DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

RIN 1018–AI20

Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the Topeka Shiner

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), propose designation of critical habitat pursuant to the Endangered Species Act of 1973, as amended (Act), for the Topeka shiner (*Notropis topeka*). This proposal is made in response to a court settlement in *Biodiversity Legal Foundation et al.* v. *Ralph Morganweck et al.* C00–D–1180, committing the Service to submit for publication in the **Federal Register** a proposal to withdraw the existing ''not prudent'' critical habitat determination together with a new proposed critical habitat determination for the Topeka shiner by August 13, 2002. We are proposing to designate as critical habitat a total of 186 stream segments, representing 3,765.9 kilometers (2,340 miles) of stream in the States of Iowa, Kansas, Minnesota, Nebraska, and South Dakota. Proposed critical habitat includes portions of the North Raccoon, Boone, and Rock River watersheds in Iowa; the Kansas, Big Blue, Smoky Hill, and Cottonwood River watersheds in Kansas; the Rock and Big Sioux River watersheds in Minnesota; and the Big Sioux, Vermillion, and James River watersheds in South Dakota. If this proposed rule is finalized, Federal agencies proposing actions that may affect the areas designated as critical habitat must consult with the Service on the effects of the proposed actions, pursuant to section 7(a)(2) of the Act. A draft Economic Analysis will be prepared in the near future and made available for public comment. We will specify the availability of the draft Economic Analysis and subsequent reopening of the comment period in local and regional newspapers in the range of the species and through a notice in the **Federal Register**.

DATES: We will consider all comments on the proposed rule received from interested parties by October 21, 2002. We will hold public meetings in—Manhattan, KS, on September 4, 2002; Bethany, MO, on September 5, 2002; Fort Dodge, IA, on September 9, 2002; Pipestone, MN, on September 10, 2002; Sioux Falls, SD on September 11, 2002; and, Madison, NE, on September 12, 2002. We will start all meetings promptly at 6 p.m. and end them no later than 9 p.m. (*See* ''Public Hearings and Meetings'' section for times and locations.)

ADDRESSES: Send your comments on the proposed rule to the Kansas Ecological Services Field Office, U.S. Fish and Wildlife Service, 315 Houston Street, Suite E, Manhattan, KS 66502. The complete file for the proposed rule will be available for public inspection, by appointment, during normal business hours at the above address. Copies of the proposed rule are available by writing to the above address or by connecting to the Service internet web site at ''*http://mountain-prairie.fws.gov/topekashiner/ch*.''

FOR FURTHER INFORMATION CONTACT: Vernon Tabor, Kansas Ecological Services Field Office, at the above address; telephone (785) 539–3474, facsimile (785) 539–8567.

SUPPLEMENTARY INFORMATION:

Background

The Topeka shiner is a small, stout minnow, not exceeding 75 millimeters (3 inches) in total length. The head is short with a small, moderately oblique mouth. The eye diameter is equal to or slightly longer than the snout. The dorsal fin is large, with the height more than one half the predorsal length of the fish, originating over the leading edge of the pectoral fins. Dorsal and pelvic fins each contain eight rays. The anal and pectoral fins contain 7 and 13 rays respectively, and there are 32 to 37 lateral line scales. Dorsally the body is olivaceous (olive-green), with a distinct dark stripe preceding the dorsal fin. A dusky stripe is exhibited along the entire longitudinal length of the lateral line. The scales above this line are darkly outlined with pigment, appearing cross-hatched. Below the lateral line the body lacks pigment, appearing silvery-white. A distinct chevron-like spot exists at the base of the caudal fin (Cross 1967; Pflieger 1975; U.S. Fish and Wildlife Service 1993).

The Topeka shiner was first described by C.H. Gilbert in 1884, using specimens captured from Shunganunga Creek, Shawnee County, Kansas (Gilbert 1884), a tributary to the Kansas River. The Topeka shiner is 1 of 83 species within the genus *Notropis* (Robins et al. 1991), all in North America. The genus is within the minnow family (*Cyprinidae*).

The Topeka shiner is characteristic of small to mid-size prairie streams with relatively high water quality and cool to moderate temperatures. Many of these streams exhibit perennial flow; however, some become intermittent during summer or periods of prolonged drought. At times when surface flows cease, pool levels and moderate water temperatures are maintained by percolation through the streambed or groundwater seepage. The predominant substrate types within these streams are gravel, cobble, and sand; however, bedrock and clay hardpan overlain by a layer of silt are not uncommon (Minckley and Cross 1959). Recently in northern portions of the species' range, the Topeka shiner has been found to exist at some stream sites with degraded water quality and habitat quality, characterized by moderately high turbidity and thick deposits of fine sediments, respectively (Hatch, University of Minnesota, pers. comm. 2000; Berry, South Dakota State University, pers. comm. 2000). At present, it is unknown whether the species utilizes these sites year-round or seasonally, or moves through these areas in an attempt to disperse from core habitat areas.

In the late 1990s, the Topeka shiner was discovered to inhabit a number of off-channel sites in Minnesota and Iowa, primarily cut-off channels and oxbows that are seasonally flooded (Hatch, pers. comm. 1999; Menzel, Iowa State University, pers. comm. 1999). It is speculated that a common factor of these off-channel sites is a connection with the water table, enabling water quality, particularly temperature and dissolved oxygen concentrations, to stay within the tolerance levels of the species during hot, dry periods. It also is suggested that the ground water contact prevents total freeze-out of these pools during winter.

Topeka shiners most often occur in pool and run areas of streams, seldom being found in riffles. They are most often pelagic (living in open water) in nature, occurring in mid-water and surface areas, and are primarily considered a schooling fish. Occasionally individuals of this species have been found in larger streams, downstream of known populations (Cross 1967; Pflieger 1975; Tabor, U.S. Fish and Wildlife Service 1998).

Historically, the Topeka shiner was widespread and abundant throughout small to mid-size streams of the central prairie regions of the United States. The Topeka shiner's historic range includes portions of Iowa, Kansas, Minnesota, Missouri, Nebraska, and South Dakota. Stream basins within the range historically occupied by the Topeka shiner include the Des Moines, Raccoon, Boone, Missouri, Big Sioux, Cedar, Shell Rock, Rock, and Iowa

Basins in Iowa; the Arkansas, Kansas, Big Blue, Saline, Solomon, Republican, Smoky Hill, Wakarusa, Cottonwood, Nemaha, and Blue Basins in Kansas; the Des Moines, Cedar, Big Sioux, and Rock Basins in Minnesota; the Missouri, Grand, Lamine, Chariton, Des Moines, Loutre, Middle, Hundred and Two, and Blue Basins in Missouri; the Big Blue, Elkhorn, Missouri, and Loup Basins in Nebraska; and the Big Sioux, Vermillion, and James Basins in South Dakota. The known geographic range (watershed area where the species was known to occur) of the Topeka shiner has been reduced by approximately 90 percent. The number of historically known collection sites (documented in the literature or by museum specimens) of Topeka shiner has been reduced by approximately 70 percent, with approximately 50 percent of this decline occurring within the last 40–50 years. The species now primarily exists in isolated population complexes (adjoining stream segments) and individual isolated stream reaches.

The Topeka shiner is impacted by habitat destruction, degradation, modification, and fragmentation resulting from siltation, reduced water quality, tributary impoundment, stream channelization, in-stream gravel mining, and changes in stream hydrology. The species also can be impacted by introduced predaceous fishes. Additional information on the biology and status of the Topeka shiner can be found in the December 15, 1998, final listing determination (63 FR 69008). Biological factors relevant to the species' habitat needs are discussed in the Primary Constituent Elements portion of this proposed rule.

Previous Federal Action

In 1990 the Service's Kansas Field Office began a status review of the Topeka shiner using data collected from stream sampling activities and information requested from knowledgeable individuals and agencies, including State fish and wildlife conservation agencies, State health and pollution control agencies, colleges and universities, and other Service offices. The Topeka shiner first received listing consideration when the species was included in the Animal Candidate Review for Listing as Endangered or Threatened Species, as a category 2 candidate species, published in the **Federal Register** (56 FR 58816) on November 21, 1991. Category 2 candidate species were those species for which information in the possession of the Service indicated that a proposal to list the species as endangered or threatened was possibly appropriate, but sufficient data on biological vulnerability and threats were not currently available to support proposed rules for listing. A status report, dated February 16, 1993 (Service 1993), was subsequently prepared concerning the species. In the November 15, 1994, Animal Candidate Review for Listing as Endangered or Threatened Species, published in the **Federal Register** (59 FR 58999), the Topeka shiner was reclassified as a category 1 candidate species. Category 1 candidates comprised taxa for which the Service had substantial information on biological vulnerability and threats to support proposals to list the taxa as endangered or threatened. We have since discontinued the category 1 and category 2 designations for candidates and have established a new policy defining candidate species. Candidate species are currently defined as those species for which the Service has sufficient information on file detailing biological vulnerability and threats to support issuance of a proposed rule to list as threatened or endangered, but issuance of the proposed rule is precluded by other listing actions. In the February 28, 1996, Review of Plant and Animal Taxa That Are Candidates for Listing as Endangered or Threatened Species, published in the **Federal Register** (61 FR 7596), the Topeka shiner was reclassified as a candidate species.

We published a proposed rule to list the Topeka shiner as endangered in the **Federal Register** on October 24, 1997 (62 FR 55381). Included in the proposed rule was notification of the opening of a 60-day public comment period and request for public hearings. The comment period was open from October 24, 1997, to December 23, 1997. Four public hearings were held from January 26–29, 1998, across the species' range. A notice to reopen the public comment period was published in the **Federal Register** (62 FR 67324) to accommodate the hearings. This comment period was open from January 12, 1998, to February 9, 1998. We published the final rule listing the Topeka shiner as an endangered species on December 15, 1998 (63 FR 69008). The effective date of the listing was January 14, 1999. We did not designate critical habitat at the time of listing, as we determined that designation of critical habitat was not prudent.

In early 1999, we assembled the Topeka Shiner Recovery Team. The team is composed of species experts from academia and industry, State natural resource agency personnel with knowledge of the species, and Fish and Wildlife Service staff. Seven team meetings were held between 1999 to 2001, with the task of developing a draft recovery plan for the species. The Service is reviewing this draft and hopes its findings can be used as a basis for its proposed recovery plan.

In an April 4, 2001, court settlement of the case, *Biodiversity Legal Foundation et al.* v. *Ralph Morganweck et al.,* C00–D–1180, we agreed to reconsider our prudency determination and, if prudent, propose critical habitat for the Topeka shiner by August 13, 2002, and to finalize our decision on critical habitat by August 13, 2003.

Critical Habitat

Critical habitat is defined in section 3(5)(A) of the Act as—(I) the specific areas within the geographic area occupied by a species, at the time it is listed in accordance with the Act, on which are found those physical or biological features (I) essential to the conservation of the species and (II) that may require special management considerations or protection; and (ii) specific areas outside the geographic area occupied by a species at the time it is listed, upon a determination that such areas are essential for the conservation of the species. The term ''conservation,'' as defined in section 3(3) of the Act, means ''to use and the use of all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to this Act are 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 also requires conferences with the Service on Federal actions that are likely to result in the destruction or adverse modification of proposed critical habitat. In our regulations at 50 CFR 402.02, we define destruction or adverse modification as ''a direct or indirect alteration that appreciably diminishes the value of critical habitat for both the survival and recovery of a listed species. Such alterations include, but are not limited to, alterations adversely modifying any of those physical or biological features that were the basis for determining the habitat to be critical.'' Aside from the added protection that may be provided under section 7, the Act does not provide other forms of protection to lands designated as critical habitat. Because consultation under section 7 of the Act does not apply to activities on private or other non-Federal lands that

do not involve a Federal nexus, critical habitat designation would not result in any regulatory requirement for these actions.

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 in which the primary constituent elements, as defined at 50 CFR 424.12(b), are found).

Section 4 requires that we designate critical habitat at the time of listing and based on what we know at the time of designation. When we designate critical habitat at the time of listing or under short court-ordered deadlines, we will often not have sufficient information to identify all areas of critical habitat. We are required, nevertheless, to make a decision and thus must base our designations on what, at the time of designation, we know to be critical habitat.

In accordance with sections 3(5)(C) of the Act, not all areas that can be occupied by a species will be designated critical habitat. Within the geographic area occupied by the species we designate only areas currently known to be essential. Essential areas should already have the features and habitat characteristics that are necessary to conserve the species. We will not speculate about what areas might be found to be essential if better information becomes available, or what areas may become essential over time. If the information available at the time of designation does not show that an area provides essential life cycle needs of the species, then the area should not be included in the critical habitat designation. We will not designate areas within the geographic area occupied by the species unless at least one of the primary constituent elements, as defined at 50 CFR 424.12(b), is present. Moreover, areas occupied by certain known populations of the Topeka shiner have not been proposed as critical habitat. For example, we did not propose critical habitat for some small scattered populations or habitats in areas highly impacted by human development.

Our regulations state, ''The Secretary shall designate as critical habitat areas outside the geographical area presently occupied by a 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)). Based on the best available science and commercial data, there appears to be no foundation upon which to make a determination that the conservation needs of the Topeka shiner require designation of critical habitat outside of the geographic area occupied by the species, so we have not proposed to designate critical habitat outside of the geographic area believed to be occupied.

Our Policy on Information Standards Under the Endangered Species Act, published in the **Federal Register** on July 1, 1994 (59 FR 34271), provides criteria, procedures, and guidance to ensure decisions made by the Service represent the best scientific and commercial data available. It requires 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 may be obtained from a recovery plan, articles in peer-reviewed journals, conservation plans developed by States, Tribes, and counties, scientific status surveys and studies, and biological assessments or other unpublished materials, and expert opinion or personal knowledge.

Habitat is often dynamic, and species may move from one area to another over time. Furthermore, we recognize designation of critical habitat may not include all habitat eventually determined as necessary to recover the species. For these reasons, all should understand that critical habitat designations do not signal that habitat outside the designation is unimportant or may not be required for recovery. Areas outside the critical habitat designation will continue to be subject to conservation actions that may be implemented under section 7(a)(1) of the Act, and the regulatory protections afforded by the section 7(a)(2) jeopardy standard and the section 9 take prohibition, as determined on the basis of the best available information at the time of the action. Federally funded or assisted projects affecting listed species outside their designated critical habitat areas may still result in likely-to-jeopardize 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.

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 base critical habitat determinations on the best scientific and commercial data available and to consider physical and biological features (primary constituent elements) that are essential to conservation of the species, and that may require special management considerations and protection. These physical and biological features include, but are not limited to—(1) Space for individual and population growth, and for normal behavior; (2) food, water, air, light, minerals, or other nutritional or physiological requirements; (3) cover or shelter; (4) sites for breeding, reproduction, rearing (or development) of offspring; and (5) habitats protected from disturbance or that are representative of the historic geographical and ecological distributions of a species.

The following studies involving the habitat requirements, life history, and population biology of Topeka shiner serve as the best science available in establishing the primary constituent elements listed below—Barber 1986; Blausey 2001; Cross 1967; Cross 1970; Cross and Collins 1975; Cross and Collins 1995; Deacon and Metcalf 1961; Gelwicks and Bruenderman 1996; Hatch 2001; Hatch and Besaw 2001; Katula 1998; Kerns 1983; Leopold et al. 1992; Michels 2000; Michl and Peters 1993; Minckley and Cross 1959; Pflieger 1975; Pflieger 1997; Rosgen 1996; Shranke *et al.* 2001; Stark *et al.* 1999; U.S. Fish and Wildlife Service 1993; Wall *et al.* 2001.

Given the large geographic range the species historically occupied, and the varying habitats used by the different life-history stages, describing specific values or conditions for each of these habitat features is not always possible. However, the following discussion summarizes the biological and habitat requirements of the Topeka shiner relevant to identifying the primary constituent elements of its critical habitat.

Topeka shiners are typically found in small, low order, prairie streams with good water quality, relatively cool temperatures, and low fish diversity (Minckley and Cross 1959; Cross 1967; Barber 1986; Cross and Collins 1995; Pflieger 1997; Blausey 2001). Although Topeka shiners can tolerate a range of water temperatures, cooler, spring-maintained systems are considered

optimum (Cross and Collins 1995; Pflieger 1997). These streams generally maintain perennial flow but may become intermittent during summer or periods of drought. Evermann and Cox (1896) reported on surveys from the Nebraska portion of the Big Blue River watershed, and noted that Topeka shiners occurred in ''pond-like, isolated portions of streams which dry up in parts of their course during dry weather.'' Minckley and Cross (1959) found Topeka shiners ''almost exclusively in quiet, open pools of small, clear streams that drain upland prairies.'' They also noted that when these streams approach intermittency the ''pools are maintained at fairly stable levels by percolation through the gravel or by springs.'' Similar habitat characteristics are described for populations in Missouri by Pflieger (1997). In South Dakota, Blausey (2001) found that runs were the dominant habitat type associated with Topeka shiner presence, although higher densities of the species were collected in pools. While characteristic of pools with stable water levels, the Topeka shiner appears to be well adapted to periodic drought conditions common to prairie streams. For example, Kerns (1983) found that even though mortality of several fish species was high in desiccating pools, juvenile Topeka shiners seemed especially drought-resistant.

In Kansas, Missouri, and South Dakota, Topeka shiners typically occur in streams with clean gravel, cobble, or sand bottoms (Pflieger 1975; Kerns 1983; Barber 1986; Cross and Collins 1995; Pflieger 1997; Blausey 2001). However, bedrock and clay hardpan covered by a thin layer of silt are not uncommon (Minckley and Cross 1959). In western Kansas pools containing Topeka shiners, Stark *et al.* (1999) determined the primary substrate to be coarse sand overlain by silt and detritus. Similarly, Michl and Peters (1993) reported the collection of Topeka shiners from a Nebraska stream having a sand and detritus substrate. While main channel areas may be typical of Kansas, Missouri, and South Dakota populations, Topeka shiners in Minnesota and Iowa appear more abundant in off-channel oxbows and side-channels than in the main channels (Menzel pers. comm. 1999; Hatch 2001). These seasonally flooded habitats also appear to have a connection with the water table, enabling temperature and dissolved oxygen to stay within tolerance levels of the species during dry, hot periods. It also suggests that the groundwater connection may prevent complete freezing of these pools in winter. Groundwater availability was a primary predictor of Topeka shiner presence in South Dakota (Blausey 2001). While we have recently found the species in some stream sites with excessive sedimentation, it is unknown whether the species uses these locations year-round, for portions of the year, or occupy these areas during periods of dispersal. In much of the range of Topeka shiner, moderate-sized mainstem streams likely provide occasional dispersal corridors for the species (Cunningham, Eco-Centrics, Inc., Omaha, Nebraska, pers. comm. 1999; Menzel pers. comm. 2001). In most cases these larger streams do not provide habitat conditions suitable for the species to complete its necessary life cycle requirements, but in the Iowa and Minnesota range of the species oxbow and other off-channel habitats adjacent to these mainstems do provide these requirements (Menzel pers. comm. 2001; Hatch 2001). In these cases, the primary constituent elements of critical habitat are present in the off-channel areas, but not in the larger mainstem streams themselves, even though they likely provide corridors for dispersion to other areas of suitable habitat.

Topeka shiners are short-lived species, rarely surviving to their third summer (Minckley and Cross 1959; Cross 1967; Kerns 1983; Cross and Collins 1995; Pflieger 1997; Hatch 2001). The species typically matures at 12–14 months of age (Kerns 1983; Cross and Collins 1995; Pflieger 1997). Based on ovarian development, Hatch (2001) suggested that Topeka shiners are multiple-clutch spawners. Topeka shiners spawn in pool habitats, over green sunfish (*Lepomis cyanellus*) and orangespotted sunfish (*Lepomis humilis*) nests, from late May to August in Kansas and Missouri (Kerns 1983; Cross and Collins 1995; Pflieger 1997). Stark *et al.* (1999) observed Topeka shiners spawning on the periphery of green sunfish nests and suggested that the habitats provided by these nests are important to the reproductive success of Topeka shiners. These same authors reported aggregations of Topeka shiners in close association with fathead minnow (*Pimephales promelas*) and orangespotted sunfish nests, but no spawning activities were observed. In Minnesota, Hatch (2001) found that Topeka shiners use rubble, boulder, and concrete rip-rap at the margins of pools and slow runs. Several authors have reported the defense of small territories by breeding male Topeka shiners (Kerns 1983, Pflieger 1997, Katula 1998, Stark *et al.* 1999, Hatch 2001). In Jack Creek, Chase County, Kansas, Mammoliti (Kansas Department of Wildlife and Parks, pers. comm. 1999) observed two male Topeka shiners defending a longear sunfish *(Lepomis megalotis)* nest as the male sunfish loafed nearby. Other authors have noted upstream movement as reproductive behavior in Topeka shiners (Minckley and Cross 1959, Kerns 1983, Barber 1986).

The Topeka shiner is primarily a schooling fish and found throughout the water column. Pflieger (1997) noted that the species schooled with other cyprinids in mid-water or near the surface. Other studies have reported Topeka shiners schooling in the lower portion of the water column with central stonerollers (*Campostoma annomalum*) (Kerns 1983, Stark *et al.* 1999). While typical of small, headwater streams, occasionally the species has been captured in larger streams, downstream of known populations. Barber (1986) noted variation in mobility within a population of Topeka shiner based on sex and age class. In the spring, as precipitation and water temperatures increased, adult males tended to move upstream or downstream. In many instances, the fish moved back to their original pool. Young-of-the-year fish tended to move downstream in the fall. Others have reported displacement of fish downstream during periods of high flow (Cross, University of Kansas, pers. comm. 1994; Tabor pers. comm. 1994). Although it is evident that the species has some capacity to disperse, at present the degree of dispersal and the species' ability to ''tributary hop'' is unknown. It has been suggested that populations found in short, direct tributaries to the Missouri River were evidence of a historic dispersal eastward by ''tributary hopping.'' However, Deacon and Metcalf (1961) found the Topeka shiner to be one of several fishes with a low capacity for dispersal following drought conditions. In addition, Michels (2000) conducted a range-wide genetic analysis of different populations of Topeka shiner and suggested that successful migration, even between adjacent populations, is rare and that movement over long distances is unlikely.

Earlier researchers (Kerns 1983, Cross and Collins 1995) reported that Topeka shiners are benthic insectivores that feed primarily on midges (chironomids), true flies (dipterans), and mayflies (ephemeropterans), with zooplankton (cladocerans and copepods) also contributing to their diet. More recent studies have found Topeka shiner feeding at a variety of trophic levels and on diverse foods. Stark *et al.* (1999) observed Topeka shiners consuming

eggs from fathead minnow nests in Willow Creek, Wallace County, Kansas. In Minnesota, food included several kinds of zooplankton, a variety of immature aquatic insects, larval fish, algal and vascular plant matter, including seed capsules (Hatch and Besaw 1998). These authors suggested that Topeka shiners function both as benthic and nektonic feeders, and propose that the species also may feed from the surfaces of aquatic plants.

We determine the primary constituent elements associated with critical habitat for Topeka shiner to be:

1. Streams most often with permanent flow, but that can become intermittent during dry periods;

2. Side channel pools and oxbows either seasonally connected to a stream or maintained by groundwater inputs, at a surface elevation equal to or lower than the bank-full discharge stream elevation. The bankfull discharge is the flow at which water begins leaving the channel and flowing into the floodplain; this level is generally attained every 1 to 2 years. Bankfull discharge, while a function of the size of the stream, is a fairly constant feature related to the formation, maintenance, and dimensions of the stream channel;

3. Streams and side channel pools with water quality necessary for unimpaired behavior, growth, and viability of all life stages. The water quality components can vary seasonally and include—temperature (1 to 30°Centigrade), total suspended solids (0 to 2000 ppm), conductivity (100 to 800 mhos), dissolved oxygen (4 ppm or greater), pH (7.0 to 9.0), and other chemical characteristics;

4. Living and spawning areas for adult Topeka shiner with pools or runs with water velocities less than 0.5 meters/second (approx. 20 inches/second) and depths ranging from 0.1 to 2.0 meters (approximately 4 to 80 inches);

5. Living areas for juvenile Topeka shiner with water velocities less than 0.5 meters/second (approx. 20 inches/second) with depths less than 0.25 meters (approx. 10 inches) and moderate amounts of instream aquatic cover, such as woody debris, overhanging terrestrial vegetation, and aquatic plants;

6. Sand, gravel, cobble, and silt substrates with amounts of fine sediment and substrate embeddedness that allows for nest building and maintenance of nests and eggs by native Lepomis sunfishes (green sunfish, orangespotted sunfish, longear sunfish) and Topeka shiner as necessary for reproduction, unimpaired behavior, growth, and viability of all life stages;

7. An adequate terrestrial, semiaquatic, and aquatic invertebrate food base that allows for unimpaired growth, reproduction, and survival of all life stages;

8. A hydrologic regime capable of forming, maintaining, or restoring the flow periodicity, channel morphology, fish community composition, off-channel habitats, and habitat components described in the other primary constituent elements; and

9. Few or no nonnative predatory or competitive nonnative species present.

The areas we are proposing for designation as critical habitat for Topeka shiner provide the above primary constituent elements essential for the conservation of the species. The proposed areas require special management considerations or protection to ensure their contribution to the conservation of the species.

Proposed Critical Habitat Designation

In proposing critical habitat for Topeka shiner, we reviewed the overall approach to the conservation of the species undertaken by local, State, Tribal, and Federal agencies and private individuals and organizations since the species' listing in 1998. We also considered the measures identified as necessary for recovery, as outlined in the species' preliminary draft recovery plan. Additionally, we solicited information and recommendations from knowledgeable biologists and members of the Topeka Shiner Recovery Team. We also reviewed the available information pertaining to habitat requirements of the species received during the listing process.

TABLE 1.—NUMBER OF STREAM SEGMENTS AND TOTAL STREAM MILEAGE PROPOSED FOR DESIGNATION AS CRITICAL HABITAT FOR TOPEKA SHINER BY STATE

State	No. of stream segments proposed by State	Total stream mileage proposed by State
Iowa	25	225
Kansas	63	587
Minnesota	57	605
Nebraska	1	6
South Dakota	40	917
Total	186	2,340

TABLE 2.—NUMBER OF STREAM SEGMENTS AND TOTAL STREAM MILEAGE PROPOSED FOR DESIGNATION AS CRITICAL HABITAT FOR TOPEKA SHINER BY COUNTY

County	Number of stream segments proposed by county	Stream mileage proposed by county
Iowa:		
Calhoun	8	68
Carroll	2	7
Dallas	3	3
Greene	8	87
Hamilton	1	1
Lyon	3	16
Osceola	1	5
Sac	4	12
Webster	1	9
Wright	3	16
Kansas:		
Butler	1	5
Chase	27	200
Dickinson	4	49
Geary	7	62
Greenwood	2	7
Marion	1	9
Marshall	2	22
Morris	6	22
Pottawatomie	1	5
Riley	4	44
Shawnee	1	18
Wabaunsee	15	136
Wallace	1	9
Minnesota:		
Lincoln	4	27
Murray	2	19
Nobles	14	115
Pipestone	21	196
Rock	25	247
Nebraska:		
Madison	1	6
South Dakota:		
Aurora	1	27
Beadle	3	98
Brookings	6	106
Clay	2	29
Davison	4	63
Deuel	2	36
Hamlin	1	8
Hanson	3	48
Hutchinson	6	66
Lincoln	3	41
McCook	2	47
Miner	2	31
Minnehaha	6	102
Moody	5	63
Turner	6	151

Note: Many stream segments occur in more than one county, thus inflating the total number per State, if totaled.

Due to the need for additional information on the species, its habitats, restoration potential, possible unknown isolated occurrences, and other factors, interim criteria for downlisting and delisting were set forth in a preliminary draft recovery plan now under review by the Service. The recovery team agreed that even though much

information on the species is known, it would be prudent to develop interim recovery criteria, as opposed to final criteria at the time the plan was developed. It also was agreed by the recovery team that the interim recovery criteria would later be adjusted to reflect new information, as it becomes available, solidifying final recovery criteria. The primary information need identified in coming to this decision was information on stream and watershed conditions within unoccupied historic range, in reference to the potential for reintroduction and reestablishment of the species in these areas. Additionally, there was the need for more information on the species' range, particularly in Nebraska and parts of Iowa, where isolated, remnant populations of Topeka shiner might be discovered, possibly affecting recovery goals. If previously unknown populations were found in these areas, this would avoid the need for reintroduction in these areas. Reintroduction and successful reestablishment is most often viewed as being more difficult than maintenance and enhancement of existing populations and habitat. The interim recovery criteria recommend protection of existing populations, enhancement and restoration of habitats occupied by depleted populations, and reintroduction and reestablishment of the species into unoccupied streams within the historical range. Since information and data are lacking on conditions of the watersheds and instream habitat in unoccupied historic range of the species, we do not propose habitat in these areas, even though we recognize that the interim recovery criteria includes reintroduction and reestablishment of Topeka shiner to these areas. We are proposing stream segments occupied by Topeka shiner, and some stream segments with no records of capture for the species that connect with occupied stream segments. These connecting stream segments possess the primary constituent elements necessary for proposal, and likely harbor the species during some flow conditions. Examples of habitat use of this type include, upstream movement during high flows or wet periods, and downstream habitat use during dry periods or periods of extended drought. Due to this consideration, we regard all stream segments proposed for critical habitat as within the geographical area occupied by the species.

Within the geographic area occupied by the species, we are designating only areas currently known to be ''essential to the conservation of the species.'' Critical habitat should already have, or have the potential for developing in the near future, many or all of the features and habitat characteristics that are necessary to sustain the species. We do not speculate about what areas might be found to be essential if better information were available, or what areas may become essential over time. If information available at the time of designation does not show an area provides essential support for a species at any phase of its life cycle, then the area should not be included in the critical habitat designation. Within the geographic area occupied by the species, we will not designate areas that do not now have the primary constituent elements that provide essential life cycle needs of the species, as defined at 50 CFR 424.12(b). Furthermore, we recognize designation of critical habitat may not include all habitat eventually determined as necessary to recover the species. For these reasons, areas outside the critical habitat designation will continue to be subject to conservation actions that may be implemented under section 7(a)(1) and the regulatory protections afforded by the section 7(a)(2) jeopardy standard and the section 9 take prohibition, as determined on the basis of the best available information at the time of the action. We specifically anticipate that federally funded or assisted 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 those planning efforts calls for a different outcome.

The proposed critical habitat described below constitutes our best assessment of areas needed for the conservation of Topeka shiner and is based on the best scientific and commercial information available. The proposed areas are essential to the conservation of the species because they currently support populations of Topeka shiner or provide critical links or corridors to other habitat for the species. The stream segments proposed for designation as critical habitat in this proposed rule are consistent with the preliminary draft recovery plan's first recovery criterion, which states that recovery of the species will be recognized as achieved when all naturally occurring populations within primary and secondary recovery units are determined to be stable or increasing over a period of 10 years.

Important considerations in selection of areas proposed in this rule include factors specific to each geographic area, watershed and stream segment, such as stream size and length, connectivity, and habitat diversity, as well as range-wide recovery considerations, such as genetic diversity and representation of major portions of the species' historical range. The proposed critical habitat reflects the need for habitat complexes and individual stream reaches of sufficient size to provide habitat for Topeka shiner populations large enough to be self-sustaining over time, despite fluctuations in local conditions.

Habitat complexes contain interconnected waters so that Topeka shiners can move between areas, at least during certain flows or seasons. The ability of the fish to repopulate areas where they are now depleted or extirpated is vital to the species' conservation. Some complexes may include stream reaches with minimal instream habitat, but which provide migration corridors for Topeka shiners. These corridors play a vital role in the dispersal of the species and the overall functioning of the aquatic ecosystem and, therefore, the integrity of upstream and downstream habitats.

The proposed designation includes representatives of all known populations of the species so as to conserve and protect genetic diversity within the species. Information on the Topeka shiner indicates a high degree of genetic differentiation among many of the remnant populations (Michels 2000), making conservation of as many of these populations as possible important to efforts to preserve genetic diversity.

Uncertainty on upstream and downstream distributional limits of some populations may result in areas of occupied habitat being excluded from the designation. Additionally, there are streams with some recent association with Topeka shiners that may not be proposed for designation. These could include streams with records of one-time captures of Topeka shiner; streams for which habitat conditions are unknown; streams with unprecise, generalized, or questionable capture locations; and streams with severely altered habitat, lacking the primary constituent elements (*e.g.,* drainage ditches).

Our determination of which stream segments to propose for designation used the best scientific information and data available. We began the process by

compiling information on the species and its habitat to create draft maps of potentially suitable stream reaches. We then consulted species experts in academia, members of the Topeka Shiner Recovery Team, and biologists from State natural resource and fish and wildlife agencies familiar with the species or the watersheds in areas with the Topeka shiner. We also consulted biologists from other Service offices in the species' range. We asked for their review of the stream reaches identified on the draft maps, and for any suggested changes or additions.

Factors considered in determining specific stream segments included—streams with occupancy and habitat information for the species; stream reaches with all or some of the primary constituent elements for Topeka shiners, including those able to attain them in the foreseeable future; habitat models; information on the species' ecology and biology; stream morphology and hydrology information; regional habitat use by the species, such as use of side-channel pools in Iowa, Minnesota, and the Big Sioux drainage in South Dakota; major habitat alterations, such as channelization and dams; and information on the mobility of Topeka shiner in reference to connectivity of adjacent stream reaches, and to home range and dispersal characteristics. Information and suggested changes provided by the individuals and agencies who reviewed the draft maps were carefully considered and implemented where they were consistent with the Service's criteria for designating critical habitat.

The proposed designation includes 186 stream segments, encompassing 3,765.9 kilometers (2,340 miles) of streams, including adjacent off-channel pool habitats in Iowa, Minnesota, and the Big Sioux River watershed of South Dakota. The stream segments are within 11 major watersheds in the States of Iowa, Kansas, Minnesota, Nebraska, and South Dakota. These 186 proposed stream segments encompass 23 stream complexes (2 or more connecting stream segments) and 18 individual, isolated streams. No habitat is proposed for Missouri (see Exclusions from Critical Habitat section below).

Proposed critical habitat includes the stream channels within the identified stream reaches and off-channel pools and oxbows in the Minnesota, Iowa, and the Big Sioux River portion of the South Dakota range. Side channel pools and oxbows that are proposed for designation are typically either seasonally connected to a stream or have waters maintained by groundwater inputs. The defining stream elevation for determining the lateral extent of proposed critical habitat in stream channels and off-channel or oxbow pools is the elevation equal to the bankfull discharge stream elevation. The bankfull discharge is the flow at which water begins leaving the channel and flowing into the floodplain (Rosgen 1996). This level is generally attained every 1 to 2 years (Leopold *et al.* 1992). Bankfull discharge, while a function of the size of the stream, is a fairly constant feature related to the formation, maintenance, and dimensions of the stream channel (Rosgen 1996).

We propose the following areas for designation as critical habitat. These areas—(1) Are currently considered occupied or provide critical links or corridors between occupied habitats and/or potentially occupied habitat; (2) provide all or some of the primary constituent elements essential to the conservation of the species; and (3) may require special management considerations or protection. (See the Regulation Promulgation section of this rule for legal descriptions and maps of the boundaries.)

Iowa

Raccoon River Watershed

1. North Raccoon River Complex (19 stream segments), Calhoun, Carroll, Dallas, Greene, Sac, and Webster Counties, Iowa. Multiple tributary streams and some of their adjacent off-channel pool habitats in this complex have recent collection records for Topeka shiners. While some habitat in these tributaries has been altered (primarily by channelization and sedimentation), current habitat conditions provide most or all of the primary constituent elements consistent with designation as critical habitat. Off-channel pool habitats adjacent to the mainstem of the North Raccoon River also have been discovered to be Topeka shiner habitat, and we propose these areas as well. However, records of Topeka shiners are lacking from the mainstem of the North Raccoon River itself. It is likely that the mainstem provides an important dispersal corridor for the species between tributary streams and off-channel pools adjacent to the mainstem, particularly during high flow events, but the habitat components within the mainstem itself do not provide the primary constituent elements necessary for proposing it for designation as critical habitat. We are proposing 19 stream segments within portions of the following tributaries and their qualifying, adjacent off-channel habitat for designation—Indian Creek, Ditch 57, and Outlet Creek; Camp Creek and West Fork Camp Creek; Prairie Creek; Lake Creek; Purgatory Creek; Cedar Creek, West Cedar Creek, and East Cedar Creek; Short Creek; Hardin Creek; Buttrick Creek, West Buttrick Creek, and East Buttrick Creek; and Elm Branch and Swan Lake Branch. Additionally, qualifying off-channel pool habitat (as described in the section on Primary Constituent Elements) adjacent to the mainstem of the North Raccoon River is proposed for designation.

Boone River Watershed

2. Eagle Creek (one stream segment), Hamilton and Wright Counties, Iowa. Eagle Creek has several recent collections of Topeka shiner even though a large portion of its upper basin has been severely altered by stream channelization and drainage ditch construction. The lower reaches of Eagle Creek still retain much of its natural stream morphology, including meanders and pool habitat. We propose the lower reach of Eagle Creek and qualifying, adjacent off-channel pool habitats for designation. The upper, channelized, portions of Eagle Creek are not proposed for designation.

3. Ditch 3 and Ditch 19 Complex (two stream segments), Wright County, Iowa. The proposed reach of Ditch 3 extends from its confluence with the Boone River, upstream to the Humboldt County line. Ditch 19 also extends upstream from its confluence with Ditch 3 to the Humboldt County line. While the general map descriptions of these streams are termed ''ditches'' due to channelization activities in the past, both streams have reestablished much of their natural morphology and instream habitat conditions in the recent past, including meanders and pool habitats. Habitat components within these streams are consistent with the Primary Consistent Elements necessary for designation as critical habitat downstream from the Humboldt County line. Topeka shiners have been recently captured from both streams. Qualifying off-channel pool habitat also is proposed. Habitat upstream from the Humboldt County line is highly modified by channelization and is not proposed for designation.

Rock River Watershed

4. Rock River Complex (two stream segments in Iowa), Lyon County, Iowa. The Rock River Complex is comprised of 2 stream segments in Iowa and 28 stream segments in Minnesota. Topeka shiners have recently been captured throughout much of the Rock River watershed, both from streams and adjacent off-channel pools and oxbows.

We propose the reach of the Rock River from its confluence with Kanaranzi Creek upstream to the border with Minnesota, and Kanaranzi Creek from the confluence with the Rock River upstream to the Minnesota border. Adjacent, qualifying off-channel pool habitats along both stream segments also are proposed.

5. Little Rock River Complex (one stream segment in Iowa), Lyon and Osceola Counties, Iowa. The Little Rock River Complex is comprised of one stream segment in Iowa and two stream segments in Minnesota. Topeka shiners have recently been captured in portions of the Little Rock River watershed, both from streams and adjacent off-channel pools and oxbows. We propose the reach of the Little Rock River from near the town of Little Rock, Iowa, upstream to the Minnesota border, including qualifying, adjacent off-channel pool habitat.

Kansas

Big Sioux River Watershed

1. Medary Creek Complex (two stream segments in Minnesota), Lincoln County, Minnesota. This complex is comprised of two stream segments in Minnesota and three in South Dakota. Topeka shiners recently have been captured from several localities in this complex. We propose portions of Medary Creek and an unnamed tributary, and adjacent off-channel pool habitat for designation.

2. Flandreau Creek Complex (four stream segments in Minnesota), Lincoln and Pipestone Counties, Minnesota. This complex is comprised of four stream segments in Minnesota and one in South Dakota. Topeka shiners have been recently captured from several localities in this complex. We proposed portions of Flandreau Creek and an unnamed tributary, East Branch Flandreau Creek, Willow Creek, and adjacent off-channel pool habitat for designation.

3. Split Rock/Pipestone/Beaver Creek Complex (18 stream segments in Minnesota), Pipestone and Rock Counties, Minnesota. This complex is comprised of 18 stream segments in Minnesota and 7 in South Dakota. The streams and some of their adjacent off-channel pool habitats in this complex have recent collection records for the Topeka shiner. While some habitat in these tributary streams has been altered, primarily by channelization and sedimentation, current habitat conditions provide most or all of the primary constituent elements.

Cottonwood River Watershed

1. Fox Creek Complex (three stream segments), Chase County, Kansas. This complex is characterized by high quality aquatic habitat. Recent collection records exist from two unnamed tributaries to Fox Creek. We propose for designation the lower reach of Fox Creek from near Strong City, Kansas, upstream through the Tallgrass Prairie National Preserve, an area managed by the U.S. National Park Service, and two unnamed tributary streams in the Preserve.

2. Diamond Creek Complex (eight stream segments), Chase and Morris Counties, Kansas. This complex is generally characterized by high-quality aquatic habitat draining large tracts of tallgrass prairie. However, an upstream portion of the basin has been largely converted to rowcropping, with a subsequent decline in aquatic habitat quality. Recent collection records exist in many of the streams draining the upland prairie habitat. We propose portions of the following streams for designation—Diamond Creek from near its confluence with the Cottonwood River, upstream to the confluence with Sixmile Creek; Gannon Creek and an unnamed tributary; Mulvane Creek; Schaffer Creek and four unnamed tributaries; Dodds Creek; Sixmile Creek; Mulberry Creek and an unnamed tributary; and an unnamed direct tributary to the Cottonwood River immediately adjacent to, and downstream from, the lower reach of Diamond Creek.

3. Middle Creek Complex (three stream segments), Chase County, Kansas. This complex is generally characterized by high-quality aquatic habitat draining large tracts of tallgrass prairie. However, portions of the western sub-basins have been converted to rowcropping. There also are several tributary streams that have had intensive dam construction, resulting in major changes to habitat and fish communities. Following dam development in the Stribby Creek drainage of the Middle Creek Basin, Topeka shiners disappeared both upstream and downstream from the impoundments. Recent collection records only exist from two streams—Collett Creek, and an unnamed tributary to Middle Creek in the lower portion of the basin. We propose portions of the following streams for designation—the lower reach of Middle Creek and two adjoining unnamed tributaries; and Collett Creek.

4. South Fork of the Cottonwood River (South Fork) Complex (15 stream segments), Butler, Chase, and Greenwood Counties, Kansas. This complex is characterized by high-quality aquatic habitat draining large tracts of tallgrass prairie. Many of the streams within this watershed have capture records for the species. There are several tributaries, including one site on the upper mainstem, that were dammed just prior to the Topeka shiner being listed as an endangered species. There have been no recent surveys along these streams to determine if Topeka shiner populations have been affected; however, the species persists in other portions of the watershed. We propose portions of the following streams for designation—the mainstem of the South Fork of the Cottonwood River from its confluence with the Cottonwood River, upstream to near its headwaters; Sharpes Creek; Rock Creek; Den Creek; Crocker Creek and an unnamed tributary; Mercer Creek and two unnamed tributaries; Jack Creek; Thurman Creek and an unnamed tributary; Little Cedar Creek; Shaw Creek; and Bloody Creek, a direct tributary to the Cottonwood River immediately downstream from the South Fork of the Cottonwood River confluence with the mainstem.

5. Mud Creek (one stream segment), Marion County, Kansas. This watershed is characterized by a mosaic of prairie and cropland. We propose one stream segment in the upper portion of the Mud Creek watershed.

Kansas River Watershed

6. Mill Creek Complex (14 stream segments), Wabaunsee County, Kansas. This complex is generally characterized by high-quality aquatic habitat draining large tracts of tallgrass prairie. However, much of the floodplain areas of mainstem Mill Creek and several of its tributaries have been converted to cropland. This conversion, likely in combination with intensive instream gravel dredging, has resulted in headcutting, bank erosion, and the loss of riparian vegetation. There is a moderate level of tributary dam development, primarily in the headwaters of the basin, and there are riparian and instream areas where cattle are over-wintered, resulting in large inputs of nutrients to the streams during periods of heavy rainfall. Recent collection records of Topeka shiner exist for many of the streams in the basin, but their abundance appears to be declining when compared with capture records from the 1950s–1970s. We propose portions of the following streams for designation—Mill Creek upstream from State Highway 30; West Branch Mill Creek; South Branch Mill Creek; East Branch Mill Creek; Mulberry Creek;

Spring Creek (a direct tributary to mainstem Mill Creek); Kuenzli Creek; Paw Paw Creek; Pretty Creek; Hendricks Creek; Loire Creek; Illinois Creek; Spring Creek (a tributary to West Branch Mill Creek); and Nehring Creek.

7. Mission Creek (one stream segment), Shawnee and Wabaunsee Counties, Kansas. This stream is characterized by good aquatic habitat draining tallgrass prairie uplands and a cultivated floodplain. Riparian conditions are good and generally appear stable. We propose the reach of Mission Creek upstream from Interstate Highway 70.

8. Deep Creek Complex (two stream segments), Riley County, Kansas. The Deep Creek Complex is characterized by high-quality aquatic habitat draining tallgrass prairie uplands and a partially cultivated floodplain. Riparian conditions are good and generally appear stable except for upstream reaches of Deep Creek where intensive instream gravel mining is occurring, resulting in severe stream bank erosion and headcutting. Recent records of Topeka shiner exist from the Pilsbury Crossing area of Deep Creek, and the lower and mid-reaches of School Creek. We propose portions of the following streams for designation—Deep Creek from near its confluence with the Kansas River, upstream to Interstate Highway 70; and approximately the downstream one-half of School Creek.

9. Wildcat Creek Complex (two stream segments), Riley County, Kansas. The Wildcat Creek Complex is composed of two stream segments and drains a variety of landscapes including cultivated cropland, tallgrass prairie uplands, and woodlands. The lower portion of the proposed downstream reach drains areas of suburban Manhattan, Kansas. This suburban reach retains good habitat quality including pool/riffle complexes, meanders, and stable riparian conditions. Riparian conditions throughout the proposed reaches are generally in good condition. Wildcat Creek's aquatic habitat is moderately impacted by sediment and nutrient inputs from upstream sources. We propose a stream segment near Riley, Kansas, and a reach from near Keats to Manhattan, Kansas. We are proposing to exclude the reach of Wildcat Creek flowing through the Fort Riley Military Installation (see Exclusions from Critical Habitat section).

10. Clarks Creek Complex (five stream segments), Geary County, Kansas. These streams can generally be characterized as having good aquatic habitat draining tallgrass prairie uplands and a partially cultivated floodplain. Riparian conditions are good and generally appear stable. Instream gravel mining occurs at variable levels in this complex. Capture records of Topeka shiner within this complex are recent. We propose portions of the following streams for designation—a mid-basin reach of Clarks Creek; Thomas Creek; Davis Creek; Dry Creek; and West Branch Dry Creek.

11. Lyon Creek Complex (five stream segments), Geary and Dickinson Counties, Kansas. The Lyon Creek Complex is composed of five stream segments that drain variable landscapes. Much of the basin, particularly the western portion, drains a mosaic of prairie uplands and croplands. Instream habitat conditions vary, with some stream reaches degraded by heavy sediment and nutrient loading. Watershed impoundments and ponds are a major feature in several of the sub-drainages of this watershed, particularly in the southeastern portion of the Lyon Creek watershed. We propose portions of the following streams for designation—the lower and mid-basin reaches of Lyon Creek; Rock Springs Creek; Carry Creek and an unnamed tributary; and West Branch Lyon Creek.

12. Walnut Creek (one stream segment), Big Blue River Watershed, Riley County, Kansas. Walnut Creek is characterized by good quality aquatic habitat. However, this reach at times has limited downstream refugia due to the backup of floodwaters from Tuttle Creek Reservoir. The proposed reach is upstream from the flood pool of the reservoir.

Big Blue River Watershed

13. Clear Fork Creek (one stream segment), Marshall and Pottawatomie Counties, Kansas. Clear Fork Creek is a tributary to the Black Vermillion River. Their confluence is in the flood pool of Tuttle Creek Reservoir. This stream is characterized by good aquatic habitat draining primarily tallgrass prairie uplands and a partially cultivated floodplain. Riparian conditions are good and generally appear stable. An apparently stable population of Topeka shiners exists within its mid-to upper reaches. Clear Fork Creek is a relatively long stream upstream of the flood pool of the reservoir, with the upper and middle reaches proposed for designation.

14. North Elm Creek (one stream segment), Marshall County, Kansas. North Elm Creek is a direct tributary to the Big Blue River near the Kansas/Nebraska border. This stream is characterized by moderately degraded instream habitat in many places, as a result of heavy sediment loading. The watershed is predominantly cropland. However, there are known areas within this stream with springs and seeps which likely contribute to the species' continuing existence in this locale. The proposed reach of North Elm Creek is upstream from its confluence with the Big Blue River to near its headwaters.

Smoky Hill River Watershed

15. Willow Creek (one stream segment), Wallace County, Kansas. The available habitat in this stream is a series of spring-fed pools with good water quality, in a watershed drained by shortgrass prairie and areas of dryland and irrigated cropping. Good land stewardship on the property surrounding the permanent pools, in combination with the spring inflows, are likely the primary factors in the continuing conservation of this population.

Minnesota

Big Sioux River Watershed

1. *Medary Creek Complex (two stream segments in Minnesota), Lincoln County, Minnesota.* This complex is comprised of two stream segments in Minnesota and three in South Dakota. Topeka shiners recently have been captured from several localities in this complex. We propose portions of Medary Creek and an unnamed tributary, and adjacent off-channel pool habitat for designation.

2. Flandreau Creek Complex (four stream segments in Minnesota), Lincoln and Pipestone Counties, Minnesota. This complex is comprised of four stream segments in Minnesota and one in South Dakota. Topeka shiners have been recently captured from several localities in this complex. We propose portions of Flandreau Creek and an unnamed tributary, East Branch Flandreau Creek, Willow Creek, and adjacent off-channel pool habitat for designation.

3. Split Rock/Pipestone/Beaver Creek Complex (18 stream segments in Minnesota), Pipestone and Rock Counties, Minnesota. This complex is comprised of 18 stream segments in Minnesota and 7 in South Dakota. The streams and some of their adjacent off-channel pool habitats in this complex have recent collection records for the Topeka shiner. While some habitat in these tributary streams has been altered, primarily by channelization and sedimentation, current habitat conditions provide most or all of the primary constituent elements consistent with designation as critical habitat. We propose for designation portions of—Pipestone Creek and two unnamed

tributaries; North Branch Pipestone Creek and an unnamed tributary; and Split Rock Creek and five unnamed tributaries; Beaver Creek and two unnamed tributaries; Little Beaver Creek; Springwater Creek; and adjacent off-channel pool habitat.

Rock River Watershed

4. Rock River Complex (28 stream segments in Minnesota), Murray, Nobles, Pipestone, and Rock Counties, Minnesota. The Rock River Complex is comprised of 28 stream segments in Minnesota and 2 stream segments in Iowa. Many streams in this complex have been impacted by channelization and sedimentation to varying degrees. These streams are characterized by predominantly natural morphology, instream pools, and a number of off-channel and oxbow pools, with some short reaches of channelization. Topeka shiners have recently been captured throughout much of the Rock River watershed, from both streams and adjacent off-channel pools and oxbows. We propose portions of the following stream reaches, along with adjacent off-channel pool habitat for designation—the Rock River from Minnesota/Iowa border, upstream to near Holland, Minnesota, and six unnamed tributaries; East Branch Rock River and an unnamed tributary; Kanaranzi Creek, East Branch Kanaranzi Creek, and three unnamed tributaries; Norwegian Creek and an unnamed tributary; Ash Creek; Elk Creek and an unnamed tributary; Champepadan Creek and three unnamed tributaries; Mound Creek; Poplar Creek and an unnamed tributary; and Chanarambie Creek and North Branch Chanarambie Creek.

5. Little Rock River Complex (two stream segments in Minnesota), Nobles County, Minnesota. The Little Rock River Complex is comprised of two stream segment in Minnesota and one stream segment in Iowa. Topeka shiners have recently been captured in portions of the Little Rock River watershed, both from streams and adjacent off-channel pools and oxbows. We propose the reaches of the Little Rock River from the Minnesota/Iowa border, upstream to near Rushmore, Minnesota, and portions of Little Rock Creek, including adjacent off-channel pool habitat.

6. Mud Creek Complex (three stream segments), Rock County, Minnesota. This complex is comprised of three stream segments. We propose portions of Mud Creek and two unnamed tributaries, and adjacent off-channel pool habitat for designation.

Nebraska

1. Taylor Creek (one stream segment), Elkhorn River Watershed, Madison County, Nebraska. A small population of Topeka shiners exists in this stream, with two recent captures of the species. This is the only stream in Nebraska with capture records for the species since 1989, and is the only proposed critical habitat in the greater Platte River watershed. Taylor Creek is somewhat modified in portions of its watershed, but retains several of the primary constituent elements necessary for designation as critical habitat, including stream morphology, pools, and instream habitat. The proposed reach of Taylor Creek is upstream from its confluence with Union Creek, near Madison, Nebraska.

South Dakota

Big Sioux River Watershed

1. Hidewood Creek (one stream segment), Deuel and Hamlin Counties, South Dakota. We propose to designate critical habitat on Hidewood Creek from its confluence with the Big Sioux River, to upstream of State Highway 15, including adjacent off-channel pool habitat.

2. Peg Munky Run (one stream segment), Deuel County, South Dakota. We propose habitat from State Highway 28, upstream to near Interstate Highway 29, including adjacent off-channel pool habitat. The downstream reach of this stream, to the confluence with the Big Sioux River, provides a possible corridor for dispersal by the species. However, this reach is highly channelized and does not have the necessary primary constituent elements present for proposing designation.

3. Sixmile Creek Complex (two stream segments), Brookings County, South Dakota. Habitat is proposed from near the confluence with the Big Sioux River, to upstream of White, South Dakota. The proposed reaches include portions of Sixmile Creek and an unnamed tributary, including adjacent off-channel pool habitat.

4. Medary Creek Complex (three stream segments), Brookings County, South Dakota. This complex is comprised of three stream segments in South Dakota and two in Minnesota. Topeka shiners have recently been captured from several localities in this complex. We propose for designation—Medary Creek from the confluence with the Big Sioux River, upstream to the South Dakota/Minnesota border; and portions of Deer Creek and an unnamed tributary, and adjacent off-channel pool habitat.

Lower Big Sioux Watershed

5. Spring Creek (one stream segment), Brookings and Moody Counties, South Dakota. The proposed reach runs from the confluence with the Big Sioux River, upstream to the South Dakota/Minnesota border, including adjacent off-channel pool habitat.

6. Flandreau Creek Complex (one stream segment in South Dakota), Moody County, South Dakota. This complex is comprised of one stream segment in South Dakota and four stream segments in Minnesota. Topeka shiners have been recently captured from several localities in this complex in Minnesota. No known collections exist from the reach proposed in South Dakota. However, this reach of stream is a likely dispersal corridor, and could be used as refugia for the species during long periods of drought. We propose for designation—Flandreau Creek, and adjacent off-channel pool habitat, from the confluence with the Big Sioux River, upstream to the South Dakota/Minnesota border.

7. Brookfield Creek (one stream segment), Brookings County, South Dakota. The stream reach proposed for designation runs upstream from the confluence with the Big Sioux River, including adjacent off-channel pool habitat.

8. Slip-Up Creek (one stream segment), Minnehaha County, South Dakota. The stream reach proposed for designation runs from the confluence with the Big Sioux River upstream, and includes adjacent off-channel pool habitat.

9. Split Rock/Pipestone/Beaver Creek Complex (seven stream segments in South Dakota), Minnehaha and Moody Counties, South Dakota. This complex is comprised of 7 stream segments in South Dakota and 18 in Minnesota. The streams and some of their adjacent off-channel pool habitats in this complex have recent collection records for Topeka shiner. While some habitat in these tributary streams has been altered, primarily by channelization and sedimentation, current habitat conditions provide most or all of the primary constituent elements consistent with designation as critical habitat. We propose for designation portions of—Split Rock Creek and an unnamed tributary; Pipestone Creek and an unnamed tributary; West Pipestone Creek; Beaver Creek; Fourmile Creek; and adjacent off-channel pool habitat within these reaches.

Vermillion River Watershed

10. Vermillion River Complex (nine stream segments), Clay, Lincoln,

McCook, Miner, and Turner Counties, South Dakota. This complex is comprised primarily of long reaches of the Vermillion River mainstem and West Fork Vermillion River. Additionally, several tributaries provide habitat for the species, with conditions varying across the complex. While some aquatic habitat has been altered, primarily by channelization and sedimentation, current habitat conditions provide most or all of the primary constituent elements consistent with designation as critical habitat. Topeka shiners have been captured in several locations within this complex, including the mainstem river reaches. It is likely that the species utilizes these mainstem reaches as dispersal corridors and refugia during periods of drought. We propose portions of the following streams for designation—Vermillion River; West Fork Vermillion River; East Fork Vermillion River; Silver Lake Creek; Camp Creek; Turkey Ridge Creek; Long Creek; Saddle Creek; and Blind Creek.

Lower James River Watershed

11. Lonetree Creek Complex (two stream segments), Hutchinson County, South Dakota. This complex provides the primary constituent elements necessary for designation as critical habitat, including natural stream morphology and instream habitat. We propose portions of Lonetree Creek immediately upstream from its confluence with the James River, and South Branch Lonetree Creek.

12. Dry Creek Complex (two stream segments), Hutchinson County, South Dakota. This complex provides the primary constituent elements necessary for designation as critical habitat, including natural stream morphology and instream habitat. We propose portions of Dry Creek upstream from its confluence with the James River and North Branch Dry Creek.

13. Wolf Creek (one stream segment), Hutchinson County, South Dakota. This stream is characterized by moderate quality aquatic habitat draining a mostly grassy floodplain and primarily cultivated uplands. The stream reach proposed for designation runs upstream from the confluence with the James River.

14. Twelve-mile Creek (one stream segment), Davison, Hanson, and Hutchinson Counties, South Dakota. This stream is characterized by moderate quality aquatic habitat draining a mostly grassy floodplain and primarily cultivated uplands. The stream reach proposed for designation upstream runs from the confluence with the James River.

15. Enemy Creek (one stream segment), Davison and Hanson Counties, South Dakota. This stream is characterized by moderate quality aquatic habitat draining a mostly grassy floodplain and primarily cultivated uplands. The stream reach proposed for designation runs upstream from the confluence with the James River.

16. Rock Creek (one stream segment), Davison, Hanson, and Miner Counties, South Dakota. This stream is characterized by moderate quality aquatic habitat draining a grassy floodplain and primarily cultivated uplands. The stream reach proposed for designation runs upstream from the confluence with the James River.

17. Firesteel Creek Complex (two stream segments), Aurora and Davison Counties, South Dakota. This complex provides the primary constituent elements necessary for designation as critical habitat, including natural stream morphology and instream habitat. We are proposing the reach of Firesteel Creek from near the headwaters of Lake Mitchell upstream to the confluence with West Branch Firesteel Creek and West Branch Firesteel upstream to near Wilmarth Lake.

Upper James River Watershed

18. Pearl Creek Complex (two stream segments), Beadle County, South Dakota. The streams in this complex are characterized by quality aquatic habitat draining a grassy floodplain and primarily cultivated uplands. Riparian conditions are good and appear stable. Recent records of Topeka shiners within these stream segments suggest a healthy and stable population. We propose for designation portions of Pearl Creek from its confluence with the James River upstream past its confluence with Middle Pearl Creek and a reach of Middle Pearl Creek upstream from its confluence with Pearl Creek.

19. Shue Creek (one stream segment), Beadle County, South Dakota. This stream is characterized by quality aquatic habitat draining a grassy floodplain and primarily cultivated uplands. The stream reach proposed for designation runs from Shue Creek's confluence with the James River upstream to Staum Dam.

Exclusions From Critical Habitat

Section 3(5) of the Act defines critical habitat, in part, as areas within the geographical area occupied by the species ''on which are found those physical and biological features (I) essential to the conservation of the species and (II) which may require special management considerations and protection.'' Special management consideration is not required if adequate management or protection is already in place. Adequate special management consideration or protection is provided by a legally operative plan or agreement that addresses the maintenance and improvement of the primary constituent elements important to the species and manages for the long-term conservation of the species. We use the following three criteria to determine if a plan provides adequate special management or protection—(1) A current plan or agreement must be complete and provide sufficient conservation benefit to the species; (2) the plan must provide assurances that the conservation management strategies will be implemented; and (3) the plan must provide assurances that the conservation management strategies will be effective, (*i.e.,* provide for periodic monitoring and revisions as necessary). If all of these criteria are met, then lands covered under the plan would no longer meet the definition of critical habitat.

Missouri—Exclusion Under Section 3(5)(A)

In Missouri, the Topeka shiner historically occurred in small, headwater streams in northern portions of the State, within the Missouri/Grand River Watershed. This area has been designated as Primary Recovery Unit 5 by the Topeka Shiner Recovery Team in the preliminary Draft Topeka Shiner Recovery Plan. The Topeka shiner has been a focal species for planning and conservation efforts on various levels in the State since the mid-1990s. In 1995, the Missouri Department of Conservation (MDC) established a 5-member Topeka shiner Working Group and a 16-member Advisory Group to direct, implement, and facilitate Topeka shiner recovery actions in Missouri. In 1996, MDC, with approval of the Conservation Commission of Missouri (Conservation Commission), listed the Topeka shiner as an endangered species under the State's Wildlife Code (Conservation Commission of Missouri 2001). In January 1999, MDC adopted and approved an Action Plan for the Topeka shiner (*Notropis topeka*) in Missouri (Action Plan) (Missouri Department of Conservation 1999). The Action Plan identifies comprehensive conservation measures and programs necessary to achieve recovery of the Topeka shiner in Missouri. Implementation of recovery efforts for the Topeka shiner in Missouri as outlined in this plan are ongoing. In 1999, the Conservation Commission established the Private Lands Services Division within MDC. Eighty-three MDC staff were redirected to private land

conservation throughout the State, including a minimum of 16 Private Lands Services personnel with responsibility for the counties in Primary Recovery Unit 5. Duties of personnel within this division include the facilitation of conservation efforts on private property throughout Missouri for all federally listed species, including the Topeka shiner. Additionally, there are at least 86 fisheries, forestry, natural history, protection, and wildlife staff delivering services to private landowners as a routine aspect of their job within Primary Recovery Unit 5.

Within the Missouri/Grand Watershed in Missouri, the following Topeka shiner conservation actions have been completed or are ongoing—(1) Establishment of the Missouri Topeka Shiner Working Group to direct the recovery of the species throughout the State; (2) the development and ongoing implementation of the Action Plan; (3) establishment of permanent sampling sites and standardized monitoring of Missouri's Topeka shiner populations and completion of a recent state-wide survey for the species (Gelwicks and Bruenderman 1996); (4) initiation of artificial propagation of Topeka shiners including the development and refinement of captive rearing techniques that will be applicable across the range of the species; (5) completion of genetic analyses of different populations of Topeka shiners in Missouri; (6) incorporation of Topeka shiner recovery and conservation efforts in State strategic planning documents on several different levels (*e.g.*, regional management guidelines, watershed inventory and assessment plans, hatchery plans, conservation area plans, various division work plans) that facilitate the implementation of activities identified in the State Action Plan and the Service's preliminary draft Recovery Plan; (7) development and dissemination of public outreach and education materials throughout Missouri and elsewhere within the range of the species (*e.g.*, Best Management Plans, posters, pamphlets, ''critter'' collector cards; various articles published in the Missouri Conservationist magazine); (8) completion and dissemination of several ecological and life history studies involving Topeka shiner; (9) securing matching funds from the Service (*e.g.*, Cooperative Endangered Species Conservation Fund, Partners for Fish and Wildlife) to conduct surveys and ecological studies, and for various habitat restoration and enhancement activities; and (10) revision of the Action Plan that will include actions not yet completed since 1999 and those uncompleted actions identified in the Service's preliminary draft Recovery Plan. Revision of the Action Plan will include a detailed implementation schedule following the Service's time table outlined in the Service's preliminary draft Recovery Plan.

Other specific Topeka shiner conservation efforts being undertaken within the Missouri/Grand Watershed in Missouri in accordance with the Action Plan are—(1) Implementation of a landowner incentive program and completion of a study on the potential impacts of Confined Animal Feeding Operations within the Moniteau Creek Watershed; (2) development of 10-year fish monitoring plans for the Moniteau, Bon Femme, and Sugar Creek watersheds; (3) development and implementation of a Sugar Creek sub-basin management plan; (4) development and implementation of a Three Creeks Conservation Area Management Plan within the Bon Femme Creek Watershed; (5) protection and management of Bon Femme Creek by establishing these watersheds as Missouri Department of Natural Resources' Agricultural Non-point Source Pollution Special Area Land Treatment watersheds; and (6) reestablishment or restoration of riparian corridors through tree plantings, natural regeneration, fencing to restrict livestock use of stream banks, creation of alternative livestock watering sources, establishment of warm season grass buffer strips, streambank stabilization activities, and actions outlined in a grazing plan developed for private landowners within the Bon Femme, Moniteau, and Sugar Creek watersheds. Additionally, 10 Missouri Stream Teams formally ''adopted'' various stretches of occupied Topeka shiner habitat within the Bon Femme, Moniteau, and Sugar Creek watersheds. Stream teams assist in the conservation of the Topeka shiner in these watersheds by promoting local citizen awareness of Topeka shiners and stream health, and by direct involvement with stream cleaning and water quality monitoring activities.

Additional assurances that the Action Plan will be implemented and conservation of the Topeka shiner will be achieved in Missouri is demonstrated by the following actions—(1) To date, at least $105,000 has been expended on recovery actions for the Topeka shiner in Missouri, and is likely to increase to at least $600,000 within the next 10 years; (2) 80 percent (*i.e.*, 12 of 15) of the priority 1 tasks (*i.e.*, those actions deemed necessary to prevent extinction of the species) identified and outlined in the implementation schedule of the Service's preliminary draft Recovery Plan have either been completed or are currently being implemented by MDC in cooperation with us, the Topeka Shiner Recovery Team, and other Federal, State, and private entities; (3) the Private Land Services Division within MDC greatly facilitates the implementation of recovery actions on private property where the species currently exists or where the species may be reintroduced; (4) planned expansion of our Partners for Fish and Wildlife Program within Topeka shiner-occupied habitat to benefit an additional 10–15 landowners at an estimated cost of $100,000 within the next 5 years (Kelly Srigley Werner, Fish and Wildlife Service Missouri Private Lands Coordinator, pers. comm.); (5) commitments by MDC Fisheries and Natural History divisions staff to help coordinate and implement Topeka shiner recovery efforts between MDC and Federal, State, and private entities, and MDC's Topeka Shiner Recovery Coordinator; (6) active participation by MDC on the Topeka Shiner Recovery Team; and (7) revisions to the Action Plan, scheduled for completion within the current calendar year, will focus on incorporating any of the recovery actions outlined in the Service's preliminary draft Recovery Plan that are currently not addressed. The scientific soundness of MDC's Action Plan was further validated by us and the Recovery Team when the Action Plan's monitoring protocol and recommendations for reducing and eliminating threats to the Topeka shiner were incorporated, in part, into the Service's preliminary draft Recovery Plan.

We evaluated the Action Plan and associated Topeka shiner conservation actions that have been completed, ongoing, or planned in Missouri against our three criteria used to determine whether lands require ''special management considerations or protections,'' under the definition of critical habitat in section 3 of the Act. The Action Plan clearly provides conservation benefits to the species; the Action Plan provides assurances that conservation efforts will be implemented since MDC has authority to implement the plan, has put in place the funding and staffing necessary to implement the Plan, and has completed or begun work on many significant elements of the Plan; and the Action Plan and efforts of MDC will be effective since they include biological goals, restoration objectives, and monitoring consistent with the preliminary draft

Recovery Plan. Therefore, we determined that all Topeka shiner areas in Missouri (Primary Recovery Unit 5) do not meet the definition of critical habitat because there is adequate special management or protection, and we did not include them in this proposal.

Fort Riley, Kansas (Department of the Army)—Exclusion Under Section 3(5)(A)

The Fort Riley Military Installation, located in Riley and Geary Counties, Kansas, is primarily an infantry and tank training facility. Fort Riley lies within the Flint Hills Region of Kansas and has several low order streams that drain to the Kansas River. Presently, the Topeka shiner occurs in four streams on Fort Riley—Wildcat Creek and its tributaries, Wind Creek, Little Arkansas Creek, and Sevenmile Creek. These streams are within Primary Recovery Unit 1, as designated by the preliminary draft Topeka Shiner Recovery Plan.

The Topeka shiner has been a focal species for planning and conservation efforts on Fort Riley since the early 1990s, with numerous stream surveys occurring from this time to the present. Development of management guidelines for the species was initialized in 1994. The first Endangered Species Management Plan for Topeka Shiner on Fort Riley was formalized in 1997. This management plan was revised and incorporated into Fort Riley's Integrated Natural Resource Management Plan 2001–2005, which was formalized July 30, 2001 (Keating, Ft. Riley Natural Resources Division, pers. comm. 2002). This management plan outlines and describes—conservation goals; management prescriptions and actions; a monitoring plan; estimates of time, cost, and personnel needed; a checklist of tasks; and an annual report (Department of the Army 2001).

We evaluated the Fort Riley Endangered Species Management Plan for Topeka Shiner and the Fort's associated Topeka shiner conservation actions that have been completed, ongoing, or planned, against our three criteria used to determine whether lands require ''special management considerations or protections,'' under the definition of critical habitat in section 3 of the Act. This management plan provides conservation benefits to the species; the plan provides assurances that conservation efforts will be implemented; and the plan and efforts of the Army will be effective since they include biological goals, restoration objectives, and monitoring consistent with the draft Recovery Plan. Therefore, we determine that all Topeka shiner areas on Fort Riley do not meet the definition of critical habitat because there is adequate special management or protection, and we did not include them in this proposal.

Land Ownership

The vast majority (approximately 98 percent) of proposed critical habitat is in private ownership. Private lands are primarily used for grazing and agriculture, but also include some urban, suburban, and industrial areas. Additionally, there are small, scattered tracts of State and Federal lands.

Effects of Critical Habitat Designation

Designating critical habitat does not, in itself, lead to the recovery of a listed species. The designation does not establish a reserve, create a management plan, establish numerical population goals, prescribe specific management practices (inside or outside of critical habitat), or directly affect areas not designated as critical habitat. Specific management recommendations for areas designated as critical habitat are most appropriately addressed in recovery and conservation plans, and through section 7 consultation and section 10 permits.

However, designation of critical habitat can help focus conservation activities for listed species by identifying areas essential to conserve the species. Designation of critical habitat also alerts the public, as well as land-managing agencies, to the importance of these areas. As a result of critical habitat designation, Federal agencies may be able to prioritize landowner incentive programs such as Conservation Reserve Program enrollment and other private landowner agreements that benefit the Topeka shiner. Critical habitat designation also may assist States and local governments in prioritizing their conservation and land management programs.

Section 7 Consultation

The regulatory effects of a critical habitat designation under the Act are triggered through the provisions of section 7, which apply 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 402. Individuals, organizations, States, local governments, and other non-Federal entities are not affected by the designation of critical habitat unless their actions occur on Federal lands, require Federal authorization, or involve Federal funding.

Section 7(a)(2) of the Act requires Federal agencies, including us, 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. Adverse modification might result from alterations that 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.

Conference for Proposed Critical Habitat

Section 7(a)(4) of the Act requires Federal agencies to confer with us on any action that is likely to result in the destruction or adverse modification of proposed critical habitat. The regulations for interagency cooperation regarding proposed critical habitat are codified at 50 CFR 402.10. During a conference on the effects of a Federal action on proposed critical habitat, we make nonbinding recommendations on ways to minimize or avoid adverse effects of the action. We document these recommendations and any conclusions reached in a conference report provided to the Federal agency and to any applicant involved.

If requested by the Federal agency and deemed appropriate by us, the conference may be conducted in accordance with the procedures for formal consultation under 50 CFR 402.14. We may adopt an opinion issued at the conclusion of the conference as our biological opinion when the critical habitat is designated by final rule, but only if new information or changes to the proposed Federal action would not significantly alter the content of the opinion.

Consultation for Designated Critical Habitat

If a Federal action may affect a listed species or its designated critical habitat, the action agency must initiate consultation with us (50 CFR 402.14). Through this consultation, we would advise the agency whether the action would likely jeopardize the continued existence of the species or adversely modify its critical habitat.

When we issue a biological opinion that concludes that an action is likely to result in the destruction or adverse modification of critical habitat, we must provide reasonable and prudent alternatives to the action, if any are identifiable. Reasonable and prudent alternatives are actions identified during consultation that can be implemented in a manner consistent with the intended purpose of the proposed action, are

consistent with the scope of the action agency's authority and jurisdiction, are economically and technologically feasible, and would likely avoid the destruction or adverse modification of critical habitat (50 CFR 402.02).

Reinitiation of Prior Consultations

A Federal agency may request a conference with us for any previously reviewed action that is likely to destroy or adversely modify proposed critical habitat and over which the agency retains discretionary involvement or control, as described above under ''Conference for Proposed Critical Habitat.'' Following designation of critical habitat, regulations at 50 CFR 402.16 require a Federal agency to reinitiate consultation for previously reviewed actions that may affect critical habitat and over which the agency has retained discretionary involvement or control.

Federal Actions That May Destroy or Adversely Modify Topeka Shiner Critical Habitat

Section 4(b)(8) of the Act requires us to include in any proposed or final regulation that designates critical habitat a description and evaluation of those activities involving a Federal action that may adversely modify such habitat or that may be affected by such designation. A wide range of Federal activities have the potential to destroy or adversely modify critical habitat for the Topeka shiner. These activities may include land and water management actions of Federal agencies (*e.g.*, U.S. Army Corps of Engineers, Natural Resources Conservation Service, and Bureau of Reclamation), and related or similar actions of other federally regulated projects (*e.g.*, road and bridge construction activities by the Federal Highway Administration; dredge and fill projects, sand and gravel mining, and bank stabilization activities conducted or authorized by the U.S. Army Corps of Engineers; and National Pollutant Discharge Elimination System permits authorized by the Environmental Protection Agency). Specifically, activities that may destroy or adversely modify critical habitat are those that alter the primary constituent elements (defined above) to an extent that the value of critical habitat for both the survival and recovery of the Topeka shiner is appreciably reduced. Such activities include, but are not limited to:

(1) Significantly and detrimentally altering the minimum flow or the natural flow regime of any of the designated stream segments. Possible actions include groundwater pumping, impoundment, and water diversion. We note that flow reductions that result from actions affecting tributaries of the proposed stream reaches also may destroy or adversely modify critical habitat;

(2) Significantly and detrimentally altering the characteristics of the riparian zone in any of the designated stream segments. Possible actions would include vegetation manipulation, timber harvest, road construction and maintenance, livestock grazing, off-road vehicle use, powerline or pipeline construction and repair, mining, and urban and suburban development;

(3) Significantly and detrimentally altering the channel morphology of any of the stream segments listed above. Possible actions 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, and excessive sedimentation from mining, livestock grazing, road construction, timber harvest, off-road vehicle use, and other watershed and floodplain disturbances;

(4) Significantly and detrimentally altering the water chemistry in any of the designated stream segments. Possible actions include release of chemical or biological pollutants into the surface water or connected groundwater at a point source or by dispersed release (non-point); and

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

Not all of the identified activities are necessarily of current concern within the range of the Topeka shiner; however, they do indicate the potential types of activities that will require consultation in the future and, therefore, may be affected by critical habitat designation. We note that the areas we propose for designation as critical habitat for the Topeka shiner are occupied by the species, and actions that adversely modify critical habitat may also jeopardize the continued existence of the species.

As discussed previously, Federal actions that are found likely to destroy or adversely modify critical habitat may often be modified, through development of reasonable and prudent alternatives, in ways that will remove the likelihood of destruction or adverse modification of critical habitat. Such project modifications may include such things as adjusting the timing of projects to avoid sensitive periods for the species and its habitat; replanting riparian vegetation; minimizing work and vehicle use in the wetted channel; restricting riparian and upland vegetation clearing; fencing to exclude livestock and limit recreational use; use of alternative livestock management techniques; avoidance of pollution; minimizing ground disturbance in the floodplain; use of alternative material sources; storage of equipment and staging of operations outside the floodplain; use of sediment barriers; access restrictions; and use of best management practices to minimize erosion.

If you have questions regarding whether specific activities will likely constitute destruction or adverse modification of critical habitat, contact the Field Supervisor, Kansas Ecological Services Field Office (*see* **ADDRESSES** section). Requests for copies of the regulations on listed wildlife and inquiries about prohibitions and permits may be addressed to the U.S. Fish and Wildlife Service, Division of Endangered Species, P.O. Box 25486, Denver Federal Center, Denver, Colorado 80225 (telephone 303–236–7400; facsimile 303–236–0027).

A preliminary draft recovery plan for the Topeka shiner has been developed and is undergoing internal review prior to being formally proposed, peer-reviewed by scientists, and published to solicit public comments. The recovery plan, when finalized, will provide recommendations on recovering this species, including recommendations on management of critical habitat. Should the recovery plan recommend adding or deleting areas as critical habitat, we will consider whether a future revision of critical habitat is appropriate.

Economic Analysis

Section 4(b)(2) of the Act requires us to designate critical habitat on the basis of the best scientific and commercial information available, and to consider the economic and other relevant impacts of designating these areas as critical habitat. We may exclude areas from critical habitat upon a determination that the benefits of such exclusions outweigh the benefits of designating these areas as critical habitat. We cannot exclude areas from critical habitat when the exclusion will result in the extinction of the species. We will conduct an analysis of the economic impacts of designating these areas as critical habitat prior to a final determination. When completed, we will announce the availability of the

draft economic analysis with a notice in the **Federal Register**, and, if necessary, reopen the comment period at the time to accept comments on the economic analysis or further comments on the proposed rule. The economic analysis will be available at *http://mountain-prairie.fws.gov/topekashiner/ch.* This economic analysis will serve as the basis of our analysis under section 4(b)(2), and of any exclusions. As this economic analysis is not yet completed, we are not yet able to identify proposed exclusions under section 4(b)(2) in this proposed rule. We will review this analysis, public comments on the analysis and this proposed rule, and the benefits of designating areas as critical habitat; we may identify certain proposed areas that should be excluded from the final critical habitat designation, provided these exclusions will not result in the extinction of the species. As a result, the final critical habitat determination may differ from this proposal.

American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act

In accordance with the Presidential Memorandum of April 29, 1994, we believe that, to the maximum extent possible, tribes should be the governmental entities to manage their lands and tribal trust resources. To this end, we support tribal measures that preclude the need for conservation regulations, and we provide technical assistance to Indian tribes who wish assistance in developing and expanding tribal programs for the management of healthy ecosystems so that Federal conservation regulations, such as designation of critical habitat, on tribal lands are unnecessary. The Presidential Memorandum of April 29, 1994, also requires us to consult with the tribes on matters that affect them, and section 4(b)(2) of the Act requires us to gather information regarding the designation of critical habitat and the effects thereof from all relevant sources, including the tribes.

In examining the geographic extent of areas proposed for designation as critical habitat, we did not identify any tribal trust resources, tribally owned fee lands, or tribal rights that might be affected by the designation. Our South Dakota Field Office corresponded with the Bureau of Indian Affairs (BIA), Great Plains Regional Office, which identified two potentially affected tribes, the Sisseton—Wahpeton Sioux Tribe and the Flandreau Santee Sioux Tribe. The BIA communicated that these tribes do have land held in trust, either by the tribe or individuals, within the general range of the Topeka shiner, but did not provide locality information. We further contacted the tribes. The Sisseton—Wahpeton Sioux Tribe responded with general information on potential Topeka shiner habitat on their tribal lands and requested funding from the Service and the BIA for surveys for the Topeka shiner. However, up to the time of this publication, no maps identifying the location of these trust lands have been provided. Therefore, we are unable to identify any tribal trust lands potentially proposed for designation as critical habitat. We do not anticipate that proposal of critical habitat on non-tribal lands will result in any impact on tribal trust resources or the exercise of tribal rights. In complying with our tribal trust responsibilities, we must communicate with all tribes potentially affected by the designation. Therefore, we are soliciting additional information during the comment period on potential effects to the tribes or tribal resources that may result from critical habitat designation.

Public Comments Solicited

We intend for any final action resulting from this proposal to be as accurate and effective as possible. Therefore, we are soliciting comments or suggestions from the public, other concerned governmental agencies, the scientific community, industry, or any other interested party regarding this proposed rule. We particularly seek comments concerning:

(1) The reasons why any habitat should or should not be determined to be critical habitat as provided by section 4 of the Act, including whether the benefits of excluding areas will outweigh the benefits of including areas as critical habitat;

(2) Specific information on the abundance of the Topeka shiner and the amount and distribution of its habitat;

(3) Areas that are essential to the conservation of the species and that may require special management considerations or protection and why;

(4) Land use practices and current or planned activities in the subject areas and their possible impacts on proposed critical habitat;

(5) Any foreseeable economic or other impacts resulting from the proposed designation of critical habitat, in particular, any impacts on small entities or families; and

(6) Economic and other values associated with designating critical habitat for the Topeka shiner, such as those derived from nonconsumptive uses (*e.g.*, hiking, camping, birding, enhanced watershed protection, increased soil retention, existence values, and reductions in administrative costs).

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

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 document clearly stated?

(2) Does the proposed rule contain technical language or jargon that interferes with the clarity?

(3) Does the format of the proposed rule (grouping and order of sections, use of headings, paragraphing, etc.) aid or reduce its clarity?

(4) Is the description of the proposed rule in the **SUPPLEMENTARY INFORMATION** section of the preamble helpful in understanding the document?

(5) What else could we do to make the proposed rule easier to understand?

Send a copy of any comments that concern 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 also may e-mail comments to *Exsec@ios.doi.gov.*

Peer Review

In accordance with our policy published on July 1, 1994 (59 FR 34270), we will seek the expert opinions of at least three appropriate and independent specialists regarding this proposed rule. The purpose of such review is to ensure listing decisions are based on scientifically sound data, assumptions, and analyses. We will

send copies of this proposed rule immediately following publication in the **Federal Register** to these peer reviewers. 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 comment period on this proposed rule during preparation of a final rulemaking. Accordingly, the final decision may differ from this proposal.

Public Hearings and Meetings

The Act provides for one or more public hearings or meetings on this proposal, if requested. Given the large geographic extent covered by this proposal, we have scheduled six public meetings.

Public meetings will be held at:

1. Manhattan, KS, on September 4, 2002, at the Ramada Inn, Landon Room, 17th and Anderson Avenue;
2. Bethany, MO, on September 5, 2002, at the Bethany Community Center, 105 North 25th Street;
3. Fort Dodge, IA, on September 9, 2002, at the Best Western Starlite Village, 1518 3rd Avenue NW.;
4. Pipestone, MN, on September 10, 2002, at the Pipestone National Monument;
5. Sioux Falls, SD, on September 11, 2002, at the Country Inn and Suites, Riverfront Room, 200 East 8th Street;
6. Madison, NE., on September 12, 2002, at the Shelter House, 300 West 10th Street.

All public meetings will run from 6 p.m. to 9 p.m.

Required Determinations

Regulatory Planning and Review

In accordance with Executive Order 12866, this document is a significant rule and was reviewed by the Office of Management and Budget (OMB). The Service is preparing a draft economic analysis of this proposed rule, and will use this analysis to meet the requirement of section 4(b)(2) of the ESA to determine the economic consequences of designating the specific areas as critical habitat and excluding any area from critical habitat if it is determined that the benefits of exclusion outweigh the benefits of specifying such areas as part of the critical habitat, unless failure to designate such areas as critical habitat will lead to the extinction of the Topeka shiner. This analysis will be available for public comment before finalizing this designation. The availability of the draft economic analysis will be announced in the **Federal Register**.

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

In the economic analysis, we will determine whether designation of critical habitat will have a significant effect on a substantial number of small entities. As discussed under Regulatory Planning and Review above, this rule is expected to result in few, if any, restrictions in addition to those currently in existence. As indicated on Table 1 (*see Critical Habitat Designation*), we designated property owned by Federal and State governments, and private entities.

Within these areas, the types of Federal actions or authorized activities that we have identified as potential concerns are:

(1) Regulation of activities affecting waters of the United States by the Corps under section 404 of the Clean Water Act, and section 10 of the Rivers and Harbors Act;

(2) Regulation of water flows, water delivery, and diversion by Federal agencies;

(3) Sale, exchange, or lease of lands owned by a Federal agency;

(4) Road construction and maintenance and right-of-way designation;

(5) Funding of low-interest loans to facilitate the construction of low-income housing by the Department of Housing and Urban Development;

(6) Hazard mitigation and post-disaster repairs funded by the Federal Emergency Management Agency;

(7) Promulgation of air and water quality standards under the Clean Air Act and the Clean Water Act and the cleanup of toxic waste and superfund sites under the Resource Conservation and Recovery Act and the Comprehensive Environmental Response, Compensation, and Liability Act by the U.S. Environmental Protection Agency;

(8) Issuance of Endangered Species Act section 10(a)(1)(B) permits by the Fish and Wildlife Service; and

(9) Activities funded, carried out, or authorized by any Federal agency.

Many of these activities sponsored by Federal agencies within the proposed critical habitat areas are carried out by small entities (as defined by the Regulatory Flexibility Act) through contract, grant, permit, or other Federal authorization. As discussed above, these actions are currently required to comply with the listing protections of the Act, and the designation of critical habitat is not anticipated to have any additional effects on these activities in areas of critical habitat occupied by the species. In the economic analysis, we will evaluate whether designation of critical habitat will have an effect on activities carried out by small entities.

For actions on non-Federal property that do not have a Federal connection (such as funding or authorization), the current restrictions concerning take of the species remain in effect, and this rule will have no additional restrictions.

Small Business Regulatory Enforcement Fairness Act (5 U.S.C. 804(2))

In the 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, Tribal, or local government agencies, or geographic regions, or (c) any significant adverse effects on competition, employment, investment, productivity, innovation, or the ability of United States-based enterprises to compete with foreign-based enterprises.

Executive Order 13211

On May 18, 2001, the President issued an Executive Order (Executive Order 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. As this proposed rule is not expected to significantly affect energy supplies, distribution, or use, this action is not a significant energy action and no Statement of Energy Effects is required.

Unfunded Mandates Reform Act

In accordance with the Unfunded Mandates Reform Act (2 U.S.C. 1501 *et seq.*) the Service will use the economic analysis to further evaluate this situation.

Takings

In accordance with Executive Order 12630, this rule does not have significant takings implications, and a takings implication assessment is not required. This determination will not ''take'' private property and will not alter the long-term value of private property. As discussed above, the designation of critical habitat affects only Federal agency actions. The rule will not increase or decrease the current restrictions on private property concerning take of Topeka shiner as defined in section 9 of the Act and its implementing regulations (50 FR 17.31). Due to current public knowledge of the species' protection, the prohibition against take of Topeka shiner both within and outside of the proposed areas, and the fact that critical habitat

provides no incremental restrictions, we do not anticipate that property values will be affected by the critical habitat designation. While real estate market values may temporarily decline following designation, due to the perception that critical habitat designation may impose additional regulatory burdens on land use, we expect any such impacts to be short term. Additionally, critical habitat designation does not preclude development of habitat conservation plans and issuance of incidental take permits. Landowners in areas that are included in the designated critical habitat will continue to utilize their property in ways consistent with the conservation of the Topeka shiner.

Federalism

In accordance with Executive Order 13132, the rule does not have significant Federalism effects. A Federalism assessment is not required. In keeping with Department of the Interior policy, the Service requested information from and coordinated development of this critical habitat proposal with appropriate State resource agencies in Iowa, Kansas, Minnesota, Missouri, Nebraska, and South Dakota, as well as during the listing process. We will continue to coordinate any future designation of critical habitat for Topeka shiner with the appropriate State agencies. The designation of critical habitat for the Topeka shiner imposes few additional restrictions to those currently in place and, therefore, has little incremental impact on State and local governments and their activities. The designation may have some benefit to these governments in that the areas essential to the conservation of the species are more clearly defined and the primary constituent elements of the habitat necessary to the conservation of the species are specifically identified. While making this definition and identification does not alter where and what federally sponsored activities may occur, doing so may assist these 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 Office of the Solicitor has determined that the 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 Act and plan public meetings on the proposed designation during the comment period. The rule uses standard property descriptions and identifies the primary constituent elements within the designated areas to assist the public in understanding the habitat needs of the Topeka shiner.

Paperwork Reduction Act of 1995

This rule does not contain any information collection requirements for which OMB approval under the Paperwork Reduction Act is required. Information collections associated with Endangered Species permits are covered by an existing OMB approval and are assigned control number 1018–0094, which expires on July 31, 2004. An agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a 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 National Environmental Policy Act (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 (Ninth Cir. Ore. 1995), cert. denied 116 S. Ct. 698 (1996)). However, when the range of the species includes States within the 10th Circuit, pursuant to the 10th Circuit ruling in *Catron County Board of Commissioners* v. *U.S. Fish and Wildlife Service*, 75 F .3d 1429 (10th Cir. 1996), we will complete a NEPA analysis with an Environmental Assessment. The range of the Topeka shiner includes States within the 10th Circuit; therefore, we are completing an Environmental Assessment and will announce its availability in the **Federal Register**.

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 512 DM 2, we readily acknowledge our responsibility to communicate meaningfully with recognized Federal Tribes on a government-to-government basis. We are required to assess the effects of critical habitat designation on tribal lands and tribal trust resources. We believe that no tribal lands or tribal trust resources are essential for the conservation of the Topeka shiner.

References Cited

A complete list of all references cited in this proposed rule is available upon request from the Kansas Ecological Services Field Office (*see* **ADDRESSES**).

Author

The primary author of this proposed rule is Vernon Tabor, Kansas Ecological Services Field Office (*see* **ADDRESSES**).

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 § 17.11(h), by revising the entry for ''Shiner, Topeka'' under ''FISHES'' to read as follows:

§ 17.11 Endangered and threatened wildlife.

* * * * *

(h) * * *

Species		Historic range	Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rules
Common name	Scientific name						
*	*	*	*	*	*		*
FISHES							

Species		Historic range	Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rules
Common name	Scientific name						
*	*	*	*	*	*		*
Shiner, Topeka	(*Notropis topeka=tristis*).	U.S.A. (IA, KS, MN, MO, NE, SD).	Entire	E	654	17.95(e)	N/A
*	*	*	*	*	*		*

3. Amend § 17.95(e) by adding critical habitat for the Topeka shiner (*Notropis topeka*) in the same alphabetical order as this species occurs in § 17.11(h).

§ 17.95 Critical habitat—fish and wildlife.

* * * * *

(e) *Fishes.* * * *

Topeka Shiner (*Notropis topeka*)

(1) Critical habitat is depicted for Calhoun, Carroll, Dallas, Greene, Hamilton, Lyon, Osceola, Sac, Webster, and Wright Counties, Iowa; Butler, Chase, Dickinson, Geary, Greenwood, Marion, Marshall, Morris, Pottawatomie, Riley, Shawnee, Wabaunsee, and Wallace Counties, Kansas; Lincoln, Murray, Nobles, Pipestone, and Rock Counties, Minnesota; Madison County, Nebraska; Aurora, Beadle, Brookings, Clay, Davison, Deuel, Hamlin, Hanson, Hutchinson, Lincoln, McCook, Miner, Minnehaha, Moody, and Turner Counties, South Dakota, on the maps and as described below.

(2) Critical habitat includes all proposed stream channels up to the bankfull discharge elevation. Additionally, in Iowa, Minnesota, and the Big Sioux River drainage of South Dakota, the off-channel, side-channel, and oxbow pools at elevations at or below the bankfull discharge elevation. 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 for Topeka shiner—(1) Streams most often with permanent flow, but that can become intermittent during dry periods; (2) Side channel pools and oxbows either seasonally connected to a stream or maintained by groundwater inputs, at a surface elevation equal to or lower than the bankfull discharge stream elevation. The bankfull discharge is the flow at which water begins leaving the channel and flowing into the floodplain; this level is generally attained every 1 to 2 years. Bankfull discharge, while a function of the size of the stream, is a fairly constant feature related to the formation, maintenance, and dimensions of the stream channel; (3) Streams and side channel pools with water quality necessary for unimpaired behavior, growth, and viability of all life stages. (The water quality components include—temperature, turbidity, conductivity, salinity, dissolved oxygen, pH, chemical contaminants, and other chemical characteristics); (4) Living and spawning areas for adult Topeka shiner with pools or runs with water velocities less than 0.5 meters/second (approx. 20 inches/second) and depths ranging from 0.1–2.0 meters (approx. 4–80 inches); (5) Living areas for juvenile Topeka shiner with water velocities less than 0.5 meters/second (approx. 20 inches/second) with depths less than 0.25 meters (approx. 10 inches) and moderate amounts of instream aquatic cover, such as woody debris, overhanging terrestrial vegetation, and aquatic plants; (6) Sand, gravel, cobble, and silt substrates with amounts of fine sediment and substrate embeddedness that allows for nest building and maintenance of nests and eggs by native *Lepomis* sunfishes (green sunfish, orangespotted sunfish, longear sunfish) and Topeka shiner as necessary for reproduction, unimpaired behavior, growth, and viability of all life stages; (7) An adequate terrestrial, semiaquatic, and aquatic invertebrate food base that allows for unimpaired growth, reproduction, and survival of all life stages; (8) A hydrologic regime capable of forming, maintaining, or restoring the flow periodicity, channel morphology, fish community composition, off-channel habitats, and habitat components described in the other primary constituent elements; and (9) Few or no nonnative predatory or competitive nonnative species present.

(4) Critical habitat was identified using—the Fifth Principal Meridian in Iowa, Missouri, and Minnesota; the Sixth Principal Meridian in Kansas and Nebraska; U.S. Geological Survey 30*60 minute (1:100,000) quadrangle maps; the National Hydrography Dataset (1:100,000) for hydrology; and Digital Line Graph (1:2,000,000) for county and State boundaries.

(5) Map 1 follows:

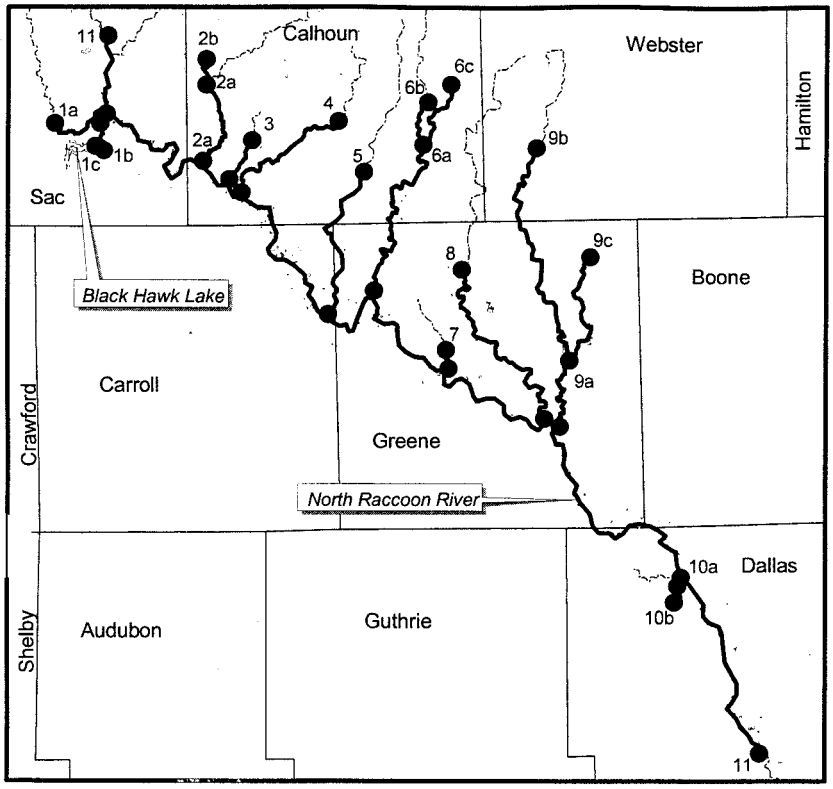
BILLING CODE 4310–55–P

Map 1

General Locations of Proposed Critical Habitat for the Topeka Shiner

(Notropis topeka)

Iowa - North Raccoon River Watershed



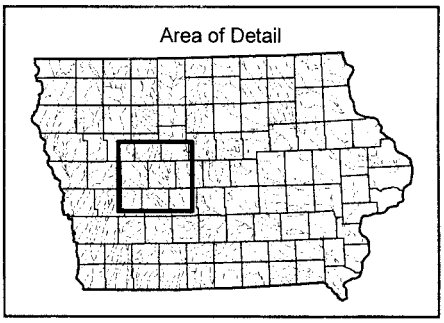
Reaches

1a. Indian Creek
1b. Ditch 57
1c. Outlet Creek
2. Camp Creek
3. Prairie Creek
4. Lake Creek
5. Purgatory Creek
6a. Cedar Creek
6b. West Cedar Creek
6c. East Cedar Creek
7. Short Creek
8. Hardin Creek
9a. Buttrick Creek
9b. West Buttrick Creek
9c. East Buttrick Creek
10a. Elm Branch
10b. Swan Lake Branch
11. Off-channel and side channel pools adjacent to North Raccoon River

5 0 5 10 15 20 Miles

N

Proposed Critical Habitat
Not Proposed as Critical Habitat
County Lines



CLAIMER

map is a graphical representation of Topeka shiner critical habitat and is provided for illustrative purposes only. The map and GIS files used to create this map are not the definitve source for determining critical habitat boundaries. While the Service makes every effort to represent the critical habitat shown on this map as completely and accurately as possible (given existing time, resources, data, and display constraints), the USFWS gives no warranty, expressed or implied, as to the accuracy, reliability, or completeness of these data.

North Raccoon River Complex

1a. Indian Creek from its confluence with the North Raccoon River (T87N, R35W, Sec. 24), upstream through T87N, R35W, Sec. 29.

1b. Tributary to Indian Creek (Ditch 57), from their confluence (T87N, R35W, Sec. 23), upstream to the confluence with the outlet creek from Black Hawk Lake (T86N, R36W, Sec. 1).

1c. Outlet Creek from Black Hawk Lake from its confluence with Ditch 57 (T86N, R36W, Sec. 1), upstream to lake outlet (T87N, R35W, Sec. 35).

2a. Camp Creek from its confluence with the North Raccoon River (T86N, R34W, Sec. 7), upstream through T87N, R34W, Sec. 8.

2b. West Fork Camp Creek from its confluence with Camp Creek (T87N, R34W, Sec. 8), upstream through T88N, R34W, Sec. 32.

3. Prairie Creek from its confluence with the North Raccoon River (T86N, R34W, Sec. 16), upstream through T87N, R34W, Sec. 35.

4. Lake Creek from its confluence with the North Raccoon River (T86N, R34W, Sec. 23), upstream through T87N, R33W, Sec. 25.

5. Purgatory Creek from its confluence with the North Raccoon River (T84N, R33W, Sec. 11), upstream through T86N, R32W, Sec. 17.

6a. Cedar Creek from its confluence with the North Raccoon River (T85N, R32W, Sec. 33), upstream to the confluence of West Cedar Creek and East Cedar Creek (T87N, R31W, Sec. 31).

6b. West Cedar Creek from its confluence with East Cedar Creek (T87N, R31W, Sec. 31), upstream through T87N, R31W, Sec. 18.

6c. East Cedar Creek from its confluence with West Cedar Creek (T87N, R31W, Sec. 31), upstream through T87N, R31W, Sec. 9.

7. Short Creek from its confluence with the North Raccoon River (T84N, R31W, Sec. 33), upstream through T84N, R31W, Sec. 28.

8. Hardin Creek from its confluence with the North Raccoon River (T83N, R30W, Sec. 23), upstream through T85N, R31W, Sec. 27.

9a. Buttrick Creek from its confluence with the North Raccoon River (T83N, R30W, Sec. 26), upstream to the confluence of West Buttrick Creek and East Buttrick Creek (T84N, R30W, Sec. 25).

9b. West Buttrick Creek, from its confluence with East Buttrick Creek (T84N, R30W, Sec. 25), upstream through T86N, R30W, Sec. 3.

9c. East Buttrick Creek, from its confluence with West Buttrick Creek (T84N, R30W, Sec. 25), upstream through T85N, R29W, Sec. 20.

10a. Elm Branch from its confluence with the North Raccoon River (T81N, R28W, Sec. 28), upstream to its confluence with Swan Lake Branch T81N, R28W, Sec. 28.

10b. Swan Lake Branch from its confluence with Elm Branch (T81N, R28W, Sec. 28), upstream through T80N, R28W, Sec. 4.

11. Off-channel and side-channel pools (that meet the previously described criteria) adjacent to the North Raccoon River from U.S. Highway 6 (T79N, R27W, Sec. 32), upstream to U.S. Highway 20 (T88N, R36W, Sec. 24).

(6) Map 2 follows:

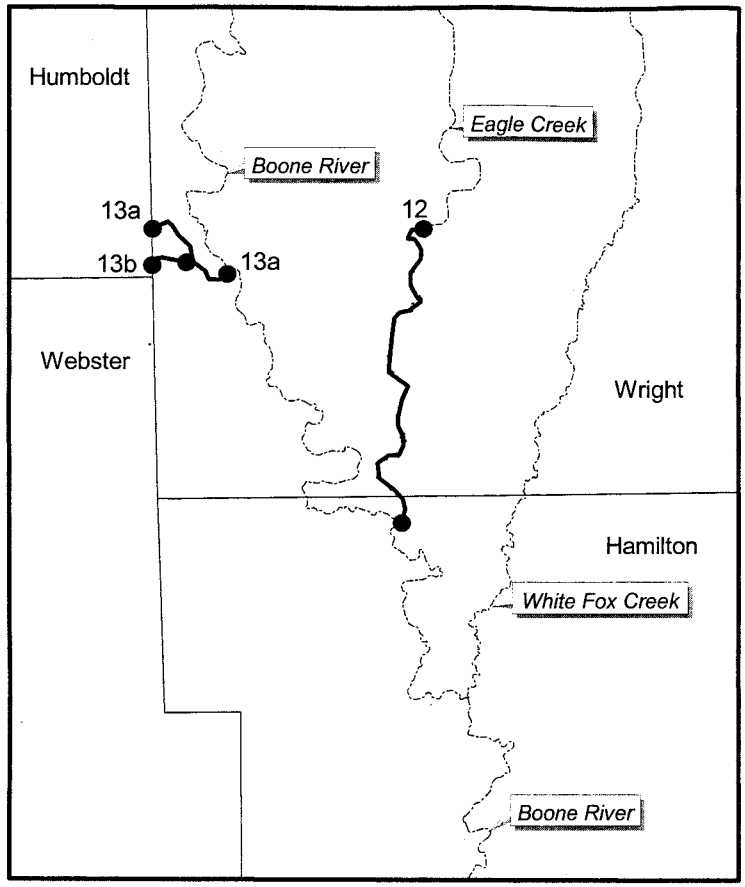
BILLING CODE 4310–55–P

Map 2

General Locations of Proposed Critical Habitat for the Topeka Shiner

(Notropis topeka)

Iowa - Boone River Watershed

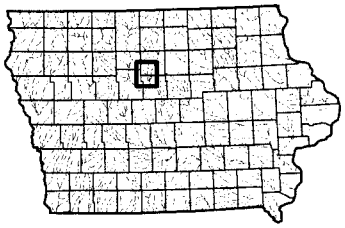


Reaches

12. Eagle Creek
13a. Ditch 3
13b. Ditch 19

5 0 5 Miles

Area of Detail



Proposed Critical Habitat
Not Proposed as Critical Habitat
County Lines

N

CLAIMER

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12. Eagle Creek from its confluence with the Boone River (T89N, R25W, Sec. 6), upstream through T91N, R25W, Sec. 30.

Ditch 3 and Ditch 19 Complex

13a. Ditch 3 from its confluence with the Boone River (T91N, R26W, Sec. 32), upstream through T91N, R26W, Sec. 30.

13b. Ditch 19 from its confluence with Ditch 3 (T91N, R26W, Sec. 31), upstream through T91N, R26W, Sec. 31.

(7) Map 3 follows:

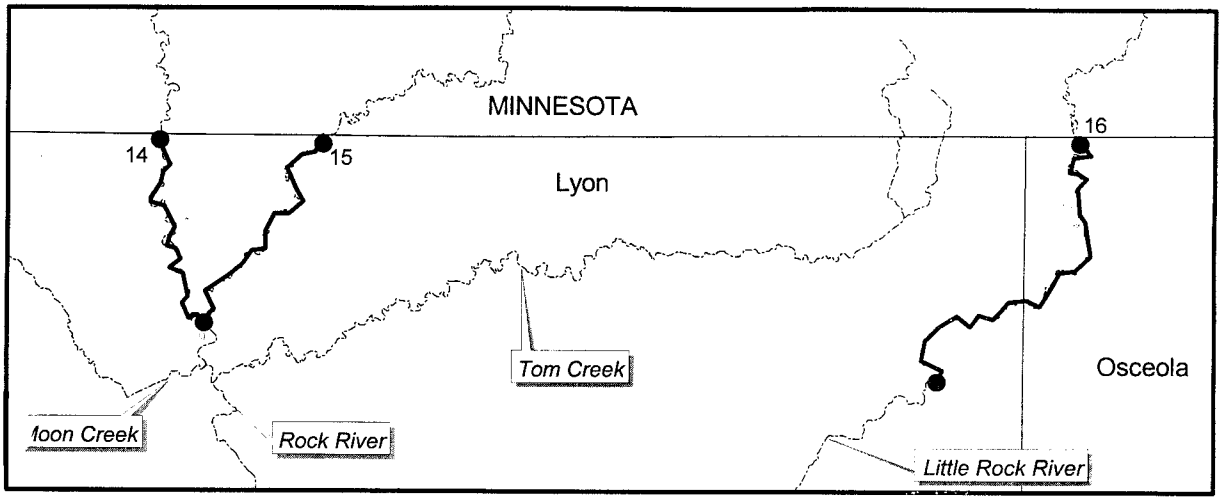
BILLING CODE 4310–55–P

Map 3

General Locations of Proposed Critical Habitat for the Topeka Shiner

(Notropis topeka)

Iowa - Rock River Watershed



5 0 5 Miles

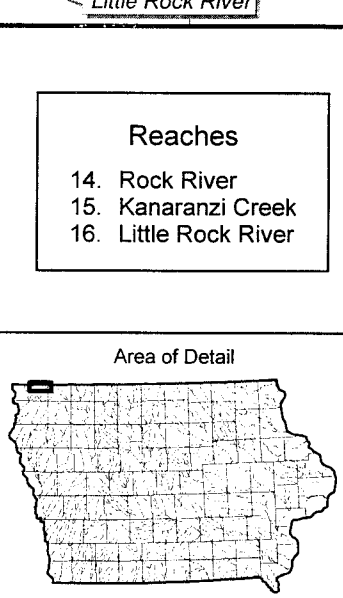
Reaches

14. Rock River
15. Kanaranzi Creek
16. Little Rock River

Proposed Critical Habitat
Not Proposed as Critical Habitat
County Lines

N

Area of Detail



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Rock River Complex

14. Rock River from its confluence with Kanaranzi Creek (T100N, R45W, Sec. 28), upstream to the Iowa/Minnesota State border (T100N, R45W, Sec. 8).

15. Kanaranzi Creek from its confluence with the Rock River (T100N, R45W, Sec. 28), upstream to the Iowa/Minnesota State border (T100N, R45W, Sec. 11).

Little Rock River Complex

16. Little Rock River from State Highway 9 (T100N, R43W, Sec. 34), upstream to the Iowa/Minnesota State border (T100N, R42W, Sec. 7).

(8) Map 4 follows:

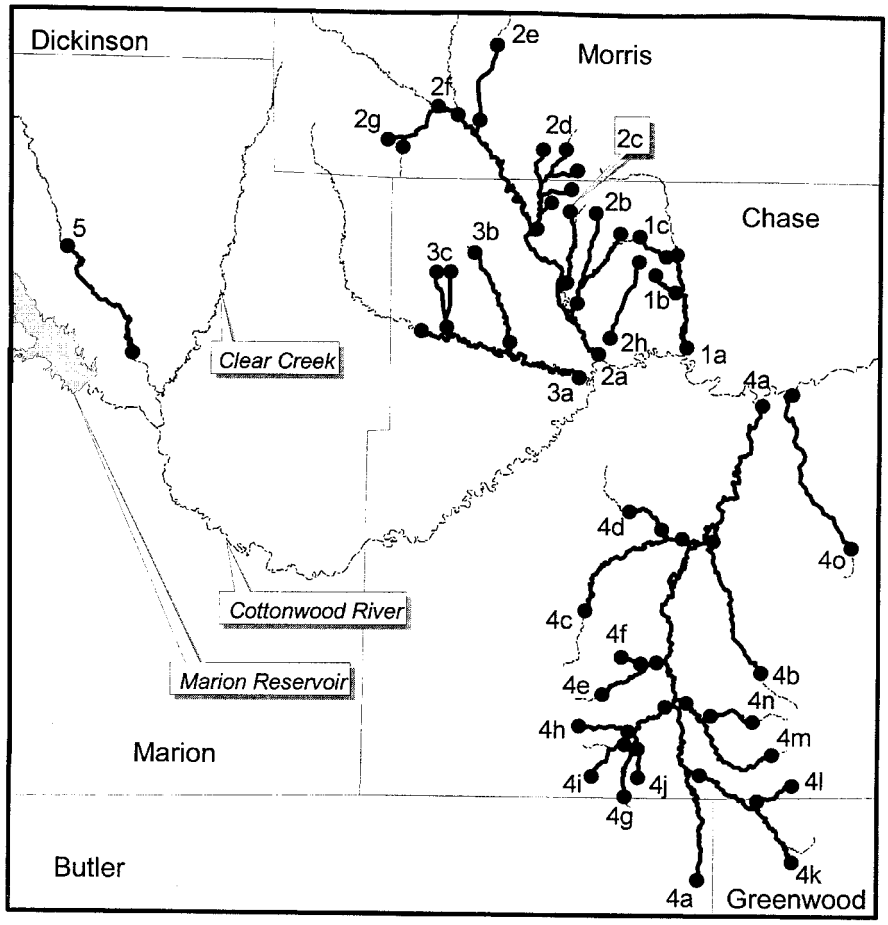
BILLING CODE 4310–55–P

Map 4

General Locations of Proposed Critical Habitat for the Topeka Shiner

(Notropis topeka)

Kansas - Cottonwood River Watershed



Reaches

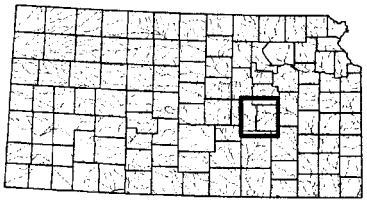
1a. Fox Creek
1b. Unnamed tributary
1c. Unnamed tributary
2a. Diamond Creek
2b. Gannon Creek
2c. Mulvane Creek
2d. Schaffer Creek
2e. Dodds Creek
2f. Sixmile Creek
2g. Mulberry Creek
2h. Unnamed tributary
3a. Middle Creek
3b. Collett Creek
3c. Unnamed tributary
4a. South Fork
4b. Sharpes Creek
4c. Rock Creek
4d. Den Creek
4e. Crocker Creek
4f. Unnamed tributary
4g. Mercer Creek
4h. Jack Creek
4i. Unnamed tributary
4j. Unnamed tributary
4k. Thurman Creek
4l. Unnamed tributary
4m. Little Cedar Creek
4n. Shaw Creek
4o. Bloody Creek
5. Mud Creek

5 0 5 10 Miles

N

Proposed Critical Habitat
Not Proposed as Critical Habitat
County Lines

Area of Detail



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Fox Creek Complex

1a. Fox Creek from U.S. Highway 50 (T19S, R8E, Sec. 17), upstream through T18S, R8E, Sec. 29.

1b. Unnamed tributary to Fox Creek, from their confluence (T18S, R8E, Sec. 32), upstream through T18S, R8E, Sec. 31.

1c. Unnamed tributary to Fox Creek, from their confluence (T18S, R8E, Sec. 29), upstream through T18S, R8E, Sec. 19.

Diamond Creek Complex

2a. Diamond Creek from U.S. Highway 50 (T19S, R7E, Sec. 14), upstream to its confluence with Sixmile Creek (T17S, R6E, Sec. 21).

2b. Gannon Creek from its confluence with Diamond Creek (T19S, R7E, Sec. 10), upstream through T18S, R7E, Sec. 24; and an unnamed tributary to Gannon Creek, from their confluence (T18S, R7E, Sec. 34), upstream through T18S, R7E, Sec. 14.

2c. Mulvane Creek from its confluence with Diamond Creek (T18S, R7E, Sec. 33), upstream through T18S, R7E, Sec. 16.

2d. Schaffer Creek from its confluence with Diamond Creek (T18S, R7E, Sec. 17), upstream through T17S, R7E, Sec. 33; an unnamed tributary stream from its confluence with Schaffer Creek (T18S, R7E, Sec. 5), upstream through T17S, R7E, Sec. 32; an unnamed tributary stream from its confluence with Schaffer Creek (T18S, R7E, Sec. 5), upstream through T18S, R7E, Sec. 3; an unnamed tributary stream from its confluence with Schaffer Creek (T18S, R7E, Sec. 8), upstream through T18S, R7E, Sec. 4; and an unnamed tributary stream from its confluence with Schaffer Creek (T18S, R7E, Sec. 8), upstream through T18S, R7E, Sec. 8.

2e. Dodds Creek from its confluence with Diamond Creek (T17S, R6E, Sec. 26), upstream through T17S, R6E, Sec. 1.

2f. Sixmile Creek from its confluence with Diamond Creek (T17S, R6E, Sec. 22), upstream to its confluence with Mulberry Creek (T17S, R6E, Sec. 21).

2g. Mulberry Creek from its confluence with Sixmile Creek (T17S, R6E, Sec. 21), upstream through T17S, R6E, Sec. 30; and an unnamed tributary to Mulberry Creek from their confluence (T17S, R6E, Sec. 30), upstream through T17S, R6E, Sec. 30.

2h. Unnamed tributary to the Cottonwood River from their confluence (T19S, R7E, Sec. 12), upstream through T18S, R8E, Sec. 30.

Middle Creek Complex

3a. Middle Creek from U.S. Highway 50 (T19S, R7E, Sec. 22), upstream to its confluence with Stribby Creek (T19S, R6E, Sec. 8).

3b. Collett Creek from its confluence with Middle Creek (T19S, R7E, Sec. 18), upstream through T18S, R6E, Sec. 26).

3c. Unnamed tributary to Middle Creek, from their confluence (T19S, R6E, Sec. 10), upstream through T18S, R6E, Sec. 33); and an unnamed tributary to the first tributary, from their confluence, upstream through T18S, R6E, Sec. 34.

South Fork of the Cottonwood River (South Fork) Complex

4a. South Fork from its confluence with the Cottonwood River (T19S, R8E, Sec. 25), upstream through T23S, R8E, Sec. 21.

4b. Sharpes Creek from its confluence with the South Fork (T20S, R8E, Sec. 34), upstream through T21S, R8E, Sec. 36.

4c. Rock Creek from its confluence with the South Fork (T20S, R8E, Sec. 33), upstream through T21S, R7E, Sec. 14.

4d. Den Creek from its confluence with Rock Creek (T20S, R8E, Sec. 31), upstream through T20S, R8E, Sec. 30.

4e. Crocker Creek from its confluence with the South Fork (T21S, R8E, Sec. 31), upstream through T22S, R7E, Sec. 1.

4f. Unnamed tributary to Crocker Creek from their confluence (T21S, R8E, Sec. 31), upstream through T21S, R8E, Sec. 31.

4g. Mercer Creek from its confluence with the South Fork (T22S, R8E, Sec. 8), upstream through T22S, R8E, Sec. 31.

4h. Jack Creek from its confluence with Mercer Creek (T22S, R8E, Sec. 18), upstream through T22S, R7E, Sec. 14.

4i. Unnamed tributary to Mercer Creek, from their confluence (T22S, R8E, Sec. 19), upstream through T22S, R7E, Sec. 26.

4j. Unnamed tributary to Mercer Creek, from their confluence (T22S, R8E, Sec. 19), upstream through T22S, R8E, Sec. 31.

4k. Thurman Creek from its confluence with the South Fork (T22S, R8E, Sec. 29), upstream through T23S, R9E, Sec. 17.

4l. Unnamed tributary to Thurman Creek, from their confluence (T23S, R8E, Sec. 1), upstream through T22S, R9E, Sec. 31.

4m. Little Cedar Creek from its confluence with the South Fork (T22S, R8E, Sec. 8), upstream through T22S, R8E, Sec. 25.

4n. Shaw Creek from its confluence with Little Cedar Creek (T22S, R8E, Sec. 16), upstream through T22S, R8E, Sec. 14.

4o. Bloody Creek from its confluence with the Cottonwood River (T19S, R9E, Sec. 29), upstream through T20S, R9E, Sec. 34.

5. Mud Creek from the south section line of T19S, R3E, Sec. 13, upstream through T18S, R3E, Sec. 28.

(9) Map 5 follows:

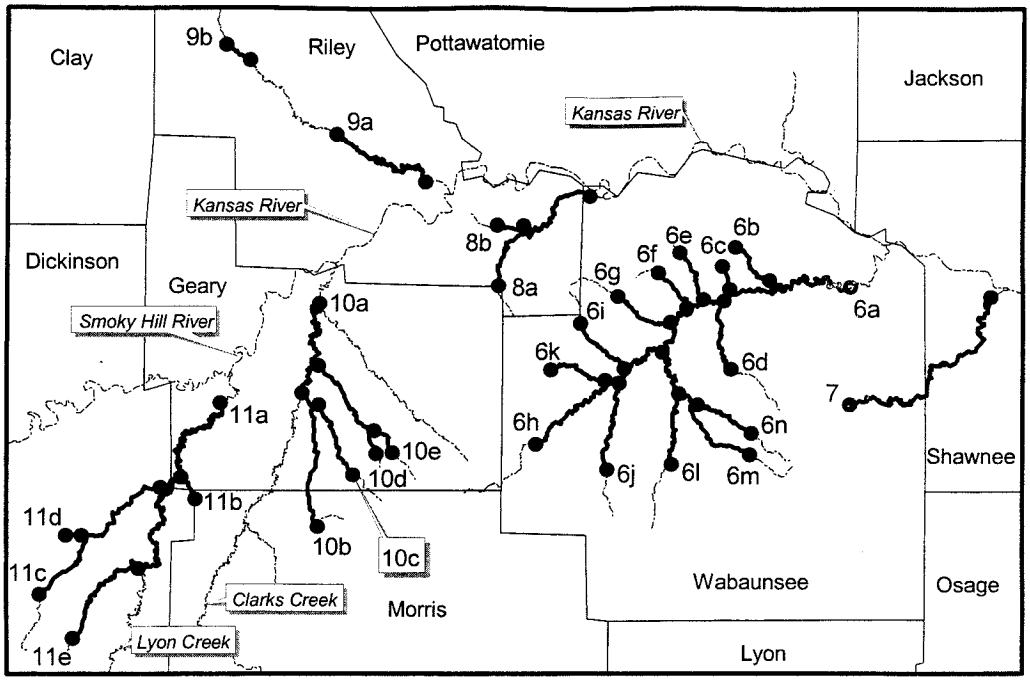
BILLING CODE 4310–55–P

Map 5

General Locations of Proposed Critical Habitat for the Topeka Shiner

(Notropis topeka)

Kansas - Kansas River Watershed



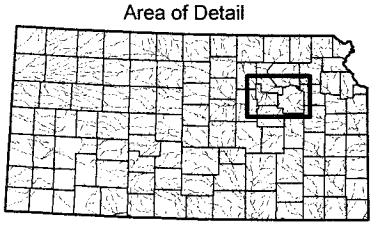
5 0 5 10 Miles

Proposed Critical Habitat

Not Proposed as Critical Habitat

County Lines

Area of Detail



Reaches

6a.	Mill Creek	8a.	Deep Creek
6b.	Mulberry Creek	8b.	School Creek
6c.	Unnamed Tributary	9a.	Wildcat Creek
6d.	Kuenzil Creek	9b.	Wildcat Creek
6e.	Spring Creek	10a.	Clarks Creek
6f.	Pretty Creek	10b.	Thomas Creek
6g.	Hendricks Creek	10c.	Davis Creek
6h.	West Branch Mill Creek	10d.	Dry Creek
6i.	Loire Creek	10e.	Unnamed tributary
6j.	Illinois Creek	11a.	Lyon Creek
6k.	Spring Creek	11b.	Rock Springs Creek
6l.	South Branch Mill Creek	11c.	Carry Creek
6m.	East Branch Mill Creek	11d.	Unnamed tributary
6n.	Nehring Creek	11e.	West Branch Lyon Creek
7.	Mission Creek		

'CLAIMER

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Mill Creek Complex

6a. Mill Creek from Kansas Highway 30 (T11S, R12E, Sec. 26), upstream to the confluence of West Branch Mill Creek and South Branch Mill Creek (T12S, R10E, Sec. 15).

6b. Mulberry Creek from its confluence with Mill Creek (T11S, R11E, Sec. 25), upstream through T11S, R11E, Sec. 10.

6c. Spring Creek from its confluence with Mill Creek (T11S, R11E, Sec. 28), upstream through T11S, R11E, Sec. 21.

6d. Kuenzli Creek from its confluence with Mill Creek (T11S, R11E, Sec. 33), upstream through T12S, R11E, Sec. 21.

6e. Paw Paw Creek from its confluence with Mill Creek (T11S, R11E, Sec. 31), upstream through T11S, R10E, Sec. 13.

6f. Pretty Creek from its confluence with Mill Creek (T11S, R10E, Sec. 36), upstream to Kansas Highway 99 (T11S, R10E, Sec. 22).

6g. Hendricks Creek from its confluence with Mill Creek (T12S, R10E, Sec. 2), upstream through T11S, R10E, Sec. 31.

6h. West Branch Mill Creek from its confluence with South Branch Mill Creek (T12S, R10E, Sec. 15), upstream through T13S, R9E, Sec. 20.

6i. Loire Creek from its confluence with West Branch Mill Creek (T12S, R10E, Sec. 29), upstream through T12S, R9E, Sec. 11.

6j. Illinois Creek from its confluence with West Branch Mill Creek (T12S, R10E, Sec. 30), upstream through T13S, R9E, Sec. 11.

6k. Spring Creek from its confluence with West Branch Mill Creek (T12S, R10E, Sec. 30), upstream through T12S, R9E, Sec. 21.

6l. South Branch Mill Creek from its confluence with West Branch Mill Creek (T12S, R10E, Sec. 15), upstream to Kansas Highway 4/99 (T13S, R10E, Sec. 26).

6m. East Branch Mill Creek from its confluence with South Branch Mill Creek (T12S, R10E, Sec. 35), upstream through T13S, R11E, Sec. 22.

6n. Nehring Creek from its confluence with East Branch Mill Creek (T13S, R10E, Sec. 1), upstream through T13S, R11E, Sec. 15.

7. Mission Creek from Interstate Highway 70 (T11S, R14E, Sec. 33), upstream to the confluence of North Branch Mission Creek and South Branch Mission Creek (T13S, R12E, Sec. 1).

Deep Creek Complex

8a. Deep Creek from Kansas Highway 18 (T10S, R9E, Sec. 26), upstream to Interstate Highway 70 (T11S, R8E, Sec. 26).

8b. School Creek from its confluence with Deep Creek (T11S, R9E, Sec. 6), upstream through T11S, R8E, Sec. 2.

Wildcat Creek Complex

9a. Wildcat Creek from Kansas Highway 18/Ft. Riley Boulevard (T10S, R7E, Sec. 24), upstream to the Ft. Riley boundary near Keats, Kansas (T10S, R6E, Sec. 1).

9b. Wildcat Creek from the Ft. Riley boundary near Riley, Kansas (T9S, R5E, Sec. 12), upstream to U.S. Highway 77 (T9S, R5E, Sec. 3).

Clarks Creek Complex

10a. Clarks Creek from its confluence with Humboldt Creek (T11S, R6E, Sec. 35), upstream to its confluence with Thomas Creek (T12S, R6E, Sec. 34).

10b. Thomas Creek from its confluence with Clarks Creek (T12S, R6E, Sec. 34), upstream through T13S, R6E, Sec. 34.

10c. Davis Creek from its confluence with Thomas Creek (T13S, R6E, Sec. 2), upstream through T13S, R7E, Sec. 31.

10d. Dry Creek from its confluence with Clarks Creek (T12S, R6E, Sec. 23), upstream through T13S, R7E, Sec. 22.

10e. West Branch Dry Creek from its confluence with Dry Creek (T13S, R7E, Sec. 16), upstream through T13S, R7E, Sec. 21.

Lyon Creek Complex

11a. Lyon Creek from U.S. Highway 77 (T13S, R5E, Sec. 3), upstream to the confluence with West Branch Lyon Creek (T15S, R4E, Sec. 2).

11b. Rock Springs Creek from its confluence with Lyon Creek (T13S, R5E, Sec. 3), upstream through T14S, R5E, Sec. 5.

11c. Carry Creek from its confluence with Lyon Creek (T13S, R5E, Sec. 31), upstream through T15S, R3E, Sec. 10.

11d. Unnamed tributary to Carry Creek from their confluence (T14S, R4E, Sec. 19), upstream through T14S, R3E, Sec. 24.

11e. West Branch Lyon Creek from its confluence with Lyon Creek (T15S, R4E, Sec. 2), upstream through T15S, R3E, Sec. 25.

(10) Map 6 follows:

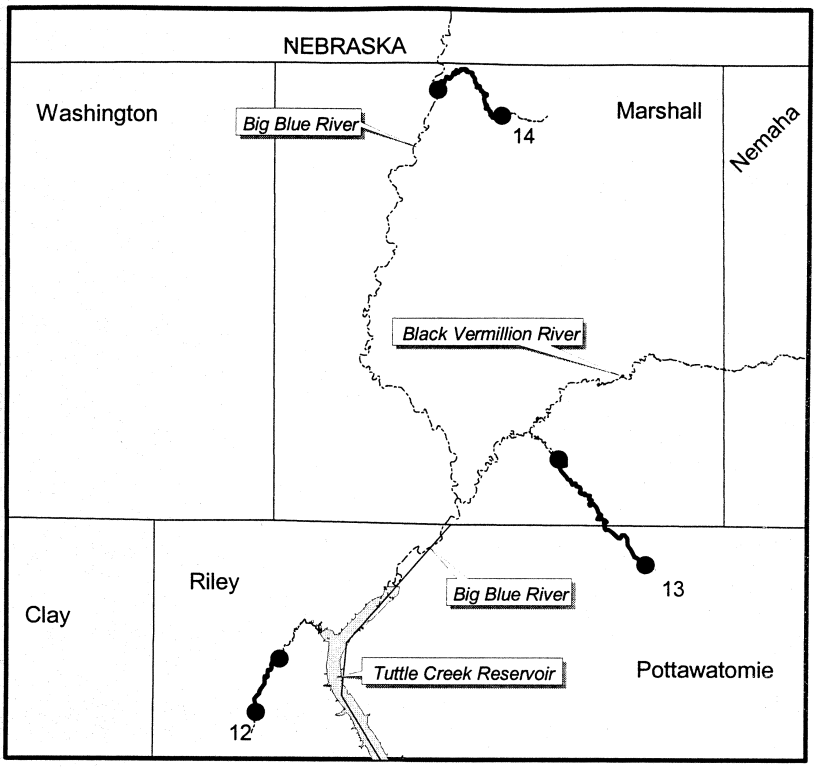
BILLING CODE 4310–55–P

Map 6

General Locations of Proposed Critical Habitat for the Topeka Shiner

(Notropis topeka)

Kansas - Big Blue Watershed

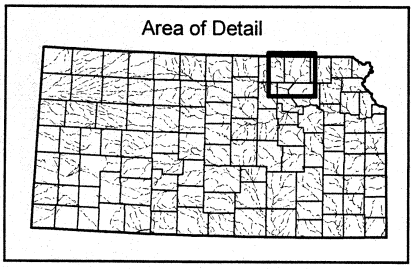


Proposed Critical Habitat

Not Proposed as Critical Habitat

County Lines

5 0 5 10 15 Miles



N

Reaches

12. *Walnut Creek*
13. *Clear Fork Creek*
14. *North Elm Creek*

CLAIMER

map is a graphical representation of Topeka shiner critical habitat and is provided for illustrative poses only. The map and GIS files used to create this map are not the definitve source for determining critical habitat boundaries. While the Service makes every effort to represent the critical habitat shown on this map as completely and accurately as possible (given existing time, resources, data, and display constraints), the USFWS gives no warranty, expressed or implied, as to the accuracy, reliability, or completeness of these data.

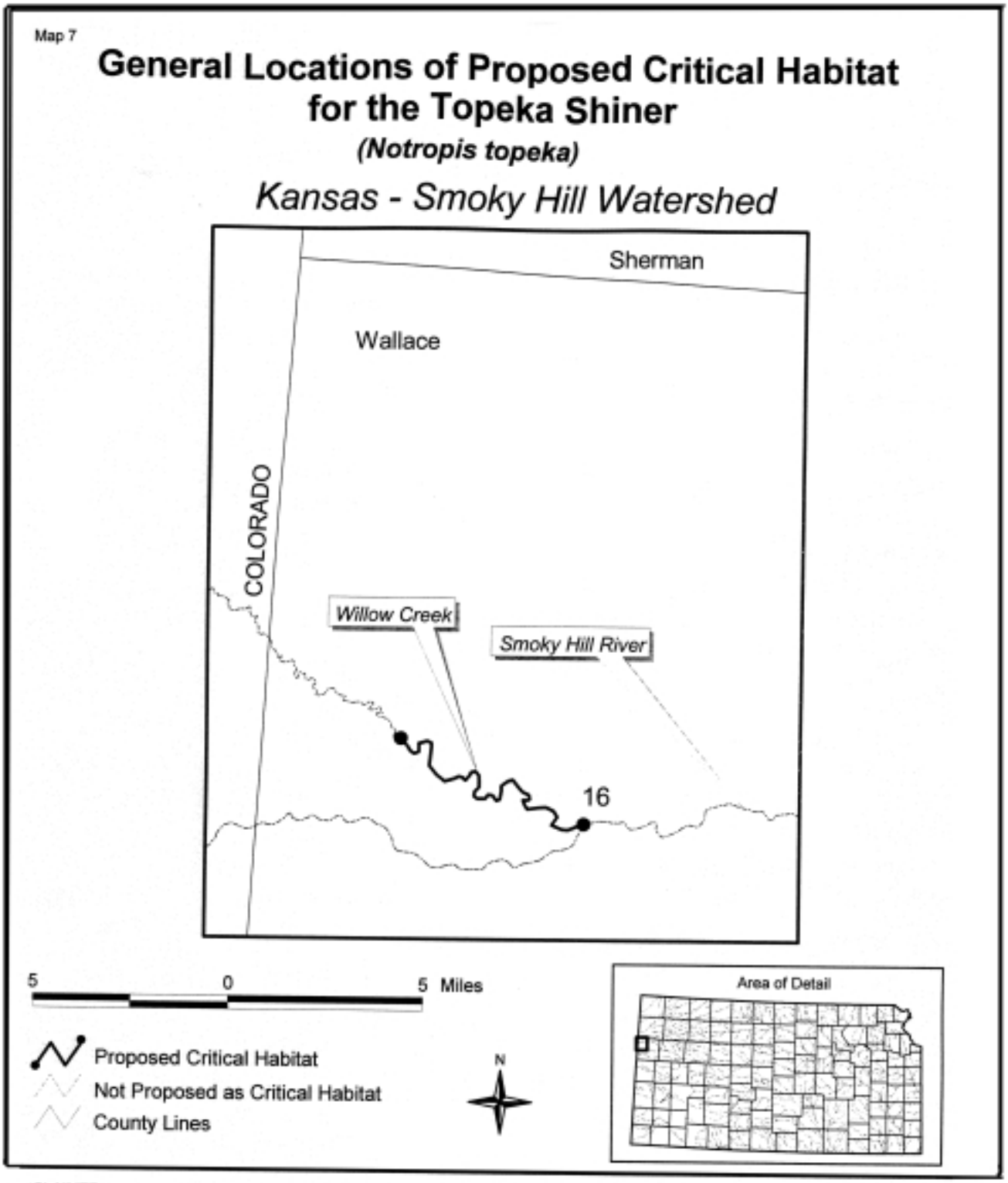
12. Walnut Creek from the east section line of T7S, R6E, Sec. 19, upstream through T8S, R5E, Sec. 1.

13. Clear Fork Creek from its confluence with Jim Creek (T5S, R9E, Sec. 17), upstream through T6S, R10E, Sec. 18.

14. North Elm Creek from its confluence with the Big Blue River (T1S, R7E, Sec. 11), upstream through T1S, R8E, Sec. 21.

(11) Map 7 follows:

BILLING CODE 4310–55–P



15. Willow Creek from its confluence with the Smoky Hill River (T13S, R41W, Sec. 17), upstream through T13S, R42W, Sec. 3.

(12) Map 8 follows:

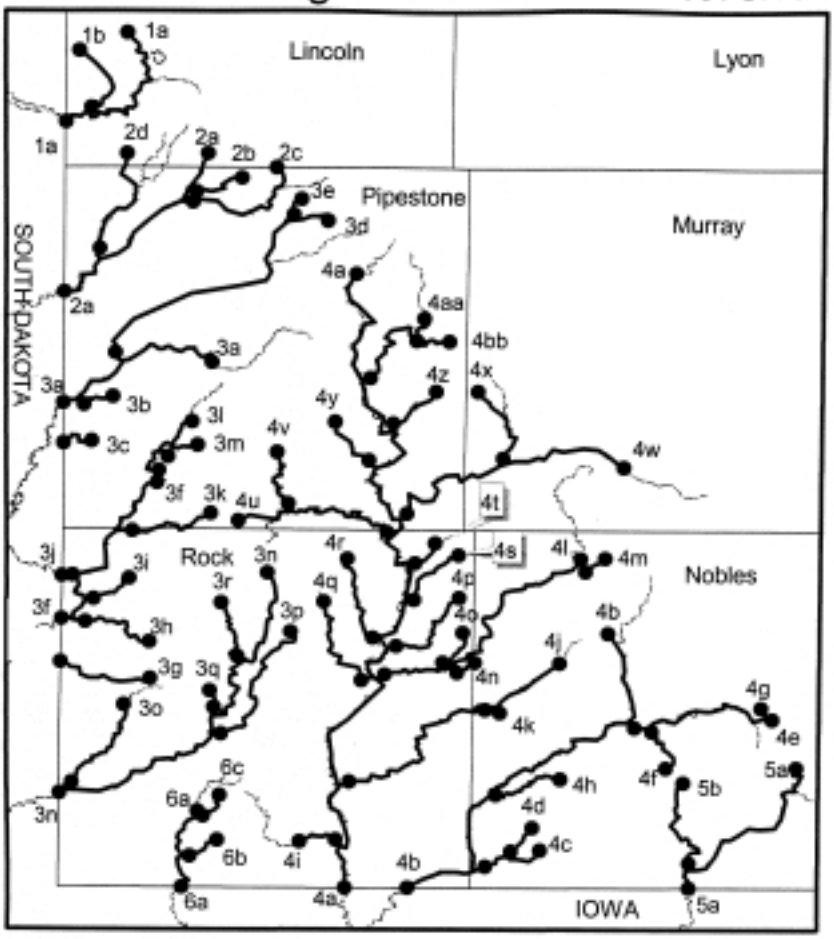
BILLING CODE 4310–55–P

Map 8

General Locations of Proposed Critical Habitat for the Topeka Shiner

(Notropis topeka)

Minnesota - Big Sioux River Watershed



5 0 5 10 Miles

N

Proposed Critical Habitat

Not Proposed as Critical Habitat

County Lines

Reaches

1a. Medary Creek
1b. Unnamed tributary
2a. Flandreau Creek
2b. Unnamed tributary
2c. East Branch Flandreau Creek
2d. Willow Creek
3a. Pipestone Creek
3b. Unnamed tributary
3c. Unnamed tributary
3d. North Branch Pipestone Creek
3e. Unnamed tributary
3f. Split Rock Creek
3g. Unnamed tributary
3h. Unnamed tributary
3i. Unnamed tributary
3j. Pipestone Creek
3k. Unnamed tributary
3l. Split Rock Creek
3m. Unnamed tributary
3n. Beaver Creek
3o. Springwater Creek
3p. Little Beaver Creek
3q. Unnamed tributary
3r. Unnamed tributary
4a. Rock River
4b. Kanaranzi Creek
4c. Norwegian Creek
4d. Unnamed tributary
4e. East Branch Kanaranzi Creek
4f. Unnamed tributary
4g. Unnamed tributary
4h. Unnamed tributary
4i. Ash Creek
4j. Elk Creek
4k. Unnamed tributary
4l. Champepadan Creek
4m. Unnamed tributary
4n. Unnamed tributary
4o. Unnamed tributary
4p. Unnamed tributary
4q. Mound Creek
4r. Unnamed tributary
4s. Unnamed tributary
4t. Unnamed tributary
4u. Popular Creek
4v. Unnamed tributary
4w. Chanarambie Creek
4x. North Branch Chanarambie Cr.
4y. Unnamed tributary
4z. Unnamed tributary
4aa. East Branch Rock River
4bb. Unnamed tributary
5a. Little Rock River
5b. Little Rock Creek
6a. Mud Creek
6b. Unnamed tributary
6c. Unnamed tributary

CLAIMER

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Medary Creek Complex

1a. Medary Creek from the MN/SD state border (T109N, R47W, Sec. 13), upstream through T110N, R46W, Sec. 21.

1b. Unnamed tributary to Medary Creek, from their confluence (T109N, R46W, Sec. 18), upstream through T110N, R46W, Sec. 30.

Flandreau Creek Complex

2a. Flandreau Creek from the Minnesota/South Dakota State border (T107N, R47W, Sec. 13), upstream through (T109N, R45W, Sec. 31).

2b. Unnamed tributary to Flandreau Creek, from their confluence (T108N, R46W, Sec. 11), upstream through T108N, R45W, Sec. 6.

2c. East Branch Flandreau Creek from its confluence with Flandreau Creek (T108N, R46W, Sec. 14), upstream through T108N, R45W, Sec. 4.

2d. Willow Creek from its confluence with Flandreau Creek (T107N, R46W, Sec. 6), upstream through T109N, R46W, Sec. 3.

Split Rock/Pipestone/Beaver Creek Complex

3a. Pipestone Creek from the Minnesota/South Dakota State border (T106N, R47W, Sec. 23), upstream through T106N, R46W, Sec. 1.

3b. Unnamed tributary to Pipestone Creek, from their confluence (T106N, R47W, Sec. 24), upstream through T106N, R46W, Sec. 19.

3c. Unnamed tributary to Pipestone Creek, from the Minnesota/South Dakota State border (T105N, R47W, Sec. 2), upstream through T105N, R46W, Sec. 1.

3d. North Branch Pipestone Creek from its confluence with Pipestone Creek (T107N, R46W, Sec. 5), upstream through T108N, R45W, Sec. 23.

3e. Unnamed tributary to North Branch Pipestone Creek, from their confluence (T108N, R45W, Sec. 22), upstream through T108N, R45W, Sec. 15.

3f. Split Rock Creek from the Minnesota/South Dakota State border (T103N, R47W, Sec. 2), upstream to Split Rock Lake Outlet (T105N, R46W, Sec. 20).

3g. Unnamed tributary to Split Rock Creek from the Minnesota/South Dakota State border (T103N, R47W, Sec. 23), upstream through T103N, R46W, Sec. 29.

3h. Unnamed tributary to Split Rock Creek, from their confluence (T103N, R47W, Sec. 2), upstream through T103N, R46W, Sec. 8.

3i. Unnamed tributary to Split Rock Creek, from their confluence (T104N, R47W, Sec. 25), upstream through T104N, R46W, Sec. 19.

3j. Pipestone Creek from its confluence with Split Rock Creek (T104N, R47W, Sec. 23), upstream to the Minnesota/South Dakota State border (T104N, R47W, Sec. 23).

3k. Unnamed tributary to Split Rock Creek, from their confluence (T104N, R46W, Sec. 6), upstream through T105N, R46W, Sec. 36.

3l. Split Rock Creek from the headwater of Split Rock Lake (T105N, R46W, Sec. 15), upstream through T106N, R46W, Sec. 35.

3m. Unnamed tributary to Split Rock Creek, from their confluence (T105N, R46W, Sec. 3), upstream through T105N, R46W, Sec. 2.

3n. Beaver Creek from the Minnesota/South Dakota State border (T102N, R47W, Sec. 35), upstream through T104N, R45W, Sec. 20.

3o. Springwater Creek from its confluence with Beaver Creek (T102N, R47W, Sec. 35), upstream through T102N, R46W, Sec. 6.

3p. Little Beaver Creek from its confluence with Beaver Creek (T102N, R46W, Sec. 12), upstream through T103N, R45W, Sec. 9.

3q. Unnamed tributary to Beaver Creek, from their confluence (T102N, R46W, Sec. 1), upstream through T103N, R46W, Sec. 35.

3r. Unnamed tributary to Beaver Creek, from their confluence (T103N, R45W, Sec. 18), upstream through T104N, R46W, Sec. 36.

Rock River Complex

4a. Rock River from the Minnesota/Iowa State border (T101N, R45W, Sec. 36), upstream through T107N, R44W, Sec. 7.

4b. Kanaranzi Creek from the Minnesota/Iowa State border (T101N, R44W, Sec. 33), upstream through T103N, R42W, Sec. 7).

4c. Norwegian Creek from its confluence with Kanaranzi Creek (T101N, R44W, Sec. 25), upstream through T101N, R43W, Sec. 21.

4d. Unnamed tributary to Norwegian Creek, from their confluence (T101N, R44W, Sec. 20), upstream through T101N, R44W, Sec. 16.

4e. East Branch Kanaranzi Creek from its confluence with Kanaranzi Creek (T102N, R42W, Sec. 5), upstream through T102N, R41W, Sec. 5.

4f. Unnamed tributary to East Branch Kanaranzi Creek, from their confluence (T102N, R42W, Sec. 9), upstream through T102N, R42W, Sec. 22.

4g. Unnamed tributary to East Branch Kanaranzi Creek, from their confluence (T102N, R42W, Sec. 5), upstream through T102N, R42W, Sec. 5.

4h. Unnamed tributary to Kanaranzi Creek, from their confluence (T102N, R43W, Sec. 31), upstream through T102N, R43W, Sec. 27.

4i. Ash Creek from its confluence with the Rock River (T101N, R45W, Sec. 24), upstream through T101N, R45W, Sec. 14.

4j. Elk Creek from its confluence with the Rock River (T102N, R45W, Sec. 36), upstream through T103N, R43W, Sec. 22.

4k. Unnamed tributary to Elk Creek, from their confluence (T102N, R44W, Sec. 1), upstream through T102N, R43W, Sec. 6.

4l. Champepadan Creek from its confluence with the Rock River (T103N, R44W, Sec. 29), upstream through T104N, R43W, Sec. 14.

4m. Unnamed tributary to Champepadan Creek, from their confluence (T104N, R43W, Sec. 14), upstream through T104N, R43W, Sec. 13.

4n. Unnamed tributary to Champepadan Creek, from their confluence (T103N, R44W, Sec. 23), upstream through T103N, R44W, Sec. 24.

4o. Unnamed tributary to Champepadan Creek, from their confluence (T103N, R44W, Sec. 23), upstream through T103N, R44W, Sec. 12.

4p. Unnamed tributary to the Rock River, from their confluence (T103N, R44W, Sec. 8), upstream through T104N, R44W, Sec. 26.

4q. Mound Creek from its confluence with the Rock River (T103N, R44W, Sec. 30), upstream through T104N, R45W, Sec. 35).

4r. Unnamed tributary to the Rock River, from their confluence (T103N, R44W, Sec. 7), upstream through T104N, R45W, Sec. 23.

4s. Unnamed tributary to the Rock River, from their confluence (T104N, R44W, Sec. 28), upstream through T104N, R44W, Sec. 11.

4t. Unnamed tributary to the Rock River, from their confluence (T104N, R44W, Sec. 16), upstream through T104N, R44W, Sec. 10.

4u. Poplar Creek from its confluence with the Rock River (T104N, R44W, Sec. 5), upstream through T105N, R45W, Sec. 32.

4v. Unnamed tributary to Poplar Creek, from their confluence (T105N, R45W, Sec. 27, upstream through T105N, R45W, Sec. 9.

4w. Chanarambie Creek from its confluence with the Rock River (T105N, R44W, Sec. 33), upstream through (T105N, R42W, Sec. 8).

4x. North Branch Chanarambie Creek from its confluence with Chanarambie

Creek (T105N, R43W, Sec. 8), upstream through T106N, R43W, Sec. 18.

4y. Unnamed tributary to the Rock River, from their confluence (T105N, R44W, Sec. 8), upstream through T106N, R45W, Sec. 36.

4z. Unnamed tributary to the Rock River, from their confluence (T106N, R44W, Sec. 33), upstream through T106N, R44W, Sec. 23.

4aa. East Branch Rock River from its confluence with the Rock River (T106N, R44W, Sec. 18), upstream through T107N, R44W, Sec. 27.

4bb. Unnamed tributary to East Branch Rock River, from their confluence (T107N, R44W, Sec. 34), upstream through T107N, R44W, Sec. 35.

Little Rock River Complex

5a. Little Rock River from the Minnesota/Iowa State border (T101N, R42W, Sec. 35), upstream through T102N, R41W, Sec. 27.

5b. Little Rock Creek from its confluence with the Little Rock River (T101N, R42W, Sec. 26), upstream through T102N, R42W, Sec. 34.

Mud Creek Complex

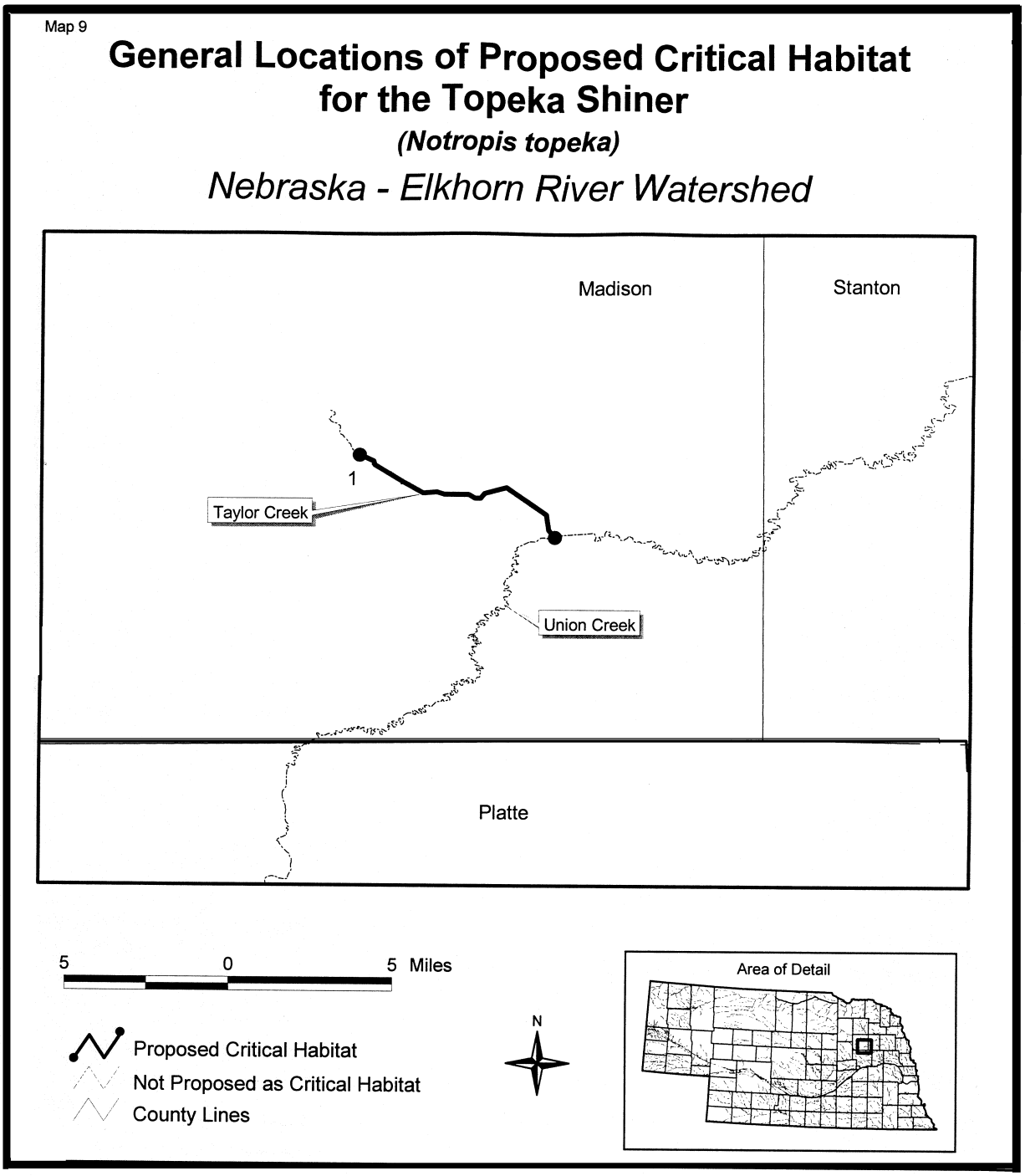
6a. Mud Creek from the Minnesota/Iowa State border (T102N, R46W, Sec. 34), upstream thru T101N, R46W, Sec. 11.

6b. Unnamed tributary to Mud Creek, from their confluence (T101N, R46W, Sec. 22), upstream through T101N, R46W, Sec. 24.

6c. Unnamed tributary to Mud Creek, from their confluence (T101N, R46W, Sec. 10), upstream through T101N, R46W, Sec. 1.

(13) Map 9 follows:

BILLING CODE 4310–55–P



1. Taylor Creek from its confluence with Union Creek (T22N, R1W, Sec. 32), upstream through T22N, R2W, Sec. 22.

(14) Map 10 follows:

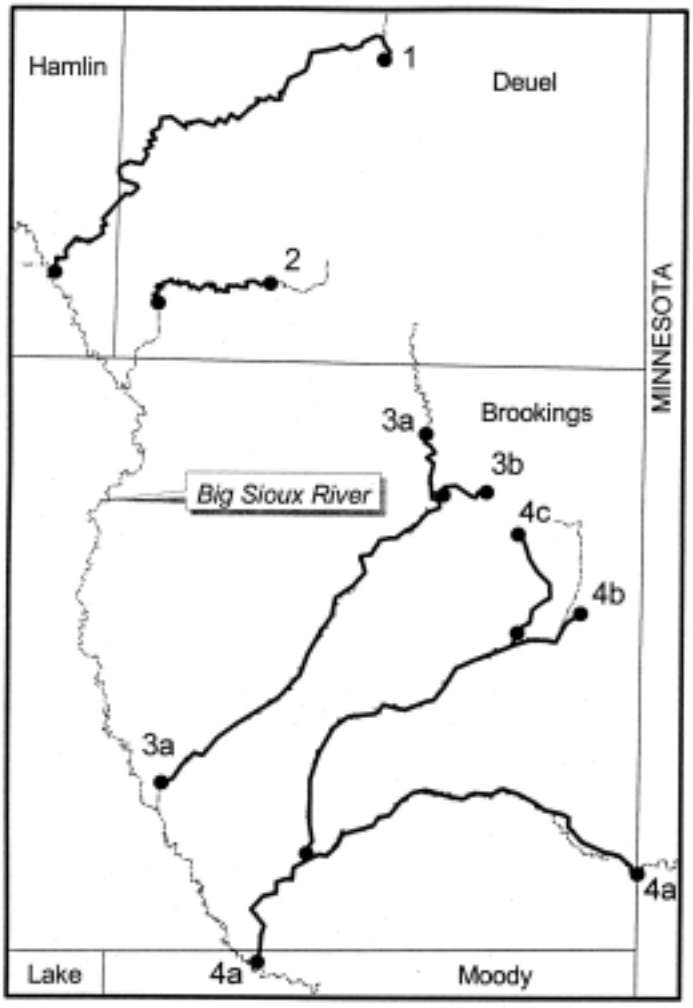
BILLING CODE 4310–55–P

Map 10

General Locations of Proposed Critical Habitat for the Topeka Shiner

(Notropis topeka)

South Dakota - Upper Big Sioux Watershed



Reaches

1. Hidewood Creek
2. Peg Munky Run
3a. Sixmile Creek
3b. Unnamed tributary
4a. Medary Creek
4b. Deer Creek
4c. Unnamed tibutary

Proposed Critical Habitat

Not Proposed as Critical Habitat

County Lines

N

Area of Detail

5 0 5 10 Miles

CLAIMER

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1. Hidewood Creek from its confluence with the Big Sioux River (T113N, R51W, Sec. 15), upstream to State Highway 15 (T115N, R49W, Sec. 35).

2. Peg Munky Run from State Highway 28 (T113N, R50W, Sec. 20), upstream through T113N, R50W, Sec. 24 (near Interstate Highway 29).

Sixmile Creek Complex

3a. Sixmile Creek from T110N, R50W, Sec. 33, upstream through T112N, R48W, Sec. 19.

3b. Unnamed tributary to Sixmile Creek, from their confluence (T112N, R48W, Sec. 31), upstream through T112N, R48W, Sec. 33.

Medary Creek Complex

4a. Medary Creek from its confluence with the Big Sioux River (T108N, R49W, Sec. 6), upstream to the SD/MN state border (T109N, R47W, Sec. 15).

4b. Deer Creek from its confluence with Medary Creek (T109N, R49W, Sec. 16), upstream through T111N, R47W, Sec. 30.

4c. Unnamed tributary to Deer Creek, from their confluence (T111N, R48W, Sec. 35), upstream through T111N, R48W, Sec. 11.

(15) Map 11 follows:

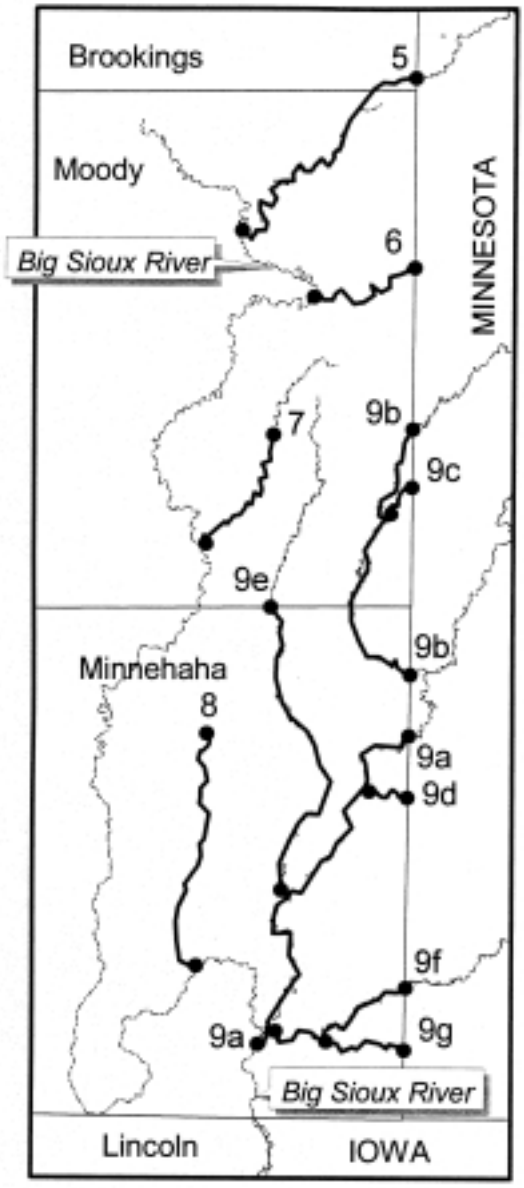
BILLING CODE 4310–55–P

Map 11

General Locations of Proposed Critical Habitat for the Topeka Shiner

(Notropis topeka)

South Dakota - Lower Big Sioux Watershed



Reaches

5. Spring Creek
6. Flandreau Creek
7. Brookfield Creek
8. Slip-up Creek
9a. Split Rock Creek
9b. Pipestone Creek
9c. Unnamed tributary
9d. Unnamed tributary
9e. West Pipestone Creek
9f. Beaver Creek
9g. Fourmile Creek

Proposed Critical Habitat
Not Proposed as Critical Habitat
County Lines

5 0 5 10 Miles

N

'CLAIMER

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5. Spring Creek from its confluence with the Big Sioux River (T107N, R48W, Sec. 5), upstream to the South Dakota/Minnesota State border (T109N, R47W, Sec. 34).

Flandreau Creek Complex

6. Flandreau Creek from its confluence with the Big Sioux River (T107N, R48W, Sec. 23), upstream to the South Dakota/Minnesota State border (T107N, R47W, Sec. 15).

7. Brookfield Creek from its confluence with the Big Sioux River (T105N, R49W, Sec. 24), upstream through T106N, R48W, Sec. 28.

8. Slip-Up Creek from it confluence with the Big Sioux River (T102N, R49W, Sec. 36), upstream through T103N, R48W, Sec. 6.

Split Rock/Pipestone/Beaver Creek Complex

9a. Split Rock Creek from its confluence with the Big Sioux River (T101N, R48W, Sec. 16), upstream to the South Dakota/Minnesota State border (T103N, R47W, Sec. 3).

9b. Pipestone Creek from the South Dakota/Minnesota State border (T104N, R47W, Sec. 22), upstream to the SD/MN state border (T106N, R47W, Sec. 22).

9c. Unnamed tributary to Pipestone Creek, from their confluence (T105N, R47W, Sec. 9), upstream to the South Dakota/Minnesota State border (T105N, R47W, Sec. 3).

9d. Unnamed tributary to Split Rock Creek, from their confluence (T103N, R47W, Sec. 17), upstream to the South Dakota/Minnesota State border (T103N, R47W, Sec. 22).

9e. West Pipestone Creek from its confluence with Split Rock Creek (T102N, R48W, Sec. 11), upstream through T104N, R48W, Sec. 3.

9f. Beaver Creek from its confluence with Split Rock Creek (T101N, R48W, Sec. 10), upstream to the South Dakota/Minnesota State border (T102N, R47W, Sec. 34).

9g. Fourmile Creek from its confluence with Beaver Creek (T101N, R48W, Sec. 13), upstream to the South Dakota/Minnesota State border (T101N, R47W, Sec. 15).

(16) Map 12 follows:

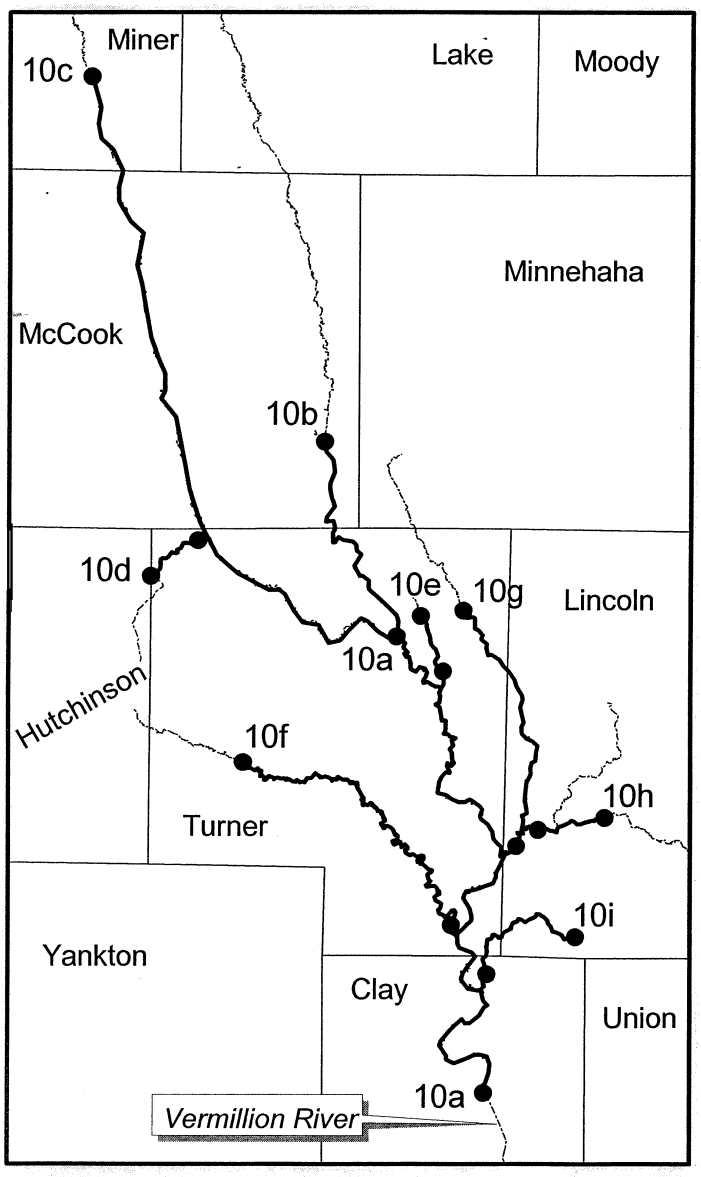
BILLING CODE 4310–55–P

Map 12

General Locations of Proposed Critical Habitat for the Topeka Shiner

(Notropis topeka)

South Dakota - Vermillion River Watershed



Reaches

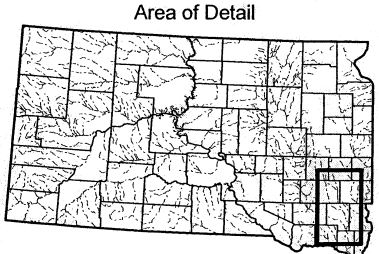
10a. Vermillion River
10b. East Fork Vermillion River
10c. West Fork Vermillion River
10d. Silver Lake Creek
10e. Camp Creek
10f. Turkey Ridge Creek
10g. Long Creek
10h. Saddle Creek
10i. Blind Creek

Proposed Critical Habitat
Not Proposed as Critical Habitat
County Lines

5 0 5 10 15 Miles

N

Area of Detail



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Vermillion River Complex

10a. Vermillion River from the southeast corner of T94N, R52W, Sec. 14, upstream to the confluence of West Fork Vermillion River and East Fork Vermillion River (T99N, R53W, Sec. 14).

10b. East Fork Vermillion River, from its confluence with the West Fork Vermillion River (T99N, R53W, Sec. 14), upstream to East Vermillion Lake Dam (T102N, R53W, Sec. 34).

10c. West Fork Vermillion River, from its confluence with the East Fork Vermillion River (T99N, R53W, Sec. 14), upstream through T105N, R56W, Sec. 1.

10d. Silver Lake Creek from its confluence with the West Fork Vermillion River (T100N, R55W, Sec. 10), upstream to the Silver Lake outlet (T100N, R55W, Sec. 30).

10e. Camp Creek from its confluence with the Vermillion River (T99N, R52W, Sec. 32), upstream through T99N, R52W, Sec. 7.

10f. Turkey Ridge Creek from its confluence with the Vermillion River (T96N, R52W, Sec. 28), upstream through T98N, R54W, Sec. 31.

10g. Long Creek from its confluence with the Vermillion River (T97N, R51W, Sec. 31), upstream through T99N, R52W, Sec. 3.

10h. Saddle Creek from its confluence with Long Creek (T97N, R51W, Sec. 20), upstream through T97N, R50W, Sec. 18.

10i. Blind Creek from its confluence with the Vermillion River (T95N, R52W, Sec. 11), upstream through T96N, R51W, Sec. 26.

(17) Map 13 follows:

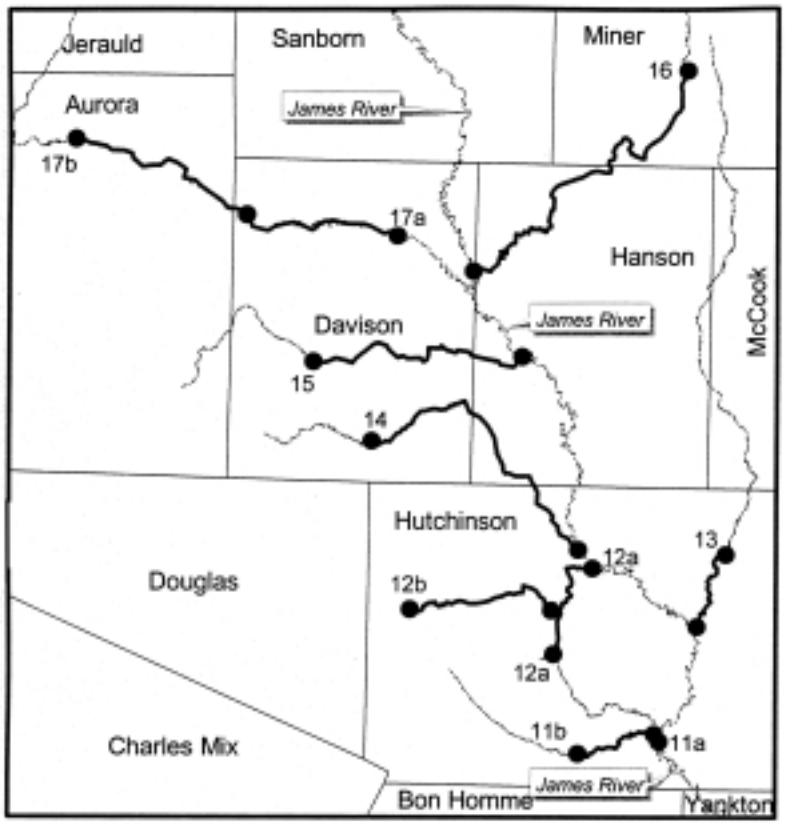
BILLING CODE 4310–55–P

Map 13

General Locations of Proposed Critical Habitat for the Topeka Shiner

(Notropis topeka)

South Dakota - Lower James River Watershed



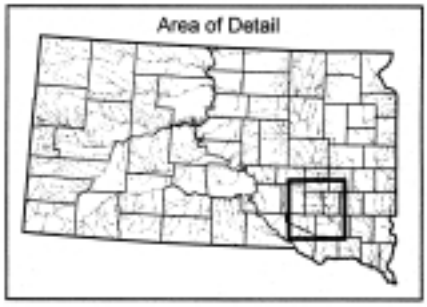
Reaches

11a. Lonetree Creek
11b. South Branch Lonetree Creek
12a. Dry Creek
12b. North Branch Dry Creek
13. Wolf Creek
14. Twelvemile Creek
15. Enermy Creek
16. Rock Creek
17a. Firesteel Creek
17b. West Branch Firesteel Creek

N

5 0 5 10 15 Miles

Proposed Critical Habitat
Not Proposed as Critical Habitat
County Lines



'CLAIMER

map is a graphical representation of Topeka shiner critical habitat and is provided for illustrative purposes only. The map and GIS files used to create this map are not the definitive source for determining critical habitat boundaries. While the Service makes every effort to represent the critical habitat shown on this map as completely and accurately as possible (given existing time, resources, data, and display constraints), the USFWS gives no warranty, expressed or implied, as to the accuracy, reliability, or completeness of these data.

Lonetree Creek Complex

11a. Lonetree Creek from its confluence with the James River (T97N, R58W, Sec. 14), upstream to its confluence with South Branch Lonetree Creek (T97N, R58W, Sec. 10).

11b. South Branch Lonetree Creek from its confluence with Lonetree Creek (T97N, R58W, Sec. 10), upstream through T97N, R59W, Sec. 23.

Dry Creek Complex

12a. Dry Creek from its confluence with the James River (T99N, R59W, Sec. 11), upstream through T98N, R59W, Sec. 9.

12b. North Branch Dry Creek from its confluence with Dry Creek (T99N, R59W, Sec. 28), upstream through T99N, R61W, Sec. 27.

13. Wolf Creek from its confluence with the James River (T99N, R57W, Sec. 31), upstream through T99N, R57W, Sec. 4.

14. Twelvemile Creek from its confluence with the James River (T99N, R59W, Sec. 3), upstream through T101N, R61W, Sec. 23.

15. Enemy Creek from its confluence with the James River (T102N, R59W, Sec. 15), upstream through T102N, R61W, Sec.19.

16. Rock Creek from its confluence with the James River (T103N, R60W, Sec. 13), upstream through T106N, R57W, Sec. 34.

Firesteel Creek Complex

17a. Firesteel Creek from the east section line of T104N, R61W, Sec. 36, upstream to the confluence with West Branch Firesteel Creek (T104N, R62W, Sec. 30).

17b. West Branch Firesteel Creek from its confluence with Firesteel Creek (T104N, R62W, Sec. 30), upstream to Wilmarth Lake outlet (T105N, R64W, Sec. 31).

(18) Map 14 follows:

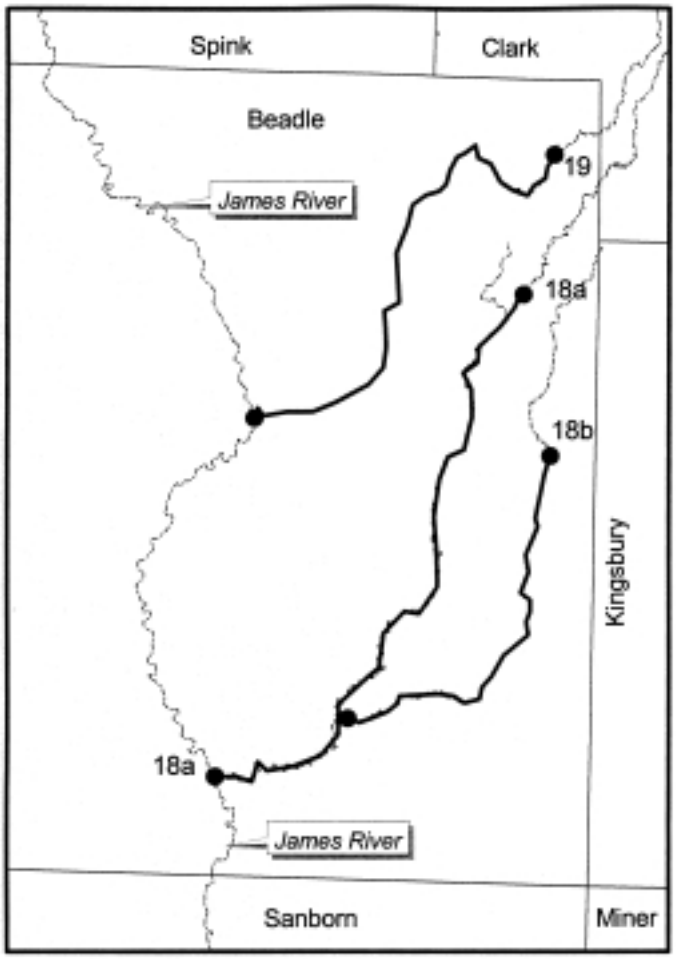
BILLING CODE 4310–55–P

Map 14

General Locations of Proposed Critical Habitat for the Topeka Shiner

(Notropis topeka)

South Dakota - Upper James River Watershed



Reaches

18a. Pearl Creek
18b. Middle Pearl Creek
19. Shue Creek

N

Area of Detail

5 0 5 10 Miles

Proposed Critical Habitat
Not Proposed as Critical Habitat
County Lines

CLAIMER

map is a graphical representation of Topeka shiner critical habitat and is provided for illustrative , poses only. The map and GIS files used to create this map are not the definitive source for determining critical habitat boundaries. While the Service makes every effort to represent the critical habitat shown on this map as completely and accurately as possible (given existing time, resources, data, and display constraints), the USFWS gives no warranty, expressed or implied, as to the accuracy, reliability, or completeness of these data.

Pearl Creek Complex

18a. Pearl Creek from its confluence with the James River (T109N, R61W, Sec. 15), upstream through T112N, R59W, Sec. 16.

18b. Middle Pearl Creek from its confluence with Pearl Creek (T109N, R60W, Sec. 4), upstream through T110N, R59W, Sec. 14.

19. Shue Creek from its confluence with the James River (T111N, R61W, Sec. 11), upstream to Staum Dam (T113N, R59W, Sec. 14).

* * * * *

Dated: August 12, 2002.

Craig Manson,

Assistant Secretary for Fish, Wildlife, and Parks.

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BILLING CODE 4310–55–C