United States Department of the Interior

FISH AND WILDLIFE SERVICE
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2-12-02-F-240

October 21, 2003

Antonio Palacios
Federal Highway Administration
Texas Division Office
300 East 8th Street, Room 826
Austin, Texas 78701

Dear Mr. Palacios:

This document transmits the U.S. Fish and Wildlife Service's (Service) biological opinion based on our review of the Texas Department of Transportation's (TxDOT) proposed bridge replacement on US 385 (HA-TX) located in Oldham County, Texas, and its effects on the threatened Arkansas River shiner (*Notropis girardi*) (ARS) in accordance with section 7 of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.). Your June 18, 2003, request for formal consultation was received on June 20, 2003.

This biological opinion is based on information provided in the biological assessment included with your original letter, telephone conversations of April and May 2002 with Charlotte Kucera, Kyle Ford, Kenneth Holmes, Ronald Johnston, Cheryl Luther and Sue McClenahan, field investigations, and other sources of information. A complete administrative record of this consultation is on file at this office.

Currently, the ARS is the only federally listed species known to occur in Oldham County, Texas. Through previous correspondence with TxDOT, the Service noted the potential presence of the mountain plover (*Charadrius montanus*) in the county. At that time, the mountain plover was proposed for listing as threatened under the Act. Since then, the proposed rule has been withdrawn (68 FR 53083, September 9, 2003) and the mountain plover no longer has any status under the Act.

Consultation History

February 26, 2002: The TxDOT Amarillo District initiated informal consultation through a letter requesting information on resources that could be affected by the proposed action.

March 8, 2002: The Service's Arlington Field Office issued a response to the original consultation request which provided a species list and information regarding the presence of occupied critical habitat for the ARS within the proposed action area. The preparation of a biological assessment for the proposed action was recommended due to the presence of the listed species in the action area.

April 5, 2002: Telephone conversation between Charlotte Kucera and Omar Bocanegra to discuss proposed action and occupied critical habitat. Ms. Kucera was advised of the known population of ARS within the action area and the need for an effects evaluation.

April 26, 2002: Received supplemental information from TxDOT via e-mail which described minimization measures to prevent adverse impacts to species.

May 3, 2003: Conference call with TxDOT (Kyle Ford, Kenneth Holmes, Ronald Johnston, Charlotte Kucera, Cheryl Luther, and Sue McClenahan) and Omar Bocanegra to discuss minimization measures and the potential effects of action.

July 15, 2002: Site visit and meeting with TxDOT (Ralph Brown, Ron Johnston, Charlotte Kucera, Cheryl Luther, Sue McClenahan, and Kenneth Petr) and John Hughes of the Services' West Texas Sub-office. It was determined at the meeting that concluding the consultation informally would not be practical, since it would involve scheduling critical construction elements during times of extremely low flow in the Canadian River. TxDOT agreed to request the initiation of formal consultation from the Federal Highway Administration (FHWA).

September 9, 2002: TxDOT submitted a draft biological assessment to the Arlington Field Office for review.

October 8, 2002: The Arlington Field Office provided comments to TxDOT on the draft biological assessment.

June 18, 2003: FHWA transmitted a request for formal consultation on the proposed action and submitted TxDOT's revised biological assessment.

July 2, 2003: The Arlington Field Office provided FHWA a response to the request for formal consultation and acknowledged the receipt of relevant information for the development of the Services' biological opinion.

September 30, 2003 The United States District Court of the District of New Mexico issued an opinion on a Joint Motion to Approve Settlement Agreement (Docket No. 30) concerning the designation of critical habitat for the ARS. The court granted the Service's motion for a voluntary remand of the critical habitat and ruled that the current designation will be vacated during the interim.

October 7, 2003 The Arlington Field Office contacted TxDOT via email to suggest the final biological opinion address the vacatur of the critical habitat and omit the effects analysis to the critical habitat. Because the action area is occupied by the species, the take estimate and reasonable and prudent measures would not be affected by the withdrawal of critical habitat. TxDOT concurred with our position.

BIOLOGICAL OPINION

I. Description of Proposed Action

The Amarillo District of TxDOT proposes to replace the existing bridge over the Canadian River on U.S. 385 in central Oldham County, Texas, as part of a larger construction project along U.S. 385. This project would receive funds from FHWA. Recent inspections of the existing bridge, built in 1954, indicate it is deteriorating rapidly. The bridge does not meet current design and safety standards for state highways. The bridge consists of five continuous steel I-beam units (20 spans) and is approximately 1,627 ft (496 m) in length. The roadway width is approximately 28 ft (8.5 m) and the deck width is approximately 31 ft (9.4 m).

The proposed action includes the removal and replacement of the four separate existing bridges and their approaches, as well as the rehabilitation of portions of US 385 and is scheduled for early 2004. In addition to the bridge at the Canadian River, the bridge over an existing Burlington Northern Sante Fe (BNSF) railroad approximately 0.33 mile (0.53 km) south of the river, and the bridges over Rica and East Cheyenne Creeks north of the river would be replaced. North of the bridge approaches, the road would be rehabilitated (re-paved) to Spur 233. The entire project would take approximately 2.5 years to complete. The project area includes approximately 7.2 miles (11.6 km) of U.S. 385 with approximately 3.67 miles (5.91 km) affected by construction. The bridge alignment at the river would be relocated approximately 16 ft (4.9 m) to the west and require approximately 13.7 acres (5.5 ha) of new right-of-way.

The proposed construction would be accomplished in phases in order to avoid creating a temporary detour by using the existing bridge to maintain traffic across the river. The proposed structure would

consist of two 12 ft (3.7 m) lanes, a 14 ft (4.3 m) flush median and two 10 ft (3 m) shoulders. The proposed deck width would be 60 ft (18.3 m). Interior supports, which currently consist of piers, would be replaced with columns, each pier needing four 36-inch (91.4 cm) diameter columns. The existing piers would be cut off at the drill shafts slightly below grade and new columns constructed west of the current location. The bridge deck would be broken into pieces and lifted off of the piers. The process of removing the bridge deck above the normal high water area should take approximately seven days. The placement of equipment in the river channel is not anticipated. Construction of the new deck will involve placing beams and pre-stressed panels in the new location. The remainder of the area is wood formed with reinforcing steel and concrete to complete the structure. Additionally, TxDOT is proposing to restore the riparian area on the southeast and northeast sides of the bridge. The restoration will consist of revegetating the existing haul road with a TxDOT approved seed mix including native grasses and installing a coarse rock riprap to discourage motorized access on the southeast side, and delineating an unpaved parking area with a stabilized berm beyond 300 ft (91.4 m) of the river on the northeast side to allow public access and discourage motorized access to the river. The sequence of events of the phased construction would be: 1) partial construction of the new bridge, 2) diversion of traffic from the existing bridge to the new bridge, 3) removal of the existing bridge, and 4) completion of the new bridge.

Two additional bridges would also be replaced on US 385 north of the Canadian River. The bridge at East Cheyenne Creek occurs approximately 5.7 miles (9.2 km) north of the river on US 385 and its confluence with the Canadian River occurs approximately 3.1 river miles (5.0 km) upstream from the Canadian River/US 385 bridge. From the East Cheyenne Creek bridge, the creek flows approximately 5.1 river miles (8.2 km) to its confluence with the Canadian River. Rica Creek is crossed approximately 3.4 miles (5.5 km) north of the river by US 385 and joins the Canadian River approximately 1.33 river miles (2.14 km) upstream from the Canadian River/US 385 bridge. The segment of Rica Creek from the bridge to its confluence with the Canadian River is approximately 4.1 river miles (6.6 km). The Service believes these bridge replacements are not likely to adversely affect the ARS due to the implementation of standard erosion and sedimentation controls, intermittent nature of the streams, and because they are located a sufficient distance where significant effects would not reasonably be expected to reach the river. Therefore, the action area for the proposed action includes the segment of U.S. 385 that would involve construction activity directly and indirectly affecting the ARS within the Canadian River. This segment extends from approximately one mile (1.61 km) north of Spur 233 south to approximately 1000 ft (304.8 m) south of the RM 1061 (approximately 3.3 miles [5.3 km] in total length) and extends outward to all areas directly affected by construction activities and includes indirect effects to the Canadian River downstream of the bridge. Additional effects consist of anticipated erosion and increased sedimentation within the river resulting from ground disturbance and may be anticipated to occur a reasonable distance downstream during and following the completion of construction. Sediment loading in streams resulting from highway construction has been shown to influence turbidity 6.2 miles (10 km) downstream from the construction activity (Hainly 1980). Because the Canadian River is naturally turbid and shallow, estimating the effects of sediment loading would be difficult; however, based on Hainly's (1980) study, these effects are expected to influence conditions within the river to a maximum of 6.2 miles (10 km) downstream of the highway. Additional indirect effects

include post-construction erosion and sedimentation and inspection and maintenance of ground stabilization features following construction activities and prior to stabilization of disturbed areas.

II. Status of the Species/Critical Habitat

The ARS was listed as threatened in November, 1998 (63 FR 64772). It is a small fish, with a maximum length of approximately 2 inches (51 mm) found in the Canadian River in New Mexico, Oklahoma and Texas. It occurs in turbid waters of shallow, primary channels of sandy streams and rivers in the Arkansas River drainage (Gilbert 1980). The ARS is a broadcast spawner, producing semibouyant eggs which remain suspended by high flows until hatching (Moore 1944). Spawning begins in May and continues through July and may be associated with seasonal flooding that increases the flow within its habitat (Bestgen et al. 1989), although they are capable of spawning multiple times throughout the season under a variety of flow regimes (Bonner 2000). After hatching, larvae utilize backwater pools and areas at the mouths of tributaries where food is plentiful. The ARS's life span is thought to be less than three years in the wild (Moore 1944). The diet of the ARS includes mostly small insects and crustaceans.

In Texas, the ARS inhabits the Canadian River where suitable habitat exists, which includes Oldham, Potter, Hutchinson, Roberts, and Hemphill Counties. Critical habitat was designated for the ARS in April, 2001 (66 FR 18002) and includes Oldham, Potter, and Hemphill Counties in Texas. However, through a recent court settlement, the ARS critical habitat has been vacated pending the Service's remand (see Consultation History section). A recovery plan for the ARS has not yet been developed.

Historically, the ARS occurred throughout the western portion of the Arkansas River Basin in Kansas, New Mexico, Oklahoma, and Texas. Currently, the ARS is thought to exist only within approximately 508 miles (820 km) of the Canadian River in Oklahoma, Texas, and New Mexico. The primary reasons for the decline of the species' historical range includes inundation and modification of stream discharge by impoundments, channel dessication from water diversion and groundwater pumping, stream channelization, and introduction of non-native species.

III. Environmental Baseline/Status of the Species within the Action Area

Under section 7(a)(2) of the Act, when considering the effects of the proposed action on federally listed species, the Service is required to take into consideration the environmental baseline. The environmental baseline includes past and present impacts of all Federal, State, or private actions and other activities in the action area (50 CFR 402.02), including Federal actions in the area that have already undergone section 7 consultation, and the impact of State or private actions which are contemporaneous with the consultation in progress.

The area that would be affected by the proposed action includes the approximately 13.7 acres (5.5 ha) site and approximately 6.2 miles (10 km) of the channel downstream of the bridge. This area encompasses a portion of the river which is known to be occupied by the ARS. In fact, the best available information indicates the ARS is common within the river where the action area occurs (Larson et al. 1991, Giggleman et al. 2001) and the population remains stable (Bonner and Wilde 2000). Seine hauls conducted in the Canadian River at U.S. 385 in 1990 produced 133 ARSs representing 38% of the fish collected, and from seine hauls in adjacent Potter County, Texas, the ARS represented 61% of the sample (Larson et al. 1991). Bonner and Wilde (2000) consistently collected ARSs at the same site on multiple sampling dates between 1996 and 1998. Samples taken at this site during high flow conditions in 2001 produced six ARS representing 12% of the sample; however, ARS were absent from an additional sample taken during low flow conditions the same year (Giggleman et al. 2001).

Although reservoir construction is a significant threat to the ARS, the population remains stable on the portions of the Canadian River in Texas between the major reservoirs. However, these stretches of the river are subject to low flows and drought which limits habitat availability. Low flow conditions may be exacerbated by the threat of excessive groundwater pumping in the general area.

IV. Effects of the Action

It is anticipated that ARS occupying the portion of the Canadian River within the action area would be adversely affected through the temporary loss of habitat, seining and handling of individuals, harassment from construction activity, and increased turbidity within the river.

Work within the river channel would consist of placement of columns for the new bridge and removal of the existing piers. It is anticipated that it will take two separate actions, each action taking four days, to remove the existing piers in the channel. These actions would require the diversion of river water around the pier area with a temporary sandbag dam or cofferdam and de-watering the area. The total size of disturbance (including equipment placement) in the area of normal high water is approximately 0.128 acres (0.052 ha). The diversion of water and de-watering would displace ARS individuals in the area immediately surrounding the existing piers. The habitat within the temporary dam would be removed from ARS access until the project is complete. Piers within the ordinary high water mark would be cut off slightly below grade and lifted out of the channel to minimize disturbance to the area.

An additional pier on the northeast side of the bridge is immediately adjacent to the river bank. The base of this pier is partially exposed due to erosion of the bank. The remaining bank at this location is unstable necessitating the removal of this pier just below bank level following the removal of the bridge deck. This would minimize turbidity that would be caused by attempting to remove the portion of the pier below ground.

It is anticipated that the construction of the new columns would take four separate actions, each action requiring four days. The drill piece used for the placement of columns creates a sediment cone during operation. Turbidity is likely to increase during these actions given the highly erodible nature of the riverbed and banks. The removal and construction of piers and columns within the ordinary high water mark would occur outside of the ARS peak spawning season (May-July).

Hydrological analysis of the site indicates the need to divert water around one existing pier and to replace this pier with one new set of columns within the channel. A dam of sandbags or a cofferdam is proposed on the southwest side of the river during the construction of the bridge to divert the water from this area. If the water course should change during or before construction, the same measures would be employed for any column area that is within the water. The maximum amount of habitat within the channel that may be temporarily bermed would be approximately 0.5 acres (0.2 ha). Once the diversion(s) is in place, representatives from TxDOT, under the direction of at least one qualified fishery biologist, would seine within the dammed area to remove any fishes, including ARS that may be trapped. Fish removed from bermed areas would be immediately released in the river.

The Canadian River varies in turbidity, with increases occurring during high flow and significant precipitation. The effects to the aquatic biota of streams resulting from highway construction has been well documented (Barton 1977, Wellman et al. 2000, Barrett et al. 1995). Native fish within the river, including the ARS, are adapted to survival in the shallow turbid water typical of prairie streams (Bonner and Wilde 2002, Robison and Buchanan 1988). Since sources of turbidity related to construction would not occur during the ARS peak spawning season, adverse effects from increased turbidity are anticipated to be relevant to sediment plumes from intense construction activity, food availability and feeding. The ARS can effectively locate food in turbid conditions, in fact, intermediate turbidity may enhance prey detection (Boehlert and Morgan 1985), however; food consumption decreases under high turbidity (Bonner and Wilde 2002). Adverse effects to aquatic macroinvertebrates resulting from increased sediment load would also be expected to reduce food availability for the ARS (Henley et al. 2000, Hynes 1976). However, these effects may be negligible (Wellman et al. 2000) and only short-term due to the expected recolonization of invertebrates to the affected area (Barton 1977). Additionally, recent studies have found that terrestrial and semiaquatic invertebrates make up a significant portion of the ARS diet (Jimenez 1999).

ARS within the action area would also be affected by the activity related to the removal and construction of the bridges including the use of equipment, temporary storage of materials, foot and vehicle traffic, installation of erosion and sedimentation controls, and incidental fallback of debris into the river. The immediate area receiving increased sediment loads may also inhibit fish from using the area immediately downstream of the bridge (Barton 1977). This increased activity is expected to harass the ARS occurring within the action area and potentially harming them by limiting access to habitat and disrupting migration and/or seasonal movements within the river.

Indirect effects anticipated from the proposed action are erosion, increased sedimentation, and increased turbidity within the river following the completion of the segment of road. Additionally,

some indirect effects may occur from the maintenance and removal of erosion and sedimentation controls utilized at the construction site. Inspection and maintenance of erosion and sedimentation control devices would occur post-construction until disturbed areas have become stabilized to match existing vegetative cover in the area. The contractor would make repairs to damaged or ineffective controls as soon as possible.

V. Cumulative Effects

Cumulative effects include the effects of future State, tribal, local or private actions that are reasonably certain to occur in the action area considered in this biological opinion. Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the Act.

The identified cumulative effects reasonably certain to occur within the action area are flow depletion due to excessive groundwater pumping, off-road vehicle (ORV) use within the river channel and riparian area, and introduction of bait fish from anglers. Groudwater withdrawals within the Canadian River Basin affect the rate of flow within the Canadian River; however, it is the Service's opinion (noted in the ARS listing final rule) that these effects are relatively minor upstream of Lake Meredith, which includes the action area. The threat to ARS from the introduced Red River shiner (*Notropis bairdi*) from anglers and commercial bait harvesters within the ARS's range has been documented (Cross et al. 1983, Felley and Cothran 1981), although this species has not been reported from the Canadian River in Texas. Because the road provides public access to the river, the potential for anglers to use the river for recreation and introduce non-native species exists; however, this potential effect is difficult to predict or quantify. The public access to the river provided by the road crossing also exacerbates the effect of recreational ORV use within the river channel. The extent of the effects of ORV use within the river channel on the ARS are not currently known.

VI. Conclusion

The ARS is known to occur in most portions of the Canadian River in Texas and populations are thought to be stable. The proposed action will not impose a physical barrier to ARS occupying the river within the action area, but individuals may be deterred by activity related to project implementation. Take related to the immediate area affected by construction is likely only to temporarily affect the local population.

After reviewing the current status of the ARS, the environmental baseline for the action area, the effects of the proposed US 385 bridge replacement, and the cumulative effects, it is the Service's biological opinion that the action, as proposed, is not likely to jeopardize the continued existence of the ARS.

INCIDENTAL TAKE STATEMENT

Section 9 of the Act and Federal regulation pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. Harm is further defined by the Service to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Harass is defined by the Service as intentional or negligent actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the Act provided that such taking is in compliance with the terms and conditions of this incidental take statement.

The measures described below are non-discretionary, and must be undertaken by FHWA so that they become binding conditions of any grant or permit issued to TxDOT, as appropriate, for the exemption in section 7(o)(2) to apply. FHWA has a continuing duty to regulate the activity covered by this incidental take statement. If FHWA (1) fails to assume and implement the terms and conditions or (2) fails to require TxDOT to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to the permit or grant document, the protective coverage of section 7(o)(2) may lapse. In order to monitor the impact of incidental take, FHWA or TxDOT must report the progress of the action and its impact on the species to the Service as specified in the incidental take statement [50 CFR §402.14(i)(3)].

Amount or Extent of Take Anticipated

The Service anticipates the local population of ARS within the Canadian River could be taken as a result of the proposed action, however, it will be difficult to accurately predict due the nature of the take and biology of the species. Therefore, take will be assessed based on the temporal description of activities expected to affect the species as noted in the biological assessment and using habitat area as a surrogate for the species. The incidental take is expected to be in the form of harassment, wounding, and/or killing. Harassment related to construction activities is anticipated to occur during intense construction activity and during seining and handling of fish during dewatering of bermed areas. Take in the form of wounding and/or killing is expected during seining and dewatering of bermed areas.

The Service believes harassment related to intense construction activity is reasonably certain to occur for those activities involving ground disturbance in close proximity to the river channel. The biological assessment identifies these activities as the removal and placement of piers and columns within the channel, which would be scheduled for a maximum of 24 days out of the approximately 2.5 year project. Thus, take of the local population of ARS from harassment related to intense construction activity will occur for a maximum of 24 days. The seining and dewatering of bermed

areas is estimated to take the individuals trapped within the bermed areas, which is not to exceed 0.5 acres (0.2 ha).

Effect of the Take

In the accompanying biological opinion, the Service determined that this level of anticipated take is not likely to result in jeopardy to the species.

Reasonable and Prudent Measures

The Service believes the following reasonable and prudent measures are necessary and appropriate to minimize impacts of incidental take of ARS:

1) Temporary storage and staging areas for equipment and materials will be located beyond 300 ft (91.4 km) of the river to reduce the amount of riparian clearing and soil disturbance.

2) Vehicle or other motorized equipment use will be restricted to outside of the river channel. The existing unpaved road adjacent to the bridge will be used as a haul road during construction. Haul roads will not be extended into the river. Due to the natural fluctuation of the channel, variance in flow rates, and saturation of channel substrate, a minimum 10-ft buffer zone from the wetted channel will be maintained within the action area. Equipment and motorized vehicles will not be allowed within the buffer zone, with the exception of activity occurring within the bermed areas.

3) The removal of water and fish from bermed areas will be accomplished immediately following completion of the berms and under the supervision of a qualified fisheries biologist. Seines used will be 1/8-inch mesh size or smaller to allow collection of juvenile fish. Seine hauls will be used within the bermed areas until all fish are removed and returned to the river. Bermed areas will immediately be re-seined should water flow over the berms.

4) The construction of water diversions, seining and dewatering of bermed areas, and removal and placement of columns and piers within the ordinary high water mark will be scheduled outside of the ARS peak spawning season (May-July). Bermed areas will be minimized to the maximum extent practical to perform work.

5) Enhanced erosion control and sedimentation barriers will be strategically placed within the action area. In addition to TxDOT's normal best management practices for sedimentation and erosion control, additional silt fencing will be installed along the banks of the river upstream and downstream from bridge within TxDOT right-of-way to reduce sediment loading. Compost berms will be will be used to trap sediment from construction and will be maintained until 70% of vegetative cover from existing conditions is achieved.

6) Sediment produced from the drilling of new shafts will be removed and disposed of at an upland area outside of the Canadian River riparian zone.

7) Immediately following completion of the project, disturbed areas will be revegetated with a native seed mix and managed to ensure 70% cover from existing condition is achieved. The seed mix used for revegetation will include the following:

Green Sprangletop
Sideoats grama (El Reno)
Blue grama (Lovington)
Sand dropseed
Sand bluestem

Terms and Conditions

In order to be exempt from the prohibitions of section 9 of the Act, the FHWA must comply with the following terms and conditions, which implement the reasonable and prudent measures described above and outline required reporting/monitoring requirements. These terms and conditions are non-discretionary.

1) The contractor(s) employed for the proposed work will attend a pre-construction meeting which will include specific instruction on the implementation of the reasonable and prudent measures included in this incidental take statement.

2) Instructions specific to the contractor(s) related to implementation of the reasonable and prudent measures will be incorporated through written documentation within the project plans.

3) FHWA and/or TxDOT will monitor the extent of take through sufficient on-site inspections scheduled for activities anticipated to result in take through the duration of the action. Monitoring will include the following:

a) estimating size of bermed areas within the channel following completion of berms,

b) pre-construction inspection of erosion and sedimentation controls and post-construction inspection once a month or following precipitation of ½ inch or more (whichever occurs first),

c) monitoring duration of intense construction activity (i.e., removal and construction of piers and columns within the channel),reporting approximate number of fish (all fish collected by seining) removed from bermed areas,

d) maintaining effectiveness of erosion and sediment controls post-construction until disturbed areas have become stabilized,

e) reporting approximate area of ground disturbance and impact to the Canadian River riparian area.

4) During seining and dewatering activity, any dead or mortally wounded fish will be salvaged by placing them immediately in a 70% ethanol solution and ensuring that they are sent to the Service's Arlington Field Office for disposition.

5) Reports of on-site monitoring of the proposed action will be submitted to the Service's Arlington Field Office as follows:

a) following the completion of the anticipated berming, seining, and dewatering activities,

b) following any additional berming, seining, and dewatering activities which may be necessary due to changes in river flow,

c) following any re-seining of bermed areas which may be necessary due to water overflow,

d) and following completion of the full project.

This concludes formal consultation on the action outlined in the biological assessment. As provided in 50 CFR § 402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect listed species in a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation.

Sincerely,

Thomas J. Cloud, Jr.
Field Supervisor

CC: Charlotte Kucera, TxDOT, Austin, TX.
Cheryl Luther, TxDOT, Amarillo, TX.

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