

**2021 Monitoring Report for Stream-Crossing Projects  
That Have an Effect to Topeka Shiners and  
The American Burying Beetle**

In Compliance with Terms and Conditions Related to  
Topeka Shiner Reasonable and Prudent Measure 4 & 6:  
American Burying Beetle Reasonable and Prudent Measure 3:  
The 2008 Biological Opinion for Stream-Crossing Projects Administered/Funded by the  
South Dakota Department of Transportation and the Federal Highway Administration

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## **Table of Contents**

<i><u>Introduction</u></i>	Pg. 3
<i><u>Topeka Shiner 2021 Monitoring Report</u></i>	Pg. 3
<i><u>American Burying Beetle 2021 Report</u></i>	Pg. 6
<i><u>Conclusion</u></i>	Pg. 7
<b>Attachment 1:</b>	S.D. Fish Passage Monitoring Protocol
<b>Attachment 2:</b>	2021 Monitoring Plan to USFWS
<b>Attachment 3:</b>	2021 Monitored Structure Surveys
<b>Attachment 4:</b>	2021 Corrective Action
<b>Attachment 5:</b>	2021 Structure Seining Data Sheets
<b>Attachment 6:</b>	Tripp 01DX ‘May Affect, Likely to Adversely Affect’
<b>Table 1:</b>	2021 Monitoring Database
<b>Table 2:</b>	2020 & 2021 Projects Impacting American Burying Beetles

**Introduction:**

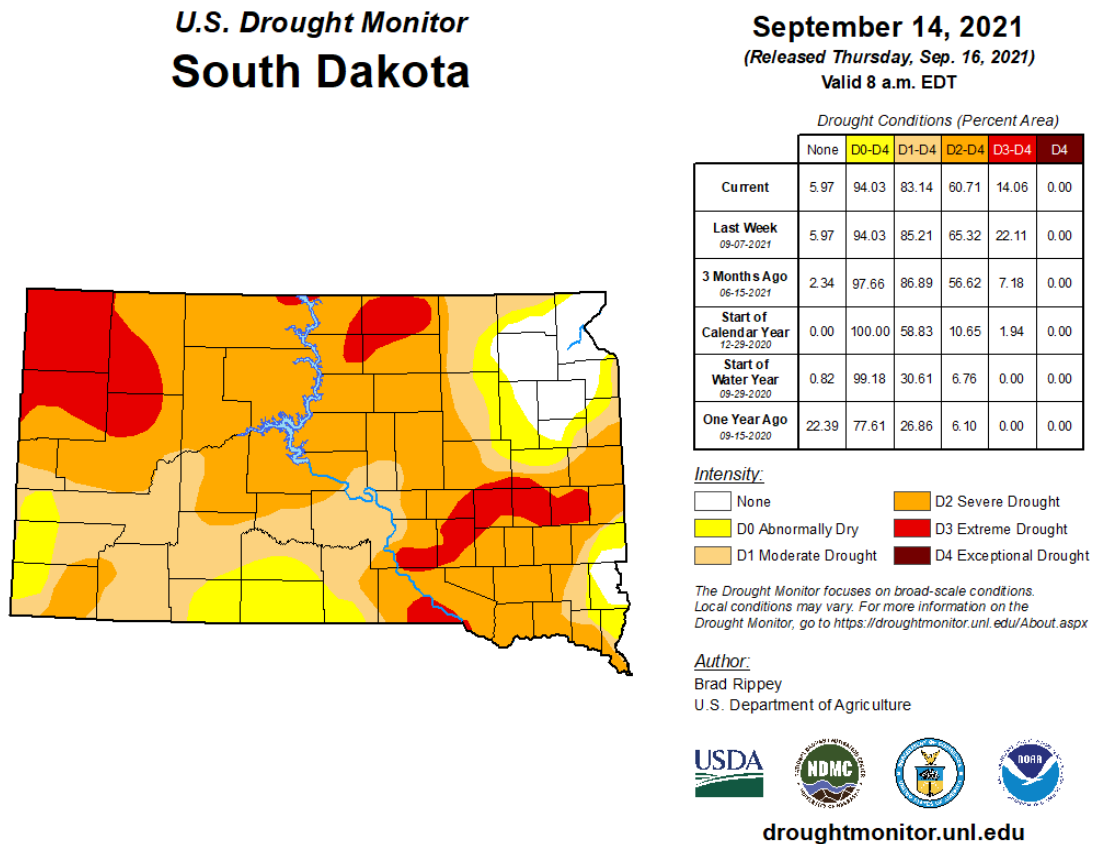
Reasonable and prudent measures (RPM) 4 in the *2008 Programmatic Biological Opinion* refers to the monitoring of all replaced structures found to “Adversely Affect” Topeka shiners. The Monitoring Program Plan “*South Dakota Fish Passage Monitoring Protocol for Projects Regulated by the 2008 Programmatic Biological Opinion: Stream Crossing Projects Administered/Funded by the South Dakota Department of Transportation and the Federal Highway Administration*” (Attachment 1 S.D. Fish Passage Monitoring Protocol) was completed and approved by the United States Fish and Wildlife Service (USFWS), Federal Highway Administration (FHWA), and the South Dakota Department of Transportation (SDDOT) in July 2012. After approval of the Monitoring Program Plan, representatives from USFWS, FHWA, and SDDOT continued to discuss and revise data collection methods and guidelines. In October 2012, this multiagency group agreed upon a set of data collection guidelines found within the ‘*SDDOT Fish Passage Assessment Worksheet*’ for use beginning in November 2012.

**Topeka Shiner 2021 Monitoring Report:**

Overview

The monitoring schedule for projects appended to the 2008 Biological Opinion is to monitor the first, third, and fifth year after the structure was constructed. SDDOT created a monitoring plan to complete structures that were not monitored in 2019 and 2020. The plan was submitted and approved by USFWS Mountain-Prairie Region 6 in May of 2021 (See Attachment 2). This revised monitoring plan allowed the SDDOT to complete monitoring of structures that required their monitoring schedule finalized. The 2021

monitoring season was conducted in the months of June and July. As Shown in Figure 1, southeastern South Dakota experienced drought conditions in 2021. The Topeka shiner’s range mostly consisted of “Severe Drought” and “Extreme Drought” conditions. Dry stream environments allowed SDDOT to accurately identify any fish passage barriers.



**Figure 1. South Dakota drought conditions as of September 2021.** Rippey, Brad and Richard Tinker. “South Dakota.” U.S. Drought Monitor. *National Drought Mitigation Center at the University of Nebraska-Lincoln, the United States Department of Agriculture, and the National Oceanic Atmospheric Administration.* <https://droughtmonitor.unl.edu/CurrentMap/StateDroughtMonitor.aspx?SD>. Accessed 16 September 2021.

### Analysis

In 2021 a total of ninety-one structures with a determination of 'May Affect, Likely to Adversely Affect' Topeka Shiners were monitored (Table 1). Forty-one of these structures constructed in 2014, 2015, and 2016 completed their monitoring schedule. Twenty-four structures constructed in 2017 and 2018 will complete their monitoring schedule in 2023. Twenty-six structures constructed in 2019 and 2020 received their first-year monitoring in 2021. For survey data sheets of structures monitored in 2021 see Attachment 3.

### Corrective actions

One structure required a corrective action involving minor debris removal accumulated from high flow events. An SDDOT maintenance action was taken in August 2021 to remove a log and other vegetation collected in the inlet of the structure (See Attachment 4).

### Fish Relocation

SDDOT retains records of fish species collected, removed, and relocated from project work areas. The relocation of species is primarily due to entrapment by constructed sheet piling and diversion channels at structure replacement locations. SDDOT Environmental staff travel to the construction site and use a sein net for rescuing entrapped fishes. Relocation of collected fishes immediately occurs back into the adjacent tributary from which they have been isolated. Fish species and number rescued data is recorded on the SDDOT Structure Seining Data Sheets. There were two sites that create the 2021 annual report of fish species collected (See Attachment 5). Four structure projects in 2020, and two structures in 2021 required seining due to potential entrapment

of endangered fish species. Many projects in 2021 did not require fish relocation because stream beds were dry due to the drought conditions. None of the visited fish rescue sites exhibited Topeka Shiners and no estimates of individuals occurred on site.

**American Burying Beetle 2021 Report:**

RPM 3 of the Terms and Conditions for the American burying beetle requires SDDOT to submit a report to USFWS for projects impacting the species. This report includes the 2020 and 2021 construction projects that SDDOT included a Special Provision for the American burying beetle (See Table 2). Projects were mostly limited to working within the existing Right-Of-Way which supported the USFWS approved determination of either a “No Effect” or “May Affect, Not likely to Adversely Affect.”

Effective November of 2020, the American burying beetle was reclassified from endangered to threatened. A section 4(d) rule prohibits the intentional take of the American burying beetle. A 2021 project expanded beyond previously disturbed roadway and resulted in a “May Affect, Likely to Adversely Affect.” The impacts of this project would not affect the species at a population level, but at a level of individual take. Incidental take is accepted in this instance as the scope of work is to replace the structure and the approach grading. Doug Backlund of the South Dakota Natural Heritage Program provided additional information stating the project location is well north of any documented American burying beetle populations (See Attachment 6).

**Conclusion:**

The 2021 monitoring report is comprised of multiple years of monitoring comments and corrections. SDDOT will continue to retain records of all monitored structures and any projects that involve stream crossings affecting sensitive species. Structure location and information for previously monitored structures for Topeka Shiner and their corresponding monitoring reports can be provided by SDDOT upon request. SDDOT has met the terms and conditions of the current 2008 Biological Opinion for the 2021 Monitoring Report.

By 2022 SDDOT anticipates an updated draft of the current Programmatic Biological Opinion. These updates are to ensure conservation of sensitive species and the incorporation of USFWS, FHWA, and the SDDOT's best interests. The 2008 Programmatic Biological Opinion requires corrections as prior listed species have been reclassified or completely delisted. Species such as the Northern Long Eared Bat need to be added to the updated Biological Opinion. Determination of effects for each species need to be reassessed based upon the current classification of each species. Reasonable and prudent measures of the current Biological Opinion will be updated as new scientific information has become available. The updated Biological Opinion between USFWS, FHWA, and the SDDOT can help the multiagency group determine special provisions for the planning and project process.