

general, as animal populations become fragmented and isolated, it becomes more difficult for them to persist. Small, isolated patches of habitat are unable to support as many Preble's mice as larger patches of habitat. When threats to persistence are similar, larger populations are more secure from extirpation than smaller ones.

The structure and function of riparian ecosystems are determined by the hydrology of the waterway. Changes in timing and abundance of water can alter the channel structure, riparian vegetation, and the adjacent floodplain, and may result in changes that are detrimental to the persistence of the Preble's. Similarly, depletion of groundwater also affects the habitat components needed by the Preble's. As groundwater supplies are depleted, more xeric (low moisture) plant communities replace the riparian vegetation. The conversion of habitats from mesic (moderate moisture), shrub-dominated systems to drier grass-dominated systems may preclude the Preble's from these areas.

Alluvial aggregate extraction may produce long-term changes to Preble's habitat by altering hydrology and removing riparian vegetation. In particular, such extraction removes and often precludes reestablishment of habitat components required by the Preble's. Such mining impacts the deposits of alluvial sands and gravels that may be important hibernation locations for the Preble's.

Within the Preble's range, bank stabilization, channelization, and other measures to address flooding and stormwater runoff have increased the rate of stream flow, straightened riparian channels, and narrowed riparian areas (Pague and Grunau 2000). Using riprap and other structural stabilization options to reduce erosion may destroy riparian vegetation, and prevent or delay its re-establishment. In some cases these measures can alter the hydrologic processes and plant communities present to the point where Preble's populations can no longer persist.

Transportation and utility corridors frequently cross Preble's habitat and may negatively affect populations. As new roads are built and old roads are maintained, habitat is destroyed or fragmented. Roads and bridges also may act as barriers to dispersal.

The increasing presence of humans near Preble's habitats may result in increased level of predation that may pose a threat to the Preble's. The striped skunk (*Mephitis mephitis*), raccoon (*Procyon lotor*), red fox (*Vulpes vulpes*), and the domestic and feral cat are found

in greater densities in and around areas of human activity; all four of these species feed opportunistically on small mammals. The indication that summer mortality is higher than overwinter mortality underscores the impact that predators can have on the Preble's.

While normal flooding events help maintain the riparian and floodplain communities that provide suitable habitat for the Preble's, increased development and surfaces impervious to water absorption within a drainage can result in more frequent and severe flood events, increase erosion, cause downcutting of channels (lowering of channel grade relative to the banks and adjacent floodplain), and prevent the re-establishment of riparian communities.

Catastrophic fires can alter habitat dramatically and change the structure and composition of the vegetation communities so that the Preble's may no longer persist. In addition, precipitation falling in a burned area may degrade Preble's habitat by causing greater levels of erosion and sedimentation along creeks. Controlled use of fire may be one method to maintain appropriate riparian, floodplain, and upland vegetation within Preble's habitat. However, over the past several decades, as human presence has increased through Preble's range, significant effort has been made to suppress fires. Long periods of fire suppression may result in a build-up of fuel and result in a catastrophic fire.

Previous Federal Actions

On July 17, 2002, we published the proposed rule to designate critical habitat for the Preble's (67 FR 47154). In that proposed rule (beginning on page 47518), we included a detailed summary of the previous Federal actions completed prior to publication of the proposal. We now provide updated information on the actions that we have completed since the proposed critical habitat designation. Four public hearings were held during the 60-day public comment period, which closed September 16, 2002. Public hearings were held in Cheyenne, Wyoming, on August 27; Wheatland, Wyoming, on August 28; Castle Rock, Colorado, on August 28; and Loveland, Colorado, on August 29. Because of numerous requests to reopen the comment period and hold additional public hearings in Colorado, the comment period was reopened on November 21, 2002, for 60 days, through January 21, 2003 (67 FR 70202). Two additional public hearings were held in Golden, Colorado, on November 21. On January 28, 2003, the Service announced the availability of the Draft Economic Analysis of Critical

Habitat Designation for the Preble's Meadow Jumping Mouse (Draft Economic Analysis) and draft EA for the proposed designation of critical habitat for the Preble's (68 FR 4160), and opened the comment period on all three documents through February 27, 2003.

Recovery Plan

Restoring an endangered or threatened species to the point where it is recovered is a primary goal of our endangered species program. To help guide the recovery effort, we prepare recovery plans for most of the listed species native to the United States. Recovery plans describe actions considered necessary for conservation of the species, establish criteria for downlisting or delisting the species, and estimate time and cost for implementing the recovery measures needed.

In early 2000, the Recovery Team was established by the Service pursuant to section 4(f)(2) of the Act and our cooperative policy on recovery plan participation, a policy intended to involve stakeholders in recovery planning (59 FR 34272). Stakeholder involvement in the development of recovery plans helps minimize the social and economic impacts that could be associated with recovery of endangered species. Various stakeholders are represented on the Recovery Team and other public participation (including oral comments at recovery team meetings and written comments on the early drafts of the recovery plan) has taken place. The Recovery Team has prepared a series of drafts of a recovery plan for the Preble's. They identify the criteria for reaching recovery and delisting of the Preble's. A draft recovery plan, once completed, will be published in the **Federal Register**, will be available for public comments, and will provide an additional venue for stakeholder and public participation. Our proposed rule to designate critical habitat cited the draft dated February 27, 2002, which we referred to as the Draft Discussion Document. This final rule and the conservation strategy that supports it have been developed incorporating information included through the March 11, 2003, Working Draft.

Summary of Comments and Recommendations

In the July 17, 2002, proposed rule, we requested all interested parties to submit comments or information concerning the designation of critical habitat for the Preble's meadow jumping mouse. During the comment period, we held four informational meetings followed by public hearings. We