area was less than 10 percent (NMFS, 1995). Because of the western population's decline, the eastern population's numerical significance has increased. NMFS (1995) estimates that the total U.S. population of Steller sea lions has declined by 73 percent between the 1960s and 1994 (NMFS, 1995). The overall trend for the entire species is a continuing decline. Also, between 1991 and 1994 pup numbers decreased in all regions of Alaska. There was a 20.8 percent decrease in the number of pups born in the area from southeastern Alaska to central Alaska. These declines reverse the apparent stability in pup numbers in southeastern Alaska.

Thus, although for listing purposes the western and eastern population segments may be considered discrete. the substantial population decline that has occurred in the eastern Gulf of Alaska through the Aleutian Islands represents a threat to the continued existence of the entire species, including the eastern population. Therefore, the vulnerability of the eastern population remains a serious concern as long as the cause of the decline of the western population remains undetermined. These populations, while separate, are not isolated, and factors causing the decline in Alaska could move eastward and pose a threat to the continued existence of the eastern population. The recent declines in pup production in the eastern population are of serious concern. In addition, the decline numbers of Steller sea lions in California, in the southern extremity of their range, is also of concern.

The Recovery Team's population evaluation criteria focused on population parameters within the western population segment, and thus, offer no guidance for evaluating the status of the eastern population segment. Recently, the Recovery Team recommended that the eastern population segment remain listed as threatened because of concerns regarding (1) the decline in Steller sea lions numbers in southern California, (2) the potential that the decline in the western population could spread east, (3) a slight decrease in pup counts in Southeast Alaska and Oregon in 1994, and (4) a concern that since animals in the western population may occur within the eastern population's geographic range, animals from the western population could be affected by a lack of protective management mechanisms (Lowry, 1994).

An analysis of the conservation status of the eastern population segment of the Steller sea lion in relationship to the standards for threatened status indicates that this population remains vulnerable, but in a manner and to an extent that differs from the vulnerability of the western population segment. This analysis indicates that the third criterion of the proposed population policy is satisfied. Likewise, the available data and information concerning the status of this stock indicates that the eastern population should continue to be considered threatened.

NMFS proposes a separate listing for the eastern population of the Steller sea lion as a threatened species under the ESA. The eastern population segment would consist of Steller sea lions from breeding colonies located east of 144 °W. long.

Listing Procedures: Summary of Factors Affecting the Species

Species may be determined to be endangered or threatened due to one or more of five factors described in section 4(a)(1) of the ESA. These factors as they apply to the western and eastern Steller sea lions population segments are discussed below.

A. The Present or Threatened Destruction, Modification, or Curtailment of its Habitat or Range

Western Population Segment: Steller sea lions breed, pup, and seek rest and refuge on relatively remote islands and points of land along the Alaska coastline. There is no evidence that the availability of rookery or haulout space is a limiting factor for this species. As the number of animals in the western population segment continues to decline, some rookeries and haulouts have been abandoned and the availability of suitable terrestrial habitat is increasing. Terrestrial habitat destruction and modification do not appear to be significant issues for this population segment, or have a significant role in its population decline.

There are indications that Steller sea lion declines may be related to changes in the availability or quality of sea lion prey, as a result of environmental changes or human activities (Alverson, 1991; Calkins and Goodwin, 1988; Loughlin and Merrick, 1991; Merrick et al., 1987; NMFS, 1992; NMFS, 1995). This issue is discussed in more detail below in the section analyzing other factors affecting the species.

Eastern Population Segment: Modification or destruction of habitat, including both terrestrial and aquatic habitat, does not appear to be a significant factor affecting Steller sea lions in Southeast Alaska. In Oregon, human disturbance of sea lions at Three Arch Rock and Orford Reef was found to have a significant effect on the number of Steller sea lions using these sites (R. Brown, pers. comm.; NMFS, 1992). State regulations have been implemented, however, to restrict vessel traffic and reduce human disturbance.

In California, the reason for the decline of Steller sea lions is not known. Former rookery habitat has been abandoned (San Miguel Island), and some other rookeries (Año Nuevo Island, Farallon Islands) are at lower than historical abundance levels. The availability of suitable terrestrial habitat does not appear to be a factor in the sea lion decline in parts of California. A redistribution of Steller sea lions from disturbed to undisturbed habitats, however, has been reported in the Farallon Islands (D. Ainley in NMFS, 1992), which may be indicative of unreported disturbance limiting habitat use in other areas. Similarly, with respect to aquatic habitat, changes in the availability and quality of Steller sea lion prey resources due to natural cycles, fisheries, and toxic substances may be a factor in observed population trends in California.

B. Overutilization for Commercial, Recreational, Scientific, or Educational

Purposes

Western and Eastern Population Segments: Steller sea lion pups were harvested commercially in the past, with significant levels of harvest occurring in eastern Aleutian Islands and the Gulf of Alaska during the 1960's and early 70's. Commercial harvest of Steller sea lions has not occurred since 1972. In the past there have been reports of people shooting at Steller sea lions at rookeries and haulout sites and in the water near boats. Although illegal, shooting of sea lions probably continues, but the magnitude and significance of this mortality source is not known. In addition, in some cases, the animals may be disturbed as a result of recreational activities. While the commercial harvest and illegal shooting of Steller sea lions may have been significant factors in past declines, especially with respect to the western population, these harvests probably are not a major or substantial cause of recent population changes.

Intentional lethal takings of small numbers of Steller sea lions for scientific purposes have occurred in the past. Since the 1990 ESA listing, however, scientists have relied on non-lethal sampling techniques. Research often results in the temporary harassment and occasionally results in the injury of Steller sea lions. Prior to 1990, a small number of animals were taken from the wild for public display