implemented under that Act. NMFS is not proposing such revisions at this time although comments on this issue are invited.

Other regulatory mechanisms: The inadequacy of other regulatory mechanisms has been suggested as a factor in the decline or vulnerability of both Steller sea lion populations. As mentioned above comments received on the status review notice included suggestions that additional regulations were needed to protect Steller sea lions from the effects of oil and gas exploration and development.

In most cases, other agencies, such as Minerals Management Services and the Forest Service, are more involved in the direct regulation of these types of activities. Of course, these agencies are expected to consult with NMFS on actions they authorize, fund, or carry out to ensure these actions are not likely to jeopardize the continued existence of listed species or to destroy or adversely modify critical habitat. Reinitiation of consultation is expected in most situations, given recent information concerning the status of the Steller sea lions. Comments received concerning the adequacy of regulations issued by other agencies will be considered during the consultation process.

Conclusions regarding the inadequacy of existing regulatory mechanisms: NMFS has not made a final determination with respect to the adequacy or inadequacy of existing regulatory mechanisms. NMFS recognizes the need for further consideration of the need for, the adequacy of, and the benefits of existing regulations. In some cases, even after further study, it may be difficult or impossible to make definite determinations about the adequacy of specific regulations because of the lack of knowledge or understanding of the mechanisms contributing to the decline or vulnerability of Steller sea lion populations.

NMFS is in the process of reinitiating or requesting reinitiation of consultation under section 7 of the ESA with respect to various agency actions that may affect Steller sea lions. Reinitiation is necessary because of new information about the status of Steller sea lions and is expected to help NMFS assess the adequacy of certain regulatory mechanisms.

In some cases, NMFS anticipates that regulations may be needed to be revised to protect Steller sea lions or to aid population recovery. Review and revision of Steller sea lion management regulations, to the maximum extent practicable, will be undertaken in full consultation with affected parties,

Federal and state agencies, and public interest groups. Except with respect to the regulatory measures proposed in this action, NMFS anticipates that major regulatory revisions will be implemented by rulemaking that is separate from any final ESA listing reclassification.

E. Other Natural or Manmade Factors Affecting its Continued Existence

Other factors also may affect either or both populations of Steller sea lions. In particular, removals of Steller sea lions from the wild, resulting from direct and incidental takings, may be a contributing factor in past and continuing declines. Changes in food availability is another factor that may be causing declines. Contaminants are also a concern. These other factors are discussed in more detail in the following sections.

Removals from the Western Population Segment: Steller sea lions frequently interact with commercial fisheries, and many have been reported incidentally taken in fisheries in the Gulf of Alaska, Bering Sea, and Aleutian Islands area. Estimates of the total number of Steller sea lions taken in commercial trawl fisheries in these waters from 1966 through 1988 exceed 20,000 animals (NMFS, 1995). Incidental catch appears to have been a contributing factor in the population decline in some areas of the Aleutian Islands and Gulf of Alaska during certain time periods. In recent years, the number of Steller sea lions taken in Federally-managed commercial groundfish fisheries in the Gulf of Alaska, Bering Sea, and Aleutian Islands has been relatively low (less than 30/ year), and incidental take in these fisheries is no longer thought to be a major factor affecting the western population.

Ålaska Native subsistence hunters have been estimated to take about 500 Steller sea lions annually in recent years; virtually all of the subsistence harvest in Alaska occurs within the range of the western population segment (Wolfe and Mischler, 1993; 1994). These removals have an impact on the population although the magnitude of estimates in comparison to the reported declines indicate that subsistence harvest has not been a significant factor in the decline. However, should the western population segment continue to decline and the subsistence harvest continue at the same level, it may become significant.

Removals from the Eastern Population Segment: Accurate data on incidental takes of Steller sea lions in other fisheries in Southeast Alaska, Oregon, and California are not available, but estimates from available sources are low. Alaska Native takes of Steller sea lions within the eastern population (Southeast Alaska) have been estimated at less than 10 animals annually (Wolfe and Mischler, 1993; 1994).

The calculated PBR for the eastern population of Steller sea lion is 706 animals, well above the current level of human-caused mortality.

Food availability for the western population segment: Steller sea lions are opportunistic feeders, that feed primarily on schooling demersal fish, such as walleye pollock, Atka mackerel, herring, and capelin. Declines in sea lion abundance may be related to changes in the availability of sea lion prey. Changes in the quantity or quality of available prey could have a chronic negative influence on the health and fitness of individual sea lions, resulting in reduced reproductive potential, increased susceptibility to disease, or death (Loughlin and Merrick, 1989). Calkins and Goodwin (1988) observed that Steller sea lions collected in the Kodiak Island area in 1985–86 were significantly smaller at age than animals collected from 1975-78, and hypothesized that nutritional stress was the cause. Juvenile sea lions, which are less adept foragers, may be most affected by changes in food availability. Demographic studies at Ugamak and Marmot Island rookeries suggest that juvenile survival has been greatly reduced over the last 20 years, and that this reduced juvenile survival may be the proximate cause of the population decline (NMFS, 1995). The role of food availability in the population decline remains unclear and is being investigated by researchers.

The BSAI and GOA commercial groundfish fisheries target important prey species of Steller sea lions, notably wallege pollock and Atka mackerel. Whether these fisheries actually deplete food resources of Steller sea lions is unclear. Analyses that have compared fishery harvests with changes in Steller sea lion abundance have been inconclusive, but the limitations of the available data may confound results (Loughlin and Merrick, 1989; Ferrero and Fritz, 1994).

One working hypothesis is that where and how fisheries operate is significant to Steller sea lions even if overall fishery removal levels are conservative of fish stocks. Fisheries that harvest large quantities of fish in relatively small geographic areas and short periods of time may deplete the local abundance of fishery resources. When such a fishery occurs in important Steller sea lion foraging habitat and