

U.S. FISH AND WILDLIFE SERVICE
5-YEAR REVIEW for
NEOSHO MADTOM
(Noturus placidus)

Species Reviewed: Neosho madtom (*Noturus placidus*)

Federal Register Notice of Listing Determination: May 12, 1990. Endangered and Threatened Wildlife and Plants; Neosho Madtom Determined to be Threatened (55 FR 21148)

Federal Register Notice Announcing Initiation of this Review: August 10, 2018. Initiation of 5-Year Status Reviews of 11 Species in the Mountain-Prairie Region (83 FR 39771).

Lead Region: Region 6, Kansas Ecological Services Field Office, Jason Luginbill, Field Supervisor, 785-539-3474

Classification: Threatened

Current Recovery Priority Number: 8c. This recovery priority number is indicative of a species facing a moderate degree of threat and a high recovery potential.

Methodology used to complete this review: In accordance with section 4(c)(2) of the Endangered Species Act of 1973, as amended (Act), the purpose of a 5-year review is to assess each threatened species and endangered species to determine whether its status has changed and it should be classified differently or removed from the Lists of Threatened and Endangered Wildlife and Plants. We previously completed a 5-year review for this species on March 25, 2013. , Biologists in the Kansas Ecological Services Office in Manhattan, Kansas, completed this 5-year review on August 22, 2019. We contacted individuals and agencies, including the Kansas Department of Wildlife Parks and Tourism (KDWP), Ecological Service Division, Kansas State University Division of Biology and the Missouri and Oklahoma Ecological Services Field Offices for information on the Neosho madtom. Additionally, we solicited data for this review from interested parties through an August 10, 2018, Federal Register notice announcing this review (83 FR 39771). We received new information in the form of survey data, including occurrence data that indicates that the Neosho madtom persists in relatively small numbers at previously documented locations; however, this new information did not alter our understanding of the species status and threats for this status review.

Review Summary: The Neosho madtom is a small catfish found only within the Neosho river basin in the Cottonwood, Neosho and Spring rivers in Kansas, Oklahoma and Missouri. It depends heavily on relatively clean gravel bars to feed, reproduce and secure shelter. The Service originally listed the Neosho madtom as a threatened species in 1991 (55 FR 21148-21153), due to existing and potential habitat modifications, such as impoundments, gravel

dredging, channelization, water diversions, water allocations, and water quality. Other threats to the species are the potential impacts of predators, regulatory mechanisms that may not be adequate to protect the species and extended droughts. Since the listing, no new dams have been constructed in Neosho madtom habitat, and there have been discussions about removing and retrofitting existing dams to improve conditions for the Neosho madtom, but these conservation efforts have not yet occurred.

New information received since our last 5-year review included occupancy surveys completed in Kansas. The KDWPT performed surveys over several months in 2016, 2017, and 2018, in an effort to document continued occupancy of Neosho madtoms. Those occupancy surveys indicated that Neosho madtoms could still be found in relatively small numbers at the survey locations. The maximum number of Neosho madtoms found at any of the survey sites was eight individuals. In 2019, biologists from the Service, KDWPT and Fort Riley Military Installation surveyed 12 locations and found Neosho madtoms in small numbers at 11 of the 12 locations. The maximum number counted at the 12 sites was 10 individuals. This new survey data indicates that Neosho madtoms have been able to maintain a continued presence in the main stem of the Neosho river.

Several fish hatcheries have the capabilities to work on captive propagation of the Neosho madtom. The Neosho National Fish hatchery in Missouri has discussed it and the Peoria tribe of Oklahoma has been working on captive propagation. Past efforts with captive propagation was minimally successful and no supplemental stocking of Neosho madtoms has occurred.

Recommendations on species status: Numerous past surveys indicate that the Neosho madtom still persists within the Neosho river basin, despite the fact that numerous stressors still exist today. However, numbers of individuals remain low to moderate. Therefore, after reviewing the best available scientific information, we conclude that the Neosho madtom remains a threatened species. Our review of new information does not change our evaluation of species status and the threats affecting the species under the factors in 4(a)(1) of the Act from our most recent review of the species. Specifically, existing and potential habitat modifications, such as impoundments, gravel dredging, channelization, water diversions, water allocation, and water quality remain threats to the species. These existing and potential threats, along with the low to moderate numbers of Neosho madtoms counted during surveys, continue to support our previous evaluation that the Neosho madtom remains in danger of becoming an endangered species throughout its entire range in the foreseeable future, and thus the Neosho madtom continues to meet the definition of a threatened species under the Act. Therefore, we recommend no change in status to the species at this time.

Recommendations for Future Actions:

1. Communicate and coordinate with the U.S. Army Corps of Engineers (Corps) concerning potential impacts to the Neosho madtom due to the operation of the John Redmond Dam. Consider consulting with the Corps on changes to the dam operations that could benefit the species.
2. Continue to develop and fund a population genetics study to investigate the possible genetic loss and differentiation of populations, which would also help inform a new draft recovery plan for the species.
3. Work with partners to draft a new recovery plan for the Neosho madtom which would include objective and measureable recovery criteria.
4. Continue to monitor the species and its habitat annually using standardized methods to help inform evaluations of abundance, distribution, and trends.
5. Continue to coordinate with other agencies, municipalities, and landowners to encourage the removal of lowhead dams in watersheds with Neosho madtoms.
6. Continue efforts to reduce non-point source pollution by working through the Farm Bill, the Watershed Restoration and Protection Strategy (WRAPS), and other incentive programs to implement best management practices within the Neosho river's watershed when opportunities exists.

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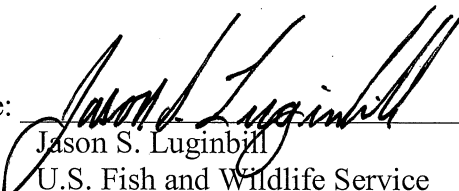
CURRENT CLASSIFICATION: Threatened

RECOMMENDATION RESULTING FROM THE 5-YEAR REVIEW:

- Downlist to Threatened
- Uplist to Endangered
- Delist:
 - Extinction
 - Recovery
 - Original data for classification in error
- No change is needed

APPROPRIATE LISTING/RECLASSIFICATION PRIORITY NUMBER, IF APPLICABLE: No change from 8C.

FIELD OFFICE APPROVAL:

Approve:  _____ Date: February 11, 2020
Jason S. Luginbill
U.S. Fish and Wildlife Service
Kansas Ecological Services Field Supervisor

The lead Field Office must ensure that other offices within the range of the species have been provided adequate opportunity to review and comment prior to the review's completion. The lead field office should document this coordination in the agency record.