

Recovery Plan for Dusky Gopher Frog (*Rana sevosa*)

[https://ecos.fws.gov/docs/recovery_plan/2015_07_16_Final%20RP_R_sevosa_08212015%20\(1\).pdf](https://ecos.fws.gov/docs/recovery_plan/2015_07_16_Final%20RP_R_sevosa_08212015%20(1).pdf)

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DRAFT AMENDMENT 1

We have identified best available information that indicates the need to amend recovery criteria for the dusky gopher frog (DGF) since the recovery plan was completed. In this proposed recovery plan modification, we identify the current downlisting criteria; describe the proposed delisting criteria; and include the rationale supporting the proposed recovery plan modification. This proposed criteria amendment supplements the recovery plan by adding delisting criteria that were not developed at the time this recovery plan was completed. The recovery objective and step-down outline are described in Part II (page 33) of the Dusky Gopher Frog Recovery Plan (USFWS 2015a). Recovery plans are non-regulatory documents that provide guidance on how best to help recover species.

**For
U.S. Fish and Wildlife Service
Southeast Region
Atlanta, Georgia**

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METHODOLOGY USED TO COMPLETE THE RECOVERY PLAN AMENDMENT

The proposed amendments to the recovery criteria are based on the species' recovery plan, the recent five-year review (USFWS 2015b), and recent studies of the species. All relevant documents and data, including reports from State agencies and non-governmental partners, were considered during this recovery plan review and modification. The lead biologist for the species gathered the information on the DGF and notified the species experts, the relevant State agencies, and nongovernmental partners of the Service's process to complete this amendment. The lead biologist used the available information to develop the delisting criteria for the DGF.

ADEQUACY OF RECOVERY CRITERIA

Section 4(f)(1)(B)(ii) of the Endangered Species Act (Act) requires that each recovery plan shall incorporate, to the maximum extent practicable, "objective, measurable criteria which, when met, would result in a determination...that the species be removed from the list." Legal challenges to recovery plans (see *Fund for Animals v. Babbitt*, 903 F. Supp. 96 (D.D.C. 1995)) and a Government Accountability Audit (GAO 2006) also have affirmed the need to frame recovery criteria in terms of threats assessed under the five threat factors in section 4(a)(1) of the Act.

Recovery Criteria

The Dusky Gopher Frog Recovery Plan (USFWS 2015a) provides only downlisting criteria for the species (see page 33). Link to the Recovery Plan:

[https://ecos.fws.gov/docs/recovery_plan/2015_07_16_Final%20RP_R_sevosa_08212015%20\(1\).pdf](https://ecos.fws.gov/docs/recovery_plan/2015_07_16_Final%20RP_R_sevosa_08212015%20(1).pdf)

Synthesis

Since the finalization of the recovery plan (USFWS 2015a), recovery efforts have focused on monitoring and managing habitat of existing populations and attempting to establish new populations, by using both head-started metamorphic frogs from the original population and captive-bred frogs. Since 2015, DGF have bred at two additional breeding ponds due to our habitat management and translocation efforts. Dusky gopher frogs breed at eight ponds, however, only the original breeding site currently supports a naturally viable population. A naturally occurring population surrounding a breeding pond discovered in 2004 has likely been extirpated.

Appropriate habitat management for the DGF continues to be a priority for the Service and our recovery partners including the U.S. Forest Service, the U.S. Army Corps of Engineers, Mississippi Department of Wildlife, Fisheries, and Parks, The Nature Conservancy, and the Land Trust for the Mississippi Coastal Plain. Genetic monitoring of the primary population, newly established populations, and the captive population is ongoing to ensure that the genetic diversity of the DGF is maintained.

The protistan disease (*Dermomycooides*) in the DGF population continues to be a serious threat to the species. Over the last three breeding cycles ending in September 2018, less than 15 natural (not head-started in tanks) metamorphic frogs have been observed from monitoring the original breeding pond. Research into various aspects of the disease is ongoing.

The threats as described in the most recent Five-year Review (USFWS 2015b) are still accurate and mortality from disease continues to limit natural recruitment to many if not all populations. The DGF remains critically endangered.

AMENDED RECOVERY CRITERIA

Recovery criteria serve as objective, measurable guidelines to assist in determining when an endangered species has recovered to the point that it may be downlisted to threatened, or that the protections afforded by the Act are no longer necessary and the DGF may be delisted. Delisting is the removal of a species from the Federal Lists of Endangered and Threatened Wildlife and Plants. Downlisting is the reclassification of a species from endangered to threatened. The term “endangered species” means any species (species, sub-species, or DPS) which is in danger of extinction throughout all or a significant portion of its range. The term “threatened species” means any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

Revisions to the Lists, including delisting or downlisting a species, must reflect determinations made in accordance with sections 4(a)(1) and 4(b) of the Act. Section 4(a)(1) requires that the Secretary determine whether a species is an endangered species or threatened species (or not) because of threats to the species. Section 4(b) of the Act requires that the determination be made “solely on the basis of the best scientific and commercial data available.” Thus, while recovery plans provide important guidance to the Service, States, and other partners on methods of minimizing threats to listed species and measurable objectives against which to measure progress towards recovery, they are guidance and not regulatory documents.

Recovery criteria should help indicate when we would anticipate that an analysis of the species’ status under section 4(a)(1) would result in a determination that the species is no longer an endangered species or threatened species. A decision to revise the status of or remove a species from the Federal Lists of Endangered and Threatened Wildlife and Plants, however, is ultimately based on an analysis of the best scientific and commercial data then available, regardless of whether that information differs from the recovery plan. When changing the status of a species, we first propose the action in the *Federal Register* to seek public comment and peer review, followed by a final decision announced in the *Federal Register*.

Herein, we propose delisting criteria for the DGF as the Dusky Gopher Frog (*Rana sevosa*) Recovery Plan (2015a) only provided downlisting criteria as discussed above.

Downlisting Recovery Criteria

We are not amending the existing downlisting criteria (refer to page 33 of the Dusky Gopher Frog Recovery Plan (2015a)).

Delisting Recovery Criteria

In addition to the existing downlisting criteria, we are proposing delisting criteria for the DGF. The DGF will be considered for delisting when the following criteria are met:

- 1) Four (4) additional metapopulations (beyond those required for downlisting) are established that exhibit a stable or increasing trend, evidenced by natural recruitment and multiple age classes. Each of these 4 metapopulation is supported by a minimum of 2 breeding ponds (addresses Factor A and E).
- 2) Spatial distribution of the four (4) metapopulations (as defined in Criterion 1) includes one (1) metapopulation in each of the focus area blocks 1, 2 and 3. Additionally, one (1) metapopulation (as defined in Criterion 1) occurs in either focus area block 4 or 5. (addresses Factor A and E).
- 3) Breeding and adjacent upland habitats within the four additional metapopulations are protected by a conservation mechanism (addresses Factor A, D, and E).

- 4) The threat of disease is ameliorated to the extent that the species will remain viable into the foreseeable future (addresses Factor C).

Justification of Criteria

The proposed delisting recovery criteria reflect the best available and most up-to-date information on the DGF. These criteria address the five factors described in section 4(a)(1) of the Act and incorporate the conservation biology principles of representation, resiliency, and redundancy (Wolf *et al.* 2015).

Criterion 1: The number of populations required for downlisting have been increased to adequately address population representation, resiliency, and redundancy such that if the other three criteria are met, the species will no longer be in danger of becoming endangered in the foreseeable future. Ensuring that populations exhibit a stable or increasing trend will demonstrate the resilience of populations. Actions taken to meet criterion 1 will reduce threats posed by Factor A (loss of populations) and Factor E (small number of populations).

Criterion 2: The spatial distribution of the 4 additional metapopulations, spread across the range of the species, will ensure population representation, resiliency, and redundancy and address threats identified in Factors A and E as described above.

Criterion 3: Long-term habitat protection will ensure that conditions favorable for DGF and adequate habitat to support the species are maintained into the future by supporting resilience of individual populations. This criterion addresses Factor A (loss of habitat), Factor D (inadequate legal protection), and Factor E (inadequate habitat management; small number of populations).

Criterion 4: The threat of disease has increased in severity since the DGF was listed in 2001. In order to maintain the viability of the species and support the principles of representation, resiliency, and redundancy, this threat must be ameliorated. This criterion addresses Factor C (disease).

Rationale for Recovery Criteria

The proposed delisting recovery criteria reflect the best available and most up-to-date information on the DGF. By expanding the number of populations in each recovery focus area and removing the threat of disease, the viability of the DGF will be improved to the point where it will no longer be likely to become endangered in the foreseeable future. The recovery criteria explicitly address all of the listing factors relevant to the species.

The DGF recovery criteria address the biodiversity principles of representation, resiliency, and redundancy (Schaffer and Stein 2000) as these concepts relate to abundance, distribution, diversity, etc. Representation involves conserving the breadth of the genetic makeup of the species to conserve its adaptive capabilities. Resiliency involves ensuring that each population is sufficiently large to withstand stochastic events. Redundancy involves ensuring a sufficient

number of populations to provide a margin of safety for the species to withstand catastrophic events.

LITERATURE CITED

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