



**Questions and Answers:
Proposed Rule to List and Designate Critical Habitat for the
Sharpnose shiner and the Smalleye shiner**

Southwest Region (Arizona • New Mexico • Oklahoma • Texas)
www.fws.gov/southwest/

For Release: August 6, 2013

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Q: What action is the U.S. Fish and Wildlife Service (Service) taking?

A: The Service is proposing to protect the sharpnose shiner (*Notropis oxyrhynchus*) and smalleye shiner (*N. buccula*) as endangered species under the Endangered Species Act (ESA). The sharpnose and smalleye shiners (two small fish) have been candidates for listing under the ESA since 2002.

The Service is also proposing to designate a total of approximately 623 miles (1,002 river kilometers) of the upper Brazos River basin and the upland areas extending beyond the river channel by 30 meters on each side as critical habitat in the following Texas counties: Baylor, Crosby, Fisher, Garza, Haskell, Kent, King, Knox, Stonewall, Throckmorton and Young.

Q: Why is the Service proposing to list the two shiner species as endangered?

A: The Service is proposing to list the sharpnose shiner and the smalleye shiner as endangered because they are presently in danger of extinction throughout their entire ranges, based on the immediacy, severity and scope of the threats from the loss of habitat due to fragmentation and reduced water quantity and quality. The threats to the two species are occurring now or are imminent and their potential impacts to the species would be catastrophic given their very limited range, making the shiners at risk of extinction at the present time. The proposal to list and designate critical habitat for the two shiner species is based on the best scientific and commercial data available.

Q: What information is the Service requesting?

A: Any final actions resulting from these proposed rules will be based on the best scientific and commercial data available and will be as accurate and as effective as possible. With respect to the listing and critical habitat proposals for the sharpnose and smalleye shiners, the Service is seeking information regarding:

- 1) The sharpnose and smalleye shiners' biology, range, and population trends, including:
 - (a) Biological or ecological requirements of these species, including habitat requirements for feeding, breeding, and sheltering;
 - (b) Genetics and taxonomy;

- (c) Historical and current range including distribution patterns;
 - (d) Historical and current population levels, and current and projected trends; and
 - (e) Past and ongoing conservation measures for these species, their habitat, or both.
- 2) Factors that may affect the continued existence of the species, which may include habitat modification or destruction, overutilization, disease, predation, the inadequacy of existing regulatory mechanisms, or other natural or manmade factors.
 - 3) Biological, commercial trade, or other relevant data concerning any threats (or lack thereof) to this species and existing regulations that may be addressing those threats.
 - 4) Additional information concerning the historical and current status, range, distribution, and population size of this species, including the locations of any additional populations of this species.
 - 5) Information on the projected and reasonably likely impacts of climate change on sharpnose and smalleye shiners.
 - 6) The relationship between groundwater withdrawal and the reduction of surface water flow in areas occupied by sharpnose and smalleye shiners.
 - 7) The relationship between saltcedar encroachment and the reduction of surface water flow.
 - 8) The causation of toxic golden alga blooms and their potential effect on sharpnose and smalleye shiners.
 - 9) Sources of surface water contamination, particularly petroleum products, in the upper Brazos River basin.
 - 10) Future reservoir impoundments (and other fish barrier construction) within the upper Brazos River basin and their potential effects to surface water flows and fish migration within habitat occupied by these species.
 - 11) Reasons why we should or should not designate habitat as “critical habitat” under section 4 of the Act (16 U.S.C. 1531 et seq.), including whether there are threats to the species from human activity, the degree of which can be expected to increase due to the designation, and whether that increase in threats outweighs the benefit of designation such that the designation of critical habitat may not be prudent.
 - 12) Specific information on:
 - (a) The amount and distribution of the sharpnose shiner and smalleye shiner and their habitat;
 - (b) What areas, that were occupied at the time of listing (or are currently occupied) and that contain features essential to the conservation of the species, should be included in the designation and why;
 - (c) Special management considerations or protection that may be needed in critical habitat areas we are proposing, including managing for the potential effects of climate change; and
 - (d) What areas not occupied at the time of listing are essential for the conservation of the species and why.
 - 13) Land use designations and current or planned activities in the subject areas and their possible impacts of these activities on these species and proposed critical habitat.
 - 14) Information on the projected and reasonably likely impacts of climate change on the sharpnose shiner and smalleye shiner and proposed critical habitat.
 - 15) Any probable economic, national security, or other relevant impacts of designating any area that may be included in the final designation; in particular, any impacts on small

entities or families, and the benefits of including or excluding areas that exhibit these impacts.

16) Whether any specific areas we are proposing for critical habitat designation should be considered for exclusion under section 4(b)(2) of the Act, and whether the benefits of potentially excluding any specific area outweigh the benefits of including that area under section 4(b)(2) of the Act.

17) Whether we could improve or modify our approach to designating critical habitat in any way to provide for greater public participation and understanding or to better accommodate public concerns and comments.

Q: How can the public submit information on the proposal?

A: The Service is requesting comments or information from other concerned governmental agencies, the scientific community, industry or any other interested parties.

On Wednesday, September 4, 2013, the Service will hold a public informational session and a public hearing. The informational session and public hearing will be held at the Abilene Civic Center, Upstairs Conference Room, 1100 North 6th Street, Abilene, TX 79601. The informational meeting will be held from 5:00 – 6:00 p.m. followed by a break and the public hearing will be held from 6:30 – 8:00 p.m.

Written comments and information concerning the proposed listing and critical habitat rules will be accepted until October 7, 2013, and may be submitted by one of the following methods:

- **Federal eRulemaking Portal:** <http://www.regulations.gov>. Submit comments on the listing proposal to Docket No. FWS–R2–ES–2013–0083, and submit comments on the critical habitat proposal to Docket No. FWS–R2–ES–2013–0008.; or
- **By hard copy:** U.S. mail or hand-delivery: Public Comments Processing, Attn: FWS–R2–ES–2013–0083; Division of Policy and Directives Management; U.S. Fish and Wildlife Service; 4401 N. Fairfax Drive, MS 2042–PDM; Arlington, VA 22203. Submit comments on the critical habitat proposal by U.S. mail or hand-delivery to: Public Comments Processing, Attn: FWS-R2-ES-2013-0008; Division of Policy and Directives Management; U.S. Fish and Wildlife Service; 4401 N. Fairfax Drive, MS 2042-PDM; Arlington, VA 22203.

Comments must be received within 60 days, on or before October 7, 2013. The Service will post all comments on <http://www.regulations.gov>. This generally means the agency will post any personal information provided through the process. The Service is not able to accept email or faxes.

For further information contact Erik Orsak, Acting Field Supervisor, U.S. Fish and Wildlife Service, Arlington, Texas, Ecological Services Field Office, 2005 NE Green Oaks Blvd., Suite 140, Arlington, Texas 76006; by telephone 817–277–1100; or by fax 817–277–1129. If you use a telecommunications device for the deaf (TDD), call the Federal Information Relay Service (FIRS) at 800-877-8339.

Q: What are shiners?

A: The sharpnose shiner and smalleye shiner are small minnows native to arid prairie streams of Texas. The maximum lifespan of these species is approximately three years, although most individuals only live through one breeding season, which is from April through September. Both species feed on a wide variety of items including aquatic invertebrates, terrestrial insects, plant material, and detritus.

The sharpnose and smalleye shiner require wide, shallow, flowing waters generally less than half a meter deep (1.6 ft) with sandy substrates. In order to successfully reproduce, it is estimated that shiners require approximately 275 km (171 mi) of unobstructed, flowing water during the breeding season to support survival of the eggs and larva. This length of stream allows the eggs and larvae to remain suspended in the water column and survive until they mature sufficiently to swim on their own.

Q: Where are the two shiner species found?

A: The two shiners are currently restricted almost entirely to the contiguous river segments of the upper Brazos River basin in north-central Texas. Historically, sharpnose and smalleye shiners existed throughout the Brazos River and several of its major tributaries within the watershed. The sharpnose shiner also historically and naturally occurred in the Colorado River and the Wichita River in Texas. Both species need wide, shallow, unobstructed flowing waters to meet their life history requirements for survival, growth, and reproduction.

Q: Why are the two shiner species in danger of extinction?

A: The two primary factors affecting the current and future conditions of these shiners are river fragmentation by impoundments and alterations of the natural streamflow regime (by impoundments, drought, groundwater withdrawal, and saltcedar encroachment) within their range. Other secondary factors, such as water quality degradation (by pollution and golden alga) and commercial harvesting for fish bait, are also likely impacting the shiners.

Q: What conservation efforts are currently being undertaken for the two shiners?

A: In the summer of 2011, fearing the shiners' possible extinction due to loss of river habitat as a result of the drought, Texas Parks and Wildlife Department (TPWD) biologists salvaged more than 1,000 sharpnose and smalleye shiners from the upper Brazos River, where record drought had confined them to shrinking, non-flowing, isolated pools. In May 2012, approximately 372 surviving individuals of each species were released into the lower Brazos River. The remaining fish were used to begin a captive propagation program at Texas Tech University (TTU).

Ichthyologists at TTU have been experimentally assessing techniques for the captive propagation of sharpnose and smalleye shiners. Due to the current restriction of both species to single populations within the upper Brazos River, it is likely captive propagation would be included as a recovery tool. These conservation efforts are in the very early stages of planning.

Service staff and staff from the Natural Resource Conservation Service (NRCS) have been discussing the potential benefits of saltcedar control and establishment of native vegetation along shiner-occupied river segments of the upper Brazos River basin and are coordinating their efforts to implement saltcedar control. These conservation efforts are also in the very early stages of planning.

Q: How would the two shiners benefit from an ESA listing?

A: Species listed as endangered or threatened under the ESA benefit from conservation measures that include recognition of threats to the species, implementation of recovery actions, and federal protection from harmful practices.

Recognition under the ESA results in public awareness and conservation by federal, state, tribal, and local agencies; private organizations; and individuals. The ESA encourages cooperation with the States and other partners to conserve listed species.

The ESA also requires the Service to develop and implement recovery plans for the conservation of threatened and endangered species. Recovery plans outline actions that are needed to improve the species' status such that it no longer requires protection under the ESA. The Service develops and implements these plans in partnership with the species experts; other federal, state, and local agencies; Tribes; nongovernmental organizations; academia; and other stakeholders. Recovery plans also establish a framework for agencies to coordinate their recovery efforts and provide estimates of the cost of implementing recovery tasks. Examples of typical recovery actions include habitat protection, habitat restoration (e.g., restoration of native vegetation), research, captive propagation and reintroduction and outreach and education.

Under the ESA, federal agencies must ensure that actions they approve, fund, or carry out do not jeopardize the continued existence of a listed species or destroy its critical habitat. In addition, under the ESA, endangered animal species cannot be killed, hunted, collected, injured, or otherwise subjected to "harm." Endangered species cannot be purchased or sold in interstate or foreign commerce without a federal permit.

Q: What is critical habitat?

A: Critical habitat is a term in the ESA that identifies geographic areas essential for the conservation of a threatened or endangered species. The ESA defines "conservation" as the actions leading towards the eventual recovery of a species to the point where it is no longer threatened or endangered.

Critical habitat provides protection from the prohibition against destruction or adverse modification from actions carried out, funded, or authorized by a federal agency and is carried out through required consultation under section 7 of the Endangered Species Act. Due to legal challenges, the Service no longer relies on the regulatory definition of "destruction or adverse modification" of critical habitat. Instead, the Service relies on the statutory provisions of the Endangered Species Act to complete adverse modification analysis.

The designation of critical habitat does not affect land ownership or establish a refuge, wilderness, reserve, preserve, or other conservation area. A critical habitat designation identifies areas that are important to the conservation of federally listed threatened or endangered species. A critical habitat designation requires federal agencies to consult with the Service on any of their actions that may affect critical habitat in designated areas. The Service can then recommend ways to minimize any adverse effects. It imposes no requirements on State or private actions on State or private lands where no federal funding, permits or approvals are required.

Critical habitat designation has several benefits including: (1) Triggering consultation under section 7 of the Act in new areas for actions in which there may be a Federal nexus where it would not otherwise occur because, for example, it has become unoccupied or the occupancy is in question; (2) focusing conservation activities on the most essential features and areas; (3) providing educational benefits to State or county governments or private entities; and (4) preventing people from causing inadvertent harm to the species.

Q: How did the Service identify the areas proposed as shiner critical habitat? Has the Service proposed to exclude any areas?

A: In accordance with the ESA, the Service first determined what specific areas, within the geographical area occupied by the species at the time they are listed, contain the physical or biological features that are essential to the conservation of the species and which may require special management considerations or protections. To determine occupancy we (1) used survey results from 2008 and 2012, and (2) considered tributaries previously occupied by either species and contiguous with currently occupied areas as occupied. Next, we considered whether designating any additional areas—outside those currently occupied at the time of listing—are necessary to ensure the conservation of the species. We are not currently proposing to designate any areas outside the geographical area occupied by the species at the time of listing. At this time we are not considering exclusion of any areas from critical habitat designation.

Q: What are the economic costs associated with the proposed critical habitat?

A: Under the Endangered Species Act, the Service is required to take into consideration the economic impact, and any other relevant impact, of designating particular areas as critical habitat. In the coming months, the Service will prepare an economic analysis which provides the estimated costs of the foreseeable economic impacts of the proposed critical habitat designation. A draft of the economic analysis will be available for public comment.

Q: Do listed species in critical habitat areas receive more protection?

A: Listed species and their habitat are protected by the ESA whether or not they are in an area designated as critical habitat. To understand the additional protection that critical habitat provides to an area, it is first necessary to understand the protection afforded to any endangered or threatened species, even if critical habitat is not designated for it.

The ESA forbids anyone to import, export, or engage in interstate or foreign sale of endangered and threatened animals and plants without a special permit. It also makes “take” illegal forbidding the

killing, harming, harassing, pursuing or removing the species from the wild. The ESA requires that federal agencies conduct their activities in such a way as to conserve species. The ESA also requires federal agencies to consult with the Service to conserve listed species on their lands and ensure that any activity they fund, authorize or carry out will not jeopardize the survival of a threatened or endangered species. This is known as consultation.

In consultations for species with critical habitat, federal agencies are required to ensure that their activities do not destroy or adversely modify critical habitat to the point that it can no longer serve its conservation role in the species' recovery. The greatest benefit of critical habitat occurs in areas that are currently unoccupied by the species, but are needed for its recovery. With critical habitat designations, these unoccupied areas are protected by the prohibition against destruction and adverse modification of critical habitat; however, no unoccupied areas are currently proposed for designation as critical habitat for either the sharpnose or small-eye shiner.

Q: Will water management in the Brazos River be affected by the proposed listing or proposed critical habitat designation?

A: Given the dry climatic conditions of the upper Brazos River basin it is likely some water management (reservoir release strategies, water conservation measures, avoidance of further habitat fragmentation, etc.) will be required to ensure these species survive long term.

Q: Will livestock grazing be affected by the proposed listing or proposed critical habitat?

A: The Service does not expect livestock grazing to be affected by the proposed listing or designation of critical habitat.

Q: How would a critical habitat designation affect my private land?

A: Requirements for consultation on critical habitat do not apply to entirely private actions on private lands. Critical habitat designations only apply to federal lands or federally funded or permitted activities on private lands. Activities on private or state lands that are funded, permitted or carried out by a federal agency, such as a permit from the U.S. Army Corps of Engineers under section 404 of the Clean Water Act, or a section 402 permit under the Clean Water Act from the Environmental Protection Agency, will be subject to the section 7 consultation process with the Service if those actions may affect critical habitat or a listed species.

Through this consultation, the Service would advise agencies whether the permitted actions would likely jeopardize the continued existence of the species or adversely modify critical habitat. Federal actions not affecting critical habitat or otherwise affecting species or their habitat (e.g., suitable habitat outside of critical habitat), and actions on non-federal lands that are not federally funded, permitted or carried out, will not require section 7 consultation.