

Impacts on special-status wildlife species were determined by identifying changes in acres of potentially occupied habitat after implementing Alternative 6R. Potential habitat was identified from known locations of each species, published accounts of each species' habitat requirements, and habitat suitability models that were developed from the vegetation and soil maps from the GIS. Impacts on occupied habitat were also identified when data were available.

The description of the wildlife habitat suitability models, maps of potential wildlife habitat, maps of special-status plant species distributions, wetland distribution map, and biological community distribution map are contained in the Flora and Fauna Environmental Baseline Study of Fort Ord, California, available at the public information repository established at the Seaside Branch Library (U.S. Army Corps of Engineers, Sacramento District 1992a).

Data collected for baseline studies of vegetation, wildlife, and wetland resources were presented to U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Game (DFG) staff at a meeting on August 7, 1992. At this meeting, data were presented on the locations and extent of upland habitats, wetland habitats, and populations of species federally listed and proposed for listing as threatened and endangered at Fort Ord. The Army provided a list to USFWS on September 16, 1992, of special-status plant and wildlife species that were identified as occurring or potentially occurring at Fort Ord, including species that are federally listed or proposed for listing as threatened and endangered. Another meeting with USFWS and DFG was held on October 22, 1992, for the purpose of identifying the locations of concentrations of sensitive biological resources at Fort Ord through the use of a computerized GIS database. Figure II.11-1 in Section II.11, Volume II depicts the locations of sensitive biological resources identified at that meeting.

The Army initiated informal consultation with the USFWS on August 7 and October 22, 1992 with meetings and the transmittal of the list of special-status species on September 16, 1992, in compliance with the Endangered Species Act. The Army is proceeding with biological data reports for sensitive species on Fort Ord and will be submitting these reports in spring 1993 to initiate formal consultation as specified in Section 7 of the Endangered Species Act. This process is expected to result in the issuance of a biological opinion by the USFWS in late 1993. Preliminary versions of Alternative 6R were presented to USFWS during meetings on March 15 and 19, 1993.

6.11.1.1 Impact Mechanisms

Disposal. The potential impacts on vegetation, wildlife, and wetland resources resulting from disposal of Fort Ord were evaluated based on potential changes in regulatory requirements for new owners and changes in installation ownership and activities after disposal. Disposal impacts are associated only with the action of turning over ownership of Fort Ord lands to individuals or agencies other than the Army. All predisposal actions associated with activities necessary to achieve and maintain caretaker status are analyzed in Section 5.2.1, "Caretaker (No Action Alternative)". Disposal impacts that could affect biological resources include loss of federal protection for federally listed plants and potential losses of populations and habitat for plants and wildlife due to disposal of lands to entities proposing intensive development.

Reuse. The potential impacts on vegetation, wildlife, and wetland resources resulting from reuse of Fort Ord were evaluated based on changes in land use. Changes in land use would have direct and indirect impacts on vegetation and wildlife. Changes in land use could require extensive soil excavation or grading, placement of fill material, and removal of vegetation. Land development would result in direct impacts on biological resources through conversion of biological communities to structures, roads, and landscaping; mortality of plants or wildlife from construction equipment; displacement of species because of temporary or permanent habitat loss; and abandonment of a site by wildlife because of disturbance during critical periods of the year.

In the reuse analysis of Alternative 6R it was assumed that no direct impacts on biological resources would result at sites with the following land use designations: coastal dune zone, natural area expansion, natural resource management area, disturbed habitat zone, university research area, recreational vehicle park, POST academy, government center, McKinney Act housing, or no proposed use (NPU). However, lands designated as NPU could be subject to reuse in the future and would require future, separate environmental documentation. No direct impact was assumed if biological resources would be preserved within the land use area or if the land use proposed under Alternative 6R would be the same as the current land use under Army ownership. Some of these land uses would result in the loss of small amounts of biological resources for construction of a limited number of structures and roads.

For the purpose of this analysis, the land use category NPU was considered an open space land use that would be maintained by the Army in caretaker status with public access restricted and vegetation management continued after surface clearance of ordnance (refer to Section 2.0, "Proposed Action"). However, because lands designated NPU could potentially be impacted after a more specific land use is assigned, the extent of biological resources in these area is described separately in Section 2.17.12.

Specific information on the location of developments was provided for land uses designated corporation yard, agri-center, recreation area expansion (RAE), school expansion (SE), and airport. For the purpose of this analysis, a complete loss of biological resources was assumed to occur in those sections where development is expected to occur, and no losses were assumed to occur in the remaining area.

In the area designated corporation yard, approximately 14 acres of habitat within the designated 46-acre area would be developed.

The agri-center land use area would undergo development on approximately 175 of the 890 allotted acres. Development would attempt to avoid sensitive biological resources and would not occur on slopes greater than 30%. Based on these criteria, development in the parcel designated agri-center is expected to occur in the region shown in Figure 6.11-1.

In the 973-acre parcel designated as RAE, several of the dirt roads along the ridges would be widened to provide 5,000-7,000 temporary parking spaces. Approximately 9% of existing habitat in the parcel would be affected. An additional 15 acres at the southernmost tip of the RAE would be converted to an interchange with SR 68. No development is expected to occur in the 150-acre parcel north of Laguna Seca designated as RAE.

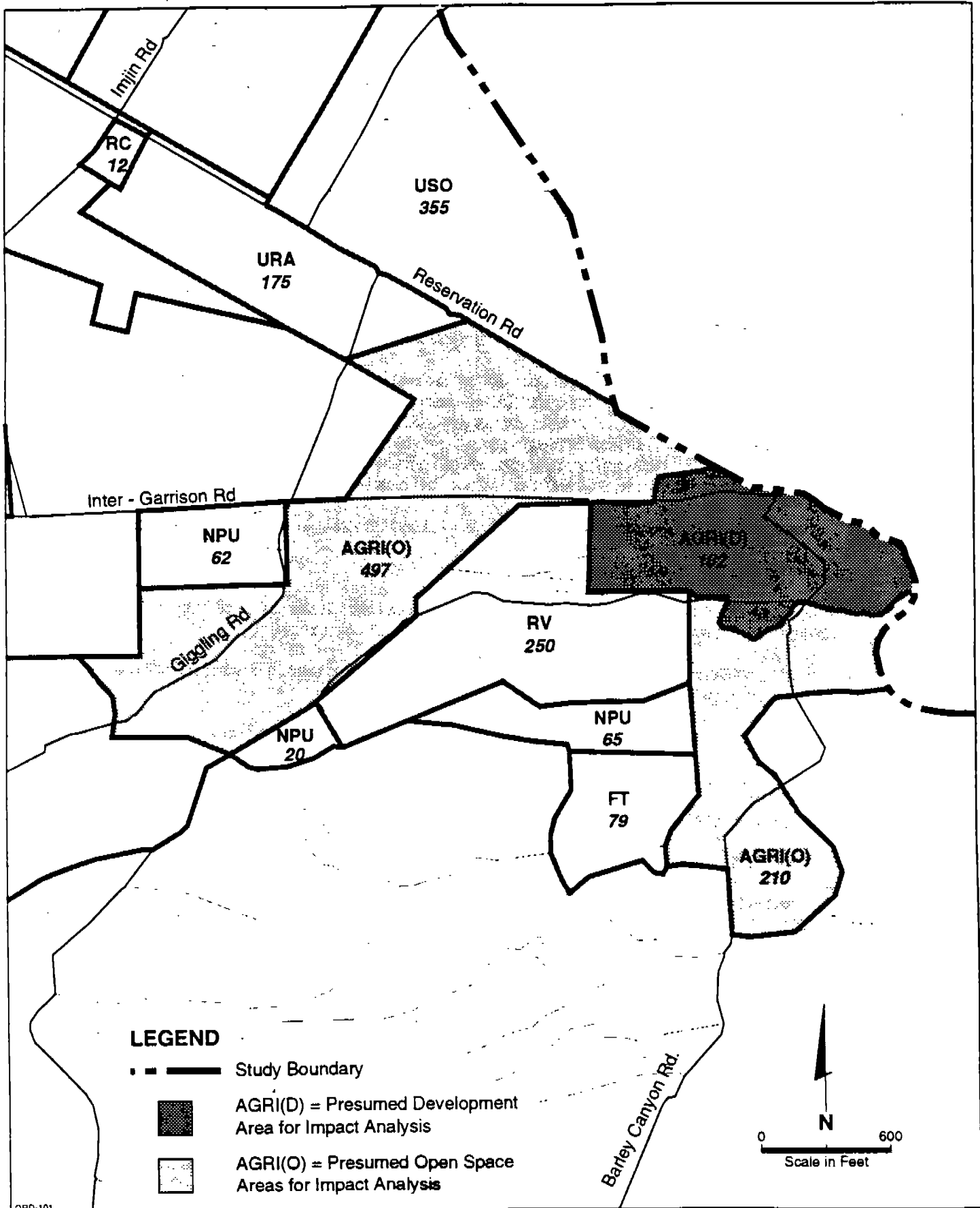
In the area designated SE, it was assumed approximately 15 acres of habitat within the designated 150-acre area would be developed.

Under Alternative 6R, direct impacts are expected to occur in the parcel designated airport only where the runway would be extended 500 feet on either side of the existing runway. However, it is possible that developments not yet specified may occur in lands surrounding the airport at some point in the future.

In the reuse analysis it was assumed that direct impacts from land uses not listed above would eliminate all biological resources within the land use footprint. For Alternative 6R, it was assumed that direct impacts from the land use of fire training would eliminate all biological resources on the site. Resources were assumed to be eliminated because under this land use category the area would be used for airport fire training, which will have a greater impact than the grassland fire training proposed under Alternatives 1-6. Also, the 79-acre area is much smaller than previously described fire training areas; thus facilities would be concentrated in a smaller area and have a greater effect on biological resources. Some of these proposed land uses could result in the retention of small patches of natural habitats and special-status species populations. The biological value of these remnant habitats would be low because of their small size, isolation, and the surrounding development.

Changes in land use could also result in indirect impacts such as mortality of native wildlife because of predation by domestic pets, disturbance to wildlife by recreationists, or erosion of soil from one parcel to an adjacent parcel resulting in loss of plant habitat or degradation of wetlands. The location and severity

Figure 6.11-1.
 Presumed Developed and Open Space Areas Within the
 Proposed Agri-Center for Revised Alternative 6



of these impacts are unknown at this time; therefore, indirect impacts on biological resources would have to be determined on a separate, site-specific basis and are not evaluated in this analysis.

6.11.1.2 Basis for Evaluation

The circumstances under which it was assumed that the proposed action of disposal and reuse under Alternative 6R would substantially affect vegetation, wildlife, and wetland resources are described below.

Disposal. Compliance with the National Environmental Policy Act (NEPA) is required for disposal of Fort Ord. Activities that prepare the installation for closure and caretaker status, including remediation of hazardous and toxic waste sites, removal of lead and other heavy metals, and surface clearing of unexploded ordnance are exempt from NEPA. Impacts resulting from remediation actions necessary to reach caretaker status are discussed in Section 5.2.1, "Caretaker" (No-Action Alternative).

The significance of disposal impacts on vegetation, wildlife, and wetland resources for compliance with NEPA was determined by considering legal requirements (i.e., Endangered Species Act, Clean Water Act), Army regulations (AR 200-1, AR 420-74), and state and local laws and policies.

Reuse. Reuse of Fort Ord lands could be by federal, state, or local agencies or private interests. The criteria used to evaluate the effects on biological resources were based on federal, state, and local laws, regulations, and policies (e.g., NEPA, Endangered Species Act, Clean Water Act, California Environmental Quality Act [CEQA], California Endangered Species Act, California Fish and Game Code, California Coastal Act). This analysis assumes that the proposed action and Alternative 6R would have a substantial effect on vegetation, wildlife, and wetland resources if it resulted in:

- a fish or wildlife population dropping below self-sustaining levels;
- possible elimination of a plant or animal community;
- a substantial effect on, reduction of the number, or restriction of the range of unique, rare, or endangered species of animals or plants, or the habitat of the species;
- an introduction of new species of plants or animals into an area or an introduction of a barrier to the normal replenishment of existing species;
- an adverse effect on riparian habitat, wetlands, or other special-status biological communities;
- a conflict with federal or state policies, such as those regarding wetlands and oak woodlands;
- a substantial conflict with special ecological areas; or
- a substantial conflict with special-status species, defined as follows:
 - plants and animals listed or proposed for listing under the federal Endangered Species Act (50 CFR 17.12 [listed plants] and 50 CFR 17.11 [listed animals] and various notices in the *Federal Register* [proposed species]);
 - plants and animals that are Category 1 or 2 candidates for possible future listing as threatened or endangered under the federal Endangered Species Act (55 FR 6184, February 21, 1990, for plants and 54 FR 554, January 6, 1989, for animals); and

plants and animals listed or proposed for listing by the State of California as threatened or endangered under the California Endangered Species Act (14 CFR 670.5).

6.11.1.3 Species Eliminated from Consideration before Impact Analysis

The American peregrine falcon, a species listed as endangered under the federal and California Endangered Species Act's, and marine mammals, reptiles, and birds are not expected to be affected by disposal and reuse of Fort Ord under Alternative 6R and were not included in the impact analysis.

American Peregrine Falcon. The nearest known nesting pair of American peregrine falcons is approximately 15 miles south of Fort Ord (Jurek, California Department of Fish and Game pers. comm.). Although American peregrine falcons may pass over Fort Ord during migration or may forage there in winter, Fort Ord does not support appropriate nesting habitat for this species. Fort Ord also does not support large populations of waterfowl and shorebirds, which are important prey items for the peregrine falcon. Alternative 6R is not expected to affect peregrine falcons.

Marine Mammals, Reptiles, and Birds. No marine mammal haul-out or breeding areas, marine turtle egg-laying areas, or seabird nesting colonies occur at or near Fort Ord. Marine mammals, reptiles, and birds are not expected to be affected by the development described for Alternative 6R. Potential conflicts with regulations associated with the Monterey Bay National Marine Sanctuary are described in Section 6.15 "Monterey Bay National Marine Sanctuary".

6.11.2 Disposal Impacts

Federally Listed Threatened and Endangered Species and Species Proposed for Federal Listing as Threatened and Endangered

- *Impact: Reduction in Federal Protection for Sand Gilia and Monterey Spineflower*

The change in ownership of lands providing habitat for federally listed threatened and endangered plants could result in a loss of federal protection for these species. The Endangered Species Act protects federally listed threatened and endangered plants only where they occur in areas under federal jurisdiction (i.e., where federal permits or monies are involved). If the Army transfers lands to nonfederal entities, sand gilia will lose its federal protection. Future actions by nonfederal agencies or private individuals that do not come under federal jurisdiction could remove sand gilia populations without violating the federal Endangered Species Act. Should Monterey spineflower become federally listed, it also could lose its federal protection at Fort Ord following disposal.

- *Mitigation: Preserve Populations and Habitat of Federally Listed, Proposed, and Candidate Plants and Wildlife through a Multispecies Habitat Management Plan*

Prior to disposal, the Army will prepare a multispecies Habitat Management Plan (HMP) for Fort Ord. The HMP will include all federally listed and proposed plants and wildlife at Fort Ord, and candidate species with a significant portion of their range within Fort Ord. The HMP will be prepared in coordination with USFWS under Section 7 of the Endangered Species Act. The goals of the HMP will be to preserve, protect, and enhance populations and habitat of federally listed and proposed threatened and endangered plants and wildlife, and to avoid reducing populations or habitat of federal candidate species to levels that may result in one or more of these species becoming listed as threatened or endangered. Recipients of Fort Ord lands will implement the guidelines of the HMP. A draft conceptual multispecies HMP is included in Appendix R.

Methods for protecting and restoring habitat and populations of sand gilia and Monterey spineflower will be included in the HMP.

The development, coordination, and implementation of the multispecies HMP is both realistic and feasible. (Federal, state and local agencies and private entities responsible for development)

- ***Impact: Potential Loss of Populations and Habitat of Sand Gilia, Monterey Spineflower, Smith's Blue Butterfly, California Linderella, and Western Snowy Plover***

Disposal of land supporting sand gilia, Monterey spineflower, Smith's blue butterfly, California linderella, and western snowy plover to entities that are proposing intensive development could result in the loss of populations of these species and their habitat. Sand gilia and Smith's blue butterfly are federally listed as endangered, coastal populations of the western snowy plover are federally listed as threatened, and Monterey spineflower and California linderella are proposed for federal listing as endangered. The loss of populations or habitat of federally listed threatened or endangered species could violate the federal Endangered Species Act.

- ***Mitigation: Preserve Populations and Habitat of Federally Listed, Proposed, and Candidate Plants and Wildlife through a Multispecies Habitat Management Plan***

Prior to disposal of Fort Ord, the Army would prepare a multispecies HMP. The HMP is discussed above under the impact "Reduction in Federal Protection for Sand Gilia and Monterey Spineflower". The HMP will address preservation and enhancement of populations and habitat for all these species. The Army will develop and coordinate the HMP, and agencies and entities receiving Fort Ord lands will implement the HMP guidelines.

The development, coordination, and implementation of the multispecies HMP is both realistic and feasible. (Federal, state, and local agencies and private entities responsible for development)

Other Biological Resources

- ***Impact: Loss of U.S. Department of Defense Protection for Plant and Butterfly Preserves***

The plant and butterfly preserves at Fort Ord would no longer have Army protection following disposal of the land supporting these preserves. However, the preserves, except preserve 3 which lies on lands designated as NPU, would likely be transferred to resource agencies (e.g., U.S. Bureau of Land Management).

- ***Mitigation: Preserve Habitat Characteristic of Native Plant Preserves through a Multispecies Habitat Management Plan***

This mitigation is described under the "Reduction in Federal Protection for Sand Gilia and Monterey Spineflower" impact. Preserving populations and habitat of federally listed, proposed, and candidate plants and wildlife species through a multispecies habitat management plan would also protect habitats characteristic of the plant preserves. The multispecies HMP will also specifically address the preservation of maritime chaparral habitat and the preservation and enhancement of coastal dune habitat. Both these habitats are significant components of the native plant preserves. The Army will develop and coordinate the HMP, and agencies and entities receiving Fort Ord lands will implement the HMP guidelines.

The development, coordination, and implementation of the multispecies HMP is both realistic and feasible. (Federal, state, and local agencies and private entities responsible for development)

6.11.3 Reuse Impacts

Common and Special Native Biological Communities

- ***Impact: Loss of Common Biological Communities (Approximately 1,550 Acres)***

Table 6.11-1 Acreage of Habitat Affected by Alternative

	Alter- native 1	Subalter- native 1A	Subalter- native 1B	Subalter- native 1C	Alter- native 2	Subalter- native 2A	Subalter- native 2B
Beaches, Bluffs, and Blowouts	9	9	9	104	5	5	5
Disturbed Dune	21	21	21	74	19	19	19
Ice Plant Mats	369	369	369	460	299	299	299
Native Coastal Strand	1	1	1	55	1	1	1
Dune Scrub	5	5	5	8	4	4	4
Coastal Scrub	474	470	490	474	459	454	473
Maritime Chaparral	12,118	12,099	12,118	12,168	6,302	6,284	6,302
Coastal Oak Woodland	2,848	2,756	2,887	2,776	2,459	2,367	2,491
Inland Oak Woodland	1,040	1,038	1,040	1,040	548	546	548
Oak Savanna	178	178	178	177	131	131	131
Annual Grassland	2,855	2,847	2,856	2,835	2,431	2,423	2,432
Perennial Grassland	229	229	229	229	230	230	230
Mixed Riparian Forest	191	191	191	191	191	191	191
Oak Riparian Forest	17	17	17	17	14	14	14
Vernal Pool	34	34	34	34	4	4	4
Ponds and Freshwater Marsh	23	23	23	23	12	12	12
Total	20,445	20,259	20,501	20,669	13,154	13,045	13,201

	Alter- native 3	Alter- native 4	Alter- native 5	Subalter- native 5A	Alter- native 6	Alter- native 6	Total Amount of Habitat at Fort Ord
Beaches, Bluffs, and Blowouts	2	2	2	2	2	2	199
Disturbed Dune	12	15	0	0	12	0	101
Ice Plant Mats	72	32	32	32	72	52	638
Native Coastal Strand	1	12	0	0	1	0	89
Dune Scrub	1	1	1	1	1	1	8
Coastal Scrub	394	304	157	152	327	90	572
Maritime Chaparral	1,816	1,267	31	0	1,238	925	12,613
Coastal Oak Woodland	2,097	1,367	226	88	2,416	537	2,972
Inland Oak Woodland	184	86	38	36	100	20	1,386
Oak Savanna	56	84	84	71	87	20	308
Annual Grassland	1,417	1,262	235	40	1,348	816	4,305
Perennial Grassland	0	0	0	0	100	32	463
Mixed Riparian Forest	0	0	0	0	181	5	191
Oak Riparian Forest	0	0	0	0	0	0	42
Vernal Pool	2	7	0	0	7	1	34
Ponds and Freshwater Marsh	2	2	0	0	3	1	30
Total	6,179	4,507	873	476	5,895	2,507	23,951

Alternative 6R would result in the removal of approximately 1,550 acres of common biological communities (Table 6.11-1) and associated common wildlife species (refer to U.S. Army Corps of Engineers, Sacramento District 1992a). These communities include approximately 55 acres of beach and blowouts, ice plant mats, and disturbed dune; about 90 acres of coastal scrub; roughly 580 acres of oak woodland and savanna; and about 820 acres of annual grassland. This amount of habitat removal represents approximately 15% of the common biological communities at Fort Ord.

The substantial portion of the annual grasslands at Fort Ord would be preserved under Alternative 6R, retaining habitat for loggerhead shrike, tricolored blackbird, homed lark, burrowing owl, northern harrier, short-eared owl, prairie falcon, golden eagle, and American badger. A relatively large portion of the coast live oak woodland and savanna on Fort Ord would also be preserved. Special-status wildlife species associated with oak communities include the Monterey orate shrew, Monterey dusky-footed woodrat, wintering sharp-shinned hawk, Cooper's hawk, yellow warbler, golden eagle, American badger, and Salinas harvest mouse. Although substantial portions of these habitats are retained under Alternative 6R implementing the following mitigation measures would further preserve coastal live oak woodland and annual grassland habitats.

- ***Mitigation: Limit Loss and Compensate Losses of Coast Live Oak Woodland and Savanna through State Policies, Local Agency General Plan Land Use Policies, and Regional Programs***

State agencies are directed by California Senate Concurrent Resolution Number 17 (California Resolution Chapter 100) to preserve and protect native oak woodlands (sites with greater than five trees per acre) to the maximum extent feasible or to provide replacement plantings for oaks that are removed. Where state agencies have future jurisdiction, oak woodlands could be avoided or, if removed, could be compensated for by replacement plantings. The number of replacement oak plantings could be based on the trunk diameters of the oaks removed, with one seedling or sapling planted for each inch of the total trunk diameter (measured at 4.5 feet above the ground).

The loss of coast live oak woodland and savanna could be limited by developing and implementing general plan land use policies and regional programs to encourage the preservation and restoration of coast live oak woodlands. General plan policies could be developed and implemented in support of projects that retain coast live oak woodlands and compensate for oaks removed. A regional program could be developed that identifies the location of oak woodlands, prioritizes the value of sites, and institutes mechanisms to protect high-value sites and to secure woodland restoration sites.

Implementing the mitigation for coast live oak woodlands and savanna would limit the loss of habitat for Monterey dusky-footed woodrat, Monterey orate shrew, golden eagle, Cooper's hawk, wintering sharp-shinned hawk, yellow warbler, American badger, Salinas harvest mouse, and greater roadrunner.

The development of state policies, local agency general plan land use policies, and regional programs to limit losses and compensate losses of coast live oak woodland and savanna is both realistic and feasible. (State and local agencies)

- ***Mitigation: Retaining Patches of Common Biological Communities within Development Areas***

Patches of habitat between proposed development areas could be fenced during construction and retained in natural condition following construction. These small patches of habitat would have minimal wildlife habitat value but may support small, remnant populations of some special-status plant species.

The mitigation described above is feasible and can be realistically implemented (Federal, state, and local agencies and private entities responsible for development)

- **Mitigation: Limit Loss of Grasslands through Local Agency General Plan Land Use Policies and Regional Programs**

The loss of grassland wildlife habitats in northern Monterey County could be limited by local agencies developing and implementing general plan land use policies and regional programs to encourage the preservation of grasslands. General plan policies in support of projects that retain grassland habitat could be developed and implemented. A regional program could be developed that identifies the location of grassland habitats, prioritizes the value of sites, and institutes mechanisms to protect high-value sites.

Implementing the mitigation for grasslands would limit the loss of habitat for loggerhead shrike, tricolored blackbird, horned lark, burrowing owl, northern harrier, short-eared owl, prairie falcon, golden eagle, and American badger.

The development of local agency general plan land use policies, and regional programs to limit losses of annual grasslands is both realistic and feasible. (Local agencies)

- **Impact: Loss of Native Dune Scrub (Approximately 1 Acre)**

Alternative 6R would result in the loss of approximately 1 acre of native dune scrub or roughly 1% of the dune scrub at Fort Ord (Table 6.11-1). The loss of dune scrub could be replaced by implementing the following mitigation.

- **Mitigation: Restore Native Dune Scrub**

Future owners of land within the coastal zone (1,000 yards landward from mean high tide or designated boundaries) would have to comply with the California Coastal Act.

Native dune scrub vegetation could be restored in areas designated "coastal dunes zone." Ice plant mats and disturbed dune vegetation could be removed from a 2-acre site in the northwest corner of Fort Ord. Native dune species could be seeded and transplanted to the mitigation site. Weed control measures could be conducted, especially for African ice plant, during the establishment period of the native vegetation. The 2-acre mitigation site could be added to the habitat preserve.

Native coastal strand and dune scrub could also be preserved and restored under the HMP implemented as mitigation for impacts on federally listed, proposed, and candidate plant and wildlife species. Restoration of native coastal strand and dune scrub would compensate in part for impacts on Monterey spineflower, Smith's blue butterfly, California black legless lizard, and dune scrub.

The mitigation described above is both realistic and feasible. A similar restoration project is being implemented on dunes directly north of Fort Ord at Marina State Beach. (State and local agencies)

- **Impact: Loss of Maritime Chaparral (Approximately 925 Acres)**

Alternative 6R would result in the removal of approximately 925 acres of maritime chaparral (Table 6.11-1). Fort Ord supports more than half of all the central maritime chaparral remaining in California. The loss of maritime chaparral would be unavoidable.

- **Mitigation: Preserve Maritime Chaparral through a Multispecies Habitat Management Plan**

This mitigation is the same as that described above for the impact "Reduction in Federal Protection for Sand Gilia and Monterey Spineflower". Preservation and enhancement of maritime chaparral will be specifically addressed in the multispecies HMP because many special-status plant and wildlife species occur primarily in maritime chaparral habitat. The Army will develop and coordinate the HMP, and agencies and entities receiving Fort Ord lands will implement the HMP guidelines.

The development, coordination, and implementation of the multispecies HMP is both realistic and feasible. (Federal, state, and local agencies and private entities responsible for development)

- ***Impact: Loss of Native Perennial Grassland (Approximately 30 Acres)***

Alternative 6R would result in the removal of approximately 30 acres of valley needlegrass grassland or roughly 5% of the perennial grassland at Fort Ord (Table 6.11-1). The removed valley needlegrass grassland supports high-density native vegetation, with purple needlegrass at greater than 30% cover, and represents approximately 15% of the high-density valley needlegrass grassland. The loss of native perennial grasslands would be considered a significant impact under CEQA. The loss of perennial grassland would be unavoidable.

- ***Mitigation: Limit Loss of Native Perennial Grasslands by Retaining Patches of Native Perennial Grasslands within Development Areas***

High quality patches of native perennial grassland in the southeast portion of the installation could be fenced during construction and retained in natural condition following construction. These small patches of habitat may support small, remnant populations of native perennial grassland.

The mitigation described above is both realistic and feasible. (Local agencies and private entities responsible for development)

- ***Impact: Loss of Riparian Forest (Approximately 5 Acres)***

Alternative 6R would result in the removal or degradation of approximately 5 acres (2%) of the riparian forest at Fort Ord (Table 6.11-1). This riparian forest habitat occurs within the proposed transportation corridor in the southern section of the installation. The affected riparian habitat would probably not be considered jurisdictional wetlands, but may be considered a jurisdictional waters of the U.S. The placement of dredged or fill material into wetlands and other waters of the United States is prohibited under Section 404 of the Clean Water Act without a permit from the Department of the Army. Implementing the following mitigation could reduce the impacts to riparian forest habitat.

- ***Mitigation: Avoid and Compensate for Loss of Riparian Forest***

Future landowners of sites that support riparian forest and other riparian habitats would have to reach agreement with DFG before they undertake alterations of the streambeds and associated riparian vegetation. Future actions requiring CEQA compliance would have to avoid, enhance, or restore all affected riparian habitat because impacts on riparian forest are considered significant by DFG.

The proposed SR 68 transportation corridor could be redesigned to avoid riparian forest. Where riparian forest removal is unavoidable, compensation could be at a 2:1 acreage ratio of newly created habitat to lost habitat or a 4:1 acreage ratio of enhanced habitat to lost habitat. Compensation and restoration could take place on other areas of Toro Creek.

Implementing mitigation for riparian forest would avoid or reduce impacts on Monterey ornate shrew, wintering sharp-shinned hawk, Cooper's hawk, yellow warbler, Swainson's thrush, and common yellowthroat.

The mitigation described above is both realistic and feasible. (State and local agencies and private entities responsible for development)

Special-Status Plant Species

- ***Impact: Loss of Sand Gilia Populations and Habitat (Approximately 150 Acres)***

Alternative 6R would result in the loss of approximately 150 acres of occupied sand gilia habitat. These habitat areas support sand gilia at high densities on approximately 15 acres, medium densities on roughly 5 acres, and low densities on about 130 acres. Maritime chaparral and coastal scrub habitat on sandy soils are potential suitable habitat for sand gilia. Approximately 1,000 acres of potential habitat would be lost under Alternative 6R.

Sand gilia is listed as endangered under the federal Endangered Species Act. Removal of individuals or populations of sand gilia could violate the federal Endangered Species Act. The loss of sand gilia populations would be unavoidable under Alternative 6R.

- ***Mitigation: Preserve Populations and Habitat of Federally Listed, Proposed, and Candidate Plants and Wildlife through a Multispecies Habitat Management Plan***

Recipients of disposed Fort Ord lands would be required to follow the management and land use guidelines in the multispecies HMP. The HMP is discussed previously under the disposal impact "Reduction in Federal Protection for Sand Gilia and Monterey Spineflower". The multispecies HMP will specifically address methods for preservation and enhancement of sand gilia populations and habitat at Fort Ord. The Army will develop and coordinate the HMP, and agencies and entities receiving Fort Ord lands will implement the HMP guidelines.

The development, coordination, and implementation of the multispecies HMP is both realistic and feasible. (Federal, state, and local agencies and private entities responsible for development)

- ***Impact: Loss of Monterey Spineflower Populations and Habitat (Approximately 940 Acres)***

Alternative 6R would result in the loss of approximately 940 acres of habitat occupied by Monterey spineflower. These habitat areas support Monterey spineflower at high densities on approximately 70 acres, medium densities on about 515 acres, and low densities on roughly 355 acres. All maritime chaparral and coastal dune habitats, and grassland and coastal scrub habitats on sandy soils, are potentially suitable habitat for Monterey spineflower. Monterey spineflower occurs in natural and artificial disturbance patches in these habitats.

Monterey spineflower is proposed for listing as endangered under the federal Endangered Species Act. Monterey spineflower could become listed during disposal and reuse. Should Monterey spineflower become listed as endangered, the removal of individuals or populations could be a violate the federal Endangered Species Act. The loss of Monterey spineflower populations would be unavoidable under Alternative 6R.

- ***Mitigation: Preserve Populations and Habitat of Federally Listed, Proposed, and Candidate Plants and Wildlife through a Multispecies Habitat Management Plan***

This mitigation is described for the disposal impact "Reduction in Federal Protection for Sand Gilia and Monterey Spineflower" discussed previously.

- ***Impact: Loss of Federal Candidate Plant Species Populations and Habitat***

Alternative 6R would result in the loss of occupied habitat of plant species that are candidates (Category 1 or 2) for federal listing as threatened or endangered or species for which listing packages are in preparation: Toro manzanita, sandmat manzanita, Hickman's onion, Monterey ceanothus, Eastwood's

ericameria, coast wallflower, and wedge-leaf horkelia. More than 50% of the total ranges of Toro manzanita, sandmat manzanita, Monterey ceanothus, and Eastwood's ericameria are at Fort Ord. Alternative 6R would result in the loss of approximately 5% of the populations of these species at Fort Ord and Table 4.11-2 in Section 4.11).

Approximately 5% of the occupied habitat of Hickman's onion, 20% of the occupied habitat of coast wallflower, and 5% of the occupied habitat of wedge-leafed horkelia at Fort Ord would also be removed under Alternative 6R (Table 6.11-2). No individuals of Yadon's piperia at Fort Ord would be removed under this alternative. Fort Ord does not represent as large a portion of the species' range for Hickman's onion, coast wallflower, wedge-leaf horkelia, and Yadon's piperia as for the other candidate species (Table 4.11-2 in Section 4.11).

The loss of federal candidate plant species could be considered a significant impact under CEQA. The loss of federal candidate plant species would be unavoidable under Alternative 6R.

- ***Mitigation: Preserve Populations and Habitat of Federally Listed, Proposed, and Candidate Plants and Wildlife through a Multispecies Habitat Management Plan***

This mitigation is described for the disposal impact "Reduction in Federal Protection for Sand Gilla and Monterey Spineflower" discussed previously.

- ***Mitigation: Minimize Losses and Establish and Protect New Populations of Federal Candidate Plants***

Federal candidate plant species could meet the definition of rare or endangered species under CEQA. Actions requiring CEQA compliance by state or local agencies would require mitigation for losses of these plants.

The loss of populations of federal candidate plant species would be minimized by avoiding populations and establishing new populations where feasible. This mitigation is both realistic and feasible. (State and local agencies and private entities responsible for development)

- ***Impact: Loss of Populations and Habitat of Other Special-Status Plant Species (Approximately 1,580 Acres)***

Alternative 6R would result in the loss of approximately 1,210 acres of habitat occupied by eight plant species on the CNPS Lists 4 and 1b but with no federal or state status: Hooker's manzanita, Monterey Indian paintbrush, Douglas' spineflower, Lewis' clarkia, virgate eriastrum, small-leaved lomatium, curly-leaved monardella, and purple-flowered piperia (Table 6.11-2). Roughly 25% of the total range of Hooker's manzanita occurs at Fort Ord, and roughly 10% of the occupied habitat at Fort Ord would be removed under Alternative 6. Fort Ord does not support a large percentage of the range of the other species (Table 4.11-2 in Section 4.11).

The loss of CNPS List 4 or 1b species could be considered a significant impact under CEQA. The loss of CNPS List 4 and 1b species would be unavoidable under Alternative 1.

- ***Mitigation: Preserve Populations and Habitat of Federally Listed, Proposed, and Candidate Plant and Wildlife Species through a Multispecies Habitat Management Plan***

This mitigation is described for the disposal impact "Reduction in Federal Protection for Sand Gilla and Monterey Spineflower" discussed previously. Developing and implementing a multispecies Habitat Management Plan to preserve populations and habitat of federally listed, proposed, and candidate plant and wildlife species would also preserve many other special-status plant species populations and habitat.

Table 6.11-2 Loss of Occupied Habitat of Special-Status Plant Species by Reuse Alternative

Acres Removed by Population Density

Special-Status Plant Species	Alt. 1	Sub. 1A	Sub. 1B	Sub. 1C	Alt. 2	Sub. 2A	Sub. 2B	Alt. 3	Alt. 4	Alt. 5	Sub. 5A	Alt. 6R
Sand gillia, E/T/1B^a												
Low	3,150	3,150	3,150	3,150	2,070	2,070	2,070	790	470	15	0	130
Medium	310	310	310	310	290	290	290	210	190	0	0	5
High	160	160	160	160	160	160	160	160	85	0	0	15
Total	3,620	3,620	3,620	3,620	2,520	2,520	2,520	1,160	745	15	0	150
Seaside bird's-beak, C1/E/1B												
Low	1,100	1,100	1,100	1,100	540	540	540	75	0	0	0	0
Medium	15	15	15	15	0	0	0	0	0	0	0	0
High	0	0	0	0	0	0	0	0	0	0	0	0
Total	1,120	1,120	1,120	1,120	540	540	540	75	0	0	0	0
Sandmat manzanita, C2/-/1B												
Low	2,130	2,110	2,130	2,110	1,260	1,240	1,260	890	610	20	0	80
Medium	3,160	3,150	3,160	3,210	1,980	1,980	1,980	600	620	5	0	370
High	3,450	3,450	3,450	3,450	1,650	1,650	1,650	610	240	15	0	80
Total	8,740	8,710	8,740	8,770	4,890	4,870	4,890	2,100	1,470	40	0	520
Monterey ceanothus, C2/-/4												
Low	2,310	2,310	2,310	2,310	1,650	1,650	1,650	750	530	15	0	190
Medium	6,840	6,830	6,840	6,840	3,000	3,000	3,000	880	520	5	0	360
High	2,440	2,440	2,440	2,480	1,220	1,220	1,220	360	280	0	0	265
Total	11,590	11,580	11,590	11,630	5,870	5,870	5,870	1,990	1,330	20	0	800
Coast wallflower, C2/-/1b												
Low	420	420	420	410	390	390	390	160	70	10	0	100
Medium	190	190	190	200	190	190	190	190	160	0	0	50
High	10	10	10	50	10	10	10	10	20	0	0	0
Total	620	620	620	660	590	590	590	360	250	10	0	150
Yadon's piperia, /-/1B												
Low	15	15	15	15	15	15	15	15	0	0	0	0
Medium	0	0	0	0	0	0	0	0	0	0	0	0
High	0	0	0	0	0	0	0	0	0	0	0	0
Total	15	15	15	15	15	15	15	15	0	0	0	0
Monterey spineflower, PE/-/1B												
Low	5,690	5,680	5,690	5,730	3,330	3,320	3,330	1,600	1,030	45	20	355
Medium	3,400	3,380	3,420	3,390	1,930	1,910	1,950	1,290	970	50	25	515
High	890	890	890	970	500	500	500	310	140	15	0	70
Total	9,980	9,950	10,000	10,090	5,760	5,730	5,780	3,200	2,140	110	45	930
Toro manzanita, C2/-/1B												
Low	2,210	2,210	2,210	2,210	1,100	1,100	1,100	240	210	10	0	130
Medium	2,000	2,000	2,000	2,000	770	770	770	240	80	0	0	60
High	1,670	1,670	1,670	1,670	770	770	770	95	0	0	0	10
Total	5,880	5,880	5,880	5,880	2,640	2,640	2,640	575	290	10	0	190

Table 6.11-2 Continued

Acres Removed by Population Density

Special-Status Plant Species	Acres Removed by Population Density											
	Alt. 1	Sub. 1A	Sub. 1B	Sub. 1C	Alt. 2	Sub. 2A	Sub. 2B	Alt. 3	Alt. 4	Alt. 5	Sub. 5A	Alt. 6R
Hickman's allium, C1/-/1B												
Low	270	270	270	270	250	250	250	75	0	0	0	0
Medium	120	120	120	120	0	0	0	0	75	0	0	20
High	0	0	0	0	0	0	0	0	0	0	0	0
Total	390	390	390	390	250	250	250	75	75	0	0	20
Eastwood's ericameria, C2/-/1B												
Low	3,430	3,430	3,430	3,430	1,780	1,780	1,780	460	250	15	0	220
Medium	2,020	2,020	2,020	2,070	1,450	1,450	1,450	230	80	0	0	125
High	25	25	25	25	25	25	25	25	5	0	0	1
Total	5,475	5,475	5,475	5,525	3,255	3,255	3,255	715	335	15	0	341
Wedge-leaved horkelia, C2/-/1B												
Low	2,290	2,290	2,290	2,290	1,270	1,270	1,270	480	80	0	0	40
Medium	1,200	1,200	1,200	1,200	650	650	650	280	190	10	0	105
High	0	0	0	0	0	0	0	0	0	0	0	0
Total	3,490	3,490	3,490	3,490	1,920	1,920	1,920	750	270	10	0	140
All other special- status plants species (CNPS List 3 or 4 and no Federal or State Status) ^b	11,800	11,760	11,810	11,950	6,160	6,130	6,170	2,070	1,220	50	1	1,210

^a All other designations given in Table 4.11-1.

^b Hookers' manzanita, Monterey Indian paintbrush, Douglas' spineflower, Lewis' clarkia, virgate eriastrum, small-leaved lomatum, Santa Cruz County monkeyflower, curly-leaved monardella, and purple-flowered piperia species with only one individual: robust spineflower (PE/-/1b0, and Pajaro manzanita (-/-/4).

Special-Status Wildlife Species - Federally Listed Endangered and Proposed Endangered

- ***Impact: Loss of Smith's Blue Butterfly Habitat (Approximately 1 Acre)***

Under Alternative 6R, less than 1% (approximately 1 acre) of the Smith's blue butterfly habitat at Fort Ord would be eliminated by development (acres affected for all special-status and special-interest wildlife species for each option and subalternative are shown in Table 6.11-3).

The habitat at Fort Ord has been identified in the Smith's blue butterfly recovery plan (U.S. Fish and wildlife Service 1984) as important for the recovery of the species. The Smith's blue butterfly is listed as a federally endangered species. Loss of Smith's blue butterfly habitat would be a significant impact under NEPA because it would violate the federal Endangered Species Act.

- ***Mitigation: Preserve Populations and Habitat of Federally Listed and Proposed Endangered Plants and Wildlife through a Multispecies Habitat Conservation Plan***

Recipients of disposed Fort Ord lands would be required to follow the management and land use guidelines in the multispecies HMP developed by the Army. The HMP is described for the "Reduction in Federal Protection for Sand Gilia and Monterey Spineflower" impact discussed previously under "Disposal Impacts". The HMP may prescribe avoidance of Smith's blue butterfly habitat or replacement of affected habitat through restoration of dune habitats. Components of the HMP focused on Smith's blue butterfly may be developed in association with the proposed Marina Dunes Habitat Conservation Plan (HCP). (Other federal, state and local agencies and private entities responsible for development)

- ***Impact: Degradation of Smith's Blue Butterfly Habitat***

Under Alternative 6R, public access would be permitted on the beaches and dunes at Fort Ord. Foot traffic and other human impacts associated with increased use could damage host plants and degrade Smith's blue butterfly habitat in the coastal dune zone. Degradation of Smith's blue butterfly habitat would be a significant impact under NEPA because it would violate the federal Endangered Species Act.

- ***Mitigation: Preserve Populations and Habitat of Federally Listed and Proposed Endangered Plants and Wildlife through a Multispecies Habitat Conservation Plan***

Recipients of disposed Fort Ord lands would be required to follow the management and land use guidelines in the multispecies HMP developed by the Army. The HMP is described for the "Reduction in Federal Protection for Sand Gilia and Monterey Spineflower" impact discussed previously under "Disposal Impacts". Development and implementation of the HMP would address methods to preserve and protect Smith's blue butterfly habitat such as constructing wooden boardwalks to direct beach access, installing interpretive signs designating the area as sensitive habitat, and providing adequate, full-time law enforcement for the coastal dune zones. (Federal, state and local agencies and private entities responsible for development)

- ***Impact: Disturbance to Nesting Western Snowy Plovers***

Under Alternative 6, public access would be allowed on the beaches at Fort Ord. Disturbances caused by increased public use of the beaches could cause nest failures in snowy plovers, resulting in direct mortality to eggs and chicks. Direct mortality would be considered a significant impact under NEPA because coastal populations of western snowy plovers are listed as threatened under the federal Endangered Species Act.

Table 6.11-3 Approximate Habitat Losses for Special-Status and Special-Interest Wildlife Species by Reuse Alternative

Species	Legal Status*		Approximate Acres of Potential Habitat Available	Approximate Acres of Potential Habitat Lost						
	Federal/State	Potential Habitat		Alt. 1	Sub. 1A	Sub. 1B	Sub. 1C	Alt. 2	Sub. 2A	Sub. 2B
Smith's Blue Butterfly	FE/-	Buckwheat in dune habitats	180	40	40	40	120	25	25	25
California Linderiella	FPE/-	Vernal pools and ponds	65	60	60	60	60	15	15	15
Black Legless Lizard	C2/SSC	General habitat; native dune vegetation and where coastal scrub and maritime chaparral overlap with Baywood sands and Oceana soils	3,320	2,790	2,780	2,790	2,920	2,710	2,700	2,710
Monterey Dusky-Footed Woodrat	C2/-	Maritime chaparral and coastal coast live oak woodland	15,560	14,970	14,860	15,000	14,950	8,760	8,650	8,790
Monterey Ornate Shrew	C2/-	General habitat; mixed riparian and oak riparian forest, coastal and inland coast live oak woodland	4,640	4,000	4,140	4,020	3,210	3,120	3,120	3,240
Loggerhead Shrike	C2/-	Dunes, grasslands, coastal scrub, maritime chaparral	18,990	16,080	16,050	16,100	16,410	9,750	9,720	9,770
Tricolored Blackbird	C2/SSC	Grasslands in the southeastern portion of Fort Ord	2,580	1,130	1,130	1,130	1,130	1,040	1,040	1,040
California Horned Lark	C2/-	Grasslands	4,790	3,060	3,060	3,090	3,060	2,660	2,660	2,660
California Tiger Salamander	C2/SSC	Vernal pools and ponds	65	60	60	60	60	15	15	15
California Red-Legged Frog and Southwestern Pond Turtle	C1/SSC	Ponds	30	25	25	25	25	10	10	10
Burrowing Owl and Northern Harrier	-/SSC	Grasslands	4,790	3,060	3,060	3,090	3,060	2,660	2,660	2,660
Cooper's Hawk and Yellow Warbler	-/SSC	Mixed riparian forest, oak riparian forest, and canyon bottom, inland coast live oak woodland	300	210	210	210	210	205	205	205
Sharp-Shinned Hawk	-/SSC	Mixed riparian forest, oak riparian forest, inland coast live oak woodland	1,670	1,250	1,250	1,250	1,250	340	340	340

Table 6.11-3 Continued

Species	Legal Status ^a		Approximate Acres of Potential Habitat Available	Approximate Acres of Potential Habitat Lost						
	Federal/State	Potential Habitat		Alt. 1	Sub. 1A	Sub. 1B	Sub. 1C	Alt. 2	Sub. 2A	Sub. 2B
Golden Eagle	-/SSC	Oak savanna, inland coast live oak woodland, coastal scrub, maritime chaparral, and grasslands	19,880	16,910	16,880	16,930	16,940	10,115	10,080	10,130
Prairie Falcon	-/SSC	Grassland and oak savanna	5,090	3,250	3,250	3,260	3,240	2,790	2,780	2,790
American Badger	-/SSC	Grassland, oak savanna, coastal coast live oak woodland	8,070	6,110	6,010	6,150	6,020	5,250	5,150	5,260
Coast Horned Lizard	-/SSC	General habitat; where coastal scrub and maritime chaparral overlap with baywood sands, Arnold Enez, and Oceana soils	10,430	10,070	10,050	10,080	10,110	5,520	5,500	5,530
Salinas Harvest Mouse	SI	Coastal coast live oak woodland	2,970	2,650	2,760	2,690	2,780	2,400	2,370	2,490
Great Road Runner	SI	Maritime chaparral, inland coast live oak woodland	14,020	13,160	13,140	13,160	13,210	6,850	6,830	6,850
Swainson's Thrush and Common Yellowthroat	SI	Mixed riparian forest	200	190	190	190	190	190	190	190

Table 6.11-3 Continued

Species	Legal Status ^a		Approximate Acres of Potential Habitat Available	Approximate Acres of Potential Habitat Lost				
	Federal/State	Potential Habitat		Alt. 3	Sub. 4	Sub. 5	Sub. 5A	Alt. 6R
Smith's Blue Butterfly	FE/-	Buckwheat in dune habitats	180	2	15	1	1	1
California Linderella	FPE/-	Vernal pools and ponds	65	4	9	0	0	2
Black Legless Lizard	C2/SSC	General habitat; native dune vegetation and where coastal scrub and maritime chaparral overlap with Baywood sands and Oceana soils	2,960	1,090	650	20	1	525
Monterey Dusky-Footed Woodrat	C2/-	Maritime chaparral and coastal coast live oak woodland	15,590	3,910	2,630	260	90	1,455
Monterey Ornate Shrew	C2/-	General habitat; mixed riparian and oak riparian forest, coastal and inland coast live oak woodland	4,590	2,280	1,450	260	120	562
Loggerhead Shrike	C2/-	Dunes, grasslands, coastal scrub, maritime chaparral	18,990	3,720	2,900	460	230	1,915
Tricolored Blackbird	C2/SSC	Grasslands in the south-eastern portion of Fort Ord	2,750	180	9	9	9	130
California Horned Lark	C2/-	Grasslands	4,770	1,420	1,260	240	40	850
California Tiger Salamander	C2/SSC	Vernal pools and ponds	65	4	9	0	0	2
California Red-Legged Frog and Southwestern Pond Turtle	C1/SSC	Ponds	30	2	2	0	0	1
Burrowing Owl and Northern Harrier	-/SSC	Grasslands	4,770	1,420	1,260	240	40	850
Cooper's Hawk and Yellow Warbler	-/SSC	Mixed riparian forest, oak riparian forest, and canyon bottom, inland coast live oak woodland	230	0	0	0	0	5
Sharp-Shinned Hawk	-/SSC	Mixed riparian forest, oak riparian forest, inland coast live oak woodland	1,620	55	85	85	70	25
Golden Eagle	-/SSC	Oak savanna, inland coast live oak woodland, coastal scrub, maritime chaparral, and grasslands	19,690	3,870	3,000	550	300	1,905
Prairie Falcon	-/SSC	Grassland and oak savanna	5,080	1,470	1,340	320	110	870
American Badger	-/SSC	Grassland, oak savanna, coastal coast live oak woodland	8,050	3,570	2,710	550	200	1,410

Table 6.11-3 Continued

Species	Legal Status ^a Federal/State	Potential Habitat	Approximate Acres of Potential Habitat Available	Approximate Acres of Potential Habitat Lost				
				Alt. 3	Sub. 4	Sub. 5	Sub. 5A	Alt. 6R
Coast Horned Lizard	-/SSC	General habitat; where coastal scrub and maritime chaparral overlap with baywood sands, Arnold Enez, and Oceana soils	10,440	1,870	1,410	35	0	945
Salinas Harvest Mouse	SI	Coastal coast live oak woodland	2,970	2,100	1,370	230	90	540
Greater Road Runner	SI	Maritime chaparral, inland coast live oak woodland	14,000	2,000	1,350	70	40	935
Swainson's Thrush and Common Yellowthroat	SI	Mixed riparian forest	190	0	0	0	0	5

^a Status explanations (see the "Definitions of Special-Status Species" section above for citations):

- = No designation.

Federal

FE = Endangered under the federal Endangered Species Act.

FPE = Proposed for listing as endangered.

C1 = Category for listing. Category 1 includes species for which USFWS has on file enough information on biological vulnerability to support proposals to list them.

C2 = Category 2 candidate for federal listing. Category 2 includes species for which USFWS has some biological information indicating that listing may be appropriate but for which further biological research and field study are usually needed to clarify the most appropriate status.

State

SI = Special interest species.

SSC = Species of special concern.

▪ **Mitigation: Preserve Populations and Habitat of Federally Listed and Proposed Endangered Plants and Wildlife through a Multispecies Habitat Conservation Plan**

Recipients of disposed Fort Ord lands would be required to follow the management and land use guidelines in the multispecies HMP developed by the Army. The HMP is described for the "Reduction in Federal Protection for Sand Gilia and Monterey Spineflower" impact discussed previously under "Disposal Impacts". The western snowy plover will be specifically addressed in the multispecies HMP. The HMP may recommend that human access to beaches north of Stilwell Hall be restricted during the western snowy plover breeding and nesting season (March-September) to avoid disturbance to nesting birds. If western snowy plovers are found nesting in other areas, beach access could be restricted in these locations also. (Federal, state, and local agencies and private entities responsible for development)

▪ **Impact: Loss of California Linderiella Habitat (Approximately 2 Acres)**

California linderiella occur in ephemeral, freshwater aquatic habitats, such as vernal pools, swales, and ponds. They are adapted to the temporary presence of water and to a species-specific set of environmental parameters (e.g., salinity, temperature, and alkalinity) (Simovich and Fugate 1992). California linderiella produce a single generation per year, emerging in response to their species-specific environmental cues while water bodies are full, producing eggs, then dying. Once the aquatic habitat has dried, the eggs overwinter in a resistant egg stage and hatch only when the required environmental cues in the aquatic habitat are reestablished (Zedler 1987).

Under Alternative 6R, roughly 3% (approximately 2 acres) of the potential California linderiella habitat at Fort Ord would be eliminated by development. None of the five vernal pools and ponds where California linderiella are known to occur would be eliminated. However, the proposed SR 68 transportation corridor would pass within 1,250 feet of two occupied pools.

California linderiella is currently proposed for federal endangered status. If California linderiella becomes listed as endangered, loss of habitat would be a significant impact under NEPA because it would violate the federal Endangered Species Act.

▪ **Mitigation: Preserve Populations and Habitat of Federally Listed and Proposed Endangered Plants and Wildlife through a Multispecies Habitat Conservation Plan**

This mitigation is described for the "Reduction in Federal Protection for Sand Gilia and Monterey Spineflower" impact discussed previously under "Disposal Impacts". The HMP may recommend avoidance of vernal pools and ponds where feasible or creation of wetlands of equal or greater value where vernal pools and ponds are removed. All future land owners will still be required to comply with Section 404 of the Clean Water Act if the placement of dredged or fill material is proposed in a wetland. (Other federal, state and local agencies and private entities responsible for development)

Special-Status Wildlife Species - Federal Candidate Wildlife Species

▪ **Impact: Loss of Black Legless Lizard Habitat (Approximately 17%), and Globose Dune Beetle Habitat (Approximately 1%)**

The black legless lizard occurs in areas of loose sandy soils supporting native dune, coastal scrub, or maritime chaparral vegetation. Although legless lizards have also been found along the edges of ice plant mats, ice plant is not considered suitable habitat for legless lizards (Papenfuss and Harris 1990).

Because of narrow microhabitat requirements for black legless lizards (i.e., moderate soil moisture, mixed patches of sun and shade, thick duff or leaf litter), specific acreages for elimination of black legless lizard microhabitat cannot be determined; however, under this alternative 17% of the habitat likely to contain appropriate microhabitat conditions would be eliminated by development. Therefore, it was assumed that approximately 17% of the total available microhabitat would also be eliminated.

Globose dune beetles occur in dune ecosystems in areas of native vegetation (Doyen 1976). The species lives and forages under sand and is very seldom found on the sand surface. Globose dune beetles do not travel more than a few meters from vegetation (Doyen 1976). It is unknown if globose dune beetles occur at Fort Ord. Dune areas with native vegetation are considered potential habitat.

Under Alternative 6R, roughly 17% of the available black legless lizard habitat and approximately 1% of the globose dune beetle habitat at Fort Ord would be eliminated by development. Although the black legless lizard has a very limited range, loss of 17% of the available habitat at Fort Ord would not elevate the species to threatened or endangered status. The globose dune beetle would not be substantially impacted. However, implementation of the following mitigation would minimize impacts to both species.

- ***Mitigation: Preserve Populations and Habitat of Federally Listed and Proposed Threatened and Endangered Plants and Wildlife through a Multispecies Habitat Conservation Plan***

This mitigation is described for the "Reduction in Federal Protection for Sand Gilia and Monterey Spineflower" impact discussed previously under "Disposal Impacts". The black legless lizard will be specifically addressed in the multispecies HMP. Preservation and enhancement of dune communities will conserve black legless lizard coastal habitat. Globose dune beetle habitat will also be conserved. Preservation and enhancement of maritime chaparral will conserve black legless lizard inland habitat.

- ***Impact: Degradation of Black Legless Lizard and Globose Dune Beetle Habitat In the Coastal Dune Zone***

Under Alternative 6R, public access would be permitted on the beaches and dunes at Fort Ord. Foot traffic and other human impacts associated with increased use could reduce densities of native vegetation and degrade black legless lizard and globose dune beetle habitat in the coastal dune zone.

- ***Mitigation: Preserve Populations and Habitat of Federally Listed and Proposed Threatened and Endangered Plants and Wildlife through a Multispecies Habitat Conservation Plan***

This mitigation is described for the "Reduction in Federal Protection for Sand Gilia and Monterey Spineflower" impact discussed previously under "Disposal Impacts". Methods for protection of dune habitat addressed in the HMP for Smith's blue butterfly will also protect habitat for black legless lizard and globose dune beetle.

- ***Impact: Loss of Monterey Ornate Shrew Habitat (Approximately 12%) and Monterey Dusky-Footed Woodrat Habitat (Approximately 1,455 Acres)***

No Monterey ornate shrews have been observed at Fort Ord; however, the installation is within the range of the species and suitable habitat is available. The shrew occurs only in areas with thick groundcover (i.e., duff, dead and downed logs, or dense grasses) that support large invertebrate populations. Appropriate microhabitat conditions are most likely to occur in mixed riparian and oak riparian forests, and inland and coastal coast live oak woodlands.

Specific acreage for elimination of shrew microhabitat cannot be determined; however, under Alternative 6R approximately 12% of the habitats likely to contain appropriate microhabitat conditions would be eliminated by development. Therefore, it was assumed that approximately 12% of the total available microhabitat would also be eliminated. Although the range of the Monterey ornate shrew is limited to the Monterey Bay region the loss of 12% of the available habitat at Fort Ord should not result in state or federal listing as threatened or endangered. However, habitat should be preserved where possible because of the limited range of the species

Monterey dusky-footed woodrats are known to occur at Fort Ord in maritime chaparral and coastal coast live oak woodlands. The range of the species is limited to Monterey and northern San Luis Obispo Counties with Fort Ord comprising the northern limits of its range.

Under Alternative 6R, roughly 9% (approximately 1,455 acres) of the Monterey dusky-footed woodrat habitat at Fort Ord would be eliminated by development. However, because over 12,000 acres of habitat would still remain under Alternative 6R, the loss of 9% of the available habitat should not result in state or federal listing as threatened or endangered for the Monterey dusky-footed woodrat. However, habitat should be preserved where possible because of the limited range of the species.

- ***Mitigation: Preserve Populations and Habitat of Federally Listed and Proposed Threatened and Endangered Plants and Wildlife through a Multispecies Habitat Conservation Plan***

This mitigation is described for the "Reduction in Federal Protection for Sand Gilia and Monterey Spineflower" impact discussed previously under "Disposal Impacts". The Monterey ornate shrew will be specifically addressed in the multispecies HMP. Preservation and enhancement of oak woodlands will conserve habitat for the Monterey ornate shrew. Preservation of maritime chaparral habitat addressed in the HMP will conserve habitat for the Monterey dusky-footed woodrat.

- ***Mitigation: Avoid and Compensate for Loss of Riparian Forest***

This mitigation is described for the "Loss of Riparian Forest" impact discussed previously. Implementation of this measure would aid in minimizing habitat losses for Monterey ornate shrew.

- ***Impact: Elimination of Loggerhead Shrike Habitat (Approximately 1,915 Acres)***

Loggerhead shrikes are known to occur in dune, grassland, coastal scrub, and maritime chaparral habitats at Fort Ord. Under Alternative 6R, roughly 10% (approximately 1,915 acres) of the loggerhead shrike habitat at Fort Ord would be eliminated by development.

The loggerhead shrike is widely distributed in California and is absent only from the higher elevations of the Klamath, Cascade, and Sierra Mountain Ranges. The species occurs infrequently along the coast in Monterey County, but is more abundant along the eastern portion of the county. The loss of habitat at Fort Ord would not affect a substantial portion of the species population. Although impacts on loggerhead shrike are not substantial, implementation of the following mitigation measures for other resources would result in a beneficial effect for loggerhead shrike:

- ***Mitigation: Preserve Populations and Habitat of Federally Listed and Proposed Threatened and Endangered Plants and Wildlife through a Multispecies Habitat Conservation Plan***

This mitigation is described for the "Reduction in Federal Protection for Sand Gilia and Monterey Spineflower" impact discussed previously under "Disposal Impacts". Preservation of maritime chaparral habitat addressed in the HMP will conserve habitat for the loggerhead shrike.

- ***Mitigation: Limit Losses of Grasslands through Local Agency Land Use General Plan Policies and Regional Programs***

This mitigation is described for the "Loss of Common Biological Communities" impact for reuse discussed previously. Implementation of this measure would aid in minimizing habitat losses for loggerhead shrike.

- ***Impact: Loss of Tricolored Blackbird Habitat (Approximately 130 Acres) and California Horned Lark Habitat (Approximately 850 Acres)***

Both tricolored blackbirds and California horned larks are known to occur in grassland habitats at Fort Ord. Tricolored blackbirds are restricted to the southeastern grassland area. One nesting colony occurs on the installation approximately 1.5 miles northeast of Laguna Seca and one colony occurs at Laguna Seca. The Laguna Seca colony likely forages in the grasslands at Fort Ord. Under Alternative 6R, roughly 5% (approximately 130 acres) of the grassland habitat used for foraging by tricolored blackbirds would be eliminated by development. The known nesting colony would not be affected, and approximately 2,500 acres of grassland would be preserved. Tricolored blackbirds would not be adversely affected.

California horned larks are known to occur at Fritzsche Army Airfield and are expected to occur in grasslands throughout Fort Ord. Under Alternative 6R, roughly 18% (approximately 850 acres) of this habitat would be eliminated by development.

This variety of horned lark occurs along the California Coast Ranges from Humboldt County to the Mexican border, and in the San Joaquin Valley. Elimination of habitat at Fort Ord could contribute to fragmentation of the range of the species in northern Monterey County but would not affect a substantial portion of the population.

Although impacts on tricolored blackbirds and horned lark are not substantial under Alternative 6R, the following mitigation measure described for impacts on grasslands would result in beneficial effects for both species:

- ***Mitigation: Limit Loss of Grasslands through Local Agency General Plan Land Use Policies and Regional Programs***

This mitigation is described for the "Loss of Common Biological Communities" impact discussed previously. Preserving grassland habitats would also conserve habitat for tricolored blackbird and horned lark.

- ***Impact: Loss of California Tiger Salamander Habitat (Approximately 2 Acres) and California Red-Legged Frog and Southwestern Pond Turtle Habitat (Approximately 1 Acres)***

California tiger salamanders breed in ephemeral freshwater aquatic habitats such as vernal pools and ponds, and in permanent water bodies absent of fish. Adult salamanders spend the dry season in underground refugia, such as rodent burrows, up to 1 mile from the breeding pond. Eight breeding ponds were found at Fort Ord.

California red-legged frogs and southwestern pond turtles occur in permanent or semipermanent freshwater habitats such as ponds, slow-moving streams, or small lakes. Southwestern pond turtles nest in upland habitats up to 0.25 mile from water bodies. California red-legged frogs were not located during surveys of Fort Ord, although the area is within the range of the species and suitable habitat occurs at the installation. Southwestern pond turtles are known to occur occasionally at Mudhen Lake, migrating onto Fort Ord from Merrill Ranch during heavy rain years (U.S. Fish and Wildlife Service pers. comm.), and may occur in other areas.

Under Alternative 6R, roughly 3% (approximately 2 acres) of the California tiger salamander breeding habitat at Fort Ord and one of the eight known breeding sites would be eliminated by development of the SR 68 transportation corridor. The transportation corridor would also come very close to two other known breeding ponds removing upland habitat. Roughly 3% (approximately 1 acre) of the potential red-legged frog and southwestern pond turtle habitat available would also be eliminated. Implementation of Alternative 6R would not result in a substantial decline in the California tiger salamander population in the Monterey Bay region. Compliance with Section 404 of the Clean Water Act should minimize wetland impacts.

- **Mitigation: Preserve Populations and Habitat of Federally Listed and Proposed Endangered Plants and Wildlife through a Multispecies Habitat Conservation Plan**

This mitigation is described for the "Reduction in Federal Protection for Sand Gilia and Monterey Spineflower" impact discussed previously under "Disposal Impacts". Preservation of ponds and vernal pools for California linderiella will also conserve habitat for California tiger salamander, California red-legged frog, and southwestern pond turtle. All future land owners will also be required to comply with Section 404 of the Clean Water Act if the placement of dredged or fill material is proposed in a wetland. (Other federal, state and local agencies and private entities responsible for development)

- **Mitigation: Avoid or Limit Losses and Restore Vernal Pools, Freshwater Marsh, Streams, and Pools**

This mitigation is described for the "Loss of Vernal Pools, Freshwater Marsh, Streams, and Ponds" impact discussed at the end of this chapter.

- **Mitigation: Avoid or Minimize Impacts on Upland Habitat**

Development could be designed to avoid upland habitat within 0.5 mile of vernal pools and ponds to prevent potential adverse impacts on California tiger salamanders and nesting southwestern pond turtles. If upland habitat cannot be fully avoided, as large a portion as is feasible could be preserved. (Local agencies and private entities responsible for development)

- **Impact: Loss of Potential Roosting, Hibernating, and Breeding Sites of for Special-Status Bats**

Three special-status bat species have potential to occur at Fort Ord, Townsend's western big-eared bat, pallid bat, and California mastiff bat. There are no recorded occurrences of these species at Fort Ord; although, all three species could potentially use the installation to forage, for night roosts, hibernating sites, and nursery roosts.

Townsend's western big-eared bat is a Category 2 candidate for federal listing as threatened or endangered and a California Species of Special Concern. This species roosts in caves, mines, and buildings where there is enough space for individuals to hang from walls or ceilings. All known roosts of Townsend's western big-eared are within 100m of a stream or riparian habitat (Pierson 1988). Females are extremely sensitive to disturbance and have been known to abandon a nursery roost after one human intrusion.

The California mastiff bats is also a Category 2 candidates for federal listing as threatened or endangered and a California Species of Special Concern. The California mastiff bat typically occurs in areas inland from Fort Ord and is not likely to be found at the installation (University of California, Berkeley pers. comm.). Mastiff bats occur in lowland areas in arid to semi-arid habitats including deciduous woodlands, coastal scrub, and annual grasslands (Zeiner et al. 1990). They prefer rugged rocky areas where they use large cracks in granite or sandstone as roosts. Mastiff bats will also roost in buildings if cracks or tight spaces are available (Williams 1986).

Pallid bats are considered a California Species of Special Concern. This species occurs in a wide variety of habitats including grasslands, shrublands, and forests, but is most common in dry, open habitats with rocky areas available for day roosts (Zeiner et al. 1990). Caves, rock crevices, mines, and occasionally hollow trees and buildings are used as day roosts. Pallid bats are also highly sensitive to disturbance and may abandon a roost or nursery site after only a brief intrusion.

Under Alternative 6R buildings within the Main Garrison and East Garrison will be removed to accommodate future land uses. Some buildings may potentially be used as roosting, hibernating, or breeding sites by any of these three bat species. Nursery and hibernation roosts are very rare for all these species. The loss of a nursery or hibernation site (if one occurs at Fort Ord) could substantially reduce the local population of these bat species.

- **Mitigation: Preserve Nursery and Hibernation Sites**

Before buildings are removed or modified at Fort Ord they could be surveyed for special-status bats. Surveys for hibernation sites should be conducted between October and April and surveys for nursery sites should be conducted between May and August. If a hibernation or nursery site is found in a building during surveys the building could be retained in its original condition. Activity around and in the building could be limited to levels comparable to pre-closure uses around the building.

Special-Status Wildlife Species - California Wildlife Species of Special Concern

- **Impact: Loss of Burrowing Owl, Northern Harrier, and Short-Eared Owl Habitat (Approximately 850 Acres)**

Burrowing owls occur infrequently in grassland habitats at Fort Ord (U.S. Fish and Wildlife Service pers. comm.). Northern harriers are not known to nest at Fort Ord but may winter on the installation, foraging in the grasslands. Short-eared owls are a rare summer and winter resident in Monterey County (Roberson 1985) and are not known to occur at Fort Ord. The grasslands at Fort Ord are considered potential nesting and foraging habitat for short-eared owls.

Under Alternative 6R, roughly 18% (approximately 850 acres) of the potential habitat for burrowing owl, northern harrier, and short-eared owl at Fort Ord would be eliminated by development. Elimination of northern harrier wintering habitat at Fort Ord would not affect a substantial portion of the nesting population. The loss of grassland habitat may, however, eliminate burrowing owl nesting sites and potential short-eared owl nesting habitat. Although impacts on northern harrier are not substantial, the second mitigation measure for impacts on grasslands would result in beneficial effects for northern harrier.

- **Mitigation: Compensate for Burrowing Owl Nest Sites Lost during Development**

To compensate for burrowing owl nest sites potentially lost during development, alternate nest sites could be identified or new nest sites could be created, and burrowing owls could be relocated to these new sites. Burrowing owls found nesting at Fort Ord in areas to be developed could be trapped during the nonbreeding season and relocated to suitable habitat in the natural resource management area. Artificial burrows could be provided if necessary, and relocated owls could be monitored for a minimum of 2 years to determine the success of relocation efforts. (Private entities responsible for development)

- **Mitigation: Limit Loss of Grasslands through Local Agency General Plan Land Use Policies and Regional Programs**

This mitigation is described for the "Loss of Common Biological Communities" impact discussed previously.

- **Impact: Loss of Cooper's Hawk and Yellow Warbler Habitat (Approximately 5 Acres) and Wintering Sharp-Shinned Hawk Habitat (Approximately 25 Acres)**

Cooper's hawks and yellow warblers occur in mixed riparian and oak riparian forests and in inland coast live oak woodlands in canyon bottoms at Fort Ord. Cooper's hawks and yellow warblers have been recorded nesting in Merrill Ranch Canyon, and Cooper's hawks have been recorded nesting in Barloy Canyon (Monterey Chapter of the Audubon Society pers. comm.).

Sharp-shinned hawks may winter at Fort Ord, foraging in mixed riparian and oak riparian forests and inland coast live oak woodlands. They are not known to nest at the installation.

Under Alternative 6R, roughly 2% (approximately 5 acres) of the available habitat for Cooper's hawk and yellow warbler at Fort Ord would be eliminated by development. Roughly 2% (approximately 25 acres) of the potential sharp-shinned hawk wintering habitat would be also be eliminated.

Eliminating this habitat for Cooper's hawk, yellow warbler, and wintering sharp-shinned hawk would not affect substantial portion of the local populations. However, impacts may be minimized by implementing the following mitigation measure.

- **Mitigation: Avoid and Compensate for Loss of Riparian Forest**

This mitigation is described for the "Loss of Riparian Forest" discussed previously. Preserving riparian forest would conserve habitat for Cooper's hawk, yellow warbler, and wintering sharp-shinned hawk.

- **Impact: Loss of Golden Eagle Habitat (Approximately 1,905 Acres)**

Golden eagles perch and forage in oak savanna, inland coast live oak woodland, riparian forest, maritime chaparral, coastal scrub, and grasslands at Fort Ord. It is unknown whether golden eagles nest at Fort Ord, although suitable nesting habitat is available.

Under Alternative 6R, roughly 10% (approximately 1,905 acres) of the potential golden eagle habitat at Fort Ord would be eliminated by development. The loss of 10% of the available habitat at Fort Ord would not reduce the range of the golden eagle or exclude golden eagles from the installation. Although impacts on golden eagles are not substantial, the following mitigation for impacts on other resources would result in beneficial effects for golden eagles:

- **Mitigation: Limit Loss and Compensate Losses of Coast Live Oak Woodland and Savanna through State Policies, Local Agency General Plan Land Use Policies, and Regional Programs**

This mitigation is described for the "Loss of Common Biological Communities" impacts discussed previously.

- **Mitigation: Limit Loss of Grasslands through Local Agency General Plan Land Use Policies and Regional Programs**

This mitigation is described for the "Loss of Common Biological Communities" impact discussed previously.

- **Impact: Loss of Prairie Falcon Foraging Habitat (Approximately 870 Acres)**

Prairie falcons forage in grasslands and oak savannas at Fort Ord for small mammals and birds. There are few rock outcrops or ledges suitable for nesting at Fort Ord, and prairie falcons are not expected to nest at the installation; however, one nesting pair has been recorded near Fort Ord along SR 68.

Under Alternative 6R, roughly 17% (approximately 870 acres) of the available prairie falcon foraging habitat at Fort Ord would be eliminated by development. However, substantial portions of foraging habitat would be retained in the natural resource management area. The loss of 17% of the foraging habitat at Fort Ord would not adversely affect the breeding success of prairie falcons nesting near the installation. Although impacts on prairie falcon are not substantial under Alternative 6R, the following mitigation measure for impacts on grasslands would result in beneficial effects for prairie falcon:

- **Mitigation: Limit Loss of Grasslands through Local Agency General Plan Land Use Policies and Regional Programs**

This mitigation is described for the "Loss of Common Biological Communities" impact discussed previously.

- **Impact: Loss of American Badger Habitat (Approximately 1,410 Acres)**

American badgers occur in grassland, oak savanna, and coastal coast live oak woodland habitats at Fort Ord.

Under Alternative 6R, roughly 17% (approximately 1,410 acres) of the available badger habitat on Fort Ord would be lost; however, large amounts of suitable habitat would remain in the natural resource management area. The loss of habitat would not substantially reduce the range of the species and would not affect the higher density population in the southern portion of Monterey County. Although impacts on American badger are not substantial, the following mitigation measures for impacts on other resources would result in beneficial effects for American badger:

- **Mitigation: Limit Loss of Grasslands through Local Agency General Plan Land Use Policies and Regional Programs**

This mitigation is described for the "Loss of Common Biological Communities" impact for reuse discussed previously. Implementation would reduce habitat losses for American badger.

- **Mitigation: Limit Loss and Compensate Losses of Coast Live Oak Woodland and Savanna through State Policies, Local Agency General Plan Land Use Policies, and Regional Programs**

This mitigation is described for the "Loss of Common Biological Communities" impact for reuse discussed previously. Implementation would reduce habitat losses for American badger.

- **Impact: Loss of Coast Horned Lizard Habitat (Approximately 9%)**

The coast horned lizard is distributed along the California coast from Marin County to Santa Barbara County and in the southern Sacramento Valley south through the San Joaquin Valley. Coast horned lizards occur at Fort Ord where coastal scrub and maritime chaparral habitats grow in areas with loose sandy soils. Within these broad habitat parameters this species requires specific microhabitat conditions such as open areas for sunning (i.e., roads, fuelbreaks, burned areas, or other openings in vegetation), large ant populations as prey, and extremely loose or sandy soils where they can bury themselves for cover.

Because of narrow microhabitat requirements, specific acreages for elimination of coast horned lizard microhabitat cannot be determined; however, under Alternative 6R approximately 9% of the habitats likely to contain appropriate microhabitat conditions would be eliminated by development. Therefore, it was assumed that approximately 9% of the total available microhabitat would also be eliminated.

The elimination of 9% of the available coast horned lizard habitat at Fort Ord would not reduce the range of the species or exclude the species from Fort Ord. Although impacts on coast horned lizard are not substantial under Alternative 6R, the following mitigation measure for impacts on maritime chaparral would result in beneficial effects for coast horned lizard:

- **Mitigation: Preserve Populations and Habitat of Federally Listed and Proposed Endangered Plants and Wildlife through a Multispecies Habitat Conservation Plan**

The HMP is described for the "Reduction in Federal Protection for Sand Gilia and Monterey Spineflower" impact discussed previously under "Disposal Impacts". The HMP will specifically address methods for preservation and enhancement of maritime chaparral habitat.

Special-Status Wildlife Species - Rare and Special-Interest Wildlife Species

- **Impact: Loss of Salinas Harvest Mouse Habitat (Approximately 540 Acres)**

The Salinas harvest mouse is considered a rare species in California with a very limited range, but currently has no legal status. One Salinas harvest mouse was captured in coast live oak woodland habitat at Fort Ord. It is unknown whether the harvest mouse occurs in other habitats.

Under Alternative 6R, roughly 18% (approximately 540 acres) of the available Salinas harvest mouse habitat at Fort Ord would be eliminated by development. This loss would not have a substantial affect on the Salinas harvest mouse; however, implementation of the following mitigation would minimize impacts to the species:

- **Mitigation: Limit Loss and Compensate Losses of Coast Live Oak Woodland and Savanna through State Policies, Local Agency General Plan Land Use Policies, and Regional Programs**

This mitigation is described for the "Loss of Common Biological Communities" impact discussed previously.

- **Impact: Loss of Greater Roadrunner Habitat (Approximately 935 Acres)**

The greater roadrunner population at Fort Ord is the only known population in the Monterey Bay Area (Fort Ord Parklands Group 1992). At Fort Ord, roadrunners occur in maritime chaparral and inland coast live oak woodlands.

Under Alternative 6R, roughly 7% (approximately 935 acres) of the available greater roadrunner habitat at Fort Ord would be eliminated by development. Sufficient habitat would be retained to continue to support greater roadrunners in the area. Although impacts on greater roadrunner are not substantial, the following mitigation measure for impacts on maritime chaparral would result in beneficial effects for greater roadrunner:

- **Mitigation: Preserve Populations and Habitat of Federally Listed and Proposed Endangered Plants and Wildlife through a Multispecies Habitat Conservation Plan**

The HMP is described for the "Reduction in Federal Protection for Sand Gilia and Monterey Spineflower" impact discussed previously under "Disposal Impacts". The HMP will specifically address methods for preservation and enhancement of maritime chaparral habitat.

- **Impact: Loss of Swainson's Thrush and Common Yellowthroat Habitat (Approximately 5 Acres)**

Populations of Swainson's thrush and common yellowthroat are thought to be declining in the Monterey Bay area (Fort Ord Parklands Group 1992). However, these species still occur in mixed riparian forest habitat at Fort Ord. Under Alternative 6, roughly 2% (approximately 5 acres) of the available habitat for Swainson's thrush and common yellowthroat at Fort Ord would be eliminated by development. This loss would not have a substantial affect on Swainson's thrush and common yellowthroat populations in the region. However, implementation of the following mitigation for riparian forest would minimize impacts for both species:

- **Mitigation: Avoid and Compensate for Loss of Riparian Forest**

This mitigation is described for the "Avoid and Compensate for Loss of Riparian Forest" impact discussed previously.

Wetlands and Other Waters of the United States

- **Impact: Loss of Vernal Pools, Freshwater Marsh, Streams, and Ponds (Approximately 2 Acres)**

Alternative 6R would remove or degrade approximately 1 acre of vernal pools, about 1 acre of freshwater marsh and ponds, and approximately 2,350 linear feet of streams at Fort Ord (Tables 6.11-1 and 6.11-4). Vernal pools and freshwater marsh are potentially jurisdictional wetlands and stream channels and ponds are potentially other waters of the United States protected under the Clean Water Act. The placement of dredged or fill material into wetlands and other waters of the United States is prohibited under Section 404 of the Clean Water Act without a permit from the Department of the Army. The loss of wetlands and waters of the United States could be avoided by implementing the following mitigation:

**Table 6.11-4 Loss of Perennial and Intermittent Streams and
Potential Waters of the United States by Reuse Alternative**

Reuse Alternative	Linear Extent (feet)
Alternative 1	96,400
Subalternative A	96,400
Subalternative B	96,400
Subalternative C	110,700
Alternative 2	71,400
Subalternative A	71,400
Subalternative B	71,400
Alternative 3	4,000
Alternative 4	10,500
Alternative 5	2,200
Subalternative A	2,200
Alternative 6R	2,350
Total extent of all streams at Fort Ord	655,800

Note: Streams identified on U.S. Geological Survey 1:100,000-scale digital database.

■ **Mitigation: Avoid or Limit Losses, and Restore Vernal Pools, Freshwater Marsh, Streams, and Ponds**

All future landowners would have to comply with Section 404 of the Clean Water Act if the placement of dredged or fill material is proposed in wetlands or other waters of the United States. Federal agencies must coordinate with USFWS under the Fish and Wildlife Coordination Act if actions or permits would result in the modification of wetland or open water habitats. Development entities would have to reach agreement with DFG before they could undertake alterations of streambeds, ponds, or vernal pools from which wildlife receive benefit.

Freshwater marsh, ponds, and streams could be avoided where feasible, and wetland or open water habitat of equal or greater wildlife value could be created to replace lost wetland and open water habitats. Artificial ponds and freshwater marsh could be created to replace the artificial ponds and associated freshwater marsh removed. Vernal pools should be avoided because suitable soils for vernal pools are limited in the Fort Ord area and artificial vernal pool creation has a low probability of success. Alteration of the watersheds of the vernal pools should be avoided.

These wetland and open water habitats are small landscape features, and projects can be designed to incorporate the water body and its watershed within developed areas. Implementing this mitigation would avoid or limit the adverse impacts on California linderella, California red-legged frog, California tiger salamander, southwestern pond turtle, vernal pools, freshwater marsh, streams, ponds, and CNPS plant preserves with vernal pools. Modification of developments proposed under Alternative 6R would be necessary to avoid or limit adverse impacts on these habitats.

The mitigation discussed above is both realistic and feasible. (State and local agencies and private entities responsible for development)

6.11.4 Cumulative Effects

U.S. Department of Defense ownership of Fort Ord has protected biological resources from development as cities and agriculture have expanded in the Monterey Bay region over the last 50 years. Many special-status vegetation and wildlife species and biological resources found at Fort Ord have suffered incremental losses of habitat within the region and statewide caused by urban and agricultural expansion and other land uses. Biological resources that are not substantially affected at the time of actions taken at Fort Ord may be more severely affected by cumulative impacts of continued development in Monterey and Santa Cruz Counties and throughout California.

6.11.4.1 Disposal Impacts

Impacts from loss of habitat from disposal of Fort Ord lands to entities planning development would affect vegetation and wildlife to some degree for all alternatives. Although disposal impacts for Alternative 6R are mitigated by the proposed HMP, implementation of Alternative 6R would result in some losses to biological resources that have already sustained incremental losses from other projects in Monterey and Santa Cruz Counties and statewide.

The cumulative loss of populations of CNPS List 4 species, plant species determined by CNPS to be of limited distribution, could eventually result in threatened or endangered status for these species. One CNPS List 4 species that is not a federal candidate for listing as threatened or endangered would be affected by disposal activities: Monterey Indian plantbrush. The loss of populations of this species could be long term, but populations could recover. Restoring native dune habitat would reduce impacts on this species.

Impacts on wildlife populations from habitat losses at Fort Ord are compounded by cumulative habitat losses in the Monterey Bay region and throughout California. The cumulative loss of habitat for California species of special concern, wildlife species determined by DFG to be rare or declining in California, could eventually result in threatened or endangered status for these species under the California or federal Endangered Species Act. All 10 California species of special concern mentioned in the text could be affected by disposal impacts.

6.11.4.2 Reuse Impacts

Reuse of Fort Ord would add to the continued decline in extent of biological communities that have not been identified as rare by DFG. Removal of coastal scrub and coast live oak woodland and savanna at Fort Ord would be a cumulative impact on these biological communities. Local agency general plans land use policies and regional programs could be implemented to reduce impacts on oak woodlands in northern Monterey County.

The following CNPS List 4 plant species, which are not federal candidates for listing as threatened or endangered, would be adversely affected by reuse under Alternative 6R: Monterey Indian plantbrush, Douglas' spineflower, Lewis' clarkia, virgate eriastrum, small-leaved lomatium, curly-leaved monardella, and purple-flowered piperia. Development of land would result in the permanent loss of populations and habitat of these species. The cumulative loss of populations and habitat for these species could eventually result in threatened or endangered status.

Loss of CNPS List 4 plants could be reduced by modifying development designs to avoid populations of plants and leaving as much natural habitat as possible between developed areas. Sites that are typically landscaped (e.g., road medians and industrial park lawns) could be kept as natural vegetation.

All 10 California species of special concern discussed in the text would be adversely affected to some degree by reuse. The Salinas harvest mouse, a rare species with a limited range but no formal legal status, also would be adversely affected. Development of land would result in the permanent loss of habitat for these species. The cumulative loss of habitat for these species within California could eventually result in threatened or endangered status under the California or federal Endangered Species Act.

Losses of habitat for California species of special concern and the Salinas harvest mouse could be minimized by modifying development designs to preserve areas of open space and natural vegetation. As much open space as possible should be preserved within and between developed areas. Areas of open space within adjacent developments could be connected to provide the largest continuous area possible. Large continuous corridors of habitat are of greater value to wildlife than small disjunct blocks. Natural vegetation could be preserved within open space areas, and habitat could be enhanced.

6.11.5 Summary Comparison of Reuse Alternatives

Alternative 1 would have the greatest impact on federally listed threatened and endangered plant and wildlife species at Fort Ord, as well as on all other special-status plant and wildlife species and wetland resources on the installation. Alternative 1, Subalternative C would have additional impacts on dune habitats, the marine environment, and associated federally listed threatened and endangered species. Alternative 2 would have the next greatest impact on special-status plant and wildlife species and wetland resources, followed by Alternative 3. Alternative 4 would have a lesser impact overall than Alternative 3; however, greater impacts on dune habitats and wetlands and associated special-status plant and wildlife species would occur. Alternative 5 would have the least impact on all vegetation, wildlife, and wetland resources. Alternative 6R would have impacts intermediate between Alternative 5 and Alternative 3.

6.12 VISUAL RESOURCES

6.12.1 Introduction

Visibility, visual quality, and visual sensitivity for Fort Ord have been identified using geographic information system technology and are described in Section 4.12, "Visual Resources". Fort Ord's sensitivity to visual impacts was evaluated by combining mapped elements of visibility and visual quality.

The approach for assessing the impacts of Alternative 6R involved evaluating the land use intensity of the proposed land uses (Table 6.12-1) and comparing the land use intensity of the proposed land uses with the visual sensitivity ratings (Figure 4.12-3 in Section 4.12, "Visual Resources") for Fort Ord. The resulting map (Figure 6.12-1) indicates the potential of Alternative 6R to alter the visual character and quality of Fort Ord. Proposed land uses were ranked for intensity based on their potential for producing visual impacts. Attributes evaluated in determining the visual impact potential of specific land uses included the relative extent of vegetation removal and land disturbance and the extent of new construction or modification required. Potential visual impacts of the proposed land uses were then assessed by combining land use visual intensity with visual impact sensitivity information previously generated as part of the analysis described in Section 4.12, "Visual Resources". Land use visual impact potential for each proposed land use included in Alternative 6R was identified and compared to the existing visual setting and the result described as high, medium, or low visual impact potential (Figure 6.12-1).

This analysis assumes that no new construction, surface disturbance or vegetation removal will occur in the disturbed habitat zone and coastal dunes zone land uses proposed for the coastal area. Additionally, this analysis assumes that no construction or surface disturbing activities (e.g., removal of vegetation or substantial grading) will be associated with the Army's proposed POM annex.

6.12.2 Disposal Impacts

There would be no disposal impacts on visual resources.

6.12.3 Reuse Impacts

- *Impact: Reduced Visual Unity and Intactness for Some Visually Sensitive Areas Resulting from Short- and Long-Term Construction Impacts*

Implementation of Alternative 1 would require construction of a substantial number of buildings, renovation of existing buildings, and modification of infrastructure. These activities would produce short-term visual impacts and could produce long-term visual impacts. Short-term visual impacts would occur from construction activities, including location of equipment storage areas, removal of vegetation, and infrastructure modifications. Long-term visual impacts could occur from the removal of vegetation; construction of new buildings; alteration of the appearances of buildings and other structures; and construction of improvements, such as recreation facilities, parking areas, lighting standards, and fences.

The activities described above could result in substantial reduction in visual unity and intactness for some visually sensitive areas for views from SR 1 and other important visitor use areas in and around Monterey Bay. The resulting visual impacts would be inconsistent with Policy 30251 of the California Coastal Act of 1976 concerning the protection of scenic and visual qualities of coastal areas.

- *Mitigation Measure: None Available*

- **Impact: Reduced Visual Quality of Areas Seen from State Route 68 and State Route 1**

Implementing Alternative 6R would substantially alter the visual character and reduce the visual quality of some areas seen from SR 68 and SR 1 (Figure 6.12-1).

Views of Fort Ord from SR 68, a state-designated scenic route that is heavily travelled by tourists and recreationists, would be reduced in visual quality by encroaching land uses of high impact potential. Land uses of high and moderate impact potential would be located in the foreground and middleground distance zones, respectively, in the south-central portion of the study area. Land uses of high impact potential would also be located in middleground distance zones in the southeastern and south-central portion of the study area. Some views from SR 68 may be lost because of built elements in the foreground distance zone that would screen views. Vividness and intactness of views in these areas would be reduced.

Viewed from SR 1, a proposed scenic route that is also heavily travelled by tourists and recreationists, high intensity land uses would encroach on the foreground and middleground distance zones of some views. Built elements associated with the transit center and service area proposed land uses would contrast in form, line, and color, with the fairly intact natural character of the surrounding coastal landscape.

Full mitigation of visual impacts on areas seen from SR 68 and SR 1 from this alternative would not be possible because the intactness and vividness of the views would be substantially reduced. However, implementing the following mitigation may reduce the magnitude of this impact:

- **Mitigation: Develop a Mechanism to Ensure the Consistent Application of Visual Resource Management Standards at Fort Ord**

A mechanism could be developed to ensure that such restrictions consistently apply visual resource management standards at Fort Ord. For example, a visual resources protection plan could be developed to identify existing visual sensitivity and visual quality; establish visual quality management zones; and identify precise performance objectives, standards, and guidelines for design and planning activities for the approximately 28,000 acres comprising Fort Ord. Additionally, a permanent aesthetics review board could be established at Fort Ord. The aesthetics review board could be composed of other federal, state, and local agency representatives. The aesthetics review board could be responsible for administering development of the plan, reviewing all proposed activities and plans for compliance with the visual resources protection plan, and identifying inconsistencies and forwarding recommendations and conditions to decision-making bodies to ensure compliance of the proposed activities and plans with the visual resources protection plan. Additionally, the visual resources protection plan could include the following guidelines: site structures in less sensitive locations not easily visible from important viewing locations; maintain overall heights of buildings and structures consistent in scale with the heights of surrounding vegetation and topography so they are nonintrusive on the surrounding landscape; minimize grading and other changes to land surface elements; and minimize removal or disturbance of existing vegetation and screen structures and other built elements with berms and native vegetation while maintaining views of important visual features. (Other federal, state, or local agencies)

- **Impact: Reduced Visual Quality of Areas Seen from the Salinas Valley**

Implementing Alternative 6R would substantially alter the visual character and reduce the visual quality of some areas seen from the Salinas Valley. Land uses of medium and high visual impact potential, proposed for the area north of Reservation Road and the East Garrison, would be located in middleground distance zones viewed from the Salinas Valley. The overall vividness and intactness of the study area landscape, as viewed from the Salinas Valley, would be substantially reduced.

- **Mitigation: Develop a Mechanism to Ensure the Consistent Application of Visual Resource Management Standards at Fort Ord**

This mitigation measure is described above for the "Reduced Visual Quality of Areas Seen from SR 68 and SR 1" impact.

6.12.4 Cumulative Effects

Implementing Alternative 6R would not substantially contribute to the regional urbanization of the greater Monterey Bay region because lower intensity land uses would occupy most of the installation's interior.

6.12.5 Summary Comparison of Reuse Alternatives

Impacts on visual resources would be greater under Alternatives 1, 2, and 3, which would require extensive removal of vegetation, regrading, and facility construction. The forms, lines, colors, and textures of built elements would differ substantially from those of the existing landscape, which is mostly natural in appearance. Alternatives 4 and 5 and portions of Alternative 6R are less intensive and emphasize retention of open space that would preserve the natural character of the area. Compared to Alternatives 1, 2, and 3, impacts on visual resources would be less under Alternatives 4, 5, and 6R.

6.13 CULTURAL RESOURCES

6.13.1 Introduction

This analysis is based on an archeological research design and a draft historic building inventory report prepared for Fort Ord by the U.S. Army Corps of Engineers' Construction Engineering Research Laboratory and on past archeological and architectural inventory studies that have been conducted for the facility.

The potential effects of Alternative 6R on archeological, architectural, and Native American traditional cultural properties during the disposal and reuse of Fort Ord properties were estimated, in part, by the intensity of the proposed land use. The more intense the proposed land use, the more likely these types of cultural resources would be adversely affected by the alternative. For this analysis, it was assumed that 33 permanent East Garrison buildings and two permanent buildings in the main cantonment may be eligible for the National Register. It was also assumed that the areas of greatest archeological sensitivity at Fort Ord include all terraces and benches adjacent to the Salinas River and El Toro Creek, the peripheries of the wet cycle lakes, and lands adjacent to the streams that flow through Pilarcitos and Impossible Canyons. All other installation lands are recommended in the research design as having low to medium potential for possessing archeological resources.

6.13.2 Disposal Impacts

- **Impact: Loss of Federal Protection for Buildings Listed in or Eligible for Listing in the National Register**

This alternative has the potential to affect National Register-eligible historic buildings by loss of federal protection, by splitting proposed National Register districts, and by inappropriate use or maintenance of historic buildings during the interim between closure and disposal. However, if lands possessing National Register eligible properties are transferred to other federal agencies, these agencies will have the same obligation as the Army to be responsible stewards of these properties.

- **Mitigation: Maintain Historic Buildings and Condition Their Sale or Transfer with Protective Covenants**

The loss of federal protection can largely be offset by ensuring that deeds transferring Fort Ord historic properties incorporate preservation covenants as a condition of sale. These covenants will be developed in consultation with the State Historic Preservation Officer (SHPO), the Advisory Council on Historic Preservation, and interested parties. Historic buildings must be adequately maintained until they are transferred to a new owner, and the Army must require lessees to do the same. The Army will also attempt to dispose of National Register districts as a single entity. (Army)

- **Impact: Loss of Federal Protection for Lands That Have the Potential to Contain Archeological Resources**

Proposed land developments recommended under this alternative have the potential to affect archeological resources.

- **Mitigation: Conduct Archeological Surveys of Fort Ord Lands**

Complete (100%) archeological surveys are being conducted for those Fort Ord lands recommended as having the greatest potential to contain archeological resources. Archeological sample surveys are being conducted for those areas recommended as having low to medium potential to contain archeological resources. Adverse impacts on National Register-eligible archeological resources can be avoided by a combination of actions, including imposing restrictive covenants as a condition of sale on lands containing significant archeological sites, avoiding splitting properties that make up archeological districts, and including lease clauses that require compatible use and protection as conditions for leased properties that contain significant archeological sites. (Army)

- **Impact: Loss of Federal Protection for Lands That Have the Potential to Contain Native American Traditional Cultural Properties**

Proposed land developments recommended under this alternative have the potential to affect Native American traditional cultural properties.

- **Mitigation: Contact California Native American Groups that May Have Traditional Cultural Properties Located on Fort Ord Lands**

Before disposal of Fort Ord lands, California Native American groups will be contacted to determine whether any traditional cultural properties exist on Fort Ord. If traditional cultural properties are found to exist on Fort Ord, the loss of federal protection can largely be offset by ensuring that deeds transferring Native American traditional properties include covenants that protect and allow Native Americans access to these properties. These covenants will be developed in consultation with interested Native American groups, the SHPO, and the Advisory Council on Historic Preservation. Leases will contain clauses that require compatible use and protection as a condition of the lease.

6.13.3 Reuse Impacts

The impacts identified above under "6.13.2 Disposal Impacts" would be identical for reuse. The principal impact from both disposal and reuse is the loss of federal protection for National Register-eligible properties and Native American traditional cultural properties.

6.13.4 Cumulative Effects

U.S. government ownership has protected Fort Ord lands from intensive development for more than 50 years. Disposal of these lands under Alternative 6R to private concerns will open up this property to development that may affect any archeological sites or Native American traditional cultural properties found there or buildings identified as potentially eligible for the National Register. Alternative 6R, however, has less chance to affect these properties than other alternatives that emphasize more intensive land development plans. Potential adverse effects on National Register-eligible and Native American traditional cultural properties can be prevented or mitigated in large part by the use of protective covenants; coordination with the SHPO, the Advisory Council on Historic Preservation, Native American groups, and interested parties; and, as necessary, additional intensive archeological and architectural investigations.

6.13.5 Summary Comparison of Reuse Alternatives

Alternative 1 has the greatest potential to affect any National Register eligible properties or Native American traditional cultural properties that may be found on Fort Ord. Alternative 5 has the least potential to affect cultural resources. Alternative 6R has the potential to affect Fort Ord buildings recommended as potentially eligible for listing in the National Register by loss of federal protection and by splitting a proposed National Register district. Alternative 6R and Alternative 2 would have similar effects on any archeological sites or Native American traditional cultural properties found to be located on Fort Ord. If any archeological sites or Native American traditional cultural properties are found on Fort Ord, Alternative 6R would preserve more of these in open spaces, institutional/public areas, or in parks than would occur under Alternative 1.

The areas of greatest archeological sensitivity include all terraces and benches adjacent to the Salinas River and El Toro Creek, the peripheries of the wet cycle lakes, and lands adjacent to the streams that flow through Pilarcitos and Impossible Canyons. All other installation lands are recommended as having low to medium potential to contain archeological resources.

6.14 COASTAL RESOURCES

6.14.1 Introduction

This section discusses the consistency of the proposed action and Alternative 6R with applicable sections of the California Coastal Act of 1976 (Calif. Pub. Res. Code Sec. 30000 et seq). The consistency of the proposed action and Alternative 6R with each section is presented in Table 6.14-1.

This analysis is based on the following assumptions:

- The U.S. Coast Guard did not express interest in obtaining any of the Fort Ord lands during the real estate screening process and it will not be able to assert jurisdiction over Fort Ord lands during the disposal process.
- Establishment of the Army's POM annex would not require new construction, only renovation of existing structures.
- Public access to the coastal zone during pre-disposal and disposal phases would be granted only intermittently to organized groups such as the Audubon Society for passive recreational activities. This access would be limited to day use only. The Army would control access to the coastal zone by actively patrolling the area.
- Recreation facilities constructed in the DHZ during reuse could be located in sensitive habitat areas.
- The transit center land use encompasses at least twice the area needed for the facility.

Effects of the proposed action and Alternative 6R that would be inconsistent with sections of the California Coastal Act would be substantial.

6.14.2 Disposal Impacts

- ***Impact: Reduction in Federal Protection for Sand Gilia and Monterey Spineflower***

The change in ownership of lands providing habitat for federally listed threatened and endangered plants could result in a loss of federal protection for these species. The Endangered Species Act protects federally listed threatened and endangered plants only where they occur in areas under federal jurisdiction (i.e., where federal permits or monies are involved). If the Army transfers land in the coastal zone to the State Department of Parks and Recreation, sand gilia could lose federal protection. Future actions by nonfederal agencies or private individuals that do not come under federal jurisdiction could remove sand gilia populations without violating the federal Endangered Species Act. Sand Gilia would still receive some protection under the California Endangered Species Act, CEQA, and other state regulations. Should Monterey spineflower become federally listed, it also could lose its federal protection at Fort Ord following disposal. Monterey spineflower would not be protected under the California Endangered Species Act but would receive some level of protection under CEQA and other state regulations.

- ***Mitigation: Preserve Populations and Habitat of Federally Listed, Proposed, and Candidate Plants and Wildlife through a Multispecies Habitat Management Plan***

Prior to disposal, the Army will prepare a multispecies Habitat Management Plan (HMP) for Fort Ord. This mitigation measure is described in more detail in Sections 6.11, "Vegetation, Wildlife, and Wetland Resources", and 6.11.2, "Disposal Impacts".

- ***Impact: Loss of U.S. Department of Defense Protection for Plant and Butterfly Preserves***

The plant and butterfly preserves at Fort Ord would no longer have Army protection following disposal of the land supporting these preserves.

- ***Mitigation: Preserve Habitat Characteristic of Native Plant Preserves through a Multispecies Habitat Management Plan***

Prior to disposal, the Army will prepare a multispecies HMP for Fort Ord. This mitigation measure is described in more detail in Sections 6.11, "Vegetation, Wildlife, and Wetland Resources", and 6.11.2, "Disposal Impacts".

6.14.3 Reuse Impacts

- ***Impact: Potential Inconsistency with Coastal Act Subsection 30212(a), 30214(a), and Section 30240***

Increased public access under reuse could degrade fragile coastal resources. Recreationists could disturb habitats of special-status wildlife and plant species such as Monterey spineflower, Smith's blue butterfly, nesting western snowy plovers, globose dune beetle, and black legless lizard. Increased public access would generate litter that could degrade aesthetic values of the coastal zone. Also, the construction of the service area and recreation facilities could result in a loss of coastal strand habitat and Monterey spineflower.

- ***Mitigation: Preserve Populations and Habitat of Federally Listed and Proposed Endangered Plants and Wildlife through a Multispecies Habitat Conservation Plan***

This mitigation is discussed in Section 6.11, "Vegetation, Wildlife, and Wetland Resources" under 6.11.3 "Reuse Impacts", "Special Status Wildlife Species" for the impact "Degradation of Smith's Blue Butterfly Habitat".

- **Mitigation: Minimize Disturbance to Nesting Snowy Plovers**

This mitigation is discussed in Section 6.11, "Vegetation, Wildlife, and Wetland Resources" under 6.11.3 "Reuse Impacts", "Special Status Wildlife Species", for the impact "Disturbance to Nesting Western Snowy Plovers".

- **Mitigation: Minimize Degradation of Black Legless Lizard Habitat in the Coastal Dunes Zone from Recreational Use**

This mitigation is discussed in Section 6.11, "Vegetation, Wildlife, and Wetland Resources" under 6.11.3 "Reuse Impacts", "Special Status Wildlife Species", for the impact "Degradation of Black Legless Lizard and Globose Dune Beetle Habitat in the Coastal Dunes Zone".

- **Mitigation: Provide Litter Pickup in the Coastal Zone**

Litter pickup should be provided periodically to minimize the effect of public access on the aesthetic values of the coastal zone. (State, and other local agencies).

This mitigation measure is considered feasible, as it is an integral part of a comprehensive recreation management plan.

- **Mitigation: Restore Native Dune Scrub**

This mitigation is discussed in Section 6.11 "Vegetation, Wildlife, and Wetland Resources" under 6.11.3 "Reuse Impacts", "Common and Special Native Biological Communities", for the impact "Loss of Native Dune Scrub (Approximately 1 Acre)".

- **Impact: Inconsistency with Coastal Act Sections 30230 and 30231**

New construction east of the coastal zone could result in ground disturbance, increased urban runoff, and potential spills of hazardous materials, which could damage the biological productivity of Monterey Bay. Also, the potential increased withdrawal of groundwater to supply new development east of the coastal zone could degrade local groundwater aquifers unless local water supply projects are completed (e.g. the Salinas Valley Seawater Intrusion Program and the Arroyo Seco dam).

- **Mitigation: Construct Onsite Drainage Facilities and Obtain Necessary Stormwater Discharge Permits**

This mitigation measure is discussed in Section 6.5, "Water Resources" under 6.5.1.3 "Reuse Impacts" for the impact "Water Quality Degradation from Urban Runoff".

- **Mitigation: Implement Erosion-Control Structures**

This mitigation measure is discussed in Section 6.3, "Soils, Geology, Topography, and Seismicity" under 6.3.3 "Reuse Impacts", "Erosion" for the impact "Accelerated Water Erosion".

- **Mitigation: Prepare and Implement a Hazardous Substance Control Plan for All Construction Activities**

This mitigation measure is discussed in Section 6.5, "Water Resources" under 6.5.1.3 "Reuse Impacts" for the impact "Degradation of Water Quality from Hazardous Materials Spills during Construction".

- **Mitigation: Increase Water Supply or Decrease Total Water Demand to Achieve a Balance**

This mitigation measure is discussed in Section 6.5, "Water Resources" under 6.5.2.3 "Reuse Impacts" for the impact "Increased Demand for Water (Approximately 12,000 Acre-Feet per Year)".

- **Impact: Inconsistency with Coastal Act Section 30251**

The scenic and visual qualities of the coastal zone could be adversely affected by construction of the service area, transit center, and recreation facilities.

- **Mitigation: Develop a Mechanism to Ensure the Consistent Application of Visual Resource Management Standards at Fort Ord**

This mitigation measure is described in Section 6.12 "Visual Resources" under 6.12.3 "Reuse Impacts" for the impact "Reduced Visual Quality of Areas Seen from SR 68 and SR 1".

- **Mitigation: Construct the Transit Center East of SR 1**

The transit center could be constructed within the area designated for "TC" uses east of SR 1. This would reduce effects on scenic and visual qualities of the coastal zone. (State, federal, local agencies)

- **Impact: Inconsistency with Coastal Act Section 30253**

Stilwell Hall could be rendered instable by beach erosion. If federal, state and local agencies reused this facility as a visitor center, continued beach erosion could create a risk to lives of visitors. This risk could create a need to construct protective devices to prevent further beach erosion and allow continued use of the facility.

- **Mitigation: Evaluate Reuse in Master Plan**

A master plan will be prepared for the coastal area that will evaluate the feasibility of maintenance of Stilwell Hall for reuse, relocation of Stilwell Hall, or construction of a new visitor's center and other facilities inland.

6.14.4 Cumulative Effects

No cumulative effects would occur to coastal zone resources.

6.14.5 Summary Comparison of Reuse Alternatives

Alternatives 1 and 2 propose more intensive development of the coastal zone than Alternative 6R, which is less consistent with the Coastal Act than Alternative 6R.

Alternatives 3-6 generally propose less intensive uses of the coastal zone than Alternative 6R and would generally be more consistent with the Coastal Act than Alternative 6R. Alternative 4, however, proposes a weather station in an area of the coastal zone inhabited by several special-status species, which would directly conflict with provisions of the Coastal Act. In addition to proposing less intensive use of the coastal zone than Alternative 6R, Alternative 5 proposes less intensive use of the inland area of Fort Ord. Less intense development of the inland areas of Fort Ord would generate less erosion and urban runoff, which would decrease effects on marine water quality; this would be more consistent with the Coastal Act than Alternative 6R. Alternative 6R would have slightly greater effects on the coastal zone than Alternative 6 because the transit center, which would be located partially within the coastal zone under Alternative 6R, would not be constructed under Alternative 6. This transit center would adversely affect aesthetics in the

coastal zone and would adversely affect marine water quality. Because the transit center would not be constructed under Alternative 6, it would be more consistent with the Coastal Act than Alternative 6R.

6.15 MONTEREY BAY NATIONAL MARINE SANCTUARY

6.15.1 Introduction

This analysis addresses the effects of the proposed action and Alternative 6R on the Monterey Bay National Marine Sanctuary and assumes the proposed action and Alternative 6R would have a substantial effect if an action resulted in the degradation of existing biological resources protected by the Sanctuary Management Plan which went into effect in January 1993. These biological resources include, but are not limited to, plant and animal species and their habitats, water quality issues, and overall environmental conditions as defined by the Sanctuary Management Plan.

6.15.2 Disposal Impacts

There would not be disposal impacts for this alternative.

6.15.3 Reuse Impacts

Runoff

Impacts to the sanctuary from urban runoff as a result of Alternative 6R would be similar to those identified in Section 5.2.1, "Caretaker (No-Action Alternative)". The urban pollutant load level would be proportional to reuse.

- ***Impact: Incremental Increase in Urban Pollutant Load Levels in Stormwater Runoff***

During caretaker status, it is expected that urban pollutant load levels in stormwater runoff will decrease as a result of the smaller population on Fort Ord. As reuse occurs the urban pollutant load level will again rise proportional to the reuse intensity. The type of reuse is an additional significant factor that will determine the pollutant load matrix that will occur in the runoff (i.e., residential, institutional, industrial, etc.), which ultimately affects the sanctuary.

- ***Mitigation: Comply with the National Pollutant Discharge Elimination System Point Source Industrial Permit and General Industrial Stormwater Permit***

The installation should continue to comply with the requirements of their National Pollutant Discharge Elimination System (NPDES) permit for stormwater and general industrial discharge into the Monterey Bay. Federal regulations require that NPDES permits be renewed at least once every five years and that the general stormwater permittee be required to submit water quality monitoring data annually to the California State Water Resources Control Board (SWRCB). New requirements for pollutant levels may occur once the National Oceanographic and Atmospheric Administration (NOAA) and the SWRCB have established protocols regulating discharges into the sanctuary. These new regulations should also be complied with, including the possibility of more frequent and stringent monitoring of the discharges into the sanctuary. (Army and local agencies and private entities responsible for development)

Compliance with NPDES permits is required by law and should be considered feasible mitigation. There would be no additional impacts resulting from compliance with this mitigation measure.

- ***Mitigation: Comply with the Coastal Zone Management Act's Non-Point Pollution Control Plan***

The installation should continue to participate in the California Coastal Commission and SWRCB's non-point-pollution control plan for areas in the Monterey Bay region. Continued compliance with

this plan will enable the installation to continue to operate with all requirements regulating discharges into the sanctuary. Any changes in the regulations from NOAA involvement or sanctuary Management Plan requirements will be incorporated into the non-point-pollution control plan and those regulations will be passed on to those entities that participate without a lapse in discharge controls. (Army and local water agencies)

Compliance with NPDES permits and non-point-pollution control plans are required by law and should be considered feasible mitigation. There would be no additional impacts resulting from compliance with this mitigation measure.

Erosion

Impacts to the sanctuary from erosion as a result of Alternative 6R would be similar to those identified in Section 5.2.1, "Caretaker (No-Action Alternative)". The amount of erosion would be proportional to reuse.

- ***Impact: Incremental Contribution of Sediment from Fort Ord Lands to the Salinas River***

Ongoing erosion from Fort Ord lands in the Aromas and Paso Robles formations will not stop during the transition of ownership.

- ***Mitigation: Restore Vegetation Cover through Planting***

Vegetation cover could be restored by planting or revegetation. Revegetation may be hindered by the instability of the wind-eroding soil surface, very low water-holding capacity of the sandy soils, and damage to young plants from blowing sand. Native vegetation is preferred and should be used for revegetation at Fort Ord. Once the soil surface has stabilized, additional wind erosion protection could be provided by planting trees that can grow in sandy soils, such as the native Monterey pine and Monterey cypress. Kikuyu grass has also been used to control wind erosion, but the aggressive growth of this introduced species can damage structures. (Local agencies and private entities responsible for development)

- ***Mitigation: Avoid Development on Moderately to Highly Erodible Lands***

Development could be avoided on moderately to highly erodible lands and on steep slopes greater than 15%. (Local agencies and private entities responsible for development) OR

- ***Mitigation: Limit Water Erosion by Implementing Erosion-Control Structures***

New construction in highly erosive areas would require minimal surface disturbance; and carefully designed paving of road surfaces, construction of paved drainage ditches, and conveyance of runoff to nonsloped areas; and prompt revegetation of disturbed areas. Existing erosion that threatens reuse should be mitigated with headcut repair techniques, including runoff diversion, shaping, rock riprap, and revegetation; gully downcutting should be mitigated with check dams, drop inlets, and revegetation. Erosion in some areas is so severe that restoration will be costly and potentially unsuccessful; therefore this mitigation does not completely mitigate the impact. (Local agencies and private entities responsible for development with assistance from the U.S. Soil Conservation Service)

- ***Mitigation: Avoid Development on Steep Slopes***

Development could be avoided on steep slopes susceptible to landslides (15% and greater). (Local agencies and private entities responsible for development) OR

- ***Mitigation: Implement Landslide Stabilization Measures***

Landslide stabilization measures that could be implemented include head excavation, buttressing, and subsurface drainage on active landslides; redirection of surface runoff and subsurface drainage; removal of unstable earth materials; and slope reduction. These measures are costly and unreliable and therefore do not completely mitigate the impact. (Local agencies and private entities responsible for development with assistance from the U.S. Soil Conservation Service)

■ ***Mitigation: Limit Sedimentation by Constructing Sediment Control Structures***

Constructing sediment control structures, such as sediment traps and basins, straw bale barriers, and silt fences, would reduce sediment loss from construction sites. Sources of existing sedimentation would be controlled with check dams and revegetation. (Local agencies and private entities responsible for development with assistance from the U.S. Soil Conservation Service)

Wastewater

Impacts to the sanctuary from increased discharge of wastewater as a result of Alternative 6R would be similar to those identified in Section 5.2.1, "Caretaker (No-Action Alternative)". The amount of additional wastewater discharge would be proportional to reuse.

■ ***Impact: Potential Increase of Wastewater Discharge into the Sanctuary from Monterey Regional Water Pollution Control Agency's Marina Treatment Plant***

Reuse of the installation may result in an increase in wastewater generated that would be treated and discharged into the sanctuary. Fort Ord currently generates approximately 2.4 million gallons per day (mgd) of wastewater which is treated at the treatment plant. Fort Ord has purchased 3.3 mgd of treatment plant capacity and therefore could potentially generate 0.9 mgd more and remain within existing conditions. Alternative 6R would require 4.8 mgd of treatment plant capacity, requiring either Fort Ord or the reusers to purchase an additional 1.5 mgd of treatment plant capacity. The additional capacity at the treatment plant would have to be available.

■ ***Mitigation: Implement Wastewater-Reducing Measures***

Wastewater-reducing measures could lessen the amount of wastewater treatment capacity that would be necessary to serve the new uses. (Monterey Regional Water Pollution Control Agency, county and city public works departments, and private entities)

Since this impact is only for the additional amount of discharge into the sanctuary and not because of a need for additional treatment capacity beyond the facility's ability to treat, these mitigation measures have been recommended for a reduction of the overall wastewater generation rate of the reuse alternative. These measures include the following:

- Require new uses to employ dual water systems, which enable potable water to be used for drinking and other essentials, but also allow non-septic water (gray water) to be reused for irrigation or other non-potable uses. This eliminates the need to treat gray water at a central wastewater treatment plant.
- Require new uses to employ low-flow showerheads, toilets, and faucets.
- Require hot water pipes to be insulated to reduce the amount of water wasted (and the wastewater generated) from waiting for the hot water to travel from the heater to the user.

Wastewater reduction measures are considered feasible mitigation measures for this impact. However, success depends on compliance and enforcement of the reduction measures, and results will vary from jurisdiction to jurisdiction. There would be no additional impacts resulting from compliance with this

mitigation measure other than impacts associated with the development of a dual water system or other infrastructure.

- ***Mitigation: Continue Compliance with National Pollutant Discharge Elimination System Permits***

The Monterey Regional Water Pollution Control Agency's (MRWPCA's) Marina treatment plant should continue to comply with the NPDES permit it has to discharge into the sanctuary. Additional monitoring requirements and discharge regulations may be put in place once the NOAA, the California Coastal Commission and the SWRCB have established new sanctuary regulations on discharge based on the new sanctuary Management Plan. As long as the Marina facility remains within regulations, the installation's increased amount of wastewater generation will not be significant. (Monterey Regional Water Pollution Control Agency)

Compliance with NPDES permits are required by law and should be considered feasible mitigation. There would be no additional impacts resulting from compliance with this mitigation measure.

6.15.4 Cumulative Effects

As of January 1993, the sanctuary has been regulated by the sanctuary's Management Plan, which is enforced jointly by the NOAA, California Coastal Commission, and the SWRCB. As protocols are developed between these agencies and additional regulations are adopted based on the requirements of the sanctuary's Management Plan, the sanctuary will continue to be protected by these regulations contained in the Management Plan. The overall cumulative effects on the sanctuary are positive because with time and experience, the management entities will solidify the overall approach to protecting the sanctuary and will approach enforcement of the regulations and permit requirements as a cohesive unit, enhancing the overall protection of the sanctuary.

6.15.5 Summary Comparison of Reuse Alternatives

Alternatives 1 and 2 propose coastal development which is inconsistent with the sanctuary's Management Plan. The other alternatives propose various other reuses that may contribute to increased runoff and erosion. Impacts to the sanctuary are a result of specific reuses as well as natural processes. Alternatives 3 and 4 propose reuses that would increase the potential for impacts of the sanctuary, but less than Alternatives 1 and 2. Alternative 6R proposes reuse, which may contribute to impacts to the sanctuary, but less than Alternatives 3 and 4, and Alternative 5 proposes open space uses, which too may result in increased erosion and other impacts to the sanctuary.

6.16 POTENTIAL HOSPITAL OPERATION

Alternative 6R does not include a hospital because it was not requested through the real estate screening process. However, Alternative 6R could be modified to include a combined-care facility or an outpatient facility.

6.16.1 Combined-Care Facility Scenario

A hospital would be operated as a combined-care facility under this scenario. The hospital probably would be operated by a private provider, possibly offering a managed care plan to military beneficiaries through the Uniformed Services Treatment Facility system. This scenario assumes that the capacity and types of services offered by the facility would be the same as those offered by Silas B. Hays Army Community Hospital in 1991. Both civilians and military beneficiaries would be served at the facility; however, military beneficiaries would not receive priority healthcare, but healthcare costs to beneficiaries would be the same as under a military healthcare facility.

- ***Impact: Reduction in the Availability of Healthcare Services for Military Retirees***

Because the combined-care facility would not provide priority healthcare services to military retirees and their family members, these military beneficiaries would compete for medical services with the remainder of the civilian population.

- ***Mitigation: None Available without Changing Legislation***

Current legislation would not allow the U.S. Department of Defense to compensate for the loss of inpatient medical services to retirees.

- ***Impact: Reduction in Costs for Medical Care to Retirees and their Family Members***

As a Uniformed Services Treatment Facility, the combined care facility would provide services to military retirees and their family members under a managed care plan system. Similar to the current plan offered to these beneficiaries by Silas B. Hays Army Community Hospital, beneficiaries would receive free healthcare for covered services. Implementation of this scenario would substantially reduce cost impacts on retirees and their family members.

- ***Mitigation: None Required***

- ***Impact: Need for Medical and Emergency Medical Services for Approximately 23,000 Residents***

Alternative 6R is expected to result in approximately 23,000 residents in the Fort Ord area that would need medical and emergency services. The need for these services would be provided by surrounding facilities as well as the combined-care facility under this scenario. Natividad Medical Center, Salinas Valley Memorial Hospital, and Community Hospital of the Monterey Peninsula would serve up to an estimated 90,000 additional residents based on 1990 admissions and occupancy rates and allowing for service of the existing retiree population. This does not take into account potential future growth in the Monterey Peninsula area. However, with this existing capacity to provide these medical services, there would not be any additional need for medical services under this alternative.

- ***Mitigation: None Required***

6.16.2 Outpatient Facility Scenario

An outpatient clinic would be established at Silas B. Hays Army Community Hospital or at one of the existing clinics located at Fort Ord under this scenario. No inpatient services would be offered. The clinic would probably be operated by a private provider, possibly with an agreement with the Army to provide no-cost outpatient services to military beneficiaries. The clinic would offer the same level of outpatient services provided by Fort Ord medical facilities in 1991.

- ***Impact: Reduction in the Availability of Inpatient Healthcare Services for Military Retirees***

Implementation of this scenario would restore the outpatient services lost under downsizing. Military retirees and their family members would receive outpatient services similar to 1991 levels. Inpatient services, however, would be in short supply because no hospital would be developed under this scenario and military beneficiaries would compete with the remainder of the civilian population for inpatient services at CHAMPUS hospitals.

- ***Mitigation: None Available without Changing Legislation***

Current legislation would not allow the U.S. Department of Defense to compensate for the loss of inpatient medical services.

- ***Impact: Reduction in Costs for Medical Care to Retirees and their Family Members***

Assuming that the clinic would be operated under a contract with the Army to provide outpatient services to military beneficiaries for a cost similar to costs under a military healthcare facility, implementation of this scenario would substantially reduce outpatient costs to military retirees and their family members.

- ***Mitigation: Encourage the Number of Civilian Health and Medical Programs of the Uniformed Services PRIME Providers***

To limit the increase in healthcare costs to retirees and their family members, Foundation Health will be encouraged to increase the number of hospitals and physicians under contract to provide services to CHAMPUS/PRIME patients. Beneficiaries will also be encouraged to enroll in the CHAMPUS/PRIME program by providing additional information to retirees on the costs benefits associated with CHAMPUS/PRIME. The impact of increased cost to CHAMPUS-eligible retirees and their family members for medical care would be partially mitigated by enrolling in the CHAMPUS/PRIME program; however, the impact on beneficiaries over the age of 64 would not be reduced. (U.S. Department of Defense)

- ***Impact: Military Beneficiaries Would Be Able to Use the New Medical Care Facility***

Under this hospital scenario, military beneficiaries would be able to use the new medical care facility on an equal basis with the civilian population. This would reduce the demand for services at the Oakland Naval Hospital, David Grant U.S. Air Force Medical Center, the PRIMUS clinic, and local Civilian Health and Medical Program of the Uniformed Services (CHAMPUS) providers.

- ***Mitigation: None Required***

- ***Impact: Need for Inpatient Medical Services for Approximately 23,000 Residents***

Alternative 6R is expected to result in approximately 23,000 residents in the Fort Ord area that would need inpatient medical services. The need for these services would be provided by surrounding facilities as well as the inpatient only facility under this scenario. Natividad Medical Center, Salinas Valley Memorial Hospital, and Community Hospital of the Monterey Peninsula would serve up to an estimated 90,000 additional residents based on 1990 admissions and occupancy rates and allowing for service of the existing retiree population. This does not take into account potential future growth in the Monterey Peninsula area. However, with this existing capacity to provide these medical services, there would not be any additional need for medical services under this alternative.

- ***Mitigation: None Required***

- ***Impact: Reduced Need for Additional Outpatient Services for Military Beneficiaries***

Under this scenario, military beneficiaries would be able to use outpatient services at Fort Ord. This would reduce the demand for services at the Oakland Naval Hospital, David Grant U.S. Air Force Medical Center, the PRIMUS clinic, and local CHAMPUS providers.

- ***Mitigation: None Required***