Fiedler (1991), only 15 percent were considered to be fully successful. None of these included *A. ilicifolia, H. conjugens,* or *M. linoides* ssp. *viminea.* Transplantation has not yet been demonstrated to provide for the longterm viability of any of the four taxa under consideration in this proposed rule.

In 1991, the State of California established the Natural Communities **Conservation Planning (NCCP) Program** to address conservation needs of natural ecosystems throughout the State. The initial focus of the program is the coastal sage scrub community occupied, in part, by these four taxa. Acanthomintha ilicifolia, Dudleya stolonifera, Hemizonia conjugens, and Monardella linoides ssp. viminea have been included as taxa for consideration under the coastal sage scrub NCCP Program. Several regional plans, the Multi-species Conservation Plan (MSCP) and the Multi-habitat Conservation Plan (MHCP) of San Diego County, and the Central/Coastal Subregional NCCP/ Habitat Conservation Plan (Central/ Coastal NCCP) of Orange County are under development by a consortium of county and municipal governments and other parties, including the California Department of Fish and Game and Service. Though no plans have been completed to date, progress is currently being made and significant protection will be provided by the NCCP program for the four taxa.

If adopted and implemented, the Central/Coastal NCCP as currently proposed may preclude the need to list Dudleya stolonifera. The Central/Coastal NCCP proposes protection for about 80 percent of the *D. stolonifera* populations in the San Joaquin Hills of Orange County. The largest population (about 40 percent of all individuals) would not be included within the preservation boundary. However, this population (Big Bend, Laguna Canyon) occurs on a rugged cliff and already receives some protection and management from the City of Laguna Beach which has recognized the significance of this locality since 1982.

While Acanthomintha ilicifolia, Hemizonia conjugens, and Monardella linoides ssp. viminea will benefit from the MSCP and MHCP planning efforts in San Diego County, these planning efforts have yet to be approved. If adopted and implemented, the plans may preclude the need to list one or more of these taxa. About 70 percent of the United States populations of A. ilicifolia occur within the MSCP subregion, including eight of 11 major populations. Four of these eight major populations are not adequately conserved by the proposed preserve within the subregion, and other major populations are protected but subject to edge effects. The MHCP contains about 25 percent of the United States populations of *A. ilicifolia,* including two major populations. These populations are adequately protected.

All of the United States populations of *Hemizonia conjugens* occur within the MSCP subregion. Two of the major populations, containing about 70 percent of all known individuals, are within proposed development projects that would fragment the remaining habitat. The five remaining major populations (containing about 25 percent of all individuals) may be subject to edge effects. The Service is working with local jurisdictions and landowners to protect these populations.

While about 95 percent of the United States range of Monardella linoides ssp. viminea occurs within the MSCP subregion, only about 20 percent occurs outside Miramar Naval Air Station. Though Miramar is not participating in the MSCP, the Navy is working on a management plan with the advice of the Service. At least one additional small population occurs within the Poway Habitat Conservation Plan area. Current efforts in the MSCP and Poway, while proposing adequate conservation within their respective areas, are not enough to preclude listing. However, with the completion of the Navy's management plan, M. linoides ssp. viminea should be adequately protected.

Populations of *Acanthomintha ilicifolia* on Federal land (Cleveland National Forest) are being negatively affected by unauthorized grazing and illegal shooting and dumping (Winter 1991). The most significant populations of *Monardella linoides* ssp. *viminea* occur on Federal land at Miramar Naval Air Station. Though no management plan exists for this taxon, Miramar is nearing the completion of a draft plan. Management of the Naval Air Station will soon be transferred to the United States Marine Corps, which will participate in the planning effort.

The ranges of Acanthomintha ilicifolia, Hemizonia conjugens, and Monardella linoides ssp. viminea extend into northern Baja California, Mexico. Mexico has laws that could provide protection to rare plants; however, enforcement of these laws is lacking (Service 1992).

On July 29, 1983, *Dudleya stolonifera* was included in Appendix I of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). CITES is a treaty established to prevent international

trade that may be detrimental to the survival of plants and animals. Generally, both import and export permits are required from the importing and exporting countries before an Appendix I species may be shipped, and Appendix I species may not be exported for primarily commercial purposes. However, plants that are certified by the Service as artificially propagated in accordance with CITES conference resolutions may be exported for commercial purposes with only CITES export documents from the exporting country. CITES permits may not be issued if the export will be detrimental to the survival of the species or if the specimens were not legally acquired. However, CITES does not regulate take or domestic trade.

E. Other natural or manmade factors affecting their continued existence. At least two of the taxa in this proposed rule, Dudleya stolonifera and Monardella linoides ssp. viminea, are threatened with stochastic (random) extinction by virtue of their small population sizes. Chance events, such as floods, fires, or drought, can substantially reduce or eliminate populations and increase the likelihood of extinction. In addition, small populations are threatened by inbreeding depression (Lande 1988, Ellstrand 1992). Small populations can have significantly lower germination rates than larger populations of the same species due to high levels of homozygosity (Menges 1991). Local extinctions of plant species can occur in areas with a high degree of environmental stochasticity (e.g. large fluctuations in rainfall, etc.). Furthermore, Acanthomintha ilicifolia and Hemizonia conjugens are annuals that undergo large population fluctuations from year to year. Annuals may not have a persistent seed bank or may be unable to recolonize areas of suitable habitat due to dispersal barriers such as intervening development. These populations are particularly vulnerable to local extirpations.

Non-native grass and forb species have invaded many of southern California's plant communities. Their presence and abundance is generally an indirect result of habitat disturbance by development, mining, grazing, discing, and alteration of hydrology. The invasion of both native and non-native wetland plant species as a result of altered drainage patterns threatens habitat for Monardella linoides ssp. viminea (Scheid 1985). Grazing negatively affects Acanthomintha ilicifolia by increasing erosion, contributing to soil compaction, and introducing a variety of non-native