

UNITED STATES FISH AND WILDLIFE SERVICE

ENVIRONMENTAL ACTION STATEMENT

Within the spirit and intent of the Council on Environmental Quality's regulations for implementing the National Environmental Policy Act (NEPA), and other statutes, orders, and policies that protect fish and wildlife resources, I have established the following administrative record and determined that the proposed opening of Catahoula National Wildlife Refuge to Migratory Bird Hunting in LaSalle and Catahoula Parishes, Louisiana:

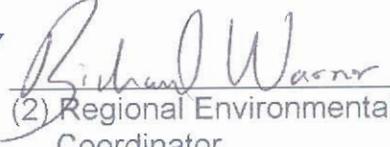
Check One:

- is a categorical exclusion as provided by 516 DM 2, Appendix 1 and 516 DM 6, Appendix 1, Section 1.4 A (4). No further NEPA documentation will therefore be made.
- is found not to have significant environmental effects as determined by the attached Environmental Assessment and Finding of No Significant Impact.
- is found to have significant effects and, therefore, further consideration of this action will require a notice of intent to be published in the Federal Register announcing the decision to prepare an EIS.
- is not approved because of unacceptable environmental damage, or violation of Fish and Wildlife Service mandates, policy, regulations, or procedures.
- is an emergency action within the context of 40 CFR 1 506.1 1. Only those actions necessary to control the immediate impacts of the emergency will be taken. Other related actions remain subject to NEPA review.

Other Supporting Documents:

Endangered Species Act, Section 7 Consultation, 2007
Compatibility Determination, 2007

Signature Approval:

| | | | |
|---|---------|--|---------|
|  | 4-10-07 |  | 4-19-07 |
| (1) Originator | Date | (2) Regional Environmental Coordinator | Date |

| | | | |
|---|---------|--|---------|
|  | 4-25-07 |  | 4/25/07 |
| (3) Regional Chief, NWRS, Southeast Region | Date | (4) Regional Director, Southeast Region | Date |

MIGRATORY BIRD HUNTING

Decision Document Package

for

CATAHOULA NWR

Contents

3. EA

Environmental Assessment
for
Migratory Bird Hunting

on

CATAHOULA NATIONAL WILDLIFE REFUGE
Catahoula and La Salle Parishes, Louisiana

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CATAHOULA
National Wildlife Refuge
Headquarters Unit

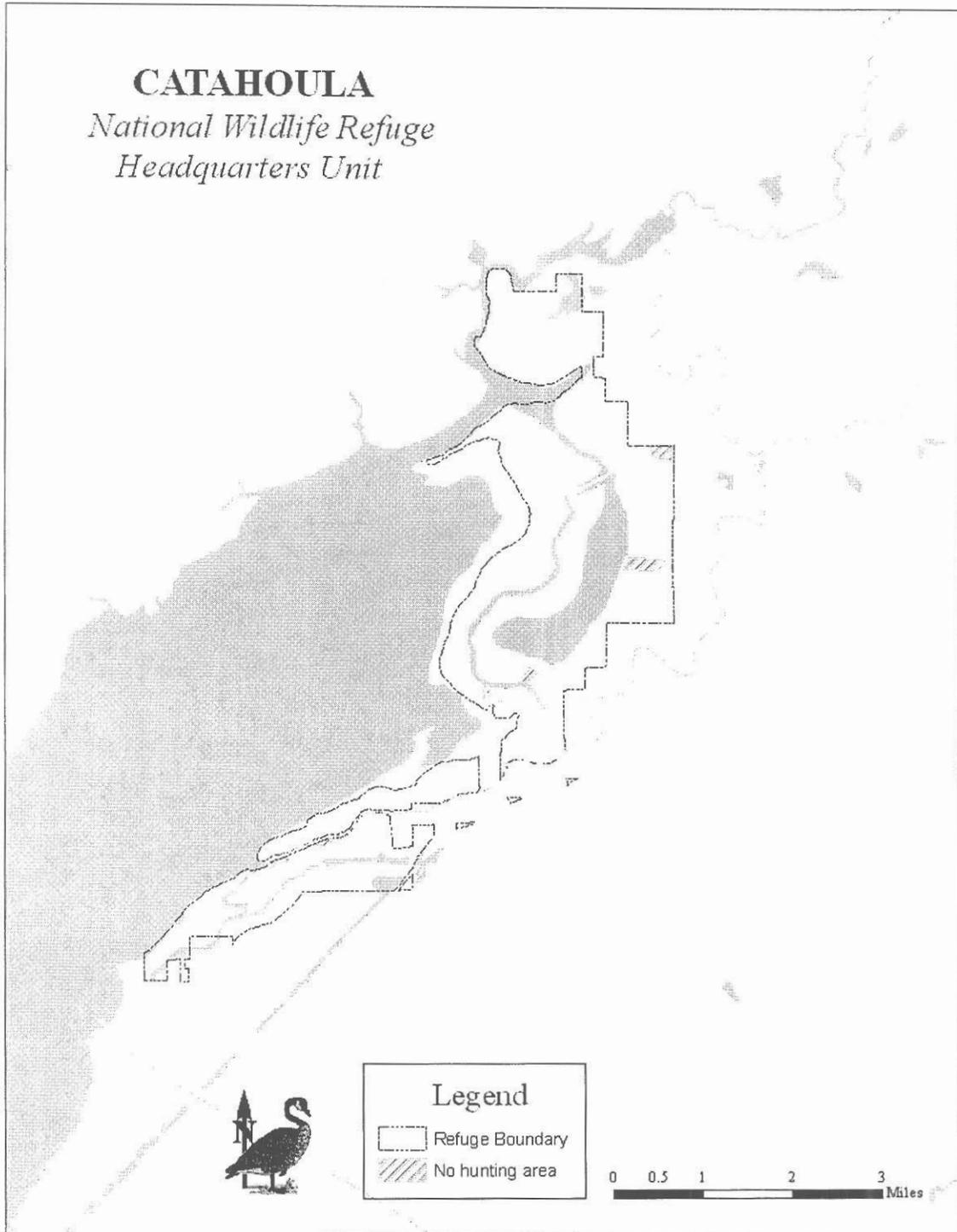


Figure 1 Areas open and closed to hunting on Catahoula NWR

CATAHOULA
National Wildlife Refuge
Bushley Bayou Unit

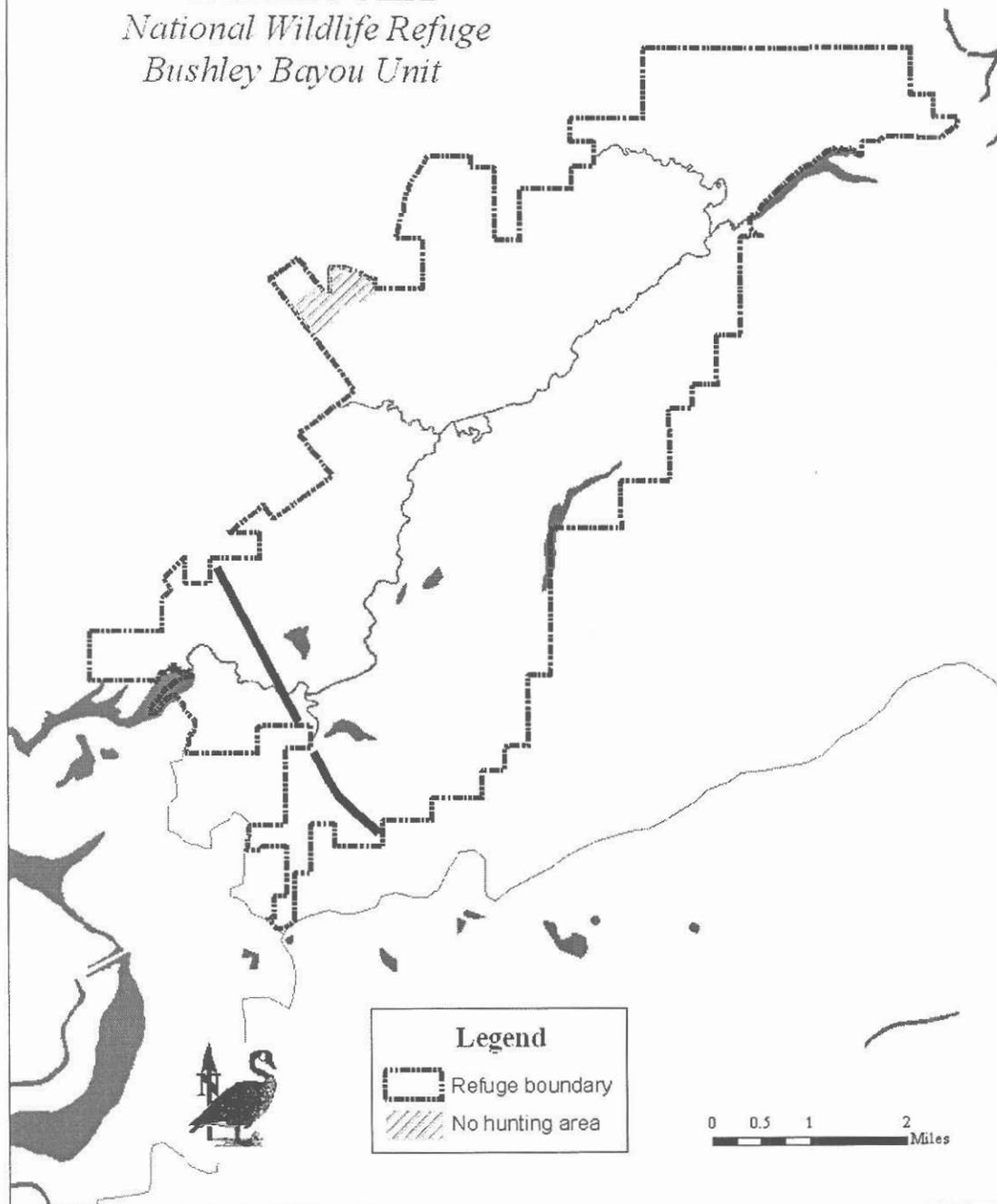


Figure 2 Areas open and closed to hunting on Catahoula NWR

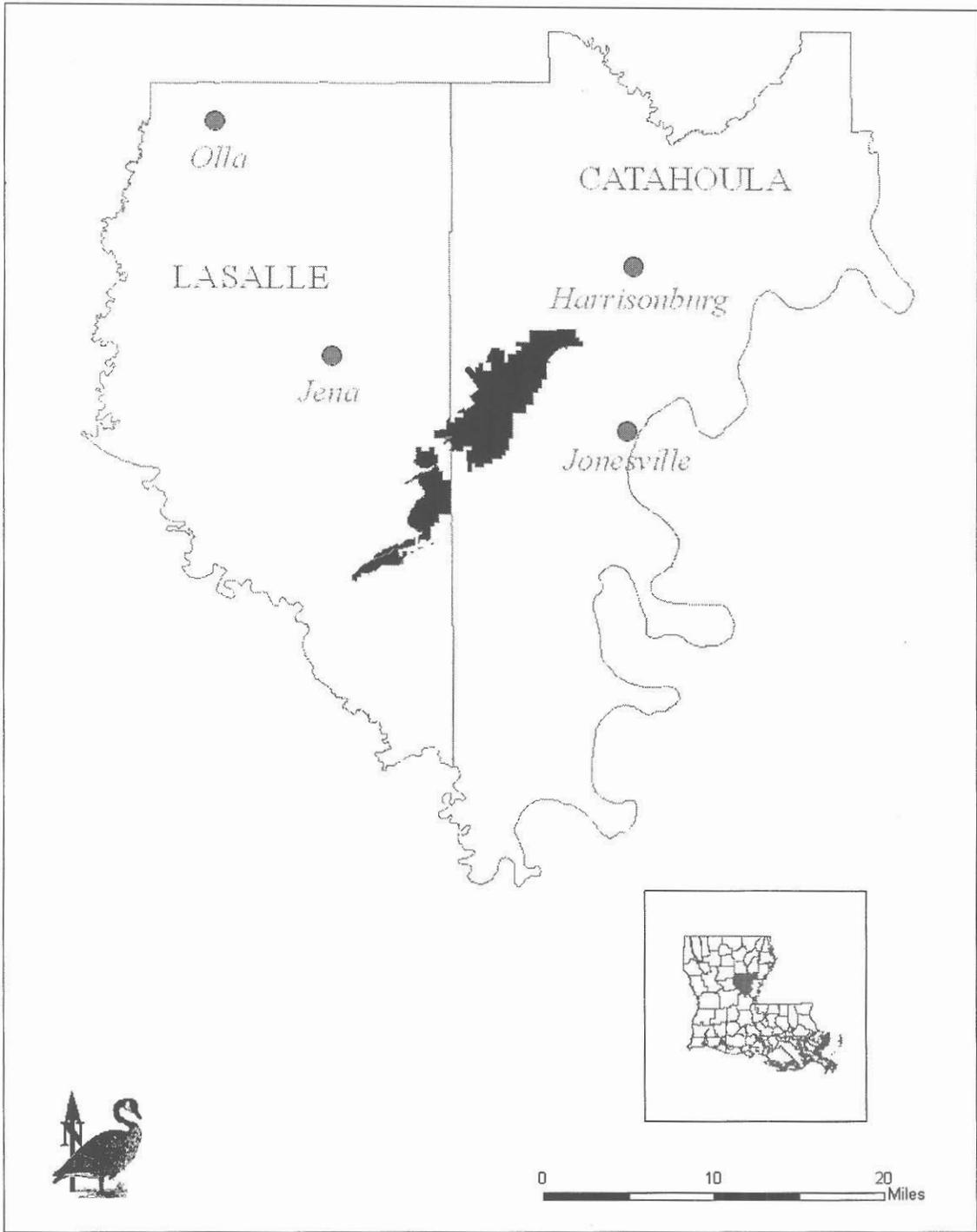


Figure 3 Location of Catahoula National Wildlife Refuge

Chapter 1 Purpose and Need for Action

Catahoula National Wildlife Refuge was established in 1958 under the authority of the Migratory Bird Conservation Act, which calls for:

"... use as an inviolate sanctuary, or for any other management purpose, for migratory birds." 16 U.S.C. § 715d (Migratory Bird Conservation Act);

and the Fish and Wildlife Act of 1956, which calls for:

"... the development, advancement, management, conservation, and protection of fish and wildlife resources ..." 16 U.S.C. § 742f (a) (4) "...the benefit of the United States Fish and Wildlife Service, in performing its activities and services. Such acceptance may be subject to the terms of any restrictive or affirmative covenant, or condition of servitude ..." 16 U.S.C. § 742f (b) (1) (Fish and Wildlife Act of 1956).

The 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 et seq.) provides authority for the Service to manage the Refuge and its wildlife populations. In addition it declares that compatible wildlife-dependent public uses are legitimate and appropriate uses of the Refuge System that are to receive priority consideration in planning and management. There are six wildlife-dependent public uses: hunting, fishing, wildlife observation, wildlife photography, environmental education and interpretation. It directs managers to increase recreational opportunities including hunting on National Wildlife Refuges when compatible with the purposes for which the Refuge was established and the mission of the National Wildlife Refuge System.

In response to a 2003 lawsuit filed by the Fund for Animals, the U.S. Fish and Wildlife Service (Service) will amend or rewrite environmental assessments that describe hunting programs at twenty-three national wildlife refuges located in the Southeast Region. The new environmental assessments will address the cumulative impacts of hunting at all refuges which were named in or otherwise affected by the lawsuit. This document addresses the hunting programs at Catahoula National Wildlife Refuge in Louisiana.

The original hunt plan document for Catahoula National Wildlife Refuge was written in 1960. The last update was in 1992. The initial refuge hunts were of short duration with small bag limits. As the refuge increased in size, gained biological data on huntable species and habitat management caused increased populations, the hunt program

expanded. The main purpose for this amendment is to expand migratory game bird hunting including waterfowl, coot, gallinule, rail, snipe, and woodcock hunting on the refuge. This action will allow harvest of a renewable resource, promote a wildlife-oriented recreational opportunity that is compatible with the purpose for which the refuge was established, increase awareness of Catahoula NWR and the National Wildlife Refuge System, and meet public demand (see Amended Hunt Management Plan Catahoula NWR).

The proposed action is needed to implement the Amended Hunt Management Plan for Catahoula NWR which would provide the public with a high quality recreational experience and provide the refuge with a wildlife management tool to promote the biological integrity of the refuge.

Chapter 2 Alternatives Including the Proposed Action

This chapter discusses the alternatives considered for hunting on Catahoula National Wildlife Refuge. These alternatives are described below.

2.1 Alternative A: Waterfowl and Migratory Bird Hunting for Catahoula NWR – Proposed Action

The proposed action would allow the hunting of waterfowl, coot, rail, gallinule, snipe, and woodcock on Catahoula National Wildlife Refuge in addition to the current hunting program. Hunting of these species would be in accordance with state and "special" refuge regulations; the most prominent of these "special" regulations being the requirement of steel shot use for migratory bird hunting. The seasons will be within the framework of the Louisiana Department of Wildlife and Fisheries regular state seasons, but could be more restrictive. Only the Bushley Bayou Unit will be open for waterfowl and migratory bird hunting at this time. Additional no hunt zones would be developed as needed to help minimize conflicts between the hunting public and other forms of wildlife-oriented public use. Biological data would be collected during all refuge hunts in an effort to monitor the status of migratory bird population's use on the refuge and apply adaptive management techniques.

Refer to Amended Hunt Management Plan for Catahoula NWR for specific regulations.

2.2 Alternative B: No Action - No Recreational Waterfowl and Migratory Bird Hunting on Entire Refuge

Under this alternative, the status quo would be maintained. Catahoula NWR would not allow waterfowl, coot, rail, gallinule, snipe, and woodcock hunting. Users would be required to find alternative locations. There would be no change to current public use or wildlife management programs. The refuge would continue to act on its own in planning and implementing habitat restoration and population control actions.

2.3 Alternative C: Decrease waterfowl and migratory bird hunting on the refuge

Under this alternative, waterfowl and migratory bird hunting opportunities would be sharply reduced. Reductions would be in the number of different species hunted and/or in the length of the hunting seasons on the refuge. The number of daily hunters permitted on the refuge might also be reduced.

2.4 Alternative D: Increase waterfowl hunting on the refuge

Under this alternative, waterfowl hunting opportunities on the refuge would be expanded. Increases would be in the number of days opened, hours allowed to hunt each day, or more liberal hunting methods (i.e. permanent blinds, leaving decoys and equipment overnight).

Chapter 3 Affected Environment

Catahoula National Wildlife Refuge (Catahoula NWR or Refuge) was established in 1958 primarily as a wintering area for migratory waterfowl. The Refuge, located in east-central LaSalle Parish and west-central Catahoula Parish, Louisiana, about 30 miles northeast of Alexandria, and 12 miles east of Jena, now totals 25,242 acres. An additional 3,012 acres of land are included in the approved acquisition boundary of the refuge. The 6,671 acre Headquarters Unit borders nine miles of the northeast shore of Catahoula Lake, a 26,000 acre natural wetland renowned for its large concentrations of migratory waterfowl. The 18,571 acre Bushley Bayou Unit, located 8 miles west of Jonesville, was established in May of 2001. The acquisition was made possible through a partnership agreement between The Conservation Fund, American Electric Power, and the Fish and Wildlife Service.

Currently, the Refuge provides a mix of various habitat types, including remnant pieces of bottomland hardwood forest, reforested areas, cypress sloughs, moist-soil areas, grassland habitat, and mudflats. The diverse habitats found on the Refuge are home to numerous wildlife species. Migratory birds such as waterfowl, shorebirds, and Neotropical migratory birds use the Refuge during certain times of the year, but there are also resident birds, such as the northern cardinal and wood duck that are here all year. Other species of resident wildlife that occur include white-tailed deer, cottontail rabbit, river otter, red-eared slider, and tree frog. Fish species include catfish, buffalo, garfish, largemouth bass, and crappie.

3.1 Physical Environment

Central Louisiana has mild winters and hot, humid summers. Temperatures range from 52° F in January to 82° F in July, with an average annual temperature of 67° F. Spring and summer are often wet, with an average annual rainfall of 71.21 inches.

3.1.1 Geology and Topography

Louisiana has a relatively young geologic history. Most surface deposits are marine and deltaic sediments that have been deposited in alternating cycles over the past 1.8 million years.

During the Tertiary period, which extended from 65 to 1.8 million years ago (mya), the Refuge was covered with a sea. In the early Eocene epoch (54 mya), the sea receded as the continental ice sheets advanced, resulting in alluvial deposits from rivers flowing into the Gulf of Mexico. This trend was reversed in the late Eocene, as sea level rose again. At this time, the sea again covered the Refuge. Finally, in the Miocene epoch (25 to 5 mya), the sea level dropped and sedimentation began to accumulate, extending land gulfward (LGS, 1990).

The alluvial soils that accrued since the Miocene have formed what topography exists in the Refuge. The Refuge lies at the far western edge of the Mississippi Alluvial Plain

ecosystem province, adjacent to the Gulf Coastal Plain ecosystem province. The province consists of flat to gently sloping broad floodplain and low terraces made up of mostly clay alluvium. The average elevation (above mean sea level) is 30 feet. The only noticeable slopes are sharp terrace scarps and natural levees that rise sharply to several meters above adjacent bottom lands or stream channels (Bailey, 1995; LGS, 1990).

3.1.2 Soils

The dominant soil series on the Refuge are the following:

Alligator-Sharkey-Tensas - The broad backswamps, depressions, and sloughs are located on the low terraces of streams and tributaries, with slopes less than one percent. Some slopes range to five percent on short escarpments bordering channels. Soils in these areas (*Alligator-Sharkey-Tensas*) are poorly drained, with ponding in the depression areas. Areas along the lower courses of tributary streams to the Mississippi River are subject to backwater flooding.

Dundee Sharkey - Natural levees and low terraces along former channels of the Mississippi River contain soils formed in thinly stratified beds of loamy alluvium (*Dundee-Water-Sharkey*). These hydric soils are very deep and somewhat poorly drained, with slopes of zero to one percent.

Guyton Smithdale - In the northwestern portion of the Refuge, soils are formed on local stream floodplains and in depression areas (*Guyton Smithdale*), rather than derived from alluvium from the Mississippi River. Slopes range from zero to one percent, and soils are poorly drained, with year-round ponding in places. A seasonal high water table is at 0 to 1.5 feet below the surface from December through May (NRCS, 2004; STATSGO, 1998).

3.1.3 Hydrology

The Refuge lies 30 miles west of the Mississippi River in the Mississippi Alluvial Valley. The area is subject to extensive annual backwater flooding that affects both the Refuge and the adjacent Catahoula Lake (USFWS, 1989).

Catahoula Lake is 26,000-acre ephemeral lake that borders the west boundary of the Refuge's Headquarters Unit. This shallow lake basin is subject to drastic seasonal fluctuations. In addition, the hydrology of Catahoula Lake and surrounding rivers, streams, and bayous has been substantially altered by the Ouachita and Black River Navigation Project (1972). Before project construction, water flowed into the lake primarily through the Little River and drained through the French Fork of the Little River to the Ouachita River. Water still drains out through the French Fork of the Little River today; however, most of it flows out of the Catahoula Lake Diversion Canal to the Black and Red Rivers (USFWS, 1989).

The Catahoula Lake water levels are managed by Refuge personnel under a tri-party cooperative agreement with the Louisiana Department of Wildlife and Fisheries, the U.S. Army Corps of Engineers, and U.S. Fish and Wildlife Service. Water management activities are specified in a Water Management Agreement and are primarily designed to emulate former natural conditions. The specifications promote desirable waterfowl habitat, which provides public waterfowl and migratory bird hunting opportunities. It also allows for commercial fishing and oil rig maintenance during high water levels, and it addresses lead shot issues.

Backwater flooding from the Mississippi River has a major hydrological impact on the Refuge. Backwater moves from the Red River to the Black River, and then through the diversion canal to the lake. Backwater can also enter the lake from the Ouachita River through the French Fork of the Little River or through Bushley Creek.

In some years backwater flooding can be substantial, flooding Refuge roads, and in some cases, it raises the level of the lake so high that no water management is possible.

There are several impoundments on both the Headquarters and the Bushley Bayou Units. There are also a number of small shallow lakes on the Bushley Bayou Unit, which are fed by perennial creeks, such as Greens Creek, Coons Creek, Rhinehart Creek, Dry Bayou, and Flat Creek, which flow out of the hills easterly to the Refuge (USFWS, 1999a).

3.1.4 Air Quality

The Clean Air Act, which was last amended in 1990, required the United States Environmental Protection Agency (EPA) to set National Ambient Air Quality Standards (NAAQS) for pollutants considered harmful to public health and the environment. The Clean Air Act established two types of NAAQS. *Primary standards* set limits to protect public health, including the health of "sensitive" populations such as asthmatics, children, and the elderly. *Secondary standards* set limits to protect public welfare, including protection against decreased visibility, damage to animals, crops, vegetation, and buildings (EPA, 1993).

The EPA Office of Air Quality Planning and Standards has set NAAQS for six principal pollutants, which are called "criteria pollutants" including carbon monoxide (CO), ozone (O₃), lead (Pb), particulate < 10 micrometers (PM-10), and sulfur dioxide (SO₂) (EPA, 1993). Areas that do not meet the primary standard for a pollutant are non-attainment areas for that pollutant.

Catahoula and La Salle Parishes are in attainment areas for these NAAQS. Louisiana violates the standard for ozone in five parishes - Ascension, East Baton Rouge, Iberville, Livingston, and West Baton Rouge. Collectively, these parishes are called the *Baton Rouge Nonattainment Area* (Tullier, 2005; LDEQ, 1997).'

The Clean Air Act also established Class I, II, and III "Prevention of Significant Deterioration (PSD)" areas with limits on the concentration of a criteria air pollutant that

can exist in certain geographic areas. Class I areas allow for very little deterioration of air quality. An example of such an area is a designated Wilderness Area. A Class II designation allows for more deterioration than Class I. Class III areas allow even more deterioration than Class II (USFWS, 2002a).

3.1.5 Water Quality and Quantity

Section 303(d) of the Clean Water Act requires states to identify water bodies that fail to meet one or more applicable water quality standards and need total maximum daily levels (TMDLs). Louisiana's Section 303(d) List of Water Bodies identifies impaired water bodies and establishes a priority ranking for such waters, taking into account the severity of the pollution and the uses to be made of the water bodies. The Section 303(d) listing requirement applies to water bodies impaired by point and non-point sources. There are no 303(d) listed waters on the Refuge; however, Catahoula Lake is listed by the U.S. Environmental Protection Agency (EPA) as a 303(d) impaired water body for oil & grease, salinity, TDS, chlorides, and sulfates. The lake floods the Refuge at certain high-water levels, potentially impacting all water bodies. Suspected sources are rangelands, petroleum activities, flow regulations/modifications, and municipal sources (LDEQ, 1999). Catahoula Lake also has a fish consumption advisory due to high mercury levels.

3.2 Vegetation

Catahoula NWR is within the Mississippi Alluvial Valley (MAV) and is a part of the Lower Mississippi River Ecosystem. The MAV was, at one time, a 25-million acre forested wetland complex that extended along both sides of the Mississippi River from Illinois to Louisiana. Although the Refuge was part of this very productive bottomland hardwood ecosystem, most of the forests on nearby lands were cleared for agricultural production. No forests have been cleared within the Headquarters Unit while it has been part of the refuge system. Most of the Willow Lake Unit of the Headquarters Unit was cleared in the late 1960's and early 1970's as was most of the forest on the Bushley Bayou Unit. In both cases this clearing occurred before the Service acquired these lands.

Catahoula NWR is low-lying bottomland subject to extensive flooding on the western edge of the Mississippi River alluvium. Currently, the Refuge provides a mix of various habitat types, including remnant pieces of bottomland hardwood forest, reforested areas, lakes, bayous, cypress sloughs, moist-soil areas, and open grassland on one field in the Willow Lake area (Table 1).

Table 1. The Habitat Types and Associated Acreages Found on Catahoula NWR

| Habitat | |
|---|--------------|
| Type | Acres |
| Bottomland Hardwood Forest | 8,599 |
| Reforested Open Fields | 13,868 |
| Moist-soil Units (MSUs) | 580 |
| Lakes/Streams/Bayous/Open Water | 1,275 |
| Grassland | 95 |
| Admin/oil and gas/roads/pipelines, etc. | 745 |

3.2.1 Bottomland Hardwood Forest

Since the inception of the Refuge, approximately 13,868 acres have been reforested or are reverting naturally back to a bottomland hardwood community. Primary species planted in the reforested areas are: (1) willow oak; (2) green ash; (3) bald cypress; (4) Nuttall oak; and (5) overcup oak.

On the Headquarters Unit, over 464 acres have been reforested with Nuttall oak, willow oak, water oak, Shumard oak, persimmon, baldcypress, and green ash. In 1976, a 40-acre agricultural field in the French Fork area of the Headquarters Unit was taken out of production and reforested with Nuttall oak seedlings by Boy Scouts. About five acres near the headquarters office were reforested in 1980-81 with Nuttall oak, water oak, willow oak, sweet pecan and baldcypress. The Willow Lake area was reforested in 1998 (187 acres) and 1999 (232 acres), totaling 419 acres, and replanted due to failures in 2000 (190 acres), and 2002 (43 acres) (Figure 7).

On the Bushley Bayou Unit, a total of 13,404 acres have been reforested. Approximately, 9,784 acres has been reforested for future potential carbon sequestration credits under the U.S. Department of Energy's Global Climate Change Program. This program aims to reduce greenhouse gases in the atmosphere, partly by the sequestration of carbon in biomass. In return, the program creates a record of emissions reductions that could possibly be used by the funding clients (in this case AEP) for "credit" against future mandatory requirements. In addition, prior to the TCF purchase of the Bushley Bayou lands, Tensas Delta Land Company reforested 3,620 acres through the WRP, bringing the total of reforested areas to 13,404 acres (Figure 8).

The acreage on the Bayou Bushley Unit was planted with native oaks, including willow oak, Nuttall oak, overcup oak, and Shumard oak, baldcypress, green ash, and pecan trees. Within these reforested areas, many native "volunteer" species, including swamp privet, button bush, water elm, bitter pecan, green ash, sweet gum, sycamore, and river birch, have grown.

3.2.2 Moist-soil and Water Management

Refuge staff manages water on the Refuge to provide habitat for wintering waterfowl, shorebirds, and wading birds on several impoundments (Figures 9 and 10). In managing the impoundments, the staff creates moist-soil units that produce natural, desirable vegetation for waterfowl to consume during the fall and winter months. These moist-soil units also benefit shorebirds and wading birds. There are 16 water control structures on the Refuge. The largest impoundment is Duck Lake, which is roughly 1,200 acres, on the Headquarters Unit. Water control became functional on this impoundment in 1980 with the installation of a water control structure within the levee at the outflow end of the impoundment. In 2001, a new water control structure was constructed to replace the old structure in conjunction with a federal highways road project whereby the Duck Lake Levee was raised and widened. The new structure has two sluice gates and a concrete weir within the structure with an 8-foot square box culvert through which the water flows, connecting Duck Lake to Duck Lake Slough.

The Refuge manages water levels on the Duck Lake Impoundment in coordination with Catahoula Lake management by raising levels before the state duck hunting season in mid-November. When the Refuge staff closes the water control structure on Catahoula Lake, they also close the Duck Lake structure to hold rain and runoff in the impoundment. To draw down water on the impoundment the Refuge opens the water control structure to allow water to drain out of the impoundment to the outlet waters (Duck Lake Slough) and into the Big Bay portion of Catahoula Lake and eventually to the Catahoula Lake diversion canal. (Water is not drawn out of Catahoula Lake into Duck Lake. Only when there is a flood event does water from Catahoula Lake backflow into the Duck Lake Impoundment.)

Several other impoundments on the Headquarters Unit have stop-log water control structures, including a small seven-acre impoundment on the Willow Lake area.

The water within Cowpen Bayou on the Headquarters Unit is also managed, not for moist-soil but for fisheries resources. The water control structure is used to move water between Cowpen Bayou and Duck Lake. Cowpen Bayou and the Highway 28 borrow pits are the only water bodies on the Headquarters Unit open to fishing year-round.

There are several impoundments managed for moist-soil on the Bushley Bayou Unit. Some of these have stop-log water control structures, including Long Lake, a 60-acre impoundment along the east boundary of the Bushley Bayou Unit, as well as one of the five impoundments north of Rhinehart Lake that were constructed by the Natural Resources Conservation Service's Wetlands Reserve Program (WRP). The other four WRP impoundments are passive in that they do not have control structures. These permanent water areas depend on rain, backwater, or runoff to fill the impoundments.

3.3 Wildlife Resources

3.3.1 Migratory and Resident Birds

Catahoula NWR was established on October 28, 1958, to provide extensive wintering habitat for migratory birds and waterfowl. It is one of the earliest such areas in central Louisiana acquired by the Government for conservation purposes, and today is home to 219 species of birds. There are 42 bird species that nest on the Refuge.

Waterfowl, wading birds, raptors, and songbirds abound at various times of the year and one can observe them by driving the Wildlife Drive or hiking along levees, fields, or wooded roads. Woodcock have been observed around the edges of the Refuge boundary and Catahoula Lake as well as within the reforested areas of the Bushley Bayou Unit, especially at dusk. Shorebirds can be found using the mudflats and shallow water areas of Duck Lake and its tailwaters and the impoundments within the Willow Lake Unit of the Headquarters Unit and the Minnow Ponds, Ducks Unlimited-Wetlands Reserve Program (DU-WRP) Ponds, Rhinehart Lake, Round Lake, and Long Lake located within the Bushley Bayou Unit. Shorebirds have been observed from spring to fall in these areas, but the highest use occurs as the lakes and impoundments are drawn down from July 1 through October 31.

Marsh birds, such as the Virginia and sora rails, use the moist-soil areas on the Refuge during the fall and spring. Wading birds, such as great blue herons, snowy and cattle egrets, great egrets, tri-colored herons, glossy ibis, green herons, and white ibis, are abundant. They use the shoreline of Catahoula Lake and the nearby sloughs and flooded depressions.

3.3.2 Threatened and Endangered Species

Bald eagles (*Haliaeetus leucocephalus*) have been seen wintering on the Refuge for many years, although there are no known nesting sites. They visit the Refuge during their migration through the area and are classified as transient. Louisiana black bear (*Ursus americanus luteolus*) habitat exists on the Refuge and it is conceivable that a transient black bear may occur. With the recent discovery of an ivory-billed woodpecker (*Campephilus principalis*) at the Central Arkansas Refuges Complex, there is a possibility; however slight, that this Refuge could provide some form of habitat now and in the future.

3.3.3 Species of Concern

Ospreys, woodstorks, northern harriers, swallow-tail kites, and alligator snapping turtles are species of special concern occasionally reported in this area.

3.3.4 Mammals

Mammals that are thought to occur on the Refuge and are associated with bottomland hardwood forest include white-tailed deer, fox and gray squirrels, swamp and cottontail rabbits, armadillos, beaver, bobcat, coyote, opossum, and raccoon. Nutria, muskrat, mink, raccoon, opossum, beaver, and otter are the primary furbearers. Of these, the beaver, muskrat, river otter, nutria, and mink are associated with the more permanently inundated wetlands and riverine systems.

3.3.5 Reptiles and Amphibians

Amphibian management and conservation are of great interest due to apparent global amphibian declines. Habitat loss, fragmentation, and degradation appear to be the primary factors in declines. This group of animals requires quality wetland habitat for their survival and they also serve as important indicators of environmental health. Although no amphibian and reptile surveys have been conducted on Catahoula NWR to determine species occurrence or population levels, lists of potential species, including frogs, turtles, and snakes,

Wildlife species found on the refuge are typical of bottomland hardwood forests, moist soils, early successional forest and upland hardwood/pine habitat. The refuge provides habitat for thousands of wintering ducks and geese and year-round habitat for nesting wood ducks. Although no large rookeries are located on the refuge, hundreds of wading and water birds, such as white ibis, herons, egrets, roseate spoonbills, and wood storks, forage in the sloughs, bayous. Resident game species include fox and gray squirrels, swamp and eastern cottontail rabbits, and white-tailed deer. Furbearers present include opossum, muskrat, nutria, mink, river otter, beaver, and red and gray foxes. Although the refuge is within the range of the American alligator, few are seen, probably due to fluctuating water levels, which is not preferred alligator habitat.

3.3.6 Threatened and Endangered Species

Bald eagles (*Haliaeetus leucocephalus*) utilize the refuge mostly during the winter months for foraging. Usually only one to four is seen annually on the Headquarters Unit and no confirmed sightings on the Bushley Bayou Unit where hunting would be expanded. Black bear habitat on the refuge is very limited and the possibility of a dispersing or wandering Louisiana black bear visiting the refuge is remote, but possible.

3.3.7 Species of Concern

Ospreys, wood storks, northern harriers, swallow-tail kites, and alligator snapping turtles are all species of special concern occasionally reported in this area. Late season drawdowns of waterfowl impoundments often attract post-breeding wood storks to the refuge.

3.4 Fishery Resources

Impoundments and streams on the Refuge are restocked during backwater flooding. Seasonal flooding of wooded areas provides a vast quantity of spawning and feeding habitat for numerous sport, commercial, and forage fishes. These species include largemouth bass, spotted bass, black crappie, white crappie, bluegill, redear sunfish, white bass, channel catfish, blue catfish, flathead catfish, alligator gar, largemouth and smallmouth buffalo, freshwater drum, and shad.

3.5 Cultural Resources

The body of federal historic preservation laws has grown dramatically since the enactment of the Antiquities Act of 1906. Several themes recur in these laws, their promulgating regulations, and more recent Executive Orders. They include: 1) each agency is to systematically inventory the "historic properties" on their holdings and to scientifically assess each property's eligibility for the National Register of Historic Places; 2) federal agencies are to consider the impacts to cultural resources during the agencies' management activities and seek to avoid or mitigate adverse impacts; 3) the protection of cultural resources from looting and vandalism are to be accomplished through a mix of informed management, law enforcement efforts, and public education; and 4) the increasing role of consultation with groups, such as Native American tribes, in addressing how a project or management activity may impact specific archaeological sites and landscapes deemed important to those groups. The U.S. Fish and Wildlife Service, like other federal agencies, are legally mandated to inventory, assess, and protect cultural resources located on those lands that the agency owns, manages, or controls. The Service's cultural resource policy is delineated in 614 FW 1-5 and 126 FW 1-3. In the FWS's Southeast Region, the cultural resource review and compliance process is initiated by contacting the Regional Historic Preservation Officer/Regional Archaeologist (RHPO/RA). The RHPO/RA will determine whether the proposed undertaking has the potential to impact cultural resources, identify the "area of potential effect," determine the appropriate level of scientific investigation necessary to ensure legal compliance, and initiates consultation with the pertinent State Historic Preservation Office (SHPO) and federally recognized Tribes.

To date, there have been two comprehensive archaeological surveys on the Refuge; however, no properties have been determined to be eligible for the NRHP. Cultural resource surveys within the Refuge have focused on the eastern shore area of Catahoula Lake (Wiseman et al, 1978; Boggess, 1991). Given the region's settlement during both the prehistoric and historic periods, the likelihood of cultural resources is considered relatively high (Wiseman et al, 1978).

3.6 Socio Economic Resources

Seventy-three percent of the land area of the 25,000-acre Refuge is located in Catahoula Parish; the remainder is in LaSalle Parish. These parishes are strategically situated in central Louisiana, in a region known as the crossroads of the state because of its location,

which is convenient to all the major cities of Louisiana. The nearest major city is Alexandria (population 46,342), roughly 30 miles southeast of the Refuge (USCB, 2000).

The total population of Catahoula Parish was estimated at 10,615 in 2003 (USCB, 2004). This estimate reflects a slight decline from the 10,920 people counted during the 2000 Census (USCB, 2000). Neighboring LaSalle Parish, which contains only 30% of the Refuge, has a slightly larger population of 14,179. Catahoula Parish has a median household income of \$22,528, as shown in Table 4. The percent of families below the poverty level, 22.6 percent, is higher than the state's average of 15.8 percent. Educational attainment, measured by percentage of persons over 25 with high school diplomas or higher, is 62 percent in Catahoula Parish and 69 percent in LaSalle Parish, lower than the state's average of 74.8 percent. LaSalle Parish has a slightly higher median household income of \$28,189 and a lower poverty level (14.9 percent) than Catahoula Parish and the state.

Table 4. Socioeconomic Statistics for Catahoula and LaSalle Parishes

| | Population (2003 Estimate) | Median househo ld income | Percent below poverty level | Educational attainment (% with high school education) | Unemployment (March 2004) |
|-----------|---|---|--|--|--------------------------------------|
| Catahoula | 10,615 | \$22,528 | 22.6% | 62% | 10.5% |
| LaSalle | 14,179 | \$28,189 | 14.9% | 69% | 7.4% |
| Louisiana | 3.4 million | \$32,566 | 15.8% | 74.8% | 5.9% |

Source: BLS, 2004; USCB, 2000; USCB, 2004

Unemployment rates for both parishes tend to be higher than the state or national averages. In 2004, Catahoula Parish had 10.5 percent unemployment rate and LaSalle had 7.4 percent unemployment, compared to a state average of 5.9 percent and a national average of 5.7 percent (BLS, 2004). Forestry dominates the local economic base and International Paper Company is a major employer. Other major industries for the parishes and the surrounding region include oil and gas services, apparel manufacturing, and agriculture. The leading field crops consist of sorghum (grain), soybeans, wheat, corn, and oats (NASS, 2004).

Wildlife-associated recreation includes fishing, hunting, and wildlife-watching activities. Wildlife-watching includes observing, photographing, and feeding fish and wildlife. The 2001 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation (USCB, 2003) quantifies the economic impacts of these activities on a state level (Table 5).

Table 5. Fishing, Hunting, and Wildlife-Associated Recreation in Louisiana

| Activity | # of participants | Activity Days | Avg. days/participant | Total expenditures (\$1,000) | Trip-related expenditures (\$1,000) | Equipment and other (\$1,000) | Average \$/participant | Average trip expenditure/day |
|-------------------|-------------------|---------------|-----------------------|------------------------------|-------------------------------------|-------------------------------|------------------------|------------------------------|
| Fishing | 970,000 | 12,637,000 | 13 | \$703,373 | \$398,751 | \$304,622 | \$743 | \$32 |
| Hunting | 333,000 | 6,442,000 | 19 | \$446,204 | \$120,668 | \$325,536 | \$1,120 | \$19 |
| Wildlife Watching | 935,000 | N/A | N/A | \$168,420 | \$55,424 | \$112,996 | \$180 | NA |

Source: US Census Bureau. 2001 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation

The survey estimates 970,000 people participated in fishing in the state, resulting in total expenditures of over \$700 million dollars. Wildlife watching attracted nearly as many participants, with 935,000 participants, but resulted in considerably less expenditure. Hunting resulted in \$446 million in total expenditures from its 333,000 participants. The total from all these activities, including trip-related expenses, equipment purchases, and licenses and services amounted to over \$1.3 billion in 2001 (USCB, 2003).

3.7 Visitor Services

Recreational visits to national wildlife refuges generate substantial economic activity. In fiscal year 2002, people visited refuges (in the lower 48 states) more than 35.5 million times for recreation and environmental education. Their spending generated \$809.2 million of sales in regional economies. As this spending flowed through the economy, nearly 19,000 people were employed and \$315.2 million in employment income was generated (Laughland and Caudill, 2003).

The six priority uses of the Refuge are fishing, hunting, wildlife observation, wildlife photography, environmental education, and environmental interpretation.

The majority of public use occurs on the Headquarters Unit with some uses on the Bushley Bayou Unit. Facilities on the Refuge include an auto tour route, boat ramps, foot trails, ATV trails, and an observation tower. There are three Service-owned boat ramps on the Refuge on Duck Lake and Cowpen Bayou. The state also maintains a boat ramp on the French Fork of Little River at Catahoula Lake.

3.7.1 Fishing

Fishing opportunities are offered year round on Cowpen Bayou and the Highway 28 borrow pits of the Headquarters Unit. However, Muddy Bayou, Duck Lake, Willow Lake, the Highway 84 borrow pits, and all other Refuge waters on the Headquarters Unit are opened to fishing from March 1 through October 31.

At the Bushley Bayou Unit, Dempsey Lake (30 acres) is a quality sportfishing lake. Bushley Bayou, which runs the entire length of the Unit, offers additional sportfishing opportunities, especially during spring high water. Typical game species sought after are bluegill, crappie, bass, and catfish. Several other lakes, such as Round Lake, Long Lake, and Rhinehart Lake, are too shallow to provide a year-round quality sport fishery; however, during periods of high water these lakes support good populations of catfish, carp, and buffalo. Crawfishing is also extremely popular in these lakes and other shallow water areas. Recreational fishing and crawfishing are allowed year-round on this Unit.

Motors of 10 horsepower or less are allowed on interior lakes within the Bushley Bayou Unit and on all Headquarters Unit waters. There is no horsepower limit on motors used on Bushley Creek, Big Bushley Creek, and Little Bushley Creek.

At the Bushley Bayou Unit, recreational gear (slat traps, wire nets, hoop nets) is allowed only by Refuge special use permits and only in Bushley Creek, Big Bushley Creek, and Little Bushley Creek.

Trotlines and yo-yos are only allowed on the Bushley Bayou Unit and have the following regulations. Trotlines must be tended at least once every 24 hours and reset when exposed by receding water levels, and must be attached with the length of cotton line that extends into the water. Trotlines must be removed when not in use. Yo-yos must be attended, and may be used during daylight hours only. Commercial fishing and commercial crawfishing are not allowed on Refuge waters.

All fishing and hunting are in accordance with state regulations and require a valid state hunting or fishing license. In addition hunters and fishermen must comply with Refuge regulations.

ATVs are allowed on designated Refuge trails at the Bushley Bayou Unit. Some of these ATV trails are open year round for fishing and hunting access. The remainder, which do not lead to any fishing areas, are closed from March 1 through August 31.

3.7.2 Hunting

Hunting is the next most popular recreational activity. Over 18,000 acres are open to hunting on the Bushley Bayou Unit and over 6,000 acres on the Headquarters Unit. On the Headquarters Unit the Refuge holds a short small game season in October for rabbit and squirrel. Hunters are allowed to access the Refuge two hours before official sunrise and are required to exit the Refuge no later than two hours after official sunset. Hunters are allowed access to the Headquarters Unit for deer, squirrel, and rabbit hunting. The Bushley Bayou Unit is open to deer, squirrel, rabbit, rails, gallinule, snipe, woodcock, and waterfowl hunting. Archery hunting is open the entire state season. On the Bushley Unit, there are three big game hunts for deer, including 5 days of gun hunting, 7 days of muzzleloader hunting, and 100+ days of archery hunting. These hunts are non-quota and

require only a signed Refuge hunt regulation brochure, which is available at the Refuge office, sign-in stations located at most major entrances, and some local hunting/fishing stores. Deer hunters are allowed to take only one deer per day and are not required to check them in. However, they must sign in and out for each hunt. Squirrels, rabbits, raccoons and feral hogs may be taken during the archery hunt. Hogs and raccoons may be taken during all Refuge hunts.

The state permits duck hunting on Catahoula Lake. The Refuge allows duck hunting four days a week, Tuesdays, Thursdays, Saturdays, and Sundays until noon, during the state season only on the Bushley Bayou Unit, except in the 160-acre no-hunting zone in the minnow pond area. Other migratory bird hunting for woodcock, snipe, and rails is open during state seasons only on the Bushley Bayou Unit. Boats, decoys, and portable blinds must be removed at the end of each day. No permanent blinds are allowed. A youth waterfowl hunt in the East Zone is allowed until noon of the state youth waterfowl season. No waterfowl or migratory bird hunting is permitted on the Headquarters Unit. Hunters under the age of 18 must have completed a hunter education course and be accompanied by an adult 21 years of age or older. Hunting is in accordance with state regulations and requires a valid state hunting license.

3.7.3 Wildlife Observation and Photography

There are many opportunities for wildlife viewing and photography on the Refuge, which currently has two designated hiking trails, an observation tower, and a 9-mile wildlife auto drive on the Headquarters Unit. Other units provide more trails, roads, and diverse habitats.

The most popular facility on the Refuge for wildlife observation is the observation tower, which overlooks a lake that draws a variety of waterfowl, shorebirds, wading birds and raptors. The wildlife drive parallels Cowpen Bayou that provides a chance to see varied bird species, alligators, turtles, otters, and other wildlife. Much of the wildlife drive takes visitors through a bottomland hardwood forest where bobcat, white-tailed deer, and feral hogs can be seen. There is also some bird watching along the dirt roads on the Bushley Bayou Unit.

Although no photo blind is provided, visitors may use various haul roads to get into the woods or close to Duck Lake, which provides a close up view of the birds using the Refuge.

3.7.4 Interpretation and Environmental Education

Along the auto tour road on the Headquarters Unit, there are many opportunities to stop at the observation tower or to take a half-mile walk along the nature trail. There is an open-air kiosk with an interpretive display, which needs to be updated, on the Headquarters Unit. Most of the entrances to the Refuge have hunter sign-in/sign-out boxes that include a kiosk with Refuge information.

Environmental education programs are not available on-site because facilities do not allow for such programs. However, the Refuge provides environmental programs for schools and community organizations when requested.

Chapter 4 Environmental Consequences

This chapter describes the foreseeable environmental consequences of implementing the two management alternatives described in Chapter 2. When detailed information is available, a scientific and analytic comparison between alternatives and their anticipated consequences is presented, which is described as “impacts” or “effects.” When detailed information is not available, those comparisons are based on the professional judgment and experience of refuge staff and Service and State biologists.

4.1 Effects Common to all Alternatives

4.1.1 Environmental Justice

Executive Order 12898 “Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations” was signed by President Bill Clinton on February 11, 1994, to focus federal attention on the environmental and human health conditions of minority and low-income populations with the goal of achieving environmental protection for all communities. The Order directed federal agencies to develop environmental justice strategies to aid in identifying and addressing disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority and low-income populations. The Order is also intended to promote nondiscrimination in federal programs substantially affecting human health and the environment, and to provide minority and low-income community’s access to public information and participation in matters relating to human health or the environment. This assessment has not identified any adverse or beneficial effects for either alternative unique to minority or low-income populations in the affected area. Neither alternative will disproportionately place any adverse environmental, economic, social, nor health impacts on minority or low-income populations.

4.1.2 Public Health and Safety

Each alternative would have similar effects or minimal to negligible effects on human health and safety.

4.1.3 Refuge Physical Environment

Impacts of each alternative on the refuge physical environment would have similar minimal to negligible effects. Some disturbance to surface soils and topography would occur in areas open for hunting; however effects would be minimal and similar to areas closed to hunting.

Impacts to the natural hydrology would have negligible effects. The refuge expects impacts to air and water quality to be minimal and only due to refuge visitors’ automobile and off-road vehicle emissions and run-off from road and trail sides. The effect of these refuge-related activities on overall air and water quality in the region are anticipated to be relatively negligible. Existing State water quality criteria and use classifications are

adequate to achieve desired on-refuge conditions; thus, implementation of any of the alternatives would not impact adjacent landowners or users air and water quality beyond the constraints already implemented under existing State standards and laws.

4.1.4 Cultural Resources

Under each alternative, hunting, regardless of method or species targeted, is a consumptive activity that does not pose any threat to historic properties on and/or near the Refuge.

4.1.5 Facilities

Maintenance or improvement of existing facilities (i.e. parking areas, roads, trails, and boat ramps) will cause minimal short term impacts to localized soils and waters and may cause some wildlife disturbances and damage to vegetation.

4.2 Summary of Effects

4.2.1 Impacts to Habitat

Alternative A – Proposed Action

The biological integrity of the refuge would be protected under this alternative, and the refuge purpose of conserving wetlands for wildlife would be achieved. Limited hunting of migratory and resident birds while providing areas of sanctuary will produce benefits to both habitat and populations. Most waterfowl hunting is limited to individual areas on the Bushley Bayou Unit of the refuge, therefore, reducing the trampling of vegetation. Continuing to limit the areas open to deer, rabbit, and feral hog hunting also will reduce the amount of vegetation affected. The continued hunting of deer and feral hogs would positively impact wildlife habitat by promoting plant health and diversity and reducing hog wallowing which destroys vegetation and compacts soils. When deer are overpopulated, they overbrowse their habitat, which can change the structure and plant composition of a forest. The refuge has reforested approximately 13,868 acres with bottomland hardwood tree species in recent years. Young tree seedlings (1-9 years old) can be killed by overbrowsing. Failure to establish this forest would have negative impacts on future resident and non-resident wildlife populations as well as the purpose of the refuge. Feral hogs are considered a threat to the biological integrity of the refuge because they are an extremely invasive, non-native species. By rooting and wallowing, feral hogs destroy wildlife habitat. Damage includes erosion along waterways and wetlands and the loss of native plants.

Impacts to vegetation should be minor with the addition of migratory bird hunting. Hunter density is estimated to be an average of 2 hunters/1,000 acres throughout the hunting season. Refuge-regulations would not permit the use of ATVs off of designated trails. Vehicles would be confined to existing roads and parking lots.

Alternative B – No Action

Under this alternative, the Refuge would not be opened to waterfowl, coot, woodcock, gallinule, snipe, and rail hunting. The refuge would continue to allow the take of deer, rabbit, squirrels, raccoon, and feral hogs; however. Not allowing hunting of migratory and resident birds would fail to meet the purposes of the refuge or improve habitat. Trampling of vegetation from game bird hunters would not occur. Continuing to limit the areas open to deer, rabbit, and feral hog hunting also will reduce the amount of vegetation affected. The hunting of deer and feral hogs positively impacts wildlife habitat by promoting plant health and diversity and reducing hog wallowing which destroys vegetation and compacts soils. When deer are overpopulated, they overbrowse their habitat, which can change the structure and plant composition of a forest. The refuge has reforested approximately 13,686 acres with bottomland hardwood tree species in recent years. Young tree seedlings (1-9 years old) can be killed by overbrowsing. Failure to establish this forest would have negative impacts on future resident and non-resident wildlife populations as well as the purpose of the refuge. Feral hogs are considered a threat to the biological integrity of the refuge because they are an extremely invasive, non-native species. By rooting and wallowing, feral hogs destroy wildlife habitat. Damage includes erosion along waterways and wetlands and the loss of native plants.

Although hunters would not be traversing across approximately 18,000+ acres currently open to migratory bird hunting, which could cause damage to individual plants by trampling vegetation, non-consumptive users would still be able to walk throughout the area.

Alternative C - Decreased waterfowl and migratory bird hunting on the refuge

Same as Alternative B except limited game bird hunting would have minor impacts to vegetation, such as trampling.

Alternative D - Increased waterfowl hunting on the refuge

Same as Alternative A except negative impacts to vegetation would be more than Alternative A, B, and C levels. Hunter density is estimated to be an average of 5 hunter/1,000 acres throughout the hunting season and this would occur for longer durations and times. Hunters would also be able to leave permanent blinds, decoys, and equipment overnight. Trampling of vegetation from hunters taking the opportunity to establish hunting areas would increase.

4.2.2 Impacts to Hunted Wildlife

Alternative A – Proposed Action

Mortality of individual hunted animals would occur under this alternative, estimated by the refuge to be a maximum of 1,500 ducks, 5 snow geese, 5 white-fronted geese, 20

snipe, 20 rail, and 20 woodcock annually. Estimates for other hunted species (coots and gallinules) would be less than 80 individuals per species.

Hunting of migratory birds would fit well within Mississippi flyway objectives and national, regional, and local populations would not be adversely affected. Continuing to take deer, feral hog, rabbit, and squirrel would help maintain their populations at or below carrying-capacity. The likelihood of deer-vehicle collisions would be decreased. Reduction of the hog population would decrease risk of transmitting fatal diseases by hogs to other wildlife species. Fewer hogs would decrease competition for food with native wildlife, such as deer, bear, turkey, and squirrel.

All seasons will be coordinated with and within the framework of the Louisiana Department of Wildlife & Fisheries Commission. Some hunting regulations may be more restrictive than State regulations to meet refuge objectives. The recreational hunting program will be an adaptive program. If necessary, modifications may be made to refuge specific regulations and/or the hunt program based on harvest data and/or public use issues.

This alternative will allow the refuge to maintain existing sanctuary areas. Since the primary refuge objective is to preserve wintering habitat for mallards, pintails, and wood ducks, care will be taken to minimize human disturbance in the sanctuary areas. Sanctuary areas will be seasonally closed to all activities.

Alternative B – No Action

Mortality of individual hunted game bird species would not occur under this alternative. Disturbance by hunters to other hunted wildlife would continue to occur at current levels along with other public uses that cause low levels of disturbance, such as wildlife observation and photography.

Migratory and resident game birds could overpopulate an area and cause large groups of birds to congregate. The likelihood of starvation and diseases, such as avian cholera and bird flu in migratory and resident birds, could increase. Continuing to take deer, feral hog, rabbit, and squirrel would help maintain their populations at or below carrying-capacity. The likelihood of deer-vehicle collisions would be decreased. Reduction of the hog population would decrease risk of transmitting fatal diseases by hogs to other wildlife species. Fewer hogs would decrease competition for food with native wildlife, such as deer, bear, turkey, and squirrel.

Alternative C - Decrease waterfowl and migratory bird hunting on the refuge

Same as Alternative A.

Alternative D - Increase waterfowl hunting on the refuge

Mortality of individual hunted animals would occur under this alternative, estimated by the refuge to initially be a maximum of 2,500 ducks, 25 snow geese, and 25 white-fronted geese annually. Estimates for other hunted species (snipe, rail, coot, woodcock, and gallinule) would be less than 80 individuals per species. This estimate would possibly decrease substantially after the first few years of hunting.

All seasons will be coordinated with and within the framework of the Louisiana Department of Wildlife and Fisheries. Hunting of game birds would fit well within Mississippi flyway objectives and national, regional, and local populations would not be adversely affected; however the use of the refuge would most likely decrease due to not maintaining closed areas. If the refuge is open for the entirety of the season for all hours and days, disturbance in sanctuary and hunted areas of the refuge would increase. The refuge could not provide enough undisturbed habitat needed to support the recommended population objectives or the objectives for which the refuge was established.

Continued hunting of deer, hog, raccoon, rabbit, and squirrel would help maintain their populations at or below carrying-capacity. The likelihood of starvation and diseases, such as bluetongue and EHD in deer and distemper would be decreased, as would deer-vehicle collisions. Reduction of the hog population would decrease risk of transmitting fatal diseases by hogs to other wildlife species. Fewer hogs would decrease competition for food with native wildlife, such as deer, bear, turkey, and squirrel.

4.2.3 Impacts to Non-hunted Wildlife

Alternative A – Proposed Action

Depredation rates of birds, turtles and their nests would decrease as populations of raccoon would continue to be decreased under this alternative. Feral hog populations would be reduced thereby decreasing predation of deer fawns, turkeys and small mammals.

Disturbance to non-hunted wildlife would increase slightly. However, significant disturbance would be unlikely for the following reasons. Small mammals, including bats, are inactive during winter when hunting season occurs. These species are also nocturnal. Both of these qualities make hunter interactions with small mammals very rare. Hibernation or torpor by cold-blood reptiles and amphibians also limits their activity during the hunting season when temperatures are low. Hunters would rarely encounter reptiles and amphibians during most of the hunting season. Invertebrates are also not active during cold weather and would have few interactions with hunters during the hunting season. The refuge has estimated current hunter density on peak days to be no more than 5 hunters/1,000 acres. Refuge regulations further mitigate possible disturbance by hunters to non-hunted wildlife. Vehicles are restricted to roads and the harassment or taking of any wildlife other than the game species legal for the season is not permitted. Disturbance to the daily wintering activities, such as feeding and resting,

of birds might occur, but would be transitory as hunters traverse habitat. Disturbance to birds by hunters would probably be commensurate with that caused by non-consumptive users.

Refuge regulations further mitigate possible disturbance by hunters to non-hunted wildlife. Vehicles are restricted to roads and the harassment or taking of any wildlife other than the game species legal for the season is not permitted. Disturbance to the daily wintering activities, such as feeding and resting, of birds might occur, but would be transitory as hunters traverse habitat.

Alternative B – No Action

Same as Alternative A except disturbance to non-hunted wildlife from game bird hunters would not increase.

Alternative C - Decrease waterfowl and migratory bird hunting on the refuge

Same as Alternative A.

Alternative D - Increase waterfowl hunting on the refuge

Same as Alternative A except disturbance to non-hunted species would increase above levels outlined above.

4.2.4 Impacts to Endangered and Threatened Species

Alternative A – Proposed Action

This alternative is would not have adverse affects to threatened and endangered species on the refuge. A Section 7 Evaluation associated with this assessment was conducted, and it was determined that the proposed action is not likely to adversely affect bald eagle, (Refer to Section 7 Evaluation for Migratory Bird Hunting on Catahoula NWR).

Alternative B – No Hunting

Because current public use levels on the refuge would remain the same, there would be no increased chance of adversely affecting threatened and endangered species.

Alternative C - Decrease waterfowl and migratory bird hunting on the refuge

Same as Alternative A.

Alternative D - Increase waterfowl hunting on the refuge

Same as Alternative A.

4.2.5 Impacts to Refuge Facilities (roads, trails, parking lots, levees)

Alternative A – Proposed Action

Additional damage to roads and ATV trails due to game bird hunter use during wet weather periods might occur. The current refuge hunt program on the Bushley Bayou Unit for the past three years has shown these impacts to be minimal. There would be some costs associated with a hunting program in the form of road and ATV trail maintenance, instructional sign needs, and law enforcement. These costs should be minimal relative to total refuge operations and maintenance costs and would not diminish resources dedicated to other refuge management programs.

Alternative B – No Hunting

Because current public use levels on the refuge would remain the same, there would be no increased impacts to Refuge Facilities.

Alternative C - Decrease waterfowl and migratory bird hunting on the refuge

Same as Alternative A.

Alternative D - Increase waterfowl hunting on the refuge

Additional damage to roads and ATV trails due to increased game bird hunter use during wet weather periods more than likely will occur. The current refuge hunt program on the Bushley Bayou Unit for the past three years has shown these impacts to be minimal; however with increased use proposed under this alternative, negative impacts could increase. There would be increased costs associated with a hunting program in the form of road and ATV trail maintenance, instructional sign needs, and law enforcement. These increased costs may negatively impact refuge operations and maintenance and diminish resources dedicated to other refuge management programs. .

4.2.6 Impacts to Wildlife Dependant Recreation

Alternative A – Proposed Action

As public use levels expand across time, unanticipated conflicts between user groups may occur. Experience has proven that time and space zoning (e.g., establishment of separate use areas, use periods, and restrictions on the number of users) is an effective tool in eliminating conflicts between user groups. Game bird hunting areas would be maintained and separated allowing hunters equal opportunities to harvest this renewable resource. Squirrel and rabbit hunters would not be able to use dogs until after the last deer gun hunt to ensure conflicts do not arise. Raccoon hunting (which the State allows to be open all year) is limited to the squirrel, rabbit, and archery season during daylight hours as incidental take. This would limit conflicts between raccoon hunters and deer gun hunters. This would also limit disturbance to wildlife during the spring and summer

when most species reproduce. Youth waterfowl hunts coincides with other hunt season and would provide youth the opportunity to hunt without having to compete with adults. Conflicts between hunters and non-consumptive users might occur but would be mitigated by time (non-hunting season) and space zoning. The refuge would focus non-consumptive use (mainly birdwatching and other wildlife viewing) in the sanctuary areas that are closed to hunting. Implementation of these “no hunting” zones on the refuge would facilitate all six of the Priority Public Uses as defined in the Refuge Improvement Act of 1997.

The public would be allowed to harvest a renewable resource, and the refuge would be promoting a wildlife-oriented recreational opportunity that is compatible with the purpose for which the refuge was established. The public would have an increased awareness of Catahoula NWR and the National Wildlife Refuge System and public demand for more hunting would be met. Waterfowl and white-tailed deer hunting are both very popular activities in Central Louisiana. Opening designated areas of the refuge to hunting would allow the general public an opportunity that was once afforded only to paying leaseholders. Waterfowl hunting was the primary use for the landowners prior to refuge establishment. Hunting will allow for the consumptive use of a renewable resource without impacting wildlife populations, habitat, or other refuge objectives. Resident and migratory game animals will be harvested at levels sufficient to provide a quality, recreational experience while maintaining healthy, viable wildlife populations. This alternative would allow youth the opportunity to experience a wildlife-dependant recreation, instill an appreciation for and understanding of wildlife, the natural world and the environment and promote a land ethic and environmental awareness.

Impacts associated with solitude are expected to be minimal given time and space zone management techniques, such as seasonal access and area closures, used to avoid conflicts among user groups.

Alternative B – No Action

The public would not have the opportunity to harvest a renewable resource, participate in wildlife-oriented recreation that is compatible with the purposes for which the refuge was established, nor have an increased awareness of Catahoula NWR and the National Wildlife Refuge System; nor would the Service be meeting public use demand. Public relations would not be enhanced with the local community. Under this alternative, youth would be unable to experience game bird hunting. This would be a missed opportunity to promote youth, wildlife-dependant recreation.

Alternative C - Decrease waterfowl and migratory bird hunting on the refuge

Same as Alternative A.

Alternative D - Increase waterfowl hunting on the refuge

Hunting opportunities and the variety of hunting experiences would be increased, and

generally well accepted. The local economy would benefit from an increased hunting program on the refuge. However, as public use levels expand across time, conflicts between user groups would occur and increase under this alternative. Experience has proven that time and space zoning (e.g., establishment of separate use areas, use periods, and restrictions on the number of users) is an effective tool in eliminating conflicts between user groups. Under this alternative, conflicts between consumptive uses would occur and possibly even between game bird hunters arguing over hunting locations. Conflicts between non-consumptive and consumptive users could also occur and increase.

Impacts associated with solitude are expected to increase given complications of implementing proper time and space zone management techniques among user groups.

4.3 Cumulative Impacts Analysis

4.3.1 Anticipated Direct and Indirect Impacts of Proposed Action on Wildlife Species.

4.3.1.1 Migratory Birds

The U.S. Fish and Wildlife Service, working with partners, annually prescribe frameworks, or outer limits, for dates and times when hunting may occur and the number of birds that may be taken and possessed. These frameworks are necessary to allow State selections of season and limits for recreation and sustenance; aid Federal, State, and tribal governments in the management of migratory game birds; and permit harvests at levels compatible with population status and habitat conditions. Because the Migratory Bird Treaty Act stipulates that all hunting seasons for migratory game birds are closed unless specifically opened by the Secretary of the Interior, the Service annually promulgates regulations (50 CFR Part 20) establishing the frameworks from which States may select season dates, bag limits, shooting hours, and other options for the each migratory bird hunting season. The frameworks are essentially permissive in that hunting of migratory birds would not be permitted without them. Thus, in effect, Federal annual regulations both allow and limit the hunting of migratory birds.

Migratory game birds are those bird species so designated in conventions between the United States and several foreign nations for the protection and management of these birds. Under the Migratory Bird Treaty Act (16 U.S.C. 703-712), the Secretary of the Interior is authorized to determine when "hunting, taking, capture, killing, possession, sale, purchase, shipment, transportation, carriage, or export of any ... bird, or any part, nest, or egg" of migratory game birds can take place, and to adopt regulations for this purpose. These regulations are written after giving due regard to "the zones of temperature and to the distribution, abundance, economic value, breeding habits, and times and lines of migratory flight of such birds, and are updated annually (16 U.S.C. 704(a)). This responsibility has been delegated to the U.S. Fish and Wildlife Service as the lead federal agency for managing and conserving migratory birds in the United States.

Acknowledging regional differences in hunting conditions, the Service has administratively divided the nation into four Flyways for the primary purpose of managing migratory game birds. Each Flyway (Atlantic, Mississippi, Central, and Pacific) has a Flyway Council, a formal organization generally composed of one member from each State and Province in that Flyway. Catahoula NWR is within the Mississippi Flyway.

The process for adopting migratory game bird hunting regulations, located in 50 CFR part 20, is constrained by three primary factors. Legal and administrative considerations dictate how long the rule making process will last. Most importantly, however, the biological cycle of migratory game birds controls the timing of data-gathering activities and thus the dates on which these results are available for consideration and deliberation. The process of adopting migratory game bird hunting regulations includes two separate regulations-development schedules, based on "early" and "late" hunting season regulations. Early hunting seasons pertain to all migratory game bird species in Alaska, Hawaii, Puerto Rico, and the Virgin Islands; migratory game birds other than waterfowl (e.g. dove, woodcock, etc.); and special early waterfowl seasons, such as teal or resident Canada geese. Early hunting seasons generally begin prior to October 1. Late hunting seasons generally start on or after October 1 and include most waterfowl seasons not already established. There are basically no differences in the processes for establishing either early or late hunting seasons. For each cycle, Service biologists and others gather, analyze, and interpret biological survey data and provide this information to all those involved in the process through a series of published status reports and presentations to Flyway Councils and other interested parties (USFWS 2006).

Under the proposed action, opening Catahoula National Wildlife Refuge to hunting should not have cumulative impacts on migratory birds. Currently, Catahoula NWR has an average harvest of 700 ducks (primarily Mallards, Wood Ducks, Gadwalls, Green-winged Teal), on 17,500 acres per season. Under the proposed action, Catahoula NWR estimates a maximum additional 1,500 ducks annually would be harvested each year. Waterfowl hunting is only allowed until noon each day during the season, which is more restrictive than regulations set forth by Louisiana Department of Wildlife and Fisheries (LDWF). This harvest impact represents 0.002% of Louisiana's four-year average harvest of 921,990 ducks (USFWS 2005). Under the proposed action, Catahoula NWR estimates a maximum additional 20 snipe and 20 rail annually would be harvested each year. This harvest impact represents 0.0002% and 0.002%, respectively of Louisiana's average harvest during the 1999 and 2000 hunting seasons of 85,550 snipe and 10,650 rail (USFWS 2006). Waterfowl hunting should have no cumulative effects on waterfowl populations.

Although woodcock are showing declines in numbers on their breeding grounds, habitat loss is considered to be the culprit, not hunting. This assertion was tested in a study conducted by the U.S. Geological Patuxent Wildlife Research Center in 2005 (McAuley *et al.* 2005). Results showed no significant differences in woodcock survival between hunted and non-hunted areas. Furthermore, the authors concluded that hunting was not

having a considerable impact on woodcock numbers in the Northeast (McAuley *et al.* 2005).

An estimated 24,000 woodcock were harvested in the 2005/06 season in the state of Louisiana. Louisiana's harvest of 24,000 woodcock represented 0.5% of the estimated 4.6 million North American woodcock population. Limited woodcock habitat exists on the refuge. With such relatively few woodcock being currently harvested on the refuge, the opening of hunting as stated in the proposed action should have no cumulative effects on their local, regional or flyway populations. Woodcock hunting is not popular in Central Louisiana, the refuge draws less than 5 woodcock hunters a year.

Because the Service is required to take abundance of migratory birds and other factors in to consideration, the Service undertakes a number of surveys throughout the year in conjunction with the Canadian Wildlife Service, State and Provincial wildlife-management agencies, and others. To determine the appropriate frameworks for each species, the Service considers factors such as population size and trend, geographical distribution, annual breeding effort, the condition of breeding and wintering habitat, the number of hunters, and the anticipated harvest. After frameworks are established for season lengths, bag limits, and areas for migratory game bird hunting, migratory game bird management becomes a cooperative effort of State and Federal Governments. After Service establishment of final frameworks for hunting seasons, the States may select season dates, bag limits, and other regulatory options for the hunting seasons. States may always be more conservative in their selections than the Federal frameworks but never more liberal. Season dates and bag limits for National Wildlife Refuges open to hunting are never longer or larger than the State regulations. In fact, based upon the findings of an environmental assessment developed when a National Wildlife Refuge opens a new hunting activity, season dates and bag limits may be more restrictive than the State allows. At Catahoula NWR, season length is more restrictive for waterfowl than the State allows.

NEPA considerations by the Service for hunted migratory game bird species are addressed by the programmatic document, "Final Supplemental Environmental Impact Statement: Issuance of Annual Regulations Permitting the Sport Hunting of Migratory Birds (FSES 88-14)," filed with the Environmental Protection Agency on June 9, 1988. We published Notice of Availability in the Federal Register on June 16, 1988 (53 FR 22582), and our Record of Decision on August 18, 1988 (53 FR 31341). Annual NEPA considerations for waterfowl hunting frameworks are covered under a separate Environmental Assessment, "Duck Hunting Regulations for 2006-07," and an August 24, 2006, Finding of No Significant Impact. Further, in a notice published in the September 8, 2005, Federal Register (70 FR 53376), the Service announced its intent to develop a new Supplemental Environmental Impact Statement for the migratory bird hunting program. Public scoping meetings were held in the spring of 2006, as announced in a March 9, 2006, Federal Register notice (71 FR 12216). More information may be obtained from: Chief, Division of Migratory Bird Management, U.S. Fish and Wildlife Service, Department of the Interior, MS MBSP-4107-ARLSQ, 1849 C Street, NWR, Washington, DC 20240.

4.3.1.2 Resident Big Game

4.3.1.2.1 Deer

Deer hunting does not have regional population impacts due to restricted home ranges. The average home range of a male deer in Mississippi is $1,511 \pm 571$ S.D hectares. (Mott *et al.* 1985). Therefore, only local impacts currently occur.

In central Louisiana, harvest and survey data confirm that decades of deer hunting on private lands surrounding Catahoula National Wildlife Refuge (using bait and a longer season) have not had a local cumulative effect on the deer population. LDWF estimate 209,200 deer were harvested throughout the state in 2005/06. The average annual statewide harvest since 1995 is 234,000 deer. Catahoula NWR estimates 60 deer are harvested per year, with no cumulative impacts from proposed game bird hunting.

4.3.1.2.2 Feral Hogs

Feral hogs are an extremely invasive introduced, non-native species and is not considered a game species by the State of Louisiana. No bag limits are established for feral hogs. Continued hunting of feral hogs provides the refuge with another management tool in reducing this detrimental species, and at the same time, is widely enjoyed by local hunters. Cumulative effects to an exotic, invasive species should not be of concern because the refuge would like to extirpate this species on refuge lands. Hunting of hogs is not considered detrimental to the biological integrity of the refuge, is not likely to create conflict with other public uses and is within the wildlife dependant public uses to be given priority consideration. Since hogs are exotic, they are a priority species for refuge management only in terms of their cumulative impacts on refuge biota and need for eradication. They are a popular game species though, and the public interest would best be served by allowing this activity on the refuge. However, even with hunting, feral hogs are likely to always be present because they are prolific breeders.

4.3.1.3 Small Game (Rabbit, Squirrel, and Raccoon)

Under the proposed action, direct and indirect impacts to small game will not change from current conditions. Rabbit, squirrel, and raccoon cannot be affected regionally by refuge hunting because of their limited home ranges. Only local effects exist. Raccoon are hunted primarily at night. Hunting helps regulate raccoon populations; however, unless the popularity of this type of hunting increases, raccoon numbers will always be higher than desired. When these species become extremely overabundant, diseases such as distemper and rabies reduce the populations. However, waiting for disease outbreak to regulate their numbers can be a human health hazard. Cumulative impacts to raccoon are

unlikely considering they reproduce quickly, are difficult to hunt due to their nocturnal habits, and are not as popular for hunting as other game species.

Studies have been conducted within and outside of Louisiana to determine the effects of hunting on the population dynamics of small game. Results from studies have consistently shown that small game, such as rabbits and squirrels, are not affected by hunting, but rather are limited by food resources. The refuge consulted with biologists at the Louisiana Dept of Wildlife and Fisheries (LDWF) in association with this assessment on the cumulative impacts of hunting on rabbits and squirrel. The statewide Louisiana squirrel harvest for 2005/06 was estimated at 1,253,900. LDWF estimated 255,200 rabbits killed by hunters in the 2005/06 season. On Catahoula NWR, from 2003-2007, hunter harvest data reports indicated a peak of 830 squirrel/season and 74 rabbit/season, representing 0.066% and 0.029%, respectively of the state's harvest. Gray squirrels, fox squirrels, eastern cottontails, and swamp rabbits are prolific breeders and their populations have never been threatened by hunting in Louisiana even prior to the passing of hunting regulations as we know them today.

4.3.1.4 Non-hunted Wildlife

Non-hunted wildlife would include non-hunted migratory birds such as songbirds, wading birds, raptors, and woodpeckers; small mammals such as voles, moles, mice, shrews, and bats; reptiles and amphibians such as snakes, skinks, turtles, lizards, salamanders, frogs and toads; and invertebrates such as butterflies, moths, other insects and spiders. Except for migratory birds and some species of migratory bats, butterflies and moths, these species have very limited home ranges and hunting could not affect their populations regionally; thus, only local effects will be discussed.

Disturbance to non-hunted migratory birds could have regional, local, and flyway effects. Regional and flyway effects would not be applicable to species that do not migrate such as most woodpeckers, and some songbirds including cardinals, titmice, wrens, chickadees, etc. The cumulative effects of disturbance to non-hunted migratory birds under the proposed action are expected to be negligible for the following reasons. Hunting season would not coincide with the nesting season. Long-term future impacts that could occur if reproduction was reduced by hunting are not relevant for this reason. Disturbance to the daily wintering activities, such as feeding and resting, of birds might occur. Disturbance to birds by hunters would probably be commensurate with that caused by non-consumptive users.

The cumulative effects of disturbance to non-hunted wildlife under the proposed action are expected to be negligible for the following reasons. However, disturbance would be unlikely for the following reasons. Small mammals, including bats, are inactive during winter when hunting season occurs. These species are also nocturnal. Both of these qualities make hunter interactions with small mammals very rare. Hibernation or torpor by cold-blood reptiles and amphibians also limits their activity during the hunting season when temperatures are low. Hunters would rarely encounter reptiles and amphibians

during most of the hunting season. Encounters with reptiles and amphibians in the early fall are few and should not have cumulative effects on reptile and amphibian populations. Invertebrates are also not active during cold weather and would have few interactions with hunters during the hunting season. The refuge has estimated current hunter density on peak days to be no more than 1 hunter per 160 acres. During the vast majority of the hunting season, hunter density is much lower (1 hunter/1,000 acres). Refuge regulations further mitigate possible disturbance by hunters to non-hunted wildlife. Vehicles are restricted to roads and the harassment or taking of any wildlife other than the game species legal for the season is not permitted.

Although ingestion of lead-shot by non-hunted wildlife could be a cumulative impact, it is not relevant to Catahoula NWR because the use of lead shot would not be permitted on the refuge for any type of hunting.

Some species of bats, butterflies and moths are migratory. Cumulative effects to these species at the “flyway” level should be negligible. These species are in torpor or have completely passed through Central Louisiana by peak hunting season in Nov-Jan. Some hunting occurs during September and October when these species are migrating; however, hunter interaction would be commensurate with that of non-consumptive users.

4.3.1.5 Endangered Species

The only species of special status that may utilize the refuge are bald eagles. A Section 7 Evaluation was conducted in association with this assessment for opening hunting on Catahoula NWR. It was determined that the proposed alternative would not likely affect this species.

Bald eagles may winter in areas that are open to waterfowl, deer, and small game hunting without noticeable effects. Actually, bald eagles wintering have been rarely observed even prior to opening hunting on the refuge.

Louisiana black bears have not been encountered on the refuge. However, it is possible transient individuals could occur without noticeable effects.

Refer to the Section 7 Evaluation for the Migratory Bird Hunting on Catahoula NWR for more information.

4.3.2 Anticipated Direct and Indirect Impacts of Proposed Action on Refuge Programs, Facilities, and Cultural Resources.

4.3.2.1 Wildlife-Dependant Recreation

Cumulative impacts to the wildlife-dependant recreation program are expected to be negligible. As public use levels expand across time, unanticipated conflicts between user groups may occur. The Refuge’s visitor use programs would be adjusted as needed to eliminate or minimize each problem and provide quality wildlife-dependent recreational

opportunities. Experience has proven that time and space zoning (e.g., establishment of separate use areas, use periods, and restrictions on the number of users) is an effective tool in eliminating conflicts between user groups.

The level of recreation use and ground-based disturbance from visitors would be largely concentrated at trails and the Refuge's office and maintenance areas. This, combined with the addition of game bird hunting opportunities, would not have an effect on Refuge programs.

The opportunities for big and small game hunting would continue at current levels under the proposed action. High deer numbers are recognized as a problem causing vegetation damage, reducing some forest understory species, and reducing reforestation seedling survival. Hunting would continue to be used to keep the deer herd and other resident wildlife in balance with the habitat's carrying capacity, resulting in long-term positive impacts on wildlife habitat.

The refuge would control access under this alternative to minimize wildlife disturbance and habitat degradation, while allowing current and proposed compatible wildlife-dependent recreation. Some areas, such as waterfowl sanctuaries, would be closed seasonally to hunting to minimize disturbance to wintering waterfowl.

4.3.2.2 Refuge Facilities

Cumulative impacts to refuge facilities are expected to be negligible. The Service defines facilities as: "Real property that serves a particular function(s) such as buildings, roads, utilities, water control structures, raceways, etc." Under the proposed action those facilities most utilized by hunters are: roads, parking lots, trails and boat launching ramps. Maintenance or improvement of existing facilities (i.e. parking areas, roads, trails, and boat ramps) will cause minimal short term impacts to localized soils and waters and may cause some wildlife disturbances and damage to vegetation. The facility maintenance and improvement activities described are periodically conducted to accommodate daily refuge management operations and general public uses such as wildlife observation and photography. These activities will be conducted at times (seasonal and/or daily) to cause the least amount of disturbance to wildlife. Siltation barriers will be used to minimize soil erosion, and all disturbed sites will be restored to as natural a condition as possible. During times when roads are impassible due to flood events or other natural causes those roads, parking lots, trails and boat ramps impacted by the event will be closed to vehicular use.

4.3.2.3 Cultural Resources

Hunting, regardless of method or species targeted, is a consumptive activity that does not pose any threat to historic properties on and/or near the Refuge. In fact, hunting meets only one of the two criteria used to identify an "undertaking" that triggers a federal agency's need to comply with Section 106 of the National Historic Preservation Act. These criteria, which are delineated in 36 CFR Part 800, state:

- 1- an undertaking is any project, activity, or program that can alter the character or use of an archaeological or historic site located within the “area of potential effect;” and
- 2- the project, activity, or program must also be either funded, sponsored, performed, licenses, or have received assistance from the agency.

Consultation with the pertinent State Historic Preservation Office and federally recognized Tribes are, therefore, not required.

4.3.3 Anticipated Impacts of Proposed Hunt on Refuge Environment and Community.

The refuge expects no sizeable cumulative impacts of the proposed action on the refuge environment which consists of soils, vegetation, air quality, water quality, hydrology, topography, and solitude. Some disturbance to surface soils and vegetation would occur in areas selected for hunting; however impacts would be minimal. Hunting would benefit vegetation as it is used to keep many resident wildlife populations in balance with the habitat’s carrying capacity. The refuge would also control access to minimize habitat degradation.

The refuge expects impacts to air and water quality to be minimal and only due to refuge visitors’ automobile and off-road vehicle emissions and run-off on road and trail sides. The effect of these refuge-related activities, as well as other management activities, on overall air and water quality in the region are anticipated to be relatively negligible, compared to the contributions of industrial centers, power plants, and non-refuge vehicle traffic. Existing State water quality criteria and use classifications are adequate to achieve desired on-refuge conditions; thus, implementation of the proposed action would not impact adjacent landowners or users beyond the constraints already implemented under existing State standards and laws.

Impacts associated with solitude are expected to be minimal given time and space zone management techniques, such as seasonal access and area closures, used to avoid conflicts among user groups.

The refuge would work closely with State, Federal, and private partners to minimize impacts to adjacent lands and its associated natural resources; however, no indirect or direct impacts are anticipated. The newly opened hunts would result in a net gain of public hunting opportunities positively impacting the general public, nearby residents, and refuge visitors. The refuge expects increased visitation and tourism to bring additional revenues to local communities but not a significant increase in overall revenue in any area.

4.3.4 Other Past, Present, Proposed, and Reasonably Foreseeable Hunts and Anticipated Impacts

Cumulative effects on the environment result from incremental effects of a proposed action when these are added to other past, present, and reasonably foreseeable future actions. While cumulative effects may result from individually minor actions, they may, viewed as a whole, become substantial over time. The proposed hunt plan has been designed so as to be sustainable through time given relatively stable conditions. Changes in refuge conditions, such as sizeable increases in refuge acreage or public use, are likely to change the anticipated impacts of the current plan and would trigger a new hunt planning and assessment process.

The implementation of any of the proposed actions described in this assessment includes actions relating to the refuge hunt program (see Amended Hunt Management Plan for Catahoula NWR). These actions would have both direct and indirect effects (e.g., new site inclusion would result in increased public use, thus increasing vehicular traffic, disturbance, etc); however, the cumulative effects of these actions are not expected to be substantial.

4.3.5 Anticipated Impacts if Individual Hunts are Allowed to Accumulate

National Wildlife Refuges, including Catahoula NWR, conduct hunting programs within the framework of State and Federal regulations. Catahoula NWR is at least as restrictive as the State of Louisiana (rabbit, squirrel, raccoon, snipe, rail, gallinule, woodcock) and in many cases more restrictive (deer, hog, waterfowl). By maintaining hunting regulations that are as, or more, restrictive than the State, individual refuges ensure that they are maintaining seasons which are supportive of management on a more regional basis. The proposed hunt plan has been reviewed and is supported by the Louisiana Dept. of Wildlife and Fisheries. Additionally, refuges coordinate with LDWF annually to maintain regulations and programs that are consistent with the State management program.

Chapter 5 Consultation and Coordination with Others

The Louisiana Department of Wildlife and Fisheries (LDWF) concurs and fully supports the regulated consumptive public use of the natural resources associated with the Catahoula NWR (Refer to Letter of Concurrence). The Fish and Wildlife Service also provided an in depth review by the Regional Office personnel and staff biologists. Numerous contacts were made throughout the area of the refuge soliciting comments, views, and ideas into the development of the accompanying hunting plan.

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U.S. Fish and Wildlife Service. 2005. Waterfowl harvest and population survey data: Estimates of U.S. harvest, hunting activity, and success derived from the state-federal cooperative harvest information program. Division of Migratory Bird Management, Columbia, Missouri, 92 pp.

U.S. Fish and Wildlife Service. 2006. Waterfowl population status, 2006. Division of Migratory Bird Management, Laurel, Maryland, 60 pp.

Williams, 2005. Louisiana Dept. of Culture, Recreation and Tourism, Office of Cultural Development, Division of Archaeology. July 15, 2005. Personal communication with Cherokee Williams, Staff Archeologist.

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Resource Survey of the Catahoula National Wildlife Refuge, LaSalle Parish, Louisiana.
Unpublished Report, (22-590).

Appendix Response to Public Comments

The Service solicited public comment for the 2007 Amended Hunt Management Plan and associated Environmental Assessment. The 30-day review period began March 5, 2007 and ended on April 5, 2007. Copies of the document were available for viewing at the refuge office, and news releases announcing its availability for comment were placed in three local newspapers.

Three comments by the public were received, two of which were in favor of the Proposed Action to implement the 2007 Amended Hunt Management Plan which would open the Catahoula NWR to migratory bird hunting on designated areas of the refuge.

We received a letter from the Humane Society of the United States that contained comments related to hunting on the National Wildlife Refuge System as a whole and containing elements related to litigation filed in 2003 by the Fund for Animals against the Service. These comments were not specific to this draft EA and are noted but not responded to here.

We received a letter from the Safari Club International (SCI) that favored hunting on Catahoula NWR but offered two recommendations. Comments by the (SCI) are summarized and responded to below.

SCI suggest that the Service address more prominently the refuge's consultation with the state fish and game agency and noting the state's concurrence with the draft Hunt Plan, that the draft Hunt Plan and EA include the state agency's input about how hunting on the refuge assists with and/or is an element of the state's efforts to manage state wildlife populations. The Service notes the comment. Catahoula NWR consults annually with the Louisiana Department of Wildlife & Fisheries at the hunt coordination meeting in Baton Rouge, LA state office to discuss refuge hunts and management of the state game species.

SCI recommends that the Service add to its cumulative analysis an explanation of how the control and/or reduction of hunted populations, considered collectively with similar wildlife management efforts on numerous refuges throughout the National Wildlife Refuge System, conserves the cumulative health of the habitat of the flyway in which the refuge is located and the migratory birds that utilize that flyway. The Service notes the comment.

ing authority of said District, that:

SECTION 1. Subject to the approval of the State Bond Commission and the Police Jury of the Parish of LaSalle, State of Louisiana, there is hereby authorized the borrowing of Five Hundred Thousand Dollars (\$500,000) in the name of and on behalf of the District to pay current expenses of the District for the year ending December 31,

upon the payment of the first advance of the purchase price thereof and to take any other action or execute and deliver any other documents which may be required to accomplish the purpose of this resolution. The Certificate shall be in such form acceptable to said Chairman and Secretary and the purchaser, and the execution of the Certificate by the Chairman and Secretary will signify the acceptance of the

(u) the reasonably anticipated amount of qualified tax-exempt obligations, which will be issued, by the issuer and all subordinate entities in calendar year 2007 does not exceed \$10,000,000.

The Chairman and Secretary of this Board are hereby empowered, authorized and directed to take any and all action and to execute and deliver any instrument, document or certificate necessary to effectuate the purposes of this Section.

SECTION 8. The Issuer will not be required to comply with the continuing disclosure requirements described in the Rule 15c-2-12(b) of the Securities and Exchange Commission [17 CFR §240.15c2-12(b)], because (a) the Certificate is not being purchased by a broker, dealer or municipal securities dealer acting as an underwriter in a primary offering of municipal securities, and (b) the Certificate is being sold to only one financial institution which (i) has such knowledge and experience in financial and business that it is capable of evaluating the merits and risks of the prospective investment in the Certificate and (ii) is not purchasing the Certificate for more than one account or with a view to distributing the Certificate.

SECTION 9. Application is hereby made to the State Bond Commission, Baton Rouge, Louisiana, and the Police Jury of the Parish of LaSalle, State of Louisiana, for approval of the issuance of the Certificates and for consent and authority to proceed with the sale of the Certificates as provided above.

SECTION 10. This

irma Terral, yeaj; Joe Wilson, yeaj; Rick Smotherman, yeaj; Mike Duke, yeaj.

And the Resolution was declared on this, the 27th day of February, 2007.

LEE RICARDEL
Chairman

PAUL G. MATHEWS
Secretary
Published:
3-7-07

SHERIFF'S SALE

28th Judicial District Court Parish of LaSalle Bank of Jena Vs. No. 34,790 Dallas C. McDaniel and Kristle L. Lambeth McDaniel

Notice is hereby given that by virtue of a writ of Seizure and Sale issued in the Honorable Twenty-Eighth Judicial District Court directed to the Parish of LaSalle, State of Louisiana, in the above entitled and numbered cause, I will offer for sale at public auction to the highest bidder, with benefit of appraisal, at the principal front door of the Courthouse in Jena, Parish of LaSalle, between the hours of 10 o'clock A.M. and Noon on March 14, 2007

Five (5) acres, more or less, together with all improvements situated thereon or appurtenances thereto belonging, situated in the East Half (1/2) of the Northwest Quarter (1/4) of the Southeast Quarter (1/4) of Section 8, Township 6 North, Range 3 East, LaSalle Parish, Louisiana, more particularly described as follows, to-wit: Start at the Northeast Corner of said East Half (1/2) of the Northwest Quarter (1/4) of the Southeast Quarter (1/4),

utes West a distance 330.0 feet; thence No 00 degrees 21 minu East a distance of 35-foot more or less; thence South 89 degrees 39 minutes East a distance 330.0 feet to the Point Beginning, contains 2 acres more or less, a being the East Half (1 of the tract of land I was acquired by Lore Ainsworth from Succession of Kevin Norris represented Willard J. Norris in a C Sale Decd da December 8, 1995, recorded on that sa date at Conveyance B 224, Page 247, Original Number 161,1 in the records of LaS Parish, Louisiana, and a being that same prope shown at Conveya Book 255, page 4 Instrument Numi 175441, at Page 431 i cash sale deed fr Willard J. Norris u Dallas C. McDaniel.

Terms of Sale, Ca with benefit of appraisal CARL SMIL SHER LaSalle Par Louisi.

Published: 2-7-07 3-7-07

NOTICE TO BIDDERS

The Jena Town Cou will receive sealed t until 10 a.m., Fric March 23, 2007, for sale of the follow property located at 2' Oak Street (dire across the street from Jena Municipal Comp formerly the Senior C zens Center):

An 850 sq. ft. building, measuring 18-ft. by 47-ft.

The property can inspected by contac the Jena Town Hall du regular office hours, 7 a.m. to 4 p.m., Mon through Friday.

The minimum bid the property is \$15,00t The Jena Town Cou reserves the right to re any or all bids received MURPHY McMIL Ma

Town of Jena, Published: 3-7-07 3-14-07 3-21-07

PUBLIC NOTICE

U.S. Fish & Wildlife Service Seeks Comments on Draft Amended Hunt Plan and Environmental Assessment for Catahoula National Wildlife Refuge

A draft Amended Hunting Plan and Environmental Assessment for Catahoula National Wildlife Refuge (NWR) in LaSalle and Catahoula Parishes is available for public review on March 5, 2007. The comment period will extend until April 5, 2007.

The plan describes four alternatives for hunting on the refuge: (1) Alternative A: Waterfowl and Migratory Bird Hunting on the Bushley Bayou Unit of Catahoula NWR Proposed Action; (2) Alternative B: No Action - No Recreational Waterfowl and Migratory Bird Hunting on the entire refuge; (3) Alternative C: Decrease waterfowl and migratory bird hunting on the refuge; (4) Alternative D: Increase waterfowl hunting on the refuge.

Under the proposed action, the additional acreage open to hunting would include migratory birds such as waterfowl, woodcock, ralls, gallinules, and snipe. Hunting would be carried out in accordance with Federal and State of Louisiana regulations, and refuge-specific regulations.

Copies of the plan can be requested from and viewed at the refuge office. The office is located on 210 Catahoula NWR Road, Jonesville, LA approximately 12 miles east of Jena on Hwy 84.

Written comments, requests for the plan, or questions can be directed to Greg Harper, Refuge Manager, at P.O. Drawer Z, Rhinehart, LA 71363; (318) 992-5261. Email comments can be provided to the following address: greg_harper@fws.gov.

The Catahoula National Wildlife Refuge is currently 25,242 acres and is located in LaSalle and Catahoula Parishes of Louisiana. The Bushley Bayou Unit is located about 8 miles west of Jonesville and 35 miles northeast of Alexandria in LaSalle and Catahoula Parishes. State Highway 126 runs through the northern part of the unit.

The U.S. Fish and Wildlife Service is the principal Federal agency responsible for conserving, protecting and enhancing fish, wildlife and plants and their habitats for the continuing benefit of the American people. The Service manages the 94 million acre National Wildlife Refuge System which encompasses more than 542 national wildlife refuges, thousands of small wetlands and other special management areas. It also operates 70 national fish hatcheries, 64 fishery resource offices and 78 ecological services field stations. The agency enforces Federal wildlife laws, administers the Endangered Species Act, manages migratory bird populations, restores nationally significant fisheries, conserves and restores wildlife habitat such as wetlands, 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.

PUBLIC NOTICE

(NOTICE OF INTENTION TO INTRODUCE LOCAL BILL - HLS 07RS-324)

Public notice is hereby given, as provided by Section 13, Article III of the Constitution of Louisiana, that there will be introduced at the forthcoming session of the Legislature of Louisiana, to be convened on April 30, 2007, a bill relative to providing for the payment of certain insurance premiums for certain retired assessors and their employees; and to provide for related matters.

Jena Times
March 7, 2007

The Town Talk
P.O. Box 7558
Alexandria, LA, 71306

Jena Times
Jena, LA

Catahoula News
Jonesville, LA

MIGRATORY BIRD HUNTING

Decision Document Package

for

CATAHOULA NWR

Contents

4. FONSI

FINDING OF NO SIGNIFICANT IMPACT (FONSI)

Catahoula National Wildlife Refuge

The U.S. Fish and Wildlife Service proposes to open Catahoula NWR to duck, geese, coot, rail, gallinule, snipe, and woodcock hunting. These hunting activities will be limited to those areas specified in the refuge-specific regulations. All or part of the refuge may be closed to hunting anytime necessary for public safety, to provide wildlife sanctuary, or for other reasons. Alternatives considered included: proposed action, no action, decrease waterfowl and migratory hunting, and increase waterfowl and migratory bird hunting.

The Service has analyzed the following alternatives to the proposal in an Environmental Assessment (copy attached):

Alternative A: Proposed Action: Waterfowl and Migratory Bird Hunting for Catahoula NWR

The proposed action would allow the hunting of waterfowl, coot, rail, gallinule, snipe, and woodcock on Catahoula NWR in addition to the current hunting program.

Alternative B: No Action: No Recreational Waterfowl and Migratory Bird Hunting on Entire Refuge

Under this alternative, the status quo would be maintained. Catahoula would not allow waterfowl, coot, rail, gallinule, snipe, and woodcock hunting. Users would be required to find alternative locations.

Alternative C: Decrease Waterfowl and Migratory Bird Hunting on the Refuge

Under this alternative, waterfowl and migratory bird hunting opportunities would be sharply reduced. Reductions would be in the number of different species hunted and/or in the length of the hunting seasons on the refuge. The number of daily hunters permitted on the refuge might also be reduced.

Alternative D: Increase Waterfowl Hunting on the Refuge

Under this alternative, waterfowl hunting opportunities on the refuge would be expanded. Increases would be in the number of days opened, hours allowed to hunt each day, or more liberal hunting methods (i.e. permanent blinds, leaving decoys and equipment overnight).

The preferred alternative was selected over the other alternatives because:

The preferred alternative would allow the refuge to manage wildlife populations, allow the public to harvest a renewable resource, provide a wildlife-oriented recreational opportunity, increase awareness of Catahoula NWR and the National Wildlife Refuge System, benefit public relations, and keep game species at a healthy level.

The preferred alternative is compatible with general Service policy regarding the establishment of hunting on National Wildlife Refuges.

The preferred alternative is compatible with the purpose for which Catahoula NWR was established.

This proposal does not initiate widespread controversy or litigation.

There are no conflicts with local, state, regional, or federal plans or policies.

Implementation of agency's decision would be expected to result in the following environmental, social, and economic effects:

It would allow the public to harvest a renewable resource.

The public would have increased opportunity for wildlife-oriented recreation.

It would help maintain healthy game populations.

It would benefit public relations for the Service by providing a low-cost opportunity to hunt in an area dominated by private hunting leases.

The Service will be perceived as a good steward of the land by continuing traditional uses of land in Louisiana and by allowing youth an opportunity to learn about hunting.

Measures to mitigate and/or minimize adverse effects that have been incorporated into the proposal. These measures include:

- I. time and space zoning of hunting activities
- II. a pro-active law enforcement program

The proposal is not expected to have any significant effects on wetlands and flood plains, pursuant to Executive Orders 11990 and 11988 because this area has historically had a high use of recreational hunting with no detrimental long-term effect on wetlands.

The proposal has been coordinated with all interested and/or affected parties.

- A. Louisiana Department of Wildlife and Fisheries, Office of the Secretary, Wildlife Division
- B. U.S. Fish and Wildlife Service, Division of Ecological Services, Lafayette, LA
- C. Catahoula Lake Conservation Club

Copies of the Environmental Assessment are available by writing:

Catahoula National Wildlife Refuge
P.O. Drawer Z
Rhinehart, LA 71363

Therefore, it is my determination that the proposal 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):

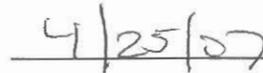
1. Both beneficial and adverse effects have been considered and this action will not have a significant effect on the human environment. (EA, pages 25-32).
2. The actions will not have a significant effect on public health and safety (EA, page 24).
3. The project will not significantly effect any unique characteristics of the geographic area such as proximity to historical or cultural resources, wild and scenic rivers, or ecologically critical areas. (EA, page 24, 30, 38).
4. The effects on the quality of the human environment are not likely to be highly controversial (EA, page 24).
5. The actions do not involve highly uncertain, unique, or unknown environmental risks to the human environment. (EA, pages 24-25).
6. The actions will not establish a precedent for future actions with significant effects nor does it represent a decision in principle about a future consideration (EA, pages 39-40).
7. There will be no cumulative significant impacts on the environment. Cumulative impacts have been analyzed with considerations of other similar activities on adjacent lands, in past actions, and in foreseeable future actions (EA, pages 24-40).

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 (EA, pages 25, 38).

9. The actions are no likely to adversely affect endangered or threatened species, or their habits (Intra-Service Section 7 Biological Evaluation Form attached to EA).

10. The actions will not lead to a violation of federal, state, or local laws imposed for the protection of the environment. (EA, page 41).

References: Environmental Assessment Migratory Bird Hunting, Catahoula NWR Amended Hunt Management Plan, Compatibility Statement, Letters of Concurrence, Refuge-specific Regulations, Intra-Service Section 7 Evaluation



 Regional Director

Date