



# United States Department of the Interior

## FISH AND WILDLIFE SERVICE

Division of Ecological Services

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In Reply Refer To:  
FWS/R2/OKES/  
CDSAS Study

November 27, 2006

Colonel Miroslav Kurka  
U.S. Army Corps of Engineers  
Tulsa District  
1645 South 101<sup>st</sup> East Avenue  
Tulsa, Oklahoma 74128-4609

Dear Colonel Kurka:

Enclosed is the U. S. Fish and Wildlife Service's (Service) draft report on the fish and wildlife resources likely to be impacted by proposed actions related to the Canton Dam Safety Assurance Supplement Study, Canton, Oklahoma. This report does not fulfill the reporting requirements set forth in Section 2(b) of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 *et seq.*) and is intended to accompany the U. S. Army Corps of Engineers' (Corps) environmental assessment report on this project.

The Service appreciates the cooperation of your staff in development of this draft report. Please provide comments, in writing, to the Service by December 15, 2006. If you have any questions, please contact Glen Hensley of this office at 918-581-7458, extension 237.

Sincerely,

Jerry J. Brabander  
Field Supervisor

Enclosure

cc: Regional Director (ARD-ES), FWS, Albuquerque, NM  
(Attn: Dean Watkins)  
Director, Oklahoma Department of Wildlife Conservation, Oklahoma City, OK  
(Attn: Fisheries and Natural Resources Section)  
Oklahoma Department of Wildlife Conservation, Canton Reservoir,  
Canton, OK (Attn: Steve Conrady)

## **Introduction**

This report provides the Fish and Wildlife Service's (Service) evaluation of fish and wildlife resources likely to be affected by the Canton Dam Safety Assurance Supplement Study, Canton, Oklahoma. The report will accompany the U.S. Army Corps of Engineers (Corps) report on the feasibility of this project to the southwest division office. This report evaluates the fish and wildlife resources under existing conditions, projections of changes that would occur following implementation of the proposed project, mitigation measures, and the position of the Service.

The Service has prepared this draft report under authority of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 *et seq.*) and, when finalized, will fulfill the reporting requirements set forth in Section 2 (b) of the Act. This report has been prepared in coordination with the Oklahoma Department of Wildlife Conservation (ODWC) and has their concurrence as indicated in their letter dated X X, 2006

## **Description of Area**

The study area is on the North Canadian River at river mile 394.3, about two miles north of the City of Canton and 75 miles northwest of Oklahoma City, Oklahoma. The Canton Dam was built in accordance with the Flood Control Act of 1938. The Dam is a 15,140 foot-long, rolled, earthfill structure with a 640 foot-long concrete spillway. The spillway

discharge is controlled by sixteen 40 foot by 25 foot tainter gates and there are three 7 foot by 12 foot sluices that pass through the spillway.

A portion of ODWC's Canton Wildlife Management Area (WMA), about 699 acres, occurs downstream of the Canton Dam. Approximately 111 acres of this area is within the proposed project area. According to the Service's National Wetland Inventory maps, this portion of the Management Area contains three palustrine forested wetlands and one palustrine emergent seasonally flooded creek. During a site visit by the ODWC, the Corps and the Service, the wetlands were evaluated as medium value wetlands, based on professional judgment of the participating organizations. Evaluations were determined based on the capability of an area to support such wildlife as beaver, waterfowl, songbirds, amphibians, reptiles and shorebirds. Together these wetlands averaged 5.5 on an evaluation scale of 1 to 10.

### **Description of Project**

The proposed project would create an auxiliary spillway along the right abutment of the dam to accommodate the risk from a 100 percent Probable Maximum Flood (PMF) into the North Canadian River tailwater. The proposed project for the auxiliary spillway would consist of nine fuse gates, founded on a broad-crested weir with sill elevation at 1610.0 feet mean sea level. The fuse gates would be placed downstream of the current highway location, and a new highway bridge would be constructed. The highway would be re-aligned to the south of the proposed project location. The location of the proposed

auxiliary spillway along with the berm to be placed at the toe of the left embankment can be seen in Figure 1.

The proposed plan calls for the excavation of 5,576,767 cubic yards of soil to be spoiled at the base of the dam. The spoil is to be used to control seepage. A berm will be created that extends 600-650 feet from the base of the current dam embankment, and will run the entire length of the embankment. The berm will encompass 111 acres of the Canton WMA.

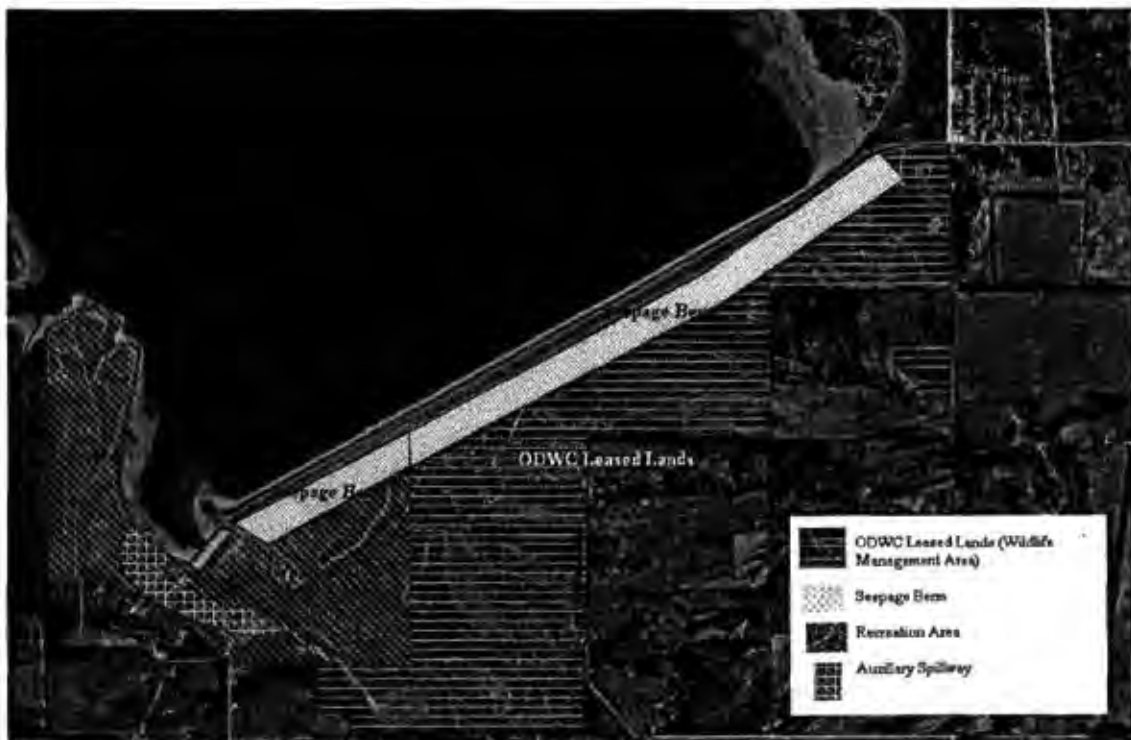


Figure 1: Proposed location of auxiliary spillway, fuse gates, and reinforcement berm at the toe of the dam embankment.

### **Fish and Wildlife Resources without the Project**

The proposed project would impact approximately 111 acres of the Canton WMA. Currently the area contains deciduous forests, scrub shrubland, and emergent palustrine forested wetlands. Good habitat is provided for white-tailed deer (*Odocoileus virginianus*), Rio Grande turkey (*Meleagris gallopavo*), fox squirrel (*Sciurus niger*), coyote (*Canis latrans*), bobwhite quail (*Colinus virginianus*), raccoon (*Procyon lotor*), bobcat (*Felis rufus*), vireos (*Vireo sp*), dickcissel (*Spiza americana*), and eastern meadowlark (*Sturnella magna*). The emergent palustrine forested and palustrine scrub shrub wetlands also provide habitat for waterfowl, mourningdove (*Zenaida macroura*), and beaver (*Castor canadensis*).

#### Threatened and Endangered Species

The federally-listed threatened bald eagle (*Haliaeetus leucocephalus*) is known to occur within the Canton WMA. Bald eagles are known to winter in the cottonwoods along the northern toe of the dam. However, no nests are known from the project area. Bald eagles utilize large trees for perching and roosting.

The federally-listed black-capped vireo (*Vireo atricapilla*) is only found in three counties in Oklahoma: Blaine, Cleveland and Comanche. No surveys have been conducted in the

project area for the presence of black-capped vireos. There is habitat within the project area that appears suitable for black-capped vireos.

The interior least tern (*Sterna albifrons*) and whooping crane (*Grus americana*) may use the area around Canton Lake during migration. The Arkansas River shiner historically occurred in portions of the North Canadian River, although recent records are extant from this project area.

### Project Impacts

Under the Canton Dam Safety Assurance Evaluation Supplement Study the proposal for the construction of the new spillway and berm would eliminate approximately 111 acres from the Canton WMA. Of the 111 acres, 5.5 acres are palustrine forested wetlands.

Table 1. Extent of habitats impacted by proposed fuse gate spillway and berm.

Habitat Type	Acres
Hardwood Forest	105.5
Palustrine Forested Wetlands	5.5
<b>Total</b>	111

### Discussion/Mitigation/Recommendations

One mission of the Service is to provide Federal leadership in the conservation, protection, and enhancement of fish and wildlife and their habitats for the continuing benefit of the American people. In response to several Congressional directives that fish and wildlife resource conservation receive equal consideration in Federal water resource planning and development, it is the goal of the Service to conserve, protect, and enhance fish and wildlife and their habitats and facilitate balanced development of this nation's natural resources by timely and effective provision of fish and wildlife resource information and recommendations. In order to serve the public interest, it is the policy of the Service to request mitigation for fish and wildlife resources if detrimental impacts would result from land and water developments, which can not be practicably avoided.

The Service's Mitigation Policy (Federal Register 46(15):7644-7663) provides guidance for formulating measures to eliminate, reduce and offset environmental impacts. These guidelines follow the sequenced approach to mitigation presented in the Council on Environmental Quality's National Environmental Policy Act (NEPA) regulations (40 CFR 1508.20). The mitigation definition found in the NEPA regulations consists of five sequential steps: 1) avoiding the impact altogether by not taking a certain action or parts of an action; 2) minimizing impacts by limiting the degree or magnitude of the action; 3) rectifying the impact by repairing, rehabilitating, or restoring the affected environment; 4) reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and 5) compensating for the unavoidable impacts by replacing or providing substitute resources or environments. The primary focus of the Service's Mitigation Policy is mitigation of losses of habitat value, with the degree of mitigation corresponding to the value and scarcity of habitat for selected evaluation

species to be impacted by a proposed project. The Service's mitigation goal for wetlands is no net loss.

Upon examination of the project area, the Service, using best professional judgement, classifies the habitat as a resource category three, an area of high to medium value for the evaluation species which are relatively abundant, along with its respective resource category mitigation goal. The goal for a resource category three is no net loss of habitat value while minimizing loss of in-kind habitat value. A mitigation ratio of 1:1 in-kind habitat value is targeted for the project. Mitigation may also include habitat that is of lesser value in lieu of restoration and enhancement efforts at greater ratios. The deciduous forests of the WMA provide habitat for white-tailed deer, turkey, and large birds of prey. The scrub shrub portions of the WMA provide habitat for migratory passerine birds, such as finches, warblers, vireos, and meadowlarks. The wetlands provide habitat for migratory waterfowl, like teal, canvasback, and redhead, resident wood ducks, and beavers.

The construction of the berm along the toe of the dam would eliminate 111 acres originally set aside as mitigation for the impacts of the Canton Reservoir Project. The tract consists of 105.5 acres of hardwood forest and 5.5 acres of palustrine forested wetlands. Wetland mitigation may be provided by redirection of seepage through a seasonally flooded wetland to create a more permanent wetland and by assisting in wetland projects conducted by ODWC. Large birds of prey, such as osprey, often use the cottonwood trees below the dam for roosting. Mitigation for lost hardwood forest habitat should consist of acquiring land and enhancement of existing managed lands to equal the amount and value of lands lost with the project.



The construction of the new spillway would eliminate habitat occupied by black-tailed prairie dogs (*Cynomys ludovicianus*). This location is a major recreational attraction for the lake area. However, the prairie dogs can be moved outside of the construction zone. Possible sites include an area closer to the park southwest of the dam. The site is located at the corner of a main road and the road leading to the park. The soil type within the relocation area should be consistent with the soil from the donor site.

### **Conclusion/Position**

In response to the findings of the Canton Dam Safety Assurance Supplement Study, Canton, Oklahoma, the U.S. Army Corps of Engineers has proposed the construction of an auxiliary spillway to accommodate the risk from a 100 percent Probable Maximum Flood into the North Canadian River tailwater. The auxiliary spillway would contain nine fuse gates founded on a broad-crested weir. The proposed project also plans for the spoiling of material from construction of the auxiliary spillway at the toe of the dam to further safeguard against seepage and slippage of the dam embankment.

The creation of the seepage berm along the dam embankment would impact 111 acres of the Canton WMA. The impact would eliminate all existing habitat within the proposed project area. The habitat within the project area was determined to be classified as a resource category three, using best professional judgment, resulting in a recommended 1:1 replacement ratio of in-kind habitat value for mitigation. The Service does not oppose this project provided mitigation is secured to offset unavoidable fish and wildlife resource losses as discussed above.