

Appendix 4: Wetlands Findings Report, Vegetation, and Wildlife Field Study



Oklahoma Department of Transportation

Environmental Programs Division

Office 521-2704

Fax 522-5193

DATE: April 21, 2008

TO: Joan Lindley, Environmental Programs Division

FROM: Julianne Hoagland, Department Natural Resources Biologist *JH*

SUBJECT: Endangered Species Act Recommendations for McCurtain County US-70 widening, J/P 17427(04)

An Endangered Species Act Section 7 consultation letter was sent to the USFWS for this project on March 24, 2008. The letter indicated a no effect determination for Interior Least Tern, Piping Plover and Red-cockaded Woodpecker; a may affect, not likely to adversely affect, determination for Ouachita rock pocketbook mussel, scaleshell mussel, winged mapleleaf mussel, leopard darter, and American alligator; and referenced the draft programmatic biological assessment and biological opinion for the American burying beetle. The Service responded with a letter dated April 10, 2008 (attached). The Service concurs with the no effect determinations and may affect determinations, given the implementation appropriate BMPs for storm water, erosion and sediment control, and chemical/fuel handling measures (dictated by Federal Regulation and the ODOT's Standard Specifications for Highway Construction). Additionally, the following plan note for ABB should be included in the final project plans and/or final contract document.

American Burying Beetle (ABB) Note:

The Contractor shall be familiar with the ABB to insure compliance with the Endangered Species Act. If any dead or injured ABB is found on site, immediately contact the Department Biologist in Environmental Programs Division at (405) 521-2515. Care must be taken in handling dead or injured beetles in order to preserve biological material for later analysis. The finder must insure that evidence intrinsic to the specimen is not unnecessarily disturbed. Information regarding the ABB, including photographic images and life history characteristics, is available at the USFWS website at URL <http://www.fws.gov/southwest/es/Oklahoma/beetle1.htm>.

The Service has expressed concern over the potential impacts of the proposed project on riparian zones and wetlands. They recommend that impacts to wetlands be avoided or minimized, and that all practicable, least environmentally damaging alternatives be examined and considered. The Service will likely seek mitigation for unavoidable impacts to important fish and wildlife habitats caused by the proposed project. The Service also recommends that the applicable standard environmental measures dictated by Federal Regulation and ODOT's Standard Specifications for Highway Construction be both specified in the final project plans and implemented.

The Service requests that all final decision documents associated with this project, including issued permits, final plan sheets and related documents be provided to them. They also request that, if any of their recommended measures for the protection of fish and wildlife resources are not implemented, a written narrative explaining why those recommended measures were not implemented be provided to their office.

If you have any questions or need any further information, please contact me at 521-2515.



In Reply Refer To:
FWS/R2/OKES/
2008-T-0153

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Division of Ecological Services
9014 East 21st Street
Tulsa, Oklahoma 74129
918/581-7458 / (FAX) 918/581-7467



April 10, 2008

RECEIVED

APR 15 2008

ENVIRONMENTAL
PROGRAMS DIV.

Julianne W. Hoagland
Oklahoma Department of Transportation
200 Northeast 21st Street
Oklahoma City, Oklahoma 73105-3204

Dear Ms. Hoagland:

Thank you for your March 24, 2008, letter requesting the U.S. Fish and Wildlife Service (Service) provide comments regarding the proposed improvements to US-70 [JP 17427(04)] in McCurtain County, Oklahoma. McCurtain County commissioners propose to expand the existing two-lane undivided highway to a four-lane divided highway with a center median. The proposed project extends 6.4 miles east of Broken Bow, Oklahoma, to the Arkansas state line. Our comments are provided in accordance with section 7 of the Endangered Species Act (ESA), the Migratory Bird Treaty Act (MBTA), and the National Environmental Policy Act (NEPA). In addition, the Service is providing comments with respect to wetlands and other important fish and wildlife resources.

Threatened and Endangered Species

The Service concurs that the proposed activities would not impact the federally-listed interior least tern *Sterna antillarum*, the piping plover *Charadrius melodus*, or the red-cockaded woodpecker *Picoides borealis*.

The proposed project corridor crosses the Mountain Fork of the Little River, which supports several federally-protected species of mussels. Given the distance between the proposed project and the confluence of the Mountain Fork and the Little River, the degree of existing disturbance along the project corridor, and the implementation of appropriate storm water and erosion control measures, the Service concurs that the proposed project is not likely to adversely affect the scaleshell mussel *Leptodea leptodon*, the Ouachita rock pocketbook *Arkansia wheeleri*, or the winged mapleleaf mussel *Quadrula fragosa*.

The Mountain Fork River also supports a known population of leopard darters *Percina pantherina*. However, this population occurs above the Broken Bow Reservoir, approximately 34 miles upstream of the project's Mountain Fork River bridge crossing. Given the implementation of appropriate storm water and erosion control measures, the Service concurs that the proposed project is not likely to adversely affect the leopard darter.

The Service concurs that the proposed project is not likely to adversely affect the American alligator *Alligator mississippiensis* given the mobility of the species and appropriate storm water and erosion control measures.

The Service agrees that the appropriate effects determination and mitigation measures proposed for the American burying beetle *Nicrophorus americanus* will be addressed in the programmatic biological assessment and conservation strategy, and formalized in a Memorandum of Understanding among the Federal Highway Administration, Oklahoma Department of Transportation (ODOT), and the Service, prior to May 20, 2008.

Migratory Birds

Migratory bird species are protected under the MBTA (16 U.S.C. 703-712: Ch. 128 *as amended*). The MBTA prohibits the take of any migratory bird without authorization from the Service. Because riparian areas often provide important breeding and nesting habitat for migratory birds, we recommend that construction be scheduled prior to or after the migratory bird nesting season. For most species in Oklahoma, nesting activity typically commences in April and continues through July. If proposed actions would occur during the nesting season, we recommend you survey for the presence of nesting migratory birds. If active nests are found, a buffer should be established around the nest and activities within the buffer cease until nesting activity concludes.

Wetlands and Other Important Fish and Wildlife Resources

According to the Service's National Wetland Inventory and findings provided in your Biological Evaluation, no wetlands occur within the project area. However, Little Blue Creek is classified as a perennial stream. Wetlands, streams and riparian zone habitat provide cover, breeding and foraging areas for native species of birds, mammals, amphibians and reptiles. Riparian vegetation serves as a buffer to protect the watercourse from non-point source pollution by filtering sediments and capturing and breaking down nutrients and water pollutants, and increases soil strength and stability (FISRWG, 1998). Riparian areas also provide shade for the stream channel and serve as important movement corridors for wildlife.

We suggest you contact the U.S. Army Corps of Engineers (Corps) (918/669-7400) concerning any Section 404 permit requirements associated with this project. Before submitting a 404 permit application to the Corps, we recommend that all practicable alternatives be assessed and included in any permit application. We strongly recommend any proposed project utilize the least environmentally damaging alternative. The Service likely will seek mitigation for unavoidable impacts to wetlands and other important fish and wildlife habitats.

The Service also recommends the ODOT specify in the project plans that the applicable standard environmental measures, as dictated by Federal regulation and ODOT's 1999 Standard Specifications for Highway Construction, be implemented. During our review of your proposed projects, the Service assumes that all applicable standard environmental measures will be utilized during the construction process. Implementation of these measures often ensures that environmental impacts are avoided or minimized. For all future proposed projects submitted to

the Service for review, reference to implementation of the applicable standard environmental measures should be stated in the project plans.

Please provide the Service with a copy of all final decision documents associated with this project. Final decision documents include the issued permit or license, final environmental impact statement, record of decision, and integrated natural resource management plan or similar document. These decision documents advise the Service of the final specifications of the proposed projects and should indicate which of the measures recommended for the protection of fish and wildlife resources are to be implemented. We also request that if any of the Service's recommended measures are not to be implemented, you provide us with a written narrative explaining why these measures were not implemented.

We appreciate the opportunity to provide comments. If you have any questions or need additional assistance with this project, please contact Angela Brown of this office at 918/581-7458.

Sincerely,

A handwritten signature in black ink, appearing to read "Jerry J. Brabander". The signature is fluid and cursive, with a large initial "J" and "B".

Jerry J. Brabander
Field Supervisor

References

FISRWG. 1998. Stream Corridor Restoration: Principles, Processes, and Practices. By the Federal Interagency Stream Restoration Working Group (FISRWG) (15 Federal agencies of the U. S. Government). GPO item No. 0120.A; SupDocs No. A 57.6/2:EN 3/PT.653. ISBN-0-934213-59-3.

WATERS OF THE U.S. FINDINGS REPORT

U.S. 70 five miles east of Broken Bow, OK to
Arkansas State Line
McCurtain County, Oklahoma

Introduction

This field study has been written in support of and in compliance with 23 CFR 771, 777 and FHWA Technical Advisory T6640.8A for the Oklahoma Department of Transportation (ODOT).

The proposed project will expand an existing two-lane highway (U.S. 70) into a four-lane divided highway with a center median (**Appendix A, Exhibit 1**). This project will provide improvements to the capacity, operation, circulation and safety along the highway. The proposed expansion would require the acquisition of additional right-of-way (ROW).

Methodology

Carter and Burgess, Inc. (Carter & Burgess) biologists, Tracy Gwaltney, Lee Nichols and Todd Hutson, conducted surveys in May 2004, to identify and delineate potential waters of the U.S.

Waters of the U.S. include rivers, streams (including perennial, intermittent, and ephemeral), bogs, sloughs, lakes, ponds (including stock tanks connected to other jurisdictional waters), and wetlands.

The jurisdictional area of lakes, ponds, rivers, and streams are identified at the ordinary high water mark (OHWM). The length and average width between the OHWM was recorded to establish a total area for the streams within the project site. The OHWM is defined as:

“...that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed in the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas (33 CFR 328.3).”

Wetlands are those “areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions [as defined by the U.S. Army Corps of Engineers (USACE) and U.S. Environmental Protection Agency].” One herbaceous wetland and 3 ephemeral streams were identified within the project boundary that met the criteria presented in the 1987 USACE manual (USACE 1987). According to the 1987 U.S. Army Corps of Engineers (USACE) Wetland Delineation Manual, a given area must contain three parameters to be identified as a wetland. These three criteria include the presence of (1) hydric soils, (2) hydrophytic vegetation and (3) wetland hydrology.

Prior to the fieldwork for this project, Carter & Burgess biologists reviewed applicable materials in the office to determine those portions along the right-of-way (ROW) where waters of the U.S. could occur. These materials included the McCurtain County soil survey, U.S. Fish and Wildlife Service’s National Wetland Inventory (NWI) Maps, U.S. Geological Survey topographic maps, Federal Emergency Management Agency (FEMA) floodplain maps, and aerial photographs. The NWI Maps for McCurtain County did not show any wetland features within the project area. The

FEMA maps showed floodplain areas extending 9,000 linear feet along the existing highway around Mountain Fork River and 600 linear feet along the highway at Rock Creek within the project ROW.

Two alternative corridors were evaluated for the presence of waters of the U.S., including wetlands. Alternative 1 extended 150-feet north of the existing U.S. 70 and Alternative 2 extended 150-feet south of U.S. 70.

Results

The two alternatives were evaluated for potential waters of the U.S. Each alternative consisted of a 150-foot wide corridor. Alternative 1 was to the north of the existing U.S. 70, while Alternative 2 was to the south. A total of 22 crossings of potential waters of the U.S. were identified (including wetlands, streams and open water features) along the project ROW as shown in **Appendix A, Exhibits 2 and 3, Sheets 1-4** and included in **Table 1**. Seventeen ephemeral streams, three intermittent streams, two perennial streams, and one wetland were identified for Alternative 1. For Alternative 2, 17 ephemeral streams, three intermittent streams, two perennial streams, one wetland, and one pond were identified. **Appendix A, Exhibits 2 and 3, Sheet 1** displays the location of the potential wetlands and pond.

Final determinations regarding potential waters of the U.S. are subject to verification by the USACE.

Table 1. Jurisdictional Waters within the Project Corridor

Alternative	Jurisdictional Water Type	Average OHWM (feet)*	Length (feet)**	Area (acres)**	PCN Required
Crossing 1					
1	Ephemeral Stream	2	366	0.0154	No
2		1	103	0.0024	No
Crossing 2					
1	Perennial Stream	192	151	0.6673	Potential
2		236	150	0.8140	Potential
Crossing 3					
1	Ephemeral Stream	5	145	0.0166	No
2		5	130	0.0149	No
Crossing 4					
1	Intermittent Stream	20	255	0.1171	Potential
2		9	244	0.0723	No
Crossing 5					
1	Intermittent Stream	4	127	0.0134	No
2		12	165	0.0454	No
Crossing 6					
1	Ephemeral Stream	1	25	0.0006	--
	Wetland	N/A	N/A	0.2658	--
	Total Jurisdictional Waters	--	--	0.2664	Potential
2	Ephemeral Stream	15	149	0.0512	--
	Wetland	N/A	N/A	0.2593	--
	Pond	N/A	N/A	0.0168	--
	Total Jurisdictional Waters	--	--	0.3273	Potential
Crossing 7					
1	Ephemeral Stream	None	None	None	No
2		2	158	0.0068	No
Crossing 8					
1	Ephemeral Stream	2	154	0.0062	No
2		1	219	0.0050	No
Crossing 9					
1	Ephemeral Stream	10	139	0.0319	No
2		7	112	0.0191	No
Crossing 10					
1	Ephemeral Stream	1	313	0.0072	No
2		6	182	0.0251	No
Crossing 11					
1	Ephemeral Stream	1	343	0.0079	No
2		5	291	0.0145	No
Crossing 12					
1	Ephemeral Stream	3	167	0.0115	No
2		10	116	0.0221	No
Crossing 13					
1	Ephemeral Stream	2	133	0.0061	No
2		1	211	0.0048	No

U.S. 70 Expansion
Waters of the U.S. Findings Report

Alternative	Jurisdictional Water Type	Average OHWM (feet)*	Length (feet)**	Area (acres)**	PCN Required
Crossing 14					
1	Ephemeral Stream	3	543	0.0439	No
2		6	158	0.0196	No
Crossing 15					
1	Ephemeral Stream	4	159	0.0146	No
2		4	172	0.0148	No
Crossing 16					
1	Ephemeral Stream	4	160	0.0147	No
2		5	125	0.0168	No
Crossing 17					
1	Intermittent Stream	12	178	0.0490	No
2		10	139	0.0350	No
Crossing 18					
1	Ephemeral Stream	None	None	None	No
2		2	184	0.0085	No
Crossing 19					
1	Ephemeral Stream	5	173	0.0198	No
2		5	125	0.0143	No
Crossing 20					
1	Ephemeral Stream	6	165	0.0228	No
2		5	170	0.0169	No
Crossing 21					
1	Ephemeral Stream	2	147	0.0067	No
2		2	149	0.0068	No
Crossing 22					
1	Perennial Stream	100	151	0.3459	Potential
2		100	150	0.3449	Potential

The wetlands at Crossing 6 were approximately 7.0 miles east of Broken Bow, OK. These sites drained into each other through a culvert under U.S. 70. These sites were not identified on the Broken Bow, OK National Wetland Inventory Quadrangle. The soil series mapped for this site is Guyton silt loam.

There was approximately 0.266 acres of potential wetland for Alternative 1 and 0.259 acres for Alternative 2. Wetland determination sheets for these areas were completed on May 5, 2004 (**Appendix B, Wetland Determination Sheet 1 and 2**) Data sheets for one upland comparison point is also included (**Appendix B, Upland Comparison Sheet 1**). Results from the wetland determination sheets are summarized below. Photographs at the site are included in **Appendix C**.

Dominant plant species at the Alternative 1 wetland were soft rush, dewberry, hop sedge, willow baccharis, sycamore, sweetgum and American elm. Dominant plant species at the Alternative 2 wetland include soft rush, dewberry, hop sedge, honeysuckle, sweetgum, American elm, water oak and willow oak. The 1987 *Corps of Engineers Wetlands Delineation Manual*, Part III-35a. states that "hydrophytic vegetation is present on a site when more than 50% of the dominant species are OBL, FACW, or FAC on lists of plant species that occur in wetlands. A national interagency panel has prepared a National List of Plant Species that Occur in Wetlands." The dominant plant species observed at Site 1 and 2, and their indicator status according to the *National List of Plant Species that Occur in Wetlands*, are listed in **Table 2**.

Table 2. Dominant Plant Species at Site 1 and Site 2

Common Name	Scientific Name	Stratum	Region 6 Indicator Status	National Indicator Status
Duckweed	<i>Lemna</i> sp.*	Other ¹	OBL	OBL
Hop sedge	<i>Carex lupulina</i>	Herb	OBL	FACW+, OBL
Soft rush	<i>Juncus effusus</i>	Herb	OBL	FACW+, OBL
Dewberry	<i>Rubus trivialis</i>	Wood Vine	FAC	FACU, FAC
Honeysuckle	<i>Lonicera japonica</i>	Wood Vine	FAC	FACU, FAC+
American elm	<i>Ulmus americana</i>	Tree	FAC	FAC, FACW
False-willow ²	<i>Baccharis salicina</i>	Tree	FAC	FAC
Sweetgum	<i>Liquidamber styraciflua</i>	Tree	FAC	FAC, FACW
Sycamore	<i>Platanus occidentalis</i>	Tree	FAC+	FAC, FACW
Water oak	<i>Quercus nigra</i>	Tree	FAC+	FAC, FACW
Willow oak	<i>Quercus phellos</i>	Tree	FACW	FAC+, FACW

¹Free floating macrophyte ²Observed in Site 1

*Species identified to the genus level due to level of specimen development

The 1987 Corps of Engineers Wetlands Delineation Manual, Part III-46 states that “wetland hydrology encompasses all hydrologic characteristics of areas that are periodically inundated or have soils saturated to the surface at some time during the growing season. Areas with evident characteristics of wetland hydrology are those where the presence of water has an over-riding influence on characteristics of vegetation and soils due to anaerobic and reducing conditions, respectively.” Part III-49 of the 1987 Wetlands Delineation Manual lists indicators of wetland hydrology as including, but not limited to: drainage patterns, drift lines, sediment deposition, watermarks, stream gauge data and flood predictions, historic records, visual observation of saturated soils, and visual observation of inundation. Indicators of wetland hydrology at the Alternative 1 wetland included inundation, soil saturated in the upper 12 inches, drainage patterns in wetlands and water stained leaves during the May 5, 2004, site visit. Hydrology indicators at the Alternative 2 wetland included soil saturated in the upper 12 inches, drainage patterns in wetlands, oxidized root channels in upper 12 inches, water stained leaves and the FAC-Neutral test during the May 5, 2004, site visit.

A hydric soil is defined by the U.S. Department of Agriculture Soil Conservation Service and National Technical Committee for Hydric soils as a soil that is saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions that favor the growth and regeneration of hydrophytic vegetation. The 1987 Wetlands Delineation Manual, Part III-44f defines the use of colors of various soil components as diagnostic indicators of hydric soils. Included in these diagnostic indicators are soils with bright mottles and/or low matrix colors, and the presence of iron and manganese concretions. Soils at both wetlands sites had low Munsell chroma colors (i.e. 1 and 2). Both soil profiles sampled had bright mottles (i.e. chroma of 4 to 8). Few iron concretions were observed in the soil profile at depths greater than 17 centimeters of Site 2.

Alternative 1 and 2 wetlands had characteristics of a hydrophytic vegetative community, wetland hydrology and hydric soils, in accordance with the 1987 Corps of Engineers Wetlands Delineation Manual.