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Federal Register

Tuesday,
July 27, 2004

Part II

Department of the Interior

Fish and Wildlife Service

50 CFR Part 17

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

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

RIN 1018–AI20

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

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), designate critical habitat for the Topeka shiner (*Notropis topeka*) pursuant to the Endangered Species Act of 1973, as amended (Act). We are designating as critical habitat a total of 83 stream segments, representing 1,356 kilometers (km) (836 miles (mi)) of stream in the States of Iowa, Minnesota, and Nebraska. We exclude from designation all previously proposed critical habitat in the State of Missouri under authority of sections 3(5)(A) and 4(b)(2) of the Act, and in the States of Kansas and South Dakota under authority of section 4(b)(2) of the Act. Critical habitat is not designated on the Fort Riley Military Installation in Kansas under authority of section 4(a)(3) of the Act.

DATES: This rule becomes effective August 26, 2004.

ADDRESSES: Comments and materials received, as well as supporting documentation used in the preparation of this final rule, are available for public inspection, by appointment, during normal business hours at the Kansas Ecological Services Field Office, U.S. Fish and Wildlife Service, 315 Houston Street, Suite E, Manhattan, Kansas 66502. Copies of the final rule, final economic analysis, and final environmental assessment 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; e-mail: *Vernon_Tabor@fws.gov.*

SUPPLEMENTARY INFORMATION:

Designation of Critical Habitat Provides Little Additional Protection to Species

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

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

While attention to and protection of habitat is paramount to successful conservation actions, we have consistently found that, in most circumstances, the designation of critical habitat is of little additional value for most listed species, yet it consumes large amounts of conservation resources. Sidle (1987) stated, ''Because the ESA can protect species with and without critical habitat designation, critical habitat designation may be redundant to the other consultation requirements of section 7.'' Currently, only 445 species (36 percent) of the 1,244 listed species in the United States under jurisdiction of the Service, have designated critical habitat. We address the habitat needs of all 1,244 listed species through conservation mechanisms such as listing, section 7 consultations, the section 4 recovery planning process, the section 9 protective prohibitions of unauthorized take, section 6 funding to the States, and the section 10 incidental take permit process. The Service believes that it is these measures that may make the difference between extinction and survival for many species.

Procedural and Resource Difficulties in Designating Critical Habitat

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

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

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

The costs resulting from the critical habitat designation include legal costs, the cost of preparation and publication of the designation, the analysis of the economic effects and the cost of requesting and responding to public comment, and in some cases the costs of compliance with the National Environmental Policy Act. None of these costs result in any benefit to the species that is not already afforded by the protections of the Act enumerated earlier, and they directly reduce the funds available for direct and tangible conservation actions.

Background

The Topeka shiner is found in small to mid-sized prairie streams of the central prairie regions of the United States with relatively high water quality and cool to moderate temperatures. Many of these streams exhibit perennial flow, although some become intermittent during summer or periods of prolonged drought. The Topeka shiner's historic range includes portions of Iowa, Kansas, Minnesota, Missouri, Nebraska, and South Dakota. The species continues to exist in these States, but in most areas its range is greatly reduced.

The following additional information on the distribution of the species in South Dakota has recently been made available to us. Few historical data were available regarding the distribution of

the Topeka shiner in South Dakota; at the time this species was proposed for listing in 1997, only five locations were known. The South Dakota Department of Game, Fish, and Parks (SDDGFP) initiated surveys in 1997 to determine current occupation of known historical sites and investigate other possible waterways for the species' presence. These surveys indicated that the species was more widespread in South Dakota than previously thought. In 1999, a number of agencies began working closely with the South Dakota State University Cooperative Research Unit (SDSU Coop Unit) in Brookings to delineate where Topeka shiners existed in South Dakota. Those surveys found many new streams that were occupied by Topeka shiners as well as populations in six of eight of the historical locations. Of the remaining two historical locations, one is on a stream that is expected to have Topeka shiners but resources have limited the ability to conduct surveys, while the other historical location was in the outlet of a lake that has not been surveyed due to its uncharacteristic habitat for Topeka shiners. Since then, several studies have been initiated by South Dakota Department of Transportation (SDDOT) and Natural Resource Conservation Service (NRCS) through the SDSU Coop Unit that have further expanded the list of known occupied streams and general knowledge of the species in South Dakota.

For more information on the Topeka shiner, refer to the proposed critical habitat rule published in the **Federal Register** on August 21, 2002 (67 FR 54262) and the final listing rule published in the **Federal Register** on December 15, 1998 (63 FR 69008).

Previous Federal Actions

We published a final rule in the **Federal Register** (63 FR 69008) on December 15, 1998, listing the Topeka shiner as an endangered species under the Act. In that document, we also determined that designation of critical habitat was not prudent for the species. In an April 4, 2001, court settlement of the case, *Biodiversity Legal Foundation* et al. v. *Ralph Morgenweck et al.* (C00–D–1180), we agreed to reconsider our prudency determination and, if prudent, to propose critical habitat for the Topeka shiner by August 13, 2002, and to finalize our designation of critical habitat by August 13, 2003.

On August 21, 2002, we published a proposed rule in the **Federal Register** (67 FR 54262) proposing the designation of Topeka shiner critical habitat. The proposed designation included 3,766 km (2,340 mi) of stream in the States of Iowa, Kansas, Minnesota, Nebraska, and South Dakota as critical habitat. We also proposed to exclude from designation Topeka shiner habitat in the State of Missouri and on the Fort Riley Military Installation, Kansas, under the authority of section 3(5)(A) of the Act. Concurrent with the publication of the proposed rule, we opened a 60-day public comment period. We held one public meeting in each of the six affected States during September 2002. Due to budgetary constraints, we did not finalize the designation of critical habitat by August 13, 2003. We petitioned the court to extend this deadline until July 17, 2004, and in an order dated February 10, 2004, the court granted us this extension. This order was upheld by the court on June 21, 2004.

In the August 2002 proposed rule for designation of critical habitat for the Topeka shiner, we indicated our intention not to include critical habitat in Missouri and on Fort Riley, Kansas, in the critical habitat designation. This was based upon our interpretation of the definition of critical habitat found in section 3(5)(A) of the Act. Section 3(5)(A)(i) of the Act defines critical habitat as areas on which are found those physical or biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protections. In order to give meaning to the last clause of the definition, we have considered that if an area was already adequately managed, there would be no requirement for special management considerations or protection. A management plan is considered adequate when it meets the following three criteria—(1) the plan provides a conservation benefit to the species (*i.e.*, the plan must maintain or provide for an increase in the species' population, or the enhancement or restoration of its habitat within the area covered by the plan); (2) the plan provides assurances that it will be implemented (*i.e.*, those responsible for implementing the management plan are capable of accomplishing the objectives, have an implementation schedule, and/or adequate funding for the management plan); and (3) the plan provides assurances the management plan will be effective (*i.e.*, it identifies biological goals, has provisions for reporting progress, and is of a duration sufficient to implement the plan and achieve the plan's goals and objectives).

The National Defense Authorization Act for Fiscal Year 2004 (Public Law 108–136, adopted November 24, 2003) amended the Act by adding new language to section 4(a)(3), which prohibits the Service from designating as critical habitat any lands or other geographical areas owned or controlled by the Department of Defense, or designated for its use, that are subject to an Integrated Natural Resources Management Plan (INRMP) prepared under section 101 of the Sikes Act (16 U.S.C. 670a), if the Secretary of the Interior determines in writing that such plan provides a benefit to the species for which critical habitat is proposed for designation. The Sikes Act Improvement Amendment of 1997 requires each military installation that includes land and water suitable for the conservation and management of natural resources to complete an INRMP. An INRMP integrates implementation of the military mission of the installation with stewardship of the natural resources found there. Each INRMP includes an assessment of the ecological needs on the installation, including needs to provide for the conservation of listed species; a statement of goals and priorities; a detailed description of management actions to be implemented to provide for these ecological needs; and a monitoring and adaptive management plan. The Service consults with the military on the development and implementation of INRMPs for installations with listed species.

On March 17, 2004, we published in the **Federal Register** (69 FR 12619) a revision to our proposed rule, notice of availability for the draft economic analysis and the draft environmental assessment (EA), and notice of a 30-day reopening of the public comment period for the designation of critical habitat for the Topeka shiner. In this document, we reevaluated our previous intention to exclude from designation habitat in Missouri and on Fort Riley under section 3(5)(A) of the Act. We explained our intent to exclude habitat on Fort Riley under the new provisions of section 4(a)(3). We proposed critical habitat within the State of Missouri, including 12 stream segments representing 148 km (92 mi) of stream, and proposed to exclude these areas from designation under section 4(b)(2). We also proposed an additional 24-km (15-mi) stream reach in the State of South Dakota due to new information on distribution of the species, obtained after publication of the original critical habitat proposal. Finally, we stated our intention to consider excluding critical habitat proposed in the States of Kansas and South Dakota from designation, under section 4(b)(2). This consideration was due to ongoing

management actions, the development and implementation of State management plans for the species, State protections, and other conservation activities related to the species occurring in these two States.

Summary of Comments and Recommendations

In the August 21, 2002, proposed rule, we requested that all interested parties submit comments or information concerning the designation of critical habitat for the Topeka shiner. A 60-day comment period closed on October 21, 2002. We contacted interested parties (including elected officials; Federal, State, and county governments; media outlets; and local interest groups) through a press release and related faxes, mailed announcements, telephone calls, and e-mails. On March 17, 2004, the Service opened an additional 30-day comment period on the revised proposal, draft economic analysis, draft EA, and original proposed rule.

Newspaper notices inviting public comment on the proposal and announcing the public comment period and series of public meetings were published in the following newspapers—in Iowa, *Des Moines Register* and *Ft. Dodge Messenger*; in Kansas, *Emporia Gazette, Manhattan Mercury, Topeka Capital-Journal*, and *Wichita Eagle*; in Minnesota, *Minneapolis Star-Tribune* and *Pipestone County Star*; in Missouri, *Kansas City Star, Columbia Missourian*, and *Harrison County Advisor*; in Nebraska, *Omaha World Herald* and *Norfolk News*; and in South Dakota, *Sioux Falls Argus-Leader, Mitchell Daily Republic*, and *Huron Plainsman.* The Service held six public meetings between September 4 and 12, 2002, in Manhattan, Kansas; Bethany, Missouri; Fort Dodge, Iowa; Pipestone, Minnesota; Madison, Nebraska; and Sioux Falls, South Dakota. In conjunction with our revised proposal for critical habitat in Missouri, we held an additional public meeting on April 13, 2004, in Booneville, Missouri, to allow for additional public input into the final designation.

In the 2002 comment period, a total of 34 comments were received by the Service's Kansas Field Office—13 supported the proposed critical habitat; 14 opposed the proposed critical habitat; and 7 expressed neither support nor opposition. During the 2004 comment period, we received a total of 14 comments—5 supporting designation and opposing any exclusion; 4 supporting the Missouri exclusion; 3 opposing designation in South Dakota and supporting a South Dakota exclusion; and 2 that neither supported nor opposed the proposed designation, but provided specific comments on the designation. Generally, comments received posed questions on the proposed action, procedural issues, and the economic analysis, questioned the Service's information and conclusions on the species, provided additional information for the proposed listing, suggested alternatives, and/or simply stated support or opposition to the designation. In total, comments were received from 13 Federal and State agencies or officials, 5 local agencies or officials, and 30 private organizations, companies, and individuals. All comments received during the comment period are addressed in the following summary. Comments of a similar nature are grouped into a number of general issues.

Peer Review Comments

In accordance with our policy published on July 1, 1994 (59 FR 34270), we solicited the expert opinions of five independent specialists regarding this rule. The purpose of such review is to ensure that decisions are based on scientifically sound data, assumptions, and analyses. We sent these peer reviewers, who are all fisheries scientists, copies of the proposed rule immediately following publication in the **Federal Register**. Two of the peer reviewers responded, providing comments that we have incorporated into the final rule. Both reviewers were supportive of the proposed rule.

Responses to Public Comments

(1) *Comment:* Several comments opposed designation of critical habitat because of concerns that designation would severely delay, restrict, or eliminate State and local government's ability to construct and maintain roads and bridges due to restrictions on construction in stream channels during the Topeka shiner spawning period.

Our Response: Since the listing of the Topeka shiner in December 1998, road and bridge maintenance and construction with a Federal connection (*i.e.*, using Federal funds, requiring a Federal permit, or sponsored by a Federal agency) are already being reviewed for impacts to the Topeka shiner under the consultation provisions of section 7 of the Act. This review, in most cases, involves the implementation of best management practices to reduce harm to fish and its habitat, including the avoidance of instream work during the spawning period. The designation of critical habitat will have little, if any, additional impact to these existing restrictions. State and local activities with no Federal nexus have no Federal consultation requirement.

(2) *Comment:* The designation of critical habitat will severely delay, restrict, or eliminate State and local government's ability to construct and maintain roads and bridges due to the additional cost of changing the methods and timing of construction and maintenance, and incorporating best management practices, to reduce impacts to the Topeka shiner.

Our Response: Some additional costs are anticipated for State, county, and local governments maintaining and constructing roads and bridges. The Economic Analysis forecasts that over the next 10 years $8.7 million in project modification costs will be incurred (Industrial Economics, Inc. 2004). In this final designation, we are excluding critical habitat in the States of South Dakota, Missouri, and Kansas. The project modification costs in the remaining States of Iowa, Minnesota, and Nebraska are an estimated $6 million over 10 years (Industrial Economics, Inc. 2004). Project modifications include restrictions on instream construction, construction of longer or higher bridges, culvert restrictions, construction of alternative temporary crossings, spawning season restrictions, and surveys for the Topeka shiner. For a more complete discussion of potential impacts associated with road and bridge construction and maintenance, see Section 4 of the Economic Analysis (Industrial Economics, Inc. 2004).

(3) *Comment:* Comments from South Dakota stated the estimate for project modifications for third parties (South Dakota Department of Transportation) identified in the Economic Analysis appears to be low.

Our Response: The project modifications reported in the Economic Analysis for South Dakota Department of Transportation (SDDOT) road and bridge construction and maintenance projects include stream surveys. The SDDOT believes that it may need to survey streams when work occurs in or around areas of Topeka shiner habitat. The cost associated with a survey was estimated to be $3,800 per effort (Industrial Economics, Inc. 2004). This estimate is based on a recent survey conducted by the SDDOT on the Vermillion River (Personal communication with Dave Graves, Office of Project Development, SDDOT, October 8, 2002).

(4) *Comment:* Negative economic impacts will occur to schools and rural residents because of the need to drive additional miles due to construction

delays resulting from spawning date restrictions. Crop harvest also could be delayed or hampered due to spawning date restrictions that apply to construction projects.

Our Response: Consultations on construction projects that have been occurring since the species was listed in 1998 include spawning date restrictions already. The designation of critical habitat will create little additional impact due to spawning date restrictions beyond what is already being incurred.

(5) *Comment:* The designation of critical habitat and the resulting section 7 consultations will delay the implementation of soil and water conservation practices and result in less conservation, more bureaucratic regulation, and further economic hardship for private landowners.

Our Response: Most soil and water conservation activities are not likely to affect Topeka shiners or their habitat, and are not encumbered by the consultation process.

(6) *Comment:* Designation of critical habitat may cause land adjacent to designated streams to be taken out of crop production or cause production practices to be altered. This will result in less profit to the producer and severely affect his/her ability to farm or ranch.

Our Response: Designation of critical habitat will not impact a farmer's right to farm nor dictate production practices. If a private producer plans actions with Federal sponsorship that may affect the Topeka shiner or adversely modify critical habitat, that Federal agency is required to consult with the Service regarding the potential impact to the species or its habitat. If there is no Federal nexus, there is no consultation requirement, whether critical habitat is designated or not. These consultation provisions have been in place since the listing of the species in 1998. Little new regulatory burden will result from designation of critical habitat because all designated areas are occupied habitat. Impacts in these areas already require consultation.

(7) *Comment:* The designation of critical habitat and the implementation of the future recovery plan (*see* Comment 8) will interrupt or prohibit livestock grazing and feeding in and near areas of critical habitat. Livestock operations have been present in these areas for more than 100 years and it is apparent that Topeka shiners and livestock operations can coexist.

Our Response: If a livestock producer plans actions with Federal sponsorship that may affect the Topeka shiner, that Federal agency is required to consult with the Service regarding the potential impact to the species or its habitat. These consultation provisions have been in place since the listing of the species in 1998. Little new regulatory burdens will result from the designation of critical habitat because all designated areas are occupied. Activities that may adversely affect the Topeka shiner already require consultation.

(8) *Comment:* The Topeka Shiner Recovery Plan should have been released before, or concurrently with, the designation of critical habitat and the economic analysis, so that all aspects of the conservation efforts for the species could be thoroughly analyzed by agricultural producers and the general public.

Our Response: We agree that the finalization of the recovery plan prior to or concurrently with the critical habitat designation would have been optimal. A technical draft recovery plan was under internal review at the time of the release of our proposed rule for critical habitat (August 21, 2002). Because of court-approved deadlines and the development of the critical habitat designation received priority over the completion of the recovery plan. Following completion of the critical habitat designation, we plan to restart work on the recovery plan. On completion of the draft recovery plan, we will provide an opportunity for interested parties to comment.

(9) *Comment:* Topeka shiner populations are in decline, and failure to designate critical habitat in South Dakota will lead to their extirpation. Healthy populations in the waters of South Dakota will benefit not only aquatic and riparian wildlife species, but the human population as well.

Our Response: We believe that, with the development and implementation of the South Dakota Management Plan for the Topeka Shiner and the ongoing conservation actions underway by private landowners in the State, the benefits of excluding critical habitat in that State exceed the benefits of designation. In addition, since the time of the species' listing in 1998, the Topeka shiner has been found to be much more widely distributed in South Dakota than previously believed. The best scientific information, at this time, indicates that exclusion of critical habitat will in no way cause the extirpation of the species from South Dakota, or the extinction of the species across its range as a whole.

(10) *Comment:* Topeka shiner critical habitat should extend beyond the habitat proposed for designation and include all of the surrounding watersheds as well. With the limited amount of habitat proposed, Topeka shiners do not have enough room to recover to suitable levels.

Our Response: In proposing and designating critical habitat for the Topeka shiner, we used the best scientific information available to determine the primary constituent elements (habitat components) required by the species; where these components exist within the range of the species; and what areas are essential to the conservation of the species. The information sources we compiled included the technical draft of the recovery plan, State conservation and recovery plans, conservation plans for localized areas, species status surveys, research efforts concerning the species, and habitat models. If Topeka shiner populations expand beyond the areas designated as critical habitat, the protections of the Act (*i.e.*, section 7 consultation, section 9 ''take'' provisions) afforded listed species will protect these ''new'' or expanded populations as well. Watershed-based recovery actions improving habitat, as outlined in the conservation and recovery plans, will encourage expansion to these areas by Topeka shiners.

(12) The maps of the proposed critical habitat in Iowa are inadequate. It is difficult to determine if the areas proposed are on drainage ditches or natural streams.

Our Response: The critical habitat maps were created as a graphical representation of Topeka shiner critical habitat. The maps and GIS files used to create the critical habitat maps are not the definitive source of determining the critical habitat boundaries. The reaches proposed for designation were coded to specific legal descriptions of the habitat, which are included in the amendatory language of this rule. These specific legal descriptions are the definitive source of determining critical habitat boundaries. Larger-scale maps are available for inspection at the Kansas Field Office (*see* **ADDRESSES**).

(13) *Comment:* Recent studies have shown that the Topeka shiner is doing very well in South Dakota due to the effective management practices being implemented by agricultural producers. Both further study of the Topeka shiner and implementation of the State management plan inappropriately waste time and State resources. The species needs no management in South Dakota.

Our Response: Surveys since the Topeka shiner was listed indicate that the species is present in South Dakota in each of the three watersheds where it was known to exist historically (the Big Sioux, James, and Vermillion River

watersheds) as well as in nearly all of the historically known occupied streams. Additionally, the Topeka shiner has been documented in more streams in South Dakota than previously known, and evidence of its persistence has been documented in some areas where repeated sampling has occurred. The reasons for this are not entirely clear, but may be due to a variety of factors, including lack of tributary impoundments and associated stocking of predatory fish species, low numbers of channelized streams, and lack of instream gravel-mining practices. These activities have been implicated in the decline of the Topeka shiner's status in other States. We believe the Topeka Shiner Management Plan for the State of South Dakota, which outlines many of the practices currently ongoing in the State via cooperation with Federal, State, and local governments as well as private landowners, provides significant benefit to the species, and we encourage the State and its numerous partners to continue implementing the actions outlined in the Plan.

(14) *Comment:* Critical habitat designation offers little or no benefit beyond that of the protections afforded the species when it was listed. When a species is listed as endangered, actions are automatically taken that limit activities around their habitat. The addition of critical habitat forces overly strict land use constraints and creates contention among various interest groups. Missouri already has a management plan for the species, and the State can handle recovery efforts without additional involvement from the Service.

Our Response: This rule recognizes the benefits of the Missouri Action Plan for the Topeka Shiner and believe the benefits of excluding designation in Missouri exceed the benefits that designation would provide. The Service will continue to be involved in the conservation of the species in Missouri, including section 7 consultation, enforcement of section 9 provisions, conservation and recovery actions sponsored by the Service on private lands, and the continued development of the range-wide recovery plan for Topeka shiner that includes Missouri.

(15) *Comment:* In Missouri a management plan already is being successfully implemented. This plan is based on partnerships between the Missouri Department of Conservation (MDC) and private landowners. Designating critical habitat in Missouri would severely damage these partnerships and greatly diminish the chances the Topeka shiner will recover and eventually be taken off the endangered species list.

Our Response: We recognize the benefits of the Missouri Action Plan for the Topeka Shiner, including the partnerships between private landowners and the MDC. We conclude that the benefits of excluding designation in Missouri exceed the benefits that designation would provide. We recognize that recovery of the species is dependent on solid relationships and partnerships between conservation agencies and private landowners.

(16) *Comment:* The Missouri Action Plan for the Topeka Shiner mentions tasks required for recovery that are to be completed by other State agencies, including the Missouri Department of Natural Resources (MDNR). To date there has been no formal transmittal of the Action Plan to the MDNR. The MDNR does not have time, money, or personnel to complete these tasks as envisioned in the Action Plan.

Our Response: Although other agencies are identified in the State Action Plan, all identified tasks attributable to such entities are voluntary. Most of the items in the plan pertaining to the MDNR are actions that the agency regularly performs (*e.g.*, Clean Water 401 certification, review of National Pollution Discharge Elimination System permits). Because such tasks were already being performed by MDNR staff, the MDC saw no need at the time to formally transmit the action plan to MDNR. The MDNR continues to provide funding and personnel for various tasks identified in the State action plan.

(17) *Comment:* The Missouri Action Plan for the Topeka Shiner was unilaterally developed by the MDC. MDNR, which was assigned tasks in the plan, and citizen's groups were not involved in development of the plan. The plan was conceived and developed by MDC personnel, with minimal involvement from other entities, including the Service.

Our Response: The Service was an active participant and consultant to the team that developed the State action plan. The MDC plans to update the State action plan for the Topeka shiner within the current calendar year and will solicit input on its development and implementation from other potential partners, including MDNR.

(18) *Comment:* Protections afforded a listed species under the section 7 consultation provisions vary between the ''jeopardy'' standard and the ''adverse modification'' standard. For example, if no critical habitat is designated in Missouri and a Federal action is proposed that the Service finds, in a biological opinion, could jeopardize the continuing existence of the species, the action agency could proceed with the project without modifications, even with the jeopardy opinion. This is not the case if critical habitat is designated. An objection by the Service would halt the project and the action agency could not proceed until substantial modifications are incorporated into the project.

Our Response: Section 7(a)(2) of the Act requires Federal agencies to satisfy two standards in carrying out their programs. Federal agencies must ensure that their activities are not likely to—(1) jeopardize the continued existence of any listed species, or (2) result in the destruction or adverse modification of designated critical habitat. These two standards (*i.e.*, jeopardy and adverse modification) are separate but equal determinations. In other words, determining that a project would adversely modify designated critical habitat does not have more regulatory weight than determining that the project would jeopardize the continued existence of a species. Although Federal agencies can choose to implement a project after receiving a biological opinion finding jeopardy or adverse modification, any take which results from the action is not exempt from the provisions of section 9 of the Act. Additionally, failure to explain in the administrative record how the agency addressed the Service's biological opinion can expose the action agency to a judicial challenge under both the Act and the Administrative Procedure Act.

(19) *Comment:* The Missouri Action Plan for the Topeka Shiner depends primarily on voluntary cooperation for its implementation.

Our Response: We recognize that the Missouri Action Plan is voluntary in regard to the implementation of conservation tasks. The primary agency responsible for this ''voluntary implementation'' is the MDC. The MDC has a long and distinguished record involving conservation activities related to the Topeka shiner, dating back prior to Federal listing, and has consistently committed personnel and funding to these tasks.

(20) *Comment:* The Missouri Action Plan has failed. Since it came into effect in 1999 Topeka shiner populations have continued to decline in Missouri. The Bonne Femme Creek population of Topeka shiners has likely disappeared since the plan's inception. While there are many aspects of the plan that are laudable, it is clear that recovery has not resulted, or even progressed. This voluntary action plan should not be

allowed to take the place of Federal designation of critical habitat and an enforceable Federal plan to assure recovery.

Our Response: We disagree that the Missouri Action Plan for the Topeka Shiner has failed. While it is true some Missouri populations of the Topeka shiner have continued to decline since the action plan was finalized in 1999, it should be recognized that recovery of the species will not occur rapidly. The impacts that now affect the species are generally the result of decades of land-use and land-cover changes that cannot be remedied or corrected in a short period of time. The Missouri plan is being implemented and conservation actions completed, contributing toward achieving the goal of recovery. The action plan does not replace the Service's regulatory authorities under the Act. These authorities, under both sections 7 and 9, will continue into the future. We believe the benefits of excluding critical habitat in Missouri from our designation exceed the benefits of including it. The recovery of Topeka shiner will require a combination of voluntary actions and regulatory oversight.

(21) *Comment:* All of the proposed habitat in Missouri should be designated, plus other habitat where the Topeka shiner once existed. Protection of this unoccupied habitat will be essential for the recovery of the species. It also is likely that additional populations still exist in other areas of the species' Missouri range. According to knowledgeable fisheries biologists, the Topeka shiner still may occur in Slate Creek. Additional surveys should be conducted to identify these sites, and this habitat should be designated as well.

Our Response: We recognize that recovery of the Topeka shiner in Missouri will likely require the reintroduction to, or recolonization of, additional habitat. However, until the recovery plan is completed, we cannot identify all potential reintroduction sites. We also may identify an experimental population through section 10(j) of the Act. A nonessential, experimental population could provide more regulatory flexibility in managing reintroduced populations. The Act prohibits the Service from designating critical habitat for an experimental population, so it has been the Service's practice not to designate critical habitat where an experimental population is contemplated.

The MDC continues to sample suitable habitat in hopes of locating additional Topeka shiner populations. The last known records of Topeka shiner from Slate Creek were from 1962. In 2003, Jemerson and Hart Creeks, both tributaries to Slate Creek, were sampled and no Topeka shiners were found (Kerns, pers. comm. 2004). Additional sampling in this watershed is planned for this year. However, at this time, we have not found the species in the Slate Creek watershed or confirmed any specimens.

(22) *Comment:* Contrary to the Service's assertion, critical habitat provides added benefit to listed species. The Service is in possession of at least two studies, Rachlinski (1997) and Taylor *et al.* (2003), which demonstrate that listed species with critical habitat are significantly less likely to decline and more likely to improve than species without critical habitat. Designation helps to protect unoccupied habitat that is essential to the recovery of the species. In addition, there are two different standards for consultation under section 7. For species that are listed without critical habitat, a Federal agency must only consider whether their action jeopardizes the continuing existence of the species (in other words, whether it will increase the risk of extinction). For species with critical habitat, the agency also must consider whether the action will destroy or adversely modify critical habitat (in other words, whether it will impede recovery). Several Federal Circuit Courts have recognized this (*Sierra Club* v. *U.S. Fish and Wildlife Service*, 245 F.3d 434, 441–42, 5th Cir. 2001; *Greenpeace* v. *National Marine Fisheries Service*, 55 F. Supp. 2d 1248, 1265, W.D. Wash. 1999; *Conservation Council for Hawaii* v. *Babbitt*, 2 F. Supp. 2d 1280, 1287, D. Haw. 1998).

Our Response: Under section 7 of the Act, Federal agencies must consult with us on activities they undertake, fund, or permit that may affect critical habitat and lead to its destruction or adverse modification. However, the Act prohibits unauthorized take of listed species and requires consultation for activities that may affect them, including habitat alterations, regardless of whether critical habitat has been designated. This is why we have found that the designation of critical habitat provides little additional protection to most listed species.

(23) *Comment:* The Service misapplies the section 4(b)(2) standard in excluding critical habitat. Throughout the proposed designation, the Service relies on State management plans in Missouri, Kansas, and South Dakota as justifications for excluding areas of critical habitat. However, under section 4(b)(2), the Secretary may only exclude critical habitat from designation if the benefits of exclusion outweigh the benefits of inclusion (16 U.S.C. 1533(b)(B)(2)). By relying on these management plans, the Service has based its decision on something other than the balancing of costs and benefits. Management plans are not sufficiently beneficial to the species as to outweigh the benefits of including the areas they cover in the final critical habitat designation. Section 4(b)(2) does not address other management plans as the ultimate deciding factor for excluding critical habitat designation. Since the Service asserts that there is no additional protection over existing benefit to designating critical habitat, they are ultimately balancing a zero benefit against overestimated costs and concluding that the costs outweigh the benefits. Thus, the Service never adequately weighed the benefits of designation against the risk of designation as required by statute.

Our Response: Pursuant to section 4(b)(2) of the Act, we are required to take into consideration the economic impact, impact on national security, and any other relevant impact of specifying any particular area as critical habitat. We also may exclude any area from critical habitat if we determine that the benefits of such exclusion outweigh the benefits of specifying such area as part of the critical habitat, provided that the failure to designate such area will not result in the extinction of the species. We use information from our economic analysis, or other sources such as public comments, management plans, etc., to conduct this analysis. A decision to exclude an area is at the discretion of the Secretary. However, for us to consider excluding an area from the designation, we are required to determine that the benefits of the exclusion outweigh the benefits (*i.e.*, biological or conservation benefits) of including the specific area in the designation. This is not simply a monetary cost/benefit analysis, however. This is a policy analysis, and can include consideration of the impacts of the designation, the benefits to the species from the designation, as well as policy considerations such as national security, tribal relationships, impacts on conservation partnerships, and other public policy concerns. This evaluation is done on a case-by-case basis for particular areas based on the best available scientific and commercial data. In the case of Topeka shiner, we are not only considering the State management plans, we are also considering our partnerships with the States and with private landowners. These partnerships have been critically

important to the conservation of the Topeka shiner, and could be jeopardized through a designation. We have concluded that benefit of exclusion outweighs the benefit of inclusion for Kansas, Missouri, and South Dakota.

(24) *Comment:* The Economic Analysis overestimates costs in Missouri, particularly in the Bonne Femme Creek Watershed.

Our Response: The Economic Analysis relies on information from a variety of sources, including the action agencies conducting, permitting, or funding projects, such as the U.S. Army Corps of Engineers (Corps) and the Natural Resources Conservation Service (NRCS) in the Department of Agriculture, to determine the expected activities within each watershed likely to be impacted by conservation measures associated with the Topeka shiner.

Based on the high rate of conversion of agriculture and forest lands into residential, commercial, golf course, and hobby farm development, the Corps estimates that over the next 10 years the Bonne Femme Creek watershed is likely to experience growth resulting in up to twice as many projects as were permitted over the previous 10 years (Industrial Economics, Inc. 2004). The population of Boone County is expected to increase approximately 14 percent from 2005 to 2015, compared to the State of Missouri, which is forecast to increase approximately 5 percent over the same time period (Industrial Economics, Inc. 2004).

Though there have been no consultations on agriculture and ranching activities for the Topeka shiner in the past, based on historical program participation in the watersheds concerned, the NRCS anticipates future consultations. The NRCS expects pond construction to be an issue over the next 10 years (of all the watershed practices that may impact the Topeka shiner, pond construction is the most common) (Industrial Economics, Inc. 2004). Both the Service and NRCS anticipate completing a programmatic consultation on all NRCS program activities within the next year. Therefore, the Economic Analysis indicates that it is reasonable, given currently available information, to anticipate consultation regarding agriculture in the next 10 years regarding the Topeka shiner in these watersheds (Industrial Economics, Inc. 2004).

In addition, a comment noted that the amount reported for ''other'' forecast costs in Appendix B of the Economic Analysis includes possible water quality monitoring. The comment stated that this is inaccurate as the Environmental Protection Agency (EPA) does not undertake water quality sampling. The forecast costs reported as ''other,'' in Appendix B of the Economic Analysis, include two informal consultation efforts by the State of Missouri to revise water quality standards and do not include EPA water quality monitoring costs.

Summary of Changes From the Proposed Rule

In preparation for development of our final designation of critical habitat for the Topeka shiner, we reviewed comments received on the proposed designation of critical habitat and those received on the revised proposal we published in early 2004. In addition to minor modifications and corrections of legal descriptions, we have made three revisions to our critical habitat designation, as follows:

(1) We have excluded from designation the proposed critical habitat units in the State of Kansas under the authority of section 4(b)(2) of the Act. Kansas has a State Endangered Species Act that provides for special management and state designation of critical habitat, which is more extensive than what the Service originally proposed under the Federal Endangered Species Act. Therefore, we have concluded that adequate management for the Topeka shiner is already in place, and that the benefits of exclusion outweigh the benefits of designating critical habitat in the State.

(2) We have excluded from designation the proposed critical habitat units in the State of Missouri under the authority of sections 3(5)(A) and 4(b)(2) of the Act. Missouri has had a management plan for the Topeka shiner since 1999. We have concluded that adequate management for the Topeka shiner is already in place, and that the benefits of exclusion outweigh the benefits of designating critical habitat in the State.

(3) We have excluded from designation the proposed critical habitat units in the State of South Dakota under the authority of section 4(b)(2) of the Act. South Dakota completed a State-wide management plan for the Topeka shiner in 2003, and we find that the benefits of exclusion outweigh the benefits of designating critical habitat in the State.

(4) We did not designate critical habitat on the Fort Riley Military Reservation in Kansas because the installation has an approved INRMP containing special management considerations for the Topeka shiner. We consider the Topeka shiner conservation measures to be adequate and are thus prohibited from designating critical habitat on the installation in accordance with section 4(a)(3) of the Act.

Critical Habitat

Critical habitat is defined in section 3 of the Act as—(i) the specific areas within the geographical 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 geographical area occupied by a species at the time it is listed, upon a determination that such areas are essential for the conservation of the species. ''Conservation'' means the use of all methods and procedures needed to bring an endangered or threatened species to the point at which listing under the Act is no longer necessary.

Critical habitat receives protection under section 7 of the Act through the prohibition against destruction or adverse modification of critical habitat with regard to actions authorized, funded, or carried out by a Federal agency. Section 7 of the Act also requires conferences on Federal actions that are likely to result in the destruction or adverse modification of proposed critical habitat.

To be included in a critical habitat designation, the habitat must first be ''essential to the conservation of the species.'' Critical habitat designations identify, to the extent known using the best scientific and commercial data available, habitat areas that provide essential life cycle needs of the species (*i.e.*, areas on which are found the primary constituent elements, as defined at 50 CFR 424.12(b)). Occupied habitat may be included in critical habitat only if the essential features thereon may require special management or protection.

Our regulations state that, ''The Secretary shall designate as critical habitat areas outside the geographic area presently occupied by the species only when a designation limited to its present range would be inadequate to ensure the conservation of the species'' (50 CFR 424.12(e)). Accordingly, when the best available scientific and commercial data do not demonstrate that the conservation needs of the species so require, we will not designate critical habitat in areas outside the geographic area occupied by the species.

Section 4(b)(2) of the Act requires that we take into consideration the economic impact, impacts to national security, and any other relevant impact of

designating any particular area as critical habitat. We may exclude areas from critical habitat designation when the benefits of exclusion outweigh the benefits of including the areas within critical habitat, provided the exclusion will not result in extinction of the species.

Our Policy on Information Standards under the Endangered Species Act, published in the **Federal Register** on July 1, 1994 (59 FR 34271), and our U.S. Fish and Wildlife Service Information Quality Guidelines (2002) provide criteria, establish procedures, and provide guidance to ensure that our decisions represent the best scientific and commercial data available. They require our 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 and counties, scientific status surveys and studies, biological assessments, or other unpublished materials and expert opinion or personal knowledge.

This critical habitat designation does not signal that habitat outside the designation is unimportant to the Topeka shiner. Areas outside the critical habitat designation will continue to be subject to conservation actions that may be implemented under section 7(a)(1), and to 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 these planning efforts calls for a different outcome.

Methods

As required by section 4(b)(1)(A) of the Act, we use the best scientific and commercial data available in determining the areas essential to the conservation of the 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 solicited information and recommendations from knowledgeable biologists and members of the Topeka Shiner Recovery Team. The Topeka Shiner Recovery Team is composed of species experts from academia and industry, State natural resource agency personnel with knowledge of the species, and Service staff. It has completed an agency technical draft Recovery Plan, which we used, in part, to develop this final critical habitat designation. We reviewed the available information pertaining to habitat requirements of the species received during the listing process.

We have reviewed available information that pertains to the habitat requirements of this species, including information from the final rule listing the species as endangered (63 FR 69008). In addition, the following studies address the habitat requirements and other biological and physical needs of the Topeka shiner and serve as the best available information in determining critical habitat for the species—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.

Primary Constituent Elements

In accordance with section 3(5)(A)(i) of the Act and regulations at 50 CFR 424.12, in determining which areas to designate as critical habitat, we must consider those physical and biological features (primary constituent elements (PCEs)) that are essential to the conservation of the species, and that may require special management considerations or protection. These include, but are not limited to: Space for individual and population growth, and for normal behavior; food, water, air, light, minerals, or other nutritional or physiological requirements; cover or shelter; sites for breeding, reproduction, and rearing (or development) of offspring; and habitats that are protected from disturbance or are representative of the historic geographical and ecological distributions of a species. The area designated as critical habitat for the Topeka shiner is within the geographical area presently occupied by the species and contains the physical or biological features (PCEs) essential for the conservation of the species.

The specific PCEs required for Topeka shiner habitat are derived from the biological needs of the Topeka shiner as described here. 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 optimal (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 macrohabitat type associated with Topeka shiner presence, although higher densities of the species were collected in pools. While characteristic of pools with stable water levels and cooler temperatures, Topeka shiners appear to be well adapted to periodic drought conditions common to prairie streams and are able to endure acute periods of high water temperatures. 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 and Missouri, 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 the species has recently been found in some stream sites with excessive sedimentation, it is unknown whether it uses these locations year-round, for portions of the year, or 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 a short-lived species, rarely surviving to their third summer in the wild (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 (*L. 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 suggest 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 observed no spawning activities. In Minnesota, Hatch (2001) found that Topeka shiners used rubble, boulder, and concrete rip-rap at the margins of pools and slow runs. Several authors 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 rangewide 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 suggest that Topeka shiners function both as benthic (bottom) and nektonic (water column) feeders, and propose that the species also may feed from the surfaces of aquatic plants.

The primary constituent elements for the Topeka shiner consist of:

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 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 shiners 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 nonnative competitive species present.

Criteria Used To Identify Critical Habitat

We are designating critical habitat in areas we have determined are essential to the conservation of the Topeka shiner. These areas have the primary constituent elements described above. According to the best available information, they are all occupied by the species or provide critical links or corridors between occupied habitats.

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. 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 designated 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 designated 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 designated as critical habitat in this final rule are consistent with the preliminary agency technical draft recovery plan first recovery criterion, which states that recovery of the species will be recognized as achieved when all naturally occurring populations within recovery units are determined to be stable or increasing over a period of 10 years.

Important considerations in selection of areas designated 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 rangewide recovery considerations, such as genetic diversity and representation of major portions of the species' historical range. The designated 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 designation includes representatives of all known populations of the species so as to conserve and protect the genetic diversity of 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.

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 imprecise, generalized, or questionable capture locations; and streams with severely altered habitat, lacking the primary constituent elements (*e.g.*, drainage ditches).

We used the best scientific information and data available in making our determination of which stream segments to designate as critical habitat. We compiled information on the species and its habitat to create proposed 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 proposed maps, and for any suggested changes or additions. We opened two public comment periods and held seven public meetings to solicit input and additional information from the public and other interested parties or groups. We also solicited peer review from five fisheries scientists.

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 and Minnesota; 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 that reviewed the proposed maps were carefully considered and implemented where they were consistent with the Service's criteria for designating critical habitat.

The designation includes 83 stream segments, encompassing 1,356 km (836 mi) of stream in Iowa, Minnesota, and Nebraska. This includes adjacent off-channel pool habitats in Iowa and Minnesota. The stream segments are within five major watersheds in the States of Iowa, Minnesota, and Nebraska. These 83 designated stream segments encompass 8 stream complexes (2 or more connecting stream segments) and 2 individual, isolated streams. All habitat previously proposed for designation in Kansas, Missouri, and South Dakota is excluded from designation as critical habitat for Topeka shiner (*see* Exclusions from Critical Habitat).

Designated critical habitat includes the stream channels within the identified stream reaches and off-channel pools and oxbows in Minnesota and Iowa. 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).

Special Management Considerations or Protection

When designating critical habitat, we assess whether the areas determined to be essential for conservation may require special management considerations or protection. Primary threats and special management considerations are described below on a unit-by-unit basis (*see* Critical Habitat Unit Descriptions). Overall, major threats to this species include sedimentation caused by agricultural practices, ditch maintenance, and road construction, as described in the final listing rule. Measures to improve habitat include grass waterways, riparian fencing, and best management practices for construction projects and ditch maintenance (63 FR 69008).

Critical Habitat Designation

Tables 1 and 2 summarize the location and extent of designated critical habitat. We provide general descriptions of the boundaries of designated critical habitat units below.

TABLE 1.—NUMBER OF STREAM SEGMENTS AND TOTAL STREAM MILEAGE BEING DESIGNATED AS CRITICAL HABITAT FOR TOPEKA SHINER, BY STATE

State	Number of stream segments	Total stream mileage
Iowa	25	225
Minnesota	57	605
Nebraska	1	6
Total	83	836

TABLE 2.—NUMBER OF STREAM SEGMENTS AND TOTAL STREAM MILEAGE BEING DESIGNATED AS CRITICAL HABITAT FOR TOPEKA SHINER, BY COUNTY

County	Number of stream segments	Stream mileage
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
Minnesota:		
Lincoln	4	27
Murray	2	19
Nobles	14	115
Pipestone	21	196
Rock	25	247
Nebraska:		
Madison	1	6

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

Critical Habitat Unit Descriptions

We are designating the following areas as critical habitat for the Topeka shiner. These areas constitute our best assessment at this time of the areas essential for the conservation of the Topeka shiner that may require special management. All of these units are essential for the conservation of Topeka shiners because the overall water quality, substrate, and stream flow characteristics can support healthy populations of the species when recovery efforts are implemented. In accordance with our conservation strategy for this species, it is important to provide special management to all stream reaches that we know are occupied.

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 PCEs 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 designate 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 PCEs necessary for proposing it for designation as critical habitat. Primary threats to the Topeka shiner that require special management in this watershed include agricultural practices and channelization that increase sedimentation and other water quality impacts. Special management for the Topeka shiner in this watershed would include grass waterways and terracing to reduce erosion, and implementation of best management practices for ditch maintenance. In this unit, 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. Primary threats to the Topeka shiner that require special management in this watershed include agricultural practices and channelization that increases sedimentation and other water quality impacts. Special management for the Topeka shiner in this watershed would include grass waterways and terracing to reduce erosion, and implementation of best management practices for ditch maintenance.

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 PCEs 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. Primary threats to the Topeka shiner that require special management in this watershed include agricultural practices and channelization that increases sedimentation and other water quality impacts. Special management for the Topeka shiner in this watershed would include grass waterways and terracing to reduce erosion, and implementation of best management practices for ditch maintenance.

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. Primary threats to the Topeka shiner that require special management in this watershed include agricultural practices and channelization that increases sedimentation and other water quality impacts. Special management for the Topeka shiner in this watershed would include grass waterways and terracing to reduce erosion, and implementation of best management practices for ditch maintenance.

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. Primary threats to the Topeka shiner that require special management in this watershed include agricultural practices and channelization that increases sedimentation and other water quality impacts. Special management for the Topeka shiner in this watershed would include grass waterways and terracing to reduce erosion, and implementation of best management practices for ditch maintenance.

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. 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. Primary threats to the Topeka shiner that require special management in this watershed include agricultural practices and channel maintenance that increases sedimentation and other water quality impacts. Special management for the Topeka shiner in this watershed would include grass waterways and riparian fencing to reduce erosion.

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. Primary threats to the Topeka shiner that require special management in this watershed include agricultural practices and channel maintenance that increases sedimentation and other water quality impacts. Special management for the Topeka shiner in this watershed would include grass waterways and riparian fencing to reduce erosion.

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 PCEs 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. Primary threats to the Topeka shiner that require special management in this watershed include agricultural practices and channelization that increases sedimentation and other water quality impacts. Special management for the Topeka shiner in this watershed would include grass waterways and terracing to reduce erosion, and implementation of best management practices for ditch maintenance.

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. Primary threats to the Topeka shiner that require special management in this watershed include agricultural practices and channelization that increases sedimentation and other water quality impacts. Special management for the Topeka shiner in this watershed would include grass waterways and terracing to reduce erosion, and implementation of best management practices for ditch maintenance.

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. Primary threats to the Topeka shiner that require special management in this watershed include agricultural practices and channel maintenance that increases sedimentation and other water quality impacts. Special management for the Topeka shiner in this watershed would include grass waterways and terracing to reduce erosion, and implementation of best management practices for ditch maintenance.

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. Primary threats to the Topeka shiner that require special management in this watershed include agricultural practices and channel maintenance that increases sedimentation and other water quality impacts. Special management for the Topeka shiner in this watershed would include grass waterways and riparian fencing, and implementation of best management practices for ditch maintenance.

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 PCEs 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. Primary threats to the Topeka shiner that require special management in this watershed include agricultural practices and channel maintenance that increases sedimentation and other water quality impacts. Special management for the Topeka shiner in this watershed would include grass waterways, grazing management plans and riparian habitat protection projects to reduce erosion.

Land Ownership

The vast majority (approximately 99 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. The remaining one percent of lands are owned by State, county and local governments, and are used for public recreation, flood control projects and bridge crossings.

Effects of Critical Habitat Designation

Section 7 Consultation

Section 7 of the Act requires Federal agencies, including the Service, to ensure that actions they fund, authorize, or carry out are not likely to destroy or adversely modify critical habitat.

Section 7(a) of the Act requires Federal agencies, including the Service, to evaluate their actions with respect to any species that is proposed or listed as endangered or threatened and with respect to its critical habitat, if any is proposed or designated. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR part 402. Section 7(a)(4) of the Act requires Federal agencies to confer with us on any action that is likely to jeopardize the continued existence of a proposed species or result in destruction or adverse modification of proposed critical habitat. Conference reports provide conservation recommendations to assist the agency in eliminating conflicts that may be caused by the proposed action. The conservation recommendations in a conference report are advisory. If a species is listed or critical habitat is designated, section 7(a)(2) requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of such a species or to destroy or adversely modify its critical habitat. If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency (action agency) must enter into consultation with us. Through this consultation, the action agency ensures that the permitted actions do not destroy or adversely modify critical habitat.

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

reasonable and prudent alternative are similarly variable.

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

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

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

Section 4(b)(8) of the Act requires us to briefly evaluate and describe in any proposed or final regulation that designates critical habitat those activities involving a Federal action that may destroy or adversely modify such habitat, or that may be affected by such designation. Activities that may destroy or adversely modify critical habitat include those that appreciably reduce the value of critical habitat to the Topeka shiner. We note that such activities may also jeopardize the continued existence of the species.

Federal agencies already consult with us on activities in areas currently occupied by the species to ensure that their actions do not jeopardize the continued existence of the species. These actions 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 from impoundment, groundwater pumping, and water diversion that would cause the elimination or reduction of scouring flows; prolonged release of high flows; and habitat fragmentation. These impacts threaten maintenance of pool habitat needed for Topeka shiner survival and successful reproduction. Groundwater pumping and water diversion threaten water availability to the species and can reduce water quality impacting reproductive success. 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 resulting in increased sedimentation of Topeka shiner spawning habitat and decreased water quality. 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 that would cause elimination of pool habitat, degradation of Topeka shiner spawning habitat, and decreased water quality effecting the species' reproduction and survival. 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 that reduces water quality thereby impacting reproductive success and recruitment of young fish into the adult population. 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 that increases predation, and competition for habitat and food. 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.

We consider all of the units we are designating as critical habitat to be occupied by the Topeka shiner. We are not designating habitat in the unoccupied historic range of the species. We are designating some stream segments with no records of capture that possess the primary constituent elements of Topeka shiner habitat and connect occupied stream segments. These likely harbor the species during certain flow conditions. Federal agencies consult with us on activities in areas currently occupied by the species or if the species may be affected by the action to ensure that their actions do not jeopardize the continued existence of the species.

Previous Section 7 Consultations

A small number of section 7 consultations for Federal actions affecting the Topeka shiner and its habitat have preceded this critical habitat designation. The action agencies have included the Corps, EPA, FHA, and NRCS. Since the Topeka shiner was listed on December 15, 1998, we have conducted more than 26 informal and 3 formal consultations involving the species. These consultations addressed a range of actions, including bridge construction, highway maintenance, stream bank stabilization, and water quality discharge permits. The designation of critical habitat will have no impact on private landowner activities that do not require Federal funding or permits. Determinations regarding adverse modification of critical habitat are only applicable to activities approved, funded, or carried out by Federal agencies.

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**). 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, Colorado 80225 (telephone 303–236–7400; facsimile 303–236–0027).

Application of Section 3(5)(A) and Section 4(b)(2) of the Act

Section 3(5)(A) of the Act defines critical habitat as the specific areas within the geographic 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. Therefore, areas within the geographic area occupied by the species that do not contain the features essential for the conservation of the species are not, by definition, critical habitat. Similarly, areas within the geographic area occupied by the species that do not require special management also are not, by definition, critical habitat. To determine whether an area requires special management, we first determine if the essential features located there generally require special management to address applicable threats. If those features do not require special management, or if they do in general but not for the particular area in question because of the existence of an adequate management plan or for some other reason, then the area does not require special management.

We consider a current plan to provide adequate management or protection if it meets three criteria: (1) The plan is complete and provides a conservation benefit to the species (*i.e.*, the plan must maintain or provide for an increase in the species' population, or the enhancement or restoration of its habitat within the area covered by the plan); (2) the plan provides assurances that the conservation management strategies and actions will be implemented (*i.e.*, those responsible for implementing the plan are capable of accomplishing the objectives, and have an implementation schedule or adequate funding for implementing the management plan); and (3) the plan provides assurances that the conservation strategies and measures will be effective (*i.e.*, it identifies biological goals, has provisions for reporting progress, and is of a duration sufficient to implement the plan and achieve the plan's goals and objectives).

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

We have completed an analysis of the economic impacts of designating specific areas as Topeka shiner critical habitat. The economic analysis was conducted in a manner that is consistent with the ruling of the 10th Circuit Court of Appeals in *N.M. Cattle Growers Ass'n* v. *USFWS,* 248 F.3d 1277 (2001). It was available for public review and comment during the comment periods for the proposed rule.

In our evaluation of potential critical habitat, our consideration of economic factors included: (1) Costs to us and Federal action agencies from increased workload to conduct consultations under section 7 of the Act and technical assistance associated with critical habitat; (2) costs of modifying projects, activities, or land uses resulting from consultations involving critical habitat; (3) costs of delays from increased consultations involving critical habitat; (4) costs of reduced property values or income resulting from increased regulation of critical habitat designation; (5) potential offsetting economic benefits associated with critical habitat.

Other relevant impacts considered in this evaluation included: (1) The willingness of landowners and land managers to work with natural resource agencies and participate in voluntary conservation activities that directly benefit the Topeka shiner and other threatened or endangered species, including such cooperative partnerships as Safe Harbor Agreements; (2) the implementation of various cooperative conservation measures agreed to through various State and local partnerships, such as those outlined in the action or management plans or through similar collaborative efforts; (3) management or regulatory flexibility, such as the establishment of nonessential experimental populations under section 10(j) of the Act, to recover Topeka shiners through reintroductions; and (4) opportunities and interest of landowners to participate in various incentive and assistance programs offered by the Service and other Federal, State, and local agencies that restore habitats and improve water quality in watersheds containing Topeka shiners.

The economic analysis, along with the analysis of other relevant beneficial and detrimental impacts, serve as the basis of our analysis under section 4(b)(2) and our determination of exclusions from critical habitat. This final rule contains our analysis of economic factors and other relevant impacts of designating critical habitat, and our consideration of comments received during the public comment periods. As a result, we have identified certain areas that are excluded from the final critical habitat designation.

In our critical habitat designations, we use both the provisions outlined in sections 3(5)(A) and 4(b)(2) of the Act to evaluate those specific areas that we are considering proposing designating as critical habitat as well as for those areas that are formally proposed for designation as critical habitat. Lands we have found do not meet the definition of critical habitat under section 3(5)(A) or have excluded pursuant to section 4(b)(2) include those covered by the following types of plans if they provide assurances that the conservation measures they outline will be implemented and effective: (1) Legally operative HCPs that cover the species; (2) draft HCPs that cover the species and have undergone public review and comment (*i.e.*, pending HCPs); (3) Tribal conservation plans that cover the species; (4) State conservation plans that cover the species; (5) National Wildlife Refuge System Comprehensive Conservation Plans; and (6) other conservation efforts by State and local governments and groups that provide the necessary conservation benefits for the species, and which may cease if critical habitat is designated.

In this designation of critical habitat for the Topeka shiner, we exclude all proposed critical habitat in the State of Missouri pursuant to section 3(5)(A) and 4(b)(2), and all proposed critical habitat in the States of Kansas and South Dakota pursuant to section 4(b)(2) of the Act. These States have all completed management or recovery plans for the species, which are in various stages of implementation. No HCPs that include Topeka shiners are under development or completed.

Kansas

We previously proposed 63 stream segments encompassing 945 km (587 mi) of stream in the State of Kansas as Federal critical habitat for Topeka shiner. In our March 17, 2004, **Federal Register** notice (69 FR 12619), we notified the public that we were considering excluding the previously proposed stream segments in Kansas from designation as critical habitat for Topeka shiner under section 4(b)(2) of the Act.

We have evaluated the Recovery Plan for the Topeka Shiner in Kansas (Kansas Plan), developed by the Kansas Department of Wildlife and Parks (KDWP); the protections afforded the species and its habitat under the Kansas Nongame and Endangered Species

Conservation Act of 1975 (Kansas Act); and the associated Topeka shiner conservation actions that have been completed, ongoing, or planned in Kansas against the three criteria to determine whether lands require ''special management considerations or protections.'' The Kansas Plan and Kansas Act clearly provide conservation benefits to the species. The Kansas Plan and Kansas Act provide assurances that conservation efforts will be implemented because KDWP has authority to implement the Kansas Plan and Kansas Act, has demonstrated a history of funding and staffing the Kansas Act, has funded and staffed conservation activities for Topeka shiner in the past, and has completed or begun work on many significant elements of the Kansas Plan. The Kansas Plan and efforts of KDWP are effective because they include biological goals, restoration objectives, and monitoring consistent with a Service agency technical draft recovery plan. The regulatory purview provided by the Kansas Act, and the essential elements of the Kansas Plan, provide for special management of the Topeka shiner. We have determined that adequate special management and protection are provided by State-designated critical habitat and a legally-operative plan that addresses the maintenance and improvement of essential habitat elements and that provides for the long-term conservation of the species, as measured by the three criteria listed in the introductory paragraphs of this section of the preamble.

In Kansas, the Topeka shiner historically occurred in small, headwater streams throughout much of the State, including the Kansas, Big Blue, Smoky Hill, Saline, Republican, Arkansas, and Cottonwood Rivers watersheds. The Topeka shiner has been a focal species for planning and conservation efforts in the State since the early 1990s. In December 1999, the KDWP listed the Topeka shiner as a threatened species under the Kansas Act, and designated State critical habitat for the species as required by the Kansas Act. Shortly afterwards KDWP formed the Topeka Shiner Advisory Committee, a 12-member group with representatives from academia, watershed districts, State and local agencies, and private interest groups, to work with KDWP to provide input into the recovery planning effort and disseminate information to the public and private landowners on a local scale. The Recovery Plan for the Topeka Shiner in Kansas is expected to be finalized by the KDWP in 2004 and will designate more habitat in the State for the Topeka shiner than we proposed.

The objectives of the Kansas Plan are to: (1) Stabilize, protect, and enhance existing populations of Topeka shiner and its habitat in Kansas; (2) identify unoccupied areas of historic habitat capable of supporting, or capable of being restored to support the species, and reintroduce populations to these areas; (3) downlist (to Species In Need of Conservation status) and delist the species as identified by State recovery criteria. The Kansas Plan identifies four separate and distinct recovery units based on watershed boundaries, genetic variability between units, and degree of geographic isolation. Each recovery unit supports known populations and contains habitat features that provide the physiological, behavioral, and ecological requirements essential for the species.

The recovery criteria established in the Kansas Plan for downlisting are: (1) All naturally-occurring populations within the Kansas, Big Blue, and Cottonwood recovery units are determined to be stable or increasing for 10 years; (2) a minimum of eight reintroduction efforts have been implemented and monitored for 3 years in the above recovery units; and (3) the natural population in the Upper Smoky Hill recovery unit is stable or increasing for 10 years, and a minimum of two reintroductions in that recovery unit has occurred and been monitored for 3 years. The delisting criterion is considered met when all populations (natural and introduced) are determined stable or increasing for a period of 10 years. Provisions for statistically sound, long-term monitoring of Topeka shiner populations in Kansas are included in the Kansas Plan.

The Kansas Plan contains a narrative outline, which briefly describes each recovery action needed for the recovery of the Topeka shiner in Kansas. The KDWP also provides an implementation schedule for these actions. Of the 29 tasks listed in the schedule, 13 are ongoing. There are presently three Service-sponsored (section 6 funding) research efforts involving Topeka shiners funded in the State. The KDWP are partners, along with the Service and three different watershed districts, in three individual conservation agreements for the Topeka shiner.

The Kansas Act protects State and federally listed species in Kansas. The Kansas Act was implemented to protect State-listed species classified as threatened, endangered, or ''species in need of conservation'' within Kansas. The Kansas Act places the responsibility for identifying and undertaking appropriate conservation measures for State threatened and endangered species directly upon KDWP through Kansas Administrative Regulations. The KDWP also must undertake efforts to conserve listed species and pursue increasing their populations and improving their habitats to the point that they are no longer listed under the Kansas Act.

Kansas Administrative Regulations require the KDWP to issue special action permits for activities that affect species listed as threatened or endangered, where an action is defined as ''an activity resulting in the physical alteration of a listed species' critical habitat, physical disturbance of a listed species, or destruction of individuals of a listed species.'' These activities must be publicly funded, State or federally assisted, or require a permit from another State or Federal government agency to be included as activities that fall under KDWP's regulatory purview where action permits could be required. Critical habitat as defined under the Kansas Act is—(1) Specific areas documented as currently providing essential physical and biological features and supporting a self-sustaining population of a listed species; or (2) specific areas not documented as currently supporting a listed species, but determined essential for the listed species by the Secretary (of KDWP). Operationally, documentation relies on occurrence records of the species or identification of the essential habitat requirements as obtained through field assessment and scientific studies conducted by KDWP, State universities, and other qualified individuals or organizations. State critical habitat is designated by the KDWP.

The KDWP's Environmental Services Section (ESS) is responsible for reviewing proposed activities that fall under KDWP's regulatory purview. The ESS personnel conduct environmental reviews of these projects, including potential effects to threatened and endangered species and State-designated critical habitats. The ESS personnel issue action permits for activities that will affect listed species or their critical habitats. Special conditions are incorporated into the action permits to help offset negative effects to listed species or critical habitats. Permit conditions can limit where and when (*e.g.*, spawning date restrictions) construction activities occur and require restoration, creation, and perpetual protection of existing habitats. The KDWP can refuse to issue an action permit for activities that affect listed species and critical habitats if these activities cannot be adequately

mitigated to offset the negative effects to a listed species and its critical habitats.

Each calendar year, ESS personnel conduct environmental reviews for approximately 750 new proposed activities that fall under KDWP's regulatory purview. Since the Topeka shiner was listed by the State of Kansas on November 11, 1999, through December 31, 2003, ESS staff have conducted environmental reviews for 2,814 new proposed activities, of which 59 included the Topeka shiner. Of the 59 projects, 5 required action permits be issued by KDWP.

The KDWP presently has 68 stream segments designated as State critical habitat for the Topeka shiner, representing over 1,046 km (650 mi) of stream. The Service previously proposed 63 stream segments representing 945 km (587 mi) of stream as Federal critical habitat.

In our March 17, 2004, **Federal Register** notice (69 FR 12619), we stated that we were considering excluding the previously proposed stream segments in Kansas from designation as critical habitat for Topeka shiner under section 4(b)(2) of the Act. In our evaluation of potential critical habitat sites in Kansas, we conducted an analysis of the economic impacts and other relevant impacts of designating critical habitat. We provide the following 4(b)(2) analysis of the benefits of inclusion and the benefits of exclusion in assessing this exclusion of critical habitat in Kansas.

(1) Benefits of Inclusion

The principal benefit of designating critical habitat is that federally funded or authorized activities that adversely affect critical habitat must undergo consultation under section 7 of the Act. Consultations on Federal actions involving critical habitat ensure that habitat needed for the survival and recovery of a species is not destroyed or adversely modified, in addition to the jeopardy standard applied to all listed species.

(2) Benefits of Exclusion

The benefits of excluding Kansas from designated critical habitat include—maintenance of effective working partnerships to promote the conservation of the Topeka shiner and its habitat; establishment of new partnerships; providing benefits from the Kansas Plan to the Topeka shiner and its habitat which exceed those that would be provided by the designation of critical habitat; avoiding added administrative costs to the Service, Federal agencies, and applicants; and future regulatory flexibility for the Service and landowners by maintaining the ability to reintroduce the Topeka shiner to formerly occupied streams in Kansas by experimental populations under section 10(j) of the Act.

Recovery of listed species is often achieved through partnerships and voluntary actions. Through previous conservation actions (*e.g.,* conservation agreements with watershed districts), the KDWP has gained the cooperation of some local governmental entities and landowners and has been successful in developing voluntary conservation partnerships. Cooperators, with the assistance of KDWP, are implementing conservation measures for the Topeka shiner and its habitat in accordance with management objectives outlined in the Kansas Plan. These actions range from allowing access to private lands for surveys and site visits to rehabilitation of habitat and implementation of measures to control erosion and sedimentation. The partners have committed to conservation measures benefiting the Topeka shiner that are greater than the benefits of designating critical habitat. Excluding these areas from the designation will send a positive message to our partners and reinforce their commitment to shiner conservation.

The Economic Analysis of Critical Habitat Designation for the Topeka Shiner determined that the total potential economic costs for Kansas range from $2.3 million to $5.1 million over 10 years (Industrial Economics, Inc. 2004).

In summary, we view the continued application of the regulatory authority of State-designated critical habitat, the implementation of the Kansas Plan, and the cooperative conservation partnerships with landowners to be essential for the conservation of the Topeka shiner in Kansas. We conclude that the benefits of including Federal critical habitat in Kansas are small due to KDWP's regulatory purview over State critical habitat and the ongoing implementation of conservation actions, as identified in the Kansas Plan, and that the benefits of excluding Kansas areas from Federal critical habitat exceed the limited benefits of including them. Furthermore, we determine that exclusion from critical habitat in this State will not result in the extinction of the Topeka shiner. In accordance with section 4(b)(2) of the Act, we determine that the benefits of excluding critical habitat in Kansas outweigh the benefits of designating critical habitat, and exclude areas in Kansas containing primary constituent elements from the critical habitat designation.

Missouri

In the proposed rule, we proposed not to include stream segments in the State of Missouri in proposed critical habitat, based on our interpretation of section 3(5)(A) of the Act (67 FR 54261). In our March 17, 2004, **Federal Register** notice (69 FR 12619), we also proposed excluding Missouri under Section 4(b)(2) of the Act.

We have evaluated the Action Plan for the Topeka Shiner in Missouri (Action Plan) and associated Topeka shiner conservation actions that have been completed, are ongoing, or are planned in Missouri, against the three criteria to determine whether lands require ''special management considerations or protections.'' The Action Plan clearly provides conservation benefits to the species; the Action Plan provides assurances that conservation efforts will be implemented because 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 because they include biological goals, restoration objectives, and monitoring consistent with a Service preliminary draft recovery plan. The Missouri Action Plan provides for special management of the Topeka shiner under the definition of critical habitat in section 3(5)(A) of the Act.

In Missouri, the Topeka shiner historically occurred in small, headwater streams in northern portions of the State, within the Missouri/Grand River Watershed. The Topeka shiner has been a focal species for planning and conservation efforts in the State since the mid-1990s. In 1995, the 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, the 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 2001).

In 1999, the Conservation Commission established the Private Lands Services Division within the MDC. Eighty-three MDC staff were redirected to private land conservation throughout the State, including a minimum of 16 Private Lands Service personnel with responsibility for the counties with Topeka shiner habitat. 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 the Missouri/Grand River Watershed.

In January 1999, the MDC adopted and approved an Action Plan for the Topeka shiner in Missouri (MDC 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 the Action Plan, is ongoing. The current status of recovery tasks outlined in the Action Plan is described in Table 3 below:

TABLE 3.—STATUS OF TASKS IN THE ACTION PLAN FOR THE TOPEKA SHINER IN MISSOURI

Item	Status
Establishment of the Missouri Topeka Shiner Working Group	Complete & Ongoing.
Development & ongoing implementation of the Action Plan	Complete (1999) & Ongoing.
Establishment of permanent sampling sites & standardized monitoring of Missouri's Topeka shiner populations & completion of recent Statewide survey for the species.	Annual Monitoring—Ongoing/Initiated (began in 2000) Statewide Surveying—Complete & Ongoing.
Initiation of artificial propagation of Topeka shiners, including the development & refinement of captive rearing techniques.	Complete & Ongoing.
Completion of genetic analysis of different populations of Topeka shiners in Missouri	Complete.
Incorporation of Topeka shiner recovery & conservation efforts in State strategic planning documents on several different levels.	Complete & Ongoing.
Development & dissemination of public outreach & education materials throughout Missouri & elsewhere.	Complete & Ongoing.
Completion & dissemination of several ecological & life history studies on Topeka shiner	Ongoing/Initiated.
Securing matching funds from the Service to conduct surveys & ecological studies, & for various habitat restoration & enhancement activities.	Complete & Ongoing.
Revision of the Action Plan that will include actions not yet completed since 1999 & those uncompleted actions identified in the Service's preliminary draft recovery plan.	Planned.
Implementation of a landowner incentive program & completion of a study on the potential impacts of Confined Animal Feeding Operations within the Moniteau Creek Watershed.	Completed (Confined Animal Feeding Operations study) Ongoing/Initiated (landowner incentive program).
Development of 10-year fish monitoring plans for Moniteau, Bonne Femme, & Sugar Creek Watersheds.	Complete—Plan developed with initial sampling conducted in 2000 & annual sampling since.
Development & implementation of Sugar Creek subbasin management plan	Complete & Ongoing.
Development & implementation of a Three Creeks Conservation Area management plan	Complete & Ongoing.
Protection & management of Bonne Femme Creek by establishing these watersheds as Missouri Department of Natural Resources' Non-point Source Pollution Special Area Land Treatment watersheds.	Complete & Ongoing.
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, stream bank stabilization activities, & actions outlined in grazing plan developed for private landowners within the Bonne Femme, Moniteau, & Sugar Creek Watersheds.	Initiated/Ongoing.

Assurances that the Action Plan will be implemented and conservation of the Topeka shiner will be achieved in Missouri are demonstrated by the following actions. Between January 1999 and December 31, 2003, at least $351,100 was spent on recovery actions for the Topeka shiner in Missouri, and that total is likely to increase to at least $600,000 within the next 10 years. Eighty 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 a Service preliminary draft recovery plan have either been completed or are currently being implemented (this includes 20 percent of tasks that are 100 percent completed, 47 percent of tasks that are 50 percent or greater completed, and 33 percent of tasks that are 25 percent or less completed) by the MDC in cooperation with us, the Topeka Shiner Recovery Team, and other Federal, State, and private entities.

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. The planned expansion of our Partners for Fish and Wildlife Program within Topeka shiner—occupied habitat will benefit an additional 10 to 15 landowners at an estimated cost of $100,000 within the next 5 years (Kelly Srigley Werner, Missouri Private Lands Coordinator, pers. comm.). The MDC Fisheries and Natural History Division staffs have committed to help coordinate and implement Topeka shiner recovery efforts between the MDC and Federal, State, and private entities, and MDC's Topeka Shiner Recovery Coordinator. The MDC is actively participating in the Topeka Shiner Recovery Team. The MDC's revisions to the Action Plan, scheduled for completion in 2004, will focus on incorporating any of the recovery actions outlined in a Service preliminary draft recovery plan that are currently not addressed. The scientific soundness of the MDC's Action Plan was further validated by 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 a Service preliminary draft recovery plan. In addition, the MDC, in implementing the Action Plan, has established cooperative working relationships with private landowners. These relationships have allowed for the implementation of conservation programs for the benefit of the Topeka shiner.

We have concluded that Topeka shiner habitat in Missouri does not meet the definition of critical habitat as

outlined in section 3(5)(A) of the Act because there is adequate special management or protection already in place. Therefore, these areas are not included in this critical habitat designation.

In our March 17, 2004, **Federal Register** notice (69 FR 12619), as a consequence of the court's decision in *Center for Biological Diversity* v. *Norton,* we described the previously-excluded segments in Missouri and clarified the basis for proposing to exclude these areas from the critical habitat designation for Topeka shiner under section 4(b)(2) of the Act. In our evaluation of potential critical habitat sites in Missouri, we conducted an analysis of the economic impacts and other relevant impacts of designating critical habitat. We provide the following 4(b)(2) analysis of the benefits of inclusion and the benefits of exclusion in assessing this exclusion of critical habitat in Missouri.

(1) Benefits of Inclusion

The principal benefit of designating critical habitat is that federally funded or authorized activities that adversely affect critical habitat must undergo consultation under section 7 of the Act. Consultations on Federal actions involving critical habitat ensure that habitat needed for the survival and recovery of a species is not destroyed or adversely modified, in addition to the jeopardy standard applied to all listed species.

(2) Benefits of Exclusion

The benefits of excluding Missouri from designated critical habitat include—maintenance of effective working partnerships to promote the conservation of the Topeka shiner and its habitat; establishment of new partnerships; providing benefits from the Action Plan to the Topeka shiner and its habitat which exceed those that would be provided by the designation of critical habitat; avoiding added administrative costs to the Service, Federal agencies, and applicants; and future regulatory flexibility for the Service and landowners by maintaining the ability to reintroduce the Topeka shiner to formerly occupied streams in Missouri as experimental populations under section 10(j) of the Act.

Recovery of listed species is often achieved through partnerships and voluntary actions. Through the Action Plan, the MDC has gained the cooperation of landowners and has been successful in developing voluntary conservation partnerships with these landowners. Cooperators, with the assistance of MDC, are implementing conservation measures for the Topeka shiner and its habitat in accordance with management objectives outlined in the Action Plan. These actions range from allowing access to private lands for surveys and site visits to rehabilitation of habitat and implementation of measures to control erosion and sedimentation. The partners have committed to conservation measures benefiting the Topeka shiner that are greater than the benefits of designating critical habitat

The Final Economic Analysis of Critical Habitat Designation for the Topeka Shiner determined that Bonne Femme and Moniteau Creeks in Missouri are potentially the most costly units of critical habitat based on costs per river mile (Industrial Economics, Inc. 2004). Together, these two units would cost an estimated $6.3 million over a 10-year period based on the expectation that approximately 500 section 7 consultations would result from Topeka shiner listing and critical habitat in these units (Industrial Economics, Inc. 2004). An additional $0.9 million in section 7 costs associated with listing and critical habitat in the Sugar Creek Watershed, Missouri, would be expected over the same period (Industrial Economics, Inc. 2004).

In summary, we view the continued implementation of the Action Plan and the associated cooperative conservation partnerships with landowners to be essential for the conservation of the Topeka shiner in Missouri. We believe that the benefits of including critical habitat in Missouri would be only small additions to the currently ongoing successful conservation actions, as identified in the Action Plan, through multiple partnerships. We believe the benefits of excluding Missouri areas from critical habitat greatly exceed the limited benefits of including them. Furthermore, we believe that exclusion from critical habitat in this State will not result in the extinction of the Topeka shiner. In accordance with section 4(b)(2) of the Act, we believe that the benefits of excluding critical habitat in Missouri outweigh the benefits of designating critical habitat, and exclude areas in Missouri containing primary constituent elements from the critical habitat designation.

South Dakota

We have evaluated the Topeka Shiner Management Plan for the State of South Dakota (SD Plan) and associated Topeka shiner conservation actions that have been completed, are ongoing, or are planned in South Dakota, against the three criteria to determine whether lands require ''special management considerations or protections.'' The SD Plan provides conservation benefits to the species. It provides assurances that conservation efforts will be implemented because the State of South Dakota 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. It is effective because the SD Plan and other efforts by the State of South Dakota include biological goals, restoration objectives, and monitoring consistent with a Service preliminary draft recovery plan. The SD Plan and other cooperative efforts in South Dakota provide for special management of the Topeka shiner.

In our August 21, 2002, proposed rule, we identified 40 stream segments for designation in South Dakota. We proposed one additional segment in our revision to the proposal published March 17, 2004 (69 FR 12619). Before the original proposal was published, the South Dakota Department of Game, Fish, and Parks (SDDGFP) requested that we consider a State-wide exclusion from designation based on the authority given the Service under section 3(5)(A) and/or 4(b)(2) of the Act.

Prior to the 2002 proposal to designate critical habitat, SDDGFP and the South Dakota Department of Agriculture, the South Dakota Department of Environment and Natural Resources (SDDENR), and the SDDOT developed the Topeka Shiner Management Plan for the State of South Dakota (SD Plan). The development of the SD Plan was a cooperative effort that also involved Federal agencies, private individuals, agricultural groups, and academia. The SD Plan was completed and signed in June 2003 by the four State agencies with management responsibilities for actions that can influence Topeka shiner streams. This commitment by the lead regulatory and management agencies within State government to the SD Plan is a unique approach to cooperative Topeka shiner conservation within the range of this species.

The goals of the SD Plan are to—(1) maintain habitat integrity in Topeka shiner streams; and (2) establish a point-based management goal for the State of South Dakota in contribution toward national recovery efforts. The SD Plan states specific objectives to meet the plan goals, including: (1) Management actions that address stream hydrology, geomorphology, and water quality; (2) establishment of a monitoring and assessment protocol to evaluate South Dakota's point-based recovery goal; and

(3) development of public outreach and education strategies to inform all entities involved about Topeka shiner management in South Dakota.

The SD Plan provides conservation benefits to the species by implementation of on the ground actions undertaken through partnership efforts and conservation strategies. The SD Plan provides assurances that conservation efforts will be implemented because the State of South Dakota has authority to implement the plan and has put in place the funding and staffing necessary to implement the Plan. In addition, there is a long history of implementation of strategies in the SD Plan that have had positive effects on Topeka shiners. The SD Plan, and efforts by the State of South Dakota, have been and will continue to be effective because they address the threats to the species in South Dakota and include biological goals, restoration objectives, and monitoring consistent with, or superior to, a Service preliminary draft recovery plan that has been developed (U.S. Fish and Wildlife Service 2002).

Implementation of recovery efforts for the Topeka shiner in South Dakota, are planned or ongoing. The current status of tasks in the SD Plan is described in Table 4 below:

TABLE 4.—STATUS OF TASKS IN THE TOPEKA SHINER MANAGEMENT PLAN FOR THE STATE OF SOUTH DAKOTA

Action item	Status
Establish the South Dakota Topeka shiner working group	Complete and Ongoing.
Develop and implement the State Plan	Complete (2003) and Ongoing.
Conduct surveys to determine extent of Topeka shiner range in South Dakota	Complete and Ongoing.
Design long term monitoring and assessment plan	Complete.
Develop an education and outreach program to provide information on the Topeka shiner and watershed health.	Ongoing.
Develop and maintain a Topeka shiner website for information on this species	Complete and Ongoing.
Complete genetic analyses of different Topeka shiner populations in South Dakota	Complete.
Incorporation of Topeka shiner recovery and conservation efforts in State strategic planning documents on different levels.	Ongoing.
Secure matching funds from the Service and others to conduct surveys and ecological studies and for various habitat restoration and enhancement activities.	Complete and Ongoing.
Conduct research in relationship to stream hydrology and Topeka shiner habitat	Ongoing.
Provide technical and financial assistance to landowners interested in creating or restoring wetland areas	Complete and Ongoing.
Provide landowner incentives to increase native vegetative cover	Complete and Ongoing.
Work with government agencies to develop best management practices that minimize erosion	Complete and Ongoing.
Provide financial and technical assistance to landowners to reestablish native vegetation along riparian zones	Complete and Ongoing.
Provide technical and financial assistance to landowners and other agencies interested in restoring habitat in degraded stream reaches.	Complete and Ongoing.
Review projects that may adversely alter Topeka shiner streams	Complete and Ongoing.
Continue working with the Service to provide information and assistance on section 7 consultation issues	Ongoing.
Continue working with section 6 funds to further identify Topeka shiner areas and strategy for long-term conservation.	Ongoing.
Provide technical assistance to urban, residential and development planners to improve water quality from water discharge systems.	Complete and Ongoing.
Work with NRCS to have Topeka shiner streams get higher priority for EQIP and WHIP funding	Complete and Ongoing.
Provide incentives for landowners to establish riparian buffers or filter strips along agricultural fields with high runoff potential.	Complete and Ongoing.
Continue technical assistance for permitting and designing confined animal feeding operations	Ongoing.
Continue routine inspections of sewage treatment facilities to ensure compliance with water quality standards	Ongoing.

Assurances that the SD Plan will be implemented and conservation of the Topeka shiner will be achieved in South Dakota are demonstrated by the following actions. Between January 1999 and December 31, 2003, at least $700,000 was expended on recovery actions and habitat improvement for the Topeka shiner by the State of South Dakota, and that total is likely to increase to at least $3 million over the next 10 years (Dowd Stukel and Shearer, SDDGFP, pers. comm. 2004; Graves, SDDOT, pers. comm. 2004; SDDENR Web site 2004). All of the tasks identified in the SD Plan that have definite end points have been completed. Remaining tasks, such as project reviews to minimize adverse impacts to Topeka shiners, implementation of projects to enhance Topeka shiner streams, and Topeka shiner surveys will be ongoing.

Overall, 86 percent (*i.e.*, 12 of 14) 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 a Service preliminary draft recovery plan have either been completed or are currently being implemented. Of two remaining priority 1 tasks, one involves ''determining impacts of sedimentation on habitat quality.'' South Dakota recognizes that sedimentation may impair habitat for Topeka shiner and has instituted aggressive provisions to minimize erosion from activities they may undertake or permit. One example is the development of stringent erosion control measures and spawning season restrictions that the SDDOT includes for all projects crossing Topeka shiner streams.

The other priority 1 task involved evaluation of piscivorous fish within Topeka shiner habitat. This task was included in the rangewide draft Recovery Plan because some fish, particularly largemouth bass, have been documented to be damaging to Topeka shiner populations. The information for South Dakota does not show much overlap between Topeka shiner populations and largemouth bass. Therefore, while this is an important issue in parts of the Topeka shiner range, it is not believed to be problematic in South Dakota.

In addition to two Topeka shiner studies initiated by SDDOT through the SDSU Coop Unit, SDDOT has committed to extensive management practices to minimize adverse effects of

road and highway stream crossing projects on Topeka shiner streams. These provisions are among the most rigorous in the species' range. SDDOT has also conducted a programmatic formal section 7 consultation with the Service for construction projects that involve all SDDOT road crossings of Topeka shiner streams.

SDDGFP and SDDENR also routinely review projects to ensure impacts to Topeka shiners and its habitat are minimized. In South Dakota, SDDENR has assumed the section 401 water quality program from EPA and issues certification for all section 404 permits authorized by the U.S. Army Corps of Engineers. This State program ensures discharges do not compromise water quality in the receiving water bodies.

The SDDGFP has been an active partner in cooperation with us, the Topeka Shiner Recovery Team, and other Federal, State, and private entities. The SD Plan greatly facilitates the implementation of recovery actions on private property where the species currently exists or where potential habitat for the species exists.

The SDDGP Habitat Program recently developed a series of implementation guidelines for wetland projects proposed within Topeka shiner watersheds. The guidelines provide field staff with an early screening process to identify any potential conflict habitat projects may create in Topeka shiner streams. This screen also allows selection of management tools that can provide specific benefits to water quality.

The SDDGFP staff has committed to help coordinate and implement Topeka shiner recovery efforts between the State of South Dakota and Federal, State, and private entities. The SDDGFP is actively participating in the Topeka Shiner Recovery Team. In addition, the SDDGFP and other State signatory agencies have established cooperative working relationships with private landowners. These relationships have allowed for the implementation of conservation programs for the benefit of the Topeka shiner.

The SDDENR also has upgraded numerous reaches of Topeka shiner streams to a fisheries classification for Clean Water Act purposes (Snyder, SDDENR, pers. comm. 2004). This includes all areas proposed for critical habitat designations in South Dakota. This is important, since some areas where Topeka shiners have been found in recent years have been on streams or portions of streams that are intermittent and were previously not classified as a fishery water body. With SDDENR reclassification of these streams to a fishery, the full suite of water quality standards apply to that water body when evaluating a National Pollution Discharge Elimination System permit. A fishery classification to a stream is an important upgrade that the State has undertaken as part of their Triennial Review Process of water quality standards.

The State of South Dakota developed a general permit in 1998 to address animal waste resulting from concentrated animal feeding operations (CAFOs). Since development of this permit, the State has regulated 64 CAFOs in the Topeka shiner range in South Dakota. There are an additional 55 CAFOs in the Topeka shiner range going through the permitting system to be authorized under the general permit. This can include existing operations being brought into compliance as well as new or expanded facilities. This important regulatory measure requires strict adherence to provisions of the general permit that allows no discharge of animal waste to streams or rivers from livestock waste management facilities. This regulatory requirement has resulted in significant upgrades to animal waste disposal systems in the range of the Topeka shiner. Significant partnerships between landowners and programs such as the Environmental Quality Incentive Program (EQIP) funds have resulted and are being used to bring existing CAFOs into compliance.

South Dakota has worked with agencies to prioritize expenditures of funds towards actions that would benefit Topeka shiner. For example, through efforts by the resource agencies, the NRCS has modified their ranking criteria such that projects funded by the Environmental Quality Incentives Program (EQIP) and the Wildlife Habitat Incentives Program (WHIP) receive additional points, and thus higher ranking, if benefits to Topeka shiners will result from a proposed project. The SDDENR through their implementation of the 319 program, in concert the Environmental Agency Program, provides incentives to undertake actions that benefit water quality of Topeka shiner streams. SDDGFP and others have cooperated to attain federal grants that prioritize Topeka shiner watersheds with projects that benefit water quality and stream hydrology. Designation of critical habitat would not be expected to appreciably enhance the prioritization efforts that have already occurred and those that are ongoing.

The State also believes that the SD Plan will lay the groundwork for a future Habitat Conservation Plan (HCP) that may be developed by the State. The SD Plan is recognized to be an important component of a future HCP, and provides an indication of South Dakota's ongoing efforts to develop an HCP for Topeka shiners.

In our evaluation of potential critical habitat sites in South Dakota, we conducted an analysis of the economic impacts and other relevant impacts of designating critical habitat. We provide the following 4(b)(2) analysis of the benefits of inclusion and the benefits of exclusion in assessing this exclusion of critical habitat in South Dakota.

(1) Benefits of Inclusion

The principal benefit of designating critical habitat is that federally funded or authorized activities that adversely affect critical habitat must undergo consultation under section 7 of the Act. Consultations on Federal actions involving critical habitat ensure that habitat needed for the survival and recovery of a species is not destroyed or adversely modified, in addition to the jeopardy standard applied to all listed species.

(2) Benefits of Exclusion

The benefits of excluding South Dakota from designated critical habitat include continued participation of State agencies to neutralize threats to Topeka shiner, maintenance of effective working partnerships to promote the conservation of the Topeka shiner and its habitat; establishment of new partnerships; providing benefits from the SD Plan to the Topeka shiner and its habitat which exceed those that would be provided by the designation of critical habitat; and avoiding added administrative costs to the Service, Federal agencies, and permit applicants.

Recovery of listed species that occur primarily on or adjacent to private lands is often best achieved through partnerships, voluntary actions, and incentives. Through the SD Plan, the State of South Dakota has gained the cooperation of landowners and has been successful in developing voluntary conservation partnerships with these landowners. Cooperators, with the assistance of partners identified in the SD Plan, are implementing conservation measures for the Topeka shiner and its habitat in accordance with management objectives outlined in the SD Plan. The broad engagement of the many diverse groups and individuals that developed the SD Plan lends strength to both the SD Plan as well as our belief that its partnership and cooperative concepts have conservation value. The monitoring plan that the SD Plan has undertaken will provide annual data to track the status of the species. Section 4(a)(3)(B) allows us to revisit critical

habitat designations. If in the future the currently healthy population declines, we retain the ability to designate CH in the State at a later date.

In summary, we view the continued implementation of the SD Plan with its threat abatement and cooperative conservation partnerships with landowners to be essential for the conservation of the Topeka shiner in South Dakota. We believe that the benefits of including critical habitat in South Dakota are negligible compared to benefits of the conservation actions identified in the SD Plan. Finally, we believe that exclusion from critical habitat in South Dakota will not result in the extinction of the Topeka shiner nor adversely impact the species. In accordance with section 4(b)(2) of the Act, we believe that the benefits of excluding critical habitat in South Dakota outweigh the benefits of designating critical habitat in the State, and exclude areas in South Dakota containing primary constituent elements from the critical habitat designation.

Application of Section 4(a)(3) of the Act

Section 318 of fiscal year 2004 the National Defense Authorization Act (Public Law No. 108–136) amended the Endangered Species Act to address the relationship of INRMPs to critical habitat by adding a new section 4(a)(3)(B). This provision prohibits the Service from designating as critical habitat any lands or other geographical areas owned or controlled by the Department of Defense, or designated for its use, that are subject to an INRMP prepared under section 101 of the Sikes Act (16 U.S.C. 670a), if the Secretary of the Interior determines in writing that such plan provides a benefit to the species for which critical habitat is proposed for designation. Fort Riley, Kansas, has an INRMP in place that provides a benefit for the Topeka shiner (*see* Application of Section 4(a)(3) of the Act). All Topeka shiner habitat suitable for designation on the Fort Riley Military Installation, Kansas, also is not included in this designation under the authority of section 4(a)(3) of the Act.

Fort Riley, Kansas

In our August 21, 2002, proposed rule, we proposed not to include stream segments on the Fort Riley Military Installation, Kansas, as critical habitat, on the basis of our interpretation of section 3(5)(A) of the Act. Due to the Federal District Court decision (*Center for Biological Diversity* v. *Norton,* Civ. No. 01–409 TUC DCB, D. Ariz., Jan. 13, 2003) and the amendment to section 4(a)(3) of the Act, we now clarify the basis for not designating stream segments on Fort Riley. As discussed above, Section 4(a)(3) of the Act now prohibits the Secretary of the Department of the Interior from designating critical habitat on Department of Defense lands if an adequate INRMP is in place.

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. Fort Riley initiated development of management guidelines for the species 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 INRMP 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 (U.S. 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, and find that it provides a benefit to the species under section 4(a)(3).

The primary benefit of proposing critical habitat is to identify lands essential to the conservation of the species, which, if designated as critical habitat, would require consultation with the Service to ensure that activities would not adversely modify critical habitat. As previously discussed, Fort Riley has a completed final INRMP that provides for sufficient conservation management and protection for the Topeka shiner. Moreover, this INRMP has already undergone section 7 consultation with the Service prior to its final approval. Further, activities authorized, funded, or carried out by the military or Federal agencies in these areas that may affect the Topeka shiner will still require consultation under section 7 of the Act, based on the requirement that Federal agencies ensure that such activities not jeopardize the continued existence of listed species. This requirement applies even without critical habitat designation on these lands.

The requirements of section 4(a)(3) of the Act are satisfied in relation to Topeka shiner habitat on Fort Riley. Therefore, we do not include these stream segments in the designation as critical habitat for Topeka shiner.

Iowa, Minnesota and Nebraska

We have designated occupied critical habitat on a number of streams in Iowa, Minnesota and Nebraska because, although these States are implementing conservation actions that benefit Topeka shiners, there are currently no ''legally operative'' conservation plans proposed or in place that we can weigh against the three criteria we use to address special management needs. Federal actions that adversely affect critical habitat must undergo consultation under section 7 of the Act. Consultations on Federal actions involving critical habitat ensure that habitat needed for the survival and recovery of a species is not destroyed or adversely modified.

Economic Analysis

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

Following the publication of the proposed critical habitat designation, we conducted an economic analysis to estimate the potential economic effect of the designation. The draft analysis was made available for public review on March 17, 2004 (69 CFR 12619). We accepted comments on the draft analysis until April 16, 2004.

Our economic analysis evaluated the potential future effects associated with the listing of the Topeka shiner as endangered under the Act, as well as any potential effect of the critical habitat designation above and beyond those regulatory and economic impacts associated with listing. The following discussion presents the potential economic effects of the proposed critical habitat designation. However, in this final critical habitat rule, we are excluding lands owned by Fort Riley and the States of Kansas, Missouri, and South Dakota from the areas designated as critical habitat for the Topeka shiner. Therefore, because our economic analysis included impacts of areas that are subsequently excluded from the final critical habitat, the values presented below and in the economic analysis are likely significant overestimates of the potential economic

effects resulting from this critical habitat rule for the Topeka shiner.

The categories of potential costs considered in the analysis included the costs associated with: (1) Conducting section 7 consultations due to the listing or the critical habitat, including reinitiated consultations and technical assistance; (2) modifications to projects, activities, or land uses resulting from the section 7 consultations; and (3) potential offsetting beneficial costs connected to critical habitat including educational benefits.

We conclude that the designation of critical habitat would not result in a significant economic impact. Our economic analysis estimates that the potential economic effects over a 10-year period would range from $16.7 million to $37.0 million using a 7 percent discount rate (Industrial Economics, Inc. 2004). Road and bridge construction and maintenance, agriculture, and ranching-related activities account for 66 percent of these costs (Industrial Economics, Inc. 2004).

Agriculture and ranching are the main activities in Topeka shiner critical habitat. However, our analysis indicates that economic impacts to farmers and ranchers will likely be minimal as the consultations that are expected to arise from farming and ranching-related activities are not likely to result in costly additional project modifications because they primarily involve Federal assistance for conservation programs (*i.e.*, the Conservation Reserve Program) (Industrial Economics, Inc. 2004). The administrative costs of consultation and technical assistance efforts account for over 80 percent of the projected costs of this designation, with project modifications representing the remaining 20 percent (Industrial Economics, Inc. 2004).

The economic impacts associated with the proposed critical habitat designation would be manifest primarily as increased operating costs for Federal, State, and local agencies in Iowa, Minnesota, Missouri, Kansas, Nebraska, and South Dakota. Federal, State, and local agencies would bear 70 percent of these costs, with private entities incurring the remainder (Industrial Economics, Inc. 2004). Because we are excluding Missouri, Kansas, and South Dakota and because most of the costs of this rule are borne by governmental agencies rather than private businesses or landowners, secondary impacts to the region are expected to be minimal (Industrial Economics, Inc. 2004).

Although we do not find the economic costs to be significant, they were considered in balancing the benefits of including and excluding areas from critical habitat.

We received four comments on the draft economic analysis of the proposed designation. Two of the comments identified that some of the costs attributed to transportation and sand and gravel operations were overstated, while one stated that estimated third party costs for transportation projects in South Dakota appeared to be low. One commenter requested that the analysis include benefits and incremental costs. Following the close of the comment period, the economic analysis was finalized. We made no revisions or additions to the draft economic analysis.

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

Required Determinations

Regulatory Planning and Review

In accordance with Executive Order 12866, this document is a significant rule in that it may raise novel legal and policy issues, but it is not anticipated to have an annual effect on the economy of $100 million or more or affect the economy in a material way. Because of the Court-ordered deadline for publication in the **Federal Register**, formal Office of Management and Budget (OMB) review was not undertaken. We prepared an economic analysis of this action to meet the requirement of section 4(b)(2) of the Endangered Species Act to determine the economic consequences of designating the specific areas as critical habitat. The draft economic analysis was made available for public comment and we considered those comments during the preparation of this rule. The costs of the final designation are estimated to be between $8.84 to $13.66 million. The economic analysis indicates that this rule will not have an annual economic effect of $100 million or more or adversely affect any economic sector, productivity, competition, jobs, the environment, or other units of government.

Under the Act, critical habitat may not be destroyed or adversely modified by a Federal agency action; the Act does not impose any restrictions related to critical habitat on non-Federal persons unless they are conducting activities funded or otherwise sponsored or permitted by a Federal agency. Because of the potential for impacts on other Federal agencies' activities, we reviewed this action for any inconsistencies with other Federal agency actions. Based on our economic analysis and information related to implementing the listing of the species such as conducting section 7 consultations, we believe that this designation will not create inconsistencies with other agencies' actions or otherwise interfere with an action taken or planned by another agency, nor will it materially affect entitlements, grants, user fees, loan programs, or the rights and obligations of their recipients.

Regulatory Flexibility Act

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

On the basis of information in our final economic analysis, we have determined that a substantial number of small entities are not affected by the critical habitat designation for Topeka shiner. Therefore, we are certifying that the designation will not have a significant effect on a substantial number of small entities. The factual basis for certifying that this rule will not have a significant economic impact on a substantial number of small entities is as follows.

Small entities include small organizations, such as independent nonprofit organizations, and small governmental jurisdictions, including school boards and city and town governments that serve fewer than 50,000 residents, as well as small businesses. The RFA/SBREFA requires that agencies use the Small Business Administration's definition of ''small business'' that has been codified at 13 CFR 121.201. Small businesses include manufacturing and mining concerns with fewer than 500 employees, wholesale trade entities with fewer than 100 employees, retail and service

businesses with less than $5 million in annual sales, general and heavy construction businesses with less than $27.5 million in annual business, special trade contractors doing less than $11.5 million in annual business, and agricultural businesses with annual sales less than $750,000. The RFA/SBREFA does not explicitly define either ''substantial number'' or ''significant economic impact.'' Consequently, to assess whether a ''substantial number'' of small entities is affected by this designation, this analysis considers the relative number of small entities likely to be impacted in an area. In addition, Federal courts and Congress have indicated that an RFA/SBREFA is properly limited to impacts to entities directly subject to the requirements of the regulation (Service 2002). Therefore, entities not directly regulated by the listing or critical habitat designation are not considered in this section of the analysis. The RFA/SBREFA defines ''small governmental jurisdiction'' as the government of a city, county, town, school district, or special district with a population of less than 50,000. Although certain State agencies may be affected by this critical habitat designation, State governments are not considered small governments, for the purposes of the RFA. The SBREFA further defines ''small organization'' as any not-for-profit enterprise that is independently owned and operated and is not dominant in its field.

Even where the requirements of section 7 might apply due to critical habitat, based on our experience with section 7 consultations for all listed species, virtually all projects, including those that, in their initial proposed form, would result in jeopardy or adverse modification determinations under section 7, can be implemented successfully with, at most, the adoption of reasonable and prudent alternatives. These measures by definition must be economically feasible and within the scope of authority of the Federal agency involved in the consultation.

The designation of critical habitat for the shiner is not expected to result in a significant economic impact on a substantial number of small entities. Approximately 12 to 22 percent ($1 million to 3 million) of the forecast total costs of $8.84 to $13.66 million will be borne by Federal agencies. The majority (approximately 80 to 90 percent) of the remaining costs ($7.8 million to $10.6 million) are largely associated with transportation-related activities. Specifically, approximately 60 to 80 percent of the forecast total costs, or $7.1 million to $8.2 million, are associated with road/bridge construction and maintenance projects. These costs will primarily be borne by State DOT and various action agencies. Agriculture makes up the remaining five to 13 percent of forecast total costs ($450,000 to $1,750,000) and recreation and conservation activities three to seven percent of forecast total costs ($250,000 to $975,000). Third parties may be impacted by consultations regarding agriculture activities (*e.g.*, critical area planting, nutrient management, multiple purpose dams, and structures for water controls) and recreation projects (*e.g.*, boat docks), however, project modifications are anticipated to be minimal. The Service expects these costs will be relatively small to the individual operator and therefore will not generate significant economic impacts on a substantial number of small entities.

For these reasons, we are certifying that the designation of critical habitat for Topeka shiner will not have a significant economic impact on a substantial number of small entities. Therefore, a regulatory flexibility analysis is not required.

Small Business Regulatory Enforcement Fairness Act

Under the SBREFA (5 U.S.C. 801 *et. seq.*), this rule is not a major rule. Based on the effects identified in the economic analysis, we believe that this critical habitat designation will not have an effect on the economy of $100 million or more, will not cause a major increase in costs or prices for consumers, and will not have significant adverse effects on competition, employment, investment, productivity, innovation, or the ability of United States-based enterprises to compete with foreign-based enterprises. Our detailed assessment of the economic effects of this designation is described in the economic analysis.

Energy Supply, Distribution, or Use

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 final 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), the Service makes the following findings:

(a) This rule will not produce a Federal mandate. In general, a Federal mandate is a provision in legislation, statute or regulation that would impose an enforceable duty upon State, local, tribal governments, or the private sector and includes both ''Federal intergovernmental mandates'' and ''Federal private sector mandates.'' These terms are defined in 2 U.S.C. 658(5)–(7). ''Federal intergovernmental mandate'' includes a regulation that ''would impose an enforceable duty upon State, local, or tribal governments'' with two exceptions. It excludes ''a condition of federal assistance.'' It also excludes ''a duty arising from participation in a voluntary Federal program,'' unless the regulation ''relates to a then-existing Federal program under which $500,000,000 or more is provided annually to State, local, and tribal governments under entitlement authority,'' if the provision would ''increase the stringency of conditions of assistance'' or ''place caps upon, or otherwise decrease, the Federal Government's responsibility to provide funding'' and the State, local, or tribal governments ''lack authority'' to adjust accordingly. (At the time of enactment, these entitlement programs were: Medicaid; AFDC work programs; Child Nutrition; Food Stamps; Social Services Block Grants; Vocational Rehabilitation State Grants; Foster Care, Adoption Assistance, and Independent Living; Family Support Welfare Services; and Child Support Enforcement.) ''Federal private sector mandate'' includes a regulation that ''would impose an enforceable duty upon the private sector, except (i) a condition of Federal assistance; or (ii) a duty arising from participation in a voluntary Federal program.''

The designation of critical habitat does not impose a legally binding duty on non-Federal government entities or private parties. Under the Act, the only regulatory effect is that Federal agencies must ensure that their actions do not destroy or adversely modify critical habitat under section 7. While non-Federal entities who receive Federal funding, assistance, permits or otherwise require approval or authorization from a Federal agency for an action may be indirectly impacted by the designation of critical habitat, the legally binding duty to avoid destruction or adverse modification of critical habitat rests squarely on the Federal agency. Furthermore, to the extent that non-Federal entities are indirectly impacted because they receive Federal assistance or participate

in a voluntary Federal aid program, the Unfunded Mandates Reform Act would not apply; nor would critical habitat shift the costs of the large entitlement programs listed above on to State governments.

(b) The economic analysis that was prepared in support of this rulemaking fully assesses the effects of this designation on Federal, State, local, and tribal governments, and to the private sector, and indicates that this rule will not significantly or uniquely affect small governments. As such, Small Government Agency Plan is not required.

Takings

In accordance with Executive Order 12630 (''Government Actions and Interference with Constitutionally Protected Private Property Rights,'' March 18, 1988; 53 FR 8859), we have analyzed the potential takings implications of the designation of critical habitat for Topeka shiner. The takings implications assessment concludes that this final rule does not pose significant takings implications. A copy of this assessment can be obtained by contacting the Kansas Field Office (*see* **ADDRESSES**).

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, we requested information from, and coordinated development of, this critical habitat designation with, appropriate State resource agencies in Iowa, Kansas, Minnesota, Missouri, Nebraska, and South Dakota. The designation of critical habitat in areas currently occupied by Topeka shiner imposes no additional restrictions to those currently in place and, therefore, has little additional 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 is more clearly defined, and the PCEs 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, it 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 have designated critical habitat in accordance with the provisions of the Act. The rule uses standard property descriptions and identifies the PCEs within the designated area to assist the public in understanding the habitat needs of the Topeka shiner.

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

This rule does not contain any information collection requirements for which OMB approval under the Paperwork Reduction Act is required. 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 in connection with designating critical habitat under the Act. 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 Tenth Circuit, pursuant to the Tenth Circuit ruling in *Catron County Board of Commissioners* v. *U.S. Fish and Wildlife Service*, 75 F .3d 1429 (Tenth Cir. 1996), we will complete a National Environmental Policy Act analysis. The range of Topeka shiner includes States within the Tenth Circuit; therefore, we completed a draft environmental assessment and made it available for public review and comment. A final environmental assessment and Finding of No Significant Impact have been prepared for this designation and are available from the Kansas Field Office (*see* **ADDRESSES**).

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 Topeka shiner.

References Cited

A complete list of all references cited herein is available upon request from the Kansas Field Office (*see* **ADDRESSES**).

Author

The primary author of this 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.

Regulation Promulgation

■ Accordingly, we 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	When critical special			
Common name	Scientific name			Status	Listed	Habitat	Rules
*	*	*	*	*	*		*
FISHES							
*	*	*	*	*	*		*
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; Lincoln, Murray, Nobles, Pipestone, and Rock Counties, Minnesota; and Madison County, Nebraska, on the maps and as described below.

(2) Critical habitat includes all stream channels up to the bankfull discharge elevation. Additionally, in Iowa and Minnesota, 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) The primary constituent elements of critical habitat for the Topeka shiner consist of:

(i) Streams most often with permanent flow, but that can become intermittent during dry periods;

(ii) 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;

(iii) 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.);

(iv) 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);

(v) 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;

(vi) Sand, gravel, cobble, and silt substrates with amounts of fine sediment and substrate embeddedness that allow 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;

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

(viii) 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

(ix) Few or no nonnative predatory or nonnative competitive species present.

Critical Habitat Map Units

(4) Critical habitat was identified using the Fifth Principal Meridian in Iowa and Minnesota; the Sixth Principal Meridian in 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) Unit 1: North Raccoon River Watershed—Calhoun, Carroll, Dallas, Greene, Sac and Webster Counties, Iowa.

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

(ii) Reach 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).

(iii) Reach 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).

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

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

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

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

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

(ix) Reach 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).

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

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

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

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

(xiv) Reach 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).

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

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

(xvii) Reach 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.

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

(xix) Reach 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) *Note:* Unit 1 (Map 1) follows.

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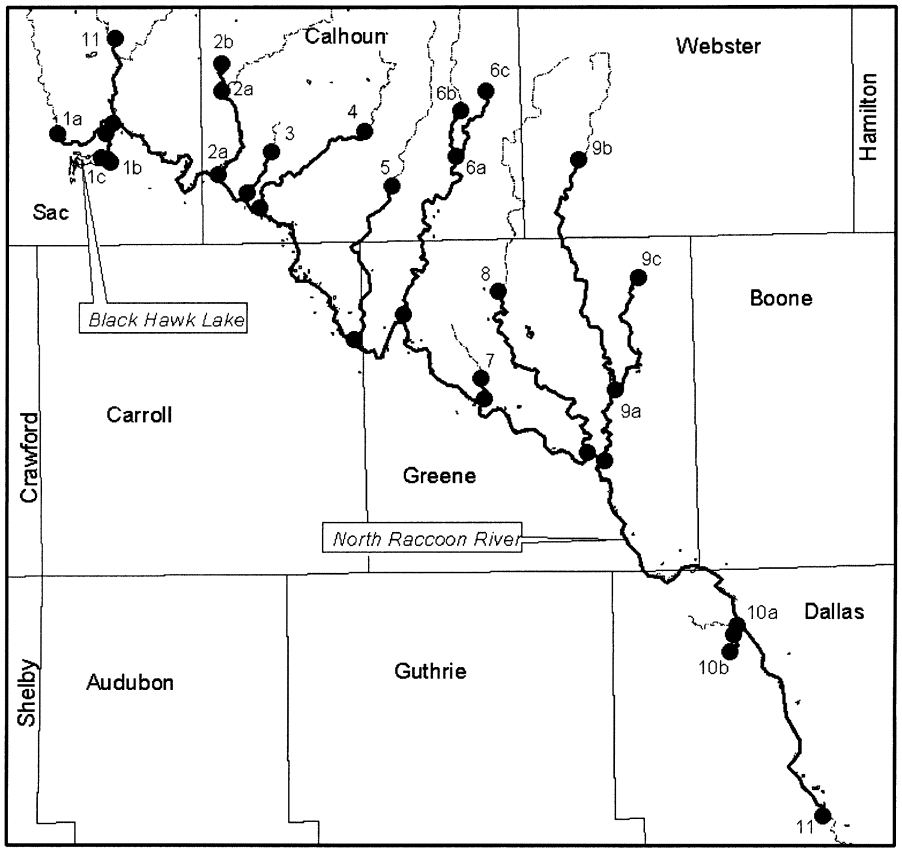
Map 1: General Locations of Designated Critical Habitat for the Topeka Shiner *(Notropis topeka)*

Iowa - North Raccoon River Watershed



10 0 10 Miles

10 0 10 20 Kilometers

N

Proposed Critical Habitat

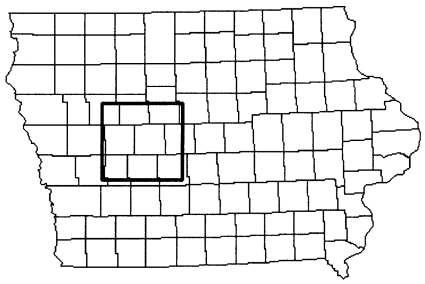
Not Proposed as Critical Habitat

County Lines

Reaches

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

Area of Detail



(7) Unit 2: Boone River Watershed—Wright and Hamilton Counties, Iowa.

(i) Reach 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

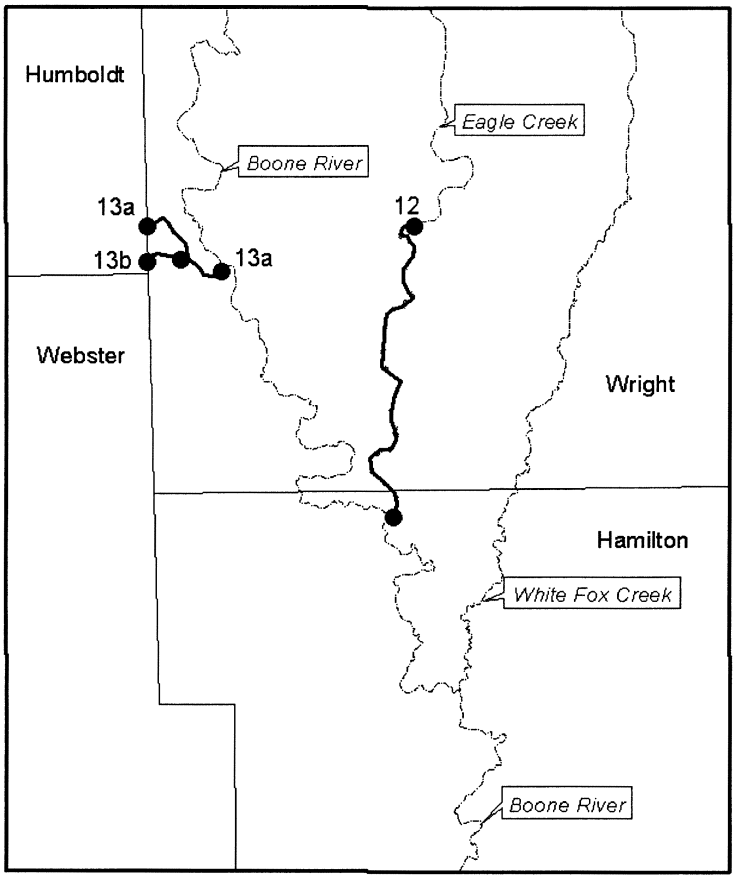
(ii) Reach 13a. Ditch 3 from its confluence with the Boone River (T91N, R26W, Sec. 32), upstream through T91N, R26W, Sec. 30.

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

(8) *Note:* Unit 2 (Map 2) follows.

Map 2: General Locations of Designated Critical Habitat for the Topeka Shiner *(Notropis topeka)*

Iowa - Boone River Watershed



5 0 5 Miles

5 0 5 10 Kilometers

Proposed Critical Habitat

Not Proposed as Critical Habitat

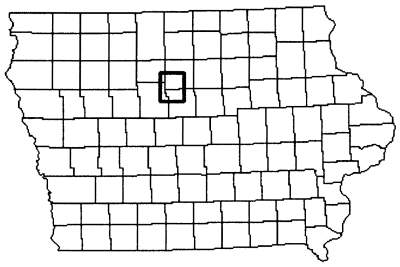
County Lines

Reaches

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

N

Area of Detail



(9) Unit 3: Rock River Watershed—Lyon and Osceola Counties, Iowa.

Rock River Complex

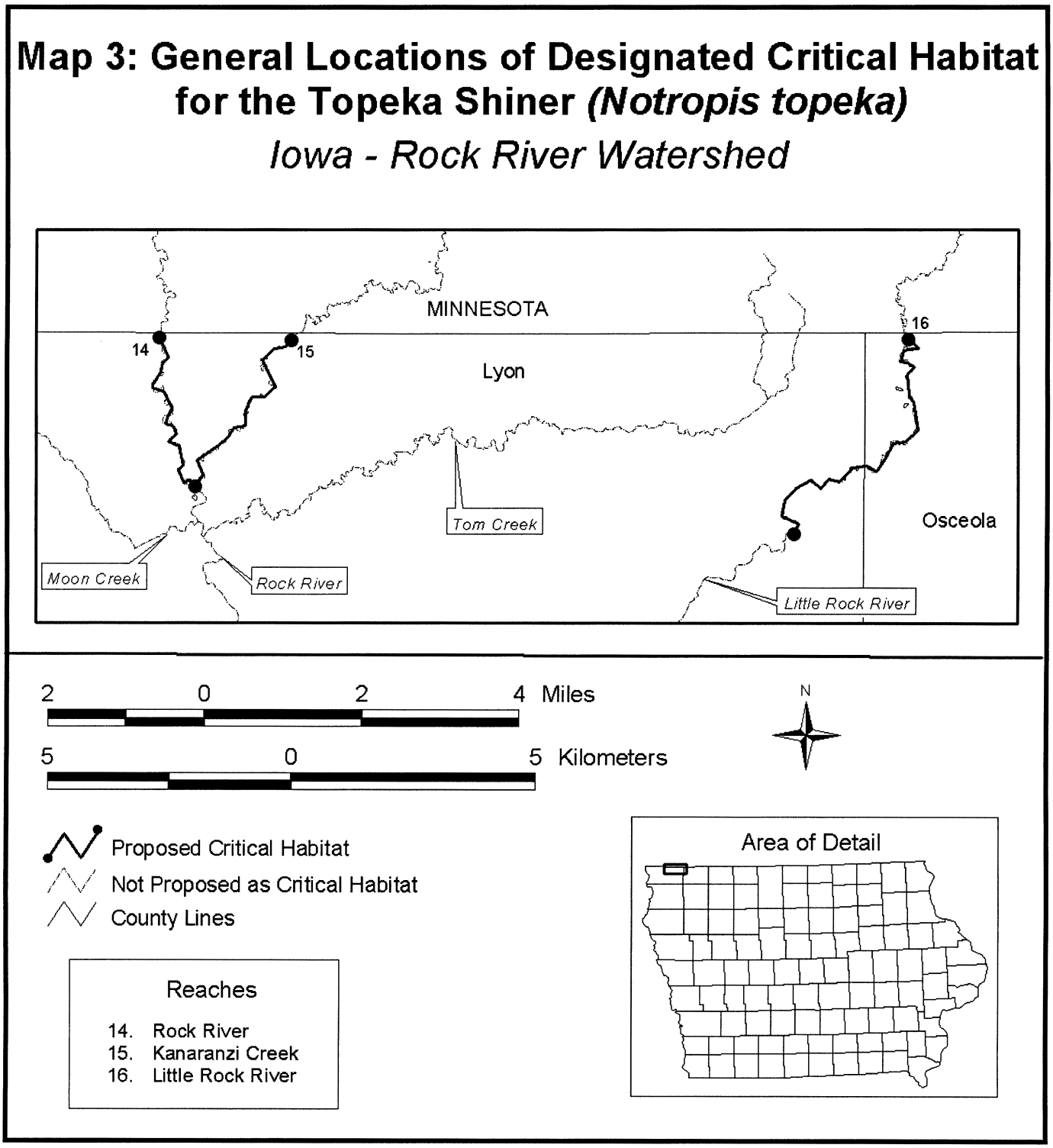
(i) Reach 14. Rock River from its confluence with Kanaranzi Creek (T100N, R45W, Sec. 28), upstream to the Iowa/Minnesota State border (T100N, R45W, Sec. 8).

(ii) Reach 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

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

(10) *Note:* Unit 3 (Map 3) follows.



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(11) Unit 4: Big Sioux River Watershed—Lincoln, Pipestone and Rock, Counties, Minnesota; and Rock River Watershed—Murray, Nobles, Pipestone and Rock Counties, Minnesota.

Medary Creek Complex

(i) Reach 1a. Medary Creek from the Minnesota/South Dakota State border (T109N, R47W, Sec. 13), upstream through T110N, R46W, Sec. 21.

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

Flandreau Creek Complex

(iii) Reach 2a. Flandreau Creek from the Minnesota/South Dakota State border (T107N, R47W, Sec. 14), upstream through T109N, R45W, Sec. 31.

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

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

(vi) Reach 2d. Willow Creek from its confluence with Flandreau Creek (T107N, R46W, Sec. 6), upstream through T108N, R46W, Sec. 3.

Split Rock/Pipestone/Beaver Creek Complex

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

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

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

(x) Reach 3d. North Branch Pipestone Creek from its confluence with Pipestone Creek (T106N, R46W, Sec. 5), upstream through T107N, R45W, Sec. 4.

(xi) Reach 3e. Unnamed tributary to North Branch Pipestone Creek, from their confluence (T107N, R45W, Sec. 4), upstream through T108N, R45W, Sec. 23.

(xii) Reach 3f. Split Rock Creek from the Minnesota/South Dakota State border (T103N, R47W, Sec. 2), upstream to Split Rock Lake Outlet (T105N, R46W, Sec. 22).

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

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

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

(xvi) Reach 3j. Pipestone Creek from its confluence with Split Rock Creek (T104N, R47W, Sec. 22), upstream to the Minnesota/South Dakota State border T104N, R47W, Sec. 23.

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

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

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

(xx) Reach 3n. Beaver Creek from the Minnesota/South Dakota State border (T102N, R47W, Sec. 34), upstream through T104N, R45W, Sec. 20.

(xxi) Reach 3o. Springwater Creek from its confluence with Beaver Creek (T102N, R47W, Sec. 34), upstream through T102N, R46W, Sec. 6.

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

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

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

Rock River Complex

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

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

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

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

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

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

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

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

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

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

(xxxv) Reach 4k. Unnamed tributary to Elk Creek, from their confluence (T102N, R44W, Sec. 16), upstream through T102N, R44W, Sec. 9.

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

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

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

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

(xl) Reach 4p. Unnamed tributary to the Rock River, from their confluence (T103N, R44W, Sec. 17), upstream through T104N, R44W, Sec. 26.

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

(xlii) Reach 4r. Unnamed tributary to the Rock River, from their confluence (T103N, R44W, Sec. 8), upstream through T104N, R45W, Sec. 33.

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

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

(xlv) Reach 4u. Poplar Creek from its confluence with the Rock River (T104N,

R44W, Sec. 5), upstream through T105N, R45W, Sec. 32.

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

(xlvii) Reach 4w. Chanarambie Creek from its confluence with the Rock River (T105N, R44W, Sec. 33), upstream through T105N, R43W, Sec. 8.

(xlviii) Reach 4x. North Branch Chanarambie Creek from its confluence with Chanarambie Creek (T105N, R43W, Sec. 8), upstream through T106N, R43W, Sec. 18.

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

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

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

(lii) Reach 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

(liii) Reach 5a. Little Rock River from the Minnesota/Iowa State border (T101N, R42W, Sec. 35), upstream through T102N, R41W, Sec. 34.

(liv) Reach 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

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

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

(lvii) Reach 6c. Unnamed tributary to Mud Creek, from their confluence (T101N, R46W, Sec. 11), upstream through T101N, R46W, Sec. 1.

(12) **Note:** Unit 4 (Map 4) follows.

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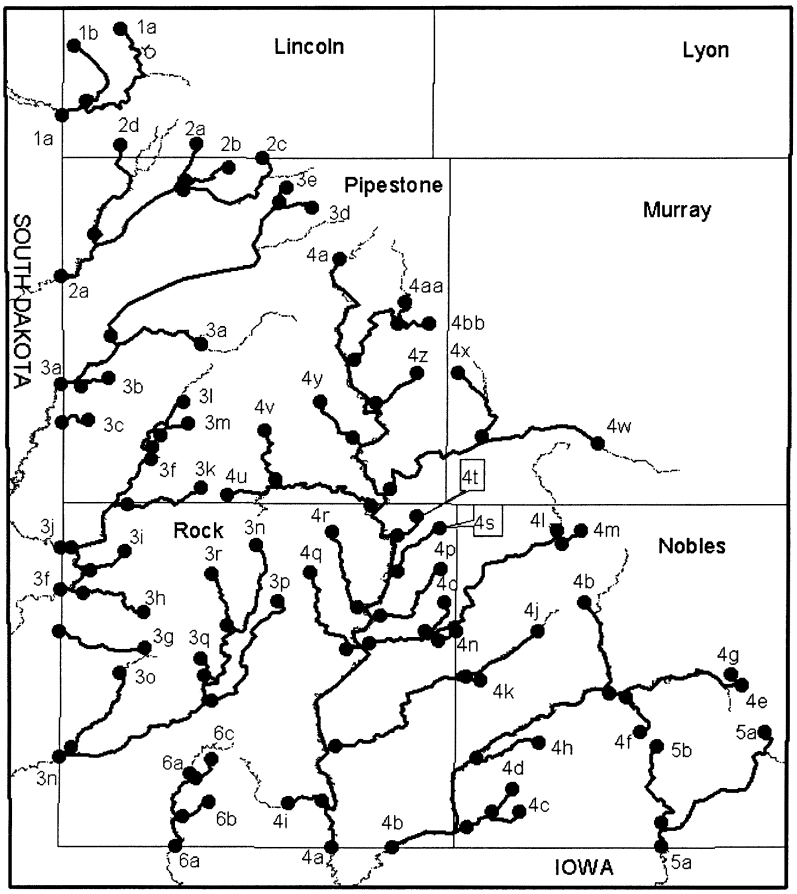
Map 4: General Locations of Designated Critical Habitat for the Topeka Shiner *(Notropis topeka)*

Minnesota - Big Souix/Rock Rivers Watershed



10 0 10 Miles

10 0 10 Kilometers

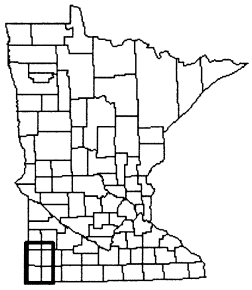
N

Proposed Critical Habitat

Not Proposed as Critical Habitat

County Lines

Area of Detail



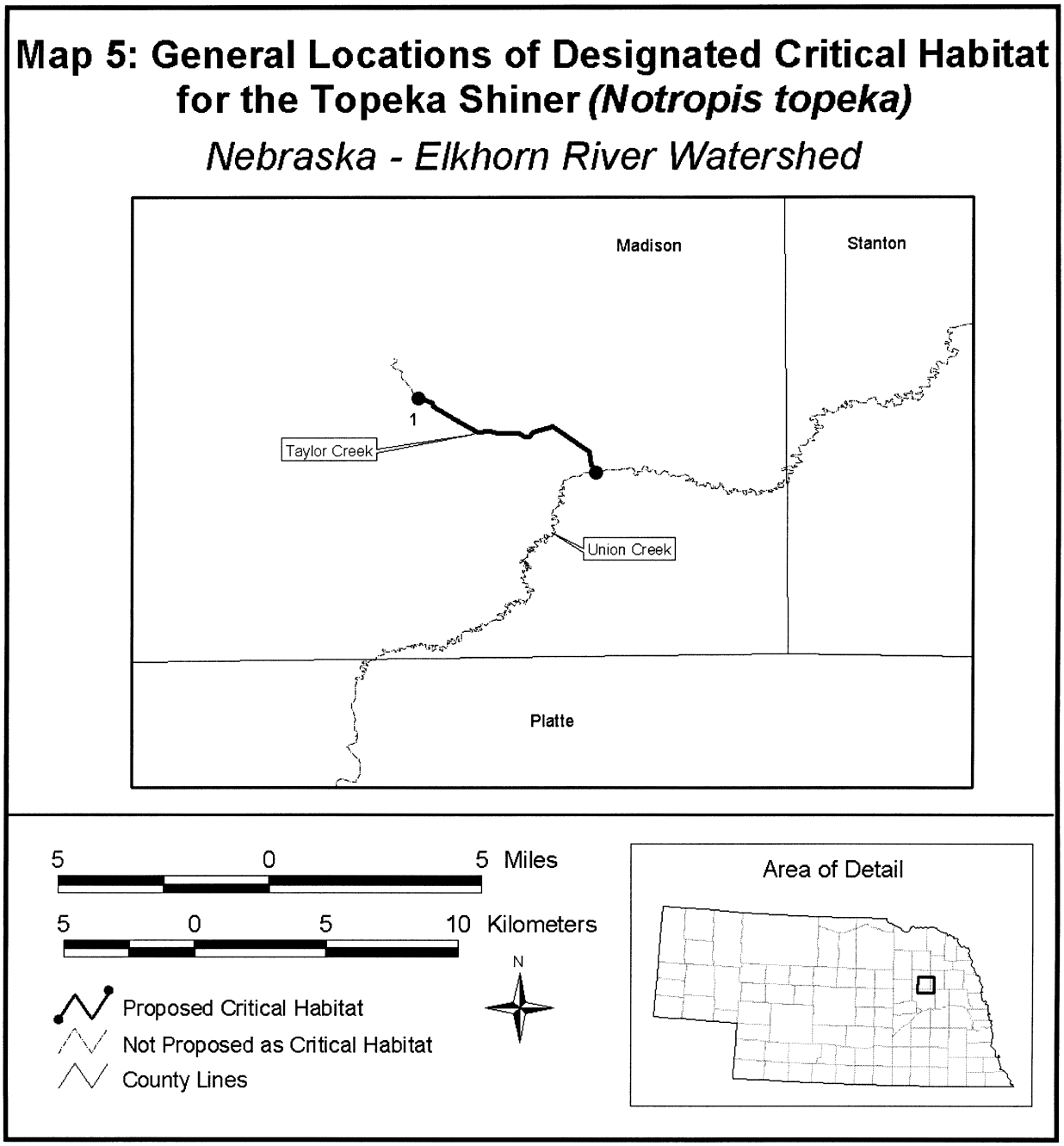
Reaches

1a. Medary Creek
1b. Unnamed tributary
2a. Flandreau Creek
2b. Unnamed tributary
2c. East Branch Flandreau Creek
2d. Wilow 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

(13) Unit 5: Elkhorn River Watershed—Madison County, Nebraska.

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

(14) **Note:** Unit 5 (Map 5) follows.



* * * * *

Dated: July 16, 2004.

Paul Hoffman,

Acting Assistant Secretary for Fish and Wildlife and Parks.

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