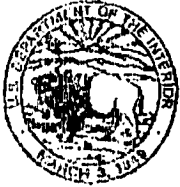


OE Site File



United States Department of the Interior

OE-0044
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FISH AND WILDLIFE SERVICE

Ventura Fish and Wildlife Office
2493 Portola Road, Suite B
Ventura, California 93003

April 11, 1997

Colonel Ila Mettee-McCutchon
Office of BRAC/Environmental
Department of the Army
Defense Language Institute Foreign Language Center and the Presidio of Monterey
Presidio of Monterey, California 93944-5006

Subject: Biological and Conference Opinion on the Closure and Reuse of Fort Ord,
Monterey County, California (1-8-97-F/C-23R)

Dear Colonel Mettee-McCutchon:

This biological and conference opinion responds to the request by the Department of the Army (Army) to reinstate formal consultation with the U.S. Fish and Wildlife Service (Service) pursuant to section 7 of the Endangered Species Act of 1973, as amended (Act). Your request was dated April 7, 1997 and received by the Service on April 7, 1997. At issue are the impacts that the closure and reuse of Fort Ord, located in Monterey County, California, may have on the federally listed Smith's blue butterfly (*Euphilotes enoptes smithi*), western snowy plover (*Charadrius alexandrinus nivosus*), California red-legged frog (*Rana aurora draytonii*), sand gilia (*Gilia tenuiflora* ssp. *arenaria*), and Monterey spineflower (*Chorizanthe pungens* var. *pungens*). Also at issue are the effects that the proposed project may have on the federally proposed black legless lizard (*Anniella pulchra nigra*) and on the proposed critical habitat of the western snowy plover. The HMP states that the endangered robust spineflower (*Chorizanthe robusta* var. *robusta*) and the proposed endangered Yadon's piperia (*Piperia yadoni*) will not be affected by the proposed action. The Service concurs with this finding and does not address these species further in this biological and conference opinion.

This biological and conference opinion was prepared using information contained in the following documents: the Final Supplemental Environmental Impact Statement, Fort Ord Disposal and Reuse (FSEIS) (Army 1996b); the Installation-wide Multispecies Habitat Management Plan for Former Fort Ord (April 1997 HMP) (Army 1996a); a letter from the Army dated April 7, 1997; and our files.

Colonel Ila Mettee-McCutchon (1-8-97-F/C-23R)

2

Consultation History

The Army Corps of Engineers (Corps) initiated consultation on the Fort Ord closure and reuse with the Service in a letter dated May 5, 1993. At that time the Army consulted on the effects that closure and reuse activities (Revised Alternative 6) would have on the federally listed Smith's blue butterfly, western snowy plover, and sand gilia. Under this alternative, impacts to all affected species would be reduced by preserving populations and habitat through developing and implementing a habitat management plan (HMP). The Service issued a biological opinion for this consultation on October 19, 1993. The Army completed the Installation-Wide Multispecies Habitat Management Plan for Fort Ord, California in February 1994 (February 1994 HMP). The February 1994 HMP addressed 11 sensitive plant species and 7 sensitive animal species (HMP species).

Since the October 19, 1993 biological opinion was issued, the California red-legged frog and Monterey spineflower were federally listed. Additionally, the black legless lizard is currently proposed for listing, and critical habitat has been proposed for the western snowy plover. These species were addressed in the February 1994 HMP. On October 4, 1995, the Army reinitiated consultation for these species. In addition, during this time the Army was preparing a supplemental environmental impact statement to include additional data and analysis of several actions including three additional reuse alternatives. The Army was also working with several entities during this time to develop a lead remediation program for the beach areas. On March 28, 1996, the Service notified the Army that, as mutually agreed, a single consultation incorporating the species with status changes as well as other changes, if any, resulting from the supplemental environmental impact statement and development of the lead remediation plan would be more appropriate.

The Army, in agreement with the Service and the various land recipients, began revising the February 1994 HMP to reflect the changes addressed in the supplemental environmental impact statement. The Army completed the FSEIS (Army 1996b) and is currently in the final stages of revising the February 1994 HMP. On January 31, 1997, the Service issued a non-jeopardy biological and conference opinion, based on the December 1996 draft of the revised HMP, which was the most current draft of the HMP. This biological and conference opinion also updated the October 19, 1993 biological opinion to reflect that an HMP had been prepared and is currently being implemented.

On March 7, 1997, the Army and the Service met to discuss the biological and conference opinion because the Army had developed more accurate information on the predisposal activities than was contained in the December 1996 HMP. The Army and the Service agreed that the biological and conference opinion should be revised to reflect this more accurate information. In a letter dated April 7, 1997, the Army provided the Service with this information and requested reinitiation of consultation. The Army also revised the HMP to reflect this information. This biological and conference opinion is based on the April 1997 HMP and the Army's April 7, 1997 letter and will apply to the signed HMP if no changes are made in the action described.

Colonel Ila Mettee-McCutchon (1-8-97-F/C-23R)

3

Description of the Proposed Action

The former Fort Ord was an Army installation in northern Monterey County. It occupied approximately 28,000 acres adjacent to the Monterey Bay. The Army was directed to close Fort Ord pursuant to the Defense Base Closure and Realignment Act of 1990. The proposed action that the Army consulted on in the October 19, 1993 biological opinion was the disposal of excess property made available by the closure (Revised Alternative 6). The Army's current proposed action is the disposal and reuse plan described in the December 1996 HMP, which is currently under final revisions. Closure and reuse of the former Fort Ord is a long-term process spanning several years due, in part, to efforts to clean contaminated sites and unexploded ordnance. The closure process is divided into two major categories in the December 1996 HMP: pre-disposal actions and disposal and reuse actions. The December 1996 HMP contains full descriptions of these actions which are summarized below.

Pre-disposal actions include placing the installation in a caretaker status, remediating contaminated sites, and supporting interim uses. After the 7th Infantry Division realigned from Fort Ord, the Army placed structures, utilities, and operation and maintenance systems into caretaker status until property disposal decisions can be implemented. To date, some of those disposal decisions have been implemented and certain portions of Fort Ord have been removed from caretaker status and transferred to other entities.

Cleanup of contaminated sites is required in preparing lands for disposal. Components of these cleanup activities have already begun pursuant to the October 19, 1993 biological opinion. Cleanup activities include excavation of contaminated soils, landfill remediation, removal of lead and other heavy metals, and ordnance and explosives removal. The majority of remediation of contaminated soils will take place in developed areas of the Main Garrison, and limited removal of contaminated soils will take place in the inland range area. Approximately 75 acres of previously disturbed habitat within the 8,000 acre inland multi-range area (MRA) will be affected during the removal of contaminated soils. These excavation areas are scattered within the MRA and were used as target areas for training soldiers.

The areas currently identified for lead removal within the beach firing ranges, based on a human health risk assessment, are those sites with greater than ten percent spent ammunition. The Army may disturb approximately 60 acres of the beach firing ranges during excavation of contaminated soils. Recontouring of the excavation areas would occur to provide a suitable site for restoration of the dunes. Additional recontouring may also occur to assist the California Department of Parks and Recreation in preparing the dunes as a State Park. The excavated soil will be sifted and the clean soil will be placed as fill at the landfill site.

The former Fort Ord contains an approximately 8,000 acre multi-range area with ordnance and explosives (OE). Clearance of OE may involve selectively removing vegetation, possibly by burning, to clear the ground surface. Where burning is infeasible, vegetation may be cut and

Colonel Ila Mettee-McCutcheon (1-8-97-F/C-23R)

4

chipped. Removal of individual OE anomalies may require excavation of soil, ranging from a single cubic foot to several cubic feet, from around the ordnance.

Lastly, two landfill areas, one just north and one just south of Imjin Road, are proposed for remediation. The landfill on the south side of Imjin Road will be capped. The landfill on the north side of Imjin Road has been excavated and consolidated on the fill areas on the south side of Imjin Road.

According to the HMP, interim uses at the former Fort Ord may involve public access to dunes and beaches. The Army would coordinate recreational uses with the California Department of Parks and Recreation. Measures to control and channel public access would include installation of signs and barriers and the use of sufficient law enforcement.

As an installation-wide plan, all parcels to be disposed of by the Army at the former Fort Ord are addressed in the December 1996 HMP. A primary goal of the December 1996 HMP is to promote preservation, enhancement, and restoration of habitats and populations of the HMP species while allowing development of selected properties to promote economic recovery. Management guidelines and specifications for reuse vary from parcel to parcel depending on future plans for each parcel and overall reuse planning. The parcels covered in the December 1996 HMP are categorized as either habitat reserve, habitat corridor, development with reserve areas or with restrictions, borderland development areas along the Natural Resource Management Area (NRMA) interface, development, or future road corridor.

Habitat reserves are lands that will be set aside from development with the primary management goal being conservation and enhancement of threatened and endangered species. The December 1996 HMP describes specific management goals, procedures for enhancement and restoration, and mechanisms of funding by each reserve manager. These habitat reserve lands are the Bureau of Land Management's NRMA (approximately 15,000 acres), the California Department of Parks and Recreation's coastal dune zone, the University of California/Natural Reserve System's Fort Ord Natural Reserve, the Salinas River Habitat Area, the Monterey Peninsula Parks District's Natural Area Expansion, and the East Garrison Reserve.

Although the parcel designated as a corridor in the December 1996 HMP may be exposed to some land management practices other than those emphasizing conservation of biological resources, this parcel will have management strategies that promote maintenance of connections between conservation areas. The corridor parcel will be managed to protect existing sensitive species in perpetuity and remain viable to support the dynamics of the ecological system within the former Fort Ord.

The December 1996 HMP designates all other parcels at the former Fort Ord as development parcels. Certain parcels designated as development contain inholdings of habitat reserve areas or have restrictions on development to protect biological resources. These reserve inholdings are subject to the same management practices as the other habitat reserves described above. Many

Colonel Ila Mettee-McCutcheon (1-8-97-F/C-23R)

5

parcels have this designation including the California Department of Parks and Recreation's disturbed habitat zone, the landfill parcel, and the City of Marina's North Fritzsche Habitat Reserve. The NRMA has development parcels adjacent to its boundary and the December 1996 HMP categorizes these as "borderland development areas along the NRMA interface." These development parcels have certain management requirements to protect the biological resources in the NRMA. These requirements include development of fire breaks and control of vehicle access. The December 1996 HMP also designates certain parcels at the former Fort Ord as development with no restrictions for management of biological resources. Some of these parcels are already developed or disturbed while others support habitat. The December 1996 HMP assumes that these parcels will be entirely developed. The December 1996 HMP has no other limitations on reuse of development parcels.

Several of the reserve areas have future road corridors designated within their boundaries. These corridors allow for the development of roads and other transit facilities in the future. Prior to these roads being developed, these corridors are subject to the same management restrictions as the habitat reserves.

After disposal, lands at the former Fort Ord would either be under Federal, State, local, or private management. Lands would be transferred to Federal agencies using memoranda of understanding. The Army will transfer lands to non-Federal agencies using deed restrictions, covenants, or conservation easements to ensure that entities acquiring parcels with habitat reserves, corridors, or development restrictions manage the land in a manner consistent with the HMP. However, even if entities are managing their land in a manner consistent with the HMP, they must also be in compliance with the Act. The Act places different requirements for the management and consideration of listed species on Federal agencies and on non-federal entities. Federal agencies must consider whether any action they undertake may affect any listed plant and animal or critical habitat for these species (50 CFR 402.14). This process allows for close coordination between the Service and Federal agencies and the development of reasonable and prudent alternatives to avoid a likely jeopardy situation or binding reasonable and prudent measures to reduce the take of individual animals when the proposed action is not likely to jeopardize the continued existence of the species (50 CFR 402.14). Federal agencies must also consider proposed species in their planning processes and enter into conference with the Service if an action is likely to jeopardize the continued existence of a proposed species (50 CFR 402.10(a)). The Act also requires all Federal agencies to use their authorities to further the conservation of listed species. All Federal agencies with management oversight of lands at the former Fort Ord will be responsible for complying with the Act as described above for all actions.

Non-federal entities are not specifically required to undertake positive conservation measures for listed species. However, section 9 of the Act prohibits the take of listed animals, where the definition of take includes "to harass, harm, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct." Harm is further defined as "an act which actually kills or injures wildlife. Such act may include significant habitat modification or degradation where it

Colonel Ila Mettee-McCutchon (1-8-97-F/C-23R)

6

actually kills or injures wildlife by significantly impairing essential behavior patterns, including breeding, feeding, or sheltering (50 CFR 17.3)." Section 9 also prohibits the removal or reduction to possession of listed plants occurring on Federal land, or the destruction of listed plants in violation of any State laws. Proponents of actions that would result in the destruction of listed plants are required to notify the California Department of Fish and Game (CDFG) ten days prior to the onset of these activities. Those non-federal entities without an incidental take permit would be in violation of the Act if any of their actions resulted in the take of a listed species. Exceptions to section 9 can be obtained through section 10(a)(1)(B) permits.

Effects of the Proposed Action on the Listed Species

Species Account

Smith's Blue Butterfly

The Smith's blue butterfly, a small lycaenid butterfly, was listed as an endangered species by the Service on June 1, 1976 (41 *Federal Register* 22044). Critical habitat has not been designated. The following summary of the Smith's blue butterfly's biology is based on descriptions in the species' recovery plan (Service 1984). The Smith's blue butterfly is endemic to several inland and coastal sand dune, serpentine grassland, and cliff-side chaparral communities in Monterey County. Host plants for the Smith's blue butterfly are two species of buckwheat, the seacliff buckwheat (*Eriogonum parvifolium*) and the coast buckwheat (*Eriogonum latifolium*). One of these two plant species must be present for Smith's blue butterfly to occur in coastal dune habitat. The preferred host plant in the southern portion of Smith's blue butterfly range is generally seacliff buckwheat, and in the northern portion of their range it is coast buckwheat. Coastal development, dune stabilization, and recreational activities have reduced the populations and habitat of Smith's blue butterfly.

Female Smith's blue butterflies lay their eggs singly on flower heads of the host buckwheat plants. The larvae hatch in about a week and begin eating the flowering heads of the buckwheat. As larvae grow they molt, passing through five instars. The larvae pupate sometime between August and November and then overwinter in the leaf litter at the base of the host plants. Smith's blue butterfly larvae may have a mutualistic interaction with ants during later instars, are preyed on by spiders, and are parasitized by wasps. The Smith's blue butterfly is a weakly flying species, and long distance dispersal is believed to occur only rarely. They have been observed dispersing up to a few hundred yards at Fort Ord and at the Marina State Beach.

The former Fort Ord is thought to support five to ten percent of the Smith's blue butterfly's range. Smith's blue butterflies are known to occur near the northern boundary of former Fort Ord and from Gigling Siding to the southern base boundary. The dunes at the former Fort Ord support 135 acres of coast and seacliff buckwheat habitat that would potentially contain the Smith's blue butterfly.

Colonel Ila Mettee-McCutchon (1-8-97-F/C-23R)

7

Western Snowy Plover

The Pacific coast population of the western snowy plover was federally listed as threatened on March 5, 1993 (58 *Federal Register* 12864). On March 2, 1995, the Service published a proposed designation of critical habitat for the western snowy plover (60 *Federal Register* 11768).

The western snowy plover is a small shorebird that forages on invertebrates in areas such as intertidal zones, the wrack line, dry sandy areas above the high tide line, salt pans, and the edges of salt marshes. The Pacific coast population nests near tidal waters along the mainland coast and on offshore islands from southern Washington to southern Baja California, Mexico. Most nesting occurs on unvegetated, or moderately vegetated, dune backed beaches, and on sand spits. Other less common nesting habitats include salt pans, dredge spoils, and salt pond levees. Nest site fidelity is common. Nesting and chick rearing activity generally occurs between March 1 and September 30. During the non-breeding season western snowy plovers may remain at breeding sites or may migrate to other locations. Most winter south of Bodega Bay, California. Many birds from the interior population winter on the central and southern coast of California.

The Pacific coast population of the western snowy plover has experienced widespread loss of nesting habitat and reduced reproductive success at many nesting locations. Factors resulting in loss of nesting habitat include urban development and the encroachment of European beachgrass. Reduced reproductive success is most frequently tied to disturbance from human activities. Activities such as walking, jogging, running pets, horseback riding, and off-road vehicle use frequently crush and destroy the western snowy plover's cryptic nests and chicks. These activities also flush adults off nests and away from chicks, and thus interfere with essential incubation and chick rearing behaviors.

The rule proposing critical habitat describes physical and biological attributes that are essential to the conservation of the western snowy plover, activities that could adversely affect proposed critical habitat areas, and the specific areas proposed to be designated as critical habitat. For all areas of critical habitat proposed for the western snowy plover, these physical and biological features and primary constituent elements are provided or will be provided by intertidal beaches (between mean low water and mean high tide), associated dune systems, and river estuaries. Important components of the beach/dune/estuarine ecosystem include surf-cast kelp, sparsely vegetated foredunes, interdunal flats, spits, washover areas, blowouts, intertidal flats, salt flats, and flat rocky outcrops. Several of these components (sparse vegetation, salt flats) are mimicked in artificial habitat types used less commonly by western snowy plovers (i.e., dredge spoil sites and salt ponds and adjoining levees). Functional suitability of areas containing the features listed above is also contingent upon isolation from human disturbance and predation. These attributes are considered essential to the conservation of the coastal population of the western snowy plover.

Colonel Ila Mettee-McCutchon (1-8-97-F/C-23R)

8

Western snowy plovers are known to nest on the beaches of the former Fort Ord. These beaches are thought to provide between five to ten percent of the species' range. The Point Reyes Bird Observatory, which has been monitoring western snowy plovers at Fort Ord since 1988, collected the following information on nesting and fledging.

YEAR	NESTS	FLEDGES
1988	10	8
1989	15	4
1990	16	0
1991	5	0
1992	1	0
1993	0	0
1994	0	0
1995	2	2
1996	1	0

During this monitoring, all nesting, except for one nest observed in 1988, was north of Stilwell Hall. However, the area south of Stilwell Hall is considered important for adults brooding chicks hatched from nests in Sand City. In addition, the beaches at the former Fort Ord are within proposed critical habitat of the western snowy plover. This area is identified in the proposed rule as Unit 5 (Fort Ord/Seaside) in CA-7 (Monterey beaches).

California Red-legged Frog

On May 23, 1996, the Service listed the California red-legged frog as threatened (61 *Federal Register* 25813). No critical habitat has been proposed at this time. The historical range of the California red-legged frog extended from the vicinity of Point Reyes National Seashore in Marin County southward to northwestern Baja California, Mexico and inland to approximately Redding in Shasta County. The California red-legged frog has sustained a 70 percent reduction in its geographic range in California.

The California red-legged frog inhabits ponds and streams, usually with moderately deep pools, permanent water, and dense aquatic vegetation within and along edges of aquatic habitat. This species is usually observed near water but can move long distances over land between water sources during the rainy season. California red-legged frogs could inhabit any aquatic and riparian areas within the range of the species. It can also be found during the dry season in any landscape features near riparian areas that provide cover and moisture.

Colonel Ila Mettee-McCutchon (1-8-97-F/C-23R)

9

The mating season of the California red-legged frog is short, lasting only one or two weeks at any given location and, depending on location, occurs between late November and early April (Hayes and Jennings 1986). Embryos hatch 6 to 14 days after fertilization, and larvae require 3.5 to 7 months to attain metamorphosis. Larvae are difficult to observe because they spend most of their time concealed in submerged vegetation or organic debris. Sexual maturity normally is reached at three to four years of age, and California red-legged frogs may live eight to ten years. Juvenile California red-legged frogs have been observed to be active diurnally and nocturnally, but adult frogs are mainly nocturnal.

No California red-legged frogs have been observed at the former Fort Ord although potential habitat is available and this species is known to occur in the vicinity. The former Fort Ord is thought to support less than one percent of the species' range.

Black Legless Lizard

The black legless lizard was proposed for listing as endangered by the Service on August 2, 1995 (60 *Federal Register* 39326). The black legless lizard has been collected primarily from coastal areas of Monterey Bay north of the Carmel River to the Salinas River. Development, sand mining, recreational use, and dune stabilization have all significantly reduced the populations and habitat of the black legless lizard.

The black legless lizard is a burrowing limbless lizard that inhabits moist areas with sandy, loose soils and some vegetation cover. They burrow in sand and leaf litter beneath plants and feed on insects and other invertebrates that occur in the sand. The activity of legless lizards is controlled by temperature. The optimum temperature is from 15 to 25 degrees Celsius. Black legless lizards bask in the warm sand during the day and feed in the afternoon and evening.

The former Fort Ord is thought to support one of the largest expanses of black legless lizard habitat. Based on 1992 surveys, approximately 3,212 acres of potential black legless lizard habitat, based on soil and vegetation types, occur at the former Fort Ord. This species has been found in stabilized coastal dunes and in areas of loose sandy soils with oak woodland, oak savanna, and maritime chaparral vegetation.

Sand Gilia

Sand gilia, a small, erect annual plant in the phlox family, was listed as endangered on June 22, 1992 (57 *Federal Register* 27858). Sand gilia occurs in scattered populations in coastal dune scrub and maritime chaparral communities from Moss Landing to the Monterey Peninsula. Sand gilia occurs in sandy soils in open, yet wind-sheltered areas. Previous physical disturbance to the sand seems to encourage germination in some areas. Recreational uses and dune stabilization threaten sand gilia populations and habitat.

Colonel Ila Mettee-McCutchon (1-8-97-F/C-23R)

10

The former Fort Ord is thought to support 50 to 70 percent of the range of sand gilia. Sand gilia occurs on approximately 3,757 acres of land at the former Fort Ord. Of this, 3,288 acres are low density stands, 309 acres are medium density stands, and 161 acres are high density stands. The most extensive stands of high density sand gilia occur in the vicinity of former Fritzsche Army Airfield. Medium stands occur in several scattered locations in the undeveloped southern portion of the former Fort Ord. Low and medium density stands occur along Imjin Road and Reservation Road. Sand gilia is not known to occur in the developed portion of the former base and only one small population was found in sand dune habitat west of Highway 1, although these areas may have provided habitat to the species prior to development and the introduction of African iceplant.

Monterey Spineflower

The Monterey spineflower, a small, prostrate annual in the buckwheat family, was listed as a threatened species on February 4, 1994 (59 *Federal Register* 5499). The Monterey spineflower is endemic to sandy soils within coastal habitats along the coast of southern Santa Cruz and northern Monterey Counties and inland to the coastal plain of Salinas Valley. The Monterey spineflower tends to occur on bare sandy patches with low vegetation cover and often colonizes recently disturbed sandy soils. Residential development, agricultural land conversion, recreational use, sand mining and dune stabilization have all reduced the populations and habitat of the Monterey spineflower.

The former Fort Ord is thought to support 75 to 95 percent of the range of the Monterey spineflower. This species is found on almost all undeveloped areas on the western portion of the former Fort Ord on approximately 10,402 acres. Of this, 5,894 acres are low density stands, 3,539 acres are medium density stands, and 969 acres are high density stands.

Analysis of Effects of Predisposal Activities

Several predisposal activities described in the December 1996 HMP may affect listed species. Predisposal activities analyzed for this biological and conference opinion are activities associated with the remediation of contaminated sites and interim uses of the dune and beach areas. The effects of these actions on listed and proposed species were analyzed with respect to the potential loss of individuals and habitat associated with these activities and the mitigation measures proposed to reduce the impacts of the actions.

The majority of remediation of contaminated soils will take place in developed areas of the Main Garrison, which would not affect listed and proposed species. Limited removal of contaminated soils will take place in the inland range area in locations that support natural habitats including those that support sand gilia, Monterey spineflower, and black legless lizards. The excavation areas are considered to be poor quality habitat for black legless lizards due to heavy disturbance from past grading and use as target areas. The excavation of 75 acres within the inland range is expected to have minor effects on black legless lizards. Monterey spineflower and sand gilia

Colonel Ila Mettee-McCutchon (1-8-97-F/C-23R)

11

populations are known to occur within and adjacent to excavation areas. Small populations of these species also occur on roads and trails which will be used to access the remediation areas. Implementation of measures described in the Army's Remedial Action Work Plan will minimize impacts to these species.

The dunes where lead cleanup may occur at the former Fort Ord are occupied by the western snowy plover, the Smith's blue butterfly, the Monterey spineflower, the sand gilia, and the black legless lizard. Lead cleanup may result in the disturbance and removal of an area that supports up to one percent of Monterey spineflower habitat at Fort Ord. Up to 15% (20.25 acres) of the existing 135 acres covered by the host plants of the Smith's blue butterfly (seacliff and coast buckwheat) would be removed, resulting in the mortality of all Smith's blue butterflies using these plants. Up to 60 acres of black legless lizard habitat may be disturbed. Remediation activities are expected to result in the direct mortality of an unknown number of black legless lizards found in this habitat. However, because the majority of the excavation and recontouring areas are considered to be poor quality habitat for black legless lizards due to previous disturbance (based on 1996 surveys), excavation and recontouring activities are expected to have minor effects on black legless lizards. In addition, the lead removal has the potential to disturb nesting western snowy plovers, destroy nests, and kill birds. Based on the findings in the December 1996 HMP, no sand gilia populations are expected to be affected.

The December 1996 HMP describes many measures designed to minimize and mitigate for the effects of lead remediation. The primary measures are summarized here. To minimize impacts to the Smith's blue butterfly, black legless lizard, and Monterey spineflower, lead removal sites will be limited to the smallest areas possible and marked to avoid unnecessary disturbance of habitat. Placement of all roads, staging areas and other facilities will avoid habitat with HMP species as much as possible. In addition, the Army will develop a restoration plan for each lead removal site with specific success criteria and a monitoring program. The goal of restoration would be to establish native vegetation at each site and establish populations of any HMP species affected to levels equitable to those observed before the disturbance. Remediation activities may will be phased within the dune habitat to allow the restoration of areas prior to the disturbance of subsequent remediation sites. This phasing will be based on disturbing no more than 10-15 percent of an HMP species' range at the former Fort Ord at a time. The phasing should apply to the Smith's blue butterfly and possibly the black legless lizard.

To avoid adverse effects of lead remediation to the western snowy plover, restrictions will be placed on when lead removal and restoration activities can occur. Monitoring of the beaches at the onset of the nesting season will be used to determine the locations of western snowy plover nests. The potential nesting habitat that the lead removal would alter is within an area proposed as critical habitat for the western snowy plover. Currently, this area is disturbed and dominated by exotic vegetation. Dune restoration within this area following the lead removal will change the character of the existing habitat and may improve the value to the site for nesting western snowy plovers. This restoration may reduce the effects of the alteration of proposed critical habitat.

Colonel Ila Mettee-McCutcheon (1-8-97-F/C-23R)

12

Ordnance clearance from the inland range area and other live fire areas could affect the sand gilia, Monterey spineflower, California red-legged frog, and black legless lizard. Sand gilia and Monterey spineflower would be removed or disturbed by the vegetation burning and cutting, from whole plant excavation, crushing or trampling from equipment or foot traffic, and onsite ordnance detonation. Clearance of OE could occur in areas supporting approximately 75 percent of the occupied habitat of sand gilia and Monterey spineflower at former Fort Ord. The December 1996 HMP states that the number of individuals and amount of habitat affected cannot be determined because the locations and amount of OE is unknown. Excavation or in situ detonation of OE in ponds would require that the ponds be drained. These ponds, which are potential habitat for California red-legged frogs, would be temporarily altered and perhaps permanently degraded. Clearance of OE could adversely affect approximately 935 acres of black legless lizard habitat and could result in the direct injury and mortality of individual black legless lizards.

The December 1996 HMP describes numerous measures to minimize and mitigate the effects of OE removal. The primary measures are summarized here. OE removal sites will be restricted to the smallest area possible to limit disturbance of habitat. Placement of all roads, staging areas and other facilities will avoid, to the extent feasible, habitat with HMP species. The Army will conduct an employee education program to inform all employees of the HMP species of concern.

Burning would be conducted to limit any given remediation area to 400 acres in size, with no more than 800 acres being burned per year to create a mosaic of burned patches of different ages. This type of burning may have a positive effect because the maritime chaparral community that supports sand gilia and Monterey spineflower is adapted to occasional natural fires. Small excavations to remove unexploded ordnance should not be detrimental to sand gilia and Monterey spineflower, because these species normally occur in disturbed soils. Large areas of disturbance associated with deeper excavations or large denotations may cause soil conditions to become unsuitable for sand gilia and Monterey spineflower. The persistence of sand gilia and Monterey spineflower within the inland ranges through years of live fire training and the subsequent wild fires and soil disturbance seem to indicate that the restoration techniques being proposed are not likely to result in the extirpation of this species. In addition, the Army has developed a vegetation burn and restoration program with specific success criteria and a monitoring program for the affected HMP species. This plan is contained in the HMP.

To minimize the effects of OE removal to black legless lizards, the Army will implement the measures described in the December 1996 HMP including preserving all living black legless lizards encountered and releasing these individuals at the location where they were found once excavation of the area has been completed. To minimize effects of OE removal to California red-legged frogs, ponds will be avoided to the extent possible. Currently no ponds are expected to be disturbed; therefore, OE removal is not expected to affect California red-legged frogs. If the Army determines that ponds must be disturbed, the December 1996 HMP states that the Army will develop and implement a mitigation and restoration plan. The Army may need to

Colonel Ila Mettee-McCutcheon (1-8-97-F/C-23R)

13

reinitiate consultation for the California red-legged frog if ponds supporting California red-legged frogs may be affected by a specific action.

The landfill on the north side of Imjin Road does not support Monterey spineflower or sand gilia; however, the capping of the landfill on the south side of Imjin Road will result in the loss of populations of Monterey spineflower and sand gilia. During surveys conducted in 1993, 5 areas, containing from 2 to 300 individual sand gilia plants each were observed at the edges of the landfill south of Imjin Road. The entire southern landfill area supports low densities of Monterey spineflower. Capping of the landfill area would involve stripping the area of existing vegetation which would remove the Monterey spineflower and sand gilia found at the site. In addition, vehicle traffic could eliminate some Monterey spineflower that occurs adjacent to the landfill area. The Army has salvaged seeds from the Monterey spineflower and sand gilia plants from this site for future restoration of the site.

According to the December 1996 HMP, interim uses at the former Fort Ord may involve public access to dunes and beaches. The HMP describes numerous measures designed to avoid take including the use of signs and trails. With the implementation of these measures, no listed species should be affected by interim uses.

Analysis of Effects for Disposal and Reuse

The potential impacts on listed species resulting from disposal and the subsequent reuse of the former Fort Ord were evaluated based on changes in land use and management from base operations and military activities to civilian uses which could have direct and indirect impacts on biological resources. Land use and management for all parcels at the former Fort Ord are described in the December 1996 HMP. Reuse of property at the former Fort Ord, which is an action to be undertaken by land recipients and not the Army, is analyzed as an indirect or secondary effect of executing the proposed action. Impacts considered include extensive soil excavation or grading, placement of fill material, and burial, trampling, or removal of vegetation; the conversion of biological communities to structures, roads, and landscaping; 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. Some of the proposed land uses, like those expected in the development parcels, are expected to eliminate all biological resources within the land use footprint. Additional impacts include predation by domestic pets; disturbance to wildlife by recreationists; soil erosion, resulting in loss of plant habitat or degradation of wetlands; or harassment due to reuse of parcels adjacent to protected parcels. The enclosed table summarizes the acreages affected for all HMP species.

The proposed plan for reuse of the coastal areas of former Fort Ord will protect 177 acres of coastal strand and scrub habitat, which has been identified as potential Smith's blue butterfly habitat. Development is designated for two acres of coastal strand and scrub habitat. In addition, habitat restoration by the California Department of Parks and Recreation will result in the expansion of coastal strand and scrub habitat to 550 acres. Habitat restoration activities

Colonel Ila Mettee-McCutchon (1-8-97-F/C-23R)

14

including landform modifications and ice plant removal may result in temporary loss of Smith's blue butterfly habitat. However, recent habitat restoration efforts on former Fort Ord and nearby State Beaches have demonstrated that Smith's blue butterfly habitat can be restored by planting coast and seacliff buckwheat. In some cases propagated buckwheat can flower and support Smith's blue butterfly within one year of installation. This restoration is expected to increase the acreage covered by seacliff and coast buckwheat plants above the current 135 acres.

Recreational uses along the coastal areas of former Fort Ord that are being planned by the California Department of Parks and Recreation may affect Smith's blue butterflies. The Preliminary Fort Ord Dunes State Park General Plan proposes that the beaches be managed to provide low intensity public use. Determining the magnitude of these impacts is difficult; however, they are anticipated to be minor given the minimization measures contained in the December 1996 HMP that the California Department of Parks and Recreation must implement. The California Department of Parks and Recreation will likely need a section 10(a)(1)(B) incidental take permit for the Smith's blue butterfly to complete restoration activities and implement recreational use of the area.

Implementation of the disposal and reuse portions of the December 1996 HMP is not expected to result in the loss of any western snowy plover habitat. However, the proposed public use of the beaches at the former Fort Ord has the potential to affect western snowy plover nesting, but predicting the impact of public use on nesting habitat is difficult. The Preliminary Fort Ord Dunes State Park General Plan proposes that the beaches be managed to provide low intensity public use. This plan establishes most public access in the beaches south of Stilwell Hall. Public access to beaches north of Stilwell Hall, where most western snowy plover nesting has occurred, will require longer walks from parking areas and will be managed for lower intensity recreation use. The effects of recreational uses are anticipated to be minor given the minimization measures contained in the December 1996 HMP that the California Department of Parks and Recreation must implement. These measures include use of interpretive signs to inform the public about potential presence of nests, use of symbolic fencing and fence exclosures, and possible seasonal closure of beach access points. Nesting may increase with completion of restoration activities and other appropriate management actions. The California Department of Parks and Recreation will likely need a section 10(a)(1)(B) incidental take permit for the western snowy plover to complete restoration activities and implement recreational use of the area. The areas that would be affected by restoration activities and recreational uses are within proposed critical habitat for the western snowy plover. Currently, these areas are disturbed and are dominated by exotic vegetation. Dune restoration within this area will change the character of the existing habitat and may improve the value to the site for nesting western snowy plovers and may thereby reduce the effects on proposed critical habitat. The continued control of exotic predators may also improve the nesting success of the western snowy plover in this area. The measures proposed to control public access and recreational use would help to minimize alteration of critical habitat.

About 24 acres of potential California red-legged frog habitat would be protected in habitat reserve areas or habitat corridors according to the December 1996 HMP. More than 95 percent of this habitat (23 acres) would be in the 15,200 acre NRMA. The habitat quality of these areas

Colonel Ila Mettee-McCutchon (1-8-97-F/C-23R)

15

is expected to improve with the implementation of the management activities required under the December 1996 HMP including constructing of permanent barriers to close all trails and non-maintained roads to vehicle use, conducting regular ranger patrols, and controlling erosion in areas in need of stabilization. An additional acre of potential California red-legged frog habitat transferred to the City of Marina is also expected to be preserved in an intact condition. Two acres of potential habitat occur in parcels identified for development and could be lost. This habitat is an artificial pond in parcel L20.2.2 that is stocked with predatory game fish to provide recreational fishing.

Based on 1992 surveys, about 1,366 of the 3,212 acres of potential habitat for the black legless lizard that occurs at the former Fort Ord will be protected. The majority of this habitat is found in the NRMA and the UC/NRS Reserve. The habitat quality of these areas is expected to improve with the implementation of the management activities required under the December 1996 HMP including constructing of permanent barriers to close all trails and non-maintained roads to vehicle use, restoration of coastal dune habitats, and controlling erosion in areas in need of stabilization. Under the December 1996 HMP, approximately 1,846 acres of potential habitat for the black legless lizard that occurs at the former Fort Ord are identified for development.

The proposed plan for reuse of the former Fort Ord as described in the December 1996 HMP will protect 154 acres of high density habitat, 173 acres of medium density, and 2624 acres of low density habitat of sand gilia. Approximately 663 acres of low density, 136 acres of medium density, and 7 acres of high density sand gilia populations are identified for development. These losses will occur primarily in the vicinity of the former Fritzsche Army Airfield and along Imjin Road. The establishment of habitat reserves and habitat corridors would protect the remaining sand gilia populations on the former Fort Ord, including 96 percent of all high-density stands. The sand gilia populations are expected to improve in quality with the implementation of the management activities required under the December 1996 HMP including constructing permanent barriers to close all trails and non-maintained roads to vehicle use and controlling erosion in areas in need of stabilization. Active management on the 605-acre UC/NRS Fort Ord Natural Reserve will reduce the potential for damage due to trespass and vandalism in the most extensive areas of high-density sand gilia habitat. Approximately 390 acres of coastal strand and coastal scrub habitat will be restored by the California Department of Parks and Recreation to reach a goal of 700 acres of habitat at the Fort Ord Dunes State Park. This habitat restoration will generally benefit sand gilia. In addition, the California Department of Parks and Recreation will establish 14,000 to 18,000 sand gilia individuals, substantially increasing the size of coastal populations. Controlled burning by the Bureau of Land Management of approximately 500 acres per year of habitat land on a 12- to 15-year rotational basis is also expected to improve habitat for sand gilia.

The proposed plan for reuse of the former Fort Ord as described in the December 1996 HMP will protect 4,019 acres of low density habitat, 2,477 acres of medium density, and 702 acres of high density habitat of the Monterey spineflower. The December 1996 HMP has identified development to occur on 1,875 acres of low density, 1,062 acres of medium density, and 267

Colonel Ila Mettee-McCutchon (1-8-97-F/C-23R)

16

acres of high density habitat for Monterey spineflower. Recreational uses along the coastal areas of the former Fort Ord that are being planned by the California Department of Parks and Recreation may have impacts on the Monterey spineflower. The Preliminary Fort Ord Dunes State Park General Plan proposes that the beaches be managed to provide low intensity public use. Determining the magnitude of these impacts is difficult; however, they are anticipated to be minor given the minimization measures contained in the December 1996 HMP that the California Department of Parks and Recreation must implement. The Monterey spineflower populations are expected to improve in quality with the implementation of the management activities required under the December 1996 HMP including constructing of permanent barriers to close all trails and non-maintained roads to vehicle use and controlling erosion in areas in need of stabilization. In addition to the conservation of existing habitat, restoration may increase the acreage of high density habitat of the Monterey spineflower within the future Fort Ord Dunes State Park from 182 to 550 acres. Controlled burning by the Bureau of Land Management of approximately 500 acres per year of habitat land on a 12- to 15-year rotational basis is also expected to improve habitat for Monterey spineflower.

Cumulative Effects

Cumulative effects are those impacts of future State, local, or private activities on endangered or threatened species or critical habitat that are reasonably certain to occur within the action area of the Federal action subject to consultation. Future Federal actions are subject to the consultation requirements established in section 7 of the Act, and therefore, are not considered cumulative in the project.

The Service is aware of other actions outside of the former Fort Ord currently approved or under review by the State, county, or local authorities where biological surveys have documented the occurrence of the sand gilia, Monterey spineflower, western snowy plover, Smith's blue butterfly, California red-legged frog, and black legless lizard. These projects include urban development, beach maintenance, and recreational use of coastal areas. The cumulative adverse effects of these known actions may preclude the eventual recovery of these species, if measures are not implemented to minimize adverse effects, protect existing populations, and enhance degraded habitat.

Biological and Conference Opinion

After reviewing their current status, the environmental baseline for the action area, the effects of the proposed activities, and the cumulative effects, the Service's biological opinion is that the action, as proposed, is not likely to jeopardize the continued existence of the sand gilia, Monterey spineflower, western snowy plover, Smith's blue butterfly, and California red-legged frog. The Service's conference opinion is that the action, as proposed, is not likely to jeopardize the continued existence of the black legless lizard and is not likely to destroy or adversely modify the proposed critical habitat for the western snowy plover. Critical habitat has not been designated for the other species.

Colonel Ila Mettee-McCutchon (1-8-97-F/C-23R)

17

Incidental Take

Section 9 of the Act prohibits the take of listed species without special exemption. Taking is defined as harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, collecting, or attempting to engage in any such conduct. Harm is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavior patterns, including breeding, feeding, or sheltering (50 *CFR* 17.3). Under the terms of sections 7(b)(4) and 7(o)(2) of the Act, taking that is incidental to and not intended as part of the agency action is permitted taking under the Act provided that such taking is in compliance with this incidental take statement. These terms and conditions are nondiscretionary, and must be undertaken by the agency or made a binding condition of any grant or permit, as appropriate.

Sections 7(b)(4) and 7(o)(2) of the Act do not apply to the incidental take of listed plant species. However, protection of listed plants is provided to the extent that the Act requires a Federal permit for the removal or reduction to possession of endangered plants from areas under Federal jurisdiction.

This incidental take statement applies to actions that the Army will actually be undertaking. The process of transferring lands will not directly result in take; therefore, none has been authorized. However, once land is transferred, certain activities, including development and recreational uses, may result in take. The Service has determined that the level of take that would occur with the implementation of the disposal and reuse activities described in the December 1996 HMP would not jeopardize the continued existence of the western snowy plover, Smith's blue butterfly, California red-legged frog, and black legless lizard. However, the entity responsible for the land or that would be responsible for the action that may result in take upon its transfer from the Army would need to obtain take authorization from the Service before proceeding.

The Service anticipates that the following forms of incidental take may occur:

1. All Smith's blue butterflies on 20.25 acres of habitat during excavation of lead and recontouring on the beach firing ranges.
2. All black legless lizards through harassment, injury, and mortality within the 60-acre area to be disturbed during excavation of lead and recontouring on the beach firing ranges.
3. All black legless lizards through harassment, injury, and mortality within the areas identified for development without restrictions in the December 1996 HMP that could be disturbed during excavation of ordnance and explosives.
4. All black legless lizards through harassment, within the 935-acre area that could be disturbed during excavation of ordnance and explosives.

Colonel Ila Mettee-McCutchon (1-8-97-F/C-23R)

18

5. Thirty black legless lizards each year through injury or mortality within the 935-acre area that could be disturbed during excavation of ordnance and explosives. If ordnance activities encounter areas where densities of black legless lizards exceed 100 individuals per acre, the Service shall be consulted to determine if further measures to minimize mortality are needed.
6. All black legless lizards through harassment, injury, and mortality within the 75-acre area that could be disturbed during removal of contaminated soils.
7. One western snowy plover adult and one nest including the eggs or chicks through harassment, injury, and mortality during excavation of lead and recontouring on the beach firing ranges.

Because the Army has determined that California red-legged frogs would not be taken in any manner during predisposal activities at the former Fort Ord, the Service has not included these species in the incidental take statement of this biological opinion.

Reasonable and Prudent Measures

The following reasonable and prudent measures are necessary and appropriate to avoid or minimize incidental take:

1. The take of western snowy plovers, Smith's blue butterflies, California red-legged frogs, and black legless lizards shall be avoided or minimized through the implementation of the Installation-Wide Multispecies Habitat Management Plan for Former Fort Ord, California.
2. The Army shall advise all future landowners of the prohibition against take of listed species pursuant to section 9 of the Act. The Army shall implement measures to ensure that unauthorized take does not occur during the time between closure of Fort Ord and the transfer of lands to other entities.
3. The Army shall ensure that vehicular traffic which occurs during the base closure process does not result in the loss of listed species.

Terms and Conditions

To be exempted from the prohibitions of section 9 of the Act, the Army shall ensure that the following terms and conditions, which implement the reasonable and prudent measures described above, are implemented:

1. To implement reasonable and prudent measure 1, the following terms and conditions are established:

Colonel Ila Mettee-McCutchon (1-8-97-F/C-23R)

19

- a. The Army shall implement all portions of the December 1996 HMP for all predisposal activities undertaken.
- b. The Army shall include language in all deeds transferring property to non-Army entities that binds the entities to implement the portions of the December 1996 HMP that apply to their specific property.

2. To implement reasonable and prudent measure 2, the following term and condition is established:

The Army shall advise future landowners of the prohibition against take of listed species pursuant to section 9 of the Act. The Army shall advise future landowners that if take of a federally listed species is anticipated within their newly owned parcels during any non-federal action, the landowner shall apply for the necessary authorization from the Service under section 10(a)(1)(B) of the Act prior to undertaking any activity likely to result in take.

3. To implement reasonable and prudent measure 3, the following term and condition is established:

The Army shall include a condition in the transfer or sale of all parcels that contain habitat for listed species designated to remain protected that restricts vehicular use to existing roads only. This restriction also applies to parcels which are transferred to other Federal agencies. Appropriate means shall be undertaken to educate public users of the former Fort Ord about the prohibition against off-road vehicle travel. While in caretaker status, the Army shall be responsible for ensuring these restrictions are enforced. Such means shall include the posting of signs or the distribution of information at the appropriate informational offices.

Reporting Requirements

The Army shall monitor the transfer of lands to other Federal and non-federal agencies and report these transfers and disposal actions to the Service annually. The Army shall also inform the Service of the progress of ordnance removal and remediation of lead contamination in this report. The report shall include: summaries of land transfers that have occurred; occurrences of incidental take, if any, including known harassment; acres of listed species habitat eliminated or restored; problems encountered in implementing mitigation measures; pertinent results of biological surveys and sighting records; and any other pertinent information. The report shall be postmarked or submitted by January 31 of each calendar year; the Service shall be notified in the case of a delay.

Disposition of Injured or Dead Specimens

Colonel Ila Mettee-McCutchon (1-8-97-F/C-23R)

20

Upon locating dead or injured Smith's blue butterflies or black legless lizards, notification must be made by telephone and writing to the Ventura Field Office (2493 Portola Road, Suite B, Ventura, California 93003, 805/644-1766 and fax 805/644-1766) within three working days of its finding. Notification must include the date, time, and location of the carcass; cause of death, if known; and any other pertinent information. Care shall be taken in handling injured animals to prevent additional injury. Injured animals may be released to the wild after receipt of concurrence from the Service. Care shall be taken in handling dead specimens to preserve biological material in the best possible state for later analysis.

The remains of intact black legless lizards and Smith's blue butterflies shall be placed with the California Academy of Sciences (Contacts: Jens Vindum, Herpetology Department and Dave Kavanaugh, Entomology Department, Golden Gate Park, San Francisco, California, 94118, 415/750-7037 and 7239, respectively). Arrangements regarding proper disposition of potential museum specimens shall be made with the California Academy of Sciences by the project monitor prior to implementation of the action.

Conservation Recommendations

Section 7(a)(1) of the Act directs Federal agencies to use their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat. The Service has no conservation recommendations for the Army regarding the disposal of lands at the former Fort Ord and during actions to remove ordnance and remediate lead contamination.

Conclusion

This concludes formal consultation and conference on the closure and reuse of Fort Ord. Reinitiation of formal consultation is required if: 1) the amount or extent of incidental take is exceeded; 2) new information reveals effects of the agency action that may adversely affect listed species or critical habitat in a manner or to an extent not considered in this biological and conference opinion; 3) the agency action is subsequently modified in a manner that causes an effect to a listed species or critical habitat that was not considered in this biological and conference opinion; or 4) a new species is listed or critical habitat designated that may be affected by this action (50 CFR 402.16).

You may ask the Service to confirm this conference opinion as a biological opinion issued through formal consultation if the black legless lizard is listed or critical habitat for western snowy plover is designated. The request must be in writing. If the Service finds that the proposed action and the information used in the conference have not significantly changed, the Service will confirm the conference opinion as a biological opinion and no further section 7 consultation will be necessary. Once this conference opinion is confirmed as a biological opinion, the reinitiation criteria described above will apply.

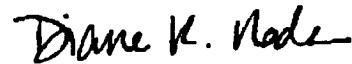
Colonel Ila Mettee-McCutchon (1-8-97-F/C-23R)

21

The incidental take statement provided for the black legless lizard in this conference opinion does not become effective until the species is listed and the conference opinion is adopted as a biological opinion issued through formal consultation. At that time the project will be reviewed to determine whether any take of the black legless lizard has occurred. Modifications to the opinion and incidental take statement may be appropriate to reflect that take. No take of the black legless lizard may occur between the listing of the species becoming effective and the adoption of the conference opinion as a biological opinion through formal consultation.

The Service greatly appreciates the cooperation of your staff, and we look forward to continued coordination in this effort. Any questions or comments should be directed to Catherine McCalvin of my staff at (805) 644-1766.

Sincerely,



Diane K. Noda
Field Supervisor

Enclosure

References Cited

U.S. Army Corps of Engineers. 1996a. Final Supplemental Environmental Impact Statement. Fort Ord Disposal and Reuse. Sacramento, California.

U.S. Army Corps of Engineers. 1996b. Installation-Wide Multispecies Habitat Management Plan for Former Fort Ord, California. Sacramento, California.

U.S. Fish and Wildlife Service. 1984. Smith's Blue Butterfly Recovery Plan. Portland, Oregon.

Table B-2. Continued

Parcel	Plants										Animals							
	Sand Gull	Eastwood's Ericameria	Coast Wallflower	Seaside Bird's Beak	Robust Spineflower	Monterey Spineflower	Monterey Ceanothus	Sandmat Manzanita	Toro Manzanita	Hooker's manzanita	Yadon's Piperia	California Lindernia	Tiger Sals- manover	Western Snowy Plover	California Red- Legged Frog	Monterey Ornate Shrew	Black Legless Lizard	Smith's Blue Butterfly
Caltrans SR 68 Exerment	H M L	H M L	H M L	H M L	H M L	H M L	H M L	H M L	H M L	H M L	H M L	H M L	H M L	H M L	H M L	H M L	H M L	H M L
MPRPD Reserve	H M L	H M L	H M L	H M L	H M L	H M L	H M L	H M L	H M L	H M L	H M L	H M L	H M L	H M L	H M L	H M L	H M L	H M L
Caltrans SR 1 Area	H M L	H M L	H M L	H M L	H M L	H M L	H M L	H M L	H M L	H M L	H M L	H M L	H M L	H M L	H M L	H M L	H M L	H M L
Subtotal	H M L	H M L	H M L	H M L	H M L	H M L	H M L	H M L	H M L	H M L	H M L	H M L	H M L	H M L	H M L	H M L	H M L	H M L
Develop- ment	H M L	H M L	H M L	H M L	H M L	H M L	H M L	H M L	H M L	H M L	H M L	H M L	H M L	H M L	H M L	H M L	H M L	H M L

Notes H = high density, M = medium density, L = low density, and - = no occurrence.
 All numbers are approximate acreages. Acreages for animal species have not been separated into high, medium, and low density. Data were collected during the 1992 Flora and Fauna Baseline study.
 * All of this habitat will be protected within an area that will have a deed covenant, including a development restriction.

Table B-2 Habitat Acres Supporting HMP Target Species within HMP Reserve Areas, Corridors, and Development Areas

Parcel	Plants										Animals							
	Sand Gila	Eastwood's Encarnera	Coast Warblower	Seaside Bird's Beak	Robust Spineflower	Monterey Spineflower	Monterey Ceanothus	Sandmat Manzanilla	Toro Manzanilla	Hooker's manzanilla	Yadon's Popera	California Lindenella	Tiger Saba-mander	Western Stoney Plover	California Red-Legged Frog	Monterey Omate Shrew	Black Legless Lizard	Smith's Blue Butterfly
State Parks Reserve	H M L	H M L	35 H 36 M 75 L	H M L	H M L	35 H 25 M 182 L	H M L	H M L	H M L	H M L	H M L	H M L	H M L	73	-	-	8	140
State Parks Development with Reserve	H M L	H M L	8 H 1 M 16 L	H M L	H M L	63 H 64 M 277 L	H M L	H M L	H M L	H M L	H M L	H M L	H M L	-	-	-	78	37
Landfill Development with Reserve	H M L	H M L	21 H 8 M 80 L	H M L	H M L	42 H 201 L	H M L	63 M 207 L	H M L	H M L	H M L	H M L	H M L	-	-	149	43	-
UCMRS Reserve	H M L	H M L	148 H 131 M 194 L	H M L	H M L	184 H 340 M 3 L	H M L	258 H 188 M 161 L	30 L	H M L	H M L	H M L	H M L	-	-	243	281	-
Marina Reserve	H M L	H M L	H M L	H M L	H M L	6 H 6 M 6 L	H M L	H M L	H M L	H M L	H M L	H M L	H M L	-	-	26	1	-
Marina Development with Reserve	H M L	H M L	H M L	H M L	H M L	7 H 88 M 1 L	H M L	H M L	H M L	H M L	H M L	H M L	H M L	-	-	1	18	-
East Garrison Reserve	H M L	H M L	6 H M 3 L	H M L	H M L	9 H 55 M 48 L	H M L	H M L	H M L	H M L	H M L	H M L	H M L	-	-	147	6	-
East Garrison Development with Reserve	H M L	H M L	H M L	H M L	H M L	38 H 1 M 54 L	H M L	141 H 89 M 119 L	60 M 5 L	H M L	H M L	H M L	H M L	-	-	282	-	-
Habitat Corridor	H M L	H M L	H M L	H M L	H M L	3 H 31 M 123 L	H M L	H M L	H M L	H M L	H M L	H M L	H M L	-	-	246	-	-
Habitat Corridor Development	H M L	H M L	H M L	H M L	H M L	30 H M 17 L	H M L	H M L	H M L	H M L	H M L	H M L	H M L	-	-	430	-	-
BLM NRRMA	H M L	H M L	2,267 H 21 M 1,517 M 2,877 L	H M L	H M L	428 H 1,678 M 3,070 L	H M L	1,727 H 5,185 M 1,319 L	1,762 H 1,963 M 1,054 L	1,241 H 2,204 M 1,054 L	56 H 56 M 56 L	56	56	-	-	1,723	835	-