A. The present or threatened destruction, modification, or curtailment of their habitat or range. The rapid urbanization of coastal southern California imminently threatens the four taxa in this proposed rule. Many of the same factors threatening Acanthomintha ilicifolia, Hemizonia conjugens, and Monardella linoides ssp. viminea in the United States (urban and agricultural development) are threatening these species in Baja California, Mexico.

Of the 35 historically known populations of Acanthomintha ilicifolia in the United States, 15 have been extirpated by residential or commercial developments. In addition, off-road vehicle activity and trampling by cattle and humans have contributed to the decline of this species. Thirteen of the remaining 20 populations of A. ilicifolia occur on unprotected land, and several of these are declining rapidly. For example, a site near Rancho Santa Fe supported hundreds of plants in 1978, but only three plants in 1986 (CNNDDB 1994). The habitat in this area was degraded, apparently from the impacts of adjacent development (CNNDDB 1994). A population of *A. ilicifolia* in Encinitas contained 11,000 plants in 1989, but only 1,400 in 1992. This population is threatened by trampling and soil erosion (Robert Taylor, botanical consultant, pers. comm. 1992). Another locality was partially extirpated by an unauthorized haul road, which eliminated 60 to 70 percent of the population (CNNDDB 1994).

Five of the known remaining locations of Acanthomintha ilicifolia occur on protected land. Two populations occur on the Cleveland National Forest (Viejas Mountain and Poser Mountain). Two populations are found in parks owned by the City of San Diego (Penasquitos Canyon and Mission Trail). One population, located on McGinty Mountain, is managed by The Nature Conservancy and the California Department of Fish and Game. However, these localities are vulnerable to habitat degradation resulting from trampling, dumping, erosion, and off-road vehicle activity. The McGinty Mountain population is threatened by a proposed water tower project (Fred Sproul, botanical consultant, pers. comm. 1992). Roads adjacent to populations in the vicinity of McGinty Mountain and Penasquitos Canyon provide easy access for foot traffic and off-road vehicle use (Mike Kelly, Friends of Los Penasquitos Canyon, pers. comm. 1992). The Viejas Mountain population has been adversely affected by trampling impacts associated with grazing, resulting in increased erosion and the invasion of

non-native plant species (Fred Sproul, pers. comm. 1992).

The status of Acanthomintha ilicifolia and its habitat in northwestern Baja California, Mexico, is not well documented. The species is known to occur as far south as Las Escobas near San Quintin, but its distribution in Mexico is spotty (Reid Moran, pers. comm. 1992). The San Diego Natural History Museum has herbarium specimens of A. ilicifolia from nine localities in Baja California, Mexico. However, little information is available on numbers of individuals or specific threats. One population near Tecate is threatened by an adjacent clay mining operation (Tom Oberbauer, senior planner, San Diego County, pers. comm. 1992). This northern region represents one of the most severely impacted areas in Baja California and many of the same factors (urban and agricultural development) that have affected the status of this taxon in the United States also threaten the species in Mexico.

Approximately 8,000 to 10,000 individuals of *Dudleya stolonifera* in six locations are thought to be extant. Urban development and associated edge effects (see Factor E) threaten *D. stolonifera*. Approximately half of the Canyon Acres population of *D. stolonifera* has been cleared by the landowner (CNNDDB 1992).

Habitat for *Dudleya stolonifera* is also degraded by adjacent land uses. The type locality for *D. stolonifera* is adjacent to urban development and is declining due to increased shading and competition from non-native plants (Kei Nakai, botanical consultant, pers. comm. 1992). The largest population of *D. stolonifera*, located directly adjacent to residential development in Aliso Canyon (Orange County), is threatened by fuel modification and hydroseeding (City of Laguna Beach 1993; Fred Roberts, pers. comm. 1994).

Proposed development threatens the majority of the remaining populations of Hemizonia conjugens in the United States. In addition, much of the potentially suitable habitat for this species has been cleared for agriculture. Three of the 18 historic locations of *H*. conjugens are considered to be extirpated (Hogan 1990, S. Morey in litt. 1994). None of the existing populations are entirely protected. One population previously known from an open space easement in a residential area had 100 plants in 1987, but was subsequently reported as extirpated (Hogan 1990). The majority of remaining habitat for this species is degraded by illegal dumping and off-road vehicle activity. At least five of the remaining localities for H. conjugens are within proposed

development projects, and one of these may already be extirpated. At least 80 percent of the largest known population (about 60 percent of all known individuals) of this species is threatened by a proposed housing development (Dudek and Associates 1992, S. Morey *in litt.* 1994).

Monardella linoides ssp. viminea was previously known from 27 occurrences in the United States, seven of which have been extirpated by transportation projects and industrial development. Of the five remaining occurrences with at least 100 individuals, none are currently protected. The remaining populations of M. linoides ssp. viminea are threatened by urban development, sand and gravel mining, off-road vehicle activity, trampling, trash dumping, and erosion. One of the largest populations (2,000 to 3,000 individuals) is located on private property, on Federal land managed by the Navy, and on City-owned property (Sycamore Canyon City Park). This population has been damaged by offroad vehicles and fire, which continue to threaten the remaining populations of this taxon. Two populations on Miramar Naval Air Station land have been partially destroyed by road construction. The other two large populations of M. linoides ssp. viminea are on private property. One of these (approximately 340 individuals) is threatened by sand and gravel mining. The other population, with approximately 200 individuals, is on property proposed for development. Habitat for this taxon in Los Penasquitos City Regional Park is degraded by stream erosion, trash dumping, and the invasion of non-native species. Another population in San Clemente Park, owned by the City of San Diego, was reported to have approximately 60 plants in the-early 1980's, but contained fewer than 35 plants in 1987 (CNNDDB

B. Overutilization for commercial, recreational, scientific, or educational purposes. Dudleya stolonifera is threatened by overcollection. Fieldcollected specimens of Dudleya stolonifera have been found in southern California nurseries, and are likely to be harvested for private collections (Kei Nakai, horticulturalist, in litt. 1978, and pers. comm. 1992). D. stolonifera and Monardella linoides ssp. viminea are known to be in cultivation (Mike Evans, Tree of Life Nursery, in litt. 1987; Hickman 1993). Overutilization is not known to be a factor for the other taxa in this proposed rule.

C. Disease or predation. Herbivory may threaten some populations of the plants contained in this proposed rule. For example, failure of the