

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 Hunting Plan for Black Bayou Lake National Wildlife Refuge in Ouachita Parish, 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.

X  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.

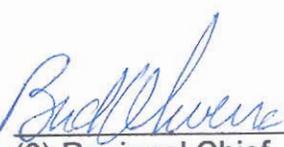
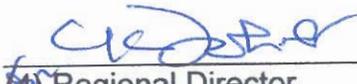
\_\_\_\_\_ is not approved because of unacceptable environmental damage, or violation of Fish and Wildlife Service mandates, policy, regulations, or procedures.

\_\_\_\_\_ 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, 2001

Signature Approval:

 _____ (1) Originator	<u>4/6/07</u> Date	 _____ (2) Regional Environmental Coordinator	<u>4/19/07</u> Date
 _____ (3) Regional Chief, NWRS, Southeast Region	<u>4/19/2007</u> Date	 _____ (4) Regional Director, Southeast Region	<u>4/21/07</u> Date

Hunting  
Decision Document Package  
for  
**Black Bayou Lake NWR**

**Contents**

2. Environmental Assessment

Environmental Assessment

**2007 Sport Hunting Plan**

on

**BLACK BAYOU LAKE NATIONAL WILDLIFE REFUGE**  
Ouachita Parish, Louisiana

For Further Information, Contact:

Refuge Manager  
U.S. Fish and Wildlife Service  
Black Bayou Lake NWR  
11372 Hwy 143  
Farmerville, LA 71241

March 2007

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**BLACK BAYOU LAKE**  
*National Wildlife Refuge*

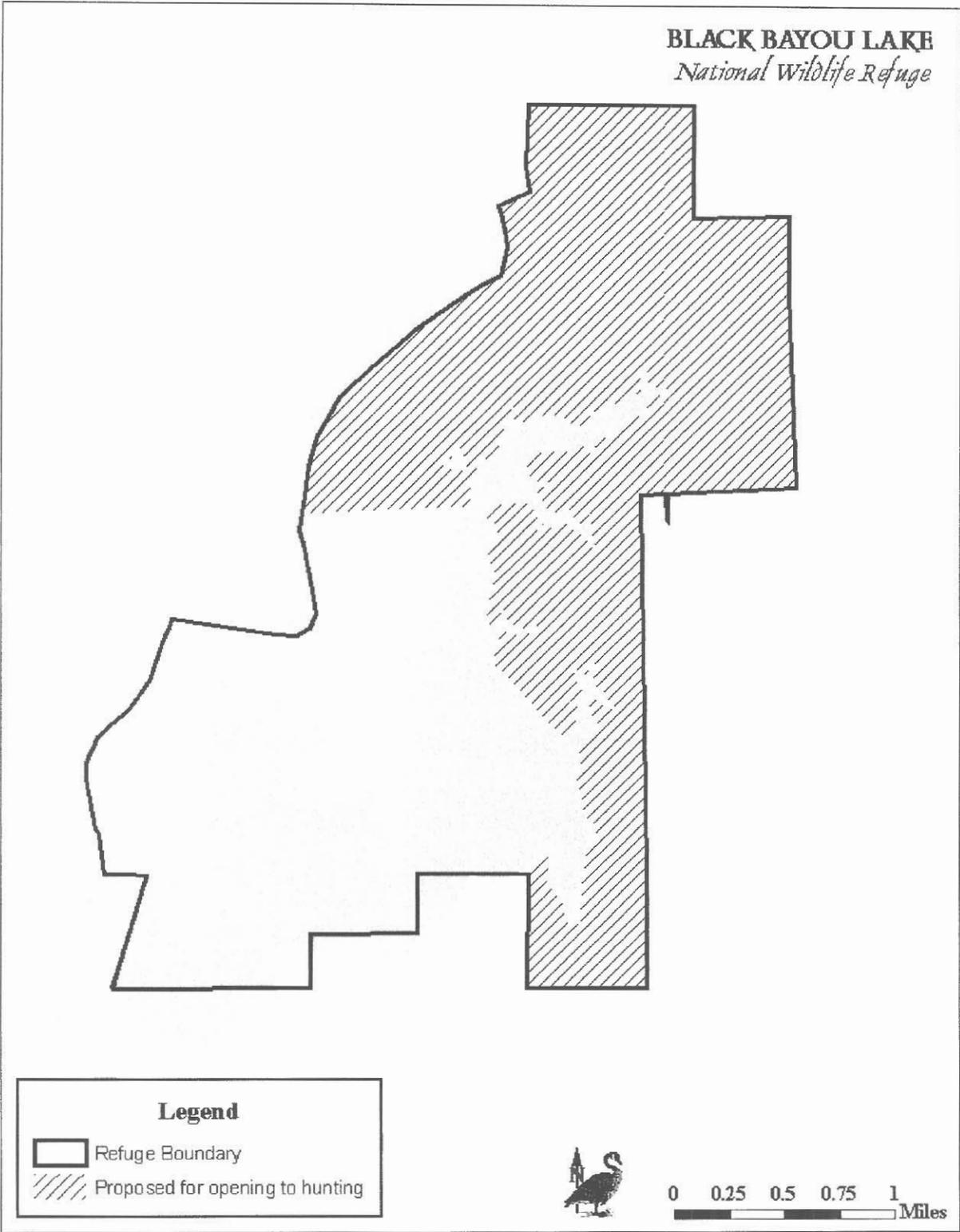


Figure 1. Area proposed for opening hunting on Black Bayou Lake NWR.



Figure 2. Location of Black Bayou Lake National Wildlife Refuge

## Chapter 1 Purpose and Need for Action

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 Black Bayou Lake National Wildlife Refuge in Louisiana.

The federally legislated purpose for which Black Bayou lake National Wildlife Refuge (NWR) was established is for "...the conservation of the wetlands of the nation in order to maintain the public benefits they provide and to help fulfill international obligations contained in various migratory bird treaties and conventions..." (16 U.S.C. 3901 (b)).

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.

The purpose of this Environmental Assessment is to evaluate the feasibility of opening Black Bayou Lake National Wildlife Refuge to hunting.

The proposed action is needed to implement the 2007 Sport Hunting Plan for Black Bayou Lake 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 Black Bayou Lake National Wildlife Refuge. These alternatives are the 1) no action which continues with current management of the hunt program and 2) proposed action which implements the Refuge's 2007 Sport Hunting Management Plan.

### **2.1      No Action Alternative: Current Management**

Under this alternative, the status quo would be maintained. Black Bayou Lake NWR would not be opened to hunting, and there would be no change to current public use or wildlife management programs.

### **2.2      Proposed Action: 2007 Sport Hunting Plan for Black Bayou Lake NWR**

The proposed action would allow hunting on Black Bayou Lake NWR. All or parts of the refuge could be closed at any time to hunting if deemed necessary by management (Figure 1). Refuge-specific regulations would limit hunting to specific areas, seasons, and/or game species.

Refer to 2007 Sport Hunting Plan for Black Bayou Lake NWR for specific regulations.

### **2.3      Open Entire Refuge to Hunting**

This alternative would require the Service to open hunting on Black Bayou Lake NWR as regulated by the state hunting seasons and regulations. This would not allow the Service to set refuge-specific regulations and consider time and spatial zoning of public use.

## **Chapter 3    Affected Environment**

Black Bayou Lake NWR is located two miles north of Monroe in northeast Ouachita Parish (Figure 2). It lies about 10 miles east of D'Arbonne National Wildlife Refuge and 15 air miles south of Upper Ouachita National Wildlife Refuge. The Arkansas state line is 30 miles north of the refuge.

### **3.1    Physical Environment**

The refuge area consists of 4,500 acres of land and water including approximately 1,500 acres within Black Bayou Lake, 1,700 acres of upland pine/hardwood forest, 840 acres of reforested bottomland hardwoods, 300 acres of bottomland hardwood forest. Black Bayou Lake drains into Bayou de Siard, by way of Hanna's Run. Further downstream, Bayou de Siard empties into the Ouachita River at the north edge of Monroe.

Black Bayou Lake NWR is located within the Lower Mississippi River Ecosystem and the Mississippi Flyway. The Ouachita River separates Monroe from West Monroe. Known as the "Twin Cities," the area's primary industries are chemicals, furniture, fertilizer, lumber, and paper. The average annual temperature is 66° Fahrenheit, and the average rainfall is 50 inches.

### **3.2    Vegetation and Land Use**

Black Bayou Lake is a beautiful natural lake that contains picturesque and stately cypress and tupelo trees. The lake is surrounded by swamps that graduate into bottomland hardwoods on the east and north. These bottomlands then intergrade to stands of pine and upland hardwoods. The overstory vegetation in the wetlands includes cypress, tupelo gum, willow, green ash, overcup oak, and hackberry. The bottomland hardwoods contain primarily water oak, willow oak, cherrybark oak, and elms. Upland species include loblolly and shortleaf pine, mockernut hickory, white oak, and post oak. The west side of the lake is adjacent to approximately 900 acres of reforested lands.

### **3.3    Wildlife Resources**

The lake's aquatic vegetation, cypress trees, and abundant buttonbush are attractive to wintering wood ducks, mallards, gadwalls, and ringnecks. The extensive beds of submerged and floating aquatic plants such as muskgrass, duckweed, and pondweed provide abundant food. Wood ducks in and around the lake find ideal brood-rearing habitat in the extensive stands of buttonbush, cypress, and tupelo trees.

Mammals using the area include white-tailed deer, bobcat, nutria, otter, mink, swamp rabbit, cottontail, fox squirrel, gray squirrel, raccoon, opossum, gray fox, red fox, and coyote.

Wading birds are also abundant throughout the lake and wetland complex. A small little blue heron rookery is present. Other species commonly observed include the great egret, cattle egret, snowy egret, night-heron, great blue heron, anhinga, green heron, double-crested cormorant, white ibis, and American bittern.

Many species of passerine birds, including neotropical migrants, use the bottomland hardwoods and adjacent uplands as breeding, wintering and transition habitat. The predominant pine stands on the east side of the lake have inactive red-cockaded woodpecker cavity trees. Bald eagles and osprey sometimes forage on the lake during the fall, winter, and spring. Wood storks show up in late summer before leaving for their wintering grounds. This is thought to be post-breeding birds dispersing from their nesting areas until they leave for their wintering grounds.

### **3.4 Threatened and Endangered Species**

#### **3.4.1 Red-cockaded Woodpecker**

Currently, there are no red-cockaded woodpeckers on Black Bayou Lake NWR. The last sighting of the bird on the refuge was in 2002, when one individual was present. According to RCW Recovery Plan guidelines, after a cluster is abandoned for five years, the cluster can be abolished.

#### **3.4.2 Bald Eagle**

Few bald eagles are seen during the year, and there are no known nests on the refuge. Eagle surveys are flown annually in conjunction with the mid-winter waterfowl counts.

### **3.5 Fishery Resources**

Black Bayou Lake has long been known for its quality fishing for largemouth bass, bream, and crappie. Water quality samples are taken monthly by University of Louisiana at Monroe at a point where the lake flows into the Bayou de Siard. Bayou de Siard is also sampled monthly at seven other sites downstream. These samples all indicate that Black Bayou Lake has exceptional water quality.

Black Bayou Lake has been recognized for many years for its quality fish. The lake has attained a regional reputation for its excellent sportfishing. Largemouth bass, crappie, and bream are the principal game fish.

The lake has historically been a clear water lake with ample aquatic vegetation. Water hyacinth is especially abundant in some parts of the lake. This exotic plant is being controlled with approved chemicals.

According to fish samples taken by state fishery biologists, Black Bayou Lake has the highest standing crop (pounds of fish per acre) of any lake in northeast Louisiana. It is locally renowned for its large chinquapin bream and largemouth bass.

### 3.6 Cultural Resources

Section 106 of the National Historic Preservation Act of 1966, as amended, and Section 14 of the Archeological Resources Protection Act require the Service to evaluate the effects of any of its actions on cultural resources (historic, architectural and archeological) that are listed or eligible for listing in the National Register of Historic Places (NRHP).

Three prehistoric sites are located on the first terrace of Bayou de Siard (Louisiana Division of Archeology 1997).

The Service believes that the proposed action will have no affect on any known or yet-to-be identified NRHP-eligible cultural resources.

### 3.7 Socio Economic

The refuge is located in Ouachita Parish just north of Monroe in north Louisiana. Historically, the area of the refuge was farmed growing cotton and corn. Ouachita Parish is dominated by the urban complex of Monroe and West Monroe, often referred to as the twin cities of northeast Louisiana. The parish economy is primarily based on natural gas production, furniture, lumber, paper, the retail trade, and higher education. Yet, agriculture is also important in Ouachita Parish as well. Monroe is the home of the University of Louisiana, and houses the headquarters of CenturyTel Communications, the fifth largest telecommunications provider in the nation. Portions of the refuge, such as the lake and the Visitor Center, are within the city limits of Monroe. Population estimates, total households, families, housing units, and median annual household incomes are listed in Table 1 for Ouachita Parish (U.S. Census Bureau 2000).

Hunting is a traditional form of outdoor recreation for many people in Ouachita Parish and for some households, hunting participation provides food at a much cheaper cost. The number of licenses sold to hunters in Ouachita Parish during the 2004/05 hunting season was 12,931, the fourth highest parish (out of 64 parishes in the state) (*LDWF, personal comm.*). The number of hunters is under represented in the parish because 15% of Louisiana hunters are seniors over age 65 and youth under age 16 that are not required to buy licenses.

**Table 1. Demographics of Ouachita Parish, Louisiana based on Census 2000 data**

<i>Parish</i>	<i>Population</i>	<i>Households</i>	<i>Families</i>	<i>Population Density (indiv/sq.mi)</i>	<i>Housing Units</i>	<i>Housing Density (units/sq.mi)</i>
Ouachita	147,250	55,216	38,319	241	60,154	98

## **Chapter 4 Environmental Consequences**

This chapter describes the foreseeable environmental consequences of implementing the three management alternatives 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 communities 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, topography, and vegetation would occur in areas selected for hunting; however effects 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.

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 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.

#### **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**

##### *No Action Alternative*

Under this alternative, the refuge would not be opened to hunting deer or beaver. When deer are overpopulated, they overbrowse their habitat, which can change the structure and plant composition of a forest. The refuge has reforested approximately 840 acres with bottomland hardwood tree species in recent years. Young tree seedlings (1-5 years old) can be killed by overbrowsing. Bottomland hardwood forests are a threatened ecosystem. 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. Beavers can kill thousands of acres of bottomland hardwood trees by damming sloughs and brakes. Forests inundated into the growing season quickly show signs of stress and trees eventually die. Beavers can have negative impacts on future resident and non-resident wildlife by killing large portions of the few remaining intact bottomland hardwood forests remaining in the United States.

Although hunters would not be traversing the refuge, which could cause damage to individual plants by trampling vegetation, non-consumptive users would still be able to walk throughout the area.

### *Proposed Action Alternative*

The biological integrity of the refuge would be protected under this alternative, and the refuge purpose of conserving wetlands for wildlife would be achieved. The hunting of beavers and deer would positively impact wildlife habitat by promoting plant health and diversity and increasing tree seedling survival. Hunting of beavers would decrease their populations and in effect, increase the health of forested wetlands.

The refuge would be utilized more by hunters which might cause increased trampling of vegetation. Impacts to vegetation should be minor. Hunter density is estimated to be an average of 1 hunter/100 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.

### *Open Entire Refuge to Hunting Alternative*

This alternative would open hunting to the entire refuge within the state's regulations set by the Louisiana Department of Wildlife and Fisheries. Under this alternative, deer and beaver populations would be decreased; however, this alternative would not take into consideration refuge objectives and the purpose for which the refuge was established.

#### **4.2.2 Impacts to Hunted Wildlife**

##### *No Action Alternative*

Hunting mortality of individual animals would not occur under this alternative. Disturbance by hunters to hunted wildlife would not occur; however, other public uses that cause disturbance, such as environmental education and interpretation, wildlife observation and photography, would still be permitted.

Deer, beaver, coyote, raccoon and opossum populations could increase above the habitat's carrying capacity in the area not opened to hunting. The likelihood of starvation and diseases, such as bluetongue and EHD in deer and distemper and rabies in raccoon and opossum, would increase as would vehicle-deer collisions.

##### *Proposed Action Alternative*

Hunting mortality of individual animals would occur under this alternative, estimated by the refuge to be a maximum of 30 deer, 130 squirrel, 50 rabbit and 500 ducks annually. Estimates for other hunted species (raccoon, opossum, quail) would be less than 20 individuals per species. Hunting causes some disturbance to not only the species being hunted but other game species as well. However, time and space zoning established by refuge regulations would minimize incidental disturbance.

Hunting of deer, beaver, coyote, raccoon and opossum 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 and rabies in raccoon and opossum, would be decreased as would deer-vehicle collisions.

#### *Open Entire Refuge to Hunting Alternative*

Hunting mortality of individual animals would occur under this alternative and would be greater than the proposed action because season length would be longer and more acreage would be available for hunting. There would be no time and spatial zoning of hunting. The refuge would not be able to restrict certain species hunted or limit the season length if deemed necessary for biological reasons.

Hunting of deer, beaver, coyote, raccoon and opossum 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 and rabies in raccoon and opossum, would be decreased as would deer-vehicle collisions.

#### **4.2.3 Impacts to Non-hunted Wildlife**

##### *No Action Alternative*

Ground and shrub nesting birds and turtles are subject to high egg depredation rates if raccoon, coyotes, and opossum populations are not kept in check through harvest. In North Louisiana, research conducted on one population of alligator snapping turtles has shown that raccoons are responsible for depredating 93% of turtle nests (USFWS 2002). Under this alternative, feral hog populations would increase. Non-native hogs are predators of small mammals and deer fawns as well as ground-nesting birds such as turkeys.

Increased disturbance to non-hunted wildlife would not occur on the refuge; however, non-consumptive users would still be permitted to access this land, which might cause disturbance to wildlife.

##### *Proposed Action Alternative*

Populations of raccoon, coyotes, and opossum would be decreased through hunting under this alternative. Depredation rates of songbirds, turkeys, turtles and their nests would decrease.

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. Hunter density is estimated to be only an average of 1 hunter/100 acres

throughout the hunting season. 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.

#### *Open Entire Refuge to Hunting Alternative*

Populations of raccoon, coyotes, and opossum would be decreased through hunting under this alternative. Depredation rates of songbirds, turkeys, turtles and their nests would decrease.

Disturbance to non-hunted wildlife would increase slightly more with this alternative because of the increased acreage available and longer season lengths. The refuge would not be able to restrict certain species hunted or limit the season length if deemed necessary for biological reasons.

#### **4.2.4 Impacts to Endangered and Threatened Species**

##### *No Action Alternative*

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.

##### *Proposed Action Alternative*

A potential disadvantage of this alternative is its effect on threatened and endangered species on the refuge such as the bald eagle and red-cockaded woodpecker. However, a Section 7 Evaluation associated with this assessment was conducted, and it was determined that the proposed action is not likely to adversely affect these species (Refer to 2007 Section 7 Evaluation for Sport Hunting on Black Bayou Lake NWR).

##### *Open Entire Refuge to Hunting Alternative*

Because the refuge would be unable to restrict hunting using time and space zoning, the potential for disturbance to threatened and endangered species is a little higher with this alternative, but still unlikely. A Section 7 Evaluation has not been conducted for this alternative.

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

##### *No Action Alternative*

Additional damage to roads and ATV trails due to hunter use during wet weather periods would not occur; however, other users would still be using roads, thereby necessitating periodic maintenance. Additionally, costs associated with an expanded hunting program

in the form of road and levee maintenance, instructional sign needs, and law enforcement would not be applicable.

#### *Proposed Action Alternative*

Additional damage to roads and ATV trails due to hunter use during wet weather periods might occur. However, non-consumptive visitors use roads necessitating maintenance. 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.

#### *Open Entire Refuge to Hunting Alternative*

Additional damage to roads and ATV trails due to hunter use during wet weather periods might occur. Unrestricted season length and access to the refuge would bring more use by hunters causing greater damage to roads and ATV trails. 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 would be higher due to longer seasons and thus, greater law enforcement presence would be necessary.

### **4.2.6 Impacts to Wildlife Dependant Recreation**

#### *No Action Alternative*

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, have an increased awareness of Black Bayou Lake 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.

#### *Proposed Action Alternative*

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. The lake proper would not be open to hunting to eliminate hunter/angler conflicts. Hunting would not be open in those areas that non-consumptive use is highest, such as the photo blind, nature trail, observation tower, etc. 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 (environmental education, birdwatching and other wildlife viewing) in the 2,1020 acres that is closed to hunting.

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

Black Bayou Lake NWR and the National Wildlife Refuge System and public demand for more hunting would be met. The public would also have the opportunity to harvest a renewable resource in a traditional manner, which is culturally important to the local community. This alternative would also allow the public to enjoy hunting at no or little cost in a region where private land is leased for hunting, often costing a person \$300-\$2000/year for membership. 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.

#### *Open Entire Refuge to Hunting Alternative*

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. However, under this alternative space and time zoning would not occur. Non-consumptive users, anglers and hunters would all be using the refuge at the same time in the same areas. The lake proper would be open to hunting causing hunter/angler conflicts. Hunting would be open in those areas that non-consumptive use is highest, such as the photo blind, nature trail, observation tower, etc.

### **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 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. Black Bayou Lake 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, Black Bayou Lake NWR estimates 500 ducks (primarily Mallards, Wood Ducks, Gadwalls, Green-winged Teal) 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 0.05% of Louisiana's four-year average harvest of 921,990 ducks (USFWS 2005). Waterfowl hunting should not have cumulative effects on waterfowl populations.

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 Black Bayou Lake NWR, regulations are 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.

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 during most of the hunting season because back water flooding inundates the refuge. During extremely dry years, when more woodcock habitat becomes available, they may experience higher harvest rates. With such relatively few woodcock being currently harvested on the refuge, the opening of additional acreage to 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 North Louisiana, the refuge draws less than 10 woodcock hunters a year.

#### 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 occur. The Louisiana Dept of Wildlife and Fisheries (LDWF) recorded deer harvest rates on lands north of the refuge from 1993-2003 on a 25,000-acre management area. An average of 213 deer per year was harvested from gun hunting during the 10-year period. Average weights of deer and lactation rates of females remained stable throughout (LDWF 2003). LDWF biologists sought to hold an extra either-sex hunt to further reduce the deer herd but were unable due to a lack of funding (LDWF, *personal comm.*).

Harvest and survey data confirm that decades of deer hunting on surrounding private lands (using bait and a longer season) have not had a local cumulative adverse 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. The refuge is not proposing deer gun hunting; only archery hunting would be allowed. The refuge estimates a maximum 30 deer would be harvested under the proposed action, representing only 0.01% of the long-term average state harvest. Archery hunting on refuge land should not have cumulative impacts on the deer herd.

#### 4.3.1.3 Small Game (Squirrel, Rabbit, Raccoon, Opossum, Coyote, Beaver and Quail)

Squirrels, rabbit, raccoon, and opossum cannot be affected regionally by refuge hunting because of their limited home ranges. Only local effects will be discussed. Opossum and raccoon are hunted primarily at night. Raccoon are more sought after than opossum by the public. Hunting helps regulate opossum and raccoon populations; however, unless the popularity of this type of hunting increases, raccoons and opossums 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 and opossum 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

harvest for 2005/06 was estimated at 1,253,900. On Black Bayou Lake NWR, from 2002-2004, hunter harvest data reports indicated a peak of 115 squirrels/season, representing 0.009% of the state's harvest. LDWF estimated 255,200 rabbits killed by hunters in the 2005/06 season. Under the proposed action, the refuge estimates a maximum 50 rabbits would be harvested, representing only 0.02% of the statewide 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.

Quail are non-migratory and therefore are not regionally affected by hunting. Only local effects will be discussed. The early successional habitat that quail favor is not abundant on the refuge; therefore, quail hunting is limited. Studies by the LDWF indicate that a harvest of <30% in the southeast should be sustainable. Past surveys by refuge staff have found that no quail were harvested from 2002-2004. The harvesting of quail should not have cumulative effects on their local population.

Coyotes and beaver cannot be affected regionally by refuge hunting because of their limited home ranges. Only local effects will be discussed. Coyotes and beaver reproduce rapidly, are overpopulated, and can have adverse effects on their habitats. Coyotes depredate small mammals, songbirds and their nests, turkey and quail nests and any other animal they opportunistically encounter. When coyote numbers are high, local wildlife populations can be negatively affected. Coyotes are probably the most resilient species in North America. Today regulated hunting has no negative cumulative impact on their populations. Hunting of both coyotes and beaver is beneficial in helping meet refuge objectives.

#### 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. Hunter density is estimated to be only an average of 1 hunter/100 acres throughout the hunting season. 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 Black Bayou Lake 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 North 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

Endangered and threatened species that may utilize the refuge are red-cockaded woodpecker and bald eagle. A Section 7 Evaluation was conducted in association with this assessment for opening hunting on Black Bayou Lake NWR. It was determined that the proposed alternative would not likely adversely affect these endangered species.

Refer to the Section 7 Evaluation for the 2007 Sport Hunting on Black Bayou Lake 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

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 increased hunting opportunity, could have a negative effect on nesting bird populations. However, the hunting season is during the winter and not during most birds' nesting period.

The opportunities for hunting would expand under the proposed action. High deer numbers are recognized as a problem causing crop damage, reducing some forest understory species, and reducing reforestation seedling survival. Hunting would 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

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 impacts of the proposed action on the refuge environment which consists of soils, vegetation, air quality, water quality 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 2007 Sport Hunting Plan for Black Bayou Lake 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.

The past refuge hunting program has been the same as the proposed action in season lengths, species hunted, and bag limits. The refuge does not foresee any changes to the proposed action in the way of increasing the intensity of hunting in the future.

#### **4.3.5 Anticipated Impacts if Individual Hunts are Allowed to Accumulate**

National Wildlife Refuges, including Black Bayou Lake NWR, conduct hunting programs within the framework of State and Federal regulations. Black Bayou Lake NWR is at least as restrictive as the State of Louisiana (squirrel, rabbit, quail, woodcock) and in many cases more restrictive (deer, waterfowl, raccoon, opossum, coyote, beaver). 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 Black Bayou Lake NWR (Refer to Letters 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.

## Appendix Literature References

- Louisiana Dept. of Wildlife and Fisheries. 2003. Deer harvest summary 1994-2003: Georgia Pacific Wildlife Management Area. Technical Report. District II, Monroe, Louisiana.
- Mott, S.E., R.L. Tucker, D.C. Gynn, H.A. Jacobson. 1985. Use of Mississippi bottomland hardwoods by white-tailed deer. *Proceedings of the Southeast Association of Fish and Wildlife Agencies* 39: 403-411.
- McAuley, D.G, J.R. Longcore, D.A. Clugston, R. B. Allen, A. Weik, S. Staats, G.F. Sepik, Wl Halteman. 2005. Effects of hunting on survival of American woodcock in the northeast. *Journal of Wildlife Management* 69(4): 1565–1577.
- 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.

## **Appendix      Response to Public Comments**

We received seven comments on our draft environmental assessment (EA) titled 2007 Sport Hunting Plan for Black Bayou Lake NWR, which was available for public comment from March 5 to April 5, 2007. Six of these comments were in support of the Service's preferred Alternative in the draft EA. One comment was in opposition to the preferred Alternative.

One commenter, who was in favor of the preferred alternative, requested that more of the refuge, specifically the lake itself, be opened to duck hunting. The Service feels that space zoning (keeping the lake closed to hunting) decreases conflicts that would potentially arise between anglers, boaters, and hunters.

Another commenter, who was in favor of the preferred alternative, recommended emphasizing in the EA that the Service has consulted with the state fish and game agency. The commenter also recommends focusing less on detrimental cumulative effects of hunting and emphasizing positive effects. The Service has amended the EA to emphasize the consultation that occurs between the Service and State. The Service feels that cumulative impacts of hunting were analyzed objectively.

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.

Hunting  
Decision Document Package  
for  
**Black Bayou Lake NWR**

**Contents**

3. FONSI

## **FINDING OF NO SIGNIFICANT IMPACT (FONSI)**

### Black Bayou Lake National Wildlife Refuge

**The U.S. Fish and Wildlife Service proposed to** open Black Bayou Lake NWR to hunting. Hunting activities will be permitted, but administratively limited to those areas specified in the refuge-specific regulations. All or parts of the refuge may be closed to hunting at any time if necessary for public safety, to provide wildlife sanctuary, or for other reasons. Alternatives considered included: proposed action, no action, or open entire refuge to hunting.

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

No action alternative—under this alternative, Black Bayou Lake NWR would not be opened to hunting.

Open entire refuge to hunting—under this alternative, the Service would provide hunting opportunities throughout the hunting seasons on all portions of the refuge.

#### **The preferred alternative was selected over the other alternatives because:**

- A. The preferred alternative would allow the public to harvest a renewable resource, provide a wildlife-oriented recreational opportunity, increase awareness of Black Bayou Lake NWR and the National Wildlife Refuge System, benefit public relations, and keep game species numbers at a healthy level.
- B. The preferred alternative is compatible with general Service policy regarding the establishment of hunting on National Wildlife Refuges.
- C. The preferred alternative is compatible with the purpose for which Black Bayou Lake NWR was established.
- D. This proposal does not initiate widespread controversy or litigation.
- E. There are no conflicts with local, state, regional, or federal plans or policies.

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

- A. It would allow the public to harvest a renewable resource.
- B. The public would have increased opportunity for wildlife-oriented recreation.
- C. It would help maintain healthy game populations.
- D. It would benefit public relations for the Service by providing a low-cost opportunity to hunt in an area dominated by private hunting leases.

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

- time and space zoning of hunting activities

- a pro-active law enforcement program
- targeted public outreach efforts

**The proposal is not expected to have any significant adverse effects on wetlands and flood plains, pursuant to Executive Orders 11990 and 11988.**

**The proposal has been coordinated with all interested and/or affected parties. Parties contacted include:**

- Louisiana Department of Wildlife and Fisheries
- Friends of Black Bayou, Inc.
- U.S. Fish and Wildlife Service, Ecological Services, Lafayette, Louisiana
- Members of the public

**Copies of the Environmental Assessment are available by writing:**

Black Bayou Lake National Wildlife Refuge  
11372 Hwy 143  
Farmerville, LA 71241

**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 Environment 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):**  
(for each factor list the page numbers of the EA where the factor was discussed)

- 1. Both beneficial and adverse effects have been considered and this action will not have a significant effect on the human environment (EA, page 10, 11).**
- 2. The actions will not have a significant effect on public health and safety (EA, page 10)**
- 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, pages 10, 11, 14, 22).**
- 4. The effects on the quality of the human environment are not likely to be highly controversial (EA, page 9, 23).**
- 5. The actions do not involve highly uncertain, unique, or unknown environmental risks to the human environment (EA, page 10, 23).**
- 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 23, 24).**

7. **There will be no cumulative significant impacts on the environment. Cumulative impacts have been analyzed with consideration of other similar activities on adjacent lands, in past action, and in foreseeable future actions (EA, page 16-24).**
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 9, 11, 22).**
9. **The actions are no likely to adversely affect endangered or threatened species, or their habitats (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, pages 24, 25).**

**References:** Environmental Assessment of 2007 Sport Hunt Plan for Black Bayou Lake NWR. Hunting Plan, Compatibility Statement, Letters of Concurrence, Refuge-specific Regulations, Intra-Service Section 7 Evaluation

  
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for Regional Director

  
\_\_\_\_\_  
Date