

90-DAY FINDING PETITION REVIEW FORM

LISTING AS THREATENED OR ENDANGERED

Federal Docket No. FWS-R5-ES-2022-0161

90-DAY FINDING ON A PETITION TO PROTECT THE ROUGHHEAD SHINER (*Notropis semperasper*) UNDER THE ENDANGERED SPECIES ACT with CRITICAL HABITAT

Petitioned action being requested:

- List as an endangered or a threatened species
 Reclassify (uplist) from a threatened species to an endangered species

Petitioned entity:

- Species
 Subspecies
 DPS of vertebrates
 Subset of listed entity (species, subspecies, DPS, etc.)

Background

Section 4(b)(3)(A) of the Endangered Species Act (Act) requires that we make a finding on whether a petition to list, delist, uplist (reclassify the species from a threatened species to an endangered species), or downlist (reclassify the species from an endangered species to a threatened species) a species presents substantial scientific or commercial information indicating that the petitioned action may be warranted. Our standard for substantial scientific or commercial information within the Code of Federal Regulations (CFR) with regard to a 90-day petition finding is “credible scientific or commercial information in support of the petition’s claims such that a reasonable person conducting an impartial scientific review would conclude that the action proposed in the petition may be warranted” (50 CFR § 424.14(h)(i)).

The Act and our regulations are clear that the responsibility is squarely on the petitioner to present the requisite level of information to meet the substantial information test to demonstrate that the petitioned action may be warranted. This means that the petitioner must not only present credible information that threats may be present; they also need to present credible information concerning a species’ documented or likely response to that threat, and that the species’ response is to such a level that listing or uplisting may be warranted. Where the petitioner has failed to do so, we should make a not-substantial finding on the petition -- we should not augment their petition with our own knowledge or other information we are aware of. If we are aware of species that may be in danger of extinction, we should undertake a status review on our own accord, regardless of the receipt of a petition.

Our regulations further state that we will consider whether a petition presents a complete and balanced representation of the relevant facts when making our finding of whether a petition presents substantial information that the requested action may be warranted. Thus, if we find that a petition cherry-picked information, ignored relevant and readily available information, and

presented a biased and incomplete representation of facts, we should consider whether the petition has met the requirement to present substantial information (see instructions below for more information).

We note that designating critical habitat is not a petitionable action under the Act. Petitions to designate critical habitat (for species without existing critical habitat) are reviewed under the Administrative Procedure Act and are not addressed here. See 50 C.F.R. § 424.14(j). To the maximum extent prudent and determinable, any proposed critical habitat will be addressed concurrently with a proposed rule to list a species, if applicable.

Petition History

On March 25, 2022, we received a petition dated March 25, 2022, from the Center for Biological Diversity (CBD), requesting that the roughhead shiner be listed as a threatened species or an endangered species and critical habitat be designated for this species under the Act. The petition clearly identified itself as such and included the requisite identification information for the petitioner, required at 50 CFR 424.14(c). This finding addresses the petition.

Evaluation of a Petition to List the Roughhead Shiner as an Endangered/Threatened Species Under the Act

Species and Range

Does the petition identify an entity that may be eligible for listing as a threatened species or endangered species (i.e., is the entity a species, subspecies, or DPS)?

- Yes
 No

Roughhead shiner (*Notropis semperasper*)

Historical range: Upper James River drainage in western Virginia

Current range: Upper James River drainage in western Virginia

Statutory and Regulatory Standards for Evaluation of the Petition

Section 4 of the Act (16 U.S.C. 1533) and its implementing regulations (50 CFR part 424) set forth the procedures for determining whether a species is an “endangered species” or a “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 at the petition review stage, 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.

In reviewing the petition, we use the term “threat” to refer in general to any action or condition that is known to or is *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 may meet the statutory definition of an “endangered species” or a “threatened species.” In determining whether a species may meet either definition, we must evaluate all identified threats by considering the expected response by the species, 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.

Below we present the information from the petition, our analysis of that information and our conclusion and petition finding relative to our substantial information standard which is “that amount of information that would lead a reasonable person to believe that the measure proposed in the petition may be warranted”.

Information in the Petition

When evaluating a petition at the 90-day finding stage, we evaluate the information in the petition and use any readily available information (e.g., in our files or published literature that we are aware of) to verify the credibility of the information presented in the petition. At this stage we do not conduct research or solicit additional information to complete the evaluation of the petition. Our implementing regulations at 50 CFR 424.14(h)(i) state that conclusions drawn in the petition without the support of credible scientific or commercial information will not be considered “substantial information.” Therefore, below we identify those claims in the petition that are supported by credible scientific or commercial information and those claims that are not supported by credible scientific or commercial information. Any claims that are not supported by credible scientific or commercial information will not be further evaluated.

Petitioner claims of threats under Factor D will not be included in this table because claims under Factor D are not an independent basis for listing under the Act. We will include consideration of existing regulatory mechanisms or conservation efforts identified in the petition or from other readily available information that may ameliorate the threats in our evaluation of the credible information presented in the petition below in “Evaluation of Information”.

4(a)(1) Factor	Threat or Activity	Do the Claims made in the Petition Rely on Credible Scientific or Commercial Information Corroborating that the Threat is Present and is Reasonably Likely to Negatively Affect Individuals?	
		If No, Explain Why Not	If Yes, Briefly Describe the Credible Information (with citations) that the Petition Presents
A	Habitat curtailment from dams	A 1979 dam rendered 22 miles of habitat unsuitable, but information was not presented in the petition regarding new or planned dam projects.	
A	Habitat modification from siltation and contamination		Citations presented within the petition support the claims that forest management activities, urbanization, and pipeline construction projects may increase siltation and contamination in streams occupied by the roughhead shiner (Angermeier and Pinder 2015; Jenkins and Burkhead 1994; VADWR Wildlife Action Plan 2015).
E	Climate change	General projections are made that climate change may cause more hot days, heavy rainfall, and flooding, but information was not presented in the petition regarding how these would impact the roughhead shiner.	
E	Competition from introduced telescope shiner		Citations within the petition support the claim that the roughhead shiner may be displaced by the introduced telescope shiner (Southeast Fishes Council 1998, Jenkins and Burkhead 1994).

Evaluation of Information

In this section we evaluate conclusions from the petition that we found to be based on credible information. Those conclusions that we did not find to be based on credible information do not constitute substantial information and therefore will not be further evaluated. When evaluating a petition at the 90-day finding stage, we evaluate the information in the petition and use any readily available information (e.g., in our files or published literature that we are aware of) to verify the credibility of the information presented in the petition. Conclusions in the petition based on credible information are then evaluated to determine if there is substantial information presented indicating the petitioned action may be warranted. The substantial information standard is “that amount of information that would lead a reasonable person to believe that the measure proposed in the petition may be warranted.”

Below we discuss our evaluation of each of the claims found to be *based on credible information* from the petition and consider any regulatory mechanisms or conservation efforts that may ameliorate the threats the species identified in the petition. When evaluating each of the factors in section 4(a)(1) of the Act, factor D is considered in light of the other factors, not independently. The discussion of the conclusions under each factor above included a summary of

information provided in the petition and contained other readily available information regarding how activities identified in the petition negatively affect the status of the entity. Below, we evaluate claims based on credible information along with the extent to which existing regulatory mechanisms may ameliorate the threats such that the petitioned entity may or may not warrant listing or uplisting.

Petition Threats/Claims or Activities

Factor A – the threat of habitat modification from siltation and/or contamination

Water quality issues may impact roughhead shiner populations, either from direct contamination or through gradual increased concentrations of materials in sediment and bottom-dwelling organisms that can result in reduced levels of dissolved oxygen and altered pH levels (VADWR Wildlife Action Plan 2015). Sources of water quality degradation include siltation (Jenkins and Burkhead 1994; Angermeier and Pinder 2015), pollution from urban impacts (VADWR Wildlife Action Plan 2015), and sedimentation or contamination from pipeline construction projects (Appalachian Voices vs. US Dept. of Interior 2022). The species' vulnerability to extirpation is exacerbated by its narrow range. The petition presents substantial information indicating the petitioned action may be warranted due to the effects of siltation or contamination from factors negatively impacting water quality.

Factor E – the threat from the introduced telescope shiner

A man-made factor affecting the continued existence of the roughhead shiner is the introduction of nonnative telescope shiner (*N. telescopus*), which has been introduced outside its native range in Virginia and West Virginia and is known to displace the roughhead shiner. As early as the 1970s, fish biologists cautioned that telescope shiners could displace roughhead shiners (Southeast Fishes Council 1998). Surveys in 1997 by Mike Pinder and Paul Bugas noted that “of the four historical sites known for roughheads, telescope shiners have taken over” (Southeast Fishes Council 1998). The petition presents substantial information indicating the petitioned action may be warranted due to effects of competition from introduced telescope shiner.

Cumulative Impacts

If at the 90-day finding stage we find that the petition presents substantial information based on one or more of the Factors (A, B, C, D, or E), we do not need to assess cumulative effects, but we will address cumulative effects of all threats in the 12-month finding. If at the 90-day finding stage we find that the petition does not present substantial information based on any one of the Factors individually, we will assess the cumulative effects to determine whether the petition presents substantial information based on all of the Factors.

Summary

After thorough examination of the petition, we find that the petitioned action of listing the roughhead shiner may be warranted by either Factor A or E individually, or by the cumulative impacts of both Factors. Under Factor A, the petition presents citations demonstrating that habitat modification from urbanization and forest management activities may degrade water quality to the point where it negatively impacts the species. Under Factor E, the petition presents citations