

(2) [Reserved.]

Dated: September 30, 2004.

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Acting Deputy Assistant Secretary for Fish and Wildlife and Parks.

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DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

RIN 1018-AT84

Endangered and Threatened Wildlife and Plants; Proposed Designation of Critical Habitat for the Arkansas River Basin Population of the Arkansas River Shiner

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), propose to designate 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). Limited new information on the biological needs of the Arkansas River Shiner has become available since critical habitat for the Arkansas River Shiner was published on April 4, 2001 (66 FR 18002). However, this rule is being proposed pursuant to a court order issued in September 2003, vacating critical habitat established for the Arkansas River Basin population of the Arkansas River Shiner and remanding the previous designation of critical habitat for preparation of a new analysis of the economic and other effects of the designation (*New Mexico Cattle Growers Association et al. v. Norton, et al. Civ. No. 02-0461*).

We propose to designate as critical habitat a total of approximately 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. This distance includes areas that we are proposing to exclude which is described further in the proposed rule below. The areas that we have determined to be 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 of Oklahoma, the Cimarron River in Kansas and Oklahoma, and the Arkansas River in Arkansas, Kansas, and Oklahoma.

In developing this proposal, we evaluated those lands determined to be essential to the conservation of the Arkansas River Shiner to ascertain if any specific areas would be appropriate for exclusion from the final critical habitat designation pursuant to section 4(b)(2) of the Act. On the basis of our preliminary evaluation, we believe that the benefits of excluding the Beaver/North Canadian River of Oklahoma (Unit 2) and the Arkansas River in Arkansas, Kansas, and Oklahoma (Unit 4), from the final critical habitat for the Arkansas River Shiner outweigh the benefits of their inclusion. As noted in the "Public Comments Solicited" section below, we are seeking comments on our preliminary 4(b)(2) analysis that is contained within this rule.

If this proposal is made final, section 7 of the Act would prohibit destruction or adverse modification of critical habitat by any activity authorized, funded, or carried out by any Federal agency. As required by section 4 of the Act, we will consider the economic and other relevant impacts prior to making a final decision on what areas to designate as critical habitat.

We hereby solicit data and comments from the public on all aspects of this proposal, including data on economic and other impacts of the proposed designation. We may revise this proposal prior to final designation to incorporate or address new information received during public comment periods.

DATES: We will accept comments until April 30, 2005. The Act provides for a public hearing on this proposal, if requested. Given the high likelihood of such requests, we intend to hold three public hearings, one in central Oklahoma, one in southwest Kansas and one in Texas. The specific times, dates, and locations for those hearings will be announced in the **Federal Register** in the coming months.

ADDRESSES: If you wish to comment, you may submit your comments and materials concerning this proposal by any one of several methods:

1. You may submit written comments and information to the Field Supervisor, Oklahoma Ecological Services Office, U.S. Fish and Wildlife Service, 222 South Houston, Tulsa, Oklahoma 74127-8909.

2. You may hand-deliver written comments and information to our Oklahoma Office, at the above address, or fax your comments to 918/581-7467.

3. You may send your comments by electronic mail (e-mail) to r2arshinerch@fws.gov. For directions on how to submit electronic filing of

comments, see the "Public Comments Solicited" section.

All comments and materials received, as well as supporting documentation used in preparation of this proposed rule, will be available for public inspection, by appointment, during normal business hours at the above address.

FOR FURTHER INFORMATION CONTACT: Jerry Brabander, Field Supervisor, Oklahoma Office (telephone 918/581-7458; facsimile 918/581-7467).

SUPPLEMENTARY INFORMATION:

Public Comments Solicited

We intend that any final action resulting from this proposal will be as accurate and as effective as possible. Therefore, we solicit comments or suggestions from the public, other concerned governmental agencies, the scientific community, industry, or any other interested party concerning this proposed rule. On the basis of public comment, during the development of the final rule we may find that areas proposed are not essential, are appropriate for exclusion under section 4(b)(2), or not appropriate for exclusion; in all of these cases, this information would be incorporated into the final designation. We particularly seek comments concerning:

- (1) The reasons why any areas included in this proposal should or should not be determined to be critical habitat as provided by section 4 of the Act, including whether the benefit of designation will outweigh any threats to the species due to the designation;

- (2) Specific information on the amount and distribution of Arkansas River Shiner habitat, and which habitat or habitat components are essential to the conservation of this species and why;

- (3) Information on the status, viability, and distribution of the Arkansas River Shiner in the Cimarron River in Kansas and Oklahoma;

- (4) Comments or information related to our determination to include the adjacent riparian area (*i.e.*, 300-feet on either side of the stream bank) as proposed critical habitat;

- (5) Land use designations and current or planned activities in or adjacent to the areas proposed and their possible impacts on proposed critical habitat;

- (6) Any foreseeable economic, national security, or other potential impacts resulting from the proposed designation, particularly any impacts on small entities;

- (7) Two areas previously designated as critical habitat (the Beaver/North Canadian River of Oklahoma (Unit 2) and portions of the Arkansas River in Arkansas, Kansas, and Oklahoma (Unit 4), although still considered essential for the conservation of the Arkansas River Shiner, are currently proposed for exclusion from critical habitat because we believe the benefit of excluding these areas outweighs the benefit of including them. We specifically solicit comment on the inclusion

or exclusion of such areas and: (a) Whether these areas are essential; (b) whether these areas warrant exclusion; (c) the basis for excluding these areas as critical habitat (section 4(b)(2) of the Act); and (d) whether the preliminary 4(b)(2) analysis contained within this rule is adequate to justify an exclusion and/or any other factors that we should take into consideration; and

(8) Whether our approach to designating critical habitat could be improved or modified in any way to provide for greater public participation and understanding, or to assist us in accommodating public concerns and comments.

If you wish to comment, you may submit your comments and materials concerning this proposal by any one of several methods (see **ADDRESSES** section). Please submit electronic comments in ASCII file format and avoid the use of special characters or any form of encryption. Please also include "Attn: RIN 1018-AT84" in your e-mail subject header and your name and return address in the body of your message. If you do not receive a confirmation from the system that we have received your Internet message, contact us directly by calling our Oklahoma Ecological Services Office at phone number 918-581-7458. Please note that the e-mail address, r2arshinerch@fws.gov will be closed out at the termination of the public comment period.

Our practice is to make comments, including names and home addresses of respondents, available for public review during regular business hours. Individual respondents may request that we withhold their home addresses from the rulemaking record, which we will honor to the extent allowable by law. There also may be circumstances in which we would withhold from the rulemaking record a respondent's identity, as allowable by law. If you wish us to withhold your name and/or address, you must state this prominently at the beginning of your comment. However, we will not consider anonymous comments. We will make all submissions from organizations or businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, available for public inspection in their entirety. Comments and materials received will be available for public inspection, by appointment, during normal business hours at the above address.

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 changed 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 amounts of 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 445 species or 36 percent of the 1,244 listed species in the U.S. under the jurisdiction of the Service have designated critical habitat. We address the habitat needs of all 1,244 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 a recent 9th Circuit judicial opinion, *Gifford Pinchot Task Force v. United States Fish and Wildlife Service*, has invalidated the Service's regulation defining destruction or adverse modification of critical habitat. We are currently reviewing the decision to determine what effect it may have on the outcome of consultations pursuant to section 7 of the Act.

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 relatively 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

The Arkansas River Shiner is a small, robust minnow with a small, dorsally flattened head, rounded snout, and small subterminal mouth (located near the head end of the body but not at the extreme end) (Miller and Robison 1973; Robison and Buchanan 1988). Dorsal (back) coloration tends to be light tan, with silvery sides gradually grading to white on the belly. Adults typically

attain a maximum length of 51 millimeters (2 inches). Dorsal, anal, and pelvic fins all have eight rays, and there is a small, black chevron (v-shaped mark) usually present at the base of the caudal (tail) fin.

The Arkansas River Shiner was first described based on a fish collection in 1926 from the Cimarron River northwest of Kenton, Cimarron County, Oklahoma (Hubbs and Ortenburger 1929). Historically, the Arkansas River Shiner was widespread and abundant throughout the western portion of the Arkansas River Basin in Kansas, New Mexico, Oklahoma, and Texas. This species has disappeared from more than 80 percent of its historical range and is now almost entirely restricted to about 820 km (508 mi) of the Canadian River in Oklahoma, Texas, and New Mexico (Larson *et al.* 1991; Pigg 1991). A small aggregation of Arkansas River Shiner still persists in the Cimarron River in Oklahoma and Kansas, based on the collection of 24 individuals since 1985. The Arkansas River Shiner was last captured from the Cimarron River in August of 2004 near Guthrie, Oklahoma, by SWCA Environmental Consultants (Stuart Leon, U.S. Fish and Wildlife Service, *in litt.* 2004). A remnant population also may persist in the Beaver/North Canadian River of Oklahoma, based on collection of only four individuals since 1990 (Larson *et al.* 1991; Jimmie Pigg, Oklahoma Department of Environmental Quality, pers. comm., 1993). The Arkansas River Shiner is no longer believed to occur in the Arkansas River in Arkansas, Kansas, and Oklahoma; a loss of over 1,240 km (770 mi) of previously occupied habitat. However, an accurate assessment of Arkansas River Shiner populations in the Arkansas and Beaver/North Canadian Rivers is difficult because the populations are likely so small, if present, that individuals escape detection during routine, one-time surveys.

The decline of the Arkansas River Shiner throughout its historical range is primarily the result of modification of the duration and timing of stream flows and inundation by impoundments, channel drying by water diversion and groundwater mining, stream channelization, and introduction of nonindigenous plant and animal species. Additional information on the biology and status of this species, as well as a thorough discussion of the threats to the species, can be found in the November 23, 1998, final listing determination (63 FR 64772) and the final critical habitat determination (66 FR 18002; April 4, 2001). Biological factors relevant to the species' habitat

needs are discussed in the "Primary Constituent Elements" section of this proposed rule.

Previous Federal Action

We published a proposed rule to list the Arkansas River Basin population of the Arkansas River Shiner as endangered and invited public comment on August 3, 1994 (59 FR 39532). A non-native population of the Arkansas River Shiner that has become established in the Pecos River was not included in that proposal. We reopened the comment period from January 6, 1995, to February 3, 1995 (60 FR 2070), to accommodate three public hearings. Following a moratorium on issuing final listings or critical habitat designations that ended on April 26, 1996, we again reopened the comment period on the proposal on December 5, 1997 (62 FR 64337). We published the final rule listing the Arkansas River Basin population of the Arkansas River shiner as a threatened species on November 23, 1998 (63 FR 64772). A recovery plan for this species has not yet been completed.

At the time of listing, we concluded that designation of critical habitat for the Arkansas River Shiner was not prudent because such designation would not benefit the species. As part of a settlement order of February 16, 2000, in *Center for Biological Diversity v. Bruce Babbitt, et al.* C99–3202 SC, we agreed to reconsider the question of whether critical habitat would be prudent; and, if designation of critical habitat were prudent, we agreed to subsequently propose designation of critical habitat for the Arkansas River Basin population of the Arkansas River Shiner by June 23, 2000. Our proposed designation of critical habitat for the Arkansas River Shiner was published in the **Federal Register** on June 30, 2000 (65 FR 40576). On August 15, 2000 (65 FR 49781), we published a notice in the **Federal Register** extending the comment period on the proposed rule and draft environmental assessment and announcing the availability of the draft economic analysis for public review and comment. The final comment period was open until October 16, 2000. After review of all comments received in response to the proposed rule, we published a final rule designating critical habitat for the Arkansas River Basin population of the Arkansas River Shiner (66 FR 18002; April 4, 2001).

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 decision in that case was

issued by Senior U.S. District Judge C. LeRoy Hansen in September of 2003. In that Memorandum Opinion, critical habitat for the Arkansas River Shiner was vacated and the Service was ordered to complete a proposed rulemaking to redesignate critical habitat by September 30, 2004. A final rulemaking is due one year later.

This proposal relies upon the best scientific and commercial data available to us, including the biological and habitat information described in the previous final rules, and recognized principles of conservation biology. Accordingly, this proposal differs from the previous critical habitat designation for the Arkansas River Shiner and includes only those areas we currently consider essential to the conservation of the species.

Critical Habitat

Critical habitat is defined in section 3 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.

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 must first be "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)).

Occupied habitat may be included in critical habitat only if the essential features thereon 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).)

Our regulations state that, "The Secretary shall designate as critical habitat areas outside the geographic area presently occupied by the species only when a designation limited to its present range would be inadequate to ensure the conservation of the species" (50 CFR 424.12(e)). 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.

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 critical habitat, a primary source of information should be the listing package for the species. Additional information sources include the 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.

Section 4 of the Act requires that we designate critical habitat on the basis of what we know at the time of designation. 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, in determining areas that are essential for the conservation of the Arkansas River Shiner, we used the best scientific and commercial data available. These included data from research and survey observations published in peer-reviewed articles and that were conducted by the Service and others; 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); our recovery outline; regional Geographic Information System (GIS) watershed and species coverages; and data compiled in the Oklahoma Natural Heritage Inventory Database. In addition, information provided in comments on the proposed critical habitat designation and draft economic analysis will be evaluated and considered in the development of the final designation for the Arkansas River Shiner. Although a recovery plan has not yet been prepared for this species, the areas we have proposed 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 below, were calculated from TIGER 2000 water line and water polygon Geographic Information Systems files.

We request that peer reviewers who are familiar with this species review the proposed rule (see "Peer Review" section below) in order to ensure that we have identified those areas that are essential for the conservation of the Arkansas River Shiner and avoid designating unsuitable habitat inappropriately.

This proposed designation does not include all areas previously designated as critical habitat for the Arkansas River Shiner (66 FR 18002; April 4, 2001). Some areas that were included in the previous designation are not being included in this proposal because they no longer meet the definition of critical habitat based on recent information concerning habitat quality and lack of primary constituent elements. Specifically, and as explained in further detail below, the Arkansas River upstream of Larned, Kansas, is not included in this proposed designation. Portions of the Beaver/North Canadian and the lower reaches of the Arkansas River between the cities of Larned and the Kansas/Oklahoma State line, are proposed for exclusion from this critical habitat designation as explained under the "*Relationship of Section 4(b)(2) of the Act to Arkansas River Shiner Critical Habitat*" section below.

During 2000 and 2001, Wilde (2002) conducted an assessment of fish communities and aquatic habitat at 10 sites from the Beaver/North Canadian River within the area previously designated (66 FR 18002; April 4, 2001) as critical habitat (Unit 2) for the Arkansas River Shiner. No Arkansas River Shiners were encountered and habitat was considered marginal for Arkansas River Shiner (Wilde 2002). Overall, aquatic habitat in the lower reach (i.e., North Canadian River) was generally swifter and deeper than that preferred by the Arkansas River Shiner in the Canadian River in Texas. Habitat in the upper reach (i.e., Beaver River) was, on average, slightly swifter but comparable in depth with habitats preferred by the Arkansas River Shiner in the Canadian River in Texas. While habitat quality in the North Canadian River, previously designated as Unit 2, appears marginal, all of the primary constituent elements are present. However, we are uncertain if the Arkansas River Shiner still inhabits this reach. Reestablishing Arkansas River Shiner in this reach would involve some

habitat restoration to achieve more optimal conditions for the Arkansas River Shiner.

Habitat improvements due to increased stream flow previously anticipated to occur in the upper reaches of the Arkansas River in Kansas, formerly designated as part of Unit 4, have failed to occur. Much of the Arkansas River upstream of Great Bend, Kansas, continues to be dewatered for significant periods of time. Examination of information (USGS 2004) for the Arkansas River in Kansas revealed that average annual streamflow values, as measured at Syracuse, Garden City, and Dodge City, were considerably higher during the period from 1998 to 2000 than they were from 2001 to 2003. Consequently, we no longer believe this reach provides all of the primary constituent elements needed by the Arkansas River Shiner. We are not including it in this proposal because we do not believe the area meets the definition of critical habitat. Habitat in the lower reaches of the Arkansas River between the cities of Great Bend and Wichita, Kansas, remains suitable for the Arkansas River Shiner. While streamflows were much lower during the period from 2001 to 2003 than they were from 1998 to 2000, streamflows were consistently higher than those measured at the more upstream gauging stations. Unfortunately, the Arkansas River Shiner no longer persists in the Arkansas River. It is not known with certainty why the species is no longer present in the Arkansas River; however, it is likely due to a combination of factors including streamflow alterations and water quality-related issues, the combination of which have precluded successful reproduction. Surveys have been conducted within the past five years with consistent negative results reported.

We intend to promote conservation and recovery of the Arkansas River Shiner in these two reaches through the use of other tools, which may include reestablishment of the Arkansas River Shiner through the provisions of section 10(j) of the Act—experimental populations. See our analysis under “*Relationship of Section 4(b)(2) of the Act to Arkansas River Shiner Critical Habitat*” section of this rule.

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 propose as critical habitat, we are required to consider those physical and biological features (primary constituent elements) that are essential to the conservation of the species and that may

require special management considerations or 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, or rearing of offspring; and habitats that are protected from disturbance or are representative of the historical, 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 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 proposed for designation. 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 following discussion summarizes the primary constituent elements determined essential to the conservation of the Arkansas River Shiner.

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 Shiner 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.

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. 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 Shiner associated most strongly with current, conductivity, and backwater and island habitat types (Polivka and Matthews 1997).

Space for Individual and Population Growth and for Normal Behavior

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).

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 (Platanía 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 Platanía and Altenbach (1998) described behavior of Arkansas River Shiner eggs. The fertilized eggs are nonadhesive and semibuoyant. Platanía 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 Platanía 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, Platanía 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; Platanía 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.

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.

Pursuant to our regulations, we are required to identify the known physical and biological features, *i.e.*, primary constituent elements, essential to the conservation of the Arkansas River Shiner, together with a description of any critical habitat that is proposed. In identifying the primary constituent elements, we used the best available scientific and commercial data available. The primary constituent

elements determined essential to the conservation of the Arkansas River Shiner 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 proposed 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.

Criteria Used To Define Critical Habitat

We are proposing to designate critical habitat within portions of the Canadian and Cimarron Rivers and their associated riparian zones that we determine 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. We first determined the occupancy status of the areas. 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, are considered essential habitat for this species. However, as discussed in the "Relationship of Section 4(b)(2) of the Act to Critical Habitat for the Arkansas River Shiner" section below, we are proposing to exclude those portions of the Arkansas and the Beaver/North Canadian Rivers determined to be essential for the conservation of the Arkansas River Shiner. 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. We solicited information from knowledgeable biologists and reviewed available information pertaining to Arkansas River Shiner biology and life history. 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).

We also 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 species' listing in 1998. For example, we previously designated an area (Unit 4) that was within the historic distribution of the Arkansas River Shiner but was believed to be unoccupied. As stated in the final rule (66 FR 18002; April 4, 2001) this area does not lack protection. The Kansas Department of Wildlife and Parks (KDWP) has designated critical habitat for the Arkansas River Shiner in accordance with Kansas State law. Portions of the mainstem Cimarron, Arkansas, South Fork Ninescaw, and Ninescaw 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.

We repropose the designation on National Park Service lands in the Lake Meredith National Recreation Area. In addition to federally-owned lands, we are proposing to designate critical habitat on non-Federal public lands and privately owned lands including lands owned by the Texas Parks and Wildlife Department, Oklahoma Department of Wildlife Conservation, and The Nature Conservancy. All non-Federal lands proposed 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, are essential to the conservation of the species, and may require special management consideration or protection. As noted

below, we are proposing to exclude 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 consider these areas to be essential to the conservation of the Arkansas River Shiner primarily for future restoration effects.

Important considerations in selection of areas included in the proposed 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 having populations of the Arkansas River Shiner established throughout major portions of its historic range. 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 to help stabilize the population and better ensure its future persistence. Some areas include stream reaches that do not exhibit optimal Arkansas River Shiner habitat, but provide movement corridors. 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. This proposed 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.

In considering this proposed designation, we took into account that preferred habitat for the Arkansas River Shiner is predominantly the mainstems of larger plains rivers. 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. Historically, the species has 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. Another 18 percent occurred during the months of May and August. Consequently, we believe that these tributaries are

occupied only during certain seasons during higher flows and do not represent optimal habitat. 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 Shiner 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.

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 Shiner 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.

Special Management Considerations or Protection

As discussed in the final listing rule and throughout this proposed critical habitat rule, the Arkansas River Shiner and its habitat are threatened by a number of factors 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, each area proposed for designation as critical habitat may require some level of management and/or protection to address current and future threats to the Arkansas River Shiner and maintain the primary constituent elements essential to its conservation to ensure the overall recovery of the species.

The range and numbers of the species has already been much reduced. 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 the 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 non-native salt cedar (*Tamarix* spp.) 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 non-native species, whether intentional or accidental, often have deleterious impacts to native species. The accidental introduction of the non-native 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 survival of the Arkansas River Shiner.

Proposed Critical Habitat Designation

The areas we are proposing as critical habitat currently provide all of those habitat components necessary to meet the primary biological needs of the Arkansas River Shiner, as defined by the primary constituent elements. The areas proposed for designation are those river reaches 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 proposed designation are areas that contain most, if not all, of the remaining genetic diversity of the Arkansas River Shiner within the Arkansas River Basin because the two segments in the Canadian River and the segment in the Cimarron River represent the largest, perhaps only, remaining viable aggregations of Arkansas River Shiner. The designation incorporates more than 90 percent of the currently known aggregations of Arkansas River Shiner in the Arkansas River Basin.

In selecting areas of critical habitat, we made an effort to avoid developed areas, such as towns and other similar lands that are not likely to contribute to Arkansas River Shiner conservation. However, the minimum mapping unit that we used to approximate our delineation of critical habitat for the Arkansas River Shiner did not allow us to exclude all developed areas such as roads and rural developed areas or other lands. Existing features and structures within the boundaries of the mapped units, such as buildings, roads, railroads, and other urban landscaped areas removed from essential aquatic and riparian habitat, are not likely to contain the primary constituent elements essential for the conservation of the Arkansas River Shiner. Therefore, Federal actions limited to these areas would not trigger section 7 consultations, unless they affect the species and/or primary constituent elements in adjacent critical habitat.

Lateral Extent of Critical Habitat

This designation takes into account the naturally dynamic nature 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. A relatively intact riparian zone, 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 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 whole 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 meters (m) (75–150 feet (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 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, *i.e.*, the flow at which water begins to leave the channel and move into the floodplain (Rosgen 1996); the bankfull discharge generally occurs every 1 to 2 years (Leopold *et al.* 1992). Bankfull discharge, while a function of the size of the stream, is a fairly consistent feature related to the formation, maintenance, and dimensions of the stream channel (Rosgen 1996).

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, are not 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 proposed 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 when 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.

Critical Habitat Unit Descriptions

Critical habitat is being proposed for the Arkansas River Shiner in three reaches of two different rivers within the Arkansas River basin in Kansas, New Mexico, Oklahoma, and Texas. During development of the critical habitat proposal for the Arkansas River Shiner, we determined which lands are essential to the conservation of the species by defining the physical and biological features essential to the species' conservation and delineating the specific areas defined by them. We then evaluated those lands determined to be essential to ascertain if any specific areas are appropriate for exclusion from critical habitat pursuant to section 4(b)(2) of the Act. On the basis of our initial evaluation, we believe that the benefits of excluding areas in the Beaver/North Canadian (Unit 2) and the Arkansas River (Unit 4), as described in the unit descriptions below, outweighs the benefits of their inclusion, and we are proposing to exclude those lands from the final

designation of critical habitat for this species pursuant to section 4(b)(2) of the Act (refer to "Relationship of Section 4(b)(2) of the Act to Critical Habitat for the Arkansas River Shiner" section below). A description of all areas determined essential to the conservation of the Arkansas River Shiner follows.

Critical habitat is being proposed for the Arkansas River Shiner on two reaches of the Canadian River in the states of New Mexico, Texas, and Oklahoma. 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.

Unit 1: Canadian River, Quay County, New Mexico, and Oldham and Potter counties, Texas:

Critical habitat 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. This reach is predominantly in private ownership. 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 include the following areas in this proposed designation because we determined that these areas are not to essential to the conservation of the Arkansas River Shiner and therefore 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 that reach. Arkansas River shiners still occur in portions of the 3.2 km (2 mi) reach between the U.S. Highway 54 bridge and Ute Dam, above the reach proposed as critical habitat. We do not consider this section of the stream to be essential to the conservation of the species since 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 Texas Parks and Wildlife Department owns a small segment downstream of the town of Canadian, TEXAS (Gene Howe Wildlife Management Area (WMA)). The Oklahoma Department of Wildlife Conservation owns a small section near Roll, Oklahoma (Packsaddle WMA). Small tracts of tribal lands are near Oklahoma City.

Critical habitat Unit 1b consists of approximately 642 km (399 mi) of river extending from the U.S. Highway 60/83 bridge near Canadian, Texas, 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. Here, the Arkansas River Shiner range from rare to common, with the species becoming more abundant in a downstream direction.

We did not include the following areas in this proposed designation because we determined that these areas are not to essential to the conservation of the Arkansas River Shiner and therefore do not meet the definition of critical habitat. The Canadian River upstream of the community of Canadian, Texas, to Sanford Dam at Lake Meredith, supported Arkansas River Shiner prior to the construction of Lake Meredith. However, habitat in this segment is degraded and generally unsuitable. Some aggregations of Arkansas River Shiner may still persist upstream of Canadian, Texas, 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—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 was historically known to support Arkansas River shiner aggregations. A small population may still persist between Optima Dam and the upper reaches of Canton Reservoir, based on the collection of four individuals since 1990. At present, habitat in large areas of the drainage are degraded or unsuitable, either because of reservoirs, reduced stream flow, or water quality impairment. As previously indicated, an assessment of fish communities and aquatic habitat at 10 sites within this unit was conducted during 2000 and 2001 (Wilde 2002). No Arkansas River Shiner were encountered and habitat was considered marginal for Arkansas River Shiner (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 the best 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 include augmenting existing aggregations of the Arkansas River Shiner and may involve reestablishing additional populations in this system. Consequently we believe

habitat within this reach is essential to the conservation of the Arkansas River Shiner but we are proposing, under section 4(b)(2) of the Act, to exclude this reach from the final critical habitat determination.

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, 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 and several of the major tributaries were inhabited by the Arkansas River Shiner, including the type locality for the species (the area from which the specimens that were used to first describe the species were taken). Between 1985 and 1992, only 16 specimens of the Arkansas River Shiner were collected from the Cimarron River. Since 1992, no specimens had been reported until 2004. 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). Although this population is by no means secure, it continues to persist over time and appears to be at least marginally viable. 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, but detailed studies have not yet been conducted. The Cimarron River is included in the designation because it is essential habitat and 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. The reach proposed for designation reflects the need for sufficient lengths of stream that 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. As noted in the "Public Comments Solicited" section above, we are seeking data on the status and distribution of the Arkansas River Shiner in the Cimarron River. On the basis of public comment and any new information received, we may find during the development of the final rule that this river segment or portions thereof, are not essential, are appropriate for exclusion under section 4(b)(2), or not appropriate for exclusion; in all of these cases, this information would be incorporated into the final designation.

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

We did not include the Cimarron River downstream of the U.S. Highway 77 bridge near Guthrie to Keystone Reservoir because we have no evidence that this reach is occupied and do not believe that it is an area essential to the conservation of the Arkansas River Shiner. This area was also not part of the prior designation of critical habitat for the Arkansas River Shiner. We believe sufficient habitat for the Arkansas River Shiner to complete its life cycle exists within the reach proposed for designation as critical habitat. 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, –313 km (194 mi) of river extending from the confluence of the Pawnee River near Larned, Kansas, downstream to 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. 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; but, 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 previously stated, we are not including the reach upstream of Larned, Kansas, in this proposed designation because it lacks several of the primary constituent elements and no longer meets the definition of critical habitat. 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. Consequently, this segment is considered essential for the conservation of the Arkansas River Shiner but we are proposing, under section 4(b)(2) of the Act, to exclude this reach from the final critical habitat determination.

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).

Table 1 below provides approximate area (mi/km) determined to be essential to the Arkansas River Shiner and area proposed for exclusion from the final critical habitat designation by State.

	Essential area proposed as critical habitat	Area proposed for exclusion from the final critical habitat designation
Kansas	62.5 (100.6)	194.1 (312.4)
New Mexico	38.0 (61.2)	0
Oklahoma	595.6 (958.5)	210.8 (339.3)
Texas	142.6 (229.5)	0
Total	838.7 (1,349.8)	404.9 (651.6)

Relationship of Section 4(b)(2) of the Act to Arkansas River Shiner Critical Habitat

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 available 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 in our analysis 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.

Pursuant to section 4(b)(2) of the Act, we must consider impacts to national security and other relevant impacts in addition to economic ones. We have determined that the lands within the designation of critical habitat for the Arkansas River Shiner are not owned or managed by the Department of Defense and there are currently no habitat conservation plans for the Arkansas River Shiner. In developing critical

habitat designations, we have also recognized under section 4(b)(2) partnerships and conservation programs or efforts that provide a conservation benefit to the subject species. In the case of Arkansas River Shiner, it is our intent to recognize future conservation efforts. In this regard we have met with the Arkansas River Shiner Coalition (Coalition) whose mission is to ease the regulatory burdens of designated critical habitat for its members and to work with the Service toward the eventual recovery of the Arkansas River Shiner. The Coalition represents several agricultural and ranching associations, water service providers, groundwater conservation districts, and other groups in Texas, Oklahoma, and New Mexico. It is the intent of the Coalition to develop an Arkansas River Shiner management plan that addresses the conservation needs of the Arkansas River Shiner and to submit their plan to us during a public comment period for consideration in the final critical habitat determination. If we receive a plan from the Coalition we will evaluate the conservation measures being provided

to or planned for the Arkansas River Shiner when making our final determination of critical habitat, and we may exclude areas pursuant to section 4(b)(2) of the Act if we find that the benefits of their exclusion outweigh the benefits of their inclusion.

There are two areas within the proposed designation that are within the historic range of Arkansas River Shiner, have been determined to be essential to the conservation of Arkansas River Shiner, currently contain one or more of the primary constituent elements for Arkansas River Shiner, and have been identified for future recovery actions that may include augmentation of existing populations or reestablishment of populations. These areas are the Beaver/North Canadian River and the Arkansas River.

Recovery activities for Arkansas River Shiner likely will include augmenting and reestablishing Arkansas River Shiner populations in the Beaver/North Canadian 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 the Arkansas River Shiner as experimental populations within areas

of its historic range. Considering the Arkansas River Shiner may be extirpated or that existing occurrences may be so small they may not be viable from these reaches and 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 and to encourage future conservation actions. Any future recovery efforts, including reintroduction of the species to areas of its historic range, must be conducted in accordance with NEPA and the Act.

In our critical habitat designation we use the provisions outlined in section 4(b)(2) of the Act to evaluate those specific areas 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 initial evaluation, we believe that the benefits of excluding the Beaver/North Canadian River in Oklahoma and the lower Arkansas River in Kansas from the designation of critical habitat for Arkansas River Shiner outweighs the benefits of their inclusion, and we are proposing to exclude these lands from final designation pursuant to section 4(b)(2) of the Act. We note that additional areas may also be considered for exclusion in the final rule and that any exclusions made in the final rule will be the result of a reanalysis of new information received, including consideration of all comments received and the findings of the economic and NEPA analyses. In this regard, we have specifically requested public comment on this issue (see "Public Comments Solicited" section above), and we provide our preliminary rationale below to further assist the public in commenting on this issue.

(1) Benefits of Inclusion

The principal benefit of any designated critical habitat is that federally funded or authorized activities in such habitat requires consultation under section 7 of the Act. Such consultation would ensure that adequate protection is provided to avoid adverse modification or destruction of critical habitat. In the absence of designated critical habitat in these unoccupied reaches, consultation on federally funded or authorized activities would not occur. However, few consultations, all informal, were conducted within these river reaches prior to vacature of the previously designated critical habitat. Some 25 consultations have been conducted on the Beaver/North Canadian River since

April 4, 2001, but none of those consultations reached the point of adverse modification. On the Arkansas River in Kansas, we anticipate even less consultation activity. Since designation of critical habitat in 2001, only nine informal consultations have been conducted and none of those reached the point of adverse modification.

In *Sierra Club v. Fish and Wildlife Service*, 245 F.3d 434 (5th Cir. 2001), the Fifth Circuit Court of Appeals stated that the identification of habitat essential to the conservation of the species can provide informational benefits to the public, State and local governments, scientific organizations, and Federal agencies. The court also noted that heightened public awareness of the plight of listed species and their habitats may facilitate conservation efforts. We agree with these findings; however, we believe that there would be little additional informational benefit gained from including the Beaver/North Canadian or the Arkansas River within the final designation of critical habitat because they were included in the previous designation, are included in this proposed rule, and will be discussed in the final rule.

Consequently, we believe that the informational benefits are already provided even though we intend to exclude these areas from the final designation.

(2) Benefits of Exclusion

Recovery activities for Arkansas River Shiner likely will include augmenting and reestablishing Arkansas River Shiner populations in the Beaver/North Canadian 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 the Arkansas River Shiner as experimental populations within areas of its historic range. Considering the Arkansas River Shiner may be extirpated or that existing occurrences may be so small they may not be viable from these reaches and 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 and to encourage future conservation actions. Any future recovery efforts, including reintroduction of the species to areas of its historic range, must be conducted in accordance with NEPA and the Act. 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 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.

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 or the Arkansas River. Use of section 10(j) is meant to encourage local cooperation through management flexibility. Critical habitat is often viewed negatively by the public since it is not well understood and there are many misconceptions about how it affects private landowners (Patlis 2001). We believe it is important for recovery of this species that we have the support of the public when we move toward the development and implementation of a recovery plan. It is critical to the recovery of the Arkansas River Shiner that we reestablish the species in areas outside of its current occupied range.

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)).

As discussed above, we believe the flexibility provided for in section 10(j) of the Act is necessary to help ensure the success of augmenting and reestablishing Arkansas River Shiner populations in the Beaver/North Canadian or the Arkansas Rivers. 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.

(3) Benefits of Exclusion Outweigh the Benefits of Inclusion

Through the development of this proposal, we have identified lands that we believe to be essential to the

conservation of the Arkansas River Shiner. Based on our initial analysis above and our analysis and treatment of these lands in our previous designation of critical habitat for the Arkansas River Shiner, we believe that the benefits of excluding these lands from the final critical habitat designation, as allowed under section 4(b)(2) of the Act, outweigh the potential benefits of including these lands. Further, we have determined that excluding these areas will not result in the extinction of the Arkansas River Shiner, as the core distribution of the Arkansas River Shiner would remain within areas proposed for critical habitat designation and section 7(a)(2) (consultation requirements) and section 9 (prohibitions against take) of the Act still apply to activities affecting the Arkansas River Shiner. Publication of this proposed rule would help accomplish the educational benefits of critical habitat by informing the public of the importance of the Beaver/North Canadian River in Oklahoma, and the Arkansas River in Kansas to recovery of the Arkansas River Shiner.

Effects of Critical Habitat Designation

Section 7 Consultation

The regulatory effects of a critical habitat designation under the Act are triggered through the provisions of section 7, which applies only to activities conducted, authorized, or funded by a Federal agency (Federal actions). Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR part 402. Individuals, organizations, States, local governments, and other non-Federal entities are 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.

Section 7(a)(2) of the Act requires Federal agencies, including the Service, to insure that their actions are not likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of designated critical habitat. This requirement is met through section 7 consultation under the Act. Our regulations define "jeopardize the continued existence of" as to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species (50 CFR 402.02). "Destruction or adverse

modification of designated critical habitat" is defined as a direct or indirect alteration that appreciably diminishes the value of the critical habitat for both the survival and recovery of the species (50 CFR 402.02). Such alterations include, but are not limited to, adverse changes to the physical or biological features, *i.e.*, the primary constituent elements, that were the basis for determining the habitat to be critical. We are currently reviewing the regulatory definition of adverse modification in relation to the conservation of the species.

Section 7(a)(4) of the Act requires Federal agencies to confer with us on any action that is likely to jeopardize the continued existence of a proposed species or result in destruction or adverse modification of proposed critical habitat. Conference reports provide conservation recommendations to assist Federal agencies in eliminating conflicts that may be caused by their proposed actions. The conservation measures in a conference report are advisory.

We may issue a formal conference report, if requested by the Federal action agency. Formal conference reports include an opinion that is prepared according to 50 CFR 402.14, as if the species was listed or critical habitat designated. We may adopt the formal conference report as the biological opinion when the species is listed or critical habitat designated, if no substantial new information or changes in the action alter the content of the opinion (50 CFR 402.10(d)).

If a species is listed or critical habitat is designated, section 7(a)(2) of the Act 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 Federal action agency would ensure that the permitted actions do not destroy or adversely modify critical habitat.

If 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 Service's Regional Director believes would avoid the likelihood of jeopardizing the continued existence of listed species or resulting in the 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 under certain circumstances, including 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 a 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 consultation under section 7. Activities on private, State, or county lands, or lands under local jurisdictions requiring a permit from a Federal agency, such as Federal Highway Administration or Federal Emergency Management Act funding, or a permit from the Corps under section 404 of the Clean Water Act, will continue to be subject to the section 7 consultation process. Federal actions not affecting listed species or critical habitat, and actions on non-Federal lands that are not federally funded, authorized, or permitted, do not require section 7 consultations.

Section 4(b)(8) of the Act requires us to evaluate briefly and describe, in any proposed or final regulation that designates critical habitat, those activities involving a Federal action that may adversely modify such habitat or that may be affected by such designation. Activities that may destroy or adversely modify critical habitat include those that alter the primary constituent elements to an extent that the value of critical habitat for both the survival and recovery of Arkansas River Shiner is appreciably reduced. We note that such activities also may jeopardize the continued existence of the species.

Activities that, when carried out, funded, or authorized by a Federal agency, may directly or indirectly destroy or adversely modify critical habitat for the Arkansas River Shiner include, but are not limited to:

(1) Actions that significantly and detrimentally alter the minimum flow or the natural flow regime of any of the proposed stream segments, including activities that cause barriers or deterrents to dispersal, inundates or drains habitat, or significantly converts habitat. Possible actions would include groundwater pumping, impoundment, water diversion, and hydropower generation. We note that such flow reductions that result from actions affecting tributaries of the proposed 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 proposed 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. 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 proposed 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 non-native aquatic species in any of the proposed 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 lands proposed as critical habitat are within the geographical area currently occupied by the species and are necessary for the conservation of the Arkansas River Shiner. Federal agencies already consult with us on actions that may affect the Arkansas River Shiner to ensure that their actions do not jeopardize the continued existence of the species. Thus, we do not anticipate substantial additional regulatory protection will result from critical habitat designation.

If you have questions regarding whether specific activities will constitute destruction or adverse modification of critical habitat, contact the Field Supervisor, Oklahoma Ecological Services Office (see **ADDRESSES** section). Requests for copies of the regulations on listed wildlife and plants 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).

Economic Analysis

Section 4(b)(2) of the Act requires us to designate critical habitat on the basis of the best scientific and commercial data 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.

We are preparing an analysis of the economic impacts of proposing critical habitat for the Arkansas River Shiner that complies with the ruling by the Tenth Circuit Court of Appeals in *New Mexico Cattle Growers Association et al. v. U.S. Fish and Wildlife Service*. We will announce the availability of the draft economic analysis as soon as it is completed, at which time we will seek public review and comment. When published, copies of the draft economic analysis will be available for downloading from the Internet at <http://ifw2es.fws.gov/Oklahoma>, or by contacting the Oklahoma Ecological Services Office directly (see **ADDRESSES** section).

Peer Review

In accordance with our policy published on July 1, 1994 (59 FR 34270), we will solicit the expert

opinions of at least three appropriate and independent specialists regarding this proposed rule. The purpose of this review is to ensure that our critical habitat designation is based on scientifically sound data, assumptions, and analyses. We will send these peer reviewers copies of this proposed rule immediately following publication in the **Federal Register**. We will invite these peer reviewers to comment, during the public comment period, on the specific assumptions and conclusions regarding the proposed designation of critical habitat.

We will consider all comments and information received during the public comment period on this proposed rule as we prepare our final rulemaking. Accordingly, the final designation may differ from this proposal.

Public Hearings

The Act provides for one or more public hearings on this proposal, if requested. We intend to hold three public hearings, one in southwestern Kansas, one in the Texas Panhandle and one in Central Oklahoma. We will schedule public hearings on this proposal and announce the dates, times, and places of those hearings in the **Federal Register** and local newspapers at least 15 days prior to the first hearing.

Clarity of the Rule

Executive Order 12866 requires each agency to write regulations and notices that are easy to understand. We invite your comments on how to make this proposed rule easier to understand, including answers to questions such as the following: (1) Are the requirements in the proposed rule clearly stated? (2) Does the proposed rule contain technical jargon that interferes with the clarity? (3) Does the format of the proposed rule (grouping and order of the sections, use of headings, paragraphing, etc.) aid or reduce its clarity? (4) Is the description of the notice in the **SUPPLEMENTARY INFORMATION** section of the preamble helpful in understanding the proposed rule? (5) What else could we do to make this proposed rule easier to understand?

Send a copy of any comments on how we could make this proposed rule easier to understand to: Office of Regulatory Affairs, Department of the Interior, Room 7229, 1849 C Street, NW., Washington, DC 20240. You may e-mail your comments to this address: Exsec@ios.doi.gov.

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 it is not anticipated to have an annual effect on the economy of \$100 million or more or adversely affect the economy in a material way. Due to the timeline for publication in the **Federal Register**, the Office of Management and Budget (OMB) has not formally reviewed this rule. The Service is preparing a draft economic analysis of this proposed action. The Service will use 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. This economic analysis also will be used to determine compliance with Executive Order 12866, Regulatory Flexibility Act, Small Business Regulatory Enforcement Fairness Act, and Executive Order 12630.

The draft economic analysis will be made available for public review and comment before we finalize this designation. At that time, copies of the analysis will be available for downloading from the Oklahoma Ecological Services Office's Internet Web site at <http://ifw2es.fws.gov/Oklahoma> or by contacting the Oklahoma Ecological Services Office directly (see **ADDRESSES** section).

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 effects 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 the 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 the factual basis for certifying that the rule will not have a significant economic impact on a substantial number of small entities. However, the SBREFA does not explicitly define "substantial number" or "significant economic impact." Consequently, to assess whether a "substantial number" of small entities are affected by this proposed designation, the following analysis considers the relative number of small entities likely to be impacted in an area.

At this time, the Service lacks the available economic information necessary to provide an adequate factual basis for the required RFA finding. Therefore, the RFA finding is deferred until completion of the draft economic analysis prepared pursuant to section 4(b)(2) of the Act and E.O. 12866. This draft economic analysis will provide the required factual basis for the RFA finding. Upon completion of the draft economic analysis, the Service will publish a notice of availability of the draft economic analysis of the proposed designation and provide for a public comment period on the proposed designation. The Service will include with the notice of availability, as appropriate, an initial regulatory flexibility analysis or a certification that the rule will not have a significant economic impact on a substantial number of small entities accompanied by the factual basis for that determination. The Service has concluded that deferring the RFA finding until completion of the draft economic analysis is necessary to meet the purposes and requirements of the RFA. Deferring the RFA finding in this manner will ensure that the Service makes a sufficiently informed determination based on adequate economic information and provides the necessary opportunity for public comment.

Small Business Regulatory Enforcement Fairness Act (5 U.S.C. 802(2))

In the draft economic analysis, we will determine whether designation of critical habitat will cause (a) any effect on the economy of \$100 million or more; (b) any increases in costs or prices for consumers, individual industries, Federal, State, or local government agencies, or geographic regions; or (c) any significant adverse effects on competition, employment, investment, productivity, innovation, or the ability of U.S.-based enterprises to compete with foreign-based enterprises.

Executive Order 13211

On May 18, 2001, the President issued an 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 proposed rule to designate critical habitat for the Arkansas River Shiner is considered a significant regulatory action under Executive Order 12866 as it may raise novel legal and policy issues. However, this designation is not expected to significantly affect energy supplies, distribution, or use because

there are few pipelines and no distribution facilities, power grid stations, etc. within the boundaries of proposed critical habitat. Therefore, this action is not a significant energy-related action and no Statement of Energy Effects is required. We will, however, further evaluate this issue as we conduct our economic analysis and, as appropriate, review and revise this assessment as warranted.

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.), the Service makes the following findings:

(a) This rule will not “significantly or uniquely” affect small governments. A Small Government Agency Plan is not required. Small governments will be affected only to the extent that any programs having Federal funds, permits, or other authorized activities must ensure that their actions will not adversely affect the critical habitat. However, as discussed above, these actions are currently subject to equivalent restrictions through the listing protections of the species, and no further restrictions are anticipated. We will, however, further evaluate this issue as we conduct our economic analysis and, as appropriate, review and revise this assessment as warranted.

(b) 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 who receive Federal funding, assistance, or permits or who 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.

Takings

In accordance with Executive Order 12630 (“Government Actions and Interference with Constitutionally Protected Private Property Rights”), this rule is not anticipated to have significant takings implications. A takings implication assessment is not required. As discussed above, the designation of critical habitat affects only Federal actions. Although private parties that receive Federal funding, assistance, or 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. Due to current public knowledge of the species’ protections, the prohibition against take of the species both within and outside of the proposed areas we do not anticipate that property values will be affected by the critical habitat designation. However, we have not yet completed the economic analysis for this proposed

rule. Once the economic analysis is available, we will review and revise this preliminary assessment as warranted.

Federalism

In accordance with Executive Order 13132, this rule does not have significant federalism effects. A federalism assessment is not required. In keeping with Department of the Interior and Department of Commerce policies, we requested information from and coordinated development of this proposed critical habitat designation with appropriate State resource agencies in Kansas, New Mexico, Oklahoma, and Texas.

The proposed designation of critical habitat in areas currently occupied by the Arkansas River Shiner imposes no additional significant restrictions beyond those currently in place and, therefore, has little incremental impact on State and local governments and their activities. The proposed designation of critical habitat may have some benefit to the State and local resource agencies in that the areas essential to the conservation of this species are more clearly defined, and the primary constituent elements of the habitat necessary to the conservation of this species are specifically identified. While 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 Executive Order 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 proposing to designate critical habitat in accordance with the provisions of the Endangered Species Act. The rule uses standard property descriptions and identifies the primary constituent elements within the proposed 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 proposed rule does not contain new or revised information collection for which OMB approval is required under the Paperwork Reduction Act. 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 will be conducting an environmental assessment and providing that document for public review and comment. In our previous designation, we prepared 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, and the Department of the Interior's manual at 512 DM 2, we readily acknowledge our responsibility to communicate meaningfully with recognized Federal Tribes on a government-to-government basis.

We recognize that we must 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 proposed designation of critical habitat for the Arkansas River Shiner currently includes tribal lands. Tribal lands within the proposed 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. We are soliciting information from the Native American Tribes and will schedule meetings, as

requested, with them during the comment period regarding potential impacts to the Tribes or their resources that may result from the critical habitat designation, and to discuss whether they have or would like to prepare conservation plans that address the Arkansas River Shiner on their lands. We will continue to work with the Tribes on these issues and provide assistance, if requested, on the development of management and conservation plans, conservation agreements, grants and other cooperative projects that could contribute to the recovery of the Arkansas River Shiner.

References Cited

A complete list of all references cited herein, as well as others, is available upon request from the Oklahoma Ecological Services Office (see **ADDRESSES** section).

Author

The primary authors of this notice are staff located at the Oklahoma Ecological Services Office (see **ADDRESSES** section).

List of Subjects in 50 CFR Part 17

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

Proposed Regulation Promulgation

Accordingly, we propose to amend part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations as set forth below:

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. 4201–4245; Pub. L. 99–625, 100 Stat. 3500; unless otherwise noted.

2. Amend § 17.95(e), by revising critical habitat for 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; Quay County, New Mexico; Beaver, Blaine, Caddo, Canadian, Cleveland, Custer, Dewey, Ellis, Grady, Harper, Hughes, Kingfisher, Logan, Major, McClain, McIntosh, Pittsburg, Pontotoc, Pottawatomie, Roger Mills Seminole,

Woods and Woodward Counties, Oklahoma; and Hemphill, Oldham, and Potter Counties, Texas, 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 described in paragraphs (3)(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) The minimum mapping unit for this designation of critical habitat for the Arkansas River shiner does not exclude all developed areas, such as buildings, roads, bridges, parking lots, railroad tracks, other paved areas, the lands that support these features, and other lands unlikely to contain the

primary constituent elements. 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)), New Mexico (New Mexico Principal Meridian (NMPM)), Oklahoma (Cimarron Meridian (CM) and Indian Meridian (IM)), and Texas (geographic coordinates): 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 1a. Canadian River—approximately 248 kilometers (km) (154

miles (mi)) from U.S. Highway 54 bridge near Logan, Quay County, New Mexico (NMPM, T. 13 N., R. 33 E., NW $\frac{1}{4}$ Sec. 14) downstream to the confluence with Coetas Creek, Potter County, Texas (35° 30'N 26" N, 101°46'37" W).

(ii) Unit 1b. Canadian River—approximately 642 km (399 mi), extending from U.S. Highway 60/83 bridge near Canadian, Hemphill County, Texas (35°56'02" N, 100°22'00" W) downstream to Indian Nation Turnpike bridge northwest of McAlester, Oklahoma (IM T. 8 N., R. 13 E., SE $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$ Sec. 23).

(iii) Unit 2. Beaver/North Canadian River, Texas, Beaver, Harper, Ellis, Woodward, and Major Counties, Oklahoma—approximately 340 km (211 mi) of river extending from Optima Dam in Texas County, Oklahoma (CM, T. 2 N., R. 18 E., NW $\frac{1}{4}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$ Sec. 5) downstream to U.S. Highway 60/281 bridge in Major County, Oklahoma (IM,

T. 20 N., R. 16 W., west boundary Sec. 28).

(iv) 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).

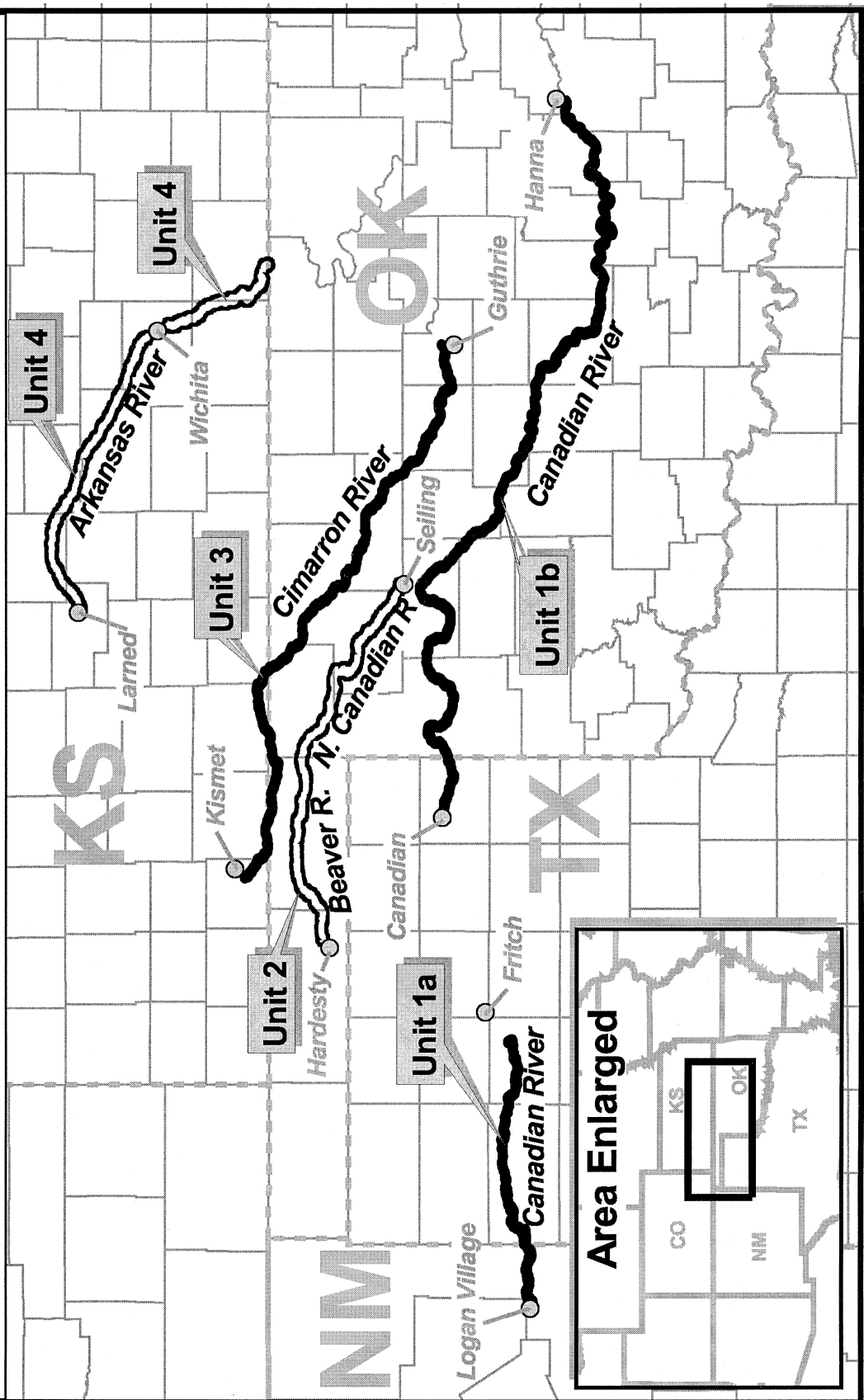
(v) Unit 4. Arkansas River, Barton, Cowley, Pawnee, Reno, Rice, Sedgwick, and Sumner Counties, Kansas—approximately 313 km (194 mi) of river extending from confluence with Pawnee River near Larned, Pawnee County, Kansas (SPM, T. 22 S., R. 16 W., Sec. 5) downstream to Kansas/Oklahoma State line in Cowley County, Kansas (SPM, T. 35 S., R. 5 E., southern boundary Sec. 18).

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

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General locations of the proposed critical habitat for the Arkansas River Shiner (*Notropis girardi*)

 Essential Area Proposed as Critical Habitat
 Proposed for Exclusion from the Final Critical Habitat Designation



* * * * *

Dated: September 30, 2004.

Julie MacDonald,

*Acting Assistant Secretary for Fish and
Wildlife and Parks.*

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