



Questions and Answers: Listing Proposal for the Texas Hornshell

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

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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 Texas hornshell, a freshwater mussel, as an endangered species under the Endangered Species Act (ESA). The species has been a candidate for listing since 2001. The proposed listing will publish in the *Federal Register* on August 10, 2016, and public comments will be accepted until October 11, 2016. We encourage the public, academia, federal and state agencies, industry and other stakeholders to review the proposal and provide comments. Our decision to list the Texas hornshell or withdraw our proposal will be based on the best available science. A final decision to list or withdraw the proposal is typically made within a year after proposal.

Q: Why is the Service proposing to list the Texas hornshell as endangered?

A: The Service is proposing to list the Texas hornshell as endangered because it has declined significantly across its historical range and faces the threat of extinction. Once found throughout the Rio Grande River Basin in New Mexico, Texas and Mexico, as well as along Mexican coastal area rivers, it is now found in only 15% of its historical range in the U.S. and is presently in danger of extinction throughout its entire range. The remaining populations are presently being impacted by the loss of habitat as a result of habitat fragmentation and reduced water quality and quantity. The proposal to list the species is based on the best scientific and commercial data available.

Q: What is the Texas hornshell?

A: The Texas Hornshell is a medium-sized freshwater mussel native to the Rio Grande Basin in Texas, New Mexico, and Mexico. Its outer shell surface appears olive green to dark brown. Texas hornshells may grow to be more than 4.5 inches long and live up to 20 years. Inside their shell is a muscular foot for movement, siphons for water exchange, gills and the viscera.

Texas hornshells have an interesting life history. Fertilized eggs develop into mollusk larvae (glochidia) and are released from the adults into water where they are consumed by fish and encyst in the host fish's gills, face, or fins. There they transform into the juvenile form and are

released, hopefully into suitable rocky substrate in high quality water, where they can attach to complete their development to eventually become reproductive adult mussels.

Q: Where is the Texas hornshell found?

A: Historically, the Texas hornshell occurred in New Mexico, Texas and Mexico. However, the population has declined notably throughout its range and it currently occupies about 15% of its historical range in the U.S. In New Mexico, it is now confirmed only in the Black River (a Pecos River tributary) of Eddy County, New Mexico. It is the last remaining native mussel in New Mexico; the other seven species have been extirpated. In the Rio Grande, the species is known to be present downstream of Big Bend National Park and near Laredo in Webb County, Texas, and the Devil's River in Val Verde County, Texas. Texas hornshells were historically widely distributed in Gulf Coast rivers in Mexico. The present status of Texas hornshell populations in Mexico and their habitats are less well known, but are presumed to be diminished in range, abundance and resiliency.

Texas hornshell typically occur in narrow areas of rivers and streams with travertine bedrock and fine-grained sand, clay or gravel in the crevices. They prefer undercut banks, crevices and bases of big boulders where the current is slowed, allowing the mussels to get a safe foothold and not be washed away in times of high water flow.

Q: What are the threats to the Texas hornshell?

A: The primary factors affecting the current and future conditions of the Texas hornshell is river fragmentation due to habitat inundation by impoundments and alterations of the natural streamflow regime (by impoundments, drought, groundwater withdrawal and resultant mussel-smothering sediment accumulation) and degradation of water quality within its range.

Q: What information is the Service requesting?

A: Any final actions (listing or proposal withdrawal) resulting from the proposed rule 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 proposal for the Texas hornshell the Service is seeking information regarding:

- (1) Texas hornshell's biology, range, and population trends, including:
 - (a) Biological or ecological requirements of the species, including habitat requirements for feeding and spawning;
 - (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 the species, its 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, particularly in Mexico.

(5) Information related to climate change within the range the Texas hornshell and how it may affect the species' habitat.

(6) The reasons why areas should or should not be designated as critical habitat as provided by section 4 of the Act (16 U.S.C. 1531 et seq.)

(7) The following specific information on:

(a) The amount and distribution of habitat for the Texas hornshell.

(b) What areas, that are currently occupied and that contain the physical and biological features essential to the conservation of the Texas hornshell, should be included in a critical habitat designation and why.

(c) Special management considerations or protection that may be needed for the essential features in potential critical habitat areas, including managing for the potential effects of climate change.

(d) What areas not occupied at the time of listing are essential for the conservation of the species and why.

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

A: Written comments and information concerning the proposed listing rule will be accepted until October 11, 2016, and may be submitted by one of the following methods:

- **Electronically:** Go to the Federal eRulemaking Portal: <http://www.regulations.gov>. In the Search box, enter FWS-R2-ES-2016-0077, which is the docket number for this rulemaking. Then, in the Search panel on the left side of the screen, under the Document Type heading, click on the Proposed Rules link to locate this document. You may submit a comment by clicking on "Comment Now!"
- **By hard copy:** Submit by U.S. mail or hand-delivery to: Public Comments Processing, Attn: FWS-R2-ES-2016-0077; U.S. Fish & Wildlife Headquarters, MS: BPHC, 5275 Leesburg Pike, Falls Church, VA 22041-3803.

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 additional information, contact Chuck Ardizzone, U.S. Fish and Wildlife Service, Texas Coastal Ecological Services Field Office, 17629 El Camino Real #211, Houston, TX 77058, by telephone 281-286-8282 or by fax 281-488-5882. Persons who use a telecommunications device for the deaf (TDD) may call the Federal Information Relay Service (FIRS) at 800-877-8339.

Q: What conservation efforts are currently being undertaken for the Texas hornshell?

A: In New Mexico, the Service is working with landowners, the State, the Bureau of Land Management (BLM) and industry on a Candidate Conservation Agreement (for federal lands) and Candidate Conservation Agreements with Assurances (for state and private lands) to provide a the groundwork for conservation for the Black and Delaware Rivers in New Mexico and Texas. The goal of these agreements is to engage all partners in specific conservation actions to improve habitat and secure flows in these rivers. Participants in these agreements include the Carlsbad Irrigation District, BLM, New Mexico Interstate Stream Commission, oil and gas industry, private landowners, counties, water pumpers and others. For additional information on the Texas hornshell CCA/A please contact Debra Hill, New Mexico Ecological Services Field Office, (505) 761-4719.

Candidate Conservation Agreements with Assurances are voluntary agreements that provide non-federal landowners and developers the opportunity to implement conservation practices that address specific threats. Cooperating non-federal landowners and developers receive assurances that, if the species is listed, they can continue to manage their land as outlined in their agreements with no additional requirements. Resulting, demonstrated and committed conservation gains will be considered by the Service when considering a final listing determination. If the species is listed and a CCAA is in place those landowners, oil and gas companies, irrigation districts, and others enrolled in the CCAA will not be required to do more than they have agreed to do under the agreements.

In Texas, The Nature Conservancy and Texas Parks and Wildlife Department are managing their lands in the Devils River watershed to reduce sediment inputs and contaminants thereby benefitting the Texas hornshell and other aquatic species. Research focused on helping improve the understanding of the species is being funded by the Office of the Texas Comptroller.

Q: How would the Texas hornshell 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, as well as 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 recovery partners 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 stream flow), 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: Would water management, grazing or oil and gas activities in the rivers and streams where the hornshell is found be affected by the proposed listing?

A: At this time the Service has only published a proposal to list the Texas hornshell and the states remain the lead for managing the species. If after reviewing the best available science the Service were to list the Texas hornshell, it is possible some water management (reservoir release strategies, water conservation measures, avoidance of further habitat fragmentation, etc.) will be required to ensure long-term survival of these species. The Service does not expect that livestock grazing or oil and gas development would be impacted if the species were to be listed, especially in areas of the Black River where a Candidate Conservation Agreement with Assurances is being developed.

Q. Why are freshwater mussels important?

A. Mussels are monitors of aquatic health: the presence of diverse and reproducing populations of mussels indicates a healthy aquatic system which means good fishing, good water quality for waterfowl and other wildlife species, as well as assurance that our water is safe. When mussel populations are at risk, it indicates problems for other fish and wildlife species, and people too.

Mussels perform important ecological functions. They are natural filters, and by feeding on algae, plankton and silts, they help purify the aquatic system. Mussels are also an important food source for many species of wildlife including otters, raccoon, muskrat, herons, egrets and some fish.

Mussels depend on the same waterways that people value, whether as a water source, favorite fishing spot, recreation area, or for their scenic qualities. Maintaining a healthy environment for mussels helps ensure these areas are available to people as well.