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50 CFR Part 17

Endangered and Threatened Wildlife and Plants; Final Designation of Critical Habitat for the Arkansas River Basin Population of the Arkansas River Shiner (*Notropis girardi*); Final Rule

DEPARTMENT OF THE INTERIOR

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RIN 1018–AT84

Endangered and Threatened Wildlife and Plants; Final Designation of Critical Habitat for the Arkansas River Basin Population of the Arkansas River Shiner (*Notropis girardi*)

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), are designating critical habitat for the Arkansas River Basin population of the Arkansas River shiner (*Notropis girardi*) pursuant to the Endangered Species Act of 1973, as amended (Act). In total, approximately 856 kilometers (532 miles) of linear distance of rivers, including 91.4 meters (300 feet) of adjacent riparian areas measured laterally from each bank are included within the boundaries of the critical habitat designation. The areas that we have determined to possess the features that are essential to the conservation of the Arkansas River shiner include portions of the Canadian River (often referred to as the South Canadian River) in New Mexico, Texas, and Oklahoma, the Beaver/North Canadian River in Oklahoma, and the Cimarron River in Kansas and Oklahoma, and the Arkansas River in Kansas. As presented in the proposed rule, we have excluded from this designation all previously designated critical habitat in the Beaver/North Canadian River in Oklahoma and the Arkansas River in Kansas under authority of section 4(b)(2) of the Act. In addition, we have excluded all previously proposed critical habitat in Unit 1a of the Canadian River in New Mexico and Texas and a portion of Unit 1b in Texas and Oklahoma under authority of section 4(b)(2) of the Act.

EFFECTIVE DATE: November 14, 2005.

ADDRESSES: Comments and materials received, as well as supporting documentation used in the preparation of this final rule, are available for public inspection, by appointment, during normal business hours at the Oklahoma Ecological Services Office, U.S. Fish and Wildlife Service, 222 South Houston, Tulsa, Oklahoma 74127–8909 (telephone 918/581–7458). The final rule, maps, economic analysis, and environmental assessment also will be available via the Internet at *http://ifw2es.fws.gov/Oklahoma*.

FOR FURTHER INFORMATION CONTACT: Field Supervisor, Oklahoma Ecological Services Office (telephone 918/581–7458; facsimile 918/581–7467).

SUPPLEMENTARY INFORMATION:

Designation of Critical Habitat Provides Little Additional Protection to Species

In 30 years of implementing the Act, the Service has found that the designation of statutory critical habitat provides little additional protection to most listed species, while consuming significant amounts of available conservation resources. The Service's present system for designating critical habitat has evolved since its original statutory prescription into a process that provides little real conservation benefit, is driven by litigation and the courts rather than biology, limits our ability to fully evaluate the science involved, consumes enormous agency resources, and imposes huge social and economic costs. The Service believes that additional agency discretion would allow our focus to return to those actions that provide the greatest benefit to the species most in need of protection.

Role of Critical Habitat in Actual Practice of Administering and Implementing the Act

While attention to and protection of habitat is paramount to successful conservation actions, we have consistently found that, in most circumstances, the designation of critical habitat is of little additional value for most listed species, yet it consumes large amounts of conservation resources. Sidle (1987) stated, ''Because the Act can protect species with and without critical habitat designation, critical habitat designation may be redundant to the other consultation requirements of section 7.'' Currently, only 470 species or 38 percent of the 1,253 listed species in the U.S. under the jurisdiction of the Service have designated critical habitat.

We address the habitat needs of all 1,253 listed species through conservation mechanisms such as listing, section 7 consultations, the section 4 recovery planning process, the section 9 protective prohibitions of unauthorized take, section 6 funding to the States, and the section 10 incidental take permit process. The Service believes that it is these measures that may make the difference between extinction and survival for many species.

We note, however, that two courts found our definition of adverse modification to be invalid (March 15, 2001, decision of the United States Court Appeals for the Fifth Circuit, *Sierra Club* v. *U.S. Fish and Wildlife Service, et al.*, F.3d 434 and the August 6, 2004, Ninth Circuit judicial opinion, *Gifford Pinchot Task Force, et al.* v. *United States Fish and Wildlife Service*). On December 9, 2004, the Director issued guidance to be used in making section 7 adverse modification determinations.

Procedural and Resource Difficulties in Designating Critical Habitat

We have been inundated with lawsuits for our failure to designate critical habitat, and we face a growing number of lawsuits challenging critical habitat determinations once they are made. These lawsuits have subjected the Service to an ever-increasing series of court orders and court-approved settlement agreements, compliance with which now consumes nearly the entire listing program budget. This leaves the Service with little ability to prioritize its activities to direct scarce listing resources to the listing program actions with the most biologically urgent species conservation needs.

The consequence of the critical habitat litigation activity is that limited listing funds are used to defend active lawsuits, to respond to Notices of Intent (NOIs) to sue relative to critical habitat, and to comply with the growing number of adverse court orders. As a result, listing petition responses, the Service's own proposals to list critically imperiled species, and final listing determinations on existing proposals are all significantly delayed.

The accelerated schedules of court-ordered designations have left the Service with almost no ability to provide for adequate public participation or to ensure a defect-free rulemaking process before making decisions on listing and critical habitat proposals due to the risks associated with noncompliance with judicially imposed deadlines. This in turn fosters a second round of litigation in which those who fear adverse impacts from critical habitat designations challenge those designations. The cycle of litigation appears endless, is very expensive, and in the final analysis provides little additional protection to listed species.

The costs resulting from the designation include legal costs, the cost of preparation and publication of the designation, the analysis of the economic effects and the cost of requesting and responding to public comment, and in some cases the costs of compliance with the National Environmental Policy Act (NEPA). None of these costs result in any benefit to the

species that is not already afforded by the protections of the Act enumerated earlier, and they directly reduce the funds available for direct and tangible conservation actions.

Background

Background information on the Arkansas River shiner and its habitat requirements can be found in our previous final designation of critical habitat for this species, published in the **Federal Register** on April 4, 2001 (66 FR 18002). Additional background information is also available in our recent proposal of critical habitat for the Arkansas River shiner, published on October 6, 2004 (69 FR 59859). That information is incorporated by reference into this final rule. This rule, which becomes effective on the date listed under **EFFECTIVE DATE** at the beginning of this document, replaces the April 4, 2001, critical habitat designation for this species.

Previous Federal Actions

We previously designated a total of approximately 1,846 kilometers (1,148 miles) of rivers, and 91.4 meters (300 feet) of their adjacent riparian zones, encompassing portions of the Arkansas River in Kansas, the Cimarron River in Kansas and Oklahoma, the Beaver/North Canadian River in Oklahoma, and the Canadian River in New Mexico, Texas, and Oklahoma on April 4, 2001 (66 FR 18002). On April 25, 2002, the New Mexico Cattle Growers Association and 16 other plaintiffs filed a complaint in United States District Court for the District of New Mexico for alleged violations of the Act, the Administrative Procedure Act, and NEPA. A Memorandum Opinion in that case was issued by Senior U.S. District Judge C. LeRoy Hansen in September of 2003 that vacated critical habitat for the Arkansas River shiner and ordered the Service to complete a final rulemaking to redesignate critical habitat by September 30, 2005. In accordance with this Memorandum Opinion, we published a proposed rule to designate 2,002 kilometers (1,244 miles) of linear distance of rivers, including 91.4 meters (300 feet) of adjacent riparian areas measured laterally from each bank on October 6, 2004. This distance included areas that were proposed to be excluded in the final rule. We extended the comment period associated with this proposed rule on April 28, 2005 (70 FR 21987). On August 1, 2005, we published a notice announcing the availability of the draft economic analysis (DEA) and draft environmental assessment, public hearing locations and dates, and reopening of the public comment period (70 FR 44078).

Summary of Comments and Recommendations

We requested written comments from the public on the proposed designation of critical habitat for the Arkansas River shiner in the proposed rule published on October 6, 2004 (69 FR 59859). We also contacted the appropriate Federal, State, and local agencies, Tribes, scientific organizations, and other interested parties and invited them to comment on the proposed rule. The initial comment period was open from October 6, 2004 through April 30, 2005. We extended this comment period until June 17, 2005 (April 28, 2005, 70 FR 21987). A second comment period was open from August 1, 2005 to August 31, 2005, to also solicit comments on the draft environmental assessment and draft economic analysis and to announce the dates, locations, and times of the public hearings (70 FR 44078). In addition, we published newspaper notices inviting public comment and announcing the public hearings in the following newspapers in New Mexico: Quay County Sun; Kansas: Dodge City Globe, Hutchinson News Herald, and Wichita Eagle Beacon; Oklahoma: Woodward News, The Daily Oklahoman, and Tulsa World; Texas: Amarillo Globe News and Lubbock Avalanche Journal. We held three public hearings on the proposed rule: Oklahoma City, Oklahoma (August 15, 2005); Amarillo, Texas (August 17, 2005); and Liberal, Kansas (August 18, 2005). Transcripts of these hearings are available for inspection (see **ADDRESSES** section). All comments and new information received during the two comment periods have been incorporated into this final rule as appropriate.

A total of 255 commenters responded during the two comment periods, including 11 Federal agencies (including elected officials), 7 State agencies, 11 private organizations, and 226 individuals. Several commenters individually submitted more than one set of comments. We received 5 comments after the close of the second comment period, but those comments were similar in nature to comments we had already received. During the comment period that opened on October 6, 2004, and closed on June 17, 2005, we received 26 comments directly addressing the proposed critical habitat designation: 2 from peer reviewers, 4 from Federal agencies, 3 from State agencies, and 5 from private organizations. Of the 26 parties responding to the proposal during the first comment period, 2 supported the proposed designation, 15 were opposed, and 9 provided additional information or otherwise expressed no position on the proposal. During the second comment period that opened on August 1, 2005, and closed on August 31, 2005, we received 235 comments directly addressing the proposed critical habitat designation, DEA, and draft environmental assessment. Of these latter comments, 8 were from a Federal agency, 7 from members of Congress, 7 from State agencies, 8 from private organizations, and 212 from individuals. Many of the comments (138) from private individuals were signed form letters. During the second comment period a total of 2 commenters supported the designation of critical habitat for the Arkansas River shiner and 71 opposed the designation. Many of those opposing the designation or not expressing a position did express support for excluding one or more of the proposed critical habitat units. We reviewed all comments for substantive information and new data regarding the Arkansas River shiner and its critical habitat. Comments have been grouped together by issue and are addressed in the following summary. All comments and information have been incorporated into the final rule as appropriate.

Peer Review

In accordance with our peer review policy published on July 1, 1994 (59 FR 34270), we solicited independent opinions from at least three knowledgeable individuals who have expertise with the species, with the geographic region where the species occurs, and/or familiarity with the principles of conservation biology. Of the six individuals contacted, two responded. The peer reviewers who submitted comments generally supported the proposal and their comments are included in the summary below and incorporated into the final rule, as appropriate.

Peer Review Comments

(1) *Comment:* A peer reviewer at an academic institution who conducts research on a variety of fish species found our proposal to be extremely thorough and appropriate for an understanding of the needs of the Arkansas River shiner. He stated that the life history of the Arkansas River shiner dictates that long stretches of free-flowing water are critical Arkansas River shiner habitats.

Our Response: As noted by the peer reviewer, we have tried to be as thorough as possible, and have considered and applied every known

study describing the life history and habitat requirements of the species when determining critical habitat for the Arkansas River shiner.

(2) *Comment:* This peer reviewer found the argument for excluding the Beaver/North Canadian River in Oklahoma and the Arkansas River in Kansas to be convincing and supported using these areas to establish experimental populations of the Arkansas River shiner.

Our Response: We agree that excluded areas still have the features that are essential for the Arkansas River shiner and we intend to utilize many recovery tools throughout the range of the species, including establishing experimental populations, as appropriate.

(3) *Comment:* Another peer reviewer at a different academic institution who has extensive experience with riverine systems in Kansas, New Mexico, and Oklahoma expressed concern regarding proposed exclusion of Beaver/North Canadian River in Oklahoma and the Arkansas River in Kansas. He stated that our position is based on the assumption that Arkansas River shiner populations in these two reaches are either so small that they cannot recover or that these populations are extirpated. In his opinion, these two reaches have not been sampled adequately for us to reach this conclusion. The recent capture of the Arkansas River shiner from the Cimarron River near Guthrie, Oklahoma is used as an example of our inability to conclude that the Arkansas River shiner has been extirpated from any particular reach.

Our Response: We agree that only a small percentage of either of these two reaches have been extensively searched for the Arkansas River shiner. We strive to base our listing decisions on the best scientific and commercial data available. Unfortunately, extensive survey data for both of these reaches were unavailable. We will not designate critical habitat in areas outside the geographic area occupied by the species at the time of listing when the best available scientific and commercial data do not demonstrate that the conservation needs of the species require such designation. Additionally, designation of critical habitat may not include all of the habitat areas that may eventually be determined to be necessary for the recovery of the species. For these reasons, critical habitat designations do not mean that habitat outside the designation is unimportant or may not be required for recovery. Before initiating any efforts to establish experimental populations in these reaches, we intend, subject to available funding, to conduct more exhaustive surveys of both units.

We believe a major benefit of excluding areas from critical habitat designation is that landowners, local jurisdictions, and other entities involved in recovery efforts for the Arkansas River shiner will be more willing to work with us in a spirit of cooperation and partnership. A possible benefit of including critical habitat on such lands is education about the species and its habitat needs. We considered that this educational benefit has largely already been met by the public participation process, and therefore, that this would not be a particularly important benefit of critical habitat designation. We have concluded, therefore, that the benefits of excluding critical habitat from such lands exceed the value of including the lands as critical habitat. See additional discussion under ''Exclusion Under Section 4(b)(2) of the Act.''

(4) *Comment:* This peer reviewer, in his best professional judgment, suggested that restoring Arkansas River shiners in the Beaver/North Canadian River in Oklahoma and the Arkansas River in Kansas would be extremely beneficial considering these repatriated populations would help ensure that multiple populations of the species persist. However, he expressed reservation that repatriation of the species was the only means to accomplish this objective. Instead both habitat restoration and repatriation might be necessary or habitat restoration alone would be sufficient should remnant populations still persist.

Our Response: We agree that restoration of Arkansas River shiner populations to additional portions of their historical range significantly reduces the likelihood of extinction and that some habitat restoration may also be necessary. A vital recovery component for this species will likely involve establishment of secure, self-sustaining populations in habitats from which the species has been extirpated. While we believe excluding historically occupied areas from the critical habitat designation could be detrimental to conservation of the species, we also believe negative public perceptions with respect to critical habitat could seriously hamper voluntary restoration efforts. Establishing experimental populations under section 10(j) of the Act appears to be the most appropriate tool to utilize in future restoration efforts. We believe the provisions of section 10(j) would help foster an atmosphere of cooperation that would encourage future voluntary conservation actions. Section 10(j) of the Act enables us to designate certain populations of federally listed species that are released into the wild as ''experimental.'' The circumstances under which this designation can be applied are the following: (1) The population is geographically separate from non-experimental populations of the same species (e.g., the population is reintroduced outside the species' current range but within its probable historic range); and (2) we determine that the release will further the conservation of the species. Section 10(j) is designed to increase our flexibility in managing an experimental population by allowing us to treat the population as threatened, regardless of the species status elsewhere in its range. In situations where we have experimental populations, certain section 9 prohibitions (*e.g.*, harm, harass, capture) that apply to endangered and threatened species may no longer apply, and a special rule can be developed that contains the prohibitions and exceptions necessary and appropriate to conserve that species. This flexibility allows us to manage the experimental population in a manner that will ensure that current and future land, water, or air uses and activities will not be unnecessarily restricted and the population can be managed for recovery purposes. Please see the ''Units 2 and 4'' discussion under the ''Exclusion Under Section 4(b)(2) of the Act'' section below for more detailed information on the section 10(j) regulation and process.

(5) *Comment:* This peer reviewer expressed concern that we proposed to exclude the Beaver/North Canadian River in Oklahoma and the Arkansas River in Kansas and was unclear why reintroduction of the Arkansas River shiner could not occur in these units if they were designated as critical habitat. The importance of these units to the conservation of the species would seem to outweigh the benefit of not designating these reaches as critical habitat.

Our Response: We strongly believe that, in order to achieve recovery for the Arkansas River shiner, we would need the flexibility provided for in section 10(j) of the Act to help ensure the success of augmenting and reestablishing Arkansas River Shiner populations in the Beaver/North Canadian River and/or the Arkansas River. Use of section 10(j) is meant to encourage local cooperation through management flexibility. Section 10(j)(2)(C)(ii) of the Act states that critical habitat shall not be designated under the Act for any experimental population determined to be not

essential to the continued existence of a species. In the case of the Arkansas River shiner, the flexibility gained by establishment of an experimental population through section 10(j) would be of little value if a designation of critical habitat overlaps it. This is because Federal agencies would still be required to consult with us on any actions that may adversely modify critical habitat. In effect, the flexibility gained from section 10(j) would be rendered useless by the designation of critical habitat.

If, during the recovery planning process we determine a revision is warranted, we can amend critical habitat at that time. Provided such a revision is warranted, and funding available, we could propose revised critical habitat and consider any new information provided, both on additional areas to be considered in the revision as well as areas included in the current designation as essential (i.e., excluded and designated areas). Based on the best available science at this time, we determine that the areas designated by this rule are sufficient to conserve the species.

(6) *Comment:* This peer reviewer stated the proposal did a good job referencing the existing literature and outlining the factors limiting the existence of the Arkansas River shiner. However, he expressed concern that much was still unknown and management actions should proceed with caution. What was clear was the critical importance of habitats in the Arkansas and Beaver/North Canadian Rivers for recovery of the species.

Our Response: We have based this proposal on the best scientific and commercial data available but we agree that many details of Arkansas River shiner life history and habitat requirements are still unknown. Our intent is to implement conservation actions for the species in a manner consistent with the available information but which avoids or minimizes the risk to the species. We agree that these habitats are important for recovery of the species and intend to address appropriate conservation of these habitats during the recovery planning process. However, based on the current information, which indicates these two reaches are unoccupied, we have excluded these areas from the final critical habitat designation.

Comments Related to Previous Federal Actions, the Act, and Implementing Regulations

(7) *Comment:* Designating critical habitat prior to development of a recovery plan for the Arkansas River shiner is inappropriate. The public should be allowed to participate in developing a recovery plan for the species, which would be far more effective than designating critical habitat.

Our Response: We agree that, in an ideal situation, we would have a recovery plan in place for any species prior to designating its critical habitat. In that way, the public would have input into the recovery process, and enough would be known about the species to help determine what areas should be designated as critical habitat. However, the Act requires that critical habitat be designated concurrently with a species' listing or, in some circumstances, within one year of a final listing determination. Unfortunately, the Act does not allow for a delay in critical habitat designation until after a recovery plan is in place.

It is important to note that the recovery planning process, which will allow the involvement of affected individuals; local, state, and tribal governments; and others interested in conservation of the Arkansas River shiner, will result in development of specific recovery actions to be implemented on behalf of the species' conservation. Although implementation is not mandatory, the recovery plan provides a ''blueprint'' for achieving recovery and substantially influences how the species is managed under the Act. Thus, although critical habitat is usually designated prior to recovery plan development, its on-the-ground recovery implementation can be influenced by a final recovery plan.

(8) *Comment:* Critical habitat designation is not necessary and provides little conservation benefit or protection to the species.

Our Response: The Act under section 4(a)(3) requires that critical habitat be designated for species listed as threatened or endangered unless such designation would not be prudent. We believe such designation would be prudent for the Arkansas River shiner. Critical habitat designation is only one facet of species conservation. The protections afforded listed species under sections 7 and 9 are substantial, and a critical habitat designation usually adds only marginal protections above those already afforded listed species. Partnerships with individual landowners and a variety of stakeholders can provide a much greater conservation benefit for listed species, as they offer positive management actions that cannot be achieved through a critical habitat designation. We agree that designation of critical habitat often provides little or no additional benefit to species conservation (see ''Designation of Critical Habitat Provides Little Additional Protection to Species'').

(9) *Comment:* The Service has underestimated the degree to which federal actions will trigger section 7 consultation for actions that occur within or near critical habitat.

Our Response: We disagree. As described in the ''Section 7 Consultation'' section below, consultation would occur when the action agency determines that activities they sponsor, fund, or authorize may affect federally listed species or are likely to destroy or adversely modify their critical habitat. The threshold for triggering section 7 consultation is clear. During the informal section 7 consultation process, we will assist Federal agencies in making a determination if their action is likely to affect critical habitat. However, the Federal Action Agency has the responsibility to make that determination, not us.

(10) *Comment:* The comment period for the NEPA document and economic analysis were inadequate to allow the public to understand and comment meaningfully and should be extended.

Our Response: The notice of availability for the NEPA document and economic analysis published August 1, 2005. We accepted comments on these two documents, in addition to the proposed rule, for 30 days ending on August 31, 2005. We believe this public comment period provided adequate opportunity for public comment. In addition, due to the large scope of this rule and in order to comply with our September 30, 2005, court ordered date for completion of the final rule it would not have been possible to extend the comment period beyond August 31, 2005.

Comments Related to Critical Habitat, Primary Constituent Elements, and Methodology

(11) *Comment:* The 300-foot lateral extent or ''buffer zone'' is excessive and unnecessary.

Our Response: Critical habitat includes the area of bankfull width plus 300 feet on either side of the banks. This is not for the purpose of creating a ''buffer zone.'' Rather, it defines the lateral extent of those areas we believe contain the features that are essential to the species' conservation. Although the Arkansas River shiner cannot be found in the riparian areas when they are dry, these areas are sometimes flooded and provide habitat during high-water periods. In addition, the riparian vegetation within these lateral areas

provides seeds and insects eaten by Arkansas River shiners, and thus contains a primary constituent element of critical habitat.

The riparian zone also provides an array of important watershed functions that directly benefit plains fishes. Vegetation in the corridor shades the stream, stabilizes banks, and provides organic litter and large woody debris. The riparian zone stores sediment, recycles nutrients and chemicals, mediates stream hydraulics, and controls microclimate. Healthy riparian zones help ensure water quality essential to aquatic life. Conversely, human activities in the riparian zone can harm stream function and fishes by directly and indirectly interfering with these important functions. Because the riparian corridor is particularly susceptible to degradation, we concluded that the adjacent riparian corridor would require special management consideration and therefore was appropriate for inclusion in critical habitat.

Comments Related to Site-Specific Areas

The following comments and responses involve issues related to the inclusion or exclusion of specific stream reaches or our methods for selecting appropriate areas for designation as critical habitat.

(12) *Comment:* Several commenters expressed support for exclusion of various units or portions of those units. One supported exclusion of the City of Wichita from Unit 4, four supported exclusion of the entirety of Unit 4, four supported exclusion of Units 2 and 4, and 141 supported exclusion of Unit 2 alone. Others (15) expressed support for exclusion of all or a portion of Unit 1a, including the segment within the upper reaches of Lake Meredith.

Our Response: Areas in Unit 1a, Unit 2, and Unit 4 are excluded from critical habitat (see ''Exclusion Under Section 4(b)(2) of the Act'' section below for a detailed discussion).

(13) *Comment:* Several commenters expressed support for exclusion of Units 1b and 3 or exclusion of all of the units from the designation.

Our Response: All proposed areas in Unit 1b and Unit 3, with the exception of a 204 km (127 mi) long reach of Unit 1b, were not excluded from critical habitat (see ''Exclusion Under Section 4(b)(2) of the Act'' section below for a detailed discussion). Units 1b and 3 contain all of the primary constituent elements and require special management. We cited streamflow alteration, introductions of nonnative species and water quality degradation as some of the threats in those areas that require special management considerations.

(14) *Comment:* Several commenters expressed concern regarding the designation of Unit 3. One stated the Cimarron River does not support a viable population, two stated the unit is unoccupied by the Arkansas River shiner, four stated the portion of Unit 3 in Kansas is unoccupied, and five stated the Cimarron River does not support the primary constituent elements.

Our Response: The Cimarron River is included in the designation because it contains all of the primary constituent elements and is occupied by the species. As stated in this final rule, 16 specimens of the Arkansas River shiner were reported captured from the Cimarron River between 1985 and 1992. In August of 2004, eight Arkansas River shiners were collected near Guthrie, Oklahoma, by SWCA Environmental Consultants (Stuart Leon, U.S. Fish and Wildlife Service, in litt. 2004). While this population is undoubtedly small and is by no means secure, it continues to persist over time. Because the Arkansas River shiner has a maximum life span of about 3 years, with the majority not surviving past two years of age, it is doubtful that the species would continue to be collected if a small population did not persist. We cannot reasonably conclude the species is extirpated from any portion of the Cimarron River unit based on the continued, although infrequent, observation of the Arkansas River shiner. Failure to record Arkansas River shiner from specific locations in the past several years is generally indicative of low population levels but does not necessarily support a declaration of extirpation from the entire stream. Documentation of small populations is very difficult and often results in false declarations of extirpation (Mayden and Kuhajda 1996). At the least, this illustrates the need for caution in concluding that a population has been extirpated. Fish, particularly small species, are often very difficult to locate when population levels are very low.

We agree that the Cimarron River and many of the other rivers and streams historically occupied by the Arkansas River shiner have portions that dry either seasonally, during drought conditions, or for other natural reasons. This species is adapted to this phenomenon and often persists in isolated pools and tributary refugia only to recolonize these dewatered areas once flow resumes. If sufficient areas of flow persist, and if all other habitat requirements are met, the stream is suitable for the species whether or not there is flow throughout all areas at all times. Consequently, the absence of the Arkansas River shiner from an area during certain periods or under certain conditions does not necessarily demonstrate that they are not present at other times. As long as a permanent barrier does not exist, Arkansas River shiners move fairly long distances within these streams.

Comments Related to National Environmental Policy Act (NEPA) Compliance

(15) *Comment:* An Environmental Assessment (EA) is not adequate for an action of this magnitude; instead an Environmental Impact Statement (EIS) is required.

Our Response: Our EA considered a no-action alternative and several action alternatives and discussed the adverse and beneficial environmental impacts of each. We determined through the EA that the overall environmental effects of this action are insignificant. An EIS is required only if we find that the proposed action is expected to have a significant impact on the human environment. Based on our analysis and comments received from the public, we prepared a final EA and made a Finding of No Significant Impact (FONSI), negating the need for preparation of an EIS. We believe our EA was consistent with the spirit and intent of NEPA. The final EA, FONSI, and final economic analysis provide our rationale for determining that critical habitat designation would not have a significant effect on the human environment. Those documents are available for public review (see **ADDRESSES** section).

Comments Related to Section 7 Consultation

(16) *Comment:* Consultation will result in project-related delays.

Our *Response:* As described in the ''Section 7 Consultation'' section below, consultation would occur when the action agency determines that activities they permit, fund, authorize, or undertake may affect federally listed species or destroy or adversely modify their critical habitat. The designation of critical habitat only affects these activities. Absent Federal permitting, funding, or authorization, critical habitat designation on private (non-Federal) lands would not obligate or trigger any consultation requirement for private (non-Federal) actions on private land.

Section 3 of the draft economic analysis addressed the administrative costs associated with section 7 consultation. The duration and complexity of any particular section 7

consultation can be influenced by a number of factors and may require substantial administrative effort on the part of all participants. Generally most delays related to project implementation can be avoided or minimized if consultation is initiated early during the project planning process. The Act specifies timeframes under which consultations are to be completed and we strive to meet those timeframes.

Comments Related to Biological Concerns

The following comments and responses involve issues related to the biological basis for the designation and status of the Arkansas River shiner.

(17) *Comment:* The Arkansas River shiner does not require the protection of the Act.

Our Response: The Arkansas River Basin population of the Arkansas River shiner was listed as threatened in 1998. Additional information on the biology and status of this species and our rationale for the listing can be found in the November 23, 1998, final listing determination (63 FR 64772).

(18) *Comment:* Current soil conservation practices keep runoff from entering the river and such measures would likely preclude existence of Arkansas River shiner habitat.

Our Response: Some soil conservation practices, such as terracing, are very effective at reducing run-off and may contribute to overall declines in peak discharge during rainfall events. However many conservation practices, such as construction of terraces, shelterbelts, grassed waterways, and certain vegetative plantings, are specifically designed to minimize soil erosion and control sedimentation. Without these practices in place, soil erosion and ensuing increased siltation would likely occur in rivers and streams of the Arkansas River basin. We do not believe that construction of terraces, shelterbelts, grassed waterways, and other vegetative plantings for conservation are likely to significantly impact habitat or threaten survival of the Arkansas River shiner.

(19) *Comment:* Grazing by livestock will not have an adverse impact on the Arkansas River shiner, at least no more significant than grazing by other ungulates such as deer or bison.

Our Response: As stated in the final listing determination (63 FR 64772), we believe well-managed, free-range livestock grazing is compatible with viable Arkansas River shiner populations and will not cause significant degradation of the riparian zone. In fact, low to moderate grazing and seasonal or rotational grazing practices are compatible with many natural resource objectives.

(20) *Comment:* The Arkansas River shiner has no lasting value and should be allowed to become extinct.

Our Response: Congress, in section 2 of the Act (Findings, Purposes, and Policy), found that numerous species of fish, wildlife, and plants had become extinct or were in danger of, or, threatened with, extinction due to a lack of concern for their conservation. Furthermore, Congress found that these species of fish, wildlife, and plants are intrinsically valuable to the nation and its people for reasons of aesthetic, ecological, educational, historical, recreational, and scientific value (section 2(a)(3)). These findings are the basis of the Act.

A variety of opinions likely exist as to a particular species' contribution to society. We believe that conserving all species of wildlife has a positive effect on society. Society, like the Arkansas River shiner, depends upon reliable supplies of clean water. Conserving water resources will help to provide a necessary resource for future generations of people and maintain a healthy aquatic ecosystem for fish and wildlife. As the health of ecosystems declines, the number of species inhabiting those systems decline. In general, the presence of rare and declining species is very often a good indicator of failing ecosystem health. It would be contrary to the Act and our mission to allow the Arkansas River shiner to become extinct without undertaking all reasonable conservation actions.

(21) *Comment:* The Arkansas River shiner and Red River shiner (Notropis bairdi) are not distinct species.

Our Response: We disagree. While the morphological characteristics, life history, and phylogeny of the two fishes are similar, all of the published scientific literature concludes the two fishes are separate and taxonomically distinct. For example, the scholarly publications on the fishes of Oklahoma (Miller and Robison 1973), Arkansas (Robison and Buchanan 1988), and Kansas (Cross 1967) all show the two fishes to be distinct species. Other scientific publications such as Felley and Cothran (1981), Marshall (1978), Cross *et al.* (1983), and Gilbert (1980) also consider these fishes to be separate, distinct taxa. Hubbs and Ortenburger (1929) provided the first description of both the Arkansas River shiner and the Red River shiner. They considered both to be separate and taxonomically distinct. Most recently, Mayden (1989) thoroughly examined the phylogenetic relationships of all North American minnows. He concluded that the two species are valid and distinct. We are not aware of any studies, scholarly or otherwise, which suggest these two species are not separate and taxonomically distinct.

(22) *Comment:* Several commenters provided additional information or confirmed the existence of numerous threats to the Arkansas River shiner including: impoundments, predation, introduction of Red River shiner, water quality degradation, and declining stream flows.

Our Response: We agree that these and other threats have influenced the distribution and abundance of the Arkansas River shiner. Please refer to information in this rule or refer to the ''Summary of Factors Affecting the Species'' section of our final listing determination (63 FR 64772).

Comments Related to the Effects of Designation

The following comments and responses involve issues related to the effects of critical habitat designation on land management or other activities.

(23) *Comment:* We received many comments from individuals expressing their concern that critical habitat designation will infringe on their rights as private property owners and that the designation could result in a reduction in their property's value.

Our Response: Only activities taking place on private property having some sort of Federal nexus (*e.g.*, Federal funding, permitting, authorization) could potentially be affected. Our experience has shown that the majority of such activities have rarely triggered formal section 7 consultation. Please see our economic analysis for further information about economic effects of this designation.

(24) *Comment:* Numerous commenters expressed concern that the designation of critical habitat will restrict access to the affected areas, impose land use restrictions, force fencing of the riparian zone, further regulate the oil and gas industry, or restrict off-road and recreational vehicle use.

Our Response: Individuals, organizations, States, local and tribal governments, and other non-Federal entities could potentially be affected by the designation of critical habitat only if their actions occur on Federal lands, require a Federal permit, license, or other authorization, or involve Federal funding and the action has the potential to affect the species or its critical habitat. In this instance, Federal agencies are required to enter into section 7 consultation with us. Effects of

the designation on projects with a Federal nexus are explained in the ''Effect of Critical Habitat Designation'' section. Designation of critical habitat does not prescribe specific management actions but does serve to identify areas that are in need of special management considerations.

(25) *Comment:* Off-road vehicle (ORV) use is not affecting the Arkansas River shiner.

Our Response: Specific information on this issue is lacking, however it is possible that heavy recreation use may adversely impact the stream and habitat for the Arkansas River shiner, particularly during periods of low flow. Recreational activities involving a Federal nexus are rare within any of the units and occur primarily within Unit 1a. The entirety of Unit 1a, including the Rosita ORV area, has been excluded from the final critical habitat designation, thus should not be influenced by the designation of critical habitat. However, the National Park Service is contemplating restrictions within the Rosita ORV area to prevent potential adverse impacts to the Arkansas River shiner under the jeopardy standard. The primary adverse impacts involve use of the river channel during the spawning season and during summertime low-flow periods when fish are concentrated in isolated pools. The Rosita ORV area is considered to be occupied by the Arkansas River shiner; therefore, this restriction is being considered regardless of the critical habitat designation.

(26) *Comment:* The designation of critical habitat will result in control of, or ''taking'' of, private property in violation of the rights granted under the Fifth and Tenth Amendments to the U.S. Constitution.

Our Response: The mere promulgation of a regulation, like the enactment of a statute, does not take private property unless the regulation on its face denies the property owners all economically beneficial or productive use of their land (*Agins* v. *City of Tiburon*, 447 U.S. 255, 260–263 (1980); *Hodel* v. *Virginia Surface Mining and Reclamation Ass'n*, 452 U.S. 264, 195 (1981); *Lucas* v. *South Carolina Coastal Council*, 505 U.S. 1003, 1014 (1992)). The Act does not automatically restrict all uses of critical habitat, but only imposes requirements under section 7(a)(2) on Federal agency actions that may result in destruction or adverse modification of designated critical habitat. This requirement does not apply to private actions that do not need Federal approvals, permits, or funding. Furthermore, as discussed above, if a biological opinion concludes that a proposed action is likely to result in destruction or modification of critical habitat, we are required to suggest reasonable and prudent alternatives. In accordance with Executive Order 12630, we conclude that this designation does not have significant takings implications (see ''Required Determinations'' section below).

Comments Related to Recovery

The following comments and responses involve issues related to recovery and recovery planning for the Arkansas River shiner. Although not relevant to the designation of critical habitat, we chose to address some of the comments related to this issue.

(27) *Comment:* Some comments expressed concern regarding implementation of unfavorable recovery actions or noted that the details, costs, and recovery goals of the recovery program have not been provided. Others mentioned specific tasks, such as further research, captive propagation, control of salt cedar (*Tamarix* spp.), stream flow restoration, control of nonnative fishes, and restoration of the Arkansas River shiner to unoccupied habitat, which we might implement during recovery.

Our Response: On July 1, 1994, the Secretaries of the Interior and Commerce set forth an interagency policy to minimize social and economic impacts of the Act consistent with timely recovery of listed species (59 FR 34272). Consistent with this policy, we intend to work closely with stakeholders throughout the Arkansas River basin regarding development of recovery actions for the Arkansas River shiner and will strive to balance implementation of those recovery actions with social and economic concerns.

The ultimate purpose of listing a species as threatened or endangered under the Act is to recover the species to the point at which it no longer needs the Act's protections. The Act mandates the conservation of listed species through different mechanisms. Section 4(f) of the Act authorizes us to develop and implement recovery plans for listed species. A recovery plan delineates reasonable actions which are believed to be required to recover and delist the species, and which may include measures specifically mentioned during the comment period. Recovery plans do not, of themselves, commit personnel or funds nor obligate an agency, entity, or person to implement the various tasks listed in the plan. Recovery plans serve to bring together Federal, State, and private stakeholders in the development and implementation of conservation actions for the species, by providing a framework to identify site specific management actions necessary to achieve conservation and survival of the species, set recovery priorities, and estimate costs of various tasks necessary to accomplish the goals of the plan. One of the main emphases of recovery plans is to address threats affecting the survival of the species and to remove or minimize their influence. However, we have no intention of restoring these ecosystems to pristine conditions.

In the ''Available Conservation Measures'' section of the final listing determination, we listed four general conservation measures that could be implemented to help conserve the Arkansas River shiner. While this list does not constitute the entire scope of a recovery plan as discussed in the provisions of section 4(f) of the Act, it does provide an indication of measures we intend to investigate during preparation of a recovery plan.

Future conservation and recovery of the shiner will emphasize remaining aggregations and habitats in the Canadian, Cimarron, and Beaver\North Canadian Rivers. We also intend to address the implications of groundwater withdrawals and diversions of surface water during the recovery process. Generally, we will support and encourage the States in their efforts to increase irrigation efficiency and improve conservation of groundwater sources in the High Plains. Conservation of the High Plains aquifer, and the resulting benefits to streamflow within the Arkansas River basin, will not occur without the participation of the States. We believe voluntary conservation of the groundwater resource will be more effective in recovery efforts for the Arkansas River shiner than restricting or otherwise regulating withdrawals.

Introductions of non-indigenous species, such as the Red River shiner, will be closely monitored. Where needed, we will develop and implement measures to minimize or eliminate the accidental or intentional release of these species. Studies will be initiated to determine the feasibility of, and techniques for, eradicating or controlling Red River shiners in the Cimarron River. If control or eradication is feasible, a control program will likely be implemented.

We have already begun steps to evaluate and study captive propagation of the Arkansas River shiner using the non-native Pecos River population. And we have begun participating in a joint effort to investigate the feasibility of controlling salt cedar as a means of enhancing stream flow in western portions of the basin. The State of Texas

has also initiated similar efforts in the Canadian River. We believe such efforts will be beneficial to recovery of the species.

At the time of final listing, we prepared a recovery outline for the shiner and have begun to implement some preliminary recovery tasks identified in the outline. Recovery outlines are brief internal planning documents that are prepared within 60 days after the date of publication of the final rule. These documents are intended to direct recovery efforts pending completion of the recovery plan. We have not, to this point, completed or even begun drafting a recovery plan. Considering the first two sections of a recovery plan present information on the biology, life history, and threats to the species, the final listing determination and this document will be used in the preparation of these sections. As such, much of the work required to draft a recovery plan has been completed. However, an implementation schedule, which details estimates of the time required to complete identified tasks and costs to carry out those measures needed to achieve the plan's goal is far from complete. We hope to utilize the expertise of the many stakeholders in the completion of this section of the plan. Once a recovery plan for the Arkansas River shiner has been developed, the plan will be available for public review and comment prior to adoption.

Comments Related to Economic Impacts and Analysis—General Comments on Methodology

(28) *Comment:* A comment offers that the Draft Economic Analysis (DEA) should present results at a more disaggregated spatial level than watersheds to facilitate land exclusions by the Secretary of the Interior. The aggregated level at which impacts are presented fails to pinpoint specific areas of high economic impact.

Our Response: We believe that the level of resolution of impact estimates presented in the DEA is appropriate for this rulemaking. The Service identified five critical habitat units, which are subdivided into 18 watersheds. The watershed level is an appropriate geographic boundary for disaggregating economic impacts associated with protecting aquatic species, because it provides important information about the linkage between upstream economic activities and downstream impacts. As described in Appendix C, the DEA uses the smallest delineation of a watershed provided consistently across all States by the U.S. Geological Survey (i.e., watersheds named using an eight-digit hydrologic unit code, or ''HUC''). In addition, the eight-digit HUC is currently used by U.S. Environmental Protection Agency (EPA) and the Service as it considers which Concentrated Animal Feeding Operations (CAFOs) will be required to take additional action to protect the shiner. The State of Oklahoma has mapped smaller watersheds, naming them using 11-digit HUCs. If the analysis were to subdivide shiner habitat by 11-digit HUCs in Oklahoma, the analysis would mistakenly exclude impacts to CAFOs in 11-digit HUCs that do not intersect habitat. This erroneous exclusion of potential costs would also occur if some other, smaller geographic boundaries such as census tracts, were used. Finally, economic activity within this habitat is relatively homogenous, and much of the data used to project future economic activity is not detailed enough to allow for further, meaningful disaggregation. As a result, presentation of costs at a more disaggregated spatial level is unlikely to pinpoint smaller areas bearing disproportionate costs.

(29) *Comment:* One comment states that most oil and gas operators are not familiar with references to watersheds provided in Exhibits 5–1 and 5–2, and a list or map of counties associated with each watershed would be helpful to clarify what areas are included and which wells are encompassed.

Our Response: The information requested is available in Exhibit ES–2 of the DEA, which provides a map overlaying the watersheds on county and State boundaries in addition to the names of each.

(30) *Comment:* One commenter stated that that the DEA neglects to consider the role of risk and uncertainty about future impacts. Because future scenarios are difficult to predict, the commenter asserts that the DEA should acknowledge the effect of altering assumptions.

Our Response: The DEA provides extensive discussion of the likelihood and uncertainty about future impacts and the bias associated with key assumptions. For example, discussion of factors influencing the frequency and impact of administrative efforts is discussed in paragraph 107. The potential for impacts at Lake Meredith, other Canadian River Municipal Water Authority (CRMWA) projects, and Ute Dam, and uncertainty surrounding the quantification of costs, is discussed in paragraphs 119, 121, and 126 through 128. Key assumptions, probability of impact, and areas of uncertainty in the estimation of impacts to the oil and gas industry are discussed in paragraphs 148 through 149, 152 through 157, 162, 165, 171, 175, and 178. The likelihood and uncertainty about future impacts to CAFOs, and the effect of key assumptions are discussed in paragraphs 181, 190 through 193, and 196 through 199. The effect of major assumptions and areas of uncertainty in estimating other agricultural impacts are described in paragraphs 202 through 203, 207 through 209, 212 through 213, 217, 222, 227, 229, 233, 235 through 236, 240, 244 through 247, and 252 through 253. In the analysis of transportation-related impacts, paragraph 255 provides information about the uncertainty associated with estimated impacts. Issues related to the estimation of impacts to recreators are discussed in paragraphs 273, 275, 278, and 279. Paragraphs 283 through 285 describe the uncertainty associated with predicting impacts to utility projects. Uncertainty regarding other types of effects, such as impacts to exotic plant control, wildlife management areas, real estate development activities, and the development of management plans is discussed in paragraphs 286 through 287, 293, 295, and 297 through 298.

(31) *Comment:* One comment states that the annualizing of total cost in the CAFO section of the DEA is not consistent with the annualization method applied in other sections of the DEA.

Our Response: We disagree. The DEA uses a consistent method to calculate annualized costs for each category of impact, as described in note (a) of Exhibit ES–4b and ES–4c.

(32) *Comment:* A comment notes that in estimating the impact to row cropping activities, the DEA considers two alternate scenarios. The projected total costs for row-cropping are presented as the sum of the two scenarios, while it's more likely that either one or the other will occur.

Our Response: We provide the following clarification. Paragraph 15 notes: ''The analysis assumes that farmers may discontinue participation in Federal farm assistance programs and retire cropland/pastureland in proposed habitat from productive economic activity, but that a choice of one option or the other is more likely.'' In Exhibits ES–4a through ES–4c, the total lower bound impact estimate assumes neither of these scenarios takes place, while the high-end impact estimate assumes that they both occur. It is likely that the actual level of impact that occurs equals an amount between these two estimates, consistent with the statement in paragraph 15.

We acknowledge that the text in paragraph 15 of the Executive Summary

is incorrect, specifically under the fifth bullet point in which the DEA states: ''Therefore, the analysis does not sum costs of agricultural land retirement and non-participation in Federal farm programs.'' In fact, as stated above, the DEA does sum the costs of agricultural land retirement and non-participation in Federal farm programs for the high-end impact estimate in Exhibits ES–4a through ES–4c.

(33) *Comment:* One comment on the DEA states that the impact to water supplies and wastewater treatment in communities along these rivers is not completely addressed. The additional cost of upgrading wastewater treatment is $1,000,000 per 1,000 people. It lists 40 communities in Units 1b and 3 that would be directly impacted.

Our Response: Impacts of water management activities at dams are estimated in Section 4 of the DEA. Impacts of potential reductions in groundwater withdrawals are estimated in Section 7. The DEA estimates the impacts of wastewater management associated with CAFOs in Section 6. The impacts to small entities associated with regulating water supplies and wastewater treatment is estimated separately in Appendix A.

In addition, paragraph 282 of the DEA explains that since the shiner's listing, 77 utility-related consultations, which include projects related to wastewater treatment facility management and construction and construction of water and transmission lines, have occurred. Only eight of the consultations resulted in project modifications. Interviews with a regional engineering firm typically involved with such projects revealed that the costs associated with the project modifications were comparable to costs for the originally-designed project. Paragraphs 283 through 285 forecast the rate of future consultations for utility projects, discuss the uncertainty associated with predicting future costs for large projects, and provide a case study of potential costs for the Norman, Oklahoma Wastewater Treatment Division. This represents the best available information at this time.

(34) *Comment:* One commenter stated that the assumption that the impact to CAFO operations would be passed on to the consumer is incorrect, because cattle owners don't price the cattle but take whatever they can get for them.

Our Response: We agree with this comment. The DEA does not assume that costs are passed on to the consumer. It assumes that compliance costs are borne entirely by the CAFO operators.

(35) *Comment:* A comment states that critical habitat designation has a negative impact on the value of properties within the boundaries of the designation, regardless of whether any future regulatory action is taken by the Service in connection with the activities on those properties.

Our Response: As stated in paragraph 40 of the DEA, we agree that critical habitat designation may stigmatize properties, resulting in a decrease in property value. However, empirical data measuring the difference in property values before and after critical habitat designation in this region are not available.

Comments Related to Economic Impacts and Analysis—Clarification of Costs Attributed to Particular Consultations Or Actions

(36) *Comment:* A comment states that the DEA projects a formal consultation if the CRMWA expands its wellfield but does not make clear the costs associated with this potential consultation.

Our Response: As shown in Exhibit 3–5, the analysis assumes that the Bureau of Reclamation will undergo a formal section 7 consultation on the potential development of its wellfields. The range of administrative costs of a typical section 7 consultation are presented in Exhibit 3–1 and are applied to this project. Paragraph 120 provides information about the general costs of the wellfield project. It also notes that data to estimate the incremental cost of pipeline placement related to shiner protection were requested but not received.

(37) *Comment:* A comment notes that costs associated with consultations for brush control are not clear.

Our Response: Exotic plant control activities are discussed in Section 9.3 of the DEA; associated administrative costs are discussed in Section 3 of the report at paragraph 103 and Exhibit 3–5. Formal consultation on exotic plant control activities in Texas is anticipated. As shown in Exhibit 3–5, the costs of these consultations between the National Resources Conservation Service (NRCS) and the Service are included in future administrative costs related to shiner conservation activities and spread across all watersheds in Texas that contain shiner habitat. As stated in paragraph 286, the DEA does not estimate project modification costs associated with exotic plant control for two reasons: (1) these activities are generally not undertaken specifically for the shiner; and (2) because exotic plant control generally benefits the species, shiner-specific project modifications are typically not required by the Service. Therefore, the DEA limits future impacts to exotic plant control activities to administrative costs only.

(38) *Comment:* One comment states that the economic impact analysis references the potential for stormwater discharge permits to trigger consultation with the Service on every proposed oil and gas location. The comment requests clarification of if or how this information was used in the cost impact analysis.

Our Response: As described in paragraph 148, the DEA assumes a greater number of oil and gas development wells will be subject to consultation under the new National Pollutant Discharge Elimination System (NPDES) permit regulations. Project modification costs associated with oil and gas well development activities are estimated in Section 5 of the DEA and summarized in paragraph 162. Administrative costs of consultation associated with oil and gas well development activities are estimated in Section 3 of the DEA and summarized in paragraph 106 and Exhibit 3–9.

(39) *Comment:* A comment letter requested that the DEA explain what is included in the annualized costs presented in Exhibits 5–1 and 5–2.

Our Response: Exhibits 5–1 and 5–2 summarize impacts to oil and gas well development and pipeline activity that are explained in greater detail later in Section 5 of the DEA. Detailed information about the number of projects affected, potential types of project modifications, and associated costs are presented in paragraphs 143 through 157, 161 through 171, and 174 through 178.

(40) *Comment:* Several comments state that the DEA does not clearly identify and outline assumptions, uncertainties, scenarios considered, and best management practices required along with the cost for each requirement used in the cost impact scenarios in the analysis of impacts to the oil and gas industry. They suggest that the DEA clarify in Exhibits 5–4, 5–6, 5–8, 5–9, and 5–11 the cost associated with the highlighted project modifications and which modifications were used in the cost impact analysis.

Our Response: Key assumptions, probability of impact, and areas of uncertainty in the estimation of impacts to the oil and gas industry are discussed in paragraphs 148 through 149, 152 through 157, 162, 165, 171, 175, and 178. However, for clarification:

The project modifications described qualitatively in Exhibit 5–4 summarize available historical information about the types of project modifications requested of oil and gas drilling projects

by the Service's Ecological Services Field Office in Tulsa, Oklahoma. Based on conversations with the Service and review of information provided by the Department of Energy (DOE), costs associated with the modifications that are most likely to be required—directional drilling and erosion control measures—are provided in Exhibit 5–5. Exhibit 5–6 summarizes the results of the analysis applying project modification costs provided in Exhibit 5–5 to past oil and gas well development consultations that considered the shiner. Exhibit 5–8 applies these same costs (Exhibit 5–5) to forecasted oil and gas well development in shiner habitat, signified by the column labeled ''Total Potential Wells in CHD (critical habitat designation) (20 years).'' Note that based on new information provided in public comment, the unit cost estimates provided in Exhibit 5–5 have been revised and impacts to this industry are recalculated. These revised estimates flow through Exhibits 5–6 and 5–8 in the final economic analysis.

Exhibit 5–9 provides historical information about the types of project modification requested in Oklahoma for oil and gas pipeline construction and maintenance activities. Exhibit 5–10 provides the unit cost estimates for cost of the project modifications most likely to be requested for future projects. Exhibit 5–11 summarizes the results of the analysis applying pipeline project modification costs of approximately $17,000 to $22,000 as provided in Exhibit 5–10 to past pipeline consultations.

(41) *Comment:* One comment states that based on Exhibit 5–10, it does not appear that consideration was given to consultation costs, clearance under the Act, installation of best management practices, loss of a project, project delays, and the delay of production to market for pipeline projects.

Our Response: Consultation costs and clearance under the Act for pipeline activity are captured in Section 3 of the DEA. No information was provided during industry interviews or in public comment about shiner-related best-management practices (BMPs) on pipeline projects aside from the setback requirement described in Exhibit 5–10. Lacking data, we are unable to estimate costs associated with delay at this time.

(42) *Comment:* One commenter requested the DEA clarify what BMPs for oil and gas drilling include and what the associated costs are. In addition, the comment asserts the DEA cost estimate for soil erosion is low and that implementing basic BMPs may cost $3,500 per day for one to two days, and could be greater depending on location.

Our Response: We acknowledge that Exhibit 5–5 might be confusing to the commenter, because it suggests that BMPs other than soil erosion control have been considered in the cost analysis. In fact, the BMPs included in the cost analysis of potential project modification costs for oil and gas well development activities are limited to soil erosion control. We appreciate the submission by the commenter of more accurate data for soil erosion costs, and have incorporated this information into our revised impact estimates.

(43) *Comment:* One commenter stated that the Service needs to examine the economic impact to an individual grower within the proposed critical habitat designation.

Our Response: Underlying all of the impacts measured in the DEA are individual impacts to farmers. In particular, paragraphs 302 through 308 and 318 through 323 provide some information about the financial resources of small farmers and potential impacts to these entities. However, the scope of this analysis does not allow for complete disaggregation of impacts to every farming entity.

Comments Related to Economic Impacts and Analysis—Potential Impacts on Groundwater Withdrawals

(44) *Comment:* Several comments expressed concern that while the DEA provides some information on the value of groundwater in shiner habitat, it excludes the potential economic impact of restricting groundwater withdrawals from the analysis. One comment states that these impacts are excluded on the grounds that there is no Federal nexus for groundwater pumping by private entities, and it would be difficult for the Service to assert that individual users were violating the Act's ''take'' prohibitions. The comment notes that, in the future, it is possible for groundwater withdrawals to be subject to consultation due, for example, to new or revised NPDES permits or other Federal programs, as well as other regulatory actions to curtail groundwater withdrawals for the benefit of the shiner.

Our Response: The DEA acknowledges in paragraphs 208 and 245 the significant role groundwater plays in the economies of counties that contain shiner habitat, and the possibility that groundwater pumping may be limited where pumping leads to dewatering of streams. However, the DEA does not base the treatment of potential impacts to groundwater solely on the absence of a Federal nexus and the difficulty in attributing ''take'' on an individual groundwater pumper. Instead, the DEA also recognizes in paragraph 246 that data required to conduct such an analysis are not available. These data are: the conjunctive characteristics of surface and groundwater; the level of pumping that would allow for recovery of historic groundwater levels; and the geographic area within which users would be required to reduce pumping. Additional data that would be necessary to complete this type of analysis and that are currently unavailable include a minimum streamflow for the shiner, information on groundwater use patterns of all impacted groundwater users, and the specific quantities of water that would need to be withheld from each water user in order to reach the minimum streamflow. Overall, the hydrologic relationships between groundwater pumping and the quality of habitat for the shiner are not defined, which precludes the analysis from considering how much, if any, reduction in groundwater pumping would be required to protect the species or its habitat.

Due to limitations in data availability, the DEA utilizes available data and simplifying assumptions to bound the potential magnitude of impacts to groundwater pumping from shiner conservation activities. Paragraph 247 discusses the methodology and data used in order to estimate the total value of groundwater to potentially affected users. The resulting implied values of groundwater presented in Exhibit 7–21 serve as an upper-bound estimate of potential impacts to groundwater users for the scenario in which users halt pumping altogether and convert irrigated land to non-irrigated uses. These implied values, are not, however, included in the aggregate cost estimates presented in the Executive Summary of the report given the highly speculative nature of the vehicles through which groundwater users may be impacted and the significant uncertainty regarding the potential magnitude of pumping restrictions discussed in the previous paragraph.

(45) *Comment:* A comment provided states that, in calculating the value of groundwater resources, the DEA considers only crop irrigation and not its use in other industries and for residential consumption.

Our Response: In determining the most likely uses of groundwater in the counties that contain shiner habitat, the DEA relies on information contained within Exhibits 2–7 through 2–10. With the exception of Exhibit 2–9, which summarizes water use in Texas counties

that contain shiner habitat for both surface and groundwater combined, the exhibits demonstrate that groundwater is used predominantly for irrigation in Kansas, Oklahoma, and New Mexico. Further, Exhibit 7–19 demonstrates that in these counties, the overwhelming majority of irrigation water in counties that contain shiner habitat and overlay the High Plains Aquifer is drawn from groundwater sources. Given these data, and the predominantly rural, agricultural nature of the region that contains shiner habitat, the analysis limits the valuation of groundwater to its value as capitalized into the value of agricultural lands. To the extent that industrial or residential consumption in cities is affected, this analysis may understate the value of groundwater to these users.

(46) *Comment:* One commenter expressed concern that the rule will affect not only agricultural operations, but also water rights and water use patterns similar to the controversies regarding the Rio Grande silvery minnow and the aquatic species in the Klamath River Basin in Oregon and California.

Our Response: The DEA does not consider the need for water diverters to reduce groundwater and/or surface water use, due to uncertainty regarding the likelihood of such restrictions and data limitations. Estimating these potential impacts requires information on minimum streamflow required to maintain shiner habitat, as well as hydrological data on current and future streamflow, water consumption patterns for specific users; and conjunctive use hydrological data linking specific water users to streamflow in shiner habitat. These data and information on requirements are currently unavailable.

Comments Related to Economic Impacts and Analysis—Estimation of Potential Impacts to CAFOs

(47) *Comment:* One comment noted that the DEA assumes that each CAFO within proposed critical habitat will be required to implement general permit conditions required by the Service but does not consider the impact of more stringent regulatory requirements.

Our Response: As described in paragraphs 189 and 191, all CAFOs are assumed to implement the requirements described in Exhibit 6–3, which are applied in addition to the general permit requirements. In other words, the requirements in Exhibit 6–3 represent measures designed to protect shiner habitat that are more stringent than what is required by the general permit. The analysis applies these requirements to all States and all CAFOs, regardless of the location of the CAFO within the watershed.

(48) *Comment:* Two organizations comment that the DEA considers only costs of project modifications to CAFOs but not the possibility of production effects and/or regional impacts associated with lost revenues and jobs. For example, if acreage devoted to a vegetative buffer is taken out of production, then the requirements would reduce the total CAFO sales revenue and create regional economic impacts. The potential loss of output and accompanying distributional economic impacts should be included in the DEA and have the potential to double or triple impact estimates.

Our Response: To the extent that CAFOs may have to cease or alter operations because of burdensome regulatory costs, reduced revenues may have regional impacts. Paragraphs 302 through 307 discuss the affordability of CAFOs requirements and the potential for these requirements to cause financial stress. Because compliance costs are relatively constant across CAFOs size classes, while revenues are not, the regulation is likely to be the most burdensome for the smallest operations. The analysis predicts that 33 to 67 small CAFOs could experience financial stress; the impact of which could cause these entities to go out of business. This represents approximately 1.5 percent of all small animal feeding operations in Kansas, Oklahoma, and Texas, so regional effects in these States in terms of indirect effects and job losses may exist, but are likely to be small.

In addition, evidence suggests that the national markets for CAFOs products are unlikely to be affected by designation. In 2003, EPA promulgated a final rule revising NPDES and Effluent Limitation Guidelines (ELG) for CAFOs. Among other requirements, the new rule required CAFOs to implement a 100-foot vegetated buffer next to conduits to surface waters. Its economic analysis supporting the proposed rule, which looked at all of the new requirements including the buffer, estimated annual compliance costs two orders of magnitude greater than those estimated for CAFOs as a result of shiner critical habitat designation. EPA conducted a separate partial equilibrium analysis to determine whether market effects would result from the regulation and determined that industry-level changes in production and prices would not be significant for most sectors (*i.e.*, consumer prices were expected to rise by less than one percent for all but the hog sector, where the increase was slightly more than one percent) (68 FR 7248). Although the potential buffer requirements are more stringent in watersheds with shiner critical habitat, the number of CAFOs affected is a fraction of those affected by the NPDES requirements. The EPA analysis suggests that a partial equilibrium analysis of the effects of shiner conservation activities is unlikely to find a significant production effect.

(49) *Comment:* A commenter states that the DEA does not address the potential complexities for CAFOs caused by the confounding effects of reducing or eliminating land application areas for manure, wastewater, and sludge, and reducing the availability of groundwater for production of crops and forage necessary for nutrient utilization.

Our Response: As discussed in paragraphs 246 through 247, whether groundwater pumping by farmers will be affected is difficult to predict. No Federal nexus exists for private groundwater pumping, and it is difficult to link take, as defined by section 9 of the ESA, to individual users. In addition, the quantity of water required for shiner protection is unknown, as no minimum or maximum flow requirements are specified as primary constituent elements (PCEs). To the extent that a CAFO operator reduces or eliminates land application areas and also must reduce groundwater usage, impacts could be compounded. However, data are not available to reasonably estimate the probability and magnitude of impacts under such a scenario.

(50) *Comment:* A commenter states that the DEA does not consider costs associated with CAFO permitting and other regulatory activities that may be required prior to implementation of recommendations made by the Service, such as preparation of permitting documentation, completion of permit applications, meetings with regulatory agencies, and administrative and technical requirements.

Our Response: The DEA assumes that each CAFO within the watersheds analyzed consults with the Service once over the time period of the analysis. The administrative costs of these consultations are described in paragraphs 93 through 99 and included in Exhibit 3–9.

(51) *Comment:* A commenter states that the DEA costs of developing a spill plan include only testing and plan-related costs and not the cost of implementing mitigation measures in the event a leak is detected or a spill occurs.

Our Response: The analysis assumes that CAFOs operators are obligated to

mitigate leaks and spills, regardless of the presence of the shiner or its habitat.

Comments Related to Economic Impacts and Analysis—Estimation of Impacts to Reservoir Operations

(52) *Comment:* One organization comments that the DEA does not estimate costs to Lake Meredith for the modification of reservoir operations to provide instream flows for the shiner. The comment notes that this lack of a quantified estimate is based on the fact that no target flow is established for shiner, uncertainty regarding whether flood control would be halted as a result of any consultation, and a lack of a Federal nexus associated with the operation of Lake Meredith other than for flood control (DEA, footnote 42). The comment also notes that the DEA states that if releases were required to benefit the shiner, the CRMWA member cities may have to find a replacement water supply but does not evaluate the costs of this scenario. The DEA should either analyze the impact of requiring releases for the benefit of the shiner or determine that this is not a possibility.

Our Response: In the absence of a minimum flow requirement for the shiner, it would be highly speculative to quantify any quantity of water required to be released from Lake Meredith. In addition, paragraph 119 states: ''In addition, the analysis notes that critical habitat is not proposed directly downstream of Sanford Dam. The potential for releases from Sanford to augment flow in Unit 1b, a distance of roughly 80 miles from the dam, is unknown.'' Despite the lack of information about specific changes to reservoir operations, the DEA provides an economic valuation of water held at Lake Meredith of $14 million (see paragraph 118). Note that the cost per thousand gallons is $0.51, not $51 as stated in this paragraph (this is a typographical error and does not affect the value estimate).

(53) *Comment:* A comment notes that paragraph 118 of the DEA provides a cost estimate of $51 per thousand gallons of water to CRMWA member cities in Fiscal Year 2001–2002 whereas the correct estimate would be $0.51 per thousand gallons. Further, that time period should not be considered predictive of future costs as it was the first year of operation of the Groundwater Supply Project. Costs to member cities per thousand gallons in 2003–2004 rose to $0.62.

Our Response: As discussed in response to the previous comment, the reported $51 per 1,000 gallons is a typographical error that does not affect the estimate of the cost of water to cities served by the CRMWA. However, using the higher value provided by the commenter of $0.62 per thousand gallons, the value of water delivered to municipalities from Lake Meredith in FY 03–04 is approximately $18 million.

(54) *Comment:* One commenter expressed confusion at the DEA's inclusion of impacts related to requiring releases at Ute Dam while excluding impacts related to the same at Lake Meredith. The commenter believes that the eventuality of these impacts is equally likely at both sites.

Our Response: Two fundamental differences between Ute and Sanford Dams make the analysis of potential impacts to Ute Dam operations less speculative than those to Sanford Dam operations: (1) critical habitat for the shiner is proposed directly downstream of Ute Dam, while it is proposed 80 miles downstream of Sanford Dam; and (2) a seepage rate is available for Ute Dam that contributes to maintaining the shiner population downstream as discussed in paragraph 125. Such a seepage rate is not available for Sanford Dam.

(55) *Comment:* Two commenters state that the DEA should include economic impacts to flood control. They state that Section 4 of the DEA contains little information on the Upstream Flood Control Program. Each dam site must have an EIS completed before its construction or rehabilitation. These dams were designed to control flooding, and provide municipal and agricultural water. The DEA conclusion that they are not likely to be impacted is misleading because of the required EIS and consultation with the Service and other groups. The new effort to rehabilitate the aging flood control sites may be impacted by the proposed critical habitat designation.

Our Response: The Upstream Flood Control Program, administered by the Oklahoma Conservation Commission, constructs small flood control dams on tributaries upstream from rivers or large streams. Watershed projects are sponsored locally, and receive planning and financial assistance from the NRCS. Of 2,540 dams planned through the Program, 2,101 were constructed as of March 2005. The majority of these projects are PL–566 and PL–534 dams. Based on extensive conversation with NRCS personnel in Oklahoma, the DEA discusses potential impacts to PL–566 dams that may impact shiner habitat in Section 4.6. In paragraph 133, the DEA identifies 16 PL–566 dams that may be impacted by shiner habitat and states that ''The NRCS does not anticipate findings of adverse impact from the Service; therefore, future consultations on these projects are assumed to be informal and project modifications are not anticipated.'' The DEA estimates the administrative costs of consultation for these 16 dams in Section 3.

(56) *Comment:* One comment stated that the DEA should consider how reducing water releases at Ute Dam by 12 percent will affect the wholesale price of water.

Our Response: Because water delivery from Ute Dam has not occurred yet, estimating the potential impact on water prices would be speculative. Such an estimate requires data on the amount of water likely consumed by water communities, availability of alternate sources of water and prices of those sources, and an understanding of the relationship between delivery costs and water quantity. Data limitations make the calculation of price changes infeasible at this time.

(57) *Comment:* One commenter states that the DEA should not limit consideration of water management costs to Ute Dam. The commenter notes that, according to the NRCS, 16 PL–566 dams are scheduled for construction in Oklahoma upstream of the proposed critical habitat designation and may be affected.

Our Response: Section 4.6 of the DEA considers potential impacts to sixteen PL–566 dams scheduled for construction in Oklahoma and states that: ''The NRCS does not anticipate findings of adverse impact from the Service; therefore, future consultations on these projects are assumed to be informal and project modifications are not anticipated.'' Informal consultation costs are captured in Section 3 of the DEA, as referenced in paragraph 106 and Exhibit 3–7.

Comments Related to Economic Impacts and Analysis—Estimation of Impacts to Oil and Gas Development

(58) *Comment:* A comment updates information provided by the Oklahoma Independent Petroleum Association (OIPA) during the development of the DEA. The comments states that basic directional drilling costs range from $7,500 to $12,000 per day in addition to the daily conventional drilling costs of approximately $10,000 to $17,500 per day. Further, drilling fluids, rental equipment, supervision, and other costs can increase the cost per day to $35,000. OIPA also states that vertical hole drilling costs approximately $25,000 per day. In contrast, another comment states that an average well drilling cost for a 12,000 foot well is $5 million, not including the costs of re-routing pipelines.

Our Response: As stated in paragraph 159 of the DEA, the Service notes that directional drilling has been required twice to protect the shiner since the listing of the species in 1998 at a cost of roughly $200,000 per project. In estimating future project modification costs to oil and gas well development activities, at paragraph 162 the DEA assumes that the equivalent percentage of future oil and gas well development projects (five percent) will require directional drilling to protect the shiner at an additional cost of $200,000 per project. We assume that the daily costs provided in the comment are within the range of the $200,000 per project estimate used in the DEA.

(59) *Comment:* Two comments provided state that the assumption that oil and gas well development increases by one percent per year over the forecast period is a conservative assumption and that the DEA confuses production rates and drilling activity. OIPA asserts that the projected production rate information should not be used to infer a similar rate on the number of wells that may be drilled in the future and presents evidence that drilling rates increase when production rates decrease. One comment states that the DEA use information in the Oklahoma Corporation Commission's 2004 annual report to project future drilling activity. The comment cites information from this report suggesting that between 1994 and 2004, oil and gas approved intents to drill increased 30 percent and, therefore, a three percent annual increase should be applied to forecast annual drilling rates. Another comment suggests that the DEA should also consider alternative scenarios in which energy prices are higher in future years than in the recent past as drilling activity is positively related to the price of energy.

Our Response: We agree that applying information specific to drilling rates is more appropriate than projecting future growth in drilling rates based on production rates. Therefore, we revise our estimate of the number of wells likely to be drilled applying the three percent annual increase recommended in public comment (note that a 30 percent increase over ten years translates to an annual growth rate of approximately 2.7 percent, however we believe rounding to three is appropriate given the uncertainty inherent in this analysis). We describe the relationship between drilling activity and energy prices in paragraph 153 of the DEA and note that drilling rates are also affected by the available oil and gas reserves that underlie habitat and the maximum number of wells that could be supported in this area. Given these uncertainties, along with the uncertainty associated with forecasting oil and natural gas prices for 20 years into the future, we believe that revising our growth rate based on the three percent rate provided in comment will address this concern about the impact of future energy prices on drilling activity. We note that more significant year to year fluctuations may occur.

(60) *Comment:* Two comments state that the DEA neglects to consider additional pipelines, including flow lines and gathering lines, which are necessary for the production of crude oil and natural gas. The comment states that 76 percent of the wells (1,011 wells) drilled in the counties containing proposed critical habitat are gas wells and will require gathering lines. A cost impact scenario should be analyzed that includes the installation of more pipelines.

Our Response: The current methodology for estimating future pipelines potentially impacting habitat is described in paragraphs 171 and 174 through 176. Given the uncertainties discussed in these paragraphs, and a lack of available information about the number of pipelines supporting each well and that may impact habitat, we assume that growth in oil and gas pipeline activities will be similar to growth in drilling activities. Therefore, we adjust our impact estimates by assuming a three percent growth rate in pipeline activity, based on information provided in public comment.

(61) *Comment:* Several comments note the potential for conservation efforts to lead to reduced and/or delayed production of oil and natural gas. One comment offered that a reduction in overall production levels will result in regional impacts. A separate comment suggests that the Service consider a scenario where consultation delays or stops production, impacting gross production tax payments to the state and royalty payments to mineral owners. A third comment states that delays in drilling could result in the expiration of leases before drilling occurs or loss of the use of a rig to another site for six or more months. Finally, a comment notes that delay costs estimated in the DOE report for storm water discharge requirements should be applied in the analysis.

Our Response: The DEA includes costs associated with delaying drilling in essential habitat, as discussed in paragraphs 149 and 162, and shown in Exhibits 5–5 and 5–8. These estimates are derived from the DOE report. The DEA does not anticipate an overall reduction in drilling activity (see paragraph 150). The availability of drilling equipment is constrained, as noted in public comments which state that small delays can result in the loss of drilling equipment and labor to other locations. These comments suggest that if drilling were prevented in essential habitat, substitute sites outside of habitat are available. Individuals operating in essential habitat may be affected negatively as activity moves to other locations, resulting in distributional effects, but no net change in social welfare.

Support for the assertion that local individuals may experience losses related to lost or delayed production and lower royalties is provided in the DOE report cited in paragraph 148 of the DEA. This report estimates impacts of proposed storm water discharge requirements on the oil and gas industry nationwide. It includes cost information related to species-specific requirements of a NPDES permit, including section 7 consultation under the Act. Using information provided in the report about potential delay time (see Exhibit 5–5 of the DEA), we estimate the potential value of lost production may range from approximately $500,000 to $1.7 million (assumes a discount rate of seven percent).

(62) *Comment:* A comment expressed concern that the 1998 cost information applied in the DEA in estimating impacts to oil and gas drilling and production is outdated.

Our Response: As described in paragraph 149, project modification costs for drilling activities were obtained from a 2004 study completed by the DOE. As noted elsewhere in this response to comment, these cost estimates have been updated with information provided as part of public comment. Costs associated with pipeline activities are based on interviews conducted in 2005 with an engineering firm currently conducting this type of work (see Exhibit 5–10).

(63) *Comment:* A comment states that the consultation process would be especially burdensome on small oil and gas operators as they may not have the personnel or expertise to consult with the Service or implement best management practices.

Our Response: In Appendix A of the report, the Small Business Regulatory Enforcement Fairness Act (SBREFA) Screening Analysis estimates the level of impact of shiner conservation activities on small oil and gas operators in counties that contain shiner habitat.

(64) *Comment:* A comment states that the 2003 data applied in the DEA estimate 1,312 wells were drilled within the counties containing proposed

critical habitat. The 2004 data, however, indicate that 1,332 wells were drilled in those same Counties. These wells comprise 62 percent of the total wells drilled in Oklahoma and the Service should consider that in its assessment of impacts to the oil and gas industry.

Our Response: Information contained within Exhibit 5–3 of the DEA, to which this comment refers, provides data and information on oil and gas well activity and production levels for counties that contain shiner habitat. We agree that the counties in Oklahoma that contain shiner habitat do contain a significant percentage of total wells located within Oklahoma. The analysis of potential impacts to oil and gas well development from shiner conservation activities considers only those wells located within and adjacent to shiner habitat. Therefore, wells under consideration in the DEA reflect a smaller percentage of statewide well activity in Oklahoma.

(65) *Comment:* A comment notes that following the method outlined in the DEA, the impact of shiner conservation efforts on oil and gas pipelines should range from $4.4 million to $5.7 million. The costs presented in paragraph 177 and Exhibit 5–13 of the DEA, however, present a range of $3.8 million to $4.4 million.

Our Response: We acknowledge a mistake in the calculation of oil and gas pipeline impacts and appreciate the submission of corrected information. The cost model associated with oil and gas pipelines has been modified to correctly reflect project modification costs provided in Exhibit 5–10 of the DEA.

(66) *Comment:* A party requests that comments with corresponding footnotes 84 and 87 be removed as the discussions did not relate to national trends, which were not known at that time.

Our Response: We will remove these footnotes from the final economic analysis.

Comments Related to Economic Impacts and Analysis—Estimation of Impacts to Grazing Activities

(67) *Comment:* Two comments expressed concern that cattle currently water from the rivers and graze in the riparian area and that finding an alternative water source or additional seasonal grazing meadows would be difficult or impossible. As a result, the comments state that the value of this water and sub-irrigated meadows incalculable. The comments further note that because the river meadows are sub-irrigated, the value of lost irrigated cropland should be used to value grazing lands.

Our Response: The Service agrees that finding substitute water sources or lands for cattle could be difficult. Consistent with the comment, the DEA does not assume that cattle will be moved to other areas. Rather, it assumes that the ability to graze these areas is lost completely and values this loss based on the number of cattle supportable on habitat lands and perpetuity value of fees paid by ranchers to graze these lands (see paragraphs 234 through 238). In other words, the analysis provides an estimate of the total value of these lands to ranchers as a bound on magnitude of potential losses given significant regulatory uncertainty. Note that the value of grazing activity on these lands is derived from market prices for grazing rights, which implicitly include values for the attributes of that land, including hydrologic features such as subirrigation. Because the permit values cited in the DEA represent average prices across each State, they likely incorporate values for both subirrigated and lower quality grazing lands. To the extent that this is the case, the total value of these grazing lands may be understated.

(68) *Comment:* Two comments state that the costs of fencing for livestock and other project modification costs are not included in the DEA. In particular, the Hughes County Conservation District estimates that fencing the tributaries of the South Canadian River will cost $168,962 and that it is likely that costs will be incurred for off-site watering facilities of $80,000. The estimated original cost of implementing practices to fulfill the recommendations of the Service would be $412,960.

Our Response: The DEA estimates a total loss in value of grazing activity in proposed habitat. The analysis assumes that ranchers will only undertake project modifications if they can do so without incurring a net loss. Thus, the analysis assumes that to the extent that ranchers continue to operate, the costs of project modifications must be less than the total value of their operation. Therefore, the estimate of the total value of grazing activity presented in the DEA is the upper bound estimate of potential impacts to ranchers.

(69) *Comment:* The Hughes County Conservation District estimates that 4,000 acres in Hughes County, Oklahoma will be affected by the CHD. These acres have a total production value of $41 per acre per year.

Our Response: The DEA estimates affected acreage using USGS land coverage geographic information system (GIS) data (see paragraph 235), and its estimate of affected acres in Hughes County is consistent with this comment. It estimates the value of lost production, used to calculate regional impacts, to be $32 per animal unit month (AUM), which can be converted to an estimate of $51 per acre using information provided in paragraphs 236 and 242. As a result, the value of lost production is calculated using a higher per acre value in the DEA than reported by Hughes County.

(70) *Comment:* Two comments provided on the DEA state that the DEA should consider the impact of designation on invasive species management efforts. Water is retained in the river when efforts are undertaken to control invasive species such as salt cedar and Russian olives. One organization comments that on the Canadian River, CRMWA treats salt cedar averaging 50 acres per mile, $200 per acre. Another comment notes the potential for curtailment of invasive species management if herbicides are found to harm the shiner.

Our Response: As stated in the response to the comment regarding the impacts to ranchers of fencing and other project modification costs, the DEA estimates a total loss in value of grazing activity in habitat. This value exceeds any project modification costs, such as invasive species control, that would practicably be implemented. The analysis assumes that ranchers will only undertake project modifications if they can do so without incurring a net loss. Thus this analysis assumes that to the extent that ranchers continue to operate, the costs of project modifications must be less than the total value of their operation. Therefore, the estimate of the total value of grazing activity presented in the DEA is the upper bound estimate of potential impacts to ranchers.

(71) *Comment:* One commenter stated that the economic analysis should forecast impacts over at least 100 years as the majority of ranchers along the Cimarron River have been owned by the same families for 100 or more years.

Our Response: Forecasting economic activity in areas of habitat is speculative beyond a 20-year time horizon. However, data are provided in the DEA that can be used to calculate the lost value of farming and ranching activities in perpetuity. The value of lost farming in the DEA is calculated by multiplying the value of crop production reported in Exhibit 7–6 by the estimated crop reduction reported in the same exhibit. For grazing, the perpetuity value of grazing permits (dollars per AUM) is provided in Exhibit 7–13. This value, multiplied by the number of lost AUMs reported in Exhibit 7–14, provides the total value of lost grazing in perpetuity. For both categories, the 20-year loss is

equivalent to approximately 46 percent of the perpetuity value assuming a three percent discount rate and 65 percent of the perpetuity value assuming a seven percent discount rate.

(72) *Comment:* One commenter stated that cattle grazing is not considered in the DEA.

Our Response: Grazing related impacts are discussed in detail in the Executive Summary and Section 7 of the DEA.

Comments Related to Economic Impacts and Analysis—Estimation of Impacts to Recreation

(73) *Comment:* A comment notes that the State Departments of Agriculture, Food and Forestry, Tourism, and Wildlife Conservation are promoting agro-tourism in the region. This effort is intended to bring dollars to rural areas. The comment states that impacts to this emerging industry are tremendous.

Our Response: Without information about the type of agro-tourism (e.g., hunting, fishing, visiting working farms, ranches or vineyards) taking place within the proposed designation habitat, current and projected visitation rates, and an indication of how shiner conservation activities would impact this industry, we are unable to estimate losses associated with this activity. These data are not readily available at this time.

(74) *Comment:* One comment states that the DEA underestimates visitation to the Rosita area by two to three times, which effects the results of the analysis.

Our Response: As described in paragraph 275, the DEA relies on visitation data provided by National Park Service (NPS) staff at the Lake Meredith National Recreation Area specifically for Rosita (note that visitation to the entire National Recreation Area, which includes other areas not proposed for critical habitat designation, is greater than visitation to Rosita alone). Data were provided by month for years 2000 through 2004 for each of the two areas. Although the data indicate an overall decline in visitation over this time period, the analysis assumes future visitation remains constant at the five-year historical average rate.

(75) *Comment:* Multiple comments confirm the importance of the off-road vehicle (ORV) land along the Canadian River. They note that it is the only public ORV land within 300 miles, and related businesses would suffer if this activity was limited within the proposed critical habitat designation. One commenter estimates that 50 to 60 percent of all off-road vehicles sold in the region are used at the Canadian River and estimates lost sales in the Panhandle area to be approximately $20 million. Including parts and accessories sales, taxes, and job losses, the total economic loss could be $200 million. Another commenter estimates that for the two major motorcycle dealers in Amarillo, Texas, there would be a potential loss of $80 million in revenue over the next 20 years.

Our Response: The Service agrees that restricting ORV use in the Rosita section of the Lake Meredith National Recreation Area could negatively impact businesses in the Pan Handle supplying goods and services to recreators. Using the IMPLAN model, the DEA estimates an initial impact to the regional economy of up to $1.6 million in the first year, along with a potential for 44 lost jobs and $168,000 in lost tax revenues (see paragraphs 277 through 279). These impacts would occur once and persist for some period of time until the economy adjusts to the change. In addition, paragraph 325 summarizes information about current annual sales of ORVs provided by ORV-business owners in the Amarillo-Lubbock business area.

It is difficult to compare the impact estimates provided by these business owners and generated from the IMPLAN model with the estimates provided in public comment. It is unclear whether the comments report total sales for ORV retail businesses, or only the portion of sales that would be lost due to shiner-related restrictions. Closures in Rosita are likely to occur between July and September, and account for only 25 percent of the total trips taken to Rosita annually. In addition, another ORV area located within Lake Meredith National Recreation Area, Big Blue, is not proposed for critical habitat designation. Estimated lost trips to Rosita account for approximately 15 percent of total ORV visitors annually to Lake Meredith National Recreation Area. To the extent that recreators substitute trips to Rosita with trips to Big Blue, losses to local businesses will be less than estimated in the DEA.

Comments Related to Economic Impacts and Analysis—Estimation of Impact to Transportation Projects

(76) *Comment:* One comment states that the new Federal Highway Bill calls for additional funding for roads and bridges and inquires if these new projects may be impacted by the designation.

Our Response: Federal Highway funding allocations to State Departments of Transportation (DOTs) are subject to section 7 consultation requirements. The DEA describes interviews with State DOTs to identify reasonably foreseeable projects and potential modification costs associated with shiner protection (see paragraphs 261 through 268). In addition, Section 3 estimates the administrative costs of future section 7 consultations, including those for transportation projects (see paragraphs 105 through 106).

(77) *Comment:* The Arkansas River Shiner Coalition comments that the DEA should consider the effects on project delay to transportation projects.

Our Response: The Service acknowledges that delayed completion of transportation projects resulting from consultation with the Service may result in additional economic impacts that are not quantified in the DEA. Considering that planning for projects generally takes years, if not decades, future projects are likely to be able to incorporate consideration of the shiner into their project schedule. However, projects intersecting habitat and slated to begin construction within the next one to two years may experience delays.

Comments from States

Section 4(f) of the Act states, ''the Secretary shall submit to the State Agency a written justification for her failure to adopt regulation consistent with the agency's comments or petition.'' Comments received from States regarding the proposal to designate critical habitat for the Arkansas River shiner are addressed below.

(78) *State Comment:* A comment expressed support that the proposed rule adequately articulated that designation of critical habitat provides no substantial recovery benefit or additional measure of protection beyond that provided by the Act.

Our Response: As stated in the proposed rule and this final rule, we agree that critical habitat provides little additional protection beyond that provided by the Act.

(79) *State Comment:* A comment expressed support for exclusion of the Beaver/North Canadian River (Unit 2) from the final designation.

Our Response: As provided in this final rule, we have excluded Unit 2, the Beaver/North Canadian River, from the designation.

Summary of Changes From the Proposed Rule

In developing this final designation of critical habitat for the Arkansas River shiner, we reviewed public comments received on the proposed designation of critical habitat published on October 6, 2004 (69 FR 59859), and the draft economic analysis and draft

environmental assessment published on August 1, 2005 (70 FR 44082). In addition to minor modifications and corrections, we conducted further evaluation of lands proposed as critical habitat and excluded additional habitat from the final designation. Table 1, included at the end of this section, outlines changes in stream length for each unit. Specifically, we are making the following changes to the final rule from the proposed rule published on October 6, 2004:

(1) In the proposed rule, we stated our intent to exclude from this designation all habitats in the Beaver/North Canadian River (Unit 2) in Oklahoma and the Arkansas River (Unit 4) in Kansas. After reviewing public comment, including that provided by our peer reviewers, we have determined to exclude these areas under the authority of section 4(b)(2) of the Act. While these two river systems are important to recovery of the species, we believe conservation of the species can best be accomplished by using our authorities under section 10(j) of the Act. Therefore we have concluded that the benefits of exclusion outweigh the benefits of designating critical habitat in these two rivers (see the ''Exclusion Under Section 4(b)(2) of the Act'' section below for a more detailed discussion).

(2) We have excluded from designation the proposed critical habitat unit in the Canadian River of New Mexico and Texas between Ute Reservoir and Lake Meredith. This 255 km (158.4 mi) long stream reach area was previously identified as Unit 1a and is excluded under the authority of section 4(b)(2) of the Act. The Canadian River Municipal Water Authority (CRMWA), in cooperation with at least 23 other Federal, State, and private partners, completed a special management plan for the Arkansas River shiner within this unit. After reviewing the plan, we believe that a reasonable certainty of execution and effectiveness exists such that conservation of the Arkansas River shiner would be promoted. Therefore we have concluded that the benefits of exclusion outweigh the benefits of designating critical habitat in this area (see ''Exclusion Under Section 4(b)(2) of the Act'' section below for a more detailed discussion).

(3) Within Unit 1b, we have excluded a reach of the Canadian River approximately 204 km (127 mi) long, extending from the Oklahoma state line, downstream to the State Highway 33 bridge near Thomas, Oklahoma, from the final critical habitat designation under section 4(b)(2) of the Act (see ''Exclusion Under Section 4(b)(2) of the Act'' section below for a detailed discussion). This reach includes the Packsaddle Wildlife Management Area (WMA) and the Four Canyons Preserve. An ongoing, funded conservation program to control salt cedar and other invasive plant species exists within this reach. Funding for this program has been secured through a Private Stewardship Grant and the goal of this program is to work with private landowners to increase stream flow in this reach of the Canadian River and thus providing a clear conservation benefit to the Arkansas River shiner. Excluding these lands preserves the partnerships that we developed with the Oklahoma Farm Bureau and other stakeholders. Therefore we have concluded that the benefits of exclusion outweigh the benefits of designating critical habitat in this area (see ''Exclusion Under Section 4(b)(2) of the Act'' section below for a more detailed discussion).

(4) Within Unit 1b, we identified a 42 km (26 mi) reach of the Canadian River upstream of the Oklahoma state line and extending to the U.S. Highway 60/83 bridge near Canadian, Texas. As a result of this segment being surrounded by conservation lands and detached from a considerably larger designated reach, it is our determination that this segment no longer meets the definition of critical habitat and was removed from consideration.

Table 1 below provides the approximate area (in miles (km)) designated as critical habitat for the Arkansas River shiner and areas excluded from the final critical habitat designation by State.

State	Areas designated as critical habitat	Areas excluded from the final critical habitat designation
Kansas	62.5 (100.6)	194.1 (312.4)
New Mexico	0	38.0 (61.2)
Oklahoma	470.2 (756.7)	336.2 (541.1)
Texas	0	142.6 (229.6)
Total	532.7 (857.3)	710.9 (1,084.3)

Critical Habitat

Critical habitat is defined in section 3(5)(A) of the Act as—(i) the specific areas within the geographic area occupied by a species, at the time it is listed in accordance with the Act, on which are found those physical or biological features (I) essential to the conservation of the species and (II) that may require special management considerations or protection; and (ii) specific areas outside the geographic area occupied by a species at the time it is listed, upon a determination that such areas are essential for the conservation of the species. ''Conservation'' means the use of all methods and procedures that are necessary to bring an endangered or a threatened species to the point at which listing under the Act is no longer necessary. No specific areas outside the geographical area occupied by the Arkansas River shiner at the time of listing are designated as critical habitat in this final rule.

Critical habitat receives protection under section 7 of the Act through the prohibition against destruction or adverse modification of critical habitat with regard to actions carried out, funded, or authorized by a Federal agency. Section 7 requires consultation on Federal actions that are likely to result in the destruction or adverse modification of critical habitat. The designation of critical habitat does not affect land ownership or establish a refuge, wilderness, reserve, preserve, or other conservation area. Such designation does not allow government or public access to private lands.

To be included in a critical habitat designation, the habitat within the area occupied by the species at the time of listing must first have features that are ''essential to the conservation of the species.'' Critical habitat designations identify, to the extent known using the best scientific and commercial data available, habitat areas that provide essential life cycle needs of the species (i.e., areas on which are found the primary constituent elements, as defined at 50 CFR 424.12(b)).

Habitat occupied at the time of listing may be included in critical habitat only

if the essential features located there may require special management or protection. Thus, we do not include areas where existing management is sufficient to conserve the species. (As discussed below, such areas may also be excluded from critical habitat pursuant to section 4(b)(2).) Accordingly, when the best available scientific and commercial data do not demonstrate that the conservation needs of the species so require, we will not designate critical habitat in areas outside the geographic area occupied by the species at the time of listing. An area currently occupied by the species but not known to be occupied at the time of listing will often contain the PCEs that are essential to the conservation of the species and, therefore, be included in the critical habitat designation for that species.

The Service's Policy on Information Standards Under the Endangered Species Act, published in the **Federal Register** on July 1, 1994 (59 FR 34271), and section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001 (P.L. 106–554; H.R. 5658), and the associated Information Quality Guidelines issued by the Service, provide criteria, establish procedures, and provide guidance to ensure that decisions made by the Service represent the best scientific and commercial data available. They require Service biologists, to the extent consistent with the Act and with the use of the best scientific and commercial data available, to use primary and original sources of information as the basis for recommendations to designate critical habitat. When determining which areas are designated as critical habitat, a primary source of information is generally the listing package for the species. Additional information sources include a recovery plan for the species, articles in peer-reviewed journals, conservation plans developed by States and counties, scientific status surveys and studies, biological assessments, or other unpublished materials and expert opinion or personal knowledge. All information is used in accordance with the provisions of Section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001 (P.L. 106–554; H.R. 5658) and the associated Information Quality Guidelines issued by the Service.

Section 4 of the Act requires that we designate critical habitat on the basis of the best scientific data available. Habitat is often dynamic, and species may move from one area to another over time. Furthermore, we recognize that designation of critical habitat may not include all of the habitat areas that may eventually be determined to be necessary for the recovery of the species. For these reasons, critical habitat designations do not signal that habitat outside the designation is unimportant or may not be required for recovery.

Areas that support populations, but are outside the critical habitat designation, will continue to be subject to conservation actions implemented under section 7(a)(1) of the Act and to the regulatory protections afforded by the section 7(a)(2) jeopardy standard, as determined on the basis of the best available information at the time of the action. Federally funded or permitted projects affecting listed species outside their designated critical habitat areas may still result in jeopardy findings in some cases. Similarly, critical habitat designations made on the basis of the best available information at the time of designation will not control the direction and substance of future recovery plans, habitat conservation plans, or other species conservation planning efforts if new information available to these planning efforts calls for a different outcome.

Methods

As required by section 4(b)(1)(A) of the Act, we used the best scientific and commercial data available in determining areas that contain the features that are essential to the conservation of the Arkansas River shiner. Our methods for identifying the Arkansas River shiner critical habitat included in this final designation are those methods we used to make our final designation for this species on April 4, 2001 (66 FR 18002) and in our subsequent proposal of critical habitat for the Arkansas River shiner, published on October 6, 2004 (69 FR 59859) as modified in accordance with our discussion in the Summary of Changes section above. These included data from research and survey observations published in peer-reviewed articles, academic theses, and agency reports, including those that were conducted by the Service; regional Geographic Information System (GIS) watershed and species coverages; and data compiled in the Oklahoma Natural Heritage Inventory Database. In addition, we used information and data received during the public comment periods on the proposed critical habitat designation, draft environmental assessment, and draft economic analysis, and communications with individuals inside and outside the Service who are knowledgeable about the species and its habitat needs.

Conservation measures described in the final listing determination (63 FR 64772) and in the Issue 8: Recovery section of the prior final critical habitat determination (66 FR 18002); and our recovery outline also were used. Although a recovery plan has not yet been prepared for this species, the areas we have designated as critical habitat represent those that currently support viable populations of the Arkansas River shiner or are areas where we have data that the Arkansas River shiner is still extant (i.e., the Cimarron River). Full recovery of the species likely will require conservation of existing populations and establishment of at least one additional viable population in an additional stream drainage within the historic range of the Arkansas River shiner.

Physical features were identified using U.S. Geological Survey (USGS) 7.5′ quadrangle maps. River reach distances, as noted in Table 1 above, were calculated from TIGER 2000 water line and water polygon GIS files.

Primary Constituent Elements

In accordance with section 3(5)(A)(i) of the Act and regulations at 50 CFR 424.12, in determining which areas to designate as critical habitat, we are required to base our determinations on the best scientific and commercial data available and to consider those physical and biological features (primary constituent elements (PCEs)) that are essential to the conservation of the species, and that may require special management considerations and protection. These features include, but are not limited to: space for individual and population growth and for normal behavior; food, water, light, or other nutritional or physiological requirements; cover or shelter; sites for breeding, reproduction, and rearing (or development) of offspring; and habitats that are protected from disturbance or are representative of the historic geographical and ecological distributions of a species.

The specific biological and physical features, referred to as the primary constituent elements, that provide for the physiological, behavioral, and ecological requirements of the Arkansas River shiner are derived from its biological needs. These features include adequate spawning flows over sufficient distances; habitat for food organisms; appropriate water quality; a natural flow regime; rearing and juvenile habitat appropriate for growth and development to adulthood; and suitable habitat (e.g., sufficient flows and lack of barriers) sufficient to allow Arkansas River shiner to recolonize upstream habitats.

Special management, such as habitat rehabilitation efforts (e.g., removal or control of non-native competitors), also may be necessary over much of the area being designated as critical habitat.

Given the large geographic range the species historically occupied, and the diverse habitats used by the various life-history stages, the specific values or conditions described for each of these habitat features may not capture all of the variability that is inherent in natural systems supporting the Arkansas River shiner. However, the identified lands provide aquatic and riparian (areas near a source of water) habitat containing the essential PCEs supporting the maintenance of self-sustaining populations throughout the range of the Arkansas River shiner. The following discussion summarizes the PCEs determined to be essential to the conservation of the Arkansas River shiner.

Space for Individual and Population Growth and for Normal Behavior

The Arkansas River shiner historically inhabited the main channels of wide, shallow, sandy-bottomed rivers and larger streams of the Arkansas River Basin (Gilbert 1980). Adult Arkansas River shiners are uncommon in quiet pools or backwaters lacking streamflow, and almost never occur in habitats having deep water and bottoms of mud or stone (Cross 1967). Cross (1967) believed that adult Arkansas River shiner prefer to orient into the current on the ''lee'' sides of large transverse sand ridges and prey upon food organisms washed downstream with the current.

Wilde *et al.* (2000) found no obvious selection for or avoidance of any particular habitat type (i.e., main channel, side channel, backwaters, and pools) by Arkansas River shiner. Arkansas River shiners did tend to select side channels and backwaters slightly more than expected based on the availability of these habitats (Wilde *et al.* 2000). Likewise, they appeared to make no obvious selection for, or avoidance of, any particular substrate type. Substrates (i.e., the river bed) in the Canadian River in New Mexico and Texas were predominantly sand; however, the Arkansas River shiner was observed to occur over silt slightly more than expected based on the availability of this substrate (Wilde *et al.* 2000).

Introductions of nonindigenous species can have a significant adverse impact on Arkansas River shiner populations under certain conditions. The morphological characteristics, population size, and ecological preferences exhibited by the Red River shiner (*Notropis bairdi*), a species endemic to the Red River drainage, suggest that it competes with the Arkansas River shiner for food and other essential life requisites (Cross *et al.* 1983; Felley and Cothran 1981). Since its introduction, the Red River shiner has colonized much of the Cimarron River and frequently may be a dominant component of the fish community (Cross *et al.* 1983; Felley and Cothran 1981). The intentional or unintentional release of Red River shiners, or other potential competitors, into other reaches of the Arkansas River drainage by anglers or the commercial bait industry is a potentially serious threat that could drastically alter habitat availability for the Arkansas River shiner in these reaches.

Food

The Arkansas River shiner is believed to be a generalized forager and feeds upon both items suspended in the water column and items lying on the substrate (Jimenez 1999; Bonner *et al.* 1997). In the Canadian River of central Oklahoma, Polivka and Matthews (1997) found that gut contents were dominated by sand/sediment and detritus (decaying organic material) with invertebrate prey being an incidental component of the diet. In the Canadian River of New Mexico and Texas, the stomach contents of Arkansas River shiner were dominated by detritus, invertebrates, grass seeds, and sand and silt (Jimenez 1999). Invertebrates were the most important food item, followed by detrital material.

Terrestrial and semiaquatic invertebrates were consumed at higher levels than were aquatic invertebrates (Jimenez 1999). With the exception of the winter season, when larval flies were consumed much more frequently than other aquatic invertebrates, no particular invertebrate taxa dominated the diet (Bonner *et al.* 1997). Fly larvae, copepods, immature mayflies, insect eggs, and seeds were the dominant items in the diet of the non-native population of the Arkansas River shiner inhabiting the Pecos River in New Mexico (Keith Gido, University of Oklahoma, in *litt.* 1997).

Water

Most plains streams are highly variable environments. These streams can have either intermittent or perennial streamflow, and typically experience periodic flooding that scours vegetation and replenishes fine sediments. Water temperatures, flow regimes, and overall physicochemical conditions (e.g., quantity of dissolved oxygen) typically fluctuate so drastically that fishes native to these systems often exhibit life-history strategies and microhabitat preferences that enable them to cope with these conditions. Matthews (1987) classified several species of fishes, including the Arkansas River shiner, based on their tolerance for adverse conditions and selectivity for physicochemical gradients. The Arkansas River shiner was described as having a high thermal and oxygen tolerance, indicating a high capacity to tolerate elevated temperatures and low dissolved oxygen concentrations (Matthews 1987). Observations from the Canadian River in New Mexico and Texas revealed that dissolved oxygen concentrations, conductivity, and pH rarely influenced habitat selection by the Arkansas River shiner (Wilde *et al.* 2000). Arkansas River shiners were collected over a wide range of conditions—water temperatures from 0.4 to 36.8° Celsius (32.7 to 98.2° Fahrenheit), dissolved oxygen from 3.4 to 16.3 parts per million, conductivity (total dissolved solids) from 0.7 to 14.4 millisiemens per centimeter, and pH from 5.6 to 9.0.

In the Canadian River in central Oklahoma, Polivka and Matthews (1997) found that Arkansas River shiner exhibited only a weak relationship between the environmental variables they measured and the occurrence of the species within the stream channel. Water depth, current, dissolved oxygen, and sand ridge and midchannel habitats were the environmental variables most strongly associated with the distribution of adult Arkansas River shiner within the channel. Similarly, microhabitat selection by Arkansas River shiner in the Canadian River in New Mexico and Texas was influenced by water depth, current velocity, and, to a lesser extent, water temperature (Wilde *et al.* 2000). Arkansas River shiners generally occurred at mean water depths between 17 and 21 centimeters (cm) (6.6–8.3 inches (in)) and current velocities between 30 and 42 cm (11.7 and 16.4 in) per second. Juvenile Arkansas River shiners selected habitat influenced strongly by current, conductivity, and backwater and island habitat types (Polivka and Matthews 1997).

Sites for Breeding, Reproduction and Rearing of Offspring

Successful reproduction by the Arkansas River shiner appears to be strongly correlated with streamflow. Moore (1944) believed the Arkansas River shiner spawned in July, usually coinciding with elevated flows following heavy rains associated with summertime thunderstorms. Bestgen *et al.* (1989) found that spawning in the non-native population of Arkansas River

shiner in the Pecos River of New Mexico generally occurred in conjunction with releases from Sumner Reservoir. However, recent studies by Polivka and Matthews (1997) and Wilde *et al.* (2000) neither confirmed nor rejected the hypothesis that elevated streamflow triggered spawning in the Arkansas River shiner.

Arkansas River shiners are in-channel, open-water, broadcast spawners that release their eggs and sperm over an unprepared substrate (Platania and Altenbach 1998; Johnston 1999). Examination of Arkansas River shiner gonadal development between 1996 and 1998 in the Canadian River in New Mexico and Texas demonstrated that the species undergoes multiple, asynchronous (not happening at the same time) spawns in a single season (Wilde *et al.* 2000). The Arkansas River shiner appears to be in peak reproductive condition throughout the months of May, June, and July (Wilde *et al.* 2000; Polivka and Matthews 1997); however, spawning may occur as early as April and as late as September. Arkansas River shiners may, on occasion, spawn in standing waters (Wilde *et al.* 2000), but it is unlikely that such events are successful.

Both Moore (1944) and Platania and Altenbach (1998) described behavior of Arkansas River shiner eggs. The fertilized eggs are nonadhesive and semibuoyant. Platania and Altenbach (1998) found that spawned eggs settled to the bottom of the aquaria where they quickly absorbed water and expanded. Upon absorbing water, the eggs became more buoyant, rose with the water current, and remained in suspension. The eggs would sink when water current was not maintained in the aquaria. This led Platania and Altenbach (1998) to conclude that the Arkansas River shiner and other plains fishes likely spawn in the upper to mid-water column during elevated flows. Spawning under these conditions would allow the eggs to remain suspended during the 10-to 30-minute period the eggs were non-buoyant. Once eggs became buoyant, they would remain suspended in the water column as long as current was present.

In the absence of sufficient streamflows, the eggs would likely settle to the channel bottom, where silt and shifting substrates would smother the eggs, hindering oxygen uptake and causing mortality of the embryos. Spawning during elevated flows appears to be an adaptation that likely increases survival of the embryo and facilitates dispersal of the young. Assuming a conservative drift rate of 3 km/hour, Platania and Altenbach (1998) estimated that the fertilized eggs could be transported 72–144 km (45–89 mi) before hatching. Developing larvae could then be transported up to an additional 216 km (134 mi) before they were capable of directed swimming movements. Bonner and Wilde (2000) speculate that 218 km (135 mi) may be the minimum length of unimpounded river that allows for the successful completion of Arkansas River shiner life history, based on their observations in the Canadian River in New Mexico and Texas.

Rapid hatching and development of the young is likely another adaptation in plains fishes that enhances survival in the harsh environments of plains streams. Arkansas River shiner eggs hatch in 24–48 hours after spawning, depending upon water temperature (Moore 1944; Platania and Altenbach 1998). The larvae are capable of swimming within 3–4 days; they then seek out low-velocity habitats, such as backwater pools and quiet water at the mouths of tributaries where food is more abundant (Moore 1944).

Evidence from Wilde *et al.* (2000) indirectly supports the speculation by Cross *et al.* (1985) that the Arkansas River shiner initiates an upstream spawning migration. Whether this represents a true spawning migration or just a general tendency in these fish to orient into the current and move upstream, perhaps in search of more favorable environmental conditions, is unknown (Wilde *et al.* 2000). Regardless, strong evidence suggested the presence of a directed, upstream movement by the Arkansas River shiner over the course of a year.

Based on our current knowledge of the life history, biology, and ecology of the species and the requirements of the habitat to sustain the essential life history functions of the species, we have determined that the Arkansas River shiner primary constituent elements (PCEs) are:

(1) A natural, unregulated hydrologic regime complete with episodes of flood and drought or, if flows are modified or regulated, a hydrologic regime characterized by the duration, magnitude, and frequency of flow events capable of forming and maintaining channel and instream habitat necessary for particular Arkansas River shiner life-stages in appropriate seasons;

(2) A complex, braided channel with pool, riffle (shallow area in a streambed causing ripples), run, and backwater components that provide a suitable variety of depths and current velocities in appropriate seasons;

(3) A suitable unimpounded stretch of flowing water of sufficient length to allow hatching and development of the larvae;

(4) Substrates of predominantly sand, with some patches of silt, gravel, and cobble;

(5) Water quality characterized by low concentrations of contaminants and natural, daily and seasonally variable temperature, turbidity, conductivity, dissolved oxygen, and pH;

(6) Suitable reaches of aquatic habitat, as defined by primary constituent elements 1 through 5 above, and adjacent riparian habitat sufficient to support an abundant terrestrial, semiaquatic, and aquatic invertebrate food base; and

(7) Few or no predatory or competitive non-native fish species present.

All areas designated as critical habitat for the Arkansas River shiner are within the historic range occupied by the species and contain one or more of the primary constituent elements essential for its conservation. These aquatic and riparian habitat PCEs form the basis of our critical habitat units. These features are essential to the conservation of the Arkansas River shiner.

Criteria Used To Identify Critical Habitat

We are designating critical habitat within portions of the Canadian and Cimarron Rivers and their associated riparian zones that we determine have the features that are essential to the conservation of the Arkansas River shiner. We considered several criteria in the selection and proposal of Arkansas River shiner critical habitat. Initially, we solicited information from knowledgeable biologists and reviewed available information pertaining to Arkansas River shiner biology and life history. The best scientific information available indicates that recovery of this species will depend on conservation of relatively long stretches of large rivers (Platania and Altenbach 1998) within Arkansas River shiner historic range. Accordingly, this critical habitat designation reflects the need for areas of sufficient stream length to provide habitat for Arkansas River shiner populations large enough to be self-sustaining over time, despite fluctuations in local conditions.

We then determined the occupancy status of the areas. Areas supporting extant populations represent the foundation for continued persistence of the species.

We considered that the preferred habitat for the Arkansas River shiner is predominantly the mainstems of larger

plains rivers. Historically, the species has also been documented from several smaller tributaries (e.g., Skeleton Creek, Wildhorse Creek, and others) to these rivers (Larson *et al.* 1991). Examination of the collection records provided in Larson *et al.* (1991) shows that about 53 percent of the reported capture dates for the Arkansas River shiner in these smaller tributaries occurred during the months of June and July, while another 18 percent occurred during the months of May and August. Consequently, we believe that these tributaries are occupied only during certain seasons associated with higher flows and do not represent optimal habitat for all life stages. However, these seasonally occupied habitats may be important feeding, nursery, or spawning areas, and all tributaries, no matter their size, are important in contributing flows to the critical habitat reaches. Federal actions that may substantially reduce these flows may adversely affect critical habitat and will be subject to consultation provisions outlined in section 7 of the Act. Because newly hatched Arkansas River shiners seek mouths of tributaries where food is more abundant (Moore 1944), this designation (see ''Lateral Extent of Critical Habitat'' section) includes small sections of the tributaries near their confluence, which are important rearing areas for larval Arkansas River shiner.

Other important considerations in selection of areas included in this critical habitat designation include factors specific to each river system, such as size, connectivity, and habitat diversity, as well as rangewide recovery considerations, such as genetic diversity and resilience to periodic extirpations in adjacent habitat patches. Each area contains stream reaches with interconnected waters so that individual Arkansas River shiners can move between areas, at least during certain flows or seasons. The ability of the fish to repopulate areas where they have been depleted or extirpated is vital to recovery by helping to stabilize the population and better ensuring its future persistence. Some areas include stream reaches that do not exhibit optimal Arkansas River shiner habitat, but provide movement corridors or connections between adjacent segment of optimal habitat. Additionally, these reaches play a vital role in the overall health of the aquatic ecosystem and, therefore, the integrity of upstream and downstream Arkansas River shiner habitats.

We then evaluated suitable habitat as defined by the primary constituent elements discussed above to assess whether they may require special management considerations or protection (see ''Special Management Considerations or Protection'' section below). During this evaluation, we reviewed the overall approach to the conservation of the species undertaken by local, State, Tribal, and Federal agencies and private individuals and organizations since the listing of this species in 1998. For example, the Kansas Department of Wildlife and Parks has designated critical habitat for the Arkansas River shiner in accordance with Kansas State law. Portions of the mainstem Cimarron, Arkansas, South Fork Ninnescah, and Ninnescah Rivers have been designated as critical habitat for the Arkansas River shiner in Kansas. A permit is required by the State of Kansas for public actions that have the potential to destroy State-listed individuals or their State designated critical habitat. Subject activities include any publicly funded or State or federally assisted action, or any action requiring a permit from any other State or Federal agency. Violation of the permit constitutes an unlawful taking, a Class A misdemeanor, and is punishable by a maximum fine of $2,500 and confinement for a period not to exceed 1 year. However, similar habitat protections for the Arkansas River shiner do not exist in Arkansas, New Mexico, Oklahoma, or Texas.

All of the stream reaches historically known to support the Arkansas River shiner at the time of listing, including portions of the Arkansas, Cimarron, Beaver/North Canadian, and Canadian Rivers, also contain the features that are considered essential habitat for this species. These areas have the primary constituent elements described above and, as such, provide suitable habitat as defined in several recent scientific studies including Platania and Altenbach 1998, Polivka and Matthews 1997, and Wilde *et al.* 2000. However, as discussed in the ''Exclusion Under Section 4(b)(2) of the Act'' section below, we are excluding those portions of the Arkansas and the Beaver/North Canadian Rivers proposed as critical habitat for the Arkansas River shiner.

As noted below, we are excluding the Beaver/North Canadian River in Oklahoma and the lower Arkansas River in Kansas. As discussed in this rule, we believe that the Arkansas River shiner is extirpated from these river segments; however, we believe they are important for future restoration effects. As we stated in the listing rule (63 FR 64772; November 23, 1998), transplantation of the Arkansas River shiner from the Pecos River will be evaluated as a means to recover the Arkansas River shiner in unoccupied portions of its historic habitat. In addition, our recovery outline for the species identified re-establishing the Arkansas River shiner into suitable unoccupied historic habitat as a crucial component of recovery. In accordance with the outline, we have undertaken steps to develop and document captive propagation techniques for the Arkansas River shiner. In November 1999, with the assistance of the New Mexico Game and Fish Department, we collected over 300 Arkansas River shiner from the Pecos River. These fish were transported to the Tishomingo National Fish Hatchery in Oklahoma where hatchery personnel were successful in inducing spawning of the species and coaxing the juveniles to feed in captivity. Future restoration efforts will undoubtedly occur, pending completion of an approved recovery plan and genetic work to determine the suitability of using Arkansas River shiner from the Pecos River population in transplantation efforts.

Restoration of Arkansas River shiner populations to additional portions of their historical range significantly reduces the likelihood of extinction due to natural or manmade factors, such as the introduction of the Red River shiner, pollution episodes, or a prolonged period of low or no flow, that might otherwise further reduce population size. For example, in July of 2003, an unintentional but unauthorized discharge of livestock waste entered the Canadian River upstream of Oklahoma City, Oklahoma. In the ensuing fish kill, an estimated 11,000 Arkansas River shiners perished. If recovery actions fail to reverse Arkansas River shiner declines in the Canadian River, the species' vulnerability to similar catastrophic events would increase. A vital recovery component for this species likely will involve establishment of secure, self-sustaining populations in habitats from which the species has been extirpated.

We also considered the existing status of Federal, non-Federal public, and private lands in designating areas as critical habitat. This included land owned by the Texas Parks and Wildlife Department, Oklahoma Department of Wildlife Conservation, and The Nature Conservancy. We also attempted to determine the extent of Tribal land areas as part of the critical habitat designation process. We have informally coordinated with the respective Tribes on this designation under the guidance of the President's memorandum of April 29, 1994, ''Government-to-Government Relations with Native American Tribal Governments'' (59 FR 22951), E.O. 13175, Secretarial Order 3206, and 512

DM 2, which require us to coordinate with federally-recognized Tribes on a Government-to-Government basis. All non-Federal lands designated as critical habitat meet the definition of critical habitat under 16 U.S.C.' 1532(5)(A)(i) of the Act in that they are within the geographical area occupied by the species, contain the features that are essential to the conservation of the species, and may require special management consideration or protection.

In determining critical habitat boundaries, we made an effort to avoid developed areas, such as buildings, paved areas and other similar lands that do not support the PCEs essential for Arkansas River shiner conservation. Any structures, paved areas, or otherwise developed areas inside critical habitat boundaries are specifically excluded by text and not part of the designated units.

A brief discussion of each area designated as critical habitat is provided in the unit descriptions below.

Special Management Considerations or Protection

When designating critical habitat, we assess whether the areas that contain the features determined to be essential for conservation may require special management considerations or protections. As we undertake the process of designating critical habitat for a species, we first evaluate lands defined by those physical and biological features essential to the conservation of the species for inclusion in the designation pursuant to section 3(5)(A) of the Act. Secondly, we then evaluate lands defined by those features to assess whether they may require special management considerations or protection.

As discussed in this final rule, our proposed rule published on October 6, 2004 (69 FR 59859), and our previous final designation of critical habitat (66 FR 18002, April 4, 2001), the Arkansas River shiner and its habitat are threatened by a multitude of human-related activities, including but not limited to, stream flow modification, habitat loss by inundation, channel drying by water diversion and groundwater mining, stream channelization, water quality degradation, and introduction of nonindigenous plant and animal species. While many of these threats operate concurrently and cumulatively with one another and with natural disturbances like drought, habitat loss and modification represents the most significant threat to the Arkansas River shiner. Consequently, we believe each area designated as critical habitat may require some level of management and/or protection to address current and future threats to the Arkansas River shiner, maintain the primary constituent elements essential to its conservation, and ensure the overall recovery of the species. Further discussion of the threats specific to each unit that may require special management considerations or protection are further discussed in the ''Unit Descriptions'' section below.

The range and numbers of the species has already been much reduced by these threats. Consequently, the remaining fragmented sections are more likely to be affected by influences from other factors such as drought, water withdrawals, and permitted and unpermitted wastewater discharges. Once habitats are isolated, other aggregations of Arkansas River shiner can no longer disperse into these reaches and help maintain or restore these populations. Isolation and segregation caused by habitat fragmentation can lead to a reduction in overall genetic diversity. Lande (1999) identified reduced genetic diversity as one of several factors influencing extinction in small populations. Therefore, to conserve and recover the fishes to the point where they no longer require the protection of the Act and may be delisted, it is important to maintain and protect all remaining genetically diverse populations of this species within its historic range.

Within the historic range of the Arkansas River shiner, considerable reaches of formerly occupied habitat have been inundated by reservoirs. While these losses are permanent and cannot reasonably be restored, management of water releases, such as those from Ute Reservoir, can be carried out in a manner that minimizes any adverse impacts and facilitates maintenance of Arkansas River shiner habitat. Removal of the nonnative salt cedar also can free additional water that, with management, can further provide for the habitat needs of the Arkansas River shiner. Streamflow management combined with control of salt cedar can retard the channel narrowing that often occurs following a reduction in streamflow and can improve Arkansas River shiner habitat.

In other portions of the historic range, a lack of reservoir releases and groundwater mining has drastically reduced streamflows necessary for maintenance of Arkansas River shiner habitat. In these areas, control of salt cedar and enhanced water conservation, for both municipal and agricultural uses, can help ensure adequate streamflow continues to occur. Considering the amount of free-flowing habitat required to sustain Arkansas River shiner reproduction (as discussed in the ''Primary Constituent Element'' section above), such management may be particularly beneficial in ensuring that suitable spawning, rearing, and nursery habitat persists.

Introductions of nonnative species, whether intentional or accidental, often have deleterious impacts to native species. The accidental introduction of the nonnative Red River shiner has negatively influenced the distribution and abundance of the Arkansas River shiner in the Cimarron River. A further introduction into other portions of its historic range poses a considerable threat to the Arkansas River shiner. Management efforts to eradicate the Red River shiner and eliminate or reduce the potential for additional releases of this species would be beneficial to the survival of the Arkansas River shiner.

Critical Habitat Designation

We are designating two units as critical habitat for the Arkansas River shiner. The critical habitat areas described below constitute our best assessment at this time of areas we determined to be occupied at the time of listing, to contain the primary constituent elements, and that may require special management. The river reaches designated are those most likely to substantially contribute to conservation of the Arkansas River shiner, which when combined with future management of certain unoccupied habitats suitable for restoration efforts, will contribute to the long-term survival and recovery of the species. Included in the designation are areas that contain most, if not all, of the remaining genetic diversity of the Arkansas River shiner within the Arkansas River Basin. The two segments in the Canadian River and the segment in the Cimarron River represent the largest, and perhaps only, remaining viable aggregations of Arkansas River shiner. The two areas designated as critical habitat, plus the three units that have been excluded from critical habitat designation, are shown in Table 1 above.

Lateral Extent of Critical Habitat

This designation takes into account the naturally dynamic character of riverine systems and recognizes that floodplains are an integral part of the stream ecosystem. Habitat quality within the mainstem river channels in the historical range of the Arkansas River shiner is intrinsically related to the character of the floodplain and the

associated tributaries, side channels, and backwater habitats that contribute to the key habitat features (e.g., substrate, water quality, and water quantity) in these reaches. Among other contributions, the floodplain provides space for natural flooding patterns and latitude for necessary natural channel adjustments to maintain appropriate channel morphology and geometry. Relatively intact riparian zones, along with periodic flooding in a relatively natural pattern, are important in maintaining the stream conditions necessary for long-term survival and recovery of the Arkansas River shiner.

Human activities that occur outside the river channel can have a demonstrable effect on the physical and biological features of aquatic habitats. However, not all of the activities that occur within a floodplain will have an adverse impact on the Arkansas River shiner or its habitat. Thus, in determining the lateral extent of critical habitat along riverine systems, we considered the definition of critical habitat under the Act. That is, critical habitat must contain the elements essential to a species' conservation and must be in need of special management considerations or protection. We see no need for special management considerations or protection for the entire floodplain, and we are not proposing to designate the entire floodplain as critical habitat. However, conservation of the river channel alone is not sufficient to ensure the survival and recovery of the Arkansas River shiner. For instance, the diet of the Arkansas River shiner includes many species of terrestrial insects and seeds of grasses occurring in the riparian corridor (Jimenez 1999). We believe the riparian corridors adjacent to the river channel provide a reasonable lateral extent for critical habitat designation.

Riparian areas are seasonally flooded habitats (i.e., wetlands) that are major contributors to a variety of vital functions within the associated stream channel (Federal Interagency Stream Restoration Working Group 1998; Brinson *et al.* 1981). Riparian zones are essential for energy and nutrient cycling, filtering runoff, absorbing and gradually releasing floodwaters, recharging groundwater, maintaining streamflows, protecting stream banks from erosion, and providing shade and cover for fish and other aquatic species. Healthy riparian corridors help ensure water courses maintain the primary constituent elements essential to stream fishes, including the Arkansas River shiner. Although the Arkansas River shiner cannot be found in riparian areas when they are dry, riparian areas provide habitat during high water periods and contribute to the food base utilized by the Arkansas River shiner.

The lateral extent (width) of riparian corridors fluctuates considerably between a stream's headwaters and its mouth. The appropriate width for riparian buffer strips has been the subject of several studies (Castelle *et al.* 1994). Most Federal and State agencies generally consider a zone 23–46 m (75–150 ft) wide on each side of a stream to be adequate (NRCS 1998; Moring et al. 1993; Lynch et al. 1985), although buffer widths as wide as 152 m (500 ft) have been recommended for achieving flood attenuation benefits (Corps 1999). In most instances, however, riparian buffer zones are primarily intended to reduce (i.e., buffer) detrimental impacts to the stream from sources outside the river channel. Consequently, while a riparian corridor 23–46 m (75–150 ft) in width may function adequately as a buffer, it is likely inadequate to preserve the natural processes that provide Arkansas River shiner primary constituent elements.

Generally, we consider a lateral distance of 91.4 m (300 ft) on each side of the stream beyond the bankfull width to be an appropriate riparian corridor width for the preservation of Arkansas River shiner constituent elements. The bankfull width is the width of the stream or river at bankfull discharge. Bankfull discharge is significant because it is the flow at which water begins to leave the active channel and move into the floodplain (Rosgen 1996) and serves to identify the point at which the active channel ceases and the floodplain begins. Bankfull discharge, while a function of climate and the size of the stream, is a fairly consistent feature related to the formation, maintenance, and dimensions of the stream channel (Rosgen 1996). Trained individuals can readily approximate the upper limits of bankfull discharge in the field using physical indicators such as depositional features, scour lines, and changes in vegetation. Bankfull discharge is generally accepted as the flow that occurs every 1 to 2 years (Leopold *et al.* 1992).

Some developed lands within the 91.4 m (300 ft) lateral extent are not considered critical habitat because they do not contain the primary constituent elements and, therefore, do not have the features that are essential to the conservation of the Arkansas River shiner. Lands located within the boundaries of the critical habitat designation, but that do not contain any of the primary constituent elements or provide habitat or biological features essential to the conservation of the Arkansas River shiner include: existing paved roads; bridges; parking lots; railroad tracks; railroad trestles; water diversion and irrigation canals outside of natural stream channels; active sand and gravel pits; regularly cultivated agricultural land; and residential, commercial, and industrial developments. However, activities funded, authorized, or carried out in these areas by Federal action agencies that may affect the primary constituent elements of the critical habitat, may require consultation pursuant to section 7 of the Act.

In summary, the riparian zone included in the lateral extent of critical habitat for the Arkansas River shiner serves several functions vital to ensuring the aquatic habitat continues to provide the primary constituent elements needed by the shiner. As stated above, a proper functioning riparian zone helps ensure that the aquatic habitat continues to function ecologically and riparian areas can provide habitat during high water periods. Plains rivers are primarily located in areas with soils predominated by sands. These soils are extremely susceptible to wind and water erosion. Once erosion starts, channel characteristics, such as hydraulics, depths, velocity and related features can change considerably and large volumes of sediment can become suspended and transported in the channel. The riparian vegetation is crucial to holding soils in place and avoiding stream bank erosion. Riparian vegetation also provides shade vital during summer time low flow events. During these times, stream flows begin to decline and fishes are often isolated to pools near the margins of the river. The overhanging vegetation helps shade these pools. Without the shade, temperatures in these pools can quickly become lethal as they exceed the thermal capacity of the fish. The riparian zone also provides seeds and terrestrial invertebrates that form a component of the diet of the Arkansas River shiner. In addition, vegetative material from the riparian zone, along with instream production, drives the nutrient/energy cycle of the stream. Aquatic invertebrates utilize this terrestrial vegetative material as food. The Arkansas River shiner in turn feeds on the invertebrates. The riparian vegetation is an important component of the food web that everything else depends upon for energy and nutrients. The riparian zone also serves to buffer the stream from impacts that occur within the floodplain but outside of the riparian zone. However, in determining the lateral extent for the Arkansas River

shiner, we believe that the riparian zone is capable of supporting most of these important processes and functions, not just serving as a buffer zone.

Unit Descriptions

Critical habitat and habitat that has been excluded includes Arkansas River shiner habitat in five reaches of four different rivers within the Arkansas River basin in Kansas, New Mexico, Oklahoma, and Texas. Lands we considered for critical habitat are largely under private, State, and Federal ownership. We are designating critical habitat in two reaches (i.e., units) and excluding the remaining three units for various reasons, as described in the ''Exclusion Under Section 4(b)(2) of the Act'' section below. For those areas that have been excluded, the unit description is provided only to define the unit. Although all of the units are within the geographic range of the species, we are not designating all of the areas known to be occupied by the Arkansas River shiner. A brief description of each unit, reasons why it contains the features essential for the conservation of the Arkansas River shiner, and the special management considerations particular to each unit, are presented below.

Unit 1a. Canadian River, Quay County, New Mexico, and Oldham and Potter Counties, Texas

The Canadian River from near Ute Dam in New Mexico to the upper reaches of Eufaula Reservoir in Oklahoma, except for those areas rendered unsuitable for Arkansas River shiner by Lake Meredith in Texas, is currently occupied by the Arkansas River shiner. These are the largest, remaining viable aggregations of Arkansas River shiner, and are considered to represent the ''core'' of what remains of the species. Smaller tributary streams, with the exception of Revuelto Creek in New Mexico and small sections of the tributaries near their confluence, may be seasonally occupied by the Arkansas River shiner.

We have excluded all areas in Unit 1a from the final critical habitat designation under section 4(b)(2) of the Act (see ''Exclusion Under Section 4(b)(2) of the Act'' section below for a detailed discussion). Unit 1a consists of approximately 248 km (154 mi) of the Canadian River extending from U.S. Highway 54 bridge near Logan, New Mexico, downstream to the confluence with Coetas Creek, Texas. Seepage from Ute Reservoir, inflow from Revuelto Creek, and several springs help sustain perennial flow in most years. There are occasional periods of no flow, and prior to 1956, low flows in the lower section were historically maintained by effluent from the Amarillo, Texas, wastewater treatment plant. This segment of the Canadian River, despite flows having been modified by Conchas and Ute reservoirs, still supports a largely intact plains river fish fauna. Within New Mexico, this reach is predominantly in private ownership, although the State of New Mexico owns scattered tracts. The reach in Texas is in private ownership, except for a small segment on the extreme lower end that is owned by the National Park Service as part of the Lake Meredith National Recreation Area.

We did not consider including the following additional areas in this designation because we determined that these areas do not meet the definition of critical habitat. Upstream of Ute Reservoir, the Canadian River was substantially modified following the construction of Conchas Reservoir and likely provides little suitable habitat. A small portion of Arkansas River shiner historical range occurs upstream of Conchas Reservoir, but the suitability of that reach for Arkansas River shiner is unknown. No extant aggregations of the Arkansas River shiner are known from these reaches. Arkansas River shiners persist in portions of the 3.2 km (2 mi) reach between the U.S. Highway 54 bridge and Ute Dam.; however, we did not consider this section of the stream to have the features essential to the conservation of the species because it rarely contains suitable habitat due to the influence of Ute Reservoir.

Unit 1b. Canadian River, Hemphill County, Texas, and Blaine, Caddo, Canadian, Cleveland, Custer, Dewey, Ellis, Grady, Hughes, McClain, McIntosh, Pittsburg, Pontotoc, Pottawatomie, Roger Mills, and Seminole Counties, Oklahoma

This reach is predominantly in private ownership, with limited areas of State and tribal ownership (see ''American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act'' section). The Oklahoma Department of Wildlife Conservation owns a small section near Roll, Oklahoma (Packsaddle WMA). The Nature Conservancy also owns a small tract near Roll, Oklahoma (Four Canyons Preserve). Small tracts of tribal lands are located near Oklahoma City.

Essential lands in Unit 1b consist of approximately 600 km (373 mi) of river extending from the Oklahoma state line, downstream to the Indian Nation Turnpike bridge northwest of McAlester, Oklahoma. This segment of the Canadian River is the longest unfragmented reach in the Arkansas River Basin that still supports the Arkansas River shiner. Arkansas River shiner abundance in this reach varies from rare to common, with the species generally becoming more abundant in a downstream direction.

Of these essential areas, we have excluded a portion of lands in Unit 1b, extending from the Oklahoma state line, downstream to the State Highway 33 bridge near Thomas, Oklahoma, from the final critical habitat designation under section 4(b)(2) of the Act (see ''Exclusion Under Section 4(b)(2) of the Act'' section below for a detailed discussion). This 204 km (127 mi) long reach includes the Packsaddle WMA and the Four Canyons Preserve. As a result, the final designation of critical habitat within Unit 1b encompasses a 396 km (246 mi) stretch from the State Highway 33 bridge near Thomas, Oklahoma, downstream to the Indian Nation Turnpike bridge northwest of McAlester, Oklahoma.

Within Unit 1b, we identified a 42 km (26 mi) reach of the Canadian River upstream of the Oklahoma state line and extending to the U.S. Highway 60/83 bridge near Canadian, Texas. This area was proposed as essential habitat for the Arkansas River shiner; however, as a result of this segment being surrounded by conservation lands, detached from a considerably larger designated reach, and too small to support successful completion of Arkansas River shiner life history (i.e., less than 218 km (135 mi)), it is our determination that this segment does not meet the definition of critical habitat and was removed from consideration.

We did not consider including the following areas in Unit 1b because we determined that these areas do not meet the definition of critical habitat. The Canadian River upstream of the community of Canadian, Texas, to Sanford Dam at Lake Meredith, frequently supported Arkansas River shiners prior to the construction of Lake Meredith. However, habitat in this segment is currently degraded and generally unsuitable. Some aggregations of Arkansas River shiner may still persist upstream of Canadian, Texas, although primarily on a seasonal basis and in extremely small numbers. Altered flow regimes will continue to affect habitat quality in this reach. Aggregations of Arkansas River shiner also persist in the 49 km (30 mi) section of the Canadian River from the Indian Nation Turnpike bridge downstream to the upper limits of Eufaula Reservoir. However, the downstream distributional limit of these populations frequently fluctuates. Management of water surface

elevations in Eufaula Reservoir for flood control and the resultant backwater effects routinely alter stream morphology at the downstream extent of the population. Under elevated surface water conditions, the lower reaches of this segment are degraded or may be entirely unsuitable for Arkansas River shiner.

Unit 2. Beaver/North Canadian River, Beaver, Ellis, Harper, Major, Texas, and Woodward Counties, Oklahoma

We have excluded all lands in Unit 2 from the final critical habitat designation under section 4(b)(2) of the Act (see ''Exclusion Under Section 4(b)(2) of the Act'' section below for a detailed discussion). Unit 2 consists of 340 km (211 mi) of river extending from Optima Dam in Texas County, Oklahoma, downstream to U.S. Highway 60/281 bridge in Major County, Oklahoma. Almost the entire Beaver/North Canadian River mainstem and at least one of the major tributaries (Deep Fork River) in Oklahoma were historically known to support Arkansas River shiner aggregations. At present, aquatic habitats in large areas of the drainage are degraded or unsuitable, either because of reservoirs, reduced stream flow, or water quality impairment. A small aggregation of Arkansas River shiners may still persist between Optima Dam and the upper reaches of Canton Reservoir, based on the collection of four individuals since 1990. However, an assessment of fish communities and aquatic habitat was conducted at 10 sites within this unit during 2000 and 2001 (Wilde 2002). During this assessment, Arkansas River shiners were not encountered and available habitat was considered marginal (Wilde 2002). While habitat quality in this reach appears marginal, all of the primary constituent elements are present. However, we are uncertain if the Arkansas River shiner still inhabits this reach. The segment between Optima Dam and the upper reaches of Canton Reservoir offers an opportunity for recovery of the Arkansas River shiner in the Beaver/North Canadian River. Reestablishing Arkansas River shiner in this reach would involve some habitat restoration to achieve more optimal conditions for the Arkansas River shiner. Recovery activities will likely include augmenting existing aggregations of the Arkansas River shiner and may involve reestablishing additional populations in this system.

Land ownership for Unit 2 is predominantly private, with limited areas of State owned lands. The Oklahoma Department of Wildlife Conservation owns small sections near Beaver, Oklahoma (Beaver River WMA) and near Fort Supply, Oklahoma (Cooper WMA). The Oklahoma Department of Parks and Tourism owns a small section near Woodward, Oklahoma (Boiling Springs State Park).

Unit 3. Cimarron River, Clark, Comanche, Meade, and Seward Counties, Kansas, and Beaver, Blaine, Harper, Kingfisher, Logan, Major, Woods, and Woodward Counties, Oklahoma

Lands in Unit 3 consist of approximately 460 km (286 mi) of river extending from U.S. Highway 54 bridge in Seward County, Kansas, downstream to U.S. Highway 77 bridge in Logan County, Oklahoma. Historically, almost the entire Cimarron River mainstem, including the type locality for the species (the area from which the specimens that were used to first describe the species were taken), and several of the major tributaries were inhabited by the Arkansas River shiner. Between 1985 and 1992, only 16 specimens of the Arkansas River shiner were collected from the Cimarron River. Arkansas River shiner specimens where not reported again until 2004 when eight Arkansas River shiners were collected near Guthrie, Oklahoma, by SWCA Environmental Consultants (Stuart Leon, U.S. Fish and Wildlife Service, in litt. 2004). Although this population is by no means secure, it continues to persist over time and appears to be at least marginally viable despite low numbers being captured over the last 13 years.

The diminished distribution and abundance of the Arkansas River shiner in the Cimarron River is due, in part, to the introduction of the Red River shiner and continuing habitat loss and degradation (Cross *et al.* 1983; Felley and Cothran 1981). The Red River shiner, a small minnow endemic to the Red River, was first recorded from the Cimarron River in Kansas in 1972 (Cross *et al.* 1985) and from the Cimarron River in Oklahoma in 1976 (Marshall 1978). Since that time, the nonindigenous Red River shiner has essentially replaced the Arkansas River shiner throughout much of the Cimarron River. While reduced streamflow in the upper reaches and the presence of Red River shiners will likely complicate recovery efforts in the Cimarron River, increased management efforts would enhance the survival of the Arkansas River shiner in this river system. Suitable habitat for the Arkansas River shiner appears to exist throughout most of the system, although detailed studies have not yet been conducted.

The Cimarron River is included in the designation because it contains all of the primary constituent elements, except for the presence of a competitive nonnative species, which we intend to address during recovery planning efforts for the Arkansas River shiner. This long, unimpounded reach is occupied by the Arkansas River shiner, based on the captures in 2004, and maintains adequate stream flows to support an intact prairie stream fish community. Although site specific capture information is missing in some areas, the lack of such information does not confirm the Arkansas River shiner has been extirpated from this area. The low numbers of Arkansas River shiners within this unit make frequent capture of specimens extremely unlikely. The protection of this area is important to maintaining the complete genetic variability of the species and the full range of ecological settings within which the Arkansas River shiner is found, and therefore maintaining the ability of the species to adapt to changing environmental conditions.

The reach designated as critical habitat reflects the need for lengths of stream sufficient to provide habitat for successful completion of Arkansas River shiner life cycle (see ''Primary Constituent Elements'' section) and to support populations of Arkansas River shiner large enough to be self-sustaining over time, despite fluctuations in local conditions. Based upon the limited number of Arkansas River shiner collection records from the Cimarron River, we are uncertain if this population is self-sustaining over time. Although we specifically solicited information on the status of Arkansas River shiners in the Cimarron River, we did not receive information from any knowledgeable fishery scientist which confirms the reach encompassing the Oklahoma/Kansas State boundary is unoccupied.

Land ownership for Unit 3 is predominantly private. Private lands in this reach are primarily used for livestock grazing and other types of agriculture.

We did not include the Cimarron River downstream of the U.S. Highway 77 bridge near Guthrie to Keystone Reservoir in the proposal or designation because we have no evidence supporting that this reach is occupied. We believe sufficient habitat for the Arkansas River shiner to complete its life cycle exists within the reach designated as critical habitat, as discussed above. The lower most reach of the Cimarron River, including its confluence with the Arkansas River, was inundated when Keystone

Reservoir was impounded in 1964. This area, including Keystone Reservoir, does not provide suitable habitat because the Arkansas River shiner would not be able to persist within the inundated portions of the River.

Unit 4: Arkansas River, Barton, Cowley, Pawnee Reno, Rice, Sedgwick, and Sumner Counties, Kansas

We have excluded all lands in Unit 4 from the final critical habitat designation under section 4(b)(2) of the Act (see ''Exclusion Under Section 4(b)(2) of the Act'' section below for a detailed discussion). Unit 4 consists of 313 km (194 mi) of river extending from the confluence of the Pawnee River near Larned, Kansas, downstream to the Kansas/Oklahoma State line in Cowley County, Kansas. This distance does not include a 20 km (12.4 mi) reach of the Arkansas River within the City of Wichita metropolitan area, extending from the westbound lane of Kansas State Highway 96 crossing downstream to the Interstate 35 crossing. Stream flows downstream of the confluence of the Pawnee River near Larned are more reliable and habitats are characteristic of those used by Arkansas River shiner in other portions of its current range. This stream segment contains one or more of the primary constituent elements, and recovery activities for the Arkansas River shiner likely will include reestablishing additional populations in this reach.

The Arkansas River in Kansas contains a significant portion of the species' historical range. The Arkansas River shiner historically inhabited the entire mainstem of the Arkansas River, but had begun to decline by 1952 due to the construction of John Martin Reservoir 10 years earlier on the Arkansas River in Bent County, Colorado (Cross *et al.* 1985). Typically, releases from John Martin Reservoir and irrigation return flows from eastern Colorado maintain streamflow in the Arkansas River as far east as Syracuse, Kansas; however, the river often ceases to flow between Syracuse and Dodge City, Kansas, due to surface and groundwater withdrawals. Surface flow then resumes near Larned and Great Bend, Kansas. Lack of sufficient streamflow and ongoing water quality degradation renders much of the Arkansas River west of Larned largely unsuitable for the Arkansas River shiner. As stated in the proposed rule, we did not include the reach upstream of Larned, Kansas, in this designation because it lacks several of the primary constituent elements and no longer meets the definition of critical habitat.

Lands in Unit 4 are entirely in private ownership except for a small area near the Kansas/Oklahoma State line owned by the U.S. Army Corps of Engineers (Kaw Wildlife Area). This area is managed by the State of Kansas (Kansas Department of Wildlife and Parks).

Effects of Critical Habitat Designation

Section 7 Consultation

If a species is listed or critical habitat is designated, section 7(a)(2) requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of such a species or to destroy or adversely modify its critical habitat. If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency (action agency) must enter into consultation with us. Through this consultation, the action agency ensures that their actions do not destroy or adversely modify critical habitat.

When we issue a biological opinion concluding that a project is likely to result in the destruction or adverse modification of critical habitat, we also provide reasonable and prudent alternatives to the project, if any are identifiable. ''Reasonable and prudent alternatives'' are defined at 50 CFR 402.02 as alternative actions identified during consultation that can be implemented in a manner consistent with the intended purpose of the action, that are consistent with the scope of the Federal agency's legal authority and jurisdiction, that are economically and technologically feasible, and that the Director believes would avoid destruction or adverse modification of critical habitat. Reasonable and prudent alternatives can vary from slight project modifications to extensive redesign or relocation of the project. Costs associated with implementing a reasonable and prudent alternative are similarly variable.

Regulations at 50 CFR 402.16 require Federal agencies to reinitiate consultation on previously reviewed actions in instances where critical habitat is subsequently designated and the Federal agency has retained discretionary involvement or control over the action or such discretionary involvement or control is authorized by law. Consequently, some Federal agencies may request reinitiation of consultation or conference with us on actions for which formal consultation has been completed, if those actions may affect designated critical habitat or adversely modify or destroy proposed critical habitat.

Federal activities that may affect the Arkansas River shiner or its critical habitat will require section 7 consultation. Activities on private or State lands requiring a permit from a Federal agency, such as a permit from the U.S. Army Corps of Engineers under section 404 of the Clean Water Act, a section 10(a)(1)(B) permit from the Service, or some other Federal action, including funding (e.g., Federal Highway Administration or Federal Emergency Management Agency funding), will also continue to be subject to the section 7 consultation process. Federal actions not affecting listed species or critical habitat and actions on non Federal and private lands that are not federally funded, authorized, or permitted do not require section 7 consultation.

Each of the areas designated in this rule have been determined to contain sufficient PCEs to provide for one or more of the life history functions of the Arkansas River shiner. In some cases, the PCEs exist as a result of ongoing federal actions. As a result, ongoing federal actions at the time of designation will be included in the baseline in any consultation conducted subsequent to this designation.

Section 4(b)(8) of the Act requires us to briefly evaluate and describe in any proposed or final regulation that designates critical habitat those activities involving a Federal action that may destroy or adversely modify such habitat, or that may be affected by such designation. Activities that may destroy or adversely modify critical habitat also may jeopardize the continued existence of the Arkansas River shiner. Federal activities that, when carried out, may adversely affect critical habitat for the Arkansas River shiner include, but are not limited to:

(1) Actions that significantly and detrimentally alter the natural flow regime of any of the designated stream segments, including activities that cause barriers or deterrents to dispersal, inundate or drain habitat, or significantly convert habitat. Possible actions would include groundwater pumping, impoundment, water diversion, and hydropower generation. These activities could eliminate or reduce the habitat necessary for the reproduction, sheltering, or growth of Arkansas River shiners. We note that such flow reductions that result from actions affecting tributaries of the designated stream reaches also may destroy or adversely modify critical habitat.

(2) Actions that significantly and detrimentally alter the characteristics of the riparian zone in any of the

designated stream segments. Possible actions would include vegetation manipulation, timber harvest, road construction and maintenance, prescribed fire, livestock grazing, off-road vehicle use, powerline or pipeline construction and repair, mining, and urban and suburban development. These activities could eliminate or reduce the habitat necessary for the reproduction, sheltering or growth of Arkansas River shiners. Some of these activities, when planned and implemented appropriately, can prove beneficial to the species and its habitat.

(3) Actions that significantly and detrimentally alter the channel morphology of any of the stream segments listed above. Possible actions would include channelization, impoundment, road and bridge construction, deprivation of substrate source, destruction and alteration of riparian vegetation, reduction of available floodplain, removal of gravel or floodplain terrace materials, reduction in stream flow, discharge of dredged or fill material and excessive sedimentation from mining, livestock grazing, road construction, timber harvest, off-road vehicle use, and other watershed and floodplain disturbances.

(4) Actions that significantly and detrimentally alter the water chemistry in any of the designated stream segments. Possible actions would include intentional or unintentional release of chemical or biological pollutants into the surface water or connected groundwater at a point source or by dispersed release (non-point).

(5) Introducing, spreading, or augmenting nonnative aquatic species in any of the designated stream segments. Possible actions would include fish stocking for sport, aesthetics, biological control, or other purposes; release of live bait fish; aquaculture; construction and operation of canals; and interbasin water transfers.

All units are within the geographic range of the species, all are occupied by the species (based on observations made within the last 20 years), and are likely to be used by the Arkansas River shiner, whether for foraging, breeding, growth of larvae and juveniles, intra-specific communication, dispersal, migration, genetic exchange, or sheltering. Federal agencies already consult with us on activities in areas currently occupied by the species or if the species may be affected by the action to ensure that their actions do not jeopardize the continued existence of the species.

If you have questions regarding whether specific activities will constitute destruction or adverse modification of critical habitat, please contact the Field Supervisor, Oklahoma Ecological Services Office (see **ADDRESSES** section). Requests for copies of the regulations on listed wildlife and inquiries about prohibitions and permits may be addressed to the U.S. Fish and Wildlife Service, Division of Threatened and Endangered Species, P.O. Box 1306, Albuquerque, New Mexico 87102 (telephone 505/248–6920; facsimile 505/248–6922).

Exclusion Under Section 4(b)(2) of the Act

Section 4(b)(2) of the Act states that critical habitat shall be designated, and revised, on the basis of the best available scientific data after taking into consideration the economic impact, national security impact, and any other relevant impact of specifying any particular area as critical habitat. An area may be excluded from critical habitat if it is determined that the benefits of exclusion outweigh the benefits of specifying a particular area as critical habitat, unless the failure to designate such area as critical habitat will result in the extinction of the species.

In our critical habitat designations, we use the provision outlined in section 4(b)(2) of the Act to evaluate those specific areas that contain the features essential to the conservation of the species to determine which areas to propose and subsequently finalize (i.e., designate) as critical habitat. On the basis of our evaluation, we have determined that the benefits of excluding certain lands from the designation of critical habitat for the Arkansas River shiner outweigh the benefits of their inclusion, and have subsequently excluded those lands from this designation pursuant to section 4(b)(2) of the Act as discussed below.

Areas excluded pursuant to section 4(b)(2) may include those covered by the following types of plans/programs if the plans/programs provide assurances that the conservation measures they outline will be implemented and effective: (1) Legally operative Habitat Conservation Plans (HCPs) that cover the species; (2) draft HCPs that cover the species and have undergone public review and comment (i.e., pending HCPs); (3) Tribal conservation plans/programs that cover the species; (4) State conservation plans/programs that cover the species; (5) National Wildlife Refuges with Comprehensive Conservation Plans (CCPs) or other applicable programs that provide assurances that the conservation measures for the species will be implemented and effective, and; (6) Partnerships, conservation plans/easements, or other type of formalized relationship/agreement on private lands. The relationship of critical habitat to these types of areas is discussed in detail in the following paragraphs.

After consideration under section 4(b)(2), the following areas of habitat have been excluded from critical habitat for the Arkansas River shiner: Units 2 (Beaver/North Canadian River) and 4 (Arkansas River), private lands within Unit 1a covered by the Canadian River Municipal Water Authority management plan (CRMWA Plan), and some private lands within Unit 1b encompassed by a portion of a plan developed by the Oklahoma Farm Bureau Legal Foundation where a partnership/commitment with the Service for the Arkansas River shiner exists. A detailed analysis of our exclusion of these lands under section 4(b)(2) of the Act is provided in the paragraphs that follow.

General Principles of Section 7 Consultations Used in the 4(b)(2) Balancing Process

The most direct, and potentially largest regulatory benefit of critical habitat is that federally authorized, funded, or carried out activities require consultation pursuant to section 7 of the Act to ensure that they are not likely to destroy or adversely modify critical habitat. There are two limitations to this regulatory effect. First, it only applies where there is a Federal nexus—if there is no Federal nexus, designation itself does not restrict actions that destroy or adversely modify critical habitat. Second, it only limits destruction or adverse modification. By its nature, the prohibition on adverse modification is designed to ensure those areas that contain the physical and biological features essential to the conservation of the species or unoccupied areas that are essential to the conservation of the species are not eroded. Critical habitat designation alone, however, does not require specific steps toward recovery.

Once consultation under section 7 of the Act is triggered, the process may conclude informally when the Service concurs in writing that the proposed Federal action is not likely to adversely affect the listed species or its critical habitat. However, if the Service determines through informal consultation that adverse impacts are likely to occur, then formal consultation would be initiated. Formal consultation concludes with a biological opinion issued by the Service on whether the proposed Federal action is likely to jeopardize the continued existence of a listed species or result in destruction or adverse modification of critical habitat,

with separate analyses being made under both the jeopardy and the adverse modification standards. For critical habitat, a biological opinion that concludes in a determination of no destruction or adverse modification may contain discretionary conservation recommendations to minimize adverse effects to primary constituent elements, but it would not contain any mandatory reasonable and prudent measures or terms and conditions. Mandatory reasonable and prudent alternatives to the proposed Federal action would only be issued when the biological opinion results in a jeopardy or adverse modification conclusion.

We also note that for 30 years prior to the Ninth Circuit Court's decision in *Gifford Pinchot*, the Service equated the jeopardy standard with the standard for destruction or adverse modification of critical habitat. The Court ruled that the Service could no longer equate the two standards and that adverse modification evaluations require consideration of impacts on the recovery of species. Thus, under the *Gifford Pinchot* decision, critical habitat designations may provide greater benefits to the recovery of a species. However, we believe the conservation achieved through implementing management plans is typically greater than would be achieved through multiple site-by-site, project-by-project, section 7 consultations involving consideration of critical habitat. Management plans commit resources to implement long-term management and protection to particular habitat for at least one and possibly other listed or sensitive species. Section 7 consultations only commit Federal agencies to prevent adverse modification to critical habitat caused by the particular project and they are not committed to provide conservation or long-term benefits to areas not affected by the proposed project. Thus, any management plan which considers enhancement or recovery as the management standard will always provide as much or more benefit than a consultation for critical habitat designation conducted under the standards required by the Ninth Circuit in the Gifford Pinchot decision.

The information provided in this section applies to all the discussions below that discuss the benefits of inclusion and exclusion of critical habitat in that it provides the framework for the consultation process.

Educational Benefits of Critical Habitat

A benefit of including lands in critical habitat is that the designation of critical habitat serves to educate landowners, State and local governments, and the public regarding the potential conservation value of an area. This helps focus and promote conservation efforts by other parties by clearly delineating areas of high conservation value for the Arkansas River shiner. In general the educational benefit of a critical habitat designation always exists, although in some cases it may be redundant with other educational effects. For example, habitat conservation plans have significant public input and may largely duplicate the educational benefit of a critical habitat designation. This benefit is closely related to a second, more indirect benefit; in that designation of critical habitat would inform State agencies and local governments about areas that could be conserved under State laws or local ordinances.

However, we believe that there would be little additional informational benefit gained from the designation of critical habitat for the exclusions we are making in this rule because these areas were included in the proposed rule as having essential Arkansas River shiner habitat. Consequently, we believe that the informational benefits are already provided even though these areas are not designated as critical habitat. Additionally, the purpose normally served by the designation of informing State agencies and local governments about areas which would benefit from protection and enhancement of habitat for the Arkansas River shiner is already well established among State and local governments, and Federal agencies in those areas which we are excluding in this rule on the basis of other existing habitat management protections.

The information provided in this section applies to all the discussions below that discuss the benefits of inclusion and exclusion of critical habitat.

Units 2 and 4

As discussed in the ''Summary of Changes from the Proposed Rule'' section above, we have determined that all habitat in the Beaver/North Canadian River in Oklahoma (Unit 2) and the Arkansas River in Kansas (Unit 4) will not be designated as critical habitat in this final rule. We have reached this determination because we believe the benefits of excluding these units from this final critical habitat designation outweigh the benefits of designating the units as critical habitat.

At the time of the final listing determination (63 FR 64772), we prepared a recovery outline for the Arkansas River shiner and we have begun to implement some preliminary recovery tasks identified in the outline. Recovery outlines are brief internal planning documents that are prepared within 60 days after the date of publication of the final listing rule. These documents are intended to direct recovery efforts pending completion of the recovery plan. Although a recovery plan has not yet been prepared, recovery activities for Arkansas River shiner likely will include augmenting and reestablishing Arkansas River shiner populations in the Beaver/North Canadian River and/or the Arkansas River. We believe that the best way to achieve this objective will be to use the authorities under section 10(j) of the Act to reestablish experimental populations of Arkansas River shiner within additional areas of its historic range. Considering that the Arkansas River shiner in these reaches may be extirpated or existing occurrences so small they may not be viable, and that natural repopulation appears unlikely without human assistance, we believe that designation of the area to be repopulated using section 10(j) of the Act is the appropriate tool to utilize in future restoration efforts.

(1) Benefits of Inclusion

As noted above, the primary regulatory benefit of any designated critical habitat is that federally funded or authorized activities in such habitat requires consultation pursuant to section 7 of the Act. Such consultation would ensure that adequate protection is provided to avoid destruction or adverse modification of critical habitat. However, consultation on critical habitat will only address those activities associated with a Federal nexus. Much of the lands within both units are in private ownership with only limited opportunities for consultation under section 7 of the Act. Since April 4, 2001, some 25 consultations have been conducted on the Beaver/North Canadian River but none of those consultations reached the point of adverse modification. On the Arkansas River in Kansas, only nine informal consultations have been conducted within that timeframe and none of those reached the point of adverse modification.

In the environmental assessment conducted for this designation under NEPA, it states that the primary conservation value of the proposed critical habitat in Units 2 and 4 would be to facilitate full consideration of impacts to recovery of the Arkansas River shiner. Recovery of the species will likely require repatriation of the fish to areas of suitable unoccupied habitat. In these unoccupied areas, a critical habitat designation may aid the

Service in addressing longer-term, more subtle impacts to recovery, such as continuing habitat degradation and loss. These benefits could accrue to other rare or sensitive species, including the peppered chub (*Macrhybopsis aestivalis*) and Arkansas darter (*Etheostoma cragini*). At the same time, opposition to designation of critical habitat could create controversy and hostility towards recovery where it would not otherwise exist.

With regard to the effects of Federal actions within these two units, designation of critical habitat may not provide substantial habitat protection due to the predominance of private lands and paucity of Federal actions in these areas. Federal water resource projects in the two units are very rare. Although the beginning point of the proposed designation for Unit 2 begins below Optima Dam, a project of the U.S. Army Corps of Engineers, the reservoir has never filled due to insufficient inflows. As stated in the previous final designation (66 FR 18002), pumping from the High Plains Aquifer has considerably reduced streamflow in the Beaver River upstream of Optima Reservoir. Water levels in Optima Reservoir, in over 27 years of operation, have never risen to the conservation pool elevation and are currently some 0.9 m (3 ft) below the top of the inactive pool. Lacking significant streamflow events of sufficient magnitude to raise water surface elevations into the conservation pool, securing beneficial releases from this reservoir would not be possible. We doubt future conditions would improve under the designation to ever secure such releases. There are no existing or proposed Federal water resource development projects within Unit 4. Designation of critical habitat in Units 2 or 4, with respect to water resources, is not likely to provide a benefit since there is a rarity of Federal involvement in water resource projects in this area.

Agricultural practices in Units 2 and 4 primarily involve livestock production on native rangeland and in confined feeding operations, and irrigated and dryland crop production. As noted in the environmental assessment, there have not been any section 7 consultations on cultivation or irrigation activities and there have only been eight informal consultations on livestock grazing since the species was listed in 1998. Most agricultural activities in the vicinity of these units are conducted almost entirely on private lands. With the exception of CAFOs, there is little or no Federal involvement in livestock or crop production and these activities are not generally subject to section 7 consultation. In Unit 4, the Environmental Protection Agency (EPA) has delegated the National Pollutant Discharge Elimination System (NPDES) permitting authority for CAFOs to the State of Kansas, a non-Federal entity. Within Unit 4, this program would not be subject to the section 7 consultation requirements unless the program undergoes another review by EPA.

However, within Unit 2 and the rest of Oklahoma, EPA is considering but has not yet delegated this program to the State. Because the best available scientific information indicates Unit 2 is not likely occupied by the Arkansas River shiner, NPDES permitting of CAFO waste discharge would not likely be triggered under the jeopardy standard for the species. Accordingly, exclusion of Unit 2 from critical habitat would eliminate consideration of potential effects of Federal agriculture-related actions on critical habitat. Within the 6 counties encompassed by Unit 2, there are some 2,620 existing animal feeding operations. However, only a small subset of these operations are CAFOs. The DEA estimated that there are some 74 CAFOs within the watersheds encompassed by Unit 2 (see exhibit 6–5 of DEA). The majority of these (51) occur within the uppermost watershed unit, which includes a large, but unknown number of CAFOS located upstream of Optima Reservoir. The CAFOs located upstream of Optima Reservoir would not be subject to section 7 consultation requirements because the reach is unoccupied and does not contain any essential habitat. Consequently, we expect the benefit of including this area in critical habitat would be minimal due to the small number of CAFOs within Unit 2.

As noted in the environmental assessment, oil and gas production and transmission is an important activity in Units 2 and 4, with production exceeding 5 million barrels of oil in Unit 2 and 4 million barrels in Unit 4. Natural gas production exceeded 209 million Mcf (thousand cubic ft) in Unit 2 and 4 million Mcf in Unit 4. Some 126 informal section 7 consultations involving oil and gas production and transmission actions have been conducted since the species was listed in 1998. To date, no oil and gas or pipeline projects have resulted in formal consultations involving the Arkansas River shiner. However, exclusion of Units 2 and 4 from critical habitat designation would eliminate consideration of potential effects of oil and gas production and pipeline projects having a Federal nexus on critical habitat. Oil and gas drilling operations typically result in removal of all vegetation prior to initiation of drilling activities. Such vegetation removal can have short-term adverse impacts due to erosion of bare soil. However, oil and gas drilling operations are required to utilize BMPs designed to reduce or eliminate erosion. Once drilling operations are complete, the sites are then revegetated in accordance with the landowners wishes. When conducted in accordance with existing regulations, oil and gas drilling operations should have minimal long-term impacts on Arkansas River shiner habitat. Because substrates in the Beaver/North Canadian and Arkansas rivers are predominantly sand, pipeline trenching activities tend not to have lasting impacts on the stream bed. The stream bed generally will return to preexisting conditions following an occurrence of bankfull discharge.

Transportation activities in Units 2 and 4 consist largely of Federal or State highway or railway line crossings over the Beaver/North Canadian and Arkansas River, respectively. Collectively the two units have 21 Federal or State highway or railway line crossings. Exclusion of Units 2 and 4 would eliminate consideration of potential effects of transportation related actions on critical habitat. As stated in the environmental assessment, critical habitat considerations in section 7 consultations are not likely to result in substantial changes, modifications or additional costs to Federal transportation actions in Units 2 or 4. However, there would be no section 7 trigger under the destruction or adverse modification standard for Arkansas River shiner critical habitat in these units. Since 1999, we have conducted 10 consultations on transportation projects which were located in critical habitat. Of those 10, four were formal consultations, one of which is ongoing. None of the consultations on those projects reached the destruction or adverse modification threshold and none of those formal consultations occurred in Units 2 or 4. While bridge and railroad construction projects can result in substantial disturbance within the project site, almost all of these impacts are anticipated to be of short duration. As indicated above, the stream beds in these two units are predominantly sand. Streamflows equivalent to bankfull discharge, due to bed load movement, generally result in restoration of the streambed to preexisting conditions. Although the placement of piers and support columns associated with bridge projects permanently eliminates habitat once the piers are in place, it is not likely that

placement of such piers will reach the destruction or adverse modification threshold.

There are no known recreational activities involving a Federal nexus within either Unit 2 or Unit 4. Because of the lack of Federal involvement in recreational activities, designation of critical habitat is not likely to provide any benefits to species conservation with respect to such activities within either the Beaver/North Canadian or Cimarron River.

As discussed above, we expect that little additional educational benefits would be derived from including these two units as critical habitat. The additional educational benefits that might arise from critical habitat designation are largely accomplished through the multiple notice and comments which accompanied the development of this and prior critical habitat designations.

(2) Benefits of Exclusion

As stated above, recovery activities for the Arkansas River shiner likely will include augmenting and reestablishing Arkansas River shiner populations in the Beaver/North Canadian River and/or the Arkansas River. We believe that the best way to achieve this objective will be to use the authorities under section 10(j) of the Act to reestablish experimental populations of Arkansas River shiner within additional areas of its historic range. We believe that designation of the area to be repopulated using section 10(j) of the Act is the appropriate tool to utilize in future restoration efforts. An overview of the process to establish an experimental population under section 10(j) of the Act is described below.

Section 10(j) of the Act enables us to designate certain populations of federally listed species that are released into the wild as ''experimental.'' The circumstances under which this designation can be applied are the following: (1) The population is geographically separate from nonexperimental populations of the same species (e.g., the population is reintroduced outside the species' current range but within its probable historic range); and (2) we determine that the release will further the conservation of the species. Section 10(j) is designed to increase our flexibility in managing an experimental population by allowing us to treat the population as threatened, regardless of the status of the species elsewhere in its range. In situations where we have experimental populations, portions of the statutory section 9 prohibitions (*e.g.*, harm, harass, capture) that apply to all endangered species and most threatened species may no longer apply, and a special rule can be developed that contains the specific prohibitions and exceptions necessary and appropriate to conserve that species. This flexibility allows us to manage the experimental population in a manner that will ensure that current and future land, water, or air uses and activities will not be unnecessarily restricted and that the population can be managed for recovery purposes.

When we designate a population as experimental, section 10(j) of the Act requires that we determine whether that population is either essential or nonessential to the continued existence of the species, on the basis of the best available information. Nonessential experimental populations located outside National Wildlife Refuge System or National Park System lands are treated, for the purposes of section 7 of the Act, as if they are proposed for listing. Thus, for nonessential experimental populations, only two provisions of section 7 would apply outside National Wildlife Refuge System and National Park System lands: section 7(a)(1), which requires all Federal agencies to use their authorities to conserve listed species, and section 7(a)(4), which requires Federal agencies to informally confer with us on actions that are likely to jeopardize the continued existence of a proposed species. Section 7(a)(2) of the Act, which requires Federal agencies to ensure that their activities are not likely to jeopardize the continued existence of a listed species, would not apply except on National Wildlife Refuge System and National Park System lands. Experimental populations determined to be ''essential'' to the survival of the species would remain subject to the consultation provisions of section 7(a)(2) of the Act.

In order to establish an experimental population, we must issue a proposed regulation and consider public comments on the proposed rule prior to publishing a final regulation. In addition, we must comply with NEPA. Also, our regulations require that, to the extent practicable, a regulation issued under section 10(j) of the Act represent an agreement between us, the affected State and Federal agencies, and persons holding any interest in land that may be affected by the establishment of the experimental population (see 50 CFR 17.81(d)).

The flexibility gained by establishment of an experimental population through section 10(j) would be of little value if a designation of critical habitat overlaps it. This is because Federal agencies would still be required to consult with us on any actions that may adversely modify critical habitat. In effect, the flexibility gained from section 10(j) would be rendered useless by the designation of critical habitat. In fact, section 10(j)(2)(C)(ii) of the Act states that critical habitat shall not be designated under the Act for any experimental population determined to be not essential to the continued existence of a species.

We strongly believe that, in order to facilitate recovery for the Arkansas River shiner, we would need the flexibility provided for in section 10(j) of the Act to help ensure the success of augmenting and reestablishing Arkansas River Shiner populations in the Beaver/North Canadian River and/or the Arkansas River. Use of section 10(j) is meant to encourage local cooperation through management flexibility. Because critical habitat is often viewed negatively by the public, we believe it is important for recovery of this species that we have the support of the public when we develop and implement a recovery plan for the Arkansas River shiner. It is critical to the recovery of the Arkansas River Shiner that we reestablish the species in areas outside of its current occupied range.

(3) Benefits of Exclusion Outweigh the Benefits of Inclusion

We believe the Beaver/North Canadian River in Oklahoma and the Arkansas River in Kansas offer the greatest potential for repatriating the species within an area of its historic range and that the reaches encompassed by Units 2 and 4 have the greatest potential for the development of an experimental population under section 10(j) of the Act. In order for a reintroduction to be successful, the support of local stakeholders, including the States of Oklahoma and Kansas, private landowners, and other potentially affected entities, is crucial. The management or regulatory flexibility provided by the establishment of a nonessential experimental population under section 10(j) of the Act would enhance recovery opportunities for the Arkansas River shiner. Exclusion allows us to utilize our flexibility to enhance the partnership efforts focused on long-term recovery of the Arkansas River shiner within these reaches and encourages other stakeholders to become a part of this cooperative effort. Inclusion of these two units would only allow us to address relatively short-term habitat alterations that generally do not reach the destruction or adverse modification

threshold. In light of this, we find that significant benefits result from excluding these units from designation of critical habitat.

(4) Exclusion Will Not Result in Extinction of the Species

We believe that exclusion of these lands will not result in extinction of the species, as they are considered unoccupied habitat based on the most recent information available to us. Designating critical habitat in the Beaver/North Canadian River or Arkansas River would not reduce the likelihood of extinction of the species from occupied reaches. Critical habitat designation is not a process to reestablish additional populations within areas outside of the current known distribution. On the contrary, reestablishing the Arkansas River shiner to formerly occupied reaches would reduce the likelihood of extinction by ensuring several viable populations exist throughout the former range of the species.

Unit 1a

As discussed in the ''Summary of Changes from the Proposed Rule'' section above, we have determined that all habitat in the Canadian River upstream of Lake Meredith to near Ute Reservoir in New Mexico (Unit 1a) will not be designated as critical habitat in this final rule. We have reached this determination because we believe the benefits of excluding these units from this final critical habitat designation outweigh the benefits of designating the units as critical habitat.

For several months we have been assisting the CRMWA and other partners in the development of a management plan/program for the Arkansas River shiner within this unit. A final approved version of the CRMWA Plan was provided to us during the second comment period. The following entities signed a Memorandum of Understanding (Planning Agreement) to govern the implementation of the CRMWA Plan: Canadian River Municipal Water Authority, New Mexico Interstate Stream Commission, Texas Parks and Wildlife Department, Texas Natural Resources Conservation Service, New Mexico Natural Resources Conservation Service, National Park Service, Oklahoma Farm Bureau, Texas Off Roaders Association, and U.S. Fish and Wildlife Service-Southwest Region. Other entities, such as the Texas Department of Transportation and New Mexico Department of Agriculture also submitted letters in support of the CRMWA Plan.

The overall goal of the CRMWA Plan is to maintain and enhance habitat integrity within this reach. The primary mechanisms to accomplish this goal are: the removal of invasive plant species, such as salt cedar, that reduce the amount of water available to support stream flow and to encourage the implementation of conservation programs that provide for preservation and protection of riparian zones. The plan includes a population monitoring and a public outreach/education component. The plan will reduce threats to the PCEs for Arkansas River shiner by maintaining habitat quality through control of invasive plants, ensuring seepage flows from Ute Dam continue, managing the amount and timing of releases from Ute Reservoir to benefit spawning conditions, and encouraging implementation of appropriate erosion control measures in the riparian zones. The plan commits to working with the off-road vehicle industry to minimize impacts from these activities on Arkansas River shiner habitat, particularly during the critical summer low flow conditions.

The CRMWA Plan clearly provides conservation benefits to the species. A number of entities have signed the plan demonstrating their willingness to fund and implement the actions presented in the plan. Several efforts related to control of non-native salt cedar have already been initiated. For example, the State of New Mexico has initiated a Non-native Phreatophyte Eradication Control Program targeting the control of salt cedar growth in the tributaries and mainstem of the Canadian River. Funds have already been expended to treat 1,407 hectares (3,476 acres) in Colfax, Mora, and Harding Counties at a cost of $800,000. The total program proposed for the Canadian River Basin in New Mexico involves treatment of some 12,843 hectares (ha, 31,734 acres).

Within the upper Canadian River watershed of Texas, the CRMWA has initiated a program to provide financial assistance to landowners, using the continuous sign-up provisions of the Conservation Reserve Program (CRP), for treatment of salt cedar infestations. In 2004, the CRMWA facilitated the treatment of 346 ha (855 acres (ac)) downstream of Ute Reservoir. To date 11 landowners have signed agreements to treat salt cedar on areas under their ownership totaling some 847 ha (2,094 ac). Contracts for an additional 1,295 ha (3,200 ac) of salt cedar downstream of Ute Reservoir remains to be signed. Initial treatment of these areas are expected to be complete by 2007.

Control of phreatophytes (i.e., a deep rooted plant that obtains water from a permanent source such as groundwater) like salt cedar can free additional water that, with appropriate management, can provide for the habitat needs of the Arkansas River shiner. Salt cedar has been found to utilize as much as 7,398 cubic meters (six ac-ft) of water for each 0.4 ha (1 ac) of heavily infested growth (Mooney and Hobbs 2000). Considering large areas (e.g., thousands of acres) of the Canadian River basin have been invaded by these shrubs, control of these plants could release significant quantities of water that would improve stream flow conditions and provide benefits to the Arkansas River shiner.

Additionally, streamflow management, combined with control of salt cedar, can retard the channel narrowing that often occurs following impoundment and subsequent reductions in streamflow. Under natural flood regimes, frequent bank to bank flooding helped maintain wide, braided stream channels preferred by Arkansas River shiner. However, as flood regimes were altered over time by impoundments, the reduced flows often facilitated the encroachment of woody vegetation into formerly unvegetated portions of the stream channel. Once established, this woody vegetation may become resistant to the influence of flood flows, particularly when the duration and magnitude of the flood flows are diminished. The result is a modified stream channel that is much narrower than that which previously existed prior to impoundment. The overall outcome is a reduction in the amount of suitable Arkansas River shiner habitat. When releases are required from Ute Reservoir in adherence to the Canadian River Compact, CRMWA coordinates with us and other partners to seek releases that would be beneficial to the Arkansas River shiner. Because an increase in streamflow is known to trigger spawning in Arkansas River shiners, releases from Ute Reservoir during the June through August spawning period would likely encourage and sustain spawning efforts. Such releases, although infrequent, when made in concert with salt cedar control efforts are anticipated to further enhance the quality of habitat for the Arkansas River shiner.

(1) Benefits of Inclusion

As noted above, the primary regulatory benefit of any designated critical habitat is that federally funded or authorized activities in such habitat require consultation pursuant to section 7 of the Act. Consultation in this unit could be triggered by federal actions that affect the shiner. The potential for

federal actions to affect the shiner are discussed below.

The environmental assessment found that relatively little groundwater use occurs in Unit 1a as most of the adjacent area is used as rangeland for livestock grazing. With respect to Lake Meredith, located on the Canadian River near the downstream limit of proposed critical habitat in Unit 1a, there is a possibility for a Federal nexus with the U.S. Army Corps of Engineers for flood control operations when the level of the lake is at or above an elevation of 2,941.3 ft are under the discretion of the U. S. Army Corps of Engineers. A portion of proposed Unit 1a extends into the flood pool. If pool levels reach this elevation, flood storage operation would be subject to section 7 consultation. However, the highest pool level recorded over the 40 year history of the project was 2,914.8 ft, which occurred in 1973. The downstream end of Unit 1a, the mouth of Coetas Creek, has an elevation of 2,950 ft and has never been inundated by Lake Meredith. Unless rainfall patterns change considerably, we believe it is unlikely that pool levels in Lake Meredith will inundate any portion of Unit 1a or trigger section 7 consultation.

As discussed above, a program of salt cedar control is currently being implemented in Unit 1a (Canadian River from Ute Dam to Lake Meredith). Salt cedar removal and control efforts in this unit are being conducted in order to achieve substantial water savings in the basin, as well as for the benefit of Arkansas River shiner and other species. Ongoing salt cedar control is funded by Federal entities and therefore triggers consultation pursuant to section 7. It is not expected, however, that consultations on salt cedar control would result in any substantial changes to projects based on their impacts on critical habitat, as these projects are beneficial to shiners.

We conclude that a designation of critical habitat in Unit 1a with respect to water resources is not likely to provide a benefit since there is limited Federal involvement in water resource projects in this area. In addition, salt cedar control programs would not likely reach the threshold of adverse modification since they can provide benefits to Arkansas River shiner habitat.

With regard to agricultural practices in Unit 1a, activities include livestock production on native rangeland and irrigated crop land. As noted in the environmental assessment, there have not been any section 7 consultations on cultivation or irrigation activities and there have only been eight informal consultations on livestock grazing since the species was listed in 1998. The environmental assessment concludes that the exclusion of Unit 1a from critical habitat would eliminate consideration of potential effects of Federal agriculture-related actions on critical habitat, which would not be considered under the jeopardy standard. However, no change is expected because agricultural activities in the vicinity of the Canadian River are conducted almost entirely on private lands with little or no Federal involvement and are therefore not subject to section 7 consultation.

Oil and gas production and transmission is an important activity in Unit 1a, with production exceeding 248,000 barrels of oil and 19 million Mcf of natural gas. As stated in the environmental assessment, there have been about 126 informal section 7 consultations on oil and gas production and transmission since the species was listed in 1998. The majority of those consultations occurred in Texas and primarily involved new wells and pipeline construction and maintenance. Benefits from critical habitat designation may occur to the species for these projects, if they are found to adversely modify critical habitat. However, it is unlikely that would be the case, since recommendations on these action normally would include only measures to minimize or prevent the likelihood of pollutants entering surface waters inhabited by the species. With regard to pipeline crossings of stream channels occupied by the species, we have recommended directional boring of pipelines under the stream bed in order to protect the Arkansas River shiner and its habitat.

Transportation activities in Unit 1a consist largely of Federal or State highway or railway line crossings over the Canadian River. However, Unit 1a has only two U.S. Highway crossings and three railroad crossings, the fewest number of any of the units. Because bridge construction projects often involve stream channel alteration, bridge construction projects have been the subject of three of the four formal consultations involving the species. We would likely required revegetation of disturbed areas following completion of construction activities. The environmental assessment concludes that the exclusion of Unit 1a from critical habitat would eliminate consideration of potential effects of Federal transportation related actions on critical habitat, which would not be considered under the jeopardy standard. Designation of critical habitat might result in the identification of additional discretionary conservation measures related to transportation projects which might not be identified if Unit 1a is excluded from the designation. However, the benefit should be relatively insignificant considering the limited number of transportation related projects in this unit and the fact that Unit 1a is occupied by the Arkansas River shiner, thus section 7 consultation and analysis of effects to habitat already occur and we would likely continue to make the same or similar discretionary recommendations as noted above.

Recreational activities involving a Federal nexus are rare within any of the units and occur primarily within Unit 1a. Off-road vehicle (ORV) use is allowed in two areas within the Lake Meredith National Recreation Area: The Big Blue Creek and the Rosita ORV areas. The Big Blue Creek ORV area is not located within Unit 1a and should not be influenced by the designation of critical habitat. However, the National Park Service is contemplating restrictions within the Rosita ORV area to prevent potential adverse impacts to the Arkansas River shiner under the jeopardy standard. The primary adverse impacts involve use of the river channel during the spawning season and during summertime low-flow periods when fish are concentrated in isolated pools. The Arkansas River shiner occurs within the Rosita ORV; therefore, this restriction is being considered regardless of the critical habitat designation and thus, we do not believe that critical habitat will provide additional benefit to this area.

As discussed above, we believe that the additional educational benefits which might arise from critical habitat designation are largely accomplished through the multiple notice and comments which accompanied the development of this regulation, as evidenced by the various agencies and community members who have come together in order to develop the CRMWA Plan.

(2) Benefits of Exclusion

The economic analysis conducted for this proposal estimates that the costs associated with designating this unit of the proposed critical habitat would be about $2.5 to $2.7 million annually. Almost all of this cost is related to any water releases and/or modified operation from Ute Reservoir required for conservation of the Arkansas River shiner. Excluding this reach could allow some or all of these costs to be avoided. However, considering that this area is currently occupied by the species, consultation for activities which might adversely impact the species, including

possible habitat modification, would be required even without the critical habitat designation, thus the possible economic benefits might not materialize.

Another benefit of excluding Unit 1a from the critical habitat designation includes relieving additional regulatory burden and costs associated with the preparation of portions of section 7 documents related to critical habitat. While the cost of adding these additional sections to assessments and consultations is relatively minor, there could be delays which can generate real costs to some project proponents. However, because critical habitat is only proposed for occupied areas already subject to section 7 consultation and a jeopardy analysis, it is anticipated this reduction would be minimal.

The CRMWA Plan provides conservation benefits to the species through implementation of on-the-ground actions undertaken by partnership effort and promotes an ecosystem approach to conservation. The plan provides assurances that the conservation efforts will be implemented and helps ensure the long-term conservation of the Arkansas River shiner. The stakeholders have demonstrated a willingness to cooperatively facilitate recovery of the Arkansas River shiner. By excluding this area from the designation, we maintain this cooperative spirit and encourage future partnerships with similarly situated industry, communities, and landowners within this reach. Recovery of listed species is often achieved through partnerships and voluntary actions. Such cooperative efforts are expected to lead to greater conservation success than would be achieved strictly through regulatory approaches, such as critical habitat designation or multiple section 7 consultations. Collaborative approaches built upon a foundation of mutual trust and understanding are often the most successful. Excluding this area from critical habitat would promote and honor that trust, reinforcing their commitment to Arkansas River shiner conservation.

(3) Benefits of Exclusion Outweigh the Benefits of Inclusion

We find that the benefits of designating critical habitat for the Arkansas River shiner in Unit 1a are small in comparison to the benefits of exclusion. Exclusion would enhance the partnership efforts focused on recovery of the Arkansas River shiner within this reach and encourage other stakeholders to become a part of this cooperative effort. Excluding this area also would reduce some of the administrative costs during consultation pursuant to section 7 of the Act.

(4) Exclusion Will Not Result in Extinction of the Species

We believe that exclusion of these lands from the critical habitat designation will not result in extinction of the species. Because this unit is occupied by the Arkansas River shiner which is protected from take under section 9 of the Act, any actions that might adversely affect the Arkansas River shiner, regardless of whether a Federal nexus is present, must undergo a consultation with the Service under the requirements of section 7 of the Act or receive a permit from us under section 10 of the Act. This exclusion leaves these protections unchanged from those which would exist if the excluded areas were designated as critical habitat. In addition, the CRMWA Plan and partnership address specific threats, such as invasion by salt cedar and impacts from ORV activities within the unit, that cannot be adequately addressed by the section 7 consultation process. This is because section 7 consultations for critical habitat only consider listed species in the project area evaluated and Federal agencies are only committed to prevent adverse modification to critical habitat caused by the particular project and are not committed to provide conservation or long-term benefits to areas not affected by the proposed project. Furthermore, the willingness of the CRMWA to secure releases from Ute Reservoir, although infrequent, in a manner that maximizes benefits to Arkansas River shiner spawning efforts likely would not occur outside this partnership. Such efforts provide greater conservation benefit than would result for designation as critical habitat since the reservoir is not federally operated and, as noted above, does not trigger consultation. There is no reason to believe that these exclusions would result in extinction of the species.

Unit 1b

As discussed in the ''Summary of Changes from the Proposed Rule'' section above, we have determined that habitat in the Canadian River downstream of the Oklahoma state line to near Thomas, Oklahoma (a portion of Unit 1b), will be excluded from the final designation of critical habitat. We have reached this determination because we believe the benefits of excluding this portion of Unit 1b from this final critical habitat designation outweigh the benefits of designating the units as critical habitat.

During the second comment period, we received a draft management plan from the Oklahoma Farm Bureau Legal Foundation (OFB Plan) for the Arkansas River shiner within the entirety of Units 1b and 3. This plan was prepared by a coalition of state, industry, and Federal conservation interests in Kansas, Oklahoma, and Texas. While the OFB Plan included several actions that work towards conservation of the Arkansas River shiner, the plan was still in draft form and implementation had not begun. Accordingly, the Service was unable to accept the benefits of the conservation plan in lieu of critical habitat. We understand it is the intention of the coalition to finalize and implement the plan. Once the OFB Plan has been finalized and is being implemented, we will review the need to have designated critical habitat for the Arkansas River shiner in the subject areas. If we find this conservation plan provides sufficient benefits to the species and the habitat, the Service will propose to exclude appropriate areas from the designation.

A portion of the OFB Plan referred to an ongoing program to control salt cedar within Dewey and Ellis counties of Oklahoma. Funding for this program has been secured through a Private Stewardship Grant in the amount of about $160,000. The goal of this program is to work with private landowners to control invasive plant species, which should increase stream flow in this reach of the Canadian River, and thus provides a clear conservation benefit to the Arkansas River shiner. Excluding these lands pursuant to section 4(b)(2) is based upon the partnerships that we developed with the Oklahoma Farm Bureau and other stakeholders and the conservation benefit being provided to this area via the grant issued to private landowners to control invasive species.

(1) Benefits of Inclusion

As noted above, the primary regulatory benefit of any designated critical habitat is that federally funded or authorized activities in such habitat require consultation pursuant to section 7 of the Act. Such consultation would ensure that adequate protection is provided to avoid destruction or adverse modification of critical habitat. However, the area is predominantly rural and there is little or no Federal involvement throughout much of this reach. Therefore, very few actions would be subject to section 7 consultation.

Some limited groundwater use occurs in this reach but no major Federal water resource projects exist or have been

proposed for this reach. As indicated for Unit 1a, salt cedar control programs would not be expected to reach the threshold of adverse modification because they generally provide benefits to Arkansas River shiner habitat. Agricultural activities in this reach are conducted almost entirely on private lands with little or no Federal involvement and would rarely be subject to section 7 consultation. Some oil and gas production and transmission occurs within the counties encompassed by this reach, with production exceeding 2.8 million barrels of oil and 340 million Mcf of natural gas. However, very little production occurs in close proximity to the river. There are only five U.S. and State Highway crossings and three railroad crossings, including the crossings at Canadian, Texas and Thomas, Oklahoma. Federal recreational opportunities, with the exception of public hunting and fishing, which would not impact critical habitat, do not exist in this reach.

As discussed above, we believe that the additional educational benefits which might arise from critical habitat designation are largely accomplished through the multiple notice and comments which accompanied the development of this regulation, as evidenced by the various agencies and community members who have come together in order to develop and support the OFB Plan.

(2) Benefits of Exclusion

Excluding the 204 km (127 mi) long reach will enhance our ability to work with stakeholders in the spirit of cooperation and partnership. The conservation program for this area will be conducted under a Private Stewardship Grant that provides conservation benefits to the species within this reach through implementation of on-the-ground actions undertaken by partnership efforts. This invasive control program should be effective and there is a high level of certainty that the conservation efforts will be implemented since funding is secured through a grant. Such efforts help ensure the long term conservation of the Arkansas River shiner. The stakeholders have demonstrated a willingness to cooperatively facilitate recovery of the Arkansas River shiner. By excluding this area from the designation, we maintain this cooperative spirit and encourage future partnerships with similarly situated industry, communities, and landowners within this reach and perhaps the remainder of Units 1b and 3. Recovery of listed species is often achieved through partnerships and voluntary actions. Such cooperative efforts are expected to lead to greater conservation success than would be achieved strictly through regulatory approaches, such as critical habitat designation or multiple section 7 consultations. Collaborative approaches built upon a foundation of mutual trust and understanding are often the most successful. Excluding this area from critical habitat would promote and honor that trust, reinforcing their commitment to Arkansas River shiner conservation.

Excluding these privately owned lands from critical habitat may, by way of example, provide positive legal, economic, and other social incentives to other non-Federal landowners having lands that could contribute to listed species recovery if voluntary conservation measures, such as salt cedar control and similar activities, are implemented.

Another benefit of excluding this reach of Unit 1b from the critical habitat designation includes relieving additional regulatory burden and costs associated with the preparation of portions of section 7 documents related to critical habitat. While the cost of adding these additional sections to assessments and consultations is relatively minor, there could be delays which can generate real costs to some project proponents. Because critical habitat is only proposed for occupied areas already subject to section 7 consultation and a jeopardy analysis, it is anticipated this reduction would be minimal.

(3) Benefits of Exclusion Outweigh the Benefits of Inclusion

We find that the benefits of designating critical habitat for the Arkansas River shiner in this reach of Unit 1b are small in comparison to the benefits of exclusion. Exclusion would enhance the partnership efforts focused on recovery of the Arkansas River shiner within this reach and encourage other stakeholders to become a part of this cooperative effort. Excluding this area also would reduce some of the administrative costs during consultation pursuant to section 7 of the Act.

(4) Exclusion Will Not Result in Extinction of the Species

We believe that exclusion of these lands from the critical habitat designation will not result in extinction of the species. Because this unit is occupied by the Arkansas River shiner which is protected from take under section 9 of the Act, any actions which might adversely affect the Arkansas River shiner, regardless of whether a Federal nexus is present, must undergo a consultation with the Service under the requirements of section 7 of the Act or receive a permit from us under section 10 of the Act. The exclusion leaves these protections unchanged from those which would exist if the excluded areas were designated as critical habitat. In addition, this partnership provides opportunities for improved streamflow and habitat conditions over a large, unfragmented stream reach which would not otherwise be available. Considering a Federal nexus for water resource projects and management does not exist within this reach, avenues to secure conservation benefits through section 7 consultation are rare. The water management benefits provided through this partnership provide greater conservation benefit than would result from designation as critical habitat. There is accordingly no reason to believe that these exclusions would result in extinction of the species.

Economic Analysis

Section 4(b)(2) of the Act requires us to designate critical habitat on the basis of the best scientific and commercial information available, and to consider the economic and other relevant impacts of designating a particular area as critical habitat. We may exclude areas from critical habitat upon a determination that the benefits of such exclusions outweigh the benefits of specifying such areas as critical habitat. We cannot exclude such areas from critical habitat when such exclusion will result in the extinction of the species concerned.

Following the publication of the proposed critical habitat designation, we conducted an economic analysis to estimate potential economic effects of the proposed Arkansas River shiner critical habitat designation (Industrial Economics 2004). The draft analysis was made available for public review on August 1, 2005 (70 FR 44078). We accepted comments on the draft analysis until August 31, 2005.

The primary purpose of the economic analysis is to estimate the potential economic impacts associated with the designation of critical habitat for the Arkansas River shiner. This information is intended to assist the Secretary in making decisions about whether the benefits of excluding particular areas from the designation outweigh the benefits of including those areas in the designation. This economic analysis considers the economic efficiency effects that may result from the designation, including habitat protections that may be co-extensive

with the listing of the species. It also addresses distribution of impacts, including an assessment of the potential effects on small entities and the energy industry. This information can be used by the Secretary to assess whether the effects of the designation might unduly burden a particular group or economic sector.

This analysis focuses on the direct and indirect costs of the rule. However, economic impacts to land use activities can exist in the absence of critical habitat. These impacts may result from, for example, local zoning laws, State and natural resource laws, and enforceable management plans and best management practices applied by other State and Federal agencies. Economic impacts that result from these types of protections are not included in the analysis as they are considered to be part of the regulatory and policy baseline. The total conservation costs from reported efficiency effects associated with the designation of critical habitat in this rule are approximately $17 to $36 million on an annualized basis.

A copy of the final economic analysis and description of the exclusion process with supporting documents are included in our administrative record and may be obtained by contacting the Oklahoma Field Office (see **ADDRESSES** section).

Required Determinations

Regulatory Planning and Review

In accordance with Executive Order 12866, this document is a significant rule in that it may raise novel legal and policy issues, but will not have an annual effect on the economy of $100 million or more or affect the economy in a material way. Due to the tight timeline for publication in the **Federal Register**, the Office of Management and Budget (OMB) has not formally reviewed this rule. As explained above, we prepared an economic analysis of this action. We used this analysis to meet the requirement of section 4(b)(2) of the Act to determine the economic consequences of designating the specific areas as critical habitat. We also used this analysis to determine whether to exclude any area from critical habitat pursuant to section 4(b)(2), if we determined that the benefits of exclusion outweigh the benefits of including an area as critical habitat, unless we determine, based on the best scientific and commercial data available, that the failure to designate such area as critical habitat will result in the extinction of the species.

Regulatory Flexibility Act (5 U.S.C. 601 et seq.)

Under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*, as amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA) of 1996), whenever an agency is required to publish a notice of rulemaking for any proposed or final rule, it must prepare and make available for public comment a regulatory flexibility analysis that describes the effect of the rule on small entities (*i.e.*, small businesses, small organizations, and small government jurisdictions). However, no regulatory flexibility analysis is required if the head of an agency certifies the rule will not have a significant economic impact on a substantial number of small entities. The SBREFA amended the Regulatory Flexibility Act (RFA) to require Federal agencies to provide a statement of factual basis for certifying that the rule will not have a significant economic impact on a substantial number of small entities. The SBREFA also amended the RFA to require a certification statement. In our proposed rule, we withheld our determination of whether this designation would result in a significant effect as defined under SBREFA until we completed our draft economic analysis of the proposed designation so that we would have the factual basis for our determination.

According to the Small Business Administration (SBA), small entities include small organizations, such as independent nonprofit organizations, and small governmental jurisdictions, including school boards and city and town governments that serve fewer than 50,000 residents, as well as small businesses (13 CFR 121.201). Small businesses include manufacturing and mining concerns with fewer than 500 employees, wholesale trade entities with fewer than 100 employees, retail and service businesses with less than $5 million in annual sales, general and heavy construction businesses with less than $27.5 million in annual business, special trade contractors doing less than $11.5 million in annual business, and agricultural businesses with annual sales less than $750,000. To determine if potential economic impacts to these small entities are significant, we considered the types of activities that might trigger regulatory impacts under this designation as well as types of project modifications that may result. In general, the term significant economic impact is meant to apply to a typical small business firm's business operations.

To determine if this designation of critical habitat for the Arkansas River shiner would affect a substantial number of small entities, we considered the number of small entities affected within particular types of economic activities (*e.g.*, concentrated animal feeding operations, oil and gas, agriculture, livestock grazing, and recreation). We considered each industry or category individually to determine if certification is appropriate. In estimating the numbers of small entities potentially affected, we also considered whether their activities have any Federal involvement; some kinds of activities are unlikely to have any Federal involvement and so will not be affected by the designation of critical habitat. Designation of critical habitat only affects activities conducted, funded, permitted, or authorized by Federal agencies; non-Federal activities are not affected by the designation.

When this critical habitat designation is effective, Federal agencies must consult with us if their activities may affect designated critical habitat. Consultations to avoid the destruction or adverse modification of critical habitat would be incorporated into the existing consultation process.

In our draft economic analysis of this proposed designation, we evaluated the potential economic effects on small business entities and small governments resulting from conservation actions related to the listing of this species and proposed designation of its critical habitat. We evaluated small business entities in five categories: concentrated animal feeding operations, oil and gas, agriculture, livestock grazing, and recreation. The following summary of the information contained in Appendix A of the draft economic analysis provides the basis for our determination.

Concentrated Animal Feeding Operations (CAFOs)

Arkansas River shiner conservation activities have the potential to affect approximately 67 of the 4,125 small animal feeding businesses (roughly 1.6 percent) located within States that contain proposed shiner habitat and impacted CAFOs (Oklahoma, Texas, and Kansas). The watersheds with highest potential impacts to small CAFOs are the Lower Canadian (Unit 1b) and the Lower Cimarron-Skeleton (Unit 3). Impacts are possible in the form of additional compliance costs related to a number of potential requirements, including increased storage capacity in wastewater retention structures and various monitoring and testing activities. These compliance costs may lead to financial stress at up to 33 facilities. Upper-bound estimates of

potential impacts result from conservative assumptions (that is, assumptions that are intended to overstate rather than understate costs) regarding the number and type of project modifications required of CAFO facilities as summarized in Section 6 of the draft economic analysis.

Oil and Gas Production Activities

Project modifications to oil and gas activities resulting from Arkansas River shiner conservation activities will have minimal effects on small oil and gas and pipeline businesses in counties that contain proposed Arkansas River shiner habitat. Impacts are expected to be limited to additional costs of compliance for oil and gas projects. Assuming that each potentially impacted well and pipeline represent individual well and pipeline businesses, annual compliance costs are roughly 1.1 percent of estimated 1997 revenues for potentially impacted small oil and gas well production businesses and 0.12 percent of estimated 1997 revenues for potentially impacted small pipeline businesses in these counties. As noted in the draft economic analysis, 1997 revenue data is the most current available data from the United States Economic Census.

Agriculture

While Arkansas River shiner conservation activities have not impacted private crop production since the listing of the species in 1998, the draft economic analysis considers that farmers may make decisions that lead to reductions in crop production within proposed critical habitat. Section 7 of the draft economic analysis presents a scenario in which farmers choose to retire agricultural land from production in order to avoid section 9 take of the species (''take'' means to harass, harm, pursue, or collect, or attempt to engage in any such conduct). The screening analysis estimates that up to 14 small farms in States that contain proposed Arkansas River shiner habitat could be impacted under this scenario. This represents a small percentage (less than one percent) of total farm operations in these States.

Livestock Grazing

Limitations on livestock grazing may impact ranchers in the region. As discussed in Section 7 of the draft economic analysis, Arkansas River shiner conservation activities could result in a reduction in the level of grazing effort within proposed Arkansas River shiner habitat on non-Federal lands. On non-Federal lands, however, impacts are uncertain, because maps describing the overlap of privately grazed lands and the proposed designation are not available (*i.e.*, that portion of each ranch which could be impacted by the designation). If each affected ranch is small, then approximately 20 to 43 ranches annually could experience losses in cattle grazing opportunities as a result of Arkansas River shiner conservation activities on non-Federal lands. This represents a small percentage (less than one percent for the upper-bound estimate) of beef cow operations in those States where habitat is proposed for designation.

Recreation

As detailed in Section 9 of the draft economic analysis, limitations on off road vehicle (ORV) use at the Rosita ORV area within Lake Meredith National Recreation Area in Hutchinson County, Texas, during the months of July to September may result in up to 23,299 lost visitor days annually. These lost visitor days represent 2.4 percent of the three-year average of total visitor trips to Lake Meredith National Recreation Area (2002 to 2004), and roughly 25 percent of annual ORV visitor trips to Rosita from 2000 to 2004. Recreation-related sales generated by small businesses in Hutchinson County, Texas, are estimated at $88.5 million. Thus, the total annual impact of reduced consumer expenditure ($897,00 to $1.3 million annually) is equivalent to 1.0 to 1.5 percent of small business revenues of affected industries in Hutchinson County. While small business impacts are likely to be minimal at the county level, some individual small businesses may experience greater impacts. However, data to identify which businesses will be affected or to estimate specific impacts to individual small businesses are not available. In addition, the entirety of Unit 1a, including Lake Meredith National Recreation Area, has been excluded from the final critical habitat designation, thus no impacts to small business would be expected in this area.

Based on this data, and the additional exclusions of units made in this final rulemaking, we have determined that this designation would not affect a substantial number of small businesses involved in concentrated animal feeding operations, oil and gas, agriculture, livestock grazing, and recreation. Further, we have determined that this designation also would not result in a significant effect to the annual sales of those small businesses impacted by this proposed designation. As such, we are certifying that this designation of critical habitat would not result in a significant economic impact on a substantial number of small entities.

Executive Order 13211

On May 18, 2001, the President issued Executive Order (E.O.) 13211 on regulations that significantly affect energy supply, distribution, and use. Executive Order 13211 requires agencies to prepare Statements of Energy Effects when undertaking certain actions. This final rule to designate critical habitat for the Arkansas River shiner is not expected to significantly affect energy supplies, distribution, or use. Appendix B of the draft economic analysis provides a detailed discussion and analysis of this determination. Specifically, three criteria were determined to be relevant to this analysis: (1) Reductions in crude oil supply in excess of 10,000 barrels per day (bbls); (2) reductions in natural gas production in excess of 25 million Mcf per year; and (3) increases in the cost of energy production in excess of one percent. The draft economic analysis determined that the oil and gas industry is not likely to experience ''a significant adverse effect'' as a result of Arkansas River shiner conservation activities. Therefore, this action is not a significant energy action and no Statement of Energy Effects is required.

Unfunded Mandates Reform Act (2 U.S.C. 1501 et seq.)

In accordance with the Unfunded Mandates Reform Act (2 U.S.C. 1501 *et seq.*), we make the following findings:

(a) This rule will not produce a Federal mandate. In general, a Federal mandate is a provision in legislation, statute or regulation that would impose an enforceable duty upon State, local, tribal governments, or the private sector and includes both ''Federal intergovernmental mandates'' and ''Federal private sector mandates.'' These terms are defined in 2 U.S.C. 658(5)–(7). ''Federal intergovernmental mandate'' includes a regulation that ''would impose an enforceable duty upon State, local, or tribal governments'' with two exceptions. It excludes ''a condition of Federal assistance.'' It also excludes ''a duty arising from participation in a voluntary Federal program,'' unless the regulation ''relates to a then-existing Federal program under which $500,000,000 or more is provided annually to State, local, and tribal governments under entitlement authority,'' if the provision would ''increase the stringency of conditions of assistance'' or ''place caps upon, or otherwise decrease, the Federal Government's responsibility to provide

funding,'' and the State, local, or tribal governments ''lack authority'' to adjust accordingly. At the time of enactment, these entitlement programs were: Medicaid; AFDC work programs; Child Nutrition; Food Stamps; Social Services Block Grants; Vocational Rehabilitation State Grants; Foster Care, Adoption Assistance, and Independent Living; Family Support Welfare Services; and Child Support Enforcement. ''Federal private sector mandate'' includes a regulation that ''would impose an enforceable duty upon the private sector, except (i) a condition of Federal assistance, or (ii) a duty arising from participation in a voluntary Federal program.''

The designation of critical habitat does not impose a legally binding duty on non-Federal government entities or private parties. Under the Act, the only regulatory effect is that Federal agencies must ensure that their actions do not destroy or adversely modify critical habitat under section 7. While non-Federal entities that receive Federal funding, assistance, or permits, or that otherwise require approval or authorization from a Federal agency for an action, may be indirectly impacted by the designation of critical habitat, the legally binding duty to avoid destruction or adverse modification of critical habitat rests squarely on the Federal agency. Furthermore, to the extent that non-Federal entities are indirectly impacted because they receive Federal assistance or participate in a voluntary Federal aid program, the Unfunded Mandates Reform Act would not apply; nor would critical habitat shift the costs of the large entitlement programs listed above onto State governments.

(b) The economic analysis discusses potential impacts of critical habitat designation for the Arkansas River shiner including administrative costs, water management activities, oil and gas activities, concentrated animal feeding operations, agriculture, and transportation. The analysis estimates that annual costs of the rule could range from $17 to $36 million per year. Oil and gas production, CAFOs, and water management activities are expected to experience the greatest economic impacts related to shiner conservation activities, in that order of relevant impact. Impacts on small governments are not anticipated, or they are anticipated to be passed through to consumers. For example, costs to CAFOs would be expected to be passed on to consumers in the form of price changes. Consequently, for the reasons discussed above, we do not believe that the designation of critical habitat for the Arkansas River shiner will significantly or uniquely affect small government entities. As such, a Small Government Agency Plan is not required.

Takings

In accordance with E.O. 12630 (''Government Actions and Interference with Constitutionally Protected Private Property Rights''), we have analyzed the potential takings implications of designating critical habitat for the Arkansas River shiner in a takings implications assessment. The takings implications assessment concludes that this proposed designation of critical habitat for the Arkansas River shiner does not pose significant takings implications.

Federalism

In accordance with E.O. 13132, this rule does not have significant Federalism effects. A Federalism assessment is not required. In keeping with Department of Interior and Department of Commerce policies, we requested information from, and coordinated development of, this final critical habitat designation with appropriate State resource agencies in Kansas, New Mexico, Oklahoma, and Texas. The designation of critical habitat in areas currently occupied by the Arkansas River shiner imposes no additional restrictions to those currently in place and, therefore, has little incremental impact on State and local governments and their activities. The designation may have some benefit to the States and local resource agencies in that the areas that contain the features essential to the conservation of the species are more clearly defined, and the primary constituent elements of the habitat necessary to the survival of the species are specifically identified. While making this definition and identification does not alter where and what federally sponsored activities may occur, it may assist local governments in long-range planning (rather than waiting for case-by-case section 7 consultations to occur).

Civil Justice Reform

In accordance with E.O. 12988, the Department of the Interior's Office of the Solicitor has determined that this rule does not unduly burden the judicial system and meets the requirements of sections 3(a) and 3(b)(2) of the Order. We are designating critical habitat in accordance with the provisions of the Endangered Species Act. This rule uses standard property descriptions and identifies the primary constituent elements within the designated areas to assist the public in understanding the habitat needs of the Arkansas River shiner.

Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.)

This rule does not contain new or revised information collection for which OMB approval is required under the Paperwork Reduction Act. This rule will not impose recordkeeping or reporting requirements on State or local governments, individuals, businesses, or organizations. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

National Environmental Policy Act

Our position is that, outside the Tenth Circuit, we do not need to prepare environmental analyses as defined by the NEPA in connection with designating critical habitat under the Endangered Species Act of 1973, as amended. We published a notice outlining our reasons for this determination in the **Federal Register** on October 25, 1983 (48 FR 49244). This assertion was upheld in the courts of the Ninth Circuit (*Douglas County* v. *Babbitt,* 48 F.3d 1495 (9th Cir. Ore. 1995), *cert. denied* 116 S. Ct. 698 (1996). However, when the range of the species includes States within the Tenth Circuit (the States of Colorado, Kansas, Nebraska, New Mexico, Oklahoma, Utah, and Wyoming), such as that of the Arkansas River shiner, pursuant to the Tenth Circuit ruling in *Catron County Board of Commissioners* v. *U.S. Fish and Wildlife Service,* 75 F.3d 1429 (10th Cir. 1996), we undertake a NEPA analysis for critical habitat designation. Accordingly, we completed an environmental assessment and finding of no significant impact on the designation of critical habitat for the Arkansas River shiner.

Government-to-Government Relationship With Tribes

In accordance with the President's memorandum of April 29, 1994, ''Government-to-Government Relations with Native American Tribal Governments'' (59 FR 22951), Executive Order 13175, Secretarial Order 3206, and the Department of the Interior's manual at 512 DM 2, we have coordinated with federally-recognized Tribes on a Government-to-Government basis. We attempted to carry out our responsibilities under the Act in a manner that harmonizes the Federal trust responsibility to Tribes and Tribal sovereignty while striving to ensure that Native American Tribes do not bear a disproportionate burden for the

conservation of listed species. This designation of critical habitat for the Arkansas River shiner includes tribal lands. Tribal lands within the designation primarily exist as scattered, fragmented tracts that are generally held privately by the individual tribal member or are held in trust for the tribe by the Bureau of Indian Affairs.

References Cited

A complete list of all references cited in this rulemaking is available upon request from the Field Supervisor, Oklahoma Ecological Services Office (see **ADDRESSES** section).

Author

The primary authors of this notice are the staff of the U.S. Fish and Wildlife Service.

List of Subjects in 50 CFR Part 17

Endangered and threatened species, Exports, Imports, Reporting and recordkeeping requirements, Transportation.

Regulation Promulgation

■ Accordingly, we amend part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations, as follows:

PART 17—[AMENDED]

■ 1. The authority citation for part 17 continues to read as follows:

Authority: 16 U.S.C. 1361–1407; 16 U.S.C. 1531–1544; 16 U.S.C. 4201–4205; Pub. L. 99–625, 100 Stat. 3500; unless otherwise noted.

■ 2. Amend § 17.95(e) by revising critical habitat for the Arkansas River Basin population of the Arkansas River shiner (*Notropis girardi*) to read as follows:

§ 17.95 Critical habitat—fish and wildlife.

* * * * *

(e) *Fishes.*

* * * * *

Arkansas River Shiner (*Notropis girardi*)

(1) Critical habitat units are depicted for Clark, Comanche, Meade, and Seward Counties, Kansas; and Beaver, Blaine, Caddo, Canadian, Cleveland, Custer, Grady, Harper, Hughes, Kingfisher, Logan, Major, McClain, McIntosh, Pittsburg, Pontotoc, Pottawatomie, Seminole, Woods and Woodward Counties, Oklahoma, on the maps and as described below.

(2) Critical habitat includes the stream channels within the identified stream reaches indicated on the map below, and includes a lateral distance of 91.4 m (300 ft) on each side of the stream width at bankfull discharge. Bankfull discharge is the flow at which water begins to leave the channel and move into the floodplain and generally occurs with a frequency of every 1 to 2 years.

(3) Within these areas, the primary constituent elements include, but are not limited to, those habitat components that are essential for the primary biological needs of foraging, sheltering, and reproduction. These elements include the following—(i) a natural, unregulated hydrologic regime complete with episodes of flood and drought or, if flows are modified or regulated, a hydrologic regime characterized by the duration, magnitude, and frequency of flow events capable of forming and maintaining channel and instream habitat necessary for particular Arkansas River shiner life-stages in appropriate seasons; (ii) a complex, braided channel with pool, riffle (shallow area in a streambed causing ripples), run, and backwater components that provide a suitable variety of depths and current velocities in appropriate seasons; (iii) a suitable unimpounded stretch of flowing water of sufficient length to allow hatching and development of the larvae; (iv) a river bed of predominantly sand, with some patches of gravel and cobble; (v) water quality characterized by low concentrations of contaminants and natural, daily and seasonally variable temperature, turbidity, conductivity, dissolved oxygen, and pH; (vi) suitable reaches of aquatic habitat, as defined by primary constituent elements (i) through (v) above, and adjacent riparian habitat sufficient to support an abundant terrestrial, semiaquatic, and aquatic invertebrate food base; and (vii) few or no predatory or competitive non-native fish species present.

(4) Developed areas, such as buildings, roads, bridges, parking lots, railroad tracks, other paved areas, and the lands that support these features are excluded from this designation. They are not designated as critical habitat and Federal actions limited to these areas would not trigger a section 7 consultation, unless they affect protected or restricted habitat and one or more of the primary constituent elements in adjacent critical habitat.

(5) Kansas (Sixth Principal Meridian (SPM)) and Oklahoma (Indian Meridian (IM)): Areas of land and water as follows (physical features were identified using USGS 7.5′ quadrangle maps; river reach distances were derived from digital data obtained from USGS National Atlas data set for river reaches, roads, and county boundaries.

(6) Critical habitat units for the Arkansas River shiner are described below.

(i) Unit 1b. Canadian River—approximately 396 km (246 mi), extending from the State Highway 33 bridge near Thomas, Oklahoma (IM T.15 N., R. 14 W., SW¼ SE¼ Sec. 15) downstream to Indian Nation Turnpike bridge northwest of McAlester, Oklahoma (IM T.8N., R.13E., SE¼ SW¼ SE¼ Sec. 23).

(ii) Unit 3. Cimarron River—approximately 460 km (286 mi), extending from U.S. Highway 54 bridge in Seward County, Kansas (SPM, T. 33 S., R. 32 W., Sec. 25) downstream to U.S. Highway 77 bridge in Logan County, Oklahoma (IM, T. 17 N., R. 2 W., Sec. 29).

(iii) **Note:** Map of critical habitat units follows:

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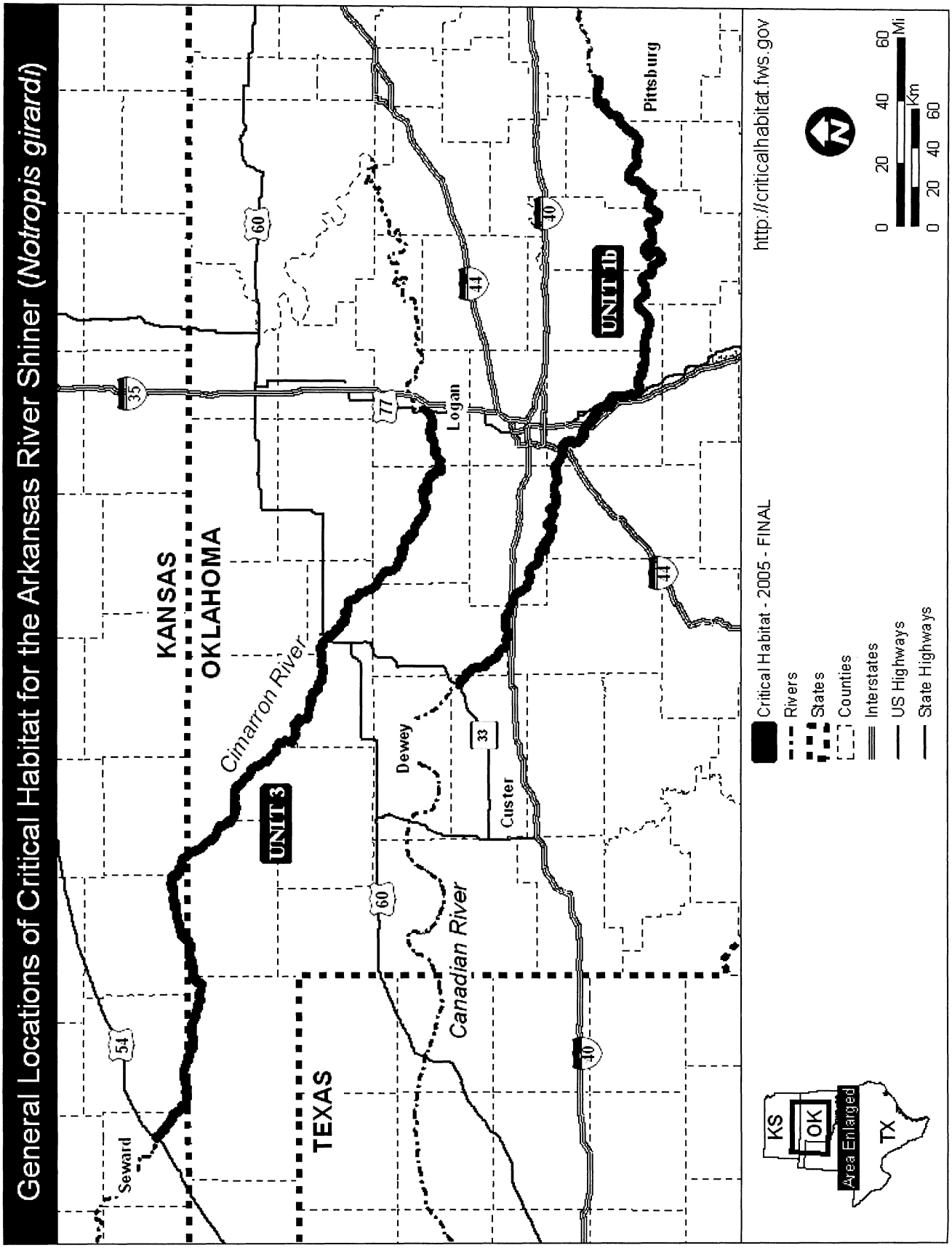
General Locations of Critical Habitat for the Arkansas River Shiner (Notropis girardi)
KANSAS
OKLAHOMA
TEXAS
Cimarron River
Canadian River
UNIT 3
UNIT 1b
Seward
Dewey
Logan
Custer
Pittsburg
35
54
60
77
33
44
40
http://criticalhabitat.fws.gov
Critical Habitat - 2005 - FINAL
Rivers
States
Counties
Interstates
US Highways
State Highways
0 20 40 60 Mi
0 20 40 60 Km
KS
OK
TX
Area Enlarged

* * * * *

Dated: September 30, 2005.

Craig Manson,

Assistant Secretary for Fish and Wildlife and Parks.

[FR Doc. 05–20048 Filed 10–12–05; 8:45 am]

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