

are threats to the species. These activities cause soil erosion, soil compaction, disturbance of the soil crust, changes in soil hydrology, changes in water quality, encroachment of nonnative species, and accumulation of thatch.

#### *B. Overutilization for Commercial, Recreational, Scientific, or Educational Purposes*

Overutilization or vandalism are not known to be threats to this species.

#### *C. Disease or Predation*

We found no evidence that disease is a factor affecting this species. Predation by cattle, livestock, or other wildlife species is not known to occur.

#### *D. The Inadequacy of Existing Regulatory Mechanisms*

*Polygonum hickmanii* currently receives no protection under Federal law, and it is not currently listed by the State of California.

*Chorizanthe robusta* var. *hartwegiana*, an endangered species, frequently occurs within the same wildflower field habitat as *Polygonum hickmanii*; however, in two locations *P. hickmanii* occurs without the former species. Even though *C. r.* var. *hartwegiana* was federally listed as endangered in 1994, and critical habitat was subsequently designated in 2002, these regulatory actions, and subsequent protections afforded the species and its habitat do not fully protect the frequently co-occurring *P. hickmanii* under the Act for several reasons. First, in context of a consultation under section 7 of the Act, because of the restricted distribution of *P. hickmanii* within the wildflower field habitat, there may be circumstances in which an action proposed by a Federal action agency may jeopardize the continued existence of *P. hickmanii* or destroy or adversely modify its critical habitat, while the same action may not result in jeopardy or adverse modification for *C. r.* var. *hartwegiana*. In addition, because of differences in phenology between the two species (flowering period in *P. hickmanii* is beginning when that of *C. r.* var. *hartwegiana* is ending), it is also possible that the timing of an activity (e.g., grazing or spraying) could be a greater threat to one species than the other. Second, even though *P. hickmanii* shares the same wildflower field habitat with *C. r.* var. *hartwegiana*, it is possible that over time, the distribution of the two species among the wildflower field patches could shift, resulting in less overlap between the two species than is evident at this point in time. Thus, regulatory protections for *C. r.* var.

*hartwegiana* may provide less protections for *P. hickmanii*. Third, because of the more restricted distribution of *P. hickmanii* and life history differences between the two plants, recovery actions implemented for *C. r.* var. *hartwegiana* may be inadequate to provide for the conservation of *P. hickmanii*.

The California Environmental Quality Act (CEQA) requires a full disclosure of the potential environmental impacts of proposed projects. The lead agency is the public agency with primary authority or jurisdiction over the project, and that agency is responsible for conducting a review of the project and consulting with other agencies concerned with the resources affected by the project. Section 15065 of the CEQA Guidelines requires a finding of significance if a project potentially "reduce(s) the number or restrict(s) the range of a rare or endangered plant or animal." Species eligible for, but not yet listed by the State as threatened or endangered, are given the same protection as those species officially listed by State or Federal governments. The Rare Plant Scientific Advisory Committee for the California Native Plant Society has determined that *Polygonum hickmanii* meets the criteria for being included on CNPS' "List 1B." The plants on List 1B meet the definitions of section 1901, chapter 10 of the California Department of Fish and Game Code, and are therefore eligible for State listing. It is mandatory that plants on List 1B be fully considered during preparation of environmental documents relating to CEQA. Once significant effects are identified, the lead agency may require mitigation for effects through changes in the project, or the lead agency may decide that overriding considerations make mitigation infeasible. In the latter case, projects may be approved that cause significant environmental damage, such as destruction of listed species. Therefore, the protection of listed species through CEQA depends upon the discretion of the lead agency involved; however, findings of "overriding considerations" are infrequent.

Inclusion of mitigation measures in a project approved through the CEQA process does not guarantee that such measures are implemented. The recycled water distribution project approved by the Scotts Valley Water District included measures to avoid and mitigate impacts to sensitive resources, including those for *Polygonum hickmanii* and *Chorizanthe robusta* var. *hartwegii*. However, grading for this project was initiated without

implementing those measures, which resulted in a much narrower buffer zone left between the plant populations and the grading activity (Carl Wilcox, California Department of Fish and Game, *in litt.* 1999).

Certain local agencies are exempt from city and county regulations in accordance with chapter 1, paragraphs 53094 and 53096, of the State of California regulations on planning, zoning, and development laws (Governor's Office of Planning and Research 1996). The High School project for the Scotts Valley Unified School District is exempt from local permitting requirements; therefore, no permits or approvals were required from the City of Scotts Valley. Additionally, the recycled water distribution project for the Scotts Valley Water District is similarly exempted; therefore, no permits or approvals are required from either the City of Scotts Valley or the County of Santa Cruz. In July 1999, the Water District proceeded with road and tank pad grading for this project. This activity was initiated without fulfilling mitigation measures that called for sensitive areas to be flagged and fenced ahead of time, and resulted in grading that went beyond the scope of work for the project. Although the County of Santa Cruz notified the Water District that the additional grading was not exempted from applicable regulations, the only consequence is that the county has requested that the damaged areas be satisfactorily restored (Alvin James, County of Santa Cruz, *in litt.* 1999).

The establishment and implementation of a management plan for the preserve at the High School site does not provide for enforcement authority to maintain the physical integrity of the preserve.

#### *E. Other Natural or Manmade Factors Affecting Its Continued Existence*

The design of preserves and open spaces related to project mitigation to date has been insufficient to provide for the long-term conservation of *Polygonum hickmanii* and other sensitive species that occur in the wildflower fields in Scotts Valley. Additionally, the threat of random extinction is increased in small populations of limited distribution (please see the "Random Extinction" section below for further discussion).

#### *Inadequate Preserve Design*

The need for adequate preserve design has been discussed by many biologists (Jensen 1987; Shafer 1995; Rathcke and Jules 1993; Kelly and Rotenberry 1993). To increase the certainty that a species will persist over a given interval of time,