other Federal agencies is to ensure that activities are carried out in a manner that is not likely to jeopardize the continued existence of listed species or adversely modify or destroy its critical habitat. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR part 402. Section 7(a)(4) of the Act and 50 CFR 402.10 of the regulations, require Federal agencies to confer informally with the Service on any action that is likely to result in destruction or adverse modification of proposed critical habitat.

Activities areas that could adversely affect proposed critical habitat of the coastal population of the western snowy plover fall into seven general categories:

(1) projects or management activities that cause, induce, or increase human-associated disturbance on beaches, including operation of off-road vehicles on the beach and beach cleaning. These activities may reduce the functional suitability of nesting, foraging, and roosting areas. Activities that may adversely modify critical habitat areas that support wintering birds (September 15-February 29) include beach cleaning that removes surfcast kelp and driftwood, dogs off leash, off-road vehicle driven at night, and falcon flying. Activities within posted fenced or otherwise protected nesting areas (March 1-September 14) that may adversely modify critical habitat areas include camping, off-road vehicle use (day or night), walking, jogging, clam digging, pets on or off leash, livestock grazing, sunbathing, picnicking, horseback riding, hang gliding, kite flying, model airplane flying, beach cleaning, and falcon flying in or over active nesting areas. With very few exceptions, the nesting area is a small fraction of the entire beach. Thus, no more that 5 to 15 percent of the vast majority of the units would be removed from these kinds of public uses during the breeding season. The Service would work with landowners to develop signs or fencing or other means to protect these small nesting areas. Furthermore, western snowy plovers occupy the soft sandy portions of the upper beach or foredunes, and people tend to prefer lower beach or sand that is regularly washed by the tides. On a case by case basis, the few restrictions could be removed after the plovers had finished breeding or left wintering grounds.

(2) actions that would promote unnatural rates or sources of predation. For example, producing human-generated litter that attracts predators, or designing exclosures that promote perching by avian predators may adversely modify critical habitat by reducing its functional suitability to support nesting snowy plovers.

(3) actions that would promote the invasion of non-native vegetation.

(4) activities associated with maintenance and operation of salt ponds. Activities that may adversely modify or destroy critical habitat when conducted during the snowy plover nesting season include flooding inactive salt ponds; raising the water level in active salt ponds; grading, resurfacing, riprapping, or placing dredged spoils on levees; and driving maintenance vehicles on levees. However, levee maintenance activities also may benefit snowy plovers by providing vegetation-free habitat for nesting. The Service would work with landowners to avoid harmful activities during the breeding season.

(5) dredge spoil disposal activities that may adversely modify critical habitat when conducted during the nesting season include deposition of spoil material, laying of pipes to transport the material, and use of machinery to spread the material. However, dredge spoil disposal sites also may benefit snowy plovers by providing nesting habitat free of European beachgrass. The Service would work with landowners to avoid harmful activities during the breeding season.

(6) shoreline erosion control projects and activities that may alter the topography of the beach. Activities that may adversely modify or destroy nesting, foraging, and roosting habitat include beach nourishment (sand deposition, spreading of sand with machinery); construction of breakwaters and jetties (interruption of sand deposition); dune stabilization using native and non-native vegetation or fencing (decreased beach width, increased beach slope, reduction in blowouts and other preferred nesting habitat); beach leveling (increased tidal reach, removal of sparse vegetation used by chicks for shelter, destruction of rackline feeding habitat). Beach nourishment projects, however, also may have the potential to benefit nesting or wintering plover habitat on some sites experiencing serious erosion. The Service would work with landowners to avoid harmful activities when the birds are present.

(7) contamination events. Contamination through oil spills or chemical releases may adversely modify critical habitat by contaminating snowy plovers and/or their food sources.

Federal agencies that may be required to consult with the Service on one or more of these activities include the Forest Service, Bureau of Land Management, Federal Aviation Administration, and the Departments of the Army (including the Corps of Engineers). Navy, and Air Force.

In addition several other species that are listed under the Act occur in the same general areas as western snowy plovers. These species share the coastal beach/dune/estuarine ecosystem with snowy plovers. All of these species occurred historically in association with western snowy plovers in this Pacific coast ecosystem, and thus, the habitat requirements of these species do not significantly conflict with those of the snowy plover. Therefore, any plans prepared for sites designated as critical habitat for the snowy plover should be considered ecosystem management plans that accommodate needs of other listed or proposed species that also occur on the site. In doing so, these proposed snowy plover critical habitat

areas more aptly represent critical habitat for a multitude of species inhabiting the coastal beach/dune/ estuarine ecosystem. Federal agencies proposing management actions for other listed species may affect critical habitat for the western snowy plover and be required to initiate formal consultation under section 7 of the Act. Conversely, proposed management actions for the benefit of the plover or its habitat may affect other listed species. The Service will work with other Federal agencies to develop ecosystem plans that provide for the needs of all listed species.

When the Service issues an opinion concluding that a project is likely to result in the destruction or adverse modification of critical habitat, the Service also provides reasonable and prudent alternatives to the project, if any are identifiable. Reasonable and prudent alternatives are defined at 50 CFR 402.02 as alternative actions identified during formal consultation that can be implemented in a manner consistent with the intended purpose of the action, that are consistent with the scope of the Federal agency's legal authority and jurisdiction, that are economically and technologically feasible, and that the Director believes would avoid resulting in the destruction or adverse modification of critical habitat. Reasonable and prudent alternatives can vary from slight project modifications to extensive redesign or relocation of the project. Costs associated with implementing a reasonable and prudent alternative are similarly variable.

Consideration of Economic and Other Factors

Section 4(b)(2) of the Act requires the Service to consider economic and other impacts of designating any particular area as critical habitat. For example, beneficial impacts of critical habitat designation may include (1) a clear notification to Federal agencies and the public of the existence and importance of critical habitat, (2) voluntary increased protection of snowy plovers on some private lands, (3) stimulation of additional attention to the requirements of section 9 of the Act by private, municipal, county, and state landowners, (4) additional protection for other listed and non-listed species that occur in areas designated as critical habitat for the snowy plover, and (5) preservation of the beach-duneestuarine ecosystem. Section 4(b)(2) authorizes the Service to exclude any area from critical habitat designation if the Service determines the benefits of excluding the area outweigh the benefits of including it, except that the Service