

(Gilpin and Soulé 1986). Genetic drift and inbreeding may lead to reductions in the ability of individuals to survive and reproduce (*i.e.*, reductions in fitness) in small populations. In addition, reduced genetic variation in small populations may make any species less able to successfully adapt to future environmental changes (Shaffer 1981, 1987; Noss and Cooperrider 1994; Primack 1998).

Conclusion for the Five Factors

In making this determination, we have carefully assessed the best scientific and commercial information available regarding the past, present, and future threats faced by the Sonoma County California tiger salamander. As discussed in the Summary of Factors Affecting the Species above, this DPS faces a number of threats. The most overwhelming threat is from continuing habitat destruction, degradation, and fragmentation. Secondary threats exist from predation and competition from introduced exotic species; possible commercial overutilization; disease; hybridization with non-native salamanders; various chemical contaminants; road-crossing mortality; rodent control operations, and the species' small remaining population. The various primary and secondary threats are not currently being offset by existing Federal, State, or local regulatory mechanisms. The Sonoma County California tiger salamander also is vulnerable to chance environmental or demographic events, to which small populations are particularly vulnerable. The combination of its biology and specific habitat requirements makes the animal highly susceptible to random events, such as drought, disease, and other occurrences. Such events are not usually a concern until the number of breeding/estivation sites or geographic distribution become severely limited, as is the case with the Sonoma County California tiger salamander.

Because the Sonoma County DPS of the California tiger salamander has been reduced to only eight known breeding sites, and all of them are subject to various immediate, ongoing, and future threats as outlined above, we find that the species is in imminent danger of extinction throughout all or a significant portion of its range and warrants immediate protection under the Act. The survival of this DPS now depends on protecting as many breeding sites and their associated upland habitats from further degradation and destruction as possible. The remaining breeding sites are vulnerable to loss from random natural or human-caused events unless sufficient habitat can be

protected and the metapopulations increased in size.

Critical Habitat

Critical habitat is defined in section 3 of the Act as the—(i) specific areas within the geographical area occupied by a species, at the time it is listed in accordance with the Act, on which are found those physical or biological features (I) essential to the conservation of the species, and (II) that may require special management considerations or protection, and (ii) specific areas outside the geographical area occupied by the species at the time it is listed in accordance with the provisions of section 4 of the Act, upon a determination by the Secretary that such areas are essential for the conservation of the species. "Conservation" means the use of all methods and procedures needed to bring the species to the point at which listing under the Act is no longer necessary.

Section 4(a)(3) of the Act and implementing regulations (50 CFR 424.12) require that, to the maximum extent prudent and determinable, the Secretary of the Interior (Secretary) designate critical habitat at the time the species is determined to be endangered or threatened. Our implementing regulations (50 CFR 424.12(a)) state that critical habitat is not determinable if information sufficient to perform the required analysis of impacts of the designation is lacking, or if the biological needs of the species are not sufficiently well known to allow identification of an area as critical habitat. Section 4(b)(2) of the Act requires us to consider economic and other relevant impacts of designating a particular area as critical habitat on the basis of the best scientific data available. The Secretary may exclude any area from critical habitat if she determines that the benefits of such exclusion outweigh the conservation benefits, unless to do so would result in the extinction of the species. In the absence of a finding that critical habitat would increase threats to a species, if any benefits would derive from critical habitat designation, then a prudent finding is warranted. In the case of this species, designation of critical habitat may provide some benefits.

The primary regulatory effect of critical habitat is the section 7 requirement that agencies refrain from taking any action that destroys or adversely modifies critical habitat. While a critical habitat designation for habitat currently occupied by this species would not be likely to change the section 7 consultation outcome because an action that destroys or

adversely modifies such critical habitat would also be likely to result in jeopardy to the species, there may be instances where section 7 consultation would be triggered only if critical habitat is designated. Examples could include unoccupied habitat or occupied habitat that may become unoccupied in the future. Designating critical habitat may also produce some educational or informational benefits. Therefore, designation of critical habitat for the Sonoma County California tiger salamander is prudent.

However, our budget for listing activities is currently insufficient to allow us to immediately complete all the listing actions required by the Act. Not designating critical habitat at this time allows us to provide the necessary protections needed for the conservation of the species without further delay. This is consistent with section 4(b)(6)(C)(i) of the Act, which states that final listing decisions may be issued without critical habitat designations when it is essential that such determinations be promptly published. The legislative history of the 1982 Act amendments also emphasized this point: "The Committee feels strongly, however, that, where biology relating to the status of the species is clear, it should not be denied the protection of the Act because of the inability of the Secretary to complete the work necessary to designate critical habitat * * * . The committee expects the agencies to make the strongest attempt possible to determine critical habitat within the time period designated for listing, but stresses that the listing of species is not to be delayed in any instance past the time period allocated for such listing if the biological data is clear but the habitat designation process is not complete" (H.R. Rep. No. 97-567 at 20 (1982)). We will prepare a critical habitat designation in the future when our available resources allow.

We will protect the Sonoma County California tiger salamander and its habitat through section 7 consultations to determine whether Federal actions are likely to jeopardize the continued existence of the species, through the recovery process, through enforcement of take prohibitions under section 9 of the Act, and through the section 10 process for activities on non-Federal lands with no Federal nexus.

Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened under the Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain practices.