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DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

[Docket No. FWS–R2–ES–2026–2278; FXES1111090FEDR–267–FF09E21000]

RIN 1018–BI86

Endangered and Threatened Wildlife and Plants; Endangered Species Status for the Rio Grande Shiner

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), propose to list the Rio Grande shiner (*Notropis jemezanus*), a fish species from the Rio Grande Basin in New Mexico, Texas, and Mexico, as an endangered species under the Endangered Species Act of 1973, as amended (Act). This determination also serves as our 12-month finding on a petition to list the Rio Grande shiner. After a review of the best scientific and commercial data available, we find that listing the species is warranted. If we finalize this rule as proposed, it would add this species to the List of Endangered and Threatened Wildlife and extend the Act's protections to the species. We find that critical habitat for this species is not determinable at this time.

DATES: Comments will be accepted on or before [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER*]. Comments submitted electronically using the Federal eRulemaking Portal (see **ADDRESSES**, below) must be received by 11:59 p.m. eastern time on the closing date.

To ensure your comment is received and considered, you must submit it using one of the methods identified in the **ADDRESSES** section of this document. Comments

submitted through any method not authorized in this document, or sent to an address not listed here, will not be considered.

We must receive requests for a public hearing, in writing, by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER] either at http://www.regulations.gov at FWS–R2–ES–2026–2278, which is the docket number for this rulemaking, or at the address shown in **FOR FURTHER INFORMATION CONTACT**.

ADDRESSES: *Comment submission:* All submissions must include the docket number (FWS-R2-ES-2026-2278) for this document. You must submit comments using one of the following methods:

(1) *Electronic submission*: Federal eRulemaking Portal at: https://www.regulations.gov. In the Search box, enter FWS–R2–ES–2026–2278, which is the docket number for this action. Then, click the Search button. On the resulting page, you may submit a comment by clicking on "Comment." Please ensure that you have found the correct document before submitting your comments.

(2) *U.S. mail*: Public Comments Processing, Attn: FWS–R2–ES–2026–2278, Policy and Regulations Branch, U.S. Fish and Wildlife Service, MS: PRB (JAO/3W), 5275 Leesburg Pike, Falls Church, VA 22041–3803.

Comments submitted through any method not authorized in this document, or sent to an address not listed here, will not be considered. We will not accept comments via email, fax, or hand delivery. We are not required to consider comments that are submitted after the comment period ends or that are submitted via a method outside of these instructions. Comments containing profanity, vulgarity, threats, or other inappropriate content will not be considered.

We will post all comments at https://www.regulations.gov. You may request that we withhold personal identifying information from public review; however, we cannot

guarantee that we will be able to do so. See **Information Requested**, below, for more information.

Pursuant to the Administrative Procedure Act at 5 U.S.C. 553(b)(4), a plain language summary of the proposed rule is available on the docket at https://www.regulations.gov.

Availability of supporting materials: Supporting materials, such as the species status assessment report, are available at https://www.regulations.gov under Docket No. FWS–R2–ES–2026–2278.

FOR FURTHER INFORMATION CONTACT: Shawn Sartorius, Field Supervisor, U.S. Fish and Wildlife Service, New Mexico Ecological Services Field Office; 505–625–1354; shawn_sartorius@fws.gov. Individuals in the United States who are deaf, deafblind, hard of hearing, or have a speech disability may dial 711 (TTY, TDD, or TeleBraille) to access telecommunications relay services. Individuals outside the United States should use the relay services offered within their country to make international calls to the point-of-contact in the United States.

SUPPLEMENTARY INFORMATION:

Executive Summary

Why we need to publish a rule. Under the Act (16 U.S.C. 1531 et seq.), a species warrants listing if it meets the definition of an endangered species (in danger of extinction throughout all or a significant portion of its range) or a threatened species (likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range). If we determine that a species warrants listing, we must list the species promptly and designate the species' critical habitat to the maximum extent prudent and determinable. We have determined that the Rio Grande shiner meets the Act's definition of an endangered species; therefore, we are proposing to list it as such. Listing a species as an endangered species or threatened species can be completed only

by issuing a rule through the Administrative Procedure Act rulemaking process (5 U.S.C. 551 et seq.).

What this document does. We propose to list the Rio Grande shiner as an endangered species under the Act.

The basis for our action. Under the Act, we may determine that a species is an endangered or threatened species because of any of five factors: (A) The present or threatened destruction, modification, or curtailment of its habitat or range; (B) overutilization for commercial, recreational, scientific, or educational purposes; (C) disease or predation; (D) the inadequacy of existing regulatory mechanisms; or (E) other natural or manmade factors affecting its continued existence. We have determined that the Rio Grande shiner meets the Act's definition of an endangered species due to the following threats: modification of water flows and aquatic habitats due to dams, river channelization, water diversions, and groundwater pumping (Factor A); deterioration of water quality (Factor A); and river drying caused by drought (Factors A and E).

Section 4(a)(3) of the Act requires that the Secretary of the Interior (Secretary), to the maximum extent prudent and determinable, concurrently with listing designate critical habitat for the species. Section 3(5)(A) of the Act defines critical habitat as (i) the specific areas within the geographical area occupied by the species, at the time it is listed, 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; and (ii) specific areas outside the geographical area occupied by the species at the time it is listed, upon a determination by the Secretary that such areas are essential for the conservation of the species. Section 4(b)(2) of the Act states that the Secretary must make the designation on the basis of the best scientific data available and after taking into consideration the economic impact, the impact on national security, and any other relevant impacts of specifying any particular area as critical habitat.

We have determined that critical habitat is not determinable at this time for the Rio Grande shiner. The Act allows the Service an additional year to publish a critical habitat designation that is not determinable at the time of listing (16 U.S.C. 1533(b)(6)(C)(ii)).

Information Requested

We intend that any final action resulting from this proposed rule will be based on the best scientific and commercial data available and be as accurate and as effective as possible. Therefore, we request comments or information from other governmental agencies, Native American Tribes, the scientific community, industry, or any other interested parties concerning this proposed rule. We particularly seek comments concerning:

(1) The species' biology, range, and population trends, including:

(a) Biological or ecological requirements of the species, including habitat requirements for feeding, breeding, and sheltering;

(b) Genetics and taxonomy;

(c) Historical and current range, including distribution patterns and the locations of any additional populations of this species;

(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) Threats and conservation actions affecting the species, including:

(a) Factors that may be affecting 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;

(b) Biological, commercial trade, or other relevant data concerning any threats (or lack thereof) to this species; and

(c) Existing regulations or conservation actions that may be addressing threats to this species.

(3) Additional information concerning the historical and current status of this species.

(4) 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.)

(5) Specific information on:

(a) The amount and distribution of habitat for the Rio Grande shiner;

(b) What areas, that are currently occupied and that contain the physical and biological features essential to the conservation of the Rio Grande shiner, 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; and

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

Please include any supplemental information with your submission (such as scientific journal articles or other publications) to allow us to verify any scientific or commercial information you include.

Please note that submissions merely stating support for, or opposition to, the action under consideration without providing supporting information, although noted, do not provide substantial information necessary to support a determination, as section 4(b)(1)(A) of the Act directs that determinations as to whether any species is an endangered or a threatened species must be made solely on the basis of the best scientific and commercial data available, and section 4(b)(2) of the Act directs that the Secretary shall designate critical habitat on the basis of the best scientific data available.

You must submit your comments and materials concerning this proposed rule by one of the methods listed in **ADDRESSES**.

If you submit information via https://www.regulations.gov, your entire submission—including any personal identifying information—will be posted on the website. If your submission is made via a hardcopy that includes personal identifying information, you may request at the top of your document that we withhold this information from public review. However, we cannot guarantee that we will be able to do so. We will post all hardcopy submissions on https://www.regulations.gov.

Comments and materials we receive, as well as supporting documentation we used in preparing this proposed rule, will be available for public inspection on https://www.regulations.gov.

Our final determination may differ from this proposal because we will consider all comments we receive during the comment period as well as any information that may become available after this proposal. Based on the new information we receive, we may conclude that the species is threatened instead of endangered, or we may conclude that the species does not warrant listing as either an endangered species or a threatened species. In our final rule, we will clearly explain our rationale and the basis for our final decision, including why we made changes, if any, that differ from this proposal.

Public Hearing

Section 4(b)(5) of the Act provides for a public hearing on this proposal, if requested. Requests must be received by the date specified in **DATES**. Such requests must be sent to the address shown in **FOR FURTHER INFORMATION CONTACT**. We will schedule a public hearing on this proposal, if requested, and announce the date, time, and place of the hearing, as well as how to obtain reasonable accommodations, in the *Federal Register* and local newspapers at least 15 days before the hearing. We may hold the public hearing in person or virtually via webinar. We will announce any public

hearing on our website, in addition to the *Federal Register*. The use of virtual public hearings is consistent with our regulations at title 50 of the Code of Federal Regulations (CFR) at § 424.16(c)(3).

Previous Federal Actions

We received a petition on January 23, 2020, from WildEarth Guardians (WEG 2020, entire) to list the Rio Grande shiner under the Act as an endangered species with critical habitat. On March 24, 2021, we published a 90-day finding determining that the petition presented substantial scientific or commercial information indicating that listing the species may be warranted (86 FR 15637). On October 31, 2024, we received a complaint from the Center for Biological Diversity and WildEarth Guardians alleging that we failed to issue a timely 12-month finding. To resolve the litigation, we committed to submit a 12-month finding to the Office of the Federal Register by September 16, 2026. This document serves as the 12-month finding for the 2020 petition.

Peer Review

We conducted a species status assessment (SSA) and prepared an SSA report for the Rio Grande shiner. The SSA report documents the results of our comprehensive biological review of the best scientific and commercial data available regarding the viability of the species, which is then used to support our decision regarding whether a species warrants listing under the Act. In accordance with our joint policy with the National Marine Fisheries Service (NMFS) on peer review that published in the *Federal Register* on July 1, 1994 (59 FR 34270), and our August 22, 2016, memorandum updating and clarifying the role of peer review in listing and recovery actions under the Act (https://www.fws.gov/sites/default/files/documents/peer-review-policy-directors-memo-2016-08-22.pdf), we solicited independent scientific review of the information contained in the Rio Grande shiner SSA report. We invited 10 independent reviewers in the fields of fish biology, hydrology, geomorphology, and water management to

participate in the peer review process; only a single individual accepted and provided a response. The peer review can be found at https://www.regulations.gov at Docket No. FWS–R2–ES–2026–2278.

Summary of Peer Reviewer Comments

As discussed in Peer Review, above, we received comments from one peer reviewer on the draft SSA report. We reviewed all comments we received from the peer reviewer for substantive issues and new information regarding the contents of the SSA report. Overall, the peer reviewer agreed with our assessment of the viability of the Rio Grande shiner, including our review of threats acting upon the species. The peer reviewer primarily provided information regarding updates to the taxonomy of minnows and shiners in the United States. We updated the SSA to reflect these changes.

The peer reviewer also provided updated citations regarding the biological information provided in the SSA. Freshwater pelagic spawning fishes release eggs into the water column and were typically referred to as semi-buoyant eggs. Clarification in a recent publication (Platania et al. 2024 entire) renamed these free-floating eggs as nearly neutrally buoyant to minimize confusion.

Other comments sought to clarify the development of Rio Grande shiner. The commenter stated that the draft SSA did not adequately describe development of larvae to juvenile stages. In the draft SSA report, we had assumed that development of larvae to the juvenile stage was relatively rapid compared to other species of shiners and minnows with a similar life history. However, the reviewer commented that the rapid development we described was unlikely and should be updated to reflect the development time documented for similar fishes (such as Rio Grande silvery minnow (*Hybognathus amarus)*). We reviewed the additional information and concluded our assumption of the pace of Rio Grande shiner development needed to be revised. We removed figures in the SSA that reflected our assumed rapid development and survival of larval and juvenile

fishes as they were no longer relevant. There were no other substantive comments from the peer reviewer.

I. Proposed Listing Determination

Background

A thorough review of the taxonomy, life history, and ecology of the Rio Grande shiner is presented in the SSA report (version 1.2; Service 2026, pp. 9–17).

The Rio Grande shiner is a small-bodied minnow endemic to low-gradient plains rivers of the Rio Grande Basin in New Mexico, Texas, and Mexico. The rivers within the species' historical range include the Rio Grande, Pecos River, Rio Conchos, Rio Salado, and Rio San Juan. Adults rarely exceed 70 millimeters (mm) (2.7 inches (in)) in standard length and have a laterally compressed body that is silver in color. They are likely omnivorous and feed on aquatic invertebrates and plankton.

This species is part of a group of freshwater pelagic spawning fishes of the Leuciscidae family. Pelagic spawners release gametes into the water column that drift downstream as part of their larval development. Rio Grande shiner spawning typically occurs during elevated flow events, either from spring run-off or summer rains. Slow flowing floodplains provide nursery habitat for the larval fish until fins develop and they can swim on their own.

Juvenile and adult Rio Grande shiners occupy pools, plunge pools, and slow-flowing run habitats. Rivers occupied by the species tend to be wide, open, and sand-laden. The Rio Grande shiner reaches sexual maturity by age-1 (i.e., one year of age) and has a short lifespan, with most individuals living 1 to 2 years. Adults migrate upstream from rearing habitats to spawning locations when water flows are suitable for reproduction.

Regulatory and Analytical Framework

Regulatory Framework

Section 4 of the Act (16 U.S.C. 1533) and the implementing regulations in title 50 of the CFR set forth the procedures for determining whether a species is an endangered species or a threatened species, issuing protective regulations for threatened species, and designating critical habitat for endangered and threatened species.

The Act defines an "endangered species" as a species that is in danger of extinction throughout all or a significant portion of its range and a "threatened species" as a species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range. The Act requires that we determine whether any species is an endangered species or a threatened species because of any of the following factors:

(A) The present or threatened destruction, modification, or curtailment of its habitat or range;

(B) Overutilization for commercial, recreational, scientific, or educational purposes;

(C) Disease or predation;

(D) The inadequacy of existing regulatory mechanisms; or

(E) Other natural or manmade factors affecting its continued existence.

These factors represent broad categories of natural or human-caused actions or conditions that could have an effect on a species' continued existence. In evaluating these actions and conditions, we look for those that may have a negative effect on individuals of the species, as well as other actions or conditions that may ameliorate any negative effects or may have positive effects.

We use the term "threat" to refer in general to actions or conditions that are known to or are reasonably likely to negatively affect individuals of a species. The term

"threat" includes actions or conditions that have a direct impact on individuals (direct impacts), as well as those that affect individuals through alteration of their habitat or required resources (stressors). The term "threat" may encompass—either together or separately—the source of the action or condition or the action or condition itself.

However, the mere identification of any threat(s) does not necessarily mean that the species meets the statutory definition of an endangered species or a threatened species. In determining whether a species meets either definition, we must evaluate all identified threats by considering the species' expected response and the effects of the threats—in light of those actions and conditions that will ameliorate the threats—on an individual, population, and species level. We evaluate each threat and its expected effects on the species, then analyze the cumulative effect of all of the threats on the species as a whole. We also consider the cumulative effect of the threats in light of those actions and conditions that will have positive effects on the species, such as any existing regulatory mechanisms or conservation efforts. The Secretary determines whether the species meets the definition of an endangered species or a threatened species only after conducting this cumulative analysis and describing the expected effect on the species.

The Act does not define the term "foreseeable future," which appears in the statutory definition of threatened species. Our regulations at 50 CFR 424.11(d) set forth a framework for evaluating the foreseeable future on a case-by-case basis, which is further described in the 2009 Memorandum Opinion on the foreseeable future from the Department of the Interior, Office of the Solicitor (M–37021, January 16, 2009; "M-Opinion," available online at https://www.doi.gov/sites/doi.opengov.ibmcloud.com/files/uploads/M-37021.pdf). The foreseeable future extends as far into the future as the U.S. Fish and Wildlife Service and National Marine Fisheries Service (hereafter, the Services) can reasonably make reliable predictions about the threats to the species and the species' responses to those threats. We

need not identify the foreseeable future in terms of a specific period of time. We will describe the foreseeable future on a case-by-case basis, using the best scientific and commercial data available and taking into account considerations such as the species' life-history characteristics, threat projection timeframes, and environmental variability. In other words, the foreseeable future is the period of time over which we can make reasonably reliable predictions about the threats to the species and the species' responses to those threats . "Reliable" does not mean "certain"; it means sufficient to provide a reasonable degree of confidence in the prediction, in light of the conservation purposes of the Act.

Analytical Framework

The SSA report documents the results of our comprehensive biological review of the best scientific and commercial data available regarding the viability of the species, including an assessment of the potential threats to the species. The SSA report does not represent our decision on whether the species should be proposed for listing as an endangered or threatened species under the Act. However, it does provide the scientific basis that informs our regulatory decisions, which involve the further application of standards within the Act and our regulations and policies.

To assess Rio Grande shiner viability, we used the three conservation biology principles of resiliency, redundancy, and representation (Shaffer and Stein 2000, pp. 306–310). Briefly, resiliency is the ability of the species to withstand environmental and demographic stochasticity (for example, wet or dry, warm or cold years); redundancy is the ability of the species to withstand catastrophic events (for example, droughts, large pollution events); and representation is the ability of the species to adapt to both near-term and long-term changes in its physical and biological environment (for example, climate conditions, pathogens). In general, species viability will increase with increases in resiliency, redundancy, and representation (Smith et al. 2018, p. 306). Using these

principles, we identified the species' ecological requirements for survival and reproduction at the individual, population, and species levels, and described the beneficial and risk factors influencing the species' viability.

The SSA process can be categorized into three sequential stages. During the first stage, we evaluated the individual species' life-history needs. The next stage involved an assessment of the historical and current condition of the species' demographics and habitat characteristics, including an explanation of how the species arrived at its current condition. The final stage of the SSA involved making predictions about the species' future condition, including responses to positive and negative environmental and anthropogenic influences. Throughout all of these stages, we used the best scientific and commercial data available to characterize viability as the ability of a species to sustain populations in the wild over time, which we then used to inform our regulatory decision.

The following is a summary of the key results and conclusions from the SSA report; the full SSA report can be found at Docket No. FWS–R2–ES–2026–2278 on https://www.regulations.gov.

Summary of Biological Status and Threats

In this discussion, we review the biological condition of the species, its resources, and the threats that influence the species' current and future condition, in order to assess the species' overall viability and the risks to that viability.

Species Needs

For a short-lived fish species such as the Rio Grande shiner, population resiliency is supported by annual reproductive output and recruitment of new breeders (Hoagstrom and Turner 2015, entire; Worthington et al. 2018, entire). This means that Rio Grande shiner populations need suitable flows and hydrological conditions that facilitate reproduction. The Rio Grande shiner is a pelagic spawner, meaning it produces nearly neutrally buoyant, non-adhesive eggs that float in the water column until hatching

(Platania and Altenbach 1998 entire; Platania et al. 2024 entire). Therefore, eggs require slow to moderate moving water to remain suspended in the water column. Early larvae (less than 3 days old) lack swim bladders and require flow to remain in the water column (Hoagstrom and Brooks 2005, p. 36). Conversely, rapid flows can transport eggs and larvae past suitable habitat for older life stages (Dudley and Platania 2007, entire); eggs and larvae cannot survive being transported into reservoirs. Eggs and larvae need free-flowing (i.e., not interrupted by a dam or other barrier) water that allows them to complete their development within a suitable dispersal distance. Adults also require free-flowing, unobstructed rivers to migrate upstream to spawning locations (Platania and Altenbach 1998, pp. 556–567; Archdeacon et al. 2018, entire). Thus, long stretches of free-flowing water with natural flow regimes are essential to population resiliency. Additionally, longer reaches provide more total habitat and support higher abundance, more habitat complexity, and more refugia from low or zero flows (Hoagstrom et al. 2008, entire).

Underscoring the importance of long river stretches to Rio Grande shiner resiliency is the empirical relationship between habitat fragmentation, water flows, and presence of pelagic spawning fishes in the Rio Grande and Pecos River (Dudley and Platania 2007, entire). Pelagic spawning fishes have been extirpated from nearly all stretches in which the length of free-flowing river (i.e., not interrupted by a dam or other barrier) is less than 100 kilometers (km) (62 miles (mi)). Native pelagic spawners only remain in areas where the uninterrupted length of free-flowing river is above this threshold. Since reservoirs are not suitable for the Rio Grande shiner, this 100-km threshold only applies to free-flowing rivers that have a natural hydroperiod (Hoagstrom and Brooks 2005, p. 53; Dudley and Platania 2007, p. 2083).

Other environmental factors such as temperature, dissolved oxygen, and salinity affect individual growth and survival, but information on explicit thresholds for the Rio

Grande shiner are unavailable. Similar pelagic spawning minnows experience substantial fluctuations in water temperatures in their native environments (Worthington et al. 2018, p. 287). In laboratory settings, similar minnow species displayed critical thermal maximums around 36.5 to 40.6 degrees Celsius (°C) (97.7 to 105 degrees Fahrenheit (°F)) and minimum dissolved oxygen tolerances of 2 to 2.7 milligrams per liter (Ostrand and Wilde 2001, p. 744). Mortality is elevated in similar minnow species when salinity exceeds 18 percent (Ostrand and Wilde 2001, p. 744; 2004, p. 1332). Accordingly, as supported by the information available on similar species, maintaining thermal maximums around 36.5 to 40.6 °C and minimum dissolved oxygen and salinity levels below their respective thresholds are important for growth and survival of Rio Grande shiners, which supports population resiliency.

In terms of redundancy, the presence of multiple resilient populations across the breadth of the species' historical distribution provides security against catastrophic events. Having multiple resilient populations distributed across the Rio Grande Basin minimizes the risk that a single event will result in extirpation of most of the species' remaining range. Populations should be distributed across variable environmental conditions to reduce the risk of correlated population dynamics, which occurs when population trends become synchronized across the range. This synchronization occurs when populations experience similar environmental conditions simultaneously; when those conditions result in poor years across multiple populations concurrently, the risk of extinction increases (Lande et al. 2003, entire). In contrast, populations that are distributed across a range of environmental conditions are more likely to experience different conditions and thus independent population trends (Fay et al. 2022, pp. 1647–1649), reducing the risk of extinction (Inchausti and Halley 2003, p. 899). Connectivity between these populations can further support viability. Should populations be lost, either due to catastrophes or stochastic declines, dispersal can result in natural repopulation. As

discussed below, connectivity between populations has been severed due to dams, meaning the potential for recolonization is nonexistent.

For representation, Rio Grande shiner populations should be distributed across a diversity of environmental conditions for exposure to different selection pressures. This variety of conditions promotes local adaptation, which increases among-population genetic diversity and evolutionary potential (Forester et al. 2016, entire; 2022, entire). Large effective population sizes maintain that genetic diversity and allow natural selection to operate more efficiently (Kardos et al. 2021, entire). Gene flow between populations is also important for representation because it fosters evolutionary potential by facilitating the movement of novel adaptive genetic variants and minimizing the loss of genetic variation due to genetic drift (Hanski et al. 2011, entire; Forester et al. 2022, p. 509).

Threats (Stressors/Risk Factors/Etc.)

We identified risk factors that have influenced the Rio Grande shiner and its habitats in the past and that may continue to do so in the future. In this proposed rule, we will discuss in detail only those factors that are meaningfully impacting the status of the species. For a detailed description of the threats analysis, please refer to the SSA report (Service 2026, pp. 30–48).

Dams

The primary threats to the Rio Grande shiner are habitat fragmentation, degradation, and destruction caused by dams (Worthington et al. 2018, p. 294). Dams have been constructed throughout the Rio Grande Basin to support a variety of human uses and have transformed aquatic habitats. These barriers impede movement of adults across river systems and fragment habitats into stretches that are too short to meet the resource needs of the Rio Grande shiner (Bunn and Arthington 2002, p. 499; Dudley and Platania 2007, pp. 2080–2082). Dams reduce reproductive success by preventing

individuals transported over them from swimming back upstream to their natal reaches and suitable habitat (Dudley and Platania 2007, p. 2075). Dams impede habitat connectivity and the movement of Rio Grande shiners that facilitate successful breeding, feeding, and sheltering (Bunn and Arthington 2002, pp. 498–500). As noted, pelagic spawning fishes in the Rio Grande and Pecos River, including the Rio Grande shiner, have been extirpated from nearly all stretches of free-flowing river less than 100 km (Dudley and Platania 2007, entire). Furthermore, the reservoirs created by dams are unsuitable for the Rio Grande shiner because they do not provide adequate transport of eggs and larvae (Platania and Altenbach 1998, entire) and they inundate the river habitats used by the species (Kehmeier et al. 2007, pp. 760–761).

Downstream of dams, streamflow is managed for human priorities, and is therefore altered compared to the natural flows under which native species evolved (Hale 1955, p. 9; Cox 1963, p. 19; Bunn and Arthington 2002, pp. 496–498; Hoagstrom et al. 2008, p. 6; Návar Cháidez 2011, p. 126; Rolls et al. 2012, p. 1174; González Escorcia 2016, entire). River flows can be artificially lowered when water is being actively impounded or diverted. Less water associated with low flows reduces the total amount of available aquatic habitat and alters that habitat's extent and structure (Rolls et al. 2012, p. 1167). Low flows also increase sediment deposition, alter the substratum, and reduce structural diversity by facilitating the reduction or loss of riffle habitats, swift-water reaches, and pools (Rolls et al. 2012, pp. 1167–1168). Reductions in the amount of, and structural changes to, available habitat may increase interactions with predators and compromise quantity and quality of refugial habitat, decreasing the capacity of populations to withstand or rebound from severe low-flow events. Low flows are also correlated with decreased water quality and changes to local vegetation and macroinvertebrate communities (Rolls et al. 2012, pp. 1170–1171). Finally, low flows may convert perennial rivers to intermittent or ephemeral waterways, increasing both the

importance and vulnerability of refugia (Rolls et al. 2012, pp. 1168–1174). Rapid loss of streamflow can strand Rio Grande shiners before they can reach refugia, resulting in increased mortality due to predation or desiccation (Bunn and Arthington 2002, p. 499; Rolls et al. 2012, pp. 1173–1174).

Additionally, dams have changed downstream patterns of water flows, resulting in less variable flows with dampened peaks in discharge (Schmidt et al. 2003, pp. 34–36). Changes to the magnitude and timing of high flow events can threaten the peak flows in spring and summer that facilitate reproduction and recruitment (Hoagstrom and Turner 2015, pp. 290–292). The construction of Falcon Dam caused severe alteration of the frequency and duration of high and low flows, with subsequent decline and extirpation of several fish species in the Rio Grande below the dam (Small et al. 2009, pp. 247–248), including the Rio Grande shiner. Furthermore, high volume pulses of water due to dam releases can flush Rio Grande shiners, particularly eggs and larvae, downstream before they fully develop, or into unsuitable habitats such as reservoirs (Dudley and Platania 2007, pp. 2079–2081).

Dams are ubiquitous across the historical range of the Rio Grande shiner (Service 2026, p. 34). Collectively, there are 68 dams in the Rio Grande Basin, including 22 on the Pecos River and 36 on the Rio Grande. Historically the Pecos River flowed uninterrupted for 1,378 km (856 mi). Currently, there are only two free-flowing stretches above the 100-km threshold, both of which are each less than 450 km (280 mi) in length (Dudley and Platania 2007, pp. 2080–2082). Similarly, the Rio Grande once supported 2,651 km (1,641 mi) of uninterrupted river length from northern New Mexico to its terminus. Today, only five free-flowing stretches greater than 100 km remain, all of which are less than 500 km (311 mi) in length. The three Mexican rivers (Rios Conchos, Salado, and San Juan) that historically supported the Rio Grande shiner are also fragmented by dams. All extant populations of the Rio Grande shiner are impacted by dams (see *Current*

Condition). Reservoirs behind these dams currently constitute over 10 percent of the historical riverine habitat in the Rio Grande Basin and thus are a substantial source of habitat loss within the historical range of the Rio Grande shiner. The presence of these dams will continue to affect the species and its habitat in the future.

Additional River Alterations

Other anthropogenic changes to rivers exacerbate the effects of dams on Rio Grande shiner population resiliency. River channels throughout the Rio Grande Basin have been modified by levees and bank hardening. These modifications were constructed for a variety of purposes, such as reducing flooding, increasing river navigability, and facilitating water diversions. Channel modifications simplify the course of rivers and thus disrupt the dynamic interactions between sediment and water that generate habitat complexity. These features also disconnect rivers from flood plains, which reduces natural flood cycles and water flows (Swanson et al. 2011, p. 10; Makar and AuBuchon 2012, p. 2565), facilitates bank aggradation, promotes scouring of river channels (Swanson et al. 2011, p. 10), and flushes sediment downstream. For aquatic species such as the Rio Grande shiner, the consequences of river modification are multifold. Hardening of riverbanks can result in direct loss of habitat, as rivers shift from multi-braided channels to deeper, more homogenous rivers with less of the low-to-moderate velocity mesohabitat (e.g., pools, backwaters, and plunges) and floodplain inundation required for breeding, feeding, and sheltering. There is no basin-wide inventory of historical channel stabilization efforts, but descriptions of the rivers throughout the Rio Grande Basin show their ubiquity (Calamusso et al. 2005, pp. 208–209; Dahm et al. 2005, p. 192; Hoagstrom and Brooks 2005, p. 80; Benavides et al. 2023, pp. 181–185). Channel stabilization has substantially altered the quality of Rio Grande shiner habitat and will continue to impact the species into the future.

Throughout the Rio Grande Basin, surface water is diverted from rivers to fulfill

various uses, mainly agricultural and municipal. Many of the diversions are associated with dams that retain water for specific uses, although other structures such as pipes and dikes can be placed in a river to divert water. Diverting water from rivers reduces flows, makes low flows during droughts more likely and more pronounced, and increases the risk that short-term effects from low-flow events become long-term ecosystem-level changes (Rolls et al. 2012, pp. 1164–1174). Diversions can lead to extirpation of the Rio Grande shiner if flows are diminished enough. Similarly, groundwater pumping, or the extraction of subsurface water from either shallow or deep aquifers, has the potential to impact surface flows needed by the Rio Grande shiner because groundwater and surface water are connected (Hogan 2013, pp. 6–7; Anaya et al. 2016, pp. 22–32; U.S. Bureau of Reclamation 2021, pp. 57–58; Payton et al. 2023, pp. 4-10, 4-29). Most groundwater pumping in the Rio Grande shiner's range occurs to support irrigated agriculture, primarily in the Pecos River in New Mexico (New Mexico Office of the State Engineer [NMOSE] 2016a, pp. 137–148; NMOSE b, pp. 109–117; NMOSE 2017a, pp. 144–153; NMOSE b, pp. 119–123; Far West Texas Water Planning Group et al. 2025, pp. 2-8–2-26; Plateau Water Planning Group and Carollo Engineers 2025, pp. 2-8–2-24; Rio Grande Regional Water Planning Group and Black and Veatch Corporation 2025, pp. 2A-6–2A-10).

Changing Environmental Conditions

Several environmental factors are also exacerbating the impact that dams and water diversion have on hydrological conditions in the Rio Grande Basin. For instance, rising temperatures in the Southwestern United States have caused an observed decline in snowpack in the mid and high elevations (White et al. 2023 p. 1362) and a decline in streamflow derived from seasonal snowpack in the region (Dettinger et al. 2015, p. 2074). In the headwaters of the Rio Grande, snow-water equivalent on April 1 declined by 25 percent from 1958 to 2015, and spring peak flows—which have been increasingly

influenced by spring rains rather than snowmelt—have shifted earlier in the spring (Chavarria and Gutzler 2018, p. 644). These trends are expected to continue into the future, with important impacts for water availability in the Rio Grande (Holmes et al. 2022, p. 168). Changes in the amount of water impacts habitat conditions for the Rio Grande shiner and changes in timing of flows affect reproductive cues.

Declines in snowpack, in conjunction with rising temperatures, are also increasing the intensity and severity of drought in the region, and thus the risk of multi-decadal megadroughts (White et al. 2023 p. 1362). Droughts have become more severe and prolonged in the Southwestern United States in recent decades (Touchan et al. 2011, p. 901). The ongoing megadrought in the Southwestern United States represents the driest 22-year period in at least 1,200 years (Williams et al. 2022, p. 234). This megadrought has caused historically unprecedented declines in groundwater reserves, reservoir levels, and stream flows, as well as increases in river drying events. These impacts pose a critical threat to the management and persistence of freshwater fishes in the region (Gido et al. 2023, p. 204). Risk of megadroughts in the Southwestern United States is projected to increase in the future (Ault et al. 2016, pp. 2–5; Williams et al. 2022, entire).

The low-flow conditions induced by droughts can have a multitude of impacts on the Rio Grande shiner including decline in habitat quantity and quality, reduced availability of refugia, direct mortality, and loss of peak flows that facilitate reproduction and recruitment. In the Upper Pecos River, Rio Grande shiner populations have crashed several times since 2000 in response to low-flow events caused by drought (Service 2026, pp. 55–62). A severe crash due to low flows from 2012 to 2014 nearly resulted in the extirpation of the Rio Grande shiner from the Upper Pecos and the population still has not rebounded to pre-crash levels. Decline and potential extirpation of the species from the Big Bend region of the Rio Grande has been attributed to drought and reductions in water flows (Moring 2005, entire). Decreased flows and increased frequency of drying

events due to drought can also reduce connectivity (Jaeger et al. 2014, pp. 2–4). Droughts can also lead to dramatic increases in water temperature, salinity and concentration of other pollutants, since they typically co-occur and act synergistically with increased anthropogenic water demands and heatwaves (van Vliet 2023, p. 902; van Vliet et al. 2024, p. 1). This in turn can reduce overall water quality and the degree to which refugia during low flows can support the Rio Grande shiner. Drought conditions can also cause physiological stress on fish, making them more vulnerable to diseases, particularly when individuals are concentrated into smaller pools (Lymbery et al. 2020, entire).

Water Quality

Although there is no precise information on the specific water quality needs of the Rio Grande shiner, the best available information on similar species indicates that poor water quality can reduce resiliency. Additionally, there is information indicating that poor water quality can result in extirpation, particularly when acting synergistically with other stressors like low flows and drought. For example, a fish-kill event caused by an algal bloom from 1986 to 1988 is implicated in the extirpation of the Rio Grande shiner from the Lower Pecos River in Texas between the city of Iraan and Amistad Reservoir. The species was present before the fish kill but was presumably extirpated due to low dissolved oxygen levels and elevated toxins caused by the bloom (Rhodes and Hubbs 1992, p. 181).

Furthermore, changes in fish assemblages in the Pecos River and Rio Grande have been attributed to degraded water quality, particularly increased salinity. For instance, reduced inflow of the Rio Conchos has led to increased salinity in the Rio Grande below the confluence and concurrent changes in native fish assemblages (Miyazono et al. 2015, p. 444). Salinity has increased in the Lower Pecos River over the last century due to seepage from oil production brine ponds, agricultural runoff, diminished floods and streamflow, and elevated evapotranspiration (Hoagstrom 2009, p.

27; Cheek and Taylor 2016, p. 341). Elevated salinity levels, in combination with golden algae blooms and low flows, have caused change in fish assemblages over time, and loss of the Rio Grande shiner in reaches where recolonization was favored by species with greater salinity tolerance (Rhodes and Hubbs 1992, entire; Hoagstrom et al. 2003, pp. 101–104; Cheek and Taylor 2016, pp. 347–348). As discussed above, information related to similar minnow species indicates that species like the Rio Grande shiner cannot survive these high salinity levels. Additionally, in Mexico, water quality is substantially degraded in many of the rivers where the Rio Grande shiner was historically found. We conclude, based on the observed response of the species in the United States as well as information related to similar species, that poor water quality has also caused reductions in resiliency for Rio Grande shiner populations in Mexico, if not outright extirpations.

Conservation Efforts and Regulatory Mechanisms

There are no conservation plans or management activities specific to the Rio Grande shiner. No propagation programs exist to maintain captive populations that could provide insurance in the event of a catastrophic event or serve as a source for reintroductions. The Rio Grande shiner is considered a species of greatest conservation need by the New Mexico Department of Wildlife, which provides no regulatory protections under the State's Wildlife Conservation Act (Biota Information System of New Mexico [BISON-M] 2026, entire). The Texas Parks and Wildlife Department (TPWD) lists the Rio Grande shiner as threatened (TPWD 2020, entire) under its State statutes (31 Texas Administrative Code [TAC] 65.171–65.176). This status prohibits take, transport, and sale of the species, with permitted exceptions. State statutes in Texas prevent targeted fishing of State threatened species, as well as more consideration for permitted activities that disturb instream habitats and higher fines for pollution spills (Birdsong et al. 2021, p. 42). There are also several voluntary conservation measures in Texas that provide opportunity to support the conservation of freshwater fishes, such as

landowner incentive programs to retore habitat and improve instream flows (Birdsong et al. 2021, p. 42). None of these programs are specific to the Rio Grande shiner. A portion of the Rio Grande is bordered by Big Bend National Park, providing a level of protection for surrounding lands and tributaries of the Rio Grande. We incorporated the effects of the existing regulations and conservation measures in the *Current Condition* section. We note, however, that existing regulations and conservation measures in Texas have not prevented the long-term decline and extirpation of the Rio Grande shiner from the Rio Grande.

Conservation activities directed at other species may benefit the Rio Grande shiner, most notably when they influence water management. In the Upper Pecos River, management of water downstream of Sumner Dam in New Mexico is influenced by the presence of the Pecos bluntnose shiner (*Notropis simus pecosensis*), a species listed under the Act. The only remaining Rio Grande shiner population in the Pecos River co-occurs with Pecos bluntnose shiner downstream of Sumner Dam. While conservation is not the primary use or target of water management in the highly managed Pecos River system, the Bureau of Reclamation (BOR) has tools to maintain flows. BOR proposed changes to water operations and water supply for the Carlsbad Irrigation District (CID) in 2016 to support the Pecos bluntnose shiner. The Service issued a Biological Opinion, which states that CID gets primary use of water for irrigation. Water provided to CID is released as block releases into the Pecos River channel. However, when BOR determines it is a critically dry year, some supplemental, leased water must be used by BOR to provide water flows. BOR determines it is critically dry by drought status and flow projections in the beginning of the year along with actual bypass between February and June (Service 2017, pp. 7–9). In a critically dry year, BOR must use any available supplemental water for environmental purposes to prevent and minimize intermittency (Service 2017, pp. 9–10) to maintain flows for the Pecos bluntnose shiner. Therefore, releases for both CID

and those designed to minimize intermittency during critically dry years benefit the Rio Grande shiner.

However, there are limitations to the extent BOR can ensure adequate water flows in the Upper Pecos River. To the extent possible, BOR is required to maintain flows in critically dry periods, but the need for water during critically dry years may exceed the supplemental water supply. Furthermore, management actions related to the Biological Opinion are not scheduled to last indefinitely. Conservation measures from the Biological Opinion are set to end in 2027, unless the U.S. Army Corps of Engineers and BOR can finalize an agreement to increase storage in the Santa Rosa Reservoir prior to the expiration of the Biological Opinion. If they can reach an agreement, the Service can extend the Biological Opinion for an additional 15 years (Service 2017, pp. 38–39). However, an extension, much less fulfillment, of the conservation measures from the Biological Opinion is uncertain. In the future, drought, elevated evaporation of surface and soil water, and variable precipitation patterns will likely create higher human demand for water when it is available (Service 2026, pp. 65–73), reducing the capacity of water managers to maintain a flowing channel.

Cumulative Effects

By using the SSA framework to guide our analysis of the scientific information documented in the SSA report, we have analyzed the cumulative effects of identified threats and conservation actions on the species. To assess the current and future condition of the species, we evaluate the effects of all the relevant factors that may be influencing the species, including threats and conservation efforts. Because the SSA framework considers not only the presence of the factors, but to what degree they collectively influence risk to the entire species, our assessment integrates the cumulative effects of the factors and replaces a standalone cumulative-effects analysis.

Current Condition

To assess the current condition of the Rio Grande shiner, we used the best scientific and commercial data available to assess past and ongoing changes in the species' habitat, demographic parameters, and distribution (Service 2026, pp. 49–65). Our current condition assessment includes river reaches where the species has been documented since 2010. There were several intensive fish surveys conducted in the 2010s (e.g., Portnoy et al. 2018, entire; Montage 2019, entire) that provided data on the distribution of the Rio Grande shiner in the Rio Grande. Since 2020 there have been fewer surveys that were more spatially limited (e.g., Taylor 2024, entire). Thus, defining current condition since 2010 allowed us to incorporate these broader datasets in assessing the contemporary distribution of the species.

We defined the spatial extent of river reaches for our analysis based on natural and anthropogenic features, primarily dams, that serve as logical breakpoints to divide the range. In the United States, reaches where the Rio Grande shiner is known to be extirpated are:

1) the mainstem Rio Grande upstream of the confluence with the Rio Conchos,
2) the mainstem Rio Grande downstream of Falcon Dam to its terminus,
3) the mainstem Pecos River above Sumner Dam,
4) the mainstem Pecos River from Brantley Dam downstream to the confluence with the Rio Grande (Service 2026, pp. 11–12),
5) the reach upstream of Amistad Reservoir to the confluence with the Rio Conchos, which we will refer to as the Amistad Reach, and
6) the reach between Amistad Dam and Lake Falcon, which we will refer to as the Falcon Reach.

Both the Falcon Reach and the Amistad Reach are included in our current condition assessment. The Rio Grande shiner has been documented in each reach since 2010,

but this proposed rule concludes that the species is extirpatedin these two reaches. The reach known to be currently occupied is the Pecos River between Sumner Dam and Brantley Reservoir in New Mexico. We refer to this as the Upper Pecos Reach. As defined, the Amistad Reach is 639 river km (397 mi) long, the Falcon Reach 471 river km (293 mi), and the Upper Pecos Reach 327 river km (203 mi).

Amistad Reach

Habitat quality has dramatically diminished in the Amistad Reach (Service 2026, pp. 35–37). Fish surveys in the portion of the reach adjacent to Big Bend National Park associated with a Rio Grande silvery minnow (*Hybognathus amarus*) reintroduction project from 2009 to 2018 yielded 11 individual Rio Grande shiners, with the last collected in 2013 (Montagne 2019, appendix F). Subsequent surveys from this reach have not detected any Rio Grande shiners (Portnoy et al. 2018, entire; Taylor et al. 2019, p. 228).

This proposed rule concludes that this population is extirpated.

Falcon Reach

Habitat quality has also dramatically diminished in the Falcon Reach (Service 2026, pp. 35–37). In this reach, flows are substantially reduced by evaporation from Amistad and Falcon Reservoirs, diversions for irrigation, decreased inputs from both small and large tributaries (especially the Rio Salado and Rio San Juan), and the cumulative consequences of water management (Contreras-Balderas et al. 2002, p. 221). The most recent record of Rio Grande shiner occurrence was in 2017 near Eagle Pass, Texas, where four individuals were captured (Osborne et al. 2021, p. 190). Prior to 2017, the most recent observation of Rio Grande shiners came in 2007 near San Ygnacio, Texas. Surveys conducted in 2022 and 2023 across 13 locations in the Falcon Reach did not find Rio Grande shiners (Taylor 2024, p. 9). Furthermore, the collections in 2017

were from a single sample site out of 14 that were surveyed, indicating that the distribution of the species was limited within the reach.

This proposed rule concludes that this population is extirpated.

Upper Pecos Reach

The Rio Grande shiner occupies much of the 327-km (203-mi) reach from Sumner Dam to the inflow of Brantley Reservoir, with abundance relatively higher in the sections that contain the highest quality habitat (Service 2026, pp. 20–24). Habitat quality is mixed within this reach, with the section immediately downstream of Sumner Dam no longer suitable for the species. The river then becomes more meandering and dynamic in the middle section where the impacts of the dam are less pronounced, creating the habitats and hydrological conditions preferred by the Rio Grande shiner. Moving further downstream, conditions degrade due to degradations in water quality (Service 2026, pp. 20–24). Though abundance metrics have varied over time, since 1992, the Rio Grande shiner has comprised, on average, 10 percent of the fish community (range 1.1 to 22.7 percent) and has been consistently found at long-term monitoring sites (Service, unpublished data). Catch per unit effort (CPUE, number of fish/100 square meters (m^2)) has been used to track population trends (relative abundance) in the occupied portion of the Upper Pecos Reach. CPUE fluctuates on an annual basis, with the most dramatic changes associated with river drying events. Since 2000, there have been two periods in which the Upper Pecos Reach experienced extreme river drying: 2001 to 2004 and 2011 to 2013 (Service 2026, pp. 55–60). The events varied in terms of timing and duration but resulted in river gauges reporting no water flow. Following these drying events, Rio Grande shiner CPUE dropped well below median annual values. From 2012 to 2014, CPUE declined to the lowest levels recorded, and in 2014 only 243 individual Rio Grande shiners were captured, well below the average annual count of 1,963 (Service 2026, p. 26). Since then, there have been no drying events of that magnitude (i.e., no

records of zero water flows) and water has been present within the river channel, and Rio Grande shiner abundance and CPUE have increased, although they remain below pre-drying levels.

Despite dramatic fluctuations in CPUE, the Rio Grande shiner population in the Upper Pecos Reach is still extant. We attribute the continued occurrences of Rio Grande shiner in the Upper Pecos Reach to the likely existence of refugia even during river drying, where some individuals persisted until the next year to spawn following return of stable base flows. Also, the return of these base flows occurred soon enough following drying to facilitate the rebound of the Rio Grande shiner population (Service 2026, p. 56–61). The fact that this population is dependent on specific, unpredictable conditions (i.e., presence of refugia and return of base flows) to persist through these events indicates that it is vulnerable to extirpation due to river drying, which is an ever-present, volatile threat that is difficult to mitigate.

Mexico

Rio Grande shiners were captured in the Rio Conchos drainage above Luis L. Leon Dam as recently as the 1990s; however, we do not have information if any surveys have been completed since then. The last report of the species in Mexico dates to 2007, when Rio Grande shiners were reported from the Rio Salado above Don Marin Dam (Contreras-Arquieta and Lozano-Vilano 2007, pp. 20–23). There have not been any recent reported detections of the Rio Grande shiner in the Rio San Juan. Habitat quality is degraded within the Mexican reaches. The Rio Conchos experiences regular periods of low flow, water stress, and water deficit throughout much of the basin due to long-duration droughts and high anthropogenic water demands (Ingol-Blanco and McKinney 2010, p. 61; 2012, p. 1357). On the Rio Conchos, between the Luis L. Leon Dam and the confluence with the Rio Grande, there have been substantial reductions in river flow and instances in which water releases were reduced to zero (Hudson et al. 2005, p. 1062). In

addition, levels of arsenic, zinc, lithium, and iron often exceed safety levels in the Rio Conchos, posing a substantial risk to aquatic organisms (Rubio-Arias et al. 2010, entire).

We assume that the Rio Grande shiner is extirpated from the Lower Rio Conchos below Luis L. Leon Dam, the Lower Rio Salado below Don Martin Dam, and the entire Rio San Juan (Service 2026, p. 12). Although surveys in these areas have been infrequent, there are no records of the Rio Grande shiner from these reaches since the 1990s. The lack of detections, coupled with the degradation of environmental conditions, impacts of dams, and declines of other aquatic species, lead to us conclude that the species is no longer present in these reaches. In both the Rio Conchos and Rio Salado below the dams, flows have been so dramatically reduced that they rivers have become intermittent, meaning they do not have continuous water flow (Service 2026, p. 39). Above the dams on the Rios Conchos and Salado, the species may still be present, but likely at low resiliency given environmental conditions and the lack of presence data over the past several decades.

Redundancy and Representation

The substantial range contraction that has occurred for the Rio Grande shiner inherently limits the species' ability to withstand catastrophic events, and in turn, reduces redundancy compared to historical conditions. Of the roughly 5,951 km (3,697 river miles) of historically occupied river stretches, at most 1,437 km (893 river miles) are currently extant, representing 24 percent of the historical range. Furthermore, only one of those stretches (Upper Pecos), representing 5 percent of the historical range, contains a population with any semblance of resiliency. Thus, the Rio Grande shiner has effectively been reduced to a single population, offering no insurance should a catastrophic event, namely river drying, result in its extirpation. Furthermore, due to severing of connectivity due to dams, there is no potential for natural recolonization should any of the extant populations disappear.

For the Rio Grande shiner, the range of historical phenotypic and genetic variation (i.e., adaptive capacity) are unknown. Given the wide breadth of the species' historical range and environmental gradients it covered, we assume that there was adaptation to an array of conditions. Based on mitochondrial DNA Rio Grande shiners from the Upper Pecos Reach and Falcon Reach may have diverged from each other 1.3 million years ago (range 0.8-1.8 million years ago) (Osborne et al. 2021 p. 193). With this divergence and the differences in habitat conditions, we find there would have been an accumulation of adaptive differences between these two populations and these differences likely extended across the species' range. Thus, declines in the geographic range and overall number of Rio Grande shiner has led to declines in effective population size, genetic variability, and therefore overall evolutionary potential.

Depending on type of genetic markers, estimates of effective size in the Upper Pecos Reach range from 259 to 8,443 (Osborne et al. 2021 p. 193). At face value, these estimates are above the recommended levels of effective size to minimize the short-term genetic risks. However, this population declines in response to drying events. As populations become smaller, there is an elevated risk of genetic bottlenecks that can result in the loss of genetic diversity. Notably, the samples used to estimate effective size in the Upper Pecos Reach were collected in 2007 and 2013, before and immediately after the population crash following drying events (Osborne et al. 2021 p. 191). Detecting bottlenecks can take several generations post-collapse, so genetic diversity reported from those years may no longer reflect the attributes of the population. These threats to genetic health can in turn, reduce overall evolutionary potential, and the species' ability to adapt to changing ecological conditions.

Future Conditions

As part of the SSA, we also assessed future changes in environmental conditions and threats to inform the future status of the Rio Grande shiner. Because we determined

that the current condition of the Rio Grande shiner is consistent with an endangered species (see **Determination of Species Status**, below), we are not presenting the results of the future conditions assessment in this proposed rule. Please refer to the SSA report (Service 2026, pp. 65–74) for the full analysis of future condition.

Determination of Status Background

Section 4 of the Act (16 U.S.C. 1533) and our regulations at 50 CFR part 424 set forth the procedures for determining whether a species meets the definition of an endangered species or a threatened species. The Act requires that we determine whether a species meets the definition of an endangered species or a threatened species because of any of the following factors: (A) The present or threatened destruction, modification, or curtailment of its habitat or range; (B) overutilization for commercial, recreational, scientific, or educational purposes; (C) disease or predation; (D) the inadequacy of existing regulatory mechanisms; or (E) other natural or manmade factors affecting its continued existence. We consider these five factors and the species' responses to these factors when making these determinations.

Section 3 of the Act defines endangered species and threatened species. An endangered species is any species which is in danger of extinction throughout all or a significant portion of its range, and a threatened species is any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range. Both definitions include not only the phrase "throughout all," but also the phrase "or a significant portion of its range." Thus, there are ultimately four bases for listing a species under the Act (in danger of extinction throughout all of its range, in danger of extinction throughout a significant portion of its range, likely to become an endangered species within the foreseeable future throughout all of its range, or likely to become an endangered species within the foreseeable future throughout a significant portion of its range). These four bases are made up of two classifications (i.e.,

endangered or threatened) and two components (i.e., throughout all of its range or throughout a significant portion of its range).

Beginning in 2001, a number of judicial opinions addressed our interpretation of the phrase "or a significant portion of its range" (the SPR phrase) in the statutory definitions of endangered species and threatened species. In *Defenders of Wildlife* v. *Norton*, 258 F.3d 1136 (9th Cir. 2001) regarding the flat-tailed horned lizard, the court held that the interpretation of the SPR phrase that we had applied in analyzing the status of the flat-tailed horned lizard was unacceptable because it would allow for a species to warrant listing throughout a significant portion of a species' range only when the species "is in danger of extinction everywhere" (*Id.* at 1141). The court held that the SPR phrase must be given independent meaning from the "throughout all" phrase to avoid making the SPR phrase in the statute superfluous.

In an attempt to address the judicial opinions calling into question our approach to evaluating whether a species was endangered or threatened throughout a significant portion of its range, the Services published a "Final Policy on Interpretation of the Phrase "Significant Portion of Its Range" in the Endangered Species Act's Definitions of "Endangered Species" and "Threatened Species" (hereafter "2014 SPR Policy;" 79 FR 37578, July 1, 2014). The notice of the draft Policy provides more detail about litigation before 2014 regarding the phrase (76 FR 76987, Dec. 9, 2011). The 2014 SPR Policy included 4 elements:

(1) Consequence—that the consequence of determining that a species warrants listing based on its status in a significant portion of its range is to list the species throughout all of its range;

(2) Significance—a definition of the term "significant";

(3) Range—that the species' "range" is the current range of the species; and

(4) DPS—that, if a [vertebrate] species is endangered or threatened in an SPR and the population in that SPR is a distinct population segment (DPS), the Service will list just the DPS.

Subsequently, two district courts vacated the definition of "significant" contained in the 2014 SPR Policy (*Ctr. for Biological Diversity* v. *Jewell*, 248 F. Supp. 3d 946, 959 (D. Ariz. 2017) ("*CBD* v. *Jewell*") and *Desert Survivors* v. *U.S. Dep't of the Interior*, 321 F. Supp. 3d 1011, 1070-74 (N.D. Cal. 2018) ("*Desert Survivors*")). The courts found that the definition in the 2014 SPR Policy set too high a threshold and rendered the SPR language in the statute superfluous, failing to give it independent meaning from the "throughout all" phrase. In 2020, another court (*Ctr. for Biological Diversity* v. *Everson*, 435 F. Supp. 3d 69 (D.D.C. 2020) ("*Everson*")) also vacated the specific aspect of the 2014 SPR Policy under which, "if the Services determine that a species is threatened throughout all of its range, the Services will not analyze whether the species is endangered in a significant portion of its range" (*Id.* at 98). This was an extension of the definition of "significant," which required a stepwise process in which we only considered whether a species may be endangered or threatened throughout a significant portion of its range when the species was not endangered or threatened throughout all of its range. In an extension of the earlier rulings from *CBD* v. *Jewell* and *Desert Survivors*, the court found that this aspect of the definition of the 2014 SPR Policy was not only inconsistent with the statute because it "rendered the 'endangered in a significant portion of its range' basis for listing superfluous," but was also "inconsistent with [Endangered Species Act] principles" and "not a logical outgrowth from the draft policy." Under this ruling, if we find a species is not in danger of extinction throughout all of its range, we must evaluate whether the species is in danger of extinction throughout a significant portion of its range, even in cases where we have determined that the species is likely to

become in danger of extinction within the foreseeable future (threatened) throughout all of its range. The remaining three elements of the 2014 SPR Policy remain intact.

In short, the courts have directed that the definition of "significant" must afford the phrase "or a significant portion of its range" an independent meaning from the "throughout all of its range" phrase. Therefore, to determine whether any species warrants listing, we determine for each classification (endangered and threatened) the appropriate component to evaluate (throughout all of its range or throughout a significant portion of its range).

We make this determination based on whether the best scientific and commercial data available indicate that the species has a similar extinction risk in all areas across its range (at a scale that is biologically appropriate for that species). When making a listing determination for a species that has a similar extinction risk *in all areas* across its range, we determine its regulatory status using the component "throughout all of its range." For example, in some cases there is no way to divide a species' range in a way that is biologically appropriate. This could be because the range is so small that there is only one population or because the species functions as a metapopulation such that effects to one population directly result in effects to another population. On the other hand, when making a listing determination for a species whose extinction risk varies across its range, we determine its regulatory status using the component "throughout a significant portion of its range."

For either classification (endangered or threatened), we consider the five factors and the species' responses to those factors regardless of which component (throughout all of its range or throughout a significant portion of its range) we are evaluating. When assessing whether a species is endangered or threatened throughout a significant portion of its range, we address two questions because we must determine whether there is any portion of the species' range for which both (1) the portion is "significant" and (2) the

species is in danger of extinction or likely to become in danger of extinction within the foreseeable future throughout that portion. We may address either question first. Regardless of which question we address first, if we reach a negative answer with respect to the first question that we address, we do not need to evaluate the other question for that portion of the species' range.

Determination of Rio Grande Shiner Status

We propose listing the Rio Grande shiner as an endangered species because it is in danger of extinction *throughout all of its range*. As stated above, when the species has similar extinction risk *in all areas* across its range (at a scale that is biologically appropriate for that species), we determine its classification based upon its regulatory status throughout all of its range. Conversely, if the extinction risk varies across its range such that the species' regulatory status may be different in a portion of its range, we determine a species' classification based upon its regulatory status throughout a significant portion of its range. Either way, we need to begin by determining the scale that is biologically appropriate for a classification determination for that species. For many species, we can divide its range in an infinite number of ways. As described in *Current Condition*, for the Rio Grande shiner, we divided the range into analysis units that correspond to river reaches in which the species has been detected since 2010. These reaches correspond to logical breakpoints in the range: the Amistad, Falcon, and Upper Pecos Reaches. Since they are bounded by dams and reservoirs, there is no connectivity between them. In summary, these reaches are the units that provide the appropriate scale to assess extinction risk for the Rio Grande shiner.

In undertaking this analysis of whether the Rio Grande shiner is in danger of extinction, we evaluated whether the species has a similar near-term risk of extinction *in all areas* across its range by assessing its extinction risk within each reach. We reviewed the best scientific and commercial data available regarding threats to the species, its

responses to those threats and any associated conservation measures. We then assessed the cumulative effects of those threats and conservation measures under the Act's section 4(a)(1) factors. We examined the following threats: habitat destruction, modification, and fragmentation caused by dams and other alterations to rivers (Factor A), deterioration of water quality (Factor A), and changes in water flows due to environmental conditions (Factors A and E), including cumulative effects. Our review indicated that the Rio Grande shiner's near-term extinction risk is similar in all areas across its range; therefore, we evaluated whether it may be endangered based upon the "throughout all of its range" component.

In the Amistad and Falcon reaches, habitat conditions have deteriorated substantially due to alterations in water flows and aquatic habitats. Due to these deteriorations, this proposed rule finds that the Rio Grande shiner is extirpated in these two reaches.. The ability of the Upper Pecos Reach population to remain resilient is entirely dependent on reliable river flows to support spawning and recruitment. Over the period it has been monitored, the Upper Pecos Reach of Rio Grande shiner experienced several river drying events that precipitated failed spawning or recruitment, substantial fluctuations in catch per unit effort, and population crashes. Despite several river drying events in the last two decades, the Upper Pecos population is still extant. We attribute the ability of the population to withstand these drying events to (1) the likely existence of suitable refugia, (2) a large enough number of individuals to disperse into these refugia, (3) a short enough duration of drying that these refugia were able to persist and foster survival, and (4) the ability of the population to subsequently rebound due to recruitment and stable base flows in subsequent years.

However, while the species has been able to persist in the Upper Pecos reach in the past, river drying will continue to be an unpredictable and severe catastrophic risk that will be challenging to mitigate. Importantly, as discussed above, such drying is

expected to increase in likelihood, intensity, and duration. As a short-lived species, the Rio Grande shiner is sensitive to extended river drying events, as recruitment of new breeders is required to replace individuals that live 2 to 3 years. Even with this capacity, abundance of the Rio Grande shiner in the Upper Pecos has not returned to levels observed before the 2014 population crash. Current conservation efforts are not sufficient to ensure protection of aquatic habitats during these extreme events. In summary, the Upper Pecos Reach has a history of episodic drying that results in dramatic population crashes of the Rio Grande shiner. These drying events are at the mercy of environmental conditions that are expected to be more likely in the future and that cannot be readily predicted or mitigated by human intervention. Furthermore, the population occupies a single mainstem channel of the Pecos River and there is no redundancy (e.g., occupied tributaries) to support repopulation should this population collapse. Thus, the Upper Pecos Reach is at risk of extinction due to the threat posed by river drying.

In summary, we find that the Rio Grande shiner is in danger of extinction in all areas across its range (i.e., every reach). Thus, there is no portion of the range where the Rio Grande shiner may have a regulatory status that is different from its status in the rest of its range.

After evaluating threats to the species, its responses to those threats and any associated conservation measures, and assessing the cumulative effects of those threats and conservation measures under the Act's section 4(a)(1) factors, we conclude that the Rio Grande shiner is in danger of extinction throughout all of its range due to the limited number of healthy, resilient populations; the severity, extent, and immediacy of threats to populations; and the anticipated responses of the Rio Grande shiner to those threats. With such extensive rangewide reductions, the Rio Grande shiner has extremely low levels of redundancy and representation. Loss of the Upper Pecos Reach due to a catastrophic event would effectively result in the extinction of the species. There is no

opportunity for demographic or genetic rescue via dispersal due to fragmentation of the range. A threatened species status is not appropriate because the threats to the species are ongoing and imminent and have already resulted in the species being in danger of extinction.

Determination of Status

Based on the best scientific and commercial data available, we determine that the Rio Grande shiner meets the Act's definition of an endangered species because it is in danger of extinction throughout all of its range. Therefore, we propose to list the Rio Grande shiner as an endangered species in accordance with sections 3(6) and 4(a)(1) of the Act.

Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened species under the Act include recognition as a listed species, planning and implementation of recovery actions, requirements for Federal protection, and prohibitions against certain practices. Recognition through listing results in public awareness and conservation by Federal, State, Tribal, and local agencies; foreign governments; private organizations; and individuals. The Act encourages cooperation with the States and other countries and calls for recovery actions to be carried out for listed species. The protection required by Federal agencies, including the Service, and the prohibitions against certain activities are discussed, in part, below.

The primary purpose of the Act is the conservation of endangered and threatened species and the ecosystems upon which they depend. The ultimate goal of such conservation efforts is the recovery of these listed species, so that they no longer need the protective measures of the Act. Section 4(f) of the Act directs us to develop and implement recovery plans for the conservation and survival of endangered and threatened species unless we determine that such a plan will not promote the conservation of the

species. Under section 4(f)(1)(B)(ii), recovery plans must, to the maximum extent practicable, include objective, measurable criteria which, when met, would result in a determination, in accordance with the provisions of section 4 of the Act, that the species be removed from the Lists of Endangered and Threatened Wildlife and Plants.

Recovery plans provide a roadmap for us and our partners on methods of enhancing conservation and minimizing threats to listed species, as well as measurable criteria against which to evaluate progress towards recovery and assess the species' likely future condition. However, they are not regulatory documents and do not substitute for the determinations and promulgation of regulations required under section 4(a)(1) of the Act. A decision to revise the status of a species, or to delist a species, is ultimately based on an analysis of the best scientific and commercial data available to determine whether a species is no longer an endangered species or a threatened species, regardless of whether that information differs from the recovery plan.

The recovery planning process begins with development of a recovery outline made available to the public soon after a final listing determination. The recovery outline guides the immediate implementation of urgent recovery actions while a recovery plan is being developed. Recovery teams (composed of species and other experts, including those from Federal and State agencies, Tribes, the academic community, or nongovernmental organizations) may be established to develop or implement recovery plans. The recovery outline, draft recovery plan, final recovery plan, and any revisions will be available on our website as they are completed (https://www.fws.gov/program/endangered-species) or from our New Mexico Ecological Services Field Office (see **FOR FURTHER INFORMATION CONTACT**).

Implementation of recovery actions generally requires the participation of a broad range of partners, including other Federal agencies, States, Tribes, nongovernmental organizations, businesses, and private landowners. Examples of recovery actions include

habitat restoration (e.g., restoration of native vegetation), research, captive propagation and reintroduction, and outreach and education. The recovery of many listed species cannot be accomplished solely on Federal lands because their ranges may occur primarily or solely on non-Federal lands. Recovery of these species requires cooperative conservation efforts on private, State, and Tribal lands.

If this species is listed, funding for recovery actions may be available from a variety of sources, including Federal budgets, State programs, and cost-share grants for non-Federal landowners, the academic community, and nongovernmental organizations. In addition, pursuant to section 6 of the Act, the States of New Mexico and Texas would be eligible for Federal funds to implement management actions that promote the protection or recovery of the Rio Grande shiner. Information on our grant programs that are available to aid species recovery can be found at: https://www.fws.gov/service/financial-assistance.

Although the Rio Grande shiner is only proposed for listing under the Act at this time, please let us know if you are interested in participating in recovery efforts for this species. Additionally, we invite you to submit any new information on this species whenever it becomes available and any information you may have for recovery planning purposes (see **FOR FURTHER INFORMATION CONTACT**).

Section 7 of the Act is titled, "Interagency Cooperation," and it mandates all Federal action agencies to use their existing authorities to further the conservation purposes of the Act and to ensure that their actions are not likely to jeopardize the continued existence of listed species or destroy or adversely modify critical habitat. Regulations implementing section 7 are codified at 50 CFR part 402.

Section 7(a)(2) states that each Federal action agency shall, in consultation with the Secretary, ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of a listed species or result in the destruction or

adverse modification of designated critical habitat. Each Federal agency shall review its action at the earliest possible time to determine whether it may affect listed species or critical habitat. If a determination is made that the action may affect listed species or critical habitat, formal consultation is required (50 CFR 402.14(a)), unless the Service concurs in writing that the action is not likely to adversely affect listed species or critical habitat. At the end of a formal consultation, the Service issues a biological opinion, containing its determination of whether the Federal action is likely to result in jeopardy or adverse modification.

In contrast, section 7(a)(4) of the Act requires Federal agencies to confer with the Service on any action which is likely to jeopardize the continued existence of any species proposed to be listed under the Act or result in the destruction or adverse modification of critical habitat proposed to be designated for such species. Although the conference procedures are required only when an action is likely to result in jeopardy or adverse modification, action agencies may voluntarily confer with the Service on actions that may affect species proposed for listing or critical habitat proposed to be designated. In the event that the subject species is listed or the relevant critical habitat is designated, a conference opinion may be adopted as a biological opinion and serve as compliance with section 7(a)(2) of the Act.

Examples of discretionary actions for the Rio Grande shiner that may be subject to conference and consultation procedures under section 7 of the Act are management of Federal lands administered by the Service, Bureau of Land Management, BOR, National Park Service, U.S. Customs and Border Protection, and International Boundary and Water Commission, as well as actions that require a Federal permit (such as a permit from the U.S. Army Corps of Engineers under section 404 of the Clean Water Act (33 U.S.C. 1251 et seq.)) or actions funded by Federal agencies such as the Federal Highway Administration, Federal Aviation Administration, or the Federal Emergency Management

Agency. Federal actions not affecting listed species or critical habitat—and actions on State, Tribal, local, or private lands that are not federally funded, authorized, or carried out by a Federal agency—do not require section 7 consultation. Federal agencies should coordinate with the New Mexico Ecological Services Field Office (see **FOR FURTHER INFORMATION CONTACT**) with any specific questions on section 7 consultation and conference requirements.

The Act and its implementing regulations set forth a series of prohibitions and exceptions that apply to endangered wildlife. The prohibitions of section 9(a)(1) of the Act, and the Service's implementing regulations codified at 50 CFR 17.21, make it illegal for any person subject to the jurisdiction of the United States to commit, to attempt to commit, to solicit another to commit or to cause to be committed any of the following acts with regard to any endangered wildlife: (1) import into, or export from, the United States; (2) take (which includes harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct) within the United States, within the territorial sea of the United States, or on the high seas; (3) possess, sell, deliver, carry, transport, or ship, by any means whatsoever, any such wildlife that has been taken illegally; (4) deliver, receive, carry, transport, or ship in interstate or foreign commerce, by any means whatsoever and in the course of commercial activity; or (5) sell or offer for sale in interstate or foreign commerce. Certain exceptions to these prohibitions apply to employees or agents of the Service, the National Marine Fisheries Service, other Federal land management agencies, and State conservation agencies.

We may issue permits to carry out otherwise prohibited activities involving endangered wildlife under certain circumstances. Regulations governing permits for endangered wildlife are codified at 50 CFR 17.22, and general Service permitting regulations are codified at 50 CFR part 13. With regard to endangered wildlife, a permit may be issued: for scientific purposes, for enhancing the propagation or survival of the

species, or for take incidental to otherwise lawful activities. The statute also contains certain exemptions from the prohibitions, which are found in sections 9 and 10 of the Act.

II. Critical Habitat

Background

Section 4(a)(3) of the Act requires that, to the maximum extent prudent and determinable, we designate a species' critical habitat concurrently with listing the species. Critical habitat is defined in section 3(5)(A) of the Act as:

(1) The specific areas within the geographical area occupied by the species, at the time it is listed in accordance with the Act, on which are found those physical or biological features

(a) Essential to the conservation of the species, and

(b) Which may require special management considerations or protection; and

(2) Specific areas outside the geographical area occupied by the species at the time it is listed, upon a determination that such areas are essential for the conservation of the species.

Our regulations at 50 CFR 424.02 define the geographical area occupied by the species as an area that may generally be delineated around species' occurrences, as determined by the Secretary (i.e., range). Such areas may include those areas used throughout all or part of the species' life cycle, even if not used on a regular basis (e.g., migratory corridors, seasonal habitats, and habitats used periodically, but not solely by vagrant individuals).

Conservation, as defined under section 3(3) of the Act, means to use and the use of all methods and procedures that are necessary to bring an endangered or threatened species to the point at which the measures provided pursuant to the Act are no longer necessary. Such methods and procedures include, but are not limited to, all activities

associated with scientific resources management such as research, census, law enforcement, habitat acquisition and maintenance, propagation, live trapping, and transplantation, and, in the extraordinary case where population pressures within a given ecosystem cannot be otherwise relieved, may include regulated taking.

Critical habitat receives protection under section 7 of the Act through the requirement that each Federal action agency ensure, in consultation with the Service, that any action they authorize, fund, or carry out is not likely to result in the destruction or adverse modification of designated critical habitat. Such designation does not allow the government or public to access private lands. Such designation does not require implementation of restoration, recovery, or enhancement measures by non-Federal landowners. Rather, designation requires that, where a landowner requests Federal agency funding or authorization for an action that may affect an area designated as critical habitat, the Federal agency consult with the Service under section 7(a)(2) of the Act. If the action may affect the listed species itself (such as for occupied critical habitat), the Federal agency would have already been required to consult with the Service even absent the designation because of the requirement to ensure that the action is not likely to jeopardize the continued existence of the listed species. Even if the Service were to conclude after consultation that the proposed activity is likely to result in destruction or adverse modification of the critical habitat, the Federal action agency and the landowner are not required to abandon the proposed activity, or to restore or recover the species; instead, they must implement "reasonable and prudent alternatives" to avoid destruction or adverse modification of critical habitat.

Under the first prong of the Act's definition of critical habitat, areas within the geographical area occupied by the species at the time it was listed are included in a critical habitat designation if they contain physical or biological features (1) which are essential to the conservation of the species and (2) which may require special

management considerations or protection. For these areas, critical habitat designations identify, to the extent known using the best scientific data available, those physical or biological features that are essential to the conservation of the species (such as space, food, cover, and protected habitat).

Under the second prong of the Act's definition of critical habitat, we can designate critical habitat in areas outside the geographical area occupied by the species at the time it is listed, upon a determination that such areas are essential for the conservation of the species.

Section 4(b)(2) of the Act requires that we designate critical habitat on the basis of the best scientific data available. Further, our Policy on Information Standards Under the Endangered Species Act (published in the *Federal Register* on July 1, 1994 (59 FR 34271)), the Information Quality Act (section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001 (Pub. L. 106–554; H.R. 5658)), and our associated Information Quality Guidelines provide criteria, establish procedures, and provide guidance to ensure that our decisions are based on the best scientific data available. They require our biologists, to the extent consistent with the Act and with the use of the best scientific data available, to use primary and original sources of information as the basis for recommendations to designate critical habitat.

When we are determining which areas should be designated as critical habitat, our primary source of information is generally the information compiled in the SSA report and information developed during the listing process for the species. Additional information sources may include any generalized conservation strategy, criteria, or outline that may have been developed for the species; the recovery plan for the species; articles in peer-reviewed journals; conservation plans developed by States and counties; scientific status surveys and studies; biological assessments; other unpublished materials; or experts' opinions or personal knowledge.

A critical habitat designation does not signal that habitat outside the designated area is unimportant or may not be needed for recovery of the species. Areas that are important to the conservation of the species, both inside and outside the critical habitat designation, would continue to be subject to: (1) Conservation actions implemented under section 7(a)(1) of the Act; (2) regulatory protections afforded by the requirement in section 7(a)(2) of the Act for Federal agencies to ensure their actions are not likely to jeopardize the continued existence of any endangered or threatened species; and (3) the prohibitions found in section 9 of the Act. These protections and conservation tools will continue to contribute to recovery of the species. Similarly, critical habitat designations made on the basis of the best scientific data available 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 at the time of those planning efforts calls for a different outcome.

Critical Habitat Determinability

Our regulations at 50 CFR 424.12(a)(2) state that critical habitat is not determinable when one or both of the following situations exist:

(i) Data sufficient to perform required analyses are lacking, or

(ii) The biological needs of the species are not sufficiently well known to identify any area that meets the definition of "critical habitat."

We reviewed the available information pertaining to the biological needs of the species and habitat characteristics where this species is located. Additionally, in making a critical habitat determination, we may exclude an area from designation if the benefits of excluding it outweigh the benefits of inclusion, provided the exclusion does not result in the extinction of the species. To properly conduct this analysis, we need data on the economic and environmental impacts that may occur due to a critical habitat designation. Those assessments are not yet complete, and we are in the process of working with

Federal, State, and other partners in acquiring the complex information needed to perform those assessments. Until we have these data, we do not have sufficient information to perform a required analysis of the impacts of the designation. Therefore, we conclude that the designation of critical habitat for the Rio Grande shiner is not determinable at this time. The Act allows the Service an additional year to publish a critical habitat designation that is not determinable at the time of listing (16 U.S.C. 1533(b)(6)(C)(ii)).

Required Determinations

Clarity of the Rule

We are required by Executive Orders (E.O.) 12866 and 12988 and by the Presidential Memorandum of June 1, 1998, to write all rules in plain language. This means that each rule we publish must:

(1) Be logically organized;

(2) Use the active voice to address readers directly;

(3) Use clear language rather than jargon;

(4) Be divided into short sections and sentences; and

(5) Use lists and tables wherever possible.

If you feel that we have not met these requirements, send us comments by one of the methods listed in **ADDRESSES**. To better help us revise the rule, your comments should be as specific as possible. For example, you should tell us the numbers of the sections or paragraphs that are unclearly written, which sections or sentences are too long, the sections where you feel lists or tables would be useful, etc.

Regulatory Planning and Review (Executive Orders 12866, 13563, and 14192)

E.O. 12866 provides that the Office of Information and Regulatory Affairs (OIRA) in the Office of Management and Budget will review significant regulatory actions. E.O. 13563 reaffirms the principles of E.O. 12866 while calling for improvements in the Nation's regulatory system to promote predictability, to reduce uncertainty, and to use the best,

most innovative, and least burdensome tools for achieving regulatory ends. E.O. 13653 directs agencies to consider regulatory approaches that reduce burdens and maintain flexibility and freedom of choice for the public where these approaches are relevant, feasible, and consistent with regulatory objectives. We have developed this proposed rule in a manner consistent with these requirements. OIRA has determined that this rule is significant. This rule is an E.O. 14192 regulatory action.

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, May 4, 1994), E.O. 13175 ("Consultation and Coordination with Indian Tribal Governments"), the President's memorandum of November 30, 2022 ("Uniform Standards for Tribal Consultation"; 87 FR 74479, December 5, 2022), and the Department of the Interior's manual at 512 DM 2, we readily acknowledge our responsibility to communicate meaningfully with federally recognized Tribes and Alaska Native Corporations on a government-to-government basis. In accordance with Secretary's Order 3206 of June 5, 1997 ("American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act"), we readily acknowledge our responsibilities to work directly with Tribes in developing programs for healthy ecosystems, to acknowledge that Tribal lands are not subject to the same controls as Federal public lands, to remain sensitive to Indian culture, and to make information available to Tribes.

The Falcon Reach of the Rio Grande shiner's range borders the Tribal lands of the Kickapoo Traditional Tribes of Texas. Several Tribes may also have interests in this area and could be affected by this proposed rule. We contacted the Kickapoo Traditional Tribe of Texas, Pueblo of Cochiti, Pueblo of Isleta, Pueblo of San Felipe, Pueblo of Sandia, Pueblo of Santa Ana, Pueblo of Santa Clara, Santo Domingo Pueblo, Kewa Pueblo, Taos

Pueblo, and Ysleta Del Sur Pueblo regarding the SSA process by mail and invited them to provide information and comments to inform the SSA. Our interactions with these Tribes are part of our government-to-government consultation with Tribes regarding the Rio Grande shiner and the Act. We will continue to work with relevant Tribal entities during the development of any final rules for the Rio Grande shiner.

References Cited

A complete list of references cited in this rulemaking is available on the internet at https://www.regulations.gov and upon request from the New Mexico Ecological Services Field Office (see **FOR FURTHER INFORMATION CONTACT**).

List of Subjects in 50 CFR Part 17

Endangered and threatened species, Exports, Imports, Plants, Reporting and recordkeeping requirements, Transportation, Wildlife.

Proposed Regulation Promulgation

Accordingly, we propose to amend part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations, as set forth below:

PART 17—ENDANGERED AND THREATENED WILDLIFE AND PLANTS

1. The authority citation for part 17 continues to read as follows:

AUTHORITY: 16 U.S.C. 1361–1407; 1531–1544; and 4201–4245, unless otherwise noted.

2. In § 17.11, in paragraph (h), amend the List of Endangered and Threatened Wildlife by adding an entry for "Shiner, Rio Grande" in alphabetical order under FISHES to read as follows:

§ 17.11 Endangered and threatened wildlife.

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(h) * * *

Common name	Scientific name	Where listed	Status	Listing citations and applicable rules

* * * * * * *				
FISHES				
* * * * * * *				
Shiner, Rio Grande	*Notropis jemezanus*	Wherever found	E	[*Federal Register* citation when published as a final rule].
* * * * * * *				

Brian Nesvik,
Director,
U.S. Fish and Wildlife Service.

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