either a wildfire or a prescribed fire (Service Manual 621 FW 1.3).

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## ACRONYMS AND ABBREVIATIONS

BCC	Birds of Conservation Concern
BRT	Biological Review Team
CCP	Comprehensive Conservation Plan
CFR	Code of Federal Regulations
cfs	cubic feet per second
CIAP	Coastal Impact Assistance Program
CWPPRA	Coastal Wetland Planning, Protection, and Restoration Act
DOI	Department of the Interior
DU	Ducks Unlimited
EA	Environmental Assessment
EIS	Environmental Impact Statement
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
FR	Federal Register
FTE	Full-time Equivalent
FY	Fiscal Year
GIS	Global Information System
LCA	Louisiana Coastal Area
NEPA	National Environmental Policy Act
NRHP	National Register of Historic Places
NWR	National Wildlife Refuge
NWRS	National Wildlife Refuge System
PFT	Permanent Full-Time
PUNA	Public Use Natural Area
RM	Refuge Manual
RNA	Research Natural Area
ROD	Record of Decision
RONs	Refuge Operating Needs System
RRP	Refuge Roads Program
Service	U.S. Fish and Wildlife Service (also, FWS)
TFT	Temporary Full-Time
USC	United States Code
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey





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## *Appendix B. References and Literature Citations*

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## Appendix C. Relevant Legal Mandates and Executive Orders

STATUE	DESCRIPTION
Administrative Procedures Act (1946)	Outlines administrative procedures to be followed by federal agencies with respect to identification of information to be made public; publication of material in the Federal Register; maintenance of records; attendance and notification requirements for specific meetings and hearings; issuance of licenses; and review of agency actions.
American Antiquities Act of 1906	Provides penalties for unauthorized collection, excavation, or destruction of historic or prehistoric ruins, monuments, or objects of antiquity on lands owned or controlled by the United States. The Act authorizes the President to designate as national monuments objects or areas of historic or scientific interest on lands owned or controlled by the United States.
American Indian Religious Freedom Act of 1978	Protects the inherent right of Native Americans to believe, express, and exercise their traditional religions, including access to important sites, use and possession of sacred objects, and the freedom to worship through ceremonial and traditional rites.
Americans With Disabilities Act of 1990	Intended to prevent discrimination of and make American Society more accessible to people with disabilities. The Act requires reasonable accommodations to be made in employment, public services, public accommodations, and telecommunications for persons with disabilities.
Anadromous Fish Conservation Act of 1965, as amended	Authorizes the Secretaries of Interior and Commerce to enter into cooperative agreements with states and other non-federal interest for conservation, development, and enhancement of anadromous fish and contribute up to 50 percent as the federal share of the cost of carrying out such agreements. Reclamation construction programs for water resource projects needed solely for such fish are also authorized.
Archaeological Resources Protection Act of 1979, as amended.	This Act strengthens and expands the protective provisions of the Antiquities Act of 1906 regarding archaeological resources. It also revised the permitting process for archaeological research.

STATUE	DESCRIPTION
Architectural Barriers Act of 1968	Requires that buildings and facilities designed, constructed, or altered with federal funds, or leased by a federal agency, must comply with standards for physical accessibility.
Bald and Golden Eagle Protection Act of 1940, as amended	Prohibits the possession, sale, or transport of any bald or golden eagle, alive or dead, or part, nest, or egg except as permitted by the Secretary of the Interior for scientific or exhibition purposes, or for the religious purposes of Indians.
Bankhead-Jones Farm Tenant Act of 1937	Directs the Secretary of Agriculture to develop a program of land conservation and utilization in order to correct maladjustments in land use and thus assist in such things as control of soil erosion, reforestation, conservation of natural resources, and protection of fish and wildlife. Some early refuges and hatcheries were established under authority of this Act.
Cave Resources Protection Act of 1988	Established requirements for the management and protection of caves and their resources on Federal lands, including allowing the land managing agencies to withhold the location of caves from the public, and requiring permits for any removal or collecting activities in caves on federal lands.
Clean Air Act of 1970	Regulates air emissions from area, stationary, and mobile sources. This Act and its amendments charge federal land managers with direct responsibility to protect the “air quality and related values” of land under their control. These values include fish, wildlife, and their habitats.
Clean Water Act of 1974, as amended	This Act and its amendments have as its objective the restoration and maintenance of the chemical, physical, and biological integrity of the Nation’s waters. Section 401 of the Act requires that federally permitted activities comply with the Clean Water Act standards, state water quality laws, and any other appropriate state laws. Section 404 charges the Army Corps of Engineers with regulating discharge of dredge or fill materials into waters of the United States, including wetlands.
Coastal Barrier Resources Act of 1982 (CBRA)	Identifies undeveloped coastal barriers along the Atlantic and Gulf coasts and included them in the John H. Chafee Coastal Barrier Resources System (CBRS). The objectives of the act are to minimize loss of human life, reduce wasteful federal expenditures, and minimize the damage to natural resources by restricting most federal expenditures that encourage development within the CBRS.

STATUE	DESCRIPTION
Coastal Barrier Improvement Act of 1990	Reauthorized the CBRA, expanded the CBRS to include undeveloped coastal barriers along the Great Lakes and in the Caribbean, and established “Otherwise Protected Areas (OPAs).” The Service is responsible for maintaining official maps, consulting with federal agencies that propose spending federal funds within the CBRS and OPAs, and making recommendations to Congress about proposed boundary revisions.
Coastal Wetlands Planning, Protection, and Restoration (1990)	Authorizes the Director of the Fish and Wildlife Service to participate in the development of a Louisiana coastal wetlands restoration program, participate in the development and oversight of a coastal wetlands conservation program, and lead in the implementation and administration of a National coastal wetlands grant program.
Coastal Zone Management Act of 1972, as amended	Established a voluntary national program within the Department of Commerce to encourage coastal states to develop and implement coastal zone management plans and requires that “any federal activity within or outside of the coastal zone that affects any land or water use or natural resource of the coastal zone” shall be “consistent to the maximum extent practicable with the enforceable policies” of a state’s coastal zone management plan. The law includes an Enhancement Grants Program for protecting, restoring, or enhancing existing coastal wetlands or creating new coastal wetlands. It also established the National Estuarine Reserve Research System, guidelines for estuarine research, and financial assistance for land acquisition.
Emergency Wetlands Resources Act of 1986	This Act authorized the purchase of wetlands from Land and Water Conservation Fund moneys, removing a prior prohibition on such acquisitions. The Act requires the Secretary to establish a National Wetlands Priority Conservation Plan, required the States to include wetlands in their Comprehensive Outdoor Recreation Plans, and transfers to the Migratory Bird Conservation Fund amounts equal to import duties on arms and ammunition. It also established entrance fees at national wildlife refuges.
Endangered Species Act of 1973, as amended	Provides for the conservation of threatened and endangered species of fish, wildlife, and plants by federal action and by encouraging the establishment of state programs. It provides for the determination and listing of threatened and endangered species and the designation of critical habitats. Section 7 requires refuge managers to perform internal consultation before initiating projects that affect or may affect endangered species.

STATUE	DESCRIPTION
Energy Policy Act of 2005	Includes a section that establishes the Coastal Impact Assistance Program (CIAP), a program authorizing funds to Outer Continental Shelf oil and gas producing states to mitigate the impact of oil and gas activities.
Environmental Education Act of 1990	This Act established the Office of Environmental Education within the Environmental Protection Agency to develop and administer a federal environmental education program in consultation with other federal natural resource management agencies, including the Fish and Wildlife Service.
Estuary Protection Act of 1968	Authorized the Secretary of the Interior, in cooperation with other federal agencies and the states, to study and inventory estuaries of the United States, including land and water of the Great Lakes, and to determine whether such areas should be acquired for protection. The Secretary is also required to encourage state and local governments to consider the importance of estuaries in their planning activities as they relate to federal natural resource grants. In approving any state grants for acquisition of estuaries, the Secretary was required to establish conditions to ensure the permanent protection of estuaries.
Estuaries and Clean Waters Act of 2000	This law creates a federal interagency council that includes the Director of the Fish and Wildlife Service, the Secretary of the Army for Civil Works, the Secretary of Agriculture, the Administrator of the Environmental Protection Agency, and the Administrator for the National Oceanic and Atmospheric Administration. The Council is charged with developing a national estuary habitat restoration strategy and providing grants to entities to restore and protect estuary habitat to promote the strategy.
Food Security Act of 1985, as amended (Farm Bill)	The Act contains several provisions that contribute to wetland conservation. The Swampbuster provisions state that farmers who convert wetlands for the purpose of planting after enactment of the law are ineligible for most farmer program subsidies. It also established the Wetland Reserve Program to restore and protect wetlands through easements and restoration of the functions and values of wetlands on such easement areas.
Farmland Protection Policy Act of 1981, as amended	The purpose of this law is to minimize the extent to which federal programs contribute to the unnecessary conversion of farmland to nonagricultural uses. Federal programs include construction projects and the management of federal lands.



STATUE	DESCRIPTION
Federal Advisory Committee Act (1972), as amended	Governs the establishment of and procedures for committees that provide advice to the federal government. Advisory committees may be established only if they will serve a necessary, non-duplicative function. Committees must be strictly advisory unless otherwise specified and meetings must be open to the public.
Federal Coal Leasing Amendment Act of 1976	Provided that nothing in the Mining Act, the Mineral Leasing Act, or the Mineral Leasing Act for Acquired Lands authorized mining coal on refuges.
Federal-Aid Highways Act of 1968	Established requirements for approval of federal highways through wildlife refuges and other designated areas to preserve the natural beauty of such areas. The Secretary of Transportation is directed to consult with the Secretary of the Interior and other federal agencies before approving any program or project requiring the use of land under their jurisdiction.
Federal Noxious Weed Act of 1990, as amended	The Secretary of Agriculture was given the authority to designate plants as noxious weeds and to cooperate with other federal, state and local agencies, farmers associations, and private individuals in measures to control, eradicate, prevent, or retard the spread of such weeds. The Act requires each federal land-managing agency, including the Fish and Wildlife Service, to designate an office or person to coordinate a program to control such plants on the agency's land and implement cooperative agreements with the states, including integrated management systems to control undesirable plants.
Fish and Wildlife Act of 1956	Establishes a comprehensive national fish, shellfish, and wildlife resources policy with emphasis on the commercial fishing industry, but also includes the inherent right of every citizen and resident to fish for pleasure, enjoyment, and betterment and to maintain and increase public opportunities for recreational use of fish and wildlife resources. Among other things, it authorizes the Secretary of the Interior to take such steps as may be required for the development, advancement, management, conservation, and protection of fish and wildlife resources including, but not limited to, research, development of existing facilities, and acquisition by purchase or exchange of land and water or interests therein.
Fish and Wildlife Conservation Act of 1980, as amended	Requires the Service to monitor non-game bird species, identify species of management concern, and implement conservation measures to preclude the need for listing under the Endangered Species Act.

STATUE	DESCRIPTION
Fish and Wildlife Coordination Act of 1958	Promotes equal consideration and coordination of wildlife conservation with other water resource development programs by requiring consultation with the Fish and Wildlife Service and the state fish and wildlife agencies where the “waters of a stream or other body of water are proposed or authorized, permitted or licensed to be impounded, diverted...or otherwise controlled or modified” by any agency under federal permit or license.
Improvement Act of 1978	This Act was passed to improve the administration of fish and wildlife programs and amends several earlier laws, including the Refuge Recreation Act, the National Wildlife Refuge Administration Act, and the Fish and Wildlife Act of 1956. It authorizes the Secretary to accept gifts and bequests of real and personal property on behalf of the United States. It also authorizes the use of volunteers on Service projects and appropriations to carry out volunteer programs.
Fishery (Magnuson) Conservation and Management Act of 1976	Established Regional Fishery Management Councils comprised of federal and state officials, including the Fish and Wildlife Service. It provides for regulation of foreign fishing and vessel fishing permits.
Freedom of Information Act, 1966	Requires all federal agencies to make available to the public for inspection and copying administrative staff manuals and staff instructions, official, published and unpublished policy statements, final orders deciding case adjudication, and other documents. Special exemptions have been reserved for nine categories of privileged material. The Act requires the party seeking the information to pay reasonable search and duplication costs.
Geothermal Steam Act of 1970, as amended	Authorizes and governs the lease of geothermal steam and related resources on public lands. Section 15 c of the Act prohibits issuing geothermal leases on virtually all Service-administrative lands.
Lacey Act of 1900, as amended	Originally designed to help states protect their native game animals and to safeguard U.S. crop production from harmful foreign species. This Act prohibits interstate and international transport and commerce of fish, wildlife, or plants taken in violation of domestic or foreign laws. It regulates the introduction to America of foreign species into new locations.

STATUE	DESCRIPTION
Land and Water Conservation Fund Act of 1948	This Act provides funding through receipts from the sale of surplus federal land, appropriations from oil and gas receipts from the Outer Continental Shelf, and other sources for land acquisition under several authorities. Appropriations from the fund may be used for matching grants to states for outdoor recreation projects and for land acquisition by various federal agencies, including the Fish and Wildlife Service.
Marine Mammal Protection Act of 1972, as amended	The 1972 Marine Mammal Protection Act established a federal responsibility to conserve marine mammals with management vested in the Department of the Interior for sea otter, walrus, polar bear, dugong, and manatee. The Department of Commerce is responsible for cetaceans and pinnipeds, other than the walrus. With certain specified exceptions, the Act establishes a moratorium on the taking and importation of marine mammals, as well as products taken from them.
Migratory Bird Conservation Act of 1929	Established a Migratory Bird Conservation Commission to approve areas recommended by the Secretary of the Interior for acquisition with Migratory Bird Conservation Funds. The role of the Commission was expanded by the North American Wetland Conservation Act to include approving wetlands acquisition, restoration, and enhancement proposals recommended by the North American Wetlands Conservation Council.
Migratory Bird Hunting and Conservation Stamp Act of 1934	Also commonly referred to as the “Duck Stamp Act,” the Act requires waterfowl hunters 16 years of age or older to possess a valid federal hunting stamp. Receipts from the sale of the stamp are deposited into the Migratory Bird Conservation Fund for the acquisition of migratory bird refuges.
Migratory Bird Treaty Act of 1918, as amended	This Act implements various treaties and conventions between the U.S. and Canada, Japan, Mexico, and the former Soviet Union for the protection of migratory birds. Except as allowed by special regulations, this Act makes it unlawful to pursue, hunt, kill, capture, possess, buy, sell, purchase, barter, export, or import any migratory bird, part, nest, egg, or product.
Mineral Leasing Act for Acquired Lands (1947), as amended	Authorizes and governs mineral leasing on acquired public lands.

STATUE	DESCRIPTION
Minerals Leasing Act of 1920, as amended	Authorizes and governs leasing of public lands for development of deposits of coal, oil, gas, and other hydrocarbons, sulphur, phosphate, potassium, and sodium. Section 185 of this title contains provisions relating to granting rights-of-ways over federal lands for pipelines.
Mining Act of 1872, as amended	Authorizes and governs prospecting and mining for the so-called "hardrock" minerals (such as gold and silver) on public lands.
National and Community Service Act of 1990	Authorizes several programs to engage citizens of the U.S. in full-and/or part-time projects designed to combat illiteracy and poverty, provide job skills, enhance educational skills, and fulfill environmental needs. Among other things, this Act establishes the American Conservation and Youth Service Corps to engage young adults in approved human and natural resource projects, which will benefit the public or are carried out on federal or Indian lands.
National Environmental Policy Act of 1969	Requires analysis, public comment, and reporting for environmental impacts of federal actions. It stipulates the factors to be considered in environmental impact statements, and requires that federal agencies employ an interdisciplinary approach in related decision-making and develop means to ensure that unqualified environmental values are given appropriate consideration, along with economic and technical considerations.
National Historic Preservation Act of 1966, as amended	It establishes a National Register of Historic Places and a program of matching grants for preservation of significant historical features. Federal agencies are directed to take into account the effects of their actions on items or sites listed or eligible for listing in the National Register.
National Trails System Act (1968), as amended	Established the National Trails System to protect the recreational, scenic, and historic values of some important trails. National Recreation Trails may be established by the Secretaries of Interior or Agriculture on land wholly or partly within their jurisdiction, with the consent of the involved state(s), and other land managing agencies, if any. National Scenic and National Historic Trails may only be designated by an Act of Congress. Several National Trails cross units of the National Wildlife Refuge System.

STATUE	DESCRIPTION
National Wildlife Refuge System Administration Act of 1966	Prior to 1966, there was no single federal law that governed the administration of the various wildlife refuges that had been established. This Act defines the National Wildlife Refuge System and authorizes the Secretary of the Interior to permit any use of an area provided such use is compatible with the major purposes(s) for which the area was established.
National Wildlife Refuge System Improvement Act of 1997	This Act amends the National Wildlife Refuge System Administration Act of 1966. This Act defines the mission of the National Wildlife Refuge System, establishes the legitimacy and appropriateness of six priority “wildlife-dependent” public uses, establishes a formal process for determining “compatible uses” of Refuge System lands, identifies the Secretary of the Interior as responsible for managing and protecting the Refuge System, and requires the development of a comprehensive conservation plan for all refuges.
Native American Graves Protection and Repatriation Act of 1990	Requires federal agencies and museums to inventory, determine ownership of, and repatriate certain cultural items and human remains under their control or possession. The Act also addresses the repatriation of cultural items inadvertently discovered by construction activities on lands managed by the agency.
Neotropical Migratory Bird Conservation Act of 2000	Establishes a matching grants program to fund projects that promote the conservation of neotropical migratory birds in the United States, Latin America, and the Caribbean.
North American Wetlands Conservation Act of 1989	Provides funding and administrative direction for implementation of the North American Waterfowl Management Plan and the Tripartite Agreement on wetlands between Canada, the U.S., and Mexico. North American Wetlands Conservation Council is created to recommend projects to be funded under the Act to the Migratory Bird Conservation Commission. Available funds may be expended for up to 50 percent of the United States share cost of wetlands conservation projects in Canada, Mexico, or the U.S. (or 100 percent of the cost of projects on federal lands).
Refuge Recreation Act of 1962, as amended	This Act authorizes the Secretary of the Interior to administer refuges, hatcheries, and other conservation areas for recreational use, when such uses do not interfere with the area’s primary purposes. It authorizes construction and maintenance of recreational facilities and the acquisition of land for incidental fish and wildlife-dependent recreational development or protection of natural resources. It also authorizes the charging of fees for public uses.

STATUE	DESCRIPTION
Partnerships for Wildlife Act of 1992	Establishes a Wildlife Conservation and Appreciation Fund, to receive appropriated funds and donations from the National Fish and Wildlife Foundation and other private sources to assist the state fish and game agencies in carrying out their responsibilities for conservation of non-game species. The funding formula is no more than 1/3 federal funds, at least 1/3 foundation funds, and at least 1/3 state funds.
Refuge Revenue Sharing Act of 1935, as amended	Provided for payments to counties in lieu of taxes from areas administered by the Fish and Wildlife Service. Counties are required to pass payments along to other units of local government within the county, which suffer losses in tax revenues due to the establishment of Service areas.
Rehabilitation Act of 1973	Requires nondiscrimination in the employment practices of federal agencies of the executive branch and contractors. It also requires all federally assisted programs, services, and activities to be available to people with disabilities.
Rivers and Harbors Appropriations Act of 1899, as amended	Requires the authorization by the Army Corps of Engineers prior to any work in, on, over, or under a navigable water of the United States. The Fish and Wildlife Coordination Act provides authority for the Service to review and comment on the effects on fish and wildlife activities proposed to be undertaken or permitted by the Corps of Engineers. Service concerns include contaminated sediments associated with dredge or fill projects in navigable waters.
Sikes Act (1960), as amended	Provides for the cooperation by the Departments of Interior and Defense with state agencies in planning, development, and maintenance of fish and wildlife resources and outdoor recreation facilities on military reservations throughout the U.S. It requires the Secretary of each military department to use trained professionals to manage the wildlife and fishery resource under his jurisdiction, and requires federal and state fish and wildlife agencies be given priority in management of fish and wildlife activities on military reservations.
Transfer of Certain Real Property for Wildlife Conservation Purposes Act of 1948	This Act provides that upon determination by the Administrator of the General Services Administration, real property no longer needed by a federal agency can be transferred, without reimbursement, to the Secretary of the Interior if the land has particular value for migratory birds, or to a state agency for other wildlife conservation purposes.

STATUE	DESCRIPTION
Transportation Equity Act for the 21st Century (1998)	Established the Refuge Roads Program, requires transportation planning that includes public involvement, and provides funding for approved public use roads and trails and associated parking lots, comfort stations, and bicycle/pedestrian facilities.
Uniform Relocation and Assistance and Real Property Acquisition Policies Act (1970), as amended	Provides for uniform and equitable treatment of persons who sell their homes, businesses, or farms to the Service. The Act requires that any purchase offer be no less than the fair market value of the property.
Water Resources Planning Act of 1965	Established a Water Resources Council to be composed of Cabinet representatives, including the Secretary of the Interior. The Council reviews river basin plans with respect to agricultural, urban, energy, industrial, recreational, and fish and wildlife needs. The Act also established a grant program to assist states in participating in the development of related comprehensive water and land use plans.
Wild and Scenic Rivers Act of 1968, as amended	This Act selects certain rivers of the nation possessing remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values; preserves them in a free-flowing condition; and protects their local environments.
Wilderness Act of 1964, as amended	The Wilderness Act of 1964 directs the Secretary of the Interior to review every roadless area of 5,000 acres or more and every roadless island regardless of size within the Refuge System and to recommend suitability of each such area. The Act permits certain activities within designated wilderness areas that do not alter natural processes. Wilderness values are preserved through a “minimum tool” management approach, which requires refuge managers to use the least intrusive methods, equipment, and facilities necessary for administering the areas.
Youth Conservation Corps Act of 1970	Established a permanent Youth Conservation Corps (YCC) program within the Departments of Interior and Agriculture. Within the Service, YCC participants perform many tasks on refuges, fish hatcheries, and research stations.



EXECUTIVE ORDERS	DESCRIPTIONS
EO 11593, Protection and Enhancement of the Cultural Environment (1971)	States that if the Service proposes any development activities that may affect the archaeological or historic sites, the Service will consult with Federal and State Historic Preservation Officers to comply with Section 106 of the National Historic Preservation Act of 1966, as amended.
EO 11644, Use of Off-road Vehicles on Public Land (1972)	Established policies and procedures to ensure that the use of off-road vehicles on public lands will be controlled and directed so as to protect the resources of those lands, to promote the safety of all users of those lands, and to minimize conflicts among the various uses of those lands.
EO 11988, Floodplain Management (1977)	The purpose of this executive order is to prevent federal agencies from contributing to the “adverse impacts associated with occupancy and modification of floodplains” and the “direct or indirect support of floodplain development.” In the course of fulfilling their respective authorities, federal agencies “shall take action to reduce the risk of flood loss, to minimize the impact of floods on human safety, health and welfare, and to conserve and restore the natural and beneficial values served by floodplains.
EO 11989 (1977), Amends Section 2 of EO 11644	Directs agencies to close areas negatively impacted by off-road vehicles.
EO 11990, Protection of Wetlands (1977)	Federal agencies are directed to provide leadership and take action to minimize the destruction, loss of degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands.
EO 12372, Intergovernmental Review of Federal Programs (1982)	Seeks to foster intergovernmental partnerships by requiring federal agencies to use the state process to determine and address concerns of state and local elected officials with proposed federal assistance and development programs.
EO 12898, Environmental Justice (1994)	Requires federal agencies to identify and address disproportionately high and adverse effects of its programs, policies, and activities on minority and low-income populations.

EXECUTIVE ORDERS	DESCRIPTIONS
<p>EO 12906, Coordinating Geographical Data Acquisition and Access (1994), Amended by EO 13286 (2003). Amendment of EO's and other actions in connection with transfer of certain functions to Secretary of DHS.</p>	<p>Recommended that the executive branch develop, in cooperation with state, local, and tribal governments, and the private sector, a coordinated National Spatial Data Infrastructure to support public and private sector applications of geospatial data. Of particular importance to comprehensive conservation planning is the National Vegetation Classification System (NVCS), which is the adopted standard for vegetation mapping. Using NVCT facilitates the compilation of regional and national summaries, which in turn, can provide an ecosystem context for individual refuges.</p>
<p>EO 12962, Recreational Fisheries (1995)</p>	<p>Federal agencies are directed to improve the quantity, function, sustainable productivity, and distribution of U.S. aquatic resources for increased recreational fishing opportunities in cooperation with states and tribes.</p>
<p>EO 13007, Native American Religious Practices (1996)</p>	<p>Provides for access to, and ceremonial use of, Indian sacred sites on federal lands used by Indian religious practitioners and direction to avoid adversely affecting the physical integrity of such sites.</p>
<p>EO 13061, Federal Support of Community Efforts Along American Heritage Rivers (1997)</p>	<p>Established the American Heritage Rivers initiative for the purpose of natural resource and environmental protection, economic revitalization, and historic and cultural preservation. The Act directs federal agencies to preserve, protect, and restore rivers and their associated resources important to our history, culture, and natural heritage.</p>
<p>EO 13084, Consultation and Coordination With Indian Tribal Governments (2000)</p>	<p>Provides a mechanism for establishing regular and meaningful consultation and collaboration with tribal officials in the development of federal policies that have tribal implications.</p>

EXECUTIVE ORDERS	DESCRIPTIONS
EO 13112, Invasive Species (1999)	Federal agencies are directed to prevent the introduction of invasive species, detect and respond rapidly to and control populations of such species in a cost effective and environmentally sound manner, accurately monitor invasive species, provide for restoration of native species and habitat conditions, conduct research to prevent introductions and to control invasive species, and promote public education on invasive species and the means to address them. This EO replaces and rescinds EO 11987, Exotic Organisms (1977).
EO 13186, Responsibilities of Federal Agencies to Protect Migratory Birds. (2001)	Instructs federal agencies to conserve migratory birds by several means, including the incorporation of strategies and recommendations found in Partners in Flight Bird Conservation plans, the North American Waterfowl Plan, the North American Waterbird Conservation Plan, and the United States Shorebird Conservation Plan, into agency management plans and guidance documents.

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# Appendix D. Public Involvement

## SUMMARY OF PUBLIC SCOPING COMMENTS

Public scoping was initiated in May 2006 with a statement published in the *Federal Register* giving notice of the start of the comprehensive conservation planning process, listing contact information, and asking for comments; a meeting was held at the public library in Belle Chasse, Louisiana. A second scoping meeting was held in Metairie in June 2006. A total of 12 people attended the meetings. The turnout was low probably because so many communities were devastated by the hurricanes in 2005 and people were busy rebuilding or still evacuated from the area. In addition to the meetings, fliers were placed throughout St. Bernard and Plaquemines Parishes, and news releases were sent to several newspapers in both Louisiana and Mississippi. The following comments were made during the public scoping phase of this plan:

### Public Programs and Visitor Services

#### Delta NWR:

1. Maintain a public boat launch with 2 ramps at the Venice facility with 24-hour accessibility.
2. Place refuge signage at ramps and directional signage on main road regarding boat ramps.
3. Have an accurate map of the Refuge available (other than the one in the permit); possibly an aerial map or navigational map with details and boundaries.
4. Locate a map station at the Venice facility.
5. Offer a webpage feature that lets hunters communicate directly with game wardens.
6. Locate, GPS, and mark all navigational hazards (partner with Conservation Force quarter boat barge, C-Force Station).
7. Monitor Delta NWR for navigational hazards, identify responsible party and have them remove objects.
8. Monitor, identify the responsible party, and have removed derelict and abandoned storm debris from land.
9. Offer hunting and fishing as priority uses with no additional licensing or permitting other than that required by the state - the refuge should be managed by and in cooperation with the state.
10. Continue public hunting access-consider opening the closed area even if on a limited basis.
11. Prohibit gill netting.
12. All crab traps should be collected for destruction if not labeled and regularly attended.
13. Authorize recreational and commercial trapping for fur bearing animals.
14. Increase funding for environmental education and interpretation to be able to communicate to the public the critical role of the refuges in mitigating hurricane damage.
15. Work to build stakeholders for these refuges and the Refuge System through education.
16. Allow public access, but manage activities so that resources are sustainable and educate people that multiple-use access requires seasonal or occasional restrictions.
17. Planning should take into account impact of future category 1-5 hurricanes.
18. This area needs to be here in the future for our children and grandchildren.
19. Hunting should not be allowed because it takes too much staff time to regulate and does not protect wildlife.
19. Ban prescribed burning, trapping, new roads, logging, and all terrain vehicles.
20. Encourage wildlife observation.
21. Improve marking of camping area.

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## **Breton NWR:**

1. If we don't do something to restore the islands, the excellent wade fishing will be gone forever.
2. The islands need to be here for our children and grandchildren.
3. Ban hunting, prescribed burning, trapping, new roads, logging, all terrain vehicles.
4. Encourage wildlife observation.
5. Increase funding for environmental education and interpretation to be able to communicate to the public the critical role of the refuges in mitigating hurricane damage.
6. Work to build stakeholders for these refuges and the Refuge System through education.
7. Allow public access, but manage activities so that resources are sustainable and educate people that multiple-use access requires seasonal or occasional restrictions.
8. Planning should take into account the impact of future category 1-5 hurricanes.
9. Offer hunting and fishing as priority uses with no additional licensing or permitting other than that required by the state - the refuge should be managed by and in cooperation with the state.

## **Wildlife and Habitat Management**

### **Delta NWR:**

1. Research and monitor/survey cattail (*Typha*) and marsh reed (*Phragmites*), particularly in interior ponds of Delta NWR to study the potential for colonization and spread of native and newer, more aggressive non-native genotypes.
2. Restore the wetlands of Delta NWR to mitigate the effect of future hurricanes.
3. Restore interior marshes.
4. Any dredged materials should be used beneficially for restoration.
5. A coastal line of defense is very important.
6. Acquisition should be the main thrust, especially north of Delta NWR, since the southern part is eroding.
7. Several comments were made regarding concern with marsh turning to open water (subsidence) where oil is extracted.
8. Several questions were asked about the negative impacts of oil and gas exploration, if current regulations are strong enough to lessen impacts, and if new pipelines are being put in.

### **Breton NWR:**

1. Restore the barrier islands to protect inland marshes and homes from future hurricanes (5 statements), to provide nesting habitat for pelicans (3 statements), and for future generations.
2. Rebuild the islands to preserve the second oldest refuge in the country, continue to provide finfish habitat, to retain the important salinity regimes of Breton and Chandeleur sounds for finfish, oyster, and marsh viability of Biloxi marsh.
3. Please make Teddy Roosevelt proud and do something to save this refuge from washing away-plantings and sand fences are great work, but we need much more- conserve the island chain and much more than wildlife will be preserved.
4. Explore the potential to restore the islands such as what type of sediment will be effective and where it will be derived.
5. Need to use heavier sediments and not just what is on site.
6. A coastal line of defense is very important.
7. Close MRGO (Mississippi River Gulf Outlet) before we try to build up the islands - the closing process will be very slow.
9. Use dredged materials beneficially for restoration.

- 10. Several people attending expressed disappointment with the Corps of Engineers lack of support for building/restoring the barrier islands.
- 11. Need to find funding for projects.
- 12. The refuge staff should be active in larger plans and organizations regarding restoration.

**DRAFT CCP/EA COMMENTS AND SERVICE’S RESPONSES**

Public comments on the draft comprehensive conservation plan and environmental assessment (Draft CCP/EA) were accepted from July 11 through August 11, 2008, as published in the Federal Register. Postcards were mailed to each person who participated in the planning process, which announced that the Service had made available the Draft CCP/EA. Recipients were given the opportunity of receiving a hard copy of the Draft CCP/EA or a CD. In addition, local and state political leaders and conservation organizations were provided copies of the Draft CCP/EA.

A total of five individuals submitted comments on the Draft CCP/EA in writing. All of the individuals submitted numerous comments.

**Affiliations of Respondents**

The table below identifies the names of respondents who commented on the Draft CCP/EA.

Name of Respondent	Affiliation
David J. Gegenheimer	Braithwaite, LA
Donald R. Duplantier, O.V.M.	Braithwaite, LA
John J. Jackson	Conservation Force
Rudy Neubeck	Metairie, LA
Randy Seibert	Braithwaite, LA

The number of affiliations represented in the above table can be summarized as follows: federal agencies, 0; state agencies, 0; local (city and parish) agencies, 0; nongovernmental organizations, 1; and public citizens (general public), 4.

**Comment Media**

The type of media used to deliver the comments received by the refuge and planning staff is categorized as follows: written letter, 5.

**Geographic Origin of Respondents**

The geographic origins of the individual respondents who submitted comments are Louisiana, 5.

**Summary of Concerns and Service’s Responses**

The public comments received address the following concerns. The Service’s response to each concern follows the comment.

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## *SUPPORT OF PROPOSED PLAN*

**Comment:** The Draft CCP/EA for Delta and Breton NWRs is not just comprehensive, but exciting in the selection of alternatives. The decision to seek large-scale habitat restoration unfortunately is the easiest part of the “total process.” I hope the efforts to reach these goals equal, if not exceed, the efforts expended in preparing such a comprehensive document.

**Service Response:** Comment noted.

**Comment:** We welcome the CCP for the Delta and Breton NWRs. It is long overdue. We favor alternatives “B” and “C” over “A” for the Delta NWR. We favor a combination of “B” and “C” as a fourth alternative, “D.” For Breton NWR, we support alternative “C,” but only if our comments are incorporated.

**Service Response:** Comment noted.

**Comment:** We commend the refuge for planning more opportunities for non-consumptive user recreation. We also are pleased that the refuge plans to review its public use programs, including hunting, annually, to evaluate their impacts on refuge resources and visitors.

**Service Response:** Comment noted.

**Comment:** To do everything possible to save this resource.

**Service Response:** Comment noted.

**Comment:** We enthusiastically support your objectives for large-scale habitat restoration and hope funding resources are found for reaching these goals.

**Service Response:** Comment noted.

## *HABITAT MANAGEMENT*

**Comment:** The habitats of Breton and Delta NWRs, though fragile, are relied upon by such a great diversity of wildlife that they must be restored and sustained.

**Service Response:** Comment noted.

**Comment:** Provide hurricane protection to Plaquemines and St. Bernard Parishes and to support wildlife and access to that wildlife.

**Service Response:** Breton NWR, under alternative “C,” the proposed alternative, will pursue efforts to partner and perform large-scale restoration work to include monitoring and habitat plans. These projects will focus primarily on sediment accretion and efforts to restore habitat that will expand the current size of the refuge. Delta NWR, under alternative “C,” the proposed alternative, will initiate restoration to the Gulf shoreline in addition to the crevasse program to build new emergent marsh.

**Comment:** Though begging for restorative help, the islands of the Breton NWR still abound with fish and fowl.

**Service Response:** Comment noted

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## FISH AND WILDLIFE POPULATION MANAGEMENT

**Comment:** On page 9 we disagree that the primary use of Delta NWR is hunting, although we certainly support hunting and feel that it should be expanded. Hunting is seasonal and is limited to the periphery. The primary year-round use is passage and fishing. Regardless, all three are important and hunting should be increased

**Service Response:** Comment noted. Passage through the refuge is allowed year-round in state-owned (water bottoms) navigable waters.

**Comment:** We object to the prohibition against netting, page 146. Cast netting for bait should be permitted.

**Service Response:** Prohibited nets on refuge include all commercial type and other nets that are set that trap fish. Cast netting for bait is currently permitted on both refuges but any sport fish caught while cast netting must be released. This clarification will be added to the netting restriction.

**Comment:** Although trapping is not recognized as a form of hunting under Service regulations, congressional sponsors of the reform that prioritized hunting think differently (personal communication with Don Young). Moreover, in Louisiana, trapping is a constitutionally protected activity. Our concern arises from the obvious need to trap on these refuges. There is a need to trap to control predators and invasive species such as nutria. The State of Louisiana pays a bounty on nutria. The proposal would literally create a sanctuary for nutria in conflict with the surrounding area – literally a Noah’s Ark for the habitat-destroying pests.

Likewise, hunters should be allowed to take nutria and coyotes. Control is not incompatible, it is necessary. The proposal does not designate nutria and coyotes as huntable species.

**Service Response:** Comments noted. We agree that control of exotic species such as nutria is necessary to protect wildlife habitat. Most refuges within the Southeast Louisiana NWR Complex do allow nutria trapping through a special use permit. It was not a priority on Delta NWR because the nutria population was not as high and there was no demand for nutria trapping permits. When a step-down plan is developed for Delta NWR, as required by Service policy, nutria trapping will be permitted on Delta NWR. Coyotes are present on the Delta NWR but in small numbers and no impacts to other wildlife species have been observed to initiate hunting of these species.

**Comment:** On page 33, one strategy for Delta NWR is to “initiate predator control to protect nesting birds,” yet the hunting of predators and trapping is prohibited.

**Service Response:** Comment noted. The population control of raccoon, opossum, and coyotes occur by alligators, a natural predator. The Service has not noted any significant predation to migratory birds. If predation impacts to nesting birds are identified and significant, we will initiate managed control actions such as trapping and or hunting.

**Comment:** Firearms and other primitive weapons and crossbows should be allowed for deer and hog hunting.

**Service Response:** Crossbows are allowed for use during the refuge archery season. Shotguns are allowed for waterfowl but limited to steel shot only. Use of primitive and modern weapons, such as muzzleloaders and rifles, are restricted due to open area environment, numerous oil and gas facilities, and workers. This would create an unsafe area for visitors, workers, and private property.



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**Comment:** Coyote, nutria, and alligator hunting should be allowed.

**Service Response:** Coyotes are not an abundant species on the refuge. Trapping will be re-initiated to control the nutria population through a special use permit system. However, we have received no interest and no requests for trapping permits. Alligator numbers significantly decreased after Hurricane Katrina, and hunting is conducted on areas adjacent to the refuge. There have been no problems or over-population documented to support hunting or removal of alligators from Delta NWR.

#### *RESOURCE PROTECTION AND REFUGE ADMINISTRATION*

**Comment:** On page 41, it is suggested that projects be identified for Friends of Louisiana Wildlife Refuges, Inc. We respectfully suggest you add “et al” for the inclusion of others that may have an equal or greater interest, capacity, and/or expertise. Ditto page 53, project 23 (“develop agreements with”); and page 85 as part of Alternative “C.”

**Service Response:** Comment noted. Changes will be made to include “et al” at the requested locations in the CCP. A key element of this CCP is to establish partnerships with local volunteers, landowners, private organizations, and state and federal natural resource agencies.

**Comment:** Page 88, third line, should be carbon dioxide, not “monoxide.”

**Service Response:** Changes will be made to read “carbon dioxide.”

**Comment:** On page 139, it states that “the areas between Main Pass and Raphael Pass are closed during the state waterfowl hunting season to all access,” emphasis added. That should not include navigation passage for hunters, fisherman, oil companies, etc., as some of those waterways, such as Octave and Dead Woman, are major passages for all. Public use should include navigation.

**Service Response:** Changes will be made to read “all refuge lands between Main Pass and Raphael Pass are closed to public entry during the refuge waterfowl hunting season.” All water bottoms owned by the State of Louisiana remain open for access throughout the year.

**Comment:** Although Appendix D, page 127-129, lists prior comments, it does no more than list them. It does not address the issues raised point-for-point as required by the APA.

**Service Response:** The Administrative Procedures Act (APA) of 1946 was adhered to by collecting comments at various meetings throughout the planning process; these comments were individually reviewed and discussed by the planning team for inclusion in the CCP, if feasible.

#### *VISITOR SERVICES*

**Comment:** I am disappointed by a statement on page 27 that proposes to discontinue primitive camping, because no adequate area exists. It is my belief public use of the refuge will drastically decline unless some accommodation for camping is made.

**Service Response:** Comment noted. The previous site designated as the “Camping Area” was seldom used and when it was used it was only a very few visitors. The site is below standards and lodging opportunities are available in the nearest town of Venice, Louisiana. Refuge visitors have had no problem accessing the refuge from off-refuge lodging. As subsidence increases in the coastal marsh, it results in fewer areas with an elevation height to support camp sites. The few areas remaining on Delta NWR with high elevations are more beneficial for wildlife use than camp sites

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given the close proximity of available lodging. Breton NWR was severely impacted from Hurricane Katrina and greatly reduced in size. The remaining habitat should be available for wildlife use, primarily sea and shore bird staging, resting, and nesting purposes. Current visitation to the refuges is on the rise and continues to increase since Hurricane Katrina.

**Comment:** Camping will not be allowed anywhere for the next 15 years in the two refuges because lack of a suitable site. Camping was “found not be an appropriate use,” pg. 133, 135. To this we object.

**Service Response:** Comment noted. The previous site designated as the “Camping Area” was seldom used at Delta NWR and most camping at Breton NWR occurred on moored vessels in state-owned waters. As subsidence increases in the marsh, it results in fewer areas with an elevation height to support camp sites. The few areas remaining on Delta NWR with high elevations are more beneficial to wildlife than camp sites. There is ample lodging opportunities available in the nearest town of Venice. Breton NWR was severely impacted from Hurricane Katrina and greatly reduced in size. The remaining habitat should be available for wildlife use, primarily sea and shore bird staging, resting, and nesting purposes. Overnight lodging aboard vessels may occur as long as moored in waters owned by the State of Louisiana and 800’ away from any visible portion of refuge lands at MLG(Mean Low Gulf). Current visitation to the refuges is on the rise and continues to increase since the occurrence of Hurricane Katrina.

**Comment:** On page 133, last paragraph, it incorrectly states that camping was not analyzed for compatibility. It was analyzed, but incorrectly on pages 133 and 135.

**Service Response:** Comments noted. Camping was determined not to be an appropriate use on either refuge on pages 135 and 136; therefore, a compatibility determination was not required to be completed.

**Comment:** The appropriateness finding of camping for Delta NWR was found negative in 5 of the 10 decision criteria, pages 135 and 136. We strongly disagree.

**Service Response:** Comments noted.

**Comment:** The CCP criminalizes both guiding and being guided by both hunting and fishing guides, pages 139 and 141. It does not likewise prohibit photographic guides, educational guides, or general tourist guides, page 142. It does not prohibit professional educators from guiding. In effect, it discriminates against the occupation of guiding hunters and anglers, against those being guided and against hunting and fishing. In particular, it discriminates against non-residents from Texas, Mississippi, Arkansas, and across the nation that are largely dependent upon professional services to access the refuge safely.

**Service Response:** Comment noted. All commercial activities are prohibited on both refuges. That includes hunting, fishing, photographic, general or “Eco” tourist guides. Educators from accredited institutions may bring classes to the refuge for educational opportunities only. On page 142, commercial photography or videography is referenced and may occur only after a request is made and a special use permit is issued. Both refuges have a high visitation from across the country and many visitors return annually. Maps are available for visitors who are “new” to the refuge and they can always contact refuge staff for any questions they have.

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**Comment:** The CCP/EA's note Presidents Bush's Executive Order (13443) to "facilitate" hunting. It should also take into consideration President Clinton's Executive Order (12962) to the same effect for fishing, which is still standing. Further it should include recognition of the right to hunt, fish, and trap that is constitutionally protected in this state.

**Service Response:** The Improvement Act recognizes, among several priorities written into the law, six wildlife-dependent recreational activities: hunting, fishing, wildlife observation, wildlife photography, and environmental education and interpretation where compatible with refuge purposes. These uses must be legitimate, appropriate, and dependent on healthy wildlife populations. Offering recreational hunting and fishing is in compliance with refuge goals. Delta NWR offers hunting and fishing and Breton NWR offers fishing opportunities. Hunting at Breton NWR is not compatible with the refuge mission.

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# *Appendix E. Appropriate Use Determinations*

## **Delta and Breton National Wildlife Refuges Appropriate Use Determinations**

An appropriate use determination is the initial decision process a refuge manager follows when first considering whether or not to allow a proposed use on a refuge. The refuge manager must find a use is appropriate before undertaking a compatibility review of the use. This process clarifies and expands on the compatibility determination process, by describing when refuge managers should deny a proposed use without determining compatibility. If we find a proposed use is not appropriate, we will not allow the use and will not prepare a compatibility determination.

Except for the uses noted below, the refuge manager must decide if a new or existing use is an appropriate refuge use. If an existing use is not appropriate, the refuge manager will eliminate or modify the use as expeditiously as practicable. If a new use is not appropriate, the refuge manager will deny the use without determining compatibility. Uses that have been administratively determined to be appropriate are:

- Six wildlife-dependent recreational uses - As defined by the National Wildlife Refuge System Improvement Act of 1997 (Improvement Act), the six wildlife-dependent recreational uses (hunting, fishing, wildlife observation and photography, and environmental education and interpretation) are determined to be appropriate. However, the refuge manager must still determine if these uses are compatible.
- Take of fish and wildlife under state regulations - States have regulations concerning take of wildlife that includes hunting, fishing, and trapping. We consider take of wildlife under such regulations appropriate. However, the refuge manager must determine if the activity is compatible before allowing it on a refuge.

### **Statutory Authorities for this policy:**

#### **National Wildlife Refuge System Administration Act of 1966, as amended by the National Wildlife Refuge System Improvement Act of 1997, 16 U.S.C. 668dd-668ee (Administration Act).**

This law provides the authority for establishing policies and regulations governing refuge uses, including the authority to prohibit certain harmful activities. The Administration Act does not authorize any particular use, but rather authorizes the Secretary of the Interior to allow uses only when they are compatible and “under such regulations as he may prescribe.” This law specifically identifies certain public uses that, when compatible, are legitimate and appropriate uses within the Refuge System. The law states “. . . it is the policy of the United States that . . . compatible wildlife-dependent recreation is a legitimate and appropriate general public use of the System . . . compatible wildlife-dependent recreational uses are the priority general public uses of the System and shall receive priority consideration in refuge planning and management; and . . . when the Secretary determines that a proposed wildlife-dependent recreational use is a compatible use within a refuge, that activity should be facilitated . . . the Secretary shall . . . ensure that priority general public uses of the System receive enhanced consideration over other general public uses in planning and management within the System . . . .” The law also states “in administering the System, the Secretary is authorized to take the following actions: . . . issue regulations to carry out this Act.” This policy implements the standards set in the Administration Act by providing enhanced consideration of priority general public

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uses and ensuring other public uses do not interfere with our ability to provide quality, wildlife-dependent recreational uses.

**Refuge Recreation Act of 1962, 16 U.S.C. 460k (Recreation Act).** This law authorizes the Secretary of the Interior to “. . . administer such areas [of the System] or parts thereof for public recreation when in his judgment public recreation can be an appropriate incidental or secondary use.” While the Recreation Act authorizes us to allow public recreation in areas of the Refuge System when the use is an “appropriate incidental or secondary use,” the Improvement Act provides the Refuge System mission and includes specific directives and a clear hierarchy of public uses on the Refuge System.

**Other Statutes that Establish Refuges, including the Alaska National Interest Lands Conservation Act of 1980 (ANILCA) (16 U.S.C. 410hh - 410hh-5, 460 mm - 460mm-4, 539-539e, and 3101 - 3233; 43 U.S.C. 1631 et seq.).**

**Executive Orders.** We must comply with Executive Order (E.O.) 11644 when allowing use of off-highway vehicles on refuges. This order requires that we: designate areas as open or closed to off-highway vehicles in order to protect refuge resources, promote safety, and minimize conflict among the various refuge users; monitor the effects of these uses once they are allowed; and amend or rescind any area designation as necessary based on the information gathered. Furthermore, E.O. 11989 requires us to close areas to off-highway vehicles when we determine that the use causes or will cause considerable adverse effects on the soil, vegetation, wildlife, habitat, or cultural or historic resources. Statutes, such as ANILCA, take precedence over executive orders.

#### **Definitions:**

##### Appropriate Use

A proposed or existing use on a refuge that meets at least one of the following four conditions.

- 1) The use is a wildlife-dependent recreational use as identified in the Improvement Act.
- 2) The use contributes to fulfilling the refuge purpose(s), the Refuge System mission, or goals or objectives described in a refuge management plan approved after October 9, 1997, the date the Improvement Act was signed into law.
- 3) The use involves the take of fish and wildlife under state regulations.
- 4) The use has been found to be appropriate as specified in section 1.11.

Native American. American Indians in the conterminous United States and Alaska Natives (including Aleuts, Eskimos, and Indians) who are members of federally recognized tribes.

Priority General Public Use. A compatible wildlife-dependent recreational use of a refuge involving hunting, fishing, wildlife observation and photography, or environmental education and interpretation.

Quality. The criteria used to determine a quality recreational experience include:

- Promotes safety of participants, other visitors, and facilities.
- Promotes compliance with applicable laws and regulations and responsible behavior.
- Minimizes or eliminates conflicts with fish and wildlife population or habitat goals or objectives in a plan approved after 1997.
- Minimizes or eliminates conflicts with other compatible wildlife-dependent recreation.
- Minimizes conflicts with neighboring landowners.
- Promotes accessibility and availability to a broad spectrum of the American people.

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- Promotes resource stewardship and conservation.
  - Promotes public understanding and increases public appreciation of America's natural resources and our role in managing and protecting these resources.
  - Provides reliable/reasonable opportunities to experience wildlife.
  - Uses facilities that are accessible and blend into the natural setting.
  - Uses visitor satisfaction to help define and evaluate programs.

*Wildlife-Dependent Recreational Use.* As defined by the Improvement Act, a use of a refuge involving hunting, fishing, wildlife observation, wildlife photography, and environmental education and interpretation.

Findings of Appropriateness of a Refuge Use for camping were found not to be an appropriate use on Delta and Breton NWRs and were not analyzed for compatibility. Boating was found to be appropriate on Delta NWR.

## FINDING OF APPROPRIATENESS OF A REFUGE USE

Refuge Name: Delta National Wildlife Refuge

Use: Boating

This form is not required for wildlife-dependent recreational uses, take regulated by the State, or uses already described in a refuge CCP or step-down management plan approved after October 9, 1997.

Decision Criteria:	YES	NO
(a) Do we have jurisdiction over the use?	X	
(b) Does the use comply with applicable laws and regulations (Federal, State, tribal, and local)?	X	
(c) Is the use consistent with applicable executive orders and Department and Service policies?	X	
(d) Is the use consistent with public safety?	X	
(e) Is the use consistent with goals and objectives in an approved management plan or other document?	X	
(f) Has an earlier documented analysis not denied the use or is this the first time the use has been proposed?	X	
(g) Is the use manageable within available budget and staff?	X	
(h) Will this be manageable in the future within existing resources?	X	
(i) Does the use contribute to the public's understanding and appreciation of the refuge's natural or cultural resources, or is the use beneficial to the refuge's natural or cultural resources?	X	
(j) Can the use be accommodated without impairing existing wildlife-dependent recreational uses or reducing the potential to provide quality (see section 1.6D, 603 FW 1, for description), compatible, wildlife-dependent recreation into the future?	X	

Where we do not have jurisdiction over the use ["no" to (a)], there is no need to evaluate it further as we cannot control the use. Uses that are illegal, inconsistent with existing policy, or unsafe ["no" to (b), (c), or (d)] may not be found appropriate. If the answer is "no" to any of the other questions above, we will **generally** not allow the use.

If indicated, the refuge manager has consulted with State fish and wildlife agencies.      **Yes** \_\_\_ **No** X

When the refuge manager finds the use appropriate based on sound professional judgment, the refuge manager must justify the use in writing on an attached sheet and obtain the refuge supervisor's concurrence.

Based on an overall assessment of these factors, my summary conclusion is that the proposed use is:

Not Appropriate \_\_\_                      Appropriate X

Refuge Manager: *Signed* *R. Lizenberger*                      Date: *8/11/08*

Refuge Supervisor: *Signed* *Richard Polyan*                      Date: *8/18/08*

**A compatibility determination is required before the use may be allowed.**



## FINDING OF APPROPRIATENESS OF A REFUGE USE

Refuge Name: Delta National Wildlife Refuge

Use: Camping

This form is not required for wildlife-dependent recreational uses, take regulated by the State, or uses already described in a refuge CCP or step-down management plan approved after October 9, 1997.

Decision Criteria:	YES	NO
(a) Do we have jurisdiction over the use?	X	
(b) Does the use comply with applicable laws and regulations (Federal, State, tribal, and local)?	X	
(c) Is the use consistent with applicable executive orders and Department and Service policies?	X	
(d) Is the use consistent with public safety?		X
(e) Is the use consistent with goals and objectives in an approved management plan or other document?		X
(f) Has an earlier documented analysis not denied the use or is this the first time the use has been proposed?	X	
(g) Is the use manageable within available budget and staff?		X
(h) Will this be manageable in the future within existing resources?		X
(i) Does the use contribute to the public's understanding and appreciation of the refuge's natural or cultural resources, or is the use beneficial to the refuge's natural or cultural resources?		X
(j) Can the use be accommodated without impairing existing wildlife-dependent recreational uses or reducing the potential to provide quality (see section 1.6D, 603 FW 1, for description), compatible, wildlife-dependent recreation into the future?	X	

Where we do not have jurisdiction over the use ["no" to (a)], there is no need to evaluate it further as we cannot control the use. Uses that are illegal, inconsistent with existing policy, or unsafe ["no" to (b), (c), or (d)] may not be found appropriate. If the answer is "no" to any of the other questions above, we will **generally** not allow the use.

If indicated, the refuge manager has consulted with State fish and wildlife agencies.      **Yes** \_\_\_ **No** X

When the refuge manager finds the use appropriate based on sound professional judgment, the refuge manager must justify the use in writing on an attached sheet and obtain the refuge supervisor's concurrence.

Based on an overall assessment of these factors, my summary conclusion is that the proposed use is:

Not Appropriate   X                        Appropriate \_\_\_\_\_

Refuge Manager: *[Signature]*                      Date: 8/11/08

Refuge Supervisor: *[Signature]*                      Date: 8/18/08

**A compatibility determination is required before the use may be allowed.**



## FINDING OF APPROPRIATENESS OF A REFUGE USE

Refuge Name: Breton National Wildlife Refuge

Use: Camping

This form is not required for wildlife-dependent recreational uses, take regulated by the State, or uses already described in a refuge CCP or step-down management plan approved after October 9, 1997.

Decision Criteria:	YES	NO
(a) Do we have jurisdiction over the use?	X	
(b) Does the use comply with applicable laws and regulations (Federal, State, tribal, and local)?	X	
(c) Is the use consistent with applicable executive orders and Department and Service policies?	X	
(d) Is the use consistent with public safety?		X
(e) Is the use consistent with goals and objectives in an approved management plan or other document?		X
(f) Has an earlier documented analysis not denied the use or is this the first time the use has been proposed?	X	
(g) Is the use manageable within available budget and staff?		X
(h) Will this be manageable in the future within existing resources?		X
(i) Does the use contribute to the public's understanding and appreciation of the refuge's natural or cultural resources, or is the use beneficial to the refuge's natural or cultural resources?		X
(j) Can the use be accommodated without impairing existing wildlife-dependent recreational uses or reducing the potential to provide quality (see section 1.6D, 603 FW 1, for description), compatible, wildlife-dependent recreation into the future?	X	

Where we do not have jurisdiction over the use ["no" to (a)], there is no need to evaluate it further as we cannot control the use. Uses that are illegal, inconsistent with existing policy, or unsafe ["no" to (b), (c), or (d)] may not be found appropriate. If the answer is "no" to any of the other questions above, we will **generally** not allow the use.

If indicated, the refuge manager has consulted with State fish and wildlife agencies.      Yes \_\_\_ No X

When the refuge manager finds the use appropriate based on sound professional judgment, the refuge manager must justify the use in writing on an attached sheet and obtain the refuge supervisor's concurrence.

Based on an overall assessment of these factors, my summary conclusion is that the proposed use is:

Not Appropriate X                      Appropriate \_\_\_

Refuge Manager: *Alex M. Zydenberg*

Date: 8/11/08

Refuge Supervisor: *Yvonne J. Johnson*

Date: 8/18/08

**A compatibility determination is required before the use may be allowed.**





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# Appendix F. Compatibility Determinations

## Delta National Wildlife Refuge Compatibility Determination

**Uses:** The following uses were considered for compatibility determination:

- 1) Boating in accordance with U.S. Coast Guard and the State of Louisiana regulations
- 2) Recreational fishing of freshwater and saltwater fish in accordance with State of Louisiana regulations
- 3) Recreational hunting of migratory birds, big-game, small game, and feral hogs in accordance with the State of Louisiana regulations
- 4) Wildlife observation/photography

A description and the anticipated biological impacts for each are addressed separately in this Compatibility Determination.

**Refuge Name:** Delta National Wildlife Refuge.

**Date Established:** November 19, 1935

**Establishing and Acquisition Authorities:** Executive Order 7229 on November 19, 1935; Executive Order 7383 on June 5, 1936; Executive Order 7538 on January 10, 1937

**Refuge Purpose:** The purpose of the refuge is to provide breeding ground for migratory birds and other wildlife. As a migratory waterfowl refuge, is subject to use for quarantine purposes. For waterfowl refuge purposes is subject to use...with the improvement of navigation in the Mississippi River and the uses thereof, and the administration of the area for wildlife conservation purposes shall be without interference with any existing or future uses or regulations of the War Department (Army Corps of Engineers). For use in a inviolate sanctuary, or for any other management purpose, for migratory birds. Protect and conserve 49,000 acres of estuarine habitats for a variety of wildlife species, and provide opportunities to the public for wildlife-dependent interpretation, education, and recreation.

### National Wildlife Refuge System Mission:

The mission of the Refuge System, as defined by the National Wildlife Refuge System Improvement Act of 1997, is:

*... to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife and plant resources and their habitats within the United States for the benefit of present and future generations of Americans.*

### Other Applicable Laws, Regulations, and Policies:

Antiquities Act of 1906 (34 Stat. 225)  
Migratory Bird Treaty Act of 1918 (15 U.S.C. 703-711; 40 Stat. 755)  
Migratory Bird Conservation Act of 1929 (16 U.S.C. 715r; 45 Stat. 1222)  
Migratory Bird Hunting Stamp Act of 1934 (16 U.S.C. 718-178h; 48 Stat. 451)  
Criminal Code Provisions of 1940 (18 U.S.C. 41)

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Bald and Golden Eagle Protection Act (16 U.S.C. 668-668d; 54 Stat. 250)  
Refuge Trespass Act of June 25, 1948 (18 U.S.C. 41; 62 Stat. 686)  
Fish and Wildlife Act of 1956 (16 U.S.C. 742a-742j; 70 Stat. 1119)  
Refuge Recreation Act of 1962 (16 U.S.C. 460k-460k-4; 76 Stat. 653)  
Wilderness Act (16 U.S.C. 1131; 78 Stat. 890)  
Land and Water Conservation Fund Act of 1965  
National Historic Preservation Act of 1966, as amended (16 U.S.C. 470, et seq.; 80 Stat. 915)  
National Wildlife Refuge System Administration Act of 1966 (16 U.S.C. 668dd, 668ee; 80 Stat. 927)  
National Environmental Policy Act of 1969, NEPA (42 U.S.C. 4321, et seq; 83 Stat. 852)  
Use of Off-Road Vehicles on Public Lands (Executive Order 11644, as amended by Executive Order 10989)  
Endangered Species Act of 1973 (16 U.S.C. 1531 et seq; 87 Stat. 884)  
Refuge Revenue Sharing Act of 1935, as amended in 1978 (16 U.S.C. 715s; 92 Stat. 1319)  
National Wildlife Refuge Regulations for the Most Recent Fiscal Year (50 CFR Subchapter C; 43 CFR 3101.3-3)  
Emergency Wetlands Resources Act of 1986 (S.B. 740)  
North American Wetlands Conservation Act of 1990  
Food Security Act (Farm Bill) of 1990 as amended (HR 2100)  
The Property Clause of The U.S. Constitution Article IV 3, Clause 2  
The Commerce Clause of The U.S. Constitution Article 1, Section 8  
The National Wildlife Refuge System Improvement Act of 1997 (Public Law 105-57, USC668dd)  
Executive Order 12996, Management and General public Use of the National Wildlife Refuge System. March 25, 1996  
Title 50, Code of Federal Regulations, Parts 25-33  
Archaeological Resources Protection Act of 1979  
Native American Graves Protection and Repatriation Act of 1990  
National Wildlife Refuge System Improvement Act of 1997 (Public law 105-57, October 9, 1997)

Compatibility determinations for each description listed are considered separately. Although, for brevity, the preceding sections from “Uses” through “Other Applicable Laws, Regulations, and Policies” are only written once within the CCP, they are part of each descriptive use and become part of that compatibility determination if considered outside of the CCP.

**(1) Description of Use:** Boating (motorized and non-motorized)

Recreational boating that is connected with other public use activities, such as hunting, fishing, and wildlife observation and photography over and adjacent to refuge-owned water bottoms. No air boats, mud boats, or air-cooled propulsion engines are allowed on refuge waters.

**Availability of Resources:** Funding for boating is supported by annual operation and maintenance funds. Costs include permit printing, administration, and monitoring the activity.

**Anticipated Impacts of the Use:** Boating use whether it is motorized or non-motorized over refuge waters for regulated public use activities in accordance with permit regulations should not have any significant adverse biological impacts. As currently proposed, the known and anticipated levels of disturbance of allowing boating fishing is considered minimal and well within the tolerance level of known fish and wildlife species and populations present on the refuge. Implementation of an effective law enforcement program and development of site specific refuge regulations that are reviewed annually should minimize most problems.

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**Public Review and Comment:** Methods used to solicit public review and comment on the Draft Comprehensive Conservation Plan and Environmental Assessment (Draft CCP/EA) included posted notices at refuge headquarters and area locations; and copies of the Draft CCP/EA distributed to adjacent landowners, the public, and local, state, and federal agencies. A notice was published in the *Federal Register* on July 11, 2008 (73 FR 39978), which announced the availability of the Draft CCP/EA for a 30-day comment period.

**Determination (check one below):**

Use is Not Compatible

Use is Compatible with Following Stipulations

**Stipulations Necessary to Ensure Compatibility:**

- Air boats, mud boats, and air cooled propulsion engines are prohibited on the refuge waters.

**Justification:** The National Wildlife Refuge System Improvement Act of 1997 identified hunting, fishing, and wildlife observation and wildlife photography as priority public uses on national wildlife refuges, where compatible with refuge purposes. Boating can facilitate these priority public uses and is the only way to access the refuge due to its remote location. This use is legitimate and appropriate. Offering recreational boating is in compliance with refuge goals, is a management objective for Delta NWR, and furthers the mission of the Refuge System.

**NEPA Compliance for Refuge Use Description:** *Place an X in appropriate space.*

Categorical Exclusion without Environmental Action Statement

Categorical Exclusion and Environmental Action Statement

Environmental Assessment and Finding of No Significant Impact

Environmental Impact Statement and Record of Decision

**Mandatory 10-year Re-evaluation Date:** 9/19/2018

**(2) Description of Use:** Recreational Fishing

Recreational fishing, a wildlife-dependent activity, has been identified in the National Wildlife Refuge System Improvement Act of 1997 as a priority public use, provided it is compatible with the purpose for which the refuge was established.

Recreational fishing of freshwater and saltwater species is allowed year-round on the refuge. Fisherman are allowed to take crabs with traps. While fishing is a popular public use on the refuge, fishing pressure is not heavy at this time and heavily dependent on tidal movement and river elevation.

All fishing falls within the framework of Louisiana's open seasons and follows state regulations. Refuge-specific regulations are reviewed annually and incorporated into the refuge hunting and fishing permit. Fishermen are not required to possess refuge permits while fishing on the refuge. The entire refuge is open to fishing during hours of daylight with the exception of areas posted with

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“Area Closed” signs or so designated in the hunting and fishing permit during state waterfowl seasons. The areas between Main Pass and Raphael Pass are closed during the state waterfowl hunting seasons to all access. The waterfowl areas open to hunting are open to fishing during the state waterfowl season during the hours of daylight after 12:00 p.m.

Limb lines, trotlines, slat traps, nets, and jug fishing are prohibited. No commercial fishing activities, including guiding or participating in a charter fishing trip, are permitted. Harvest information is gathered by a voluntary self-check form.

**Availability of Resources:** Funding for the fishing program is supported by annual operation and maintenance funds. Costs include administration and monitoring the activity.

**Anticipated Impacts of the Use:** While managed fishing opportunities result in both short- and long-term impacts to individual fish, effects at the population level are usually negligible. The fish populations are capable of sustaining harvest because of the availability of habitat and location to the Mississippi River and the Gulf of Mexico. Fishing regulations for both saltwater and freshwater species are based on specific state-wide harvest objectives. State biologists set limits and harvest guidelines based on population survey and habitat condition data. Refuge fishing programs are always within these regulations. As currently proposed, the known and anticipated levels of disturbance by allowing fishing is considered minimal and well within the tolerance level of known fish species and populations present on the refuge. All fishing activities will be conducted with the constraints of sound biological principles and refuge-specific regulations established to restrict illegal or questionable activities. Monitoring activities through fish inventories in partnerships with the state and assessments of public use levels and activities and public use programs will be adjusted as needed to limit disturbance. Implementation of an effective law enforcement program and development of site-specific refuge regulations that are reviewed annually should minimize most problems.

**Public Review and Comment:** Methods used to solicit public review and comment on the Draft Comprehensive Conservation Plan and Environmental Assessment (Draft CCP/EA) included posted notices at refuge headquarters and area locations; and copies of the Draft CCP/EA distributed to adjacent landowners, the public, and local, state, and federal agencies. A notice was published in the *Federal Register* on July 11, 2008 (73 FR 39978), which announced the availability of the Draft CCP/EA for a 30-day comment period.

**Determination (check one below):**

Use is Not Compatible

Use is Compatible with Following Stipulations

**Stipulations Necessary to Ensure Compatibility:**

- Fishing is allowed in accordance with state established annual regulations and limits as set by Louisiana Department of Wildlife and Fisheries.
- Sport fishing and crabbing are permitted only during daylight hours and only after 12:00 p.m. in the waterfowl hunting areas during state waterfowl hunting season.
- Limb lines, trotlines, slat traps, nets, and jug fishing are prohibited.

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**Justification:** The National Wildlife Refuge System Improvement Act of 1997 identified fishing as one of the priority public uses on national wildlife refuges, where compatible with refuge purposes. This use is legitimate and appropriate and is dependent upon healthy fish populations. Offering fishing is in compliance with refuge goals, is a management objective for Delta NWR, and furthers the mission of the Refuge System.

**NEPA Compliance for Refuge Use Description:** *Place an X in appropriate space.*

- Categorical Exclusion without Environmental Action Statement
- Categorical Exclusion and Environmental Action Statement
- Environmental Assessment and Finding of No Significant Impact
- Environmental Impact Statement and Record of Decision

**Mandatory 15-year Re-evaluation Date:** 9/19/2023

### **(3) Description of Use:** Recreational Hunting

Recreational hunting, a wildlife-dependent activity, has been identified in the National Wildlife Refuge System Improvement Act of 1997 as a priority public use, provided it is compatible with the purpose for which the refuge was established and Executive Order 13443 “Facilitation of Hunting Heritage and Wildlife Conservation” dated August 17, 2007. The order directs federal agencies that have programs and activities that have a measurable effect on public land management, outdoor recreation, and wildlife management, including the Departments of Interior and Agriculture, to facilitate the expansion and enhancement of hunting opportunities and the management of game species and their habitat.

Recreational hunting of white-tailed deer with bow and arrow, migratory game birds, and rabbits is allowed on the refuge. Hunters are also allowed to take feral hogs with bow and arrow during archery deer season. While hunting is the most popular public use on the refuge, hunting pressure is not heavy at this time.

All hunts fall within the framework of Louisiana’s open seasons and follow state regulations. Refuge-specific regulations are reviewed annually and incorporated into the refuge hunting permit. Hunters are required to possess refuge permits while hunting on the refuge. The entire refuge is open to hunting with the exception of areas posted with “Area Closed” signs or so designated in the hunting permit. The areas between Main Pass and Raphael Pass are closed during the hunting seasons to all access.

Waterfowl (ducks and geese), coots, rails, and gallinules may be hunted during the state season on Wednesday, Thursday, Saturday, and Sunday until noon, using non-toxic shot. Retrievers are allowed. Rabbits may be hunted during the state season, using only shotguns with non-toxic shot and dogs may be used only after the close of the state gun deer season. White-tailed deer harvest is limited to archery from October 1-31 and from the day after the close of the state waterfowl season until January 31, following the state limits and regulations. No commercial hunting activities, including guiding or participating in a guided hunt, are permitted. Harvest information is gathered by a voluntary self-check form contained in the hunting permit.



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**Availability of Resources:** Funding for the hunt program is supported by annual operation and maintenance funds. Costs include permit printing, administration, and monitoring the activity.

**Anticipated Impacts of the Use:** While managed hunting opportunities result in take of some individual animals, short term impacts to individual animals at the population level are usually negligible. Small game animal populations are capable of sustaining harvest because of their short reproduction cycles. Hunting regulations for both endemic and migratory game species are based on specific state-wide and nation-wide harvest objectives. Migratory bird regulations are established at the federal level each year following a series of meetings involving both state and federal biologists. Harvest guidelines are based on population survey and habitat condition data. Refuge hunting programs are always within these regulations. As currently proposed, the known and anticipated levels of disturbance of allowing hunting are considered minimal and well within the tolerance level of known wildlife species and populations present on the refuge. All hunting activities will be conducted with the constraints of sound biological principles and refuge-specific regulations established to restrict illegal or questionable activities. Monitoring activities through wildlife inventories and assessments of public use levels and activities will be utilized, and public use programs will be adjusted as needed to limit disturbance. Implementation of an effective law enforcement program and development of site specific refuge regulations that are reviewed annually should minimize most incidental take problems.

**Public Review and Comment:** Methods used to solicit public review and comment on the Draft Comprehensive Conservation Plan and Environmental Assessment (Draft CCP/EA) included posted notices at refuge headquarters and area locations; and copies of the Draft CCP/EA distributed to adjacent landowners, the public, and local, state, and federal agencies. A notice was published in the *Federal Register* on July 11, 2008 (73 FR 39978), which announced the availability of the Draft CCP/EA for a 30-day comment period.

**Determination (check one below):**

Use is Not Compatible

Use is Compatible with Following Stipulations

**Stipulations Necessary to Ensure Compatibility:**

- Hunting seasons and bag limits are established annually as agreed upon during the annual hunt coordination meeting with Louisiana Department of Wildlife and Fisheries personnel.
- All hunters are required to possess a signed refuge hunting permit while participating in refuge hunts. State hunting regulations apply unless otherwise listed in the permit.
- Non-toxic shot must be used.

**Justification:** The National Wildlife Refuge System Improvement Act of 1997 identified hunting as one of the priority public uses on national wildlife refuges, where compatible with refuge purposes. Executive Order 13443 "Facilitation of Hunting Heritage and Wildlife Conservation" dated August 17, 2007, directs federal agencies that have programs and activities that have a measurable effect on public land management, outdoor recreation, and wildlife management, including the Departments of Interior and Agriculture, to facilitate the expansion and enhancement of hunting opportunities and the management of game species and their habitat.

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This use is legitimate and appropriate and is dependent upon healthy wildlife populations. Offering hunting is in compliance with refuge goals, is a management objective for Delta NWR, and furthers the mission of the Refuge System.

**NEPA Compliance for Refuge Use Description:** *Place an X in appropriate space.*

- Categorical Exclusion without Environmental Action Statement
- Categorical Exclusion and Environmental Action Statement
- Environmental Assessment and Finding of No Significant Impact
- Environmental Impact Statement and Record of Decision

**Mandatory 15-year Re-evaluation Date:** 9/19/2023

**(4) Description of Use:** Wildlife Observation and Photography

Wildlife observation and photography have been identified in the National Wildlife Refuge System Improvement Act of 1997 as priority wildlife-dependent recreation uses provided they are compatible with the purpose for which the refuge was established.

Though photography and observation have occurred on the refuge, there are no blinds or platforms designated for these activities. None are proposed or planned at this time. However, opportunities exist for visitors traveling to the refuge for these activities. Commercial photography or videography is allowed under a special use permit with special conditions specific to those activities. Often copies are given to the refuge for use with refuge programs or publications.

The general public may participate in wildlife observation and photography year-round from one half hour before sunrise to one half hour after sunset in the open areas of the refuge. Boating is the only available access for these activities due to location and area.

**Availability of Resources:** Funding for wildlife observation and photography use is supported by annual operation and maintenance funds. Costs include administration and monitoring the activity.

**Anticipated Impacts of the Use:** Wildlife observation and photography should not have any significant adverse biological impacts. As currently proposed, the known and anticipated levels of disturbance of allowing these activities is considered minimal and well within the tolerance level of known fish and wildlife species and populations present on the refuge. Implementation of an effective law enforcement program and development of site-specific refuge regulations that are reviewed annually should minimize most problems.

**Public Review and Comment:** Methods used to solicit public review and comment on the Draft Comprehensive Conservation Plan and Environmental Assessment (Draft CCP/EA) included posted notices at refuge headquarters and area locations; and copies of the Draft CCP/EA distributed to adjacent landowners, the public, and local, state, and federal agencies. A notice was published in the *Federal Register* on July 11, 2008 (73 FR 39978), which announced the availability of the Draft CCP/EA for a 30-day comment period.

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**Determination (check one below):**

Use is Not Compatible

Use is Compatible with Following Stipulations

**Stipulations Necessary to Ensure Compatibility:**

- Access to areas of the refuge identified as “Closed” during the state waterfowl season must be prohibited.
- The refuge is open 30 minutes before legal sunrise to 30 minutes after legal sunset for all public use on the refuge.

**Justification:** The National Wildlife Refuge System Improvement Act of 1997 identified wildlife observation and photograph as two of the priority public uses on national wildlife refuges, where compatible with refuge purposes. These uses are legitimate and appropriate and are dependent upon healthy wildlife populations. Offering wildlife observation and photography is in compliance with refuge goals, is a management objective for Delta NWR, and furthers the mission of the Refuge System.

**NEPA Compliance for Refuge Use Description:** *Place an X in appropriate space.*

Categorical Exclusion without Environmental Action Statement

Categorical Exclusion and Environmental Action Statement

Environmental Assessment and Finding of No Significant Impact

Environmental Impact Statement and Record of Decision

**Mandatory 15-year Re-evaluation Date:** 9/19/2023

The signature of approval is for all compatibility determinations considered within the Comprehensive Conservation Plan for Delta National Wildlife Refuge. If one of the descriptive uses is considered for compatibility outside of the Comprehensive Conservation Plan, the approval signature becomes part of that determination.

Refuge Manager: *K. L. Zuberger* 8/11/08  
Signature Date

Regional Compatibility Coordinator: *Signed* 8/15/08  
Signature Date

Refuge Supervisor: *Signed* 9/17/08  
Signature Date

*Pelina*  
Regional Chief, National  
Wildlife Refuge System,  
Southeast Region:

*Signed* 9/18/08  
Signature Date

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## Breton National Wildlife Refuge Compatibility Determination

**Uses:** The following uses were considered for compatibility determination:

- 1) Recreational fishing of saltwater fish in accordance with the State of Louisiana regulations
- 2) Wildlife observation/photography

A description and the anticipated biological impacts for each use are addressed separately in this Compatibility Determination.

**Refuge Name:** Breton National Wildlife Refuge

**Date Established:** October 4, 1904

**Establishing and Acquisition Authorities:** Originally designated by an unnumbered Executive Order on October 4, 1904. Established as the Breton Island Reservation by Executive Order 369-A on November 11, 1905. Established as the Breton Bird Refuge by Executive Order 7983 on October 4, 1938. All of the federally owned lands of the refuge were entered into the National Wilderness Preservation System on January 3, 1975 (Public Law 93-632).

**Refuge Purpose:** The refuge was established to provide sanctuary for nesting wading birds and waterfowl, to protect and preserve the wilderness character of the islands, and to provide sandy beach habitat for a variety of wildlife species.

### National Wildlife Refuge System Mission:

The mission of the Refuge System, as defined by the National Wildlife Refuge System Improvement Act of 1997, is:

*... to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife and plant resources and their habitats within the United States for the benefit of present and future generations of Americans.*

### Other Applicable Laws, Regulations, and Policies:

Antiquities Act of 1906 (34 Stat. 225)  
Migratory Bird Treaty Act of 1918 (15 U.S.C. 703-711; 40 Stat. 755)  
Migratory Bird Conservation Act of 1929 (16 U.S.C. 715r; 45 Stat. 1222)  
Migratory Bird Hunting Stamp Act of 1934 (16 U.S.C. 718-178h; 48 Stat. 451)  
Criminal Code Provisions of 1940 (18 U.S.C. 41)  
Bald and Golden Eagle Protection Act (16 U.S.C. 668-668d; 54 Stat. 250)  
Refuge Trespass Act of June 25, 1948 (18 U.S.C. 41; 62 Stat. 686)  
Fish and Wildlife Act of 1956 (16 U.S.C. 742a-742j; 70 Stat. 1119)  
Refuge Recreation Act of 1962 (16 U.S.C. 460k-460k-4; 76 Stat. 653)  
Wilderness Act (16 U.S.C. 1131; 78 Stat. 890)  
Land and Water Conservation Fund Act of 1965  
National Historic Preservation Act of 1966, as amended (16 U.S.C. 470, et seq.; 80 Stat. 915)  
National Wildlife Refuge System Administration Act of 1966 (16 U.S.C. 668dd, 668ee; 80 Stat. 927)  
National Environmental Policy Act of 1969, NEPA (42 U.S.C. 4321, et seq; 83 Stat. 852)

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Use of Off-Road Vehicles on Public Lands (Executive Order 11644, as amended by Executive Order 10989)  
Endangered Species Act of 1973 (16 U.S.C. 1531 et seq; 87 Stat. 884)  
Refuge Revenue Sharing Act of 1935, as amended in 1978 (16 U.S.C. 715s; 92 Stat. 1319)  
National Wildlife Refuge Regulations for the Most Recent Fiscal Year (50 CFR Subchapter C; 43 CFR 3101.3-3)  
Emergency Wetlands Resources Act of 1986 (S.B. 740)  
North American Wetlands Conservation Act of 1990  
Food Security Act (Farm Bill) of 1990 as amended (HR 2100)  
The Property Clause of The U.S. Constitution Article IV 3, Clause 2  
The Commerce Clause of The U.S. Constitution Article 1, Section 8  
The National Wildlife Refuge System Improvement Act of 1997 (Public Law 105-57, USC668dd)  
Executive Order 12996, Management and General public Use of the National Wildlife Refuge System. March 25, 1996  
Title 50, Code of Federal Regulations, Parts 25-33  
Archaeological Resources Protection Act of 1979  
Native American Graves Protection and Repatriation Act of 1990

Compatibility determinations for each description listed are considered separately. Although, for brevity, the preceding sections from “Uses” through “Other Applicable Laws, Regulations and Policies” are only written once within the CCP, they are part of each descriptive use and become part of that compatibility determination if considered outside of the CCP.

**(1) Description of Use:** Recreational Fishing

Recreational fishing, a wildlife-dependent activity, has been identified in the National Wildlife Refuge System Improvement Act of 1997 as a priority public use, provided it is compatible with the purpose for which the refuge was established.

Recreational fishing of saltwater species is allowed year-round on the refuge. Fishermen usually wade the shallow areas adjacent to the refuge but occasionally fish from the beach. Crabbing is allowed on the refuge. While fishing is a popular public use on the refuge, fishing and crabbing pressure is not heavy at this time. Tidal movements within the Breton Sound greatly impact fishing success.

All fishing falls within the framework of the State of Louisiana open seasons and follows state regulations. Refuge-specific regulations are reviewed annually and incorporated into the refuge brochure. Fishermen are not required to possess refuge permits while fishing on the refuge. The entire refuge is open to fishing during hours of daylight with the exception of areas posted with “Area Closed” signs so designated in the refuge brochure.

Limb lines, trotlines, slat traps, nets, and jug fishing are prohibited. No commercial fishing activities, including guiding or participating in a charter fishing trip, are permitted.

**Availability of Resources:** Funding for recreational fishing is supported by annual operation and maintenance funds. Costs include permit printing, administration, and monitoring the activity.

**Anticipated Impacts of the Use:** While managed fishing opportunities result in impacts to individual fish, effects at the population level are usually negligible. The fish populations are capable of sustaining harvest because of the availability of abundant habitat in coastal Louisiana and large marsh areas surrounding the Mississippi River and proximity of the Gulf of Mexico. Regulations for saltwater fishing are based on specific state-wide harvest objectives. State biologists set limits and harvest guidelines

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based on population survey and habitat condition data. Refuge fishing programs are always within these regulations. As currently proposed, the known and anticipated levels of disturbance of allowing fishing is considered minimal and well within the tolerance level of known fish species and populations present on the refuge. All fishing activities will be conducted with the constraints of sound biological principles and refuge-specific regulations established to restrict illegal or questionable activities. Monitoring activities through fish wildlife inventories in partnership with the state and assessment of public use levels and activities will be utilized, and public use programs will be adjusted as needed to limit disturbance. Implementation of an effective law enforcement program and development of site-specific refuge regulations that are reviewed annually should minimize most problems.

**Public Review and Comment:** Methods used to solicit public review and comment on the Draft Comprehensive Conservation Plan and Environmental Assessment (Draft CCP/EA) included posted notices at refuge headquarters and area locations; and copies of the Draft CCP/EA distributed to adjacent landowners, the public, and local, state, and federal agencies. A notice was published in the *Federal Register* on July 11, 2008 (73 FR 39978), which announced the availability of the Draft CCP/EA for a 30-day comment period.

**Determination (check one below):**

Use is Not Compatible

Use is Compatible with Following Stipulations

**Stipulations Necessary to Ensure Compatibility:**

- Access to areas of the refuge identified as “Area Closed” during nesting season for sea and shore birds must be continued.
- Refuge hours must continue to remain open 30 minutes before legal sunrise to 30 minutes after sunset for all public use on the refuge.
- Limb lines, trotlines, slat traps, nets, and jug fishing are prohibited.

**Justification:** The National Wildlife Refuge System Improvement Act of 1997 identified recreational fishing as one of the priority public uses on national wildlife refuges, where compatible with refuge purposes. This use is legitimate and appropriate and is dependent upon healthy wildlife populations. Offering recreational fishing is in compliance with refuge goals, is a management objective for Breton NWR, and furthers the mission of the Refuge System.

**NEPA Compliance for Refuge Use Description:** *Place an X in appropriate space.*

- Categorical Exclusion without Environmental Action Statement  
 Categorical Exclusion and Environmental Action Statement  
 Environmental Assessment and Finding of No Significant Impact  
 Environmental Impact Statement and Record of Decision

**Mandatory 15-year Re-evaluation Date:** 9/19/2023

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**(2) Description of Use:** Wildlife Observation and Photography

Wildlife observation and photography have been identified in the National Wildlife Refuge System Improvement Act of 1997 as priority wildlife-dependent recreation uses provided they are compatible with the purpose for which the refuge was established.

Though photography and observation have occurred on the refuge, there are no blinds or platforms designated for these activities. None are proposed or planned at this time. However, opportunity exists for visitors traveling to the refuge for these activities. Commercial photography or videography is allowed under a special use permit with special conditions specific to those activities. Often copies are given to the refuge for use with refuge programs or publications.

The general public may participate in wildlife observation and photography year-round from one half hour before sunrise to one half hour after sunset in the open areas of the refuge. Boating is the only available access available for these activities due to location and area.

**Availability of Resources:** Funding for wildlife observation and photography is supported by annual operation and maintenance funds. Costs include permit printing, administration, and monitoring the activity.

**Anticipated Impacts of the Use:** Wildlife observation and photography should not have any significant adverse biological impacts. As currently proposed, the known and anticipated levels of disturbance of allowing these activities is considered minimal and well within the tolerance level of known fish and wildlife species and populations present on the refuge. Implementation of an effective law enforcement program and development of site-specific refuge regulations that are reviewed annually should minimize most problems.

**Public Review and Comment:** Methods used to solicit public review and comment on the Draft Comprehensive Conservation Plan and Environmental Assessment (Draft CCP/EA) included posted notices at refuge headquarters and area locations; and copies of the Draft CCP/EA distributed to adjacent landowners, the public, and local, state, and federal agencies. A notice was published in the *Federal Register* on July 11, 2008 (73 FR 39978), which announced the availability of the Draft CCP/EA for a 30-day comment period.

**Determination (check one below):**

Use is Not Compatible

Use is Compatible with Following Stipulations

**Stipulations Necessary to Ensure Compatibility:**

- Access to areas of the refuge identified as "Area Closed" during nesting season for sea and shore birds must be continued.
- Refuge hours must continue to remain open 30 minutes before legal sunrise to 30 minutes after sunset for all public use on the refuge.



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**Justification:** The National Wildlife Refuge System Improvement Act of 1997 identified wildlife observation and photography as two of the priority public uses on national wildlife refuges, where compatible with refuge purposes. These uses are legitimate and appropriate and are dependent upon healthy wildlife populations. Offering wildlife observation and photography is in compliance with refuge goals, is a management objective for Breton NWR, and furthers the mission of the Refuge System.

**NEPA Compliance for Refuge Use Description:** *Place an X in appropriate space.*

- Categorical Exclusion without Environmental Action Statement
- Categorical Exclusion and Environmental Action Statement
- Environmental Assessment and Finding of No Significant Impact
- Environmental Impact Statement and Record of Decision

**Mandatory 15-year Re-evaluation Date:** 9/19/2023

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## Approval of Compatibility Determinations

The signature of approval is for all compatibility determinations considered within the Comprehensive Conservation Plan for Breton National Wildlife Refuge. If one of the descriptive uses is considered for compatibility outside of the Comprehensive Conservation Plan, the approval signature becomes part of that determination.

Refuge Manager:

*Signed*  
Signature

8/11/08  
Date

Regional Compatibility  
Coordinator:

*Signed*  
Signature

8/15/08  
Date

Refuge Supervisor:

*Signed*  
Signature

9/17/08  
Date

*Acting*  
Regional Chief, National  
Wildlife Refuge System,  
Southeast Region:

*Signed*  
Signature

9/18/08  
Date



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# Appendix G. Intra-Service Section 7 Biological Evaluations

**Originating Person:** Jack Bohannon  
**Telephone Number:** (985) 882-2000  
**E-Mail:** jack\_bohannon@fws.gov  
**Date:** August 28, 2007

**PROJECT NAME:** Delta National Wildlife Refuge Comprehensive Conservation Plan

**I. Service Program:**

- Ecological Services
- Federal Aid
- Clean Vessel Act
- Coastal Wetlands
- Endangered Species Section 6
- Partners for Fish and Wildlife
- Sport Fish Restoration
- Wildlife Restoration
- Fisheries
- Refuges/Wildlife

**II. State/Agency:** Louisiana, U.S. Fish and Wildlife Service

**III. Station Name:** Delta National Wildlife Refuge (NWR)

**IV. Description of Proposed Action**

The proposed action would result in the implementation of the preferred alternative developed during the preparation of the Comprehensive Conservation Plan (CCP) for Delta NWR, a 49,000-acre refuge in Plaquemines Parish, Louisiana. Upon approval of the CCP, the following uses on the refuge will be implemented for a period of fifteen years; recreational hunting, recreational fishing, boating, wildlife observation and photography.

The preferred alternative identified in the CCP is to continue providing sanctuary and habitat for wintering waterfowl. This alternative supports the purpose for which the refuge was established "for use in an inviolate sanctuary or for any other management purpose for migratory birds" [16 U.S.C. 715d] (Migratory Bird Conservation Act), to protect and conserve 49,000 acres of estuarine habitats for a variety of wildlife species, and to provide opportunities to the public for wildlife-dependent interpretation, education, and recreation.

**V. Pertinent Species and Habitat:**

The refuge is adjacent to the Mississippi River and is an active part of the Delta Bird's Foot, which was created by sediment carried by the river that is stacked to a level which emerges from underwater to become vegetated and capture additional sediment and continue building new marsh. It is classified as Palustrine Emergent Wetlands. Two basic marsh zones occur

within the marsh habitat: fresh marsh nearest the main tributary and brackish marsh near the Gulf of Mexico waters. These tidally influenced marsh's fluctuate from a few inches to two feet. The fertile soils, vegetative composition and shallow water environment create a highly productive habitat for fish and wildlife. Endangered species occurring on the refuge are Brown Pelicans "*Pelecanus occidentalis*" and Interior Least Terns "*Sterna antillarum athalassos*". Threatened species occurring on the refuge are Gulf Sturgeon "*Acipenser oxyrinchus desotoi*" and Piping Plovers "*Chararadius melodus*".

A. Include species/habitat occurrence map:

B. Complete the following table:

SPECIES/CRITICAL HABITAT	STATUS <sup>1</sup>
Brown Pelican " <i>Pelecanus occidenallis</i> "	Endangered
Interior Least Terns " <i>Sterna antillarum</i> "	Endangered
Gulf Sturgeon " <i>Acipenser oxyrinchus desotoi</i> "	Threatened
Piping Plover " <i>Charadrius melodus</i> "	Threatened

<sup>1</sup>STATUS: E=endangered, T=threatened, PE=proposed endangered, PT=proposed threatened, CH=critical habitat, PCH=proposed critical habitat, C=candidate species, S/A=Similar Appearance

**VI. Location (attach map):**

- A. **Ecoregion Number and Name:** 27, Lower Mississippi River
- B. **County and State:** Plaquemines Parish, Louisiana
- C. **Section, township, and range (or latitude and longitude):** N 29.280 W89.243
- D. **Distance (miles) and direction to nearest town:** Venice , LA (70091); North 8 miles west side of Mississippi River

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**E. Species/habitat occurrence:**

Brown Pelicans use the refuge for loafing, resting, and feeding along edges of the Gulf of Mexico.

Least terns infrequently use small areas of beach along the Gulf of Mexico at low tide.

The Gulf Sturgeon uses the Mississippi River and tributaries entering the refuge throughout the year.

Piping Plover infrequently use small areas of beach along the Gulf of Mexico and low tide.

**VII. Determination of Effects:**

**A. Explanation of effects of the action on species and critical habitats in item V. B:**

<b>SPECIES/ CRITICAL HABITAT</b>	<b>IMPACTS TO SPECIES/CRITICAL HABITAT</b>
Brown Pelican	None
Interior Least Tern	None
Gulf Sturgeon	None
Piping Plover	None

**B. Explanation of actions to be implemented to reduce adverse effects:**

<b>SPECIES/ CRITICAL HABITAT</b>	<b>ACTIONS TO MITIGATE/MINIMIZE IMPACTS</b>
N/A	N/A

**VIII. Effect Determination and Response Requested:**

SPECIES/CRITICAL HABITAT	DETERMINATION <sup>1</sup>			REQUESTED
	NE	NA	AA	
Brown Pelican	X			Concurrence
Interior Least Tern	X			Concurrence
Gulf Sturgeon	X			Concurrence
Piping Plover	X			Concurrence
				Concurrence

<sup>1</sup>DETERMINATION/ RESPONSE REQUESTED:

NE = no effect. This determination is appropriate when the proposed action will not directly, indirectly, or cumulatively impact, either positively or negatively, any listed, proposed, candidate species or designated/proposed critical habitat. Response Requested is optional but a "Concurrence" is recommended for a complete Administrative Record.

NA = not likely to adversely affect. This determination is appropriate when the proposed action is not likely to adversely impact any listed, proposed, candidate species or designated/proposed critical habitat or there may be beneficial effects to these resources. Response Requested is a "Concurrence".

AA = likely to adversely affect. This determination is appropriate when the proposed action is likely to adversely impact any listed, proposed, candidate species or designated/proposed critical habitat. Response Requested for listed species is "Formal Consultation". Response requested for proposed and candidate species is "Conference".

**Signed**  
 Signature (originating station)  
 Title

Date 9/25/02

28. Reviewing Ecological Services Office Evaluation:
- A. Concurrence  Nonconcurrence \_\_\_\_\_
  - B. Formal consultation required \_\_\_\_\_
  - C. Conference required \_\_\_\_\_
  - D. Informal conference required \_\_\_\_\_
  - E. Remarks (attach additional pages as needed):

**Signed**  
 Signature  
 Date 11/5/02

**Signed**  
 Title Lafayette, LA GS  
 Office

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**INTRA-SERVICE SECTION 7 BIOLOGICAL EVALUATION FORM**

**Originating Person:** Jack Bohannon  
**Telephone Number:** (985) 882-2026  
**E-Mail:** jack\_bohannon@fws.gov  
**Date:** August 28, 2007

**PROJECT NAME:** Breton National Wildlife Refuge Comprehensive Conservation Plan

- I. Service Program:**
- Ecological Services
  - Federal Aid
  - Clean Vessel Act
  - Coastal Wetlands
  - Endangered Species Section 6
  - Partners for Fish and Wildlife
  - Sport Fish Restoration
  - Wildlife Restoration
  - Fisheries
  - Refuges/Wildlife

**II. State/Agency:** Louisiana, U.S. Fish and Wildlife Service

**III. Station Name:** Breton National Wildlife Refuge

**IV. Description of Proposed Action**

The proposed action would result in the implementation of the preferred alternative developed during the preparation of the Comprehensive Conservation Plan (CCP) for Breton National Wildlife Refuge, a 3,000-acre refuge in Plaquemines and St. Bernard Parishes, Louisiana. Upon approval of the CCP, the following uses on the refuge will be implemented for a period of fifteen years; recreational fishing and wildlife observation and photography.

The preferred alternative identified in the CCP is to continue providing sanctuary for nesting wading birds and seas birds as well as wintering shore birds and waterfowl, to protect and preserve the wilderness character of the islands, and to provide sandy beach habitat for a variety of wildlife species. This alternative supports the purpose for which the refuge was established.

**V. Pertinent Species and Habitat:**

The refuge is composed of barrier islands formed from the remnants of the former Mississippi River's St. Bernard delta. As the course of the river shifted westward two thousand years ago, it left behind sediment that formed the islands. The islands have been reshaped and continually decreasing in size due to impacts from tidal action, winds, and tropical storms. The refuge provides sandy beach habitat with vegetation comprised of black mangrove and groundsel bush. The shallow areas around the islands support beds of manatee, shoal, turtle, and widgeon grass. This habitat offers significant importance for nesting sea, shore and



wading birds. Endangered species occurring on the refuge are Brown Pelicans "*Pelecanus occidentalis*" and Interior Least Terns "*Sterna antillarum athalassos*". Threatened species occurring on the refuge are Piping Plovers "*Chararadius melodus*."

A. Include species/habitat occurrence map:

B. Complete the following table:

SPECIES/CRITICAL HABITAT	STATUS <sup>1</sup>
Brown Pelican " <i>Pelecanus occidenallis</i> "	Endangered
Interior Least Terns " <i>Sterna antillarum</i> "	Endangered
Piping Plover " <i>Charadrius melodus</i> "	Threatened

<sup>1</sup>STATUS: E=endangered, T=threatened, PE=proposed endangered, PT=proposed threatened, CH=critical habitat, PCH=proposed critical habitat, C=candidate species, S/A=Similar Appearance

**VI. Location (attach map):**

**A. Ecoregion Number and Name:** 27, Lower Mississippi River

**B. County and State:** Plaquemines and St. Bernard Parishes, Louisiana

**D. Section, township, and range (or latitude and longitude):** N 29.464 W 89.199

**F. Distance (miles) and direction to nearest town:** Venice, LA (70091), sixteen miles west of the refuge

**G. Species/habitat occurrence:**

Brown pelicans use the refuge for loafing, resting, nesting and feeding around the islands throughout the year.

Least terns frequently use the sandy beach habitat during the winter.

Piping plover frequently use the sandy beach habitat during the winter.

**VII. Determination of Effects:**

**C. Explanation of effects of the action on species and critical habitats in item V. B:**

<b>SPECIES/ CRITICAL HABITAT</b>	<b>IMPACTS TO SPECIES/CRITICAL HABITAT</b>
Brown Pelican	None
Interior Least Tern	None
Piping Plover	None

**B. Explanation of actions to be implemented to reduce adverse effects:**

<b>SPECIES/ CRITICAL HABITAT</b>	<b>ACTIONS TO MITIGATE/MINIMIZE IMPACTS</b>
N/A	N/A

**VIII. Effect Determination and Response Requested:**

<b>SPECIES/CRITICAL HABITAT</b>	<b>DETERMINATION<sup>1</sup></b>			<b>REQUESTED</b>
	<b>NE</b>	<b>NA</b>	<b>AA</b>	
Brown Pelican	X			Concurrence
Interior Least Tern	X			Concurrence
Piping Plover	X			Concurrence

<sup>1</sup>**DETERMINATION/ RESPONSE REQUESTED:**

*NE = no effect. This determination is appropriate when the proposed action will not directly, indirectly, or cumulatively impact, either positively or negatively, any listed, proposed, candidate species or designated/proposed critical habitat. Response Requested is optional but a "Concurrence" is recommended for a complete Administrative Record.*

*NA = not likely to adversely affect. This determination is appropriate when the proposed action is not likely to adversely impact any listed, proposed, candidate species or designated/proposed critical habitat or there may be beneficial effects to these resources. Response Requested is a "Concurrence".*

*AA = likely to adversely affect. This determination is appropriate when the proposed action is likely to adversely impact any listed, proposed, candidate species or designated/proposed critical habitat. Response Requested for listed species is "Formal Consultation". Response requested for proposed and candidate species is "Conference".*

**Signed**  
Signature (originating station) \_\_\_\_\_ Date 11/9/07  
Roger Menden  
Title \_\_\_\_\_

IX. Reviewing Ecological Services Office Evaluation:

- A. Concurrence  Nonconcurrence \_\_\_\_\_
- B. Formal consultation required \_\_\_\_\_
- C. Conference required \_\_\_\_\_
- D. Informal conference required \_\_\_\_\_
- E. Remarks (attach additional pages as needed):

**Signed**  
Signature \_\_\_\_\_ Date 11/5/07  
Acting Supervisor \_\_\_\_\_ Lafayette, La ES  
Title \_\_\_\_\_ Office \_\_\_\_\_

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## *Appendix H. Wilderness Review*

The Wilderness Act of 1964 defines a wilderness area as an area of federal land that retains its primeval character and influence, without permanent improvements or human inhabitation, and is managed so as to preserve its natural conditions and which:

1. generally appears to have been influenced primarily by the forces of nature, with the imprint of man's work substantially unnoticeable;
2. has outstanding opportunities for solitude or primitive and unconfined types of recreation;
3. has at least 5,000 contiguous roadless acres or is of sufficient size to make practicable its preservation and use in an unimpeded condition; or is a roadless island, regardless of size;
4. does not substantially exhibit the effects of logging, farming, grazing, or other extensive development or alteration of the landscape, or its wilderness character could be restored through appropriate management at the time of review; and
5. may contain ecological, geological, or other features of scientific, educational, scenic, or historic value.

The lands within Delta NWR were reviewed for their suitability in meeting the criteria for wilderness, as defined by the Wilderness Act of 1964. No lands in the refuge were found to meet these criteria primarily because of the highly visible and extensive oil and gas development. Therefore, the suitability of Delta NWR lands for wilderness designation is not further analyzed in this plan.

Lands within Breton National Wildlife Refuge were reviewed previously for eligibility and suitable lands were declared a wilderness in 1975. At that time an oil and gas facility, including housing, was located on North Breton Island; the remainder of the refuge was declared a wilderness area. Hurricanes battered the facility over time. After Hurricane Georges, the decision was made not to rebuild and maintain the buildings although the site is still active as an oil and gas terminal.



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# Appendix I. Refuge Biota

Species of concern and/or significance for management purposes occurring on Delta NWR are listed below.

## Common Name

## Scientific Name

### **BIRDS**

Snow Goose	<i>Chen caerulescens</i>
Mallard	<i>Anas platyrhynchos</i>
Mottled Duck	<i>Anas fulvigula</i>
Gadwall	<i>Anas strepera</i>
Northern Pintail	<i>Anas acuta</i>
Green-winged Teal	<i>Anas crecca</i>
Blue-winged Teal	<i>Anas discors</i>
American Wigeon	<i>Anas americana</i>
Northern Shoveler	<i>Anas clypeata</i>
Redhead	<i>Aythya americana</i>
Canvasback	<i>Aythya valisineria</i>
Scaup	<i>Aythya marila</i> ; <i>A. affinis</i> .
Southern Bald Eagle	<i>Haliaeetus leucocephalus leucocephalus</i>
Osprey	<i>Pandion heliaetus</i>
King Rail	<i>Rallus elegans</i>
Clapper Rail	<i>Rallus longirostris</i>
Purple Gallinule	<i>Porphyrio porphyrio</i>
Common Gallinule	<i>Porphyrio martinica</i>
Piping Plover	<i>Charadrius melodus</i>
Greater Yellowlegs	<i>Tringa melanoleuca</i>
Lesser Yellowlegs	<i>Tringa flavipes</i>
Eastern Brown Pelican	<i>Pelecanus occidentalis carolinensis</i>
Great Blue Heron	<i>Ardea herodias</i>
Great Egret	<i>Ardea alba</i>
Louisiana or Tricolored Heron	<i>Egretta tricolor</i>
Black-crowned Night Heron	<i>Nycticorax nycticorax</i>
Roseate Spoonbill	<i>Platalea ajaja</i>
American Avocet	<i>Recurvirostra americana</i>
Black-necked Stilt	<i>Himantopus mexicanus</i>

### **MAMMALS**

Raccoon	<i>Procyon lotor</i>
Nutria	<i>Myocastor coypus</i>

### **REPTILES AND AMPHIBIANS**

Alligator Snapping Turtle	<i>Macrochelys temminckii</i>
Alligator	<i>Alligator mississippiensis</i>

### **FISH**

Gulf Sturgeon	<i>Acipinser oxyrinchus</i>
Alligator Gar	<i>Atractosteus spatula</i>

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## PLANT COMMUNITIES

Delta splay dominated by *Scirpus* spp. and/or *Sagittaria* spp.

Scrub Shrub/Spoil Bank

*Phragmites* marsh

Species of concern and/or significance for management purposes occurring on Breton NWR are listed below.

### Common Name

### Scientific Name

#### **BIRDS**

Piping Plover

Eastern Brown Pelican

Redhead

Scaup

Laughing Gull

Royal Tern

Caspian Tern

Sandwich Tern

Black Skimmer

Sooty Tern

Common Tern

Least Tern

Forster's Tern

Gullbilled Tern

Magnificent Frigate Bird

Common Egret

Reddish Egret

Snowy Egret

Clapper Rail

White Ibis

Louisiana or Tricolored Heron

Black-Crowned Night Heron

Little Blue Heron

Herring Gull

Kelp Gull

*Charadrius melodus*

*Pelecanus occidentalis carolinensis*

*Aythya americana*

*Aythya marila*; *A. affinis*.

*Larus atricilla*

*Sterna maxima*

*Sterna caspia*

*Sterna sandvicensis*

*Rynchops niger*

*Onychoprion fuscata*

*Sterna hirundo*

*Sternula antillarum*

*Sterna forsteri*

*Gelochelidon nilotica*

*Fregata magnificens*

*Casmerodius albus*

*Egretta rufescens*

*Egretta thula*

*Rallus longirostris*

*Eudocimus albus*

*Egretta tricolor*

*Nycticorax nycticorax*

*Egretta caerulea*

*Larus argentatus*

*Larus dominicanus*

#### **MAMMALS**

Raccoon

*Procyon lotor*

#### **REPTILES AND AMPHIBIANS**

Diamondback Terrapin

*Malaclemys terrapin*

## PLANT COMMUNITIES

Seagrass Beds

Beachfront/Dune

Backbarrier Tidal Marsh

## Appendix J. Budget Requests

### REFUGE OPERATING NEEDS SYSTEM (RONS)

<b>RONS PROJECT NAME</b>	<b>PROJECT NUMBER</b>	<b>AMOUNT</b>
Monitor wildlife and habitat on Delta NWR	99011	\$140,000
Support restoration and management projects on Delta NWR	99098	129,000
Coordinate activities on Delta and Breton NWRs	00054	45,000
Manage budget and other office needs for Delta NWR	99099	118,000
Monitor snow geese and other biological programs on Delta NWR	00007	64,500
Acquisition and digitization of aerial photography for Delta NWR	00018	54,000
Improve mapping and data management capabilities for Delta NWR	00031	25,000
Monitor and improve management for mottled ducks on Delta NWR	00016	65,000
Monitor and improve management for marsh birds on Delta NWR	02007	80,000
Monitor and improve management capabilities for migratory birds on Delta NWR	00011	128,000
Determine potential contaminant levels in sediment and fish tissues on Delta NWR	03001	150,000
Determine potential contaminant levels in blood/tissues of higher vertebrates on Delta NWR	03002	150,000
Conduct aerial wildlife surveys on Breton NWR	99004	154,000
Band juvenile brown pelicans on Breton NWR	00030	27,000
Monitor wildlife and habitat on Breton NWR	99009	140,000
Seabird study on Breton NWR	97030	23,000
Acquisition and digitization of aerial photography for Breton NWR	00022	50,000
Air quality study on impacts from air pollutants on wildlife and vegetation on Breton NWR	01002	135,000
Wilderness Management Plan for Breton NWR	01001	37,000
Satellite transmitter tracking study on brown pelicans on Breton NWR	03001	110,000
Partnership with Cooperative Extension for nursery that grows plants to be used in dune and marsh restoration on Breton NWR	03002	300,000
<b>TOTAL</b>		<b>\$2,122,500</b>



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**MAINTENANCE MANAGEMENT SYSTEM NEEDS**

<b>MMS PROJECT NAME</b>	<b>PROJECT NUMBER</b>	<b>AMOUNT</b>
Replace 17' Boston Whaler, radar, Evinrude motor, and boat trailer	05138483	\$13,000
<b>TOTAL</b>		<b>\$13,000</b>

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## *Appendix K. List of Preparers*

### **PLANNING TEAM**

Kenneth Litzenberger, Project Leader, Fish and Wildlife Service, Southeast Louisiana NWR Complex - Editor; Provided overall guidance and oversight

Pondexter Dixon, Deputy Project Leader, Fish and Wildlife Service, Southeast Louisiana NWR Complex – Editor; Provided guidance

Jack Bohannon, Refuge Manager, Fish and Wildlife Service, Southeast Louisiana NWR Complex; Writer and Editor

Charlotte Parker, former Natural Resource Planner, Fish and Wildlife Service, Southeast Louisiana NWR Complex - Planning Team Leader; Writer and Editor

James Harris, Supervisory Wildlife Biologist, Fish and Wildlife Service, Southeast Louisiana NWR Complex - Writer and Editor

Byron Fortier, Supervisory Park Ranger, Southeast Louisiana NWR Complex - Writer and Editor

Diane Barth, Park Ranger, Southeast Louisiana NWR Complex - Editor

Pre-planning for the CCP began in 2004, with a review of the biological and visitor services' programs for Breton NWR by several state and federal biologists, university researchers, and personnel from other refuges. It was decided in 2006 to combine comprehensive conservation planning for Delta and Breton NWRs. During June and July 2006, Delta NWR's biological and visitor services' programs were reviewed by professionals including biologists and educators. Recommendations from these meetings were used during the development of this Draft CCP/EA.

Contributors included:

Todd Baker, Area Manager, Pass a Loutre, LDWF, Baton Rouge, LA

George Bodie, LDNR, Baton Rouge, LA

Rosa Boudreaux, Buras High School, Buras, LA

Barbara Boyle, former Deputy Project Leader, Southeast Louisiana NWR Complex, Lacombe, LA

Gay Brantly, Park Ranger, Black Bayou Lake NWR, Farmerville, LA

Wayne Burgess, 4-H Program, Plaquemines and St. Bernard Parishes, Belle Chasse, LA

Donna Bush, Photographer and Volunteer, Pearl River, LA

Donna Dittman, Louisiana State University, Baton Rouge, LA

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Cedric Doolittle, Fisheries Biologist, FWS, Baton Rouge, LA

Barrett Fortier, Biologist, Southeast Louisiana NWR Complex, Houma, LA

Debbie Fuller, FWS, Ecological Services, Lafayette, LA

David Gegenheimer, Fisherman, Gretna, LA

Richard Hale, Birdwatcher and Volunteer, Slidell, LA

Tom Hess, LDWF, Rockefeller Refuge, Cameron Parish, LA

Doug Hunt, Park Ranger, Southeast Louisiana NWR Complex, Lacombe, LA

Chuck Hunter, Chief of Planning and Resource Management, FWS, Atlanta, GA

Van Janssen, Islander Lodge, Venice, LA

Tommy Michot, U.S. Geological Survey, Lafayette, LA

Randy Myers, Waterfowl Biologist, LDWF, Baton Rouge, LA

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Barry Wilson, Gulf Coast Joint Venture Coordinator, FWS, Lafayette, LA

Christian Winslow, LDWF, Baton Rouge, LA

Paul Yakupsack, Refuge Manager, Southeast Louisiana NWR Complex, Houma, LA

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# *Appendix L. Finding of No Significant Impact*

## **Introduction**

The U.S. Fish and Wildlife Service proposes to protect and manage certain fish and wildlife resources in Plaquemines and St. Bernard Parishes, Louisiana, through Delta and Breton National Wildlife Refuges. An Environmental Assessment was prepared to inform the public of the possible environmental consequences of implementing the Comprehensive Conservation Plan for Delta and Breton National Wildlife Refuges. A description of the alternatives, the rationale for selecting the preferred alternatives, the environmental effects of the preferred alternatives, the potential adverse effects of the actions, and a declaration concerning the factors determining the significance of effects, in compliance with the National Environmental Policy Act of 1969, are outlined below. The supporting information can be found in the Environmental Assessment, which was Section B of the Draft Comprehensive Conservation Plan.

## **Alternatives**

In developing the Comprehensive Conservation Plan (CC) for Delta and Breton National Wildlife Refuges (NWRs), the Fish and Wildlife Service (Service) evaluated three alternatives for each refuge:

The Service adopted Alternative C, the “Preferred Alternative,” as the CCP for guiding the direction of each refuge for the next 15 years. The overriding concern reflected in this CCP is that wildlife conservation assumes first priority in refuge management, and that wildlife-dependent recreation uses are allowed if they are compatible with wildlife conservation. Wildlife-dependent recreation uses (e.g., hunting, fishing, wildlife observation, wildlife photography, and environmental education and interpretation) will be emphasized and encouraged.

### *Delta National Wildlife Refuge*

#### *Alternative A. No Action Alternative*

Under this alternative, no new actions would be taken to improve or enhance the refuge’s current habitat, wildlife, and public use management programs. The existing programs would be continued with no changes. Restoration efforts would remain focused on increasing emergent marsh by creating crevasses; environmental education, interpretation, and outreach would remain low-key, relying on the public to make requests. Alternative A represents no change from current management of the refuge.

#### *Alternative B. User-Focused Management*

Alternative B emphasizes maximizing public use opportunities on the refuge. The traditional uses of hunting and fishing on Delta NWR would remain, but days and hours would be expanded so that they are similar to the adjacent state wildlife management area. On-site wildlife-dependent public uses of wildlife observation, wildlife photography, and environmental education and interpretation would be supported by refuge staff, equipment, facilities, and resources as much as possible. Under this alternative, federal trust species would be monitored to meet mandates, but most resources would accommodate public demands. Species targeted for management would depend on which ones the public is interested in utilizing. All refuge management programs would support species and resources of importance for public use. Providing access to this remote refuge would be emphasized. The focus of refuge management would be on expanding public use activities to the

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fullest extent possible, while conducting only mandated resource protection for migratory birds and threatened and endangered species.

*Alternative C. Improved Habitat Restoration and Public Outreach Management (Preferred Alternative)*

The preferred alternative, Alternative C, is considered to be the most effective management action for meeting the purposes of Delta NWR by emphasizing management of its wetland resources. This management will be based on expanding restoration efforts to include not only the crevasse program, but also restoring the Gulf shoreline. This is presently the area of the most land loss since it is the most distant from the land-building sediments of the Mississippi River, and the first location on the mainland in the path of hurricanes and other strong storms. Restoration efforts will adapt to changing conditions as practices and techniques are assessed. Although no changes are planned in the traditional hunting and fishing programs that have been in effect for many years, public outreach will be expanded and improved. Because access to the refuge is difficult, outreach will center on providing information in venues such as the Venice office, local marinas, the Parish schools, and in teacher workshops, and on web pages. Wildlife monitoring will be expanded to include not only wintering, migratory waterfowl but also nesting mottled ducks, neotropical migratory birds, and other water birds, such as rails and shorebirds. Management decisions and actions will support wildlife species and habitat occurring on the refuge based on well-planned strategies and sound judgment.

*Breton National Wildlife Refuge*

*Alternative A. No Action Alternative*

Alternative A represents no change from current management of the refuge. Under this alternative, current habitat, wildlife, and public use management would continue with no changes. Restoration efforts would remain as small-scale projects undertaken by volunteers and refuge staff; environmental education, interpretation, and outreach would be included in Complex activities centered at headquarters in Lacombe.

*Alternative B.*

The primary focus under Alternative B is all active management other than mandated ones would cease. Nature would be allowed to take its course regarding the future of the islands with no restoration activities accomplished. If the islands fail to rebuild after the devastating 2005 hurricane season and continue to erode, areas available to the public may diminish. With the land area diminishing, both wildlife and the public would have less space to share as priority would be given to colonial nesting birds. Nesting areas are off-limits to the public. Environmental education and interpretation would concentrate on the history of the formation and subsequent changes and erosion of the Chandeleurs and Breton Islands.

*Alternative C. (Preferred Alternative)*

The preferred alternative, Alternative C, is considered to be the most effective management action for meeting the purposes of Breton NWR by exploring the implementation of large-scale restoration efforts in cooperation with partners. Partners are necessary to supply expertise and funding for the daunting task of restoration. Studies will be performed to determine the feasibility and costs associated with rebuilding and re-establishing the Chandeleurs and Breton Islands, or portions of the Islands. Restoration efforts will adapt to changing conditions as practices and techniques are assessed. No changes are planned in the traditional public uses on the refuge, but public outreach, and environmental education and interpretation will be expanded and improved. Because the refuge is remote and few guests other than wade fishers actually visit the islands, outreach will center around providing information in combination with Delta NWR at the Venice office, at local marinas, in the Parish schools, to teachers in workshops, and on web pages.

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## Selection Rationale

### *Delta NWR*

Alternative C is selected for implementation because it directs the development of programs to best achieve the refuge purpose and goals; emphasizes management of the wetland resources of Delta NWR based on expanding restoration efforts to include not only the crevasse program, but also restoring the Gulf shoreline; collects habitat and wildlife data; and ensures long-term achievement of refuge and Service objectives. At the same time, these management actions provide balanced levels of compatible public use opportunities consistent with existing laws, Service policies, and sound biological principles. It provides the best mix of program elements to achieve desired long-term conditions.

### *Breton NWR*

Alternative C is selected for implementation because it directs the development of programs to best achieve the refuge purpose and goals; emphasizes by exploring, implementing large-scale restoration efforts in cooperation with partners; collects habitat and wildlife data; and ensures long-term achievement of refuge and Service objectives. At the same time, these management actions provide balanced levels of compatible public use opportunities consistent with existing laws, Service policies, and sound biological principles. It provides the best mix of program elements to achieve desired long-term conditions.

Under these preferred alternatives, all lands under the management and direction of Delta and Breton NWRs will be protected, maintained, and/or enhanced and those lands within the approved acquisition boundaries will be prioritized for acquisition to best achieve national, ecosystem, and refuge-specific goals and objectives within anticipated funding and staffing levels. In addition, these actions positively address significant issues and concerns expressed by the public.

## Environmental Effects

Implementation of the Service's management action is expected to result in environmental, social, and economic effects as outlined in the CCP. Habitat management, population management, land conservation, and visitor services' management activities will result in wetland restoration and enhanced opportunities for wildlife-dependent recreation and environmental education on Delta NWR and result in habitat restoration and environmental education on Breton NWR. These effects are detailed as follows:

### *Delta NWR*

- Continue to maintain quality interior emergent marsh and initiate restoration program that focuses on restoration of the Gulf shoreline to protect interior marsh habitat.
- Proactively seek funding and partners, and explore new technologies for restoration projects such as dedicated dredge disposal to rebuild the Gulf shoreline, which will also protect interior marsh habitat.
- Initiate an environmental education/outreach program in the form of classroom presentations about Delta NWR to be offered in Plaquemines and surrounding parishes.
- Install interpretive and orientation kiosk and wayside exhibits at the Venice headquarters building to orient visitors to Delta and Breton NWRs and their primary resource stories.
- Develop a Delta NWR brochure and/or tear sheet with map.

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### *Breton NWR*

- Monitor and maintain island habitat with large-scale restoration projects.
- Proactively search for funding and partners for sand fencing and vegetative planting projects.
- Protect the islands that are under Wilderness status in accordance with the laws and regulations of the Wilderness Act of 1964.
- Improve the quality and quantity of information about Breton NWR offered to the public.
- Develop classroom programs for students in Plaquemines and St. Bernard Parishes.

## **Potential Adverse Effects and Mitigation Measures**

### *Wildlife Disturbance*

Disturbance to wildlife at some level is an unavoidable consequence of any public use program, regardless of the activity involved. Obviously, some activities innately have the potential to be more disturbing than others. The management actions to be implemented have been carefully planned to avoid unacceptable levels of impact.

As currently proposed, the known and anticipated levels of disturbance of the management action are considered minimal and well within the tolerance level of known wildlife species and populations present in the area. Implementation of the public use program will take place through carefully controlled time and space zoning, establishment of protection zones around key sites, closures of all-terrain vehicle trails, and routing of roads and trails to avoid direct contact with sensitive areas, such as nesting bird habitat. All hunting activities (i.e., season lengths, bag limits, number of hunters) will be conducted within the constraints of sound biological principles and refuge-specific regulations established to restrict illegal or non-conforming activities. Monitoring activities through wildlife inventories and assessments of public use levels and activities will be utilized, and public use programs will be adjusted as needed to limit disturbance.

### *User Group Conflicts*

As public use levels expand across time, some conflicts between user groups may occur. Programs will be adjusted, as needed, to eliminate or minimize these problems and provide quality wildlife-dependent recreational opportunities. Experience has proven that time and space zonings, such as establishment of separate use areas, use periods, and restricting numbers of users, are effective tools in eliminating conflicts between user groups.

### *Effects on Adjacent Landowners*

Implementation of the management action will not impact adjacent or in-holding landowners. Essential access to private property will be allowed through issuance of special use permits. Future land acquisition will occur on a willing-seller basis only, at fair market values within the approved acquisition boundary. Lands are acquired through a combination of fee title purchases and/or donations and less-than-fee title interests (i.e., conservation easements, cooperative agreements) from willing sellers. Funds for the acquisition of lands within the approved acquisition boundary will likely come from the Land and Water Conservation Fund or the Migratory Bird Conservation Act. The management action contains neither provisions nor proposals to pursue off-refuge stream bank riparian zone protection measures (i.e., fencing) other than on a volunteer/partnership basis.

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### *Land Ownership and Site Development*

Proposed acquisition efforts by the Service will result in changes in land and recreational use patterns, since all uses on national wildlife refuges must meet compatibility standards. Land ownership by the Service also precludes any future economic development by the private sector. Potential development of access roads, dikes, control structures, and visitor parking areas could lead to minor short-term negative impacts on plants, soil, and some wildlife species. When site development activities are proposed, each activity will be given the appropriate NEPA consideration during pre-construction planning. At that time, any required mitigation activities will be incorporated into the specific project to reduce the level of impacts to the human environment and to protect fish and wildlife and their habitats.

As indicated earlier, one of the direct effects of site development is increased public use; this increased use may lead to littering, noise, and vehicle traffic. While funding and personnel resources will be allocated to minimize these effects, such allocations make these resources unavailable for other programs.

The management action is not expected to have significant adverse effects on wetlands and floodplains, pursuant to Executive Orders 11990 and 11988.

### **Coordination**

The management action has been thoroughly coordinated with all interested and/or affected parties. Parties contacted include:

- All affected landowners
- Congressional representatives
- Governor of Louisiana
- Louisiana Department of Wildlife and Fisheries
- Louisiana Historic Preservation Officer
- Louisiana Department of Natural Resources
- University of New Orleans
- Loyola University
- Louisiana State University
- Local community officials
- Interested citizens
- Conservation organizations

### **Findings**

It is my determination that the management action does not constitute a major federal action significantly affecting the quality of the human environment under the meaning of Section 102(2)(c) of the National Environmental Policy Act of 1969 (as amended). As such, an environmental impact statement is not required. This determination is based on the following factors (40 CFR 1508.27), as addressed in the Environmental Assessment for Delta and Breton National Wildlife Refuges:

1. Both beneficial and adverse effects have been considered and this action will not have a significant effect on the human environment. (Environmental Assessment, pages 87-99)
2. The actions will not have a significant effect on public health and safety. (Environmental Assessment, page 87)



- 
3. The project will not significantly affect any unique characteristics of the geographic area such as proximity to historical or cultural resources, wild and scenic rivers, or ecologically critical areas. (Environmental Assessment, page 88)
  4. The effects on the quality of the human environment are not likely to be highly controversial. (Environmental Assessment, pages 87-99)
  5. The actions do not involve highly uncertain, unique, or unknown environmental risks to the human environment. (Environmental Assessment, pages 87-99)
  6. The actions will not establish a precedent for future actions with significant effects nor do they represent a decision in principle about a future consideration. (Environmental Assessment, pages 87-99)
  7. There will be no cumulatively significant impacts on the environment. Cumulative impacts have been analyzed with consideration of other similar activities on adjacent lands, in past action, and in foreseeable future actions. (Environmental Assessment, pages 96-97)
  8. The actions will not significantly affect any site listed in, or eligible for listing in, the National Register of Historic Places, nor will they cause loss or destruction of significant scientific, cultural, or historic resources. (Environmental Assessment, page 88)
  9. The actions are not likely to adversely affect threatened or endangered species, or their habitats. (Environmental Assessment, page 91)
  10. The actions will not lead to a violation of federal, state, or local laws imposed for the protection of the environment. (Environmental Assessment, page 87)

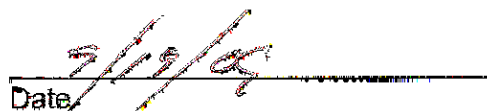
### Supporting References

Fish and Wildlife Service. 2008. Draft Comprehensive Conservation Plan and Environmental Assessment for Delta and Breton National Wildlife Refuges, Plaquemines and St. Bernard Parishes, Louisiana. U.S. Department of the Interior, Fish and Wildlife Service, Southeast Region.

### Document Availability

The Environmental Assessment was Section B of the Draft Comprehensive Conservation Plan for Delta and Breton National Wildlife Refuges and was made available in July 2008. Additional copies are available by writing: Delta National Wildlife Refuge, 61389 Highway 434, Lacombe, Louisiana 70445.

  
Signed  
Sam D. Hamilton  
Regional Director

  
Date