



# Federal Register

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**Friday,  
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## **Part II**

# **Department of the Interior**

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**Fish and Wildlife Service**

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**50 CFR Part 17**

**Endangered and Threatened Wildlife and  
Plants: Proposed Designation of Critical  
Habitat for the Pacific Coast Population  
of the Western Snowy Plover; Proposed  
Rule**

**DEPARTMENT OF THE INTERIOR****Fish and Wildlife Service****50 CFR Part 17**

RIN 1018-AT89

**Endangered and Threatened Wildlife and Plants; Proposed Designation of Critical Habitat for the Pacific Coast Population of the Western Snowy Plover****AGENCY:** Fish and Wildlife Service, Interior.**ACTION:** Proposed rule.

**SUMMARY:** We, the U.S. Fish and Wildlife Service (Service), propose to designate critical habitat for the Pacific coast distinct population segment of the western snowy plover (*Charadrius alexandrinus nivosus*) pursuant to the Endangered Species Act of 1973, as amended (Act). In developing this proposal, we evaluated those lands determined to contain habitat features essential to the conservation of the Pacific coast population of the western snowy plover to ascertain if any specific areas are appropriate for exclusion from critical habitat pursuant to section 4(b)(2) of the Act. Section 4(b)(2) requires us to take into account economic and other impacts resulting from designation, and allows us to exclude areas with essential habitat features if the benefits of exclusion outweigh those of designation. Additionally, the newly amended section 4(a)(3) requires exclusion of military lands subject to an Integrated Natural Resources Management Plan (INRMP) that benefits the species. We have excluded several units based on these provisions. Additionally, we have considered, but are not proposing, several areas that were either unoccupied at the time of listing (1993) or are unoccupied now. We include descriptions and maps of these areas and are soliciting public comment regarding the appropriateness of including any of these areas in the final critical habitat designation. We propose to designate approximately 17,299 acres (ac) (7,001 hectares (ha)) within 35 units along the coasts of California, Oregon, and Washington. This rule is being proposed pursuant to a court order issued in July 2003, partially vacating critical habitat established for the Pacific coast population of the western snowy plover and remanding the previous designation of critical habitat for preparation of a new analysis of the economic impacts (*Coos County Board of County Commissioners et al. v. Department of the Interior et al.*).

If this proposal is made final, section 7 of the Act would prohibit destruction or adverse modification of critical habitat by any activity authorized, funded, or carried out by any Federal agency. As required by section 4 of the Act, we will consider the economic and other relevant impacts prior to making a final decision on what areas to designate as critical habitat.

We hereby solicit information and comments from the public on all aspects of this proposal, including data on the economic and other impacts of designation as well as any benefits of the designation (see Public Comments Solicited section below). We are also specifically soliciting public comments on the appropriateness of excluding lands covered by certain approved and pending habitat conservation plans or management plans, and Department of Defense lands pursuant to section 4(b)(2) and 4(a)(3) of the Act from this proposed designation. We may revise this proposal prior to final designation to incorporate or address new information received during the comment period.

In the development of our final designation, we will incorporate or address any new information received during the public comment periods, or from our evaluation of the potential economic impacts of this proposal. As such, we may revise this proposal to address new information and/or to either exclude additional areas that may warrant exclusion pursuant to section 4(b)(2) or to add in those areas determined to contain essential habitat features but excluded from this proposal.

**DATES:** We will accept comments from all interested parties until February 15, 2005. We must receive requests for public hearings, in writing, at the address shown in the **ADDRESSES** section by January 31, 2005. The specific times, dates, and locations for any hearings will be announced in the **Federal Register** in the coming months.

**ADDRESSES:** If you wish to comment, you may submit your comments and materials concerning this proposal by any one of several methods:

1. You may submit written comments and information to Wayne White, Field Supervisor, U.S. Fish and Wildlife Service, Sacramento Fish and Wildlife Office, 2800 Cottage Way, W-2605, Sacramento, California 95825 (telephone 916-414-6600).

2. You may hand-deliver written comments to our Sacramento Fish and Wildlife Office, at the address given above, or fax your comments to 916-414-6713.

3. You may send comments by electronic mail (e-mail) to [WSP\\_pCH@fws.gov](mailto:WSP_pCH@fws.gov). Please see the Public Comments Solicited section below for file format and other information about electronic filing. In the event that our internet connection is not functional, please submit your comments by the alternate methods mentioned above.

The comments and materials received, as well as supporting documentation used in the preparation of this proposed rule, will be available for public inspection, by appointment, during normal business hours at the above address.

**FOR FURTHER INFORMATION CONTACT:** For general information about this proposed rule, or information on units CA 7 through CA 10, or on units considered to include habitat essential to the conservation of the plover but excluded for the San Francisco Bay area, contact Glen Tarr or Arnold Roessler, Sacramento Fish and Wildlife Office, 2800 Cottage Way, W-2605 Sacramento, CA 95825 (telephone 916-414-6600; facsimile 916-414-6712).

For information on units WA 1 through WA 4, contact Martha Jensen, Western Washington Fish and Wildlife Office, 510 Desmond Dr. SE., Lacey, WA 98503 (telephone 360-753-9000; facsimile 360-534-9331).

For information on units OR 1 through OR 12, contact Fred Seavey, Newport Field Office, 2127 SE Marine Dr., Newport, OR 97365-5258 (telephone 541-867-4558 ext. 239; facsimile 541-867-4551).

For information on units CA 1 through CA 6, contact Jim Watkins, Arcata Fish and Wildlife Office, 1655 Heindon Rd., Arcata, CA 95521 (telephone 707-822-7201; facsimile 707-822-8411).

For information on units CA 11 through CA 19, contact Mike McCrary, Ventura Fish and Wildlife Office, 2493 Portola Rd., Suite B, Ventura, CA 93003 (telephone 805-644-1766; facsimile 805-644-3958).

For information on units CA 20 through CA 27, contact Kevin Clark, Carlsbad Fish and Wildlife Office, 6010 Hidden Valley Rd., Carlsbad, CA 92009 (telephone 760-431-9440).

**SUPPLEMENTARY INFORMATION:****Public Comments Solicited**

We intend that any final action resulting from this proposal will be as accurate and as effective as possible. Therefore, comments or suggestions from the public, other concerned governmental agencies, the scientific community, industry, or any other

interested parties concerning this proposed rule are hereby solicited. Comments are particularly sought concerning:

(1) The reasons why any habitat should or should not be determined to be critical habitat as provided by section 4 of the Act, including whether the benefit of designation will outweigh any threats to the species due to designation;

(2) Specific information on the amount and distribution of western snowy plover habitat, and what habitat features and areas are essential to the conservation of the species and why;

(3) Land use designations and current or planned activities in the subject areas and their possible impacts on proposed critical habitat;

(4) Any foreseeable economic or other potential impacts resulting from the proposed designation and, in particular, any impacts on small entities; and

(5) Whether our approach to designating critical habitat could be improved or modified in any way to provide for greater public participation and understanding, or to assist us in accommodating public concerns and comments.

(6) Comments or information as to whether further clarity or specificity of the Primary Constituent Elements is necessary;

(7) Some of the lands we have identified as containing habitat features essential for the conservation of the Pacific coast population of the western snowy plover are being considered for exclusion from the final designation of critical habitat or are not included in this proposed designation. We specifically solicit comment on the possible inclusion or exclusion of such areas and:

(a) Whether these areas contain essential habitat features;

(b) Whether these, or other areas proposed but not specifically addressed in this proposal, warrant exclusion; and

(c) Relevant factors that should be considered by us when evaluating the basis for not designating these areas as critical habitat under section 4(b)(2) of the Act).

If you wish to comment, you may submit your comments and materials concerning this proposal by any one of several methods (see **ADDRESSES** section). Please submit electronic comments to [WSP\\_pCH@fws.gov](mailto:WSP_pCH@fws.gov) in ASCII file format and avoid the use of special characters or any form of encryption. Please also include "Attn: Western snowy plover" in your e-mail subject header and your name and return address in the body of your message. If you do not receive a confirmation from the system that we

have received your Internet message, contact us directly by calling our Sacramento Fish and Wildlife Office at phone number 916-414-6600. Please note that the e-mail address [WSP\\_pCH@fws.gov](mailto:WSP_pCH@fws.gov) will be closed out at the termination of the public comment period.

Our practice is to make comments, including names and home addresses of respondents, available for public review during regular business hours. Individual respondents may request that we withhold their home addresses from the rulemaking record, which we will honor to the extent allowable by law. There also may be circumstances in which we would withhold from the rulemaking record a respondent's identity, as allowable by law. If you wish us to withhold your name and/or address, you must state this prominently at the beginning of your comment. However, we will not consider anonymous comments. We will make all submissions from organizations or businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, available for public inspection in their entirety. Comments and materials received will be available for public inspection, by appointment, during normal business hours at the above address.

#### *Designation of Critical Habitat Provides Little Additional Protection to Species*

In 30 years of implementing the Act, the Service has found that the designation of statutory critical habitat provides little additional protection to most listed species, while consuming significant amounts of available conservation resources. The Service's present system for designating critical habitat has evolved since its original statutory prescription into a process that provides little real conservation benefit, is driven by litigation and the courts rather than biology, limits our ability to fully evaluate the science involved, consumes enormous agency resources, and imposes huge social and economic costs. The Service believes that additional agency discretion would allow our focus to return to those actions that provide the greatest benefit to the species most in need of protection.

#### *Role of Critical Habitat in Actual Practice of Administering and Implementing the Act*

While attention to and protection of habitat is paramount to successful conservation actions, we have consistently found that, in most circumstances, the designation of

critical habitat is of little additional value for most listed species, yet it consumes large amounts of conservation resources. Sidle (1987) stated, "Because the Act can protect species with and without critical habitat designation, critical habitat designation may be redundant to the other consultation requirements of section 7." Currently, only 445 species or 36 percent of the 1,244 listed species in the U.S. under the jurisdiction of the Service have designated critical habitat. We address the habitat needs of all 1,244 listed species through conservation mechanisms such as listing, section 7 consultations, the Section 4 recovery planning process, the Section 9 protective prohibitions of unauthorized take, Section 6 funding to the States, and the Section 10 incidental take permit process. The Service believes that it is these measures that may make the difference between extinction and survival for many species.

We note, however, that a recent 9th Circuit judicial opinion, *Gifford Pinchot Task Force v. United States Fish and Wildlife Service*, has invalidated the Service's regulation defining destruction or adverse modification of critical habitat. We are currently reviewing the decision to determine what effect it may have on the outcome of consultations pursuant to section 7 of the Act.

#### *Procedural and Resource Difficulties in Designating Critical Habitat*

We have been inundated with lawsuits for our failure to designate critical habitat, and we face a growing number of lawsuits challenging critical habitat determinations once they are made. These lawsuits have subjected the Service to an ever-increasing series of court orders and court-approved settlement agreements, compliance with which now consumes nearly the entire listing program budget. This leaves the Service with little ability to prioritize its activities to direct scarce listing resources to the listing program actions with the most biologically urgent species conservation needs.

The consequence of the critical habitat litigation activity is that limited listing funds are used to defend active lawsuits, to respond to Notices of Intent (NOIs) to sue relative to critical habitat, and to comply with the growing number of adverse court orders. As a result of this consequence, listing petition responses, the Service's own proposals to list critically imperiled species, and final listing determinations on existing proposals are all significantly delayed.

The accelerated schedules of court-ordered designations have left the Service with almost no ability to

provide for adequate public participation or to ensure a defect-free rulemaking process before making decisions on listing and critical habitat proposals due to the risks associated with noncompliance with judicially imposed deadlines. This situation in turn fosters a second round of litigation in which those who fear adverse impacts from critical habitat designations challenge those designations. The cycle of litigation appears endless, is very expensive, and in the final analysis provides relatively little additional protection to listed species.

The costs resulting from the designation include legal costs, the costs of preparation and publication of the designation, the analysis of the economic effects and the costs of requesting and responding to public comments, and, in some cases, the costs of compliance with National Environmental Policy Act. None of these costs result in any benefit to the species that is not already afforded by the protections of the Act enumerated earlier, and these associated costs directly reduce the scarce funds available for direct and tangible conservation actions.

### Background

The western snowy plover (*Charadrius alexandrinus nivosus*), one of two subspecies of snowy plover to nest in North America, is a small shorebird with pale brown to gray upperparts, gray to black legs and bill, and dark patches on the forehead, behind the eyes, and on either side of the upper breast (Page *et al.* 1995a). The species was first described in 1758 by Linnaeus (American Ornithologists' Union 1957). The Pacific coast population distinct population segment of the western snowy plover (Pacific Coast WSP) is defined as those individuals nesting adjacent to tidal waters of the Pacific Ocean, and includes all nesting birds on the mainland coast, peninsulas, offshore islands, adjacent bays, estuaries and coastal rivers. For a more complete discussion of the ecology and life history of this population, please see the final rule for listing the Pacific Coast WSP as a threatened species, which was published in the **Federal Register** on March 5, 1993 (58 FR 12864), and the previously published final rule designating critical habitat for this population segment, which was published on December 7, 1999 (64 FR 68508).

Pacific Coast WSPs typically forage for small invertebrates in wet or dry beach sand, tide-cast kelp, low foredune

vegetation, and near water seeps in salt pans. Prey species include mole crabs (*Emerita analoga*), crabs (*Pachygrapsus crassipes*), polychaete worms (*Neridae*, *Lumbrineris zonata*, etc.), amphipods (*Corophium* spp., etc.), sand hoppers (*Orchestoidea*), flies (*Ephydriidae*, *Dolichopodidae*), and beetles (*Carabidae*, etc.). Accordingly, beach cleaning activities that remove kelp and rake sand can harm plover foraging success (Page *et al.* 1995a;).

The Pacific Coast WSP breeds primarily on coastal beaches from southern Washington to southern Baja California, Mexico. This habitat is variable because of unconsolidated soils, high winds, storms, wave action, and colonization by plants. Sand spits, dune-backed beaches, beaches at creek and river mouths, and salt pans at lagoons and estuaries are the preferred habitats for nesting plovers (Wilson 1980; Stenzel *et al.* 1981). Additional western snowy plover nesting habitats include bluff-backed beaches, dredged material disposal sites, salt pond levees, dry salt ponds, and river bars (Wilson 1980; Page and Stenzel 1981; Powell *et al.* 1996; Tuttle *et al.* 1997).

The breeding season for Pacific Coast WSPs extends from early March to late September with birds at more southerly locations nesting earlier in the season than birds located farther north (Page *et al.* 1995a). Males establish nesting territories from which they advertise for mates using calls and behavioral displays. Territory sizes can vary from about 0.1 to 1.0 ha (0.25 to 2.5 ac) at interior sites (Page *et al.* 1995a). A study of coastal plovers found a maximum territory size of 0.5 ha (1.2 ac) in coastal salt pan habitat, but speculated that beach territories may have been larger (Warriner *et al.* 1986). After pair formation, both sexes defend the nesting territory from other plovers. The purpose of such defense is apparently unrelated to protection of food resources within the territory, since both sexes frequently forage in non-territorial areas up to 8 km (5 mi) from the nest when not incubating, and since the chicks and attending adults typically leave the nesting territory shortly after hatching (Page *et al.* 1995a).

Clutches normally consist of three eggs laid in a shallow depression scraped in the sand by the male. Such "nests" are typically located in open flat areas, often near some conspicuous feature such as a piece of driftwood (Page and Stenzel 1981, Page *et al.* 1995a). They are usually located within 100 m (328 ft) of the shore, but may be farther where shore access remains unblocked by dense vegetation (Page and Stenzel 1981, Page *et al.* 1995a).

Pacific Coast WSPs also tend to nest in relatively higher densities near fresh water or brackish wetlands such as river mouths, estuaries, and tidal marshes (Page and Stenzel 1981). They use these areas both as foraging sites, and in the case of freshwater sources, for drinking water (Page and Stenzel 1981, Page *et al.* 1995a). They may also be capable of functioning for long-periods without fresh water by subsisting on water obtained from insect prey (Purdue 1976, Page *et al.* 1995a).

Both sexes incubate the eggs, but females often desert the chicks approximately one week after hatching (Warriner *et al.* 1986, Page *et al.* 1995a). This allows the females to nest up to three times in a season, particularly in more southern areas where nesting seasons are longer in duration. Males typically stay with the chicks until they fledge (take their first flight) about 30 days after hatching. Newly hatched chicks are capable of running and foraging almost immediately; from this point parental behavior consists of defending chicks from other plovers, brooding them in cold weather, leading them to suitable feeding areas, and warning of approaching predators. Adults may also employ distraction displays to lead predators away from their young (Page *et al.* 1995a).

After their first chicks fledge, males may attempt to raise a new brood of chicks with a new partner. Both sexes will also readily attempt to raise new chicks if they lose an entire clutch of eggs or brood of chicks, assuming enough time remains in the nesting season (Page *et al.* 1995a). Both clutches and broods may be lost due to predators, tides and storms, and human recreational activities. Examples of the latter include both repeated flushings of nesting plovers and direct damage to nests or to young, resulting from humans, dogs, horses or vehicles that either approach plover nests too closely or actually overrun plovers and nests. (Service 1993, Ruhlén *et al.* 2003).

Small changes in the adult survival rate can have relatively large effects on population stability (Nur *et al.* 1999), so the maintenance of quality overwintering habitat is important to conservation. In western North America, both coastal and inland-nesting western snowy plovers winter along the coast (Page *et al.* 1995a). Some coastal plovers migrate up or down the coast to wintering locations, while others remain at their nesting beaches. Coastal individuals may also migrate some years and not others (Warriner *et al.* 1986, Page *et al.* 1995a). Wintering birds use many of the beaches used for nesting, but will also winter at several beaches

where nesting does not occur (Stenzel *in litt.* 2004, Page *in litt.* 2004). They also visit human-made salt ponds, and estuarine sand and mud flats (Page *et al.* 1986). Because coastal plovers can switch from being migratory to non-migratory (Warriner *et al.* 1986), they have the option of staying to nest at a hospitable wintering location. Sites that have historically supported nesting, but which currently only support wintering plovers, therefore have the potential to attract new nesters relatively quickly if appropriate management renders such areas suitable for nesting once again. This has been successfully carried out at Coal Oil Point and Hollywood Beach in southern California (M. McCrary, U.S. Fish and Wildlife Service, *in litt.* 2004). Such management successes are important to conservation, since the loss of numerous historical nesting sites was a major consideration in their original listing (Service 1993).

#### Previous Federal Actions

For a discussion of previous Federal actions regarding the Pacific coast population of the western snowy plover, please see the December 7, 1999, final rule to designate critical habitat for the Pacific coast population of the western snowy plover (64 FR 68508). That rule was remanded and partially vacated by the United States District Court for the District of Oregon on July 2, 2003, in order to conduct a new analysis of economic impacts (*Coos County Board of County Commissioners et al. v. Department of the Interior et al.*, CV 02-6128, M. Hogan). The court set a deadline of December 1, 2004, for submittal of a new proposed critical habitat designation to the **Federal Register**. The court-established deadline for submittal of the final designation is September 20, 2005.

In August 2002 we received a petition to delist the Pacific Coast WSP from the Surf Ocean Beach Commission of Lompoc, California. The City of Morro Bay submitted substantially the same petition dated May 30, 2003. On March 22, 2004, we published a notice that the petition presented substantial information to indicate that delisting may be warranted (69 FR 13326). We are currently conducting both a 12-month and a 5-year status review of the population under sections 4(b)(3)(B) and 4(c)(2) of the Act.

This proposal relies upon the best scientific and commercial data available to us, including the biological and habitat information described in the previous final rules, and recognized principles of conservation biology. Accordingly, this proposal differs from the previous critical habitat designation

for the Pacific Coast WSP and includes only those areas we currently consider to have habitat features most essential to the conservation of the species.

#### Critical Habitat

Critical habitat is defined in section 3 of the Act as—(i) the specific areas within the geographic area occupied by a species, at the time it is listed in accordance with the Act, on which are found those physical or biological features (I) essential to the conservation of the species and (II) that may require special management considerations or protection; and (ii) specific areas outside the geographic area occupied by a species at the time it is listed, upon a determination that such areas are essential to the conservation of the species. “Conservation” means the use of all methods and procedures that are necessary to bring an endangered or a threatened species to the point at which listing under the Act is no longer necessary.

Critical habitat receives protection under section 7 of the Act through the prohibition against destruction or adverse modification of critical habitat with regard to actions carried out, funded, or authorized by a Federal agency. Section 7 requires consultation on Federal actions that are likely to result in the destruction or adverse modification of critical habitat. The designation of critical habitat does not affect land ownership or establish a refuge, wilderness, reserve, preserve, or other conservation area. Such designation does not allow government or public access to private lands.

To be included in a critical habitat designation, the habitat within the area occupied by the species must first have features that are “essential to the conservation of the species.” Critical habitat designations identify, to the extent known using the best scientific and commercial data available, habitat areas that provide essential life cycle needs of the species (i.e., areas on which are found the primary constituent elements, as defined at 50 CFR 424.12(b)). If an area occupied by the species is designated it is because the primary constituent elements area currently present in sufficient quantity and quality to assure biological function.

Occupied habitat may be included in critical habitat only if the essential features thereon may require special management or protection. Thus, we do not include areas where existing management is sufficient to conserve the species. (As discussed below, such areas may also be excluded from critical habitat pursuant to section 4(b)(2).)

Our regulations state that, “The Secretary shall designate as critical habitat areas outside the geographical area presently occupied by a species only when a designation limited to its present range would be inadequate to ensure the conservation of the species” (50 CFR 424.12(e)). Accordingly, when the best available scientific and commercial data do not demonstrate that the conservation needs of the species so require, we will not designate critical habitat in areas outside the geographic area occupied by the species.

The Service’s Policy on Information Standards Under the Endangered Species Act, published in the **Federal Register** on July 1, 1994 (59 FR 34271), and Section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001 (Pub. L. 106-554; H.R. 5658) and the associated Information Quality Guidelines issued by the Service, provide criteria, establish procedures, and provide guidance to ensure that decisions made by the Service represent the best scientific and commercial data available. They require Service biologists to the extent consistent with the Act and with the use of the best scientific and commercial data available, to use primary and original sources of information as the basis for recommendations to designate critical habitat. When determining which areas are critical habitat, a primary source of information is generally the listing package for the species. Additional information sources include the recovery plan for the species, articles in peer-reviewed journals, conservation plans developed by States and counties, scientific status surveys and studies, biological assessments, or other unpublished materials and expert opinion or personal knowledge. All information is used in accordance with the provisions of the Data Quality Act.

Section 4 of the Act requires that we designate critical habitat on the basis of what we know at the time of designation. Habitat is often dynamic, and species may move from one area to another over time. Furthermore, we recognize that designation of critical habitat may not include all of the habitat areas that may eventually be determined to be necessary for the recovery of the species. For these reasons, critical habitat designations do not signal that habitat outside the designation is unimportant or may not be required for recovery.

Areas that support populations, but are outside the critical habitat designation, will continue to be subject to conservation actions implemented under section 7(a)(1) of the Act and to

the regulatory protections afforded by the section 7(a)(2) jeopardy standard, as determined on the basis of the best available information at the time of the action. Federally funded or permitted projects affecting listed species outside their designated critical habitat areas may still result in jeopardy findings in some cases. Similarly, critical habitat designations made on the basis of the best available information at the time of designation will not control the direction and substance of future recovery plans, habitat conservation plans, or other species conservation planning efforts if new information available to these planning efforts calls for a different outcome.

### Methods

As required by section 4(b)(2) of the Act and regulations at 50 CFR 424.12, we used the best scientific data available in determining the areas that contain habitat features essential to the conservation of the Pacific Coast WSP. Data sources include research published in peer-reviewed articles; previous Service documents on the species, including the original critical habitat designation (Service 1999) and final listing determination (Service 1993); numerous surveys; and aerial photographs and GIS mapping information from State sources and in our files.

Our first step was to identify those areas occupied by the Pacific Coast WSP at the time of listing. The second step was to identify, in accordance with section 3(5)(A)(i) of the Act and regulations at 50 CFR 424.12, the physical and biological habitat features (also called primary constituent elements, or PCEs) at those sites that are essential to the conservation of the species. We have mapped critical habitat unit boundaries at each site based on the extent of habitat containing sufficient PCEs to support biological function.

The mapping itself was the third step, while the fourth and final step was to exclude certain units based on sections 4(a)(3), 3(5)(a), and 4(b)(2) of the Act (see Exclusions section below). We discuss each of these four steps more fully below.

### Criteria Used To Identify Critical Habitat

To identify sites containing habitat features most essential to the conservation of the Pacific Coast WSP (as defined above in our Methods section), we applied the following three criteria:

(1) Our first criterion for critical habitat unit selection was to choose

sites in a geographic region capable of supporting the most breeding plovers. Where appropriate, we adjusted our estimates of the number of breeding birds a site could support according to additional information supplied by surveys and by local species and habitat experts.

(2) We added any major, currently occupied wintering sites not already selected under criterion one. This is necessary to provide sufficient habitat for the survival of breeding birds during the non-breeding season. A "major" wintering site must at least support more wintering birds than average for the geographical region.

(3) Finally, we added any additional occupied sites that provide unique habitat, or that are situated to facilitate genetic interchange between otherwise widely separated units. This criterion is based on standard conservation biology principles for the conservation of rare and endangered animals and their habitats (Shaffer 1981, 1987, 1995; Fahrig and Merriam 1985; Gilpin and Soule 1986; Goodman 1987a, 1987b; Stacey and Taper 1992; Mangel and Tier 1994; Lesica and Allendorf 1995; Fahrig 1997; Noss and Csuti 1997; Huxel and Hastings 1998; Redford and Richter 1999; Debinski and Holt 2000; Sherwin and Moritz 2000; Grosberg 2002; Noss *et al.* 2002). By protecting a variety of habitats and facilitating genetic interchange between them, we increase the ability of the species to adjust to various limiting factors that affect the population, such as predators, disease, major storms, and inbreeding.

### Primary Constituent Elements

In accordance with section 3(5)(A)(i) of the Act and regulations at 50 CFR 424.12, we are required to base critical habitat determinations on the best scientific and commercial data available and to consider those physical and biological features (primary constituent elements (PCEs)) that are essential to the conservation of the species, and that may require special management considerations and protection. These include, but are not limited to: space for individual and population growth and for normal behavior; food, water, air, light, minerals, or other nutritional or physiological requirements; cover or shelter; sites for breeding, reproduction, and rearing (or development) of offspring; and habitats that are protected from disturbance or are representative of the historic geographical and ecological distributions of a species.

Our determination of the primary constituent elements for the Pacific Coast WSP is based on the biological needs of the population, and on the

relationship of those needs to the population's habitat, as indicated and summarized below by the best scientific data available.

### *Space for Individual and Population Growth and Normal Behavior*

Pacific Coast WSPs establish nesting territories, but these can vary widely in size and do not provide sufficient habitat for foraging (see Background section above). Critical habitat must therefore extend beyond nesting territories to include space for foraging and water requirements during the nesting season, space for overwintering.

### *Food and Water*

Pacific Coast WSPs typically forage in open areas by locating prey visually and then running to seize it with their beaks (Page *et al.* 1995a). They may also probe in the sand for burrowing invertebrates, or charge flying insects that are resting on the ground, snapping at them as they flush. Accordingly they need open areas in which to forage, to facilitate both prey location and capture. Deposits of tide-cast wrack such as kelp or driftwood tend to attract certain invertebrates, and so provide important foraging sites for plovers (Page *et al.* 1995a). Plovers forage both above and below high tide, but not while those areas are underwater. Foraging areas will therefore typically be limited by water on their shoreward side, and by dense vegetation or development on their landward sides.

Coastal plovers use sites of fresh water for drinking where available, but some historic nesting sites, particularly in southern California, have no obvious nearby freshwater sources. Adults and chicks in those areas must be assumed to obtain their necessary water from the food they eat. Accordingly we have not included freshwater sites among the primary constituent elements of the population.

### *Reproduction and Rearing of Offspring*

Pacific Coast WSPs nest in depressions in open, relatively flat areas, near to tidal waters but far enough away to avoid being inundated by daily tides. Typical substrate is beach sand, but plovers may also lay their eggs in existing depressions in harder ground such as salt pan, cobblestones or dredge tailings. Where available, dune systems with numerous flat areas and easy access to the shore are particularly favored for nesting. Plover nesting areas must provide shelter from predators and human disturbance, as discussed below. Unfledged chicks forage with one or both parents, using the same foraging areas and behaviors as adults.

### Cover or Shelter

Plovers and their eggs are well camouflaged against light colored, sandy or pebbly backgrounds (Page *et al.* 1995a), so open areas with such substrates actually constitute shelter for purposes of nesting and foraging. Such areas provide little cover to predators, and allow plovers to fully utilize their camouflage and running speed. Chicks may also crouch near driftwood, dune plants and piles of kelp to hide from predators (Page and Stenzel 1981). Open areas do not provide shelter from winds and storms, however, and these cause many nest losses, along with extreme high tides. Plovers readily scrape blown sand out of their nests, but there is little they can do to protect their nests against serious storms or flooding other than to attempt to lay a new clutch if the old one is lost (Page *et al.* 1995a).

No studies have quantified the amount of vegetation cover that would make an area unsuitable for nesting or foraging, but coastal nesting and foraging locations typically have relatively well-defined boundaries between open sandy substrate favorable to plovers and unfavorably dense vegetation inland. Such bounds show up well in aerial and satellite photographs, which we used to map essential habitat features.

### Undisturbed Areas

Disturbance of nesting or brooding plovers by humans and domestic animals is a major factor affecting nesting success. Plovers leave their nests when humans or pets approach too closely. Dogs may also deliberately chase plovers and trample nests, while vehicles may directly crush adults, chicks or nests, separate chicks from brooding adults, and interfere with foraging (Warriner *et al.* 1986, Service 1993, Ruhlen *et al.* 2003). Repeated flushing of incubating plovers exposes the eggs to the weather and deplete energy reserves needed by the adult, which may result in reductions to nesting success. Surveys at Vandenberg Air Force Base, California, from 1994 to 1997, found the rate of nest loss on southern beaches to be consistently higher than on north beaches (where recreational use was much lower) (Persons and Applegate 1997). Ruhlen *et al.* (2003) found that increased human activities on Point Reyes beaches resulted in a lower chick survival rate. Recent efforts in various areas have been implemented to isolate nesting plovers from recreational beach users through the use of docents, symbolic fencing, and public outreach have correlated with higher nesting success in those

areas (Page, *et al.* 2003 (summer 93 survey), Palermo 2004).

### List of Primary Constituent Elements

The primary constituent elements for the Pacific Coast WSP habitat include:

(1) Sparsely vegetated areas above daily high tides (such as sandy beaches, dune systems immediately inland of an active beach face, salt flats, seasonally exposed gravel bars, dredge spoil sites, artificial salt ponds and adjoining levees) that are relatively undisturbed by the presence of humans, pets, vehicles or human-attracted predators (essential for reproduction, food, shelter from predators, protection from disturbance, and space for growth and normal behavior).

(2) Sparsely vegetated sandy beach, mud flats, gravel bars or artificial salt ponds subject to daily tidal inundation but not currently under water, that support small invertebrates such as crabs, worms, flies, beetles, sand hoppers, clams, and ostracods (essential for food).

(3) Surf or tide-cast organic debris such as seaweed or driftwood located on open substrates such as those mentioned above (essential to support small invertebrates for food, and to provide shelter from predators and weather for reproduction).

All areas proposed as critical habitat for the Pacific Coast WSP were occupied by the species at the time of listing and contain sufficient primary constituent elements to support essential biological function.

### Unoccupied Areas Identified for Possible Inclusion

The Act has different standards for designation of critical habitat in occupied and unoccupied habitat. For areas occupied by the species, these are:

—(i) The specific areas on which are found those physical or biological features essential to the conservation of the species and that may require special management considerations or protection. For areas not occupied, a determination is required that the entire area is essential for the conservation of the species before it can be included in critical habitat. Congress has also cautioned the Service to be “exceedingly circumspect” in designating unoccupied habitat.

Because Congress has directed us to be exceedingly circumspect in including unoccupied areas in critical habitat designations, we are identifying some areas which are currently unoccupied or were unoccupied at the time of listing, and requesting comment on whether they should be included in the designation. We seek comment on

whether all, only a portion, or none of the unoccupied areas identified are essential to the conservation of the population. Areas not being proposed due to lack of occupancy are identified as such in the Unit Descriptions and Map sections. Those areas are: WA 1, OR 1A, OR 1B, OR 2, OR 4, OR 5A, OR 5B, OR 6, OR 8C, OR 10B, OR 10C, OR 11, OR 12, and CA 11A.

### Mapping

Our mapping process was based on the need to exclude areas that lack PCEs, while simultaneously accounting for the dynamic nature of beach habitat, and of the second PCE above. Our mapping process also allowed us to provide a reasonable level of certainty to landowners regarding the location of unit boundaries relative to private lands.

We used Geographic Information Systems (GIS) software to establish landward bounds for those breeding and wintering sites that meet the criteria listed above. We drew the landward bounds so as to exclude habitat lacking PCEs, as determined using the most recent digital orthorectified aerial photographs available. Since most private land is located near the landward bounds, and since the landward side of the unit is likely to change less over time than other sides, we set the landward bounds to remain fixed in place, defined by the UTM NAD 27 coordinates of their vertices and endpoints (UTM NAD 27 stands for “Universal Transverse Mercator, North American Datum 1927,” and is a convention for projecting points of the globe onto a two-dimensional map).

We defined the seaward bounds of each unit according to mean low water (MLW) (including waters of the Pacific Ocean proper, as well as of bays, estuaries and rivers where water level is significantly influenced by the tides). For purposes of estimating unit sizes, we approximated MLW in California using the most recent GIS projection of mean high water (MHW). We chose MHW because it is the only approximation of the coastline currently available in GIS format. We were unable to obtain recent GIS maps of MHW or MLW for Oregon and Washington; therefore, we approximated MLW for units in those States based on aerial photographs.

When determining proposed critical habitat boundaries, we made every effort to avoid proposing the designation of developed areas such as buildings, paved areas, boat ramps and other structures that lack sufficient PCEs to support essential biological functions of the species as well as areas affected by

the use of the structure. Any such structures inadvertently left inside proposed critical habitat boundaries are not considered part of the proposed unit. This also applies to the land on which such structures sit directly. Therefore, Federal actions limited to these areas would not trigger section 7 consultations, unless they affect the species and/or primary constituent elements in adjacent critical habitat.

**Special Management Considerations or Protections**

When designating critical habitat, we assess whether the areas determined to contain habitat features essential for conservation may require special management considerations or protections. The threats affecting the continued survival and recovery of the Pacific Coast WSP within each of the proposed critical habitat units and that may require special management are described in the critical habitat unit descriptions that follow. Primary threats requiring special management considerations include disturbance of

nesting or foraging plovers by humans, vehicles, and domestic animals, high levels of predation on eggs and young, and loss of habitat due to development and encroachment of dune-stabilizing vegetation such as European beachgrass (*Ammophila arenaria*) (Service 1993).

The areas proposed for designation as critical habitat will require some level of management and/or protection to address the current and future threats to the Pacific Coast WSP and maintain the primary constituent elements essential to its conservation in order to ensure the overall conservation of the species. The designation of critical habitat does not imply that lands outside of critical habitat do not play an important role in the conservation of the plover. Federal activities that may affect those unprotected areas outside of critical habitat are still subject to review under section 7 of the Act if they may affect the plover. The prohibitions of section 9 (e.g., harm, harass, capture) also continue to apply both inside and outside of designated critical habitat.

**Proposed Critical Habitat Designation**

The areas we are proposing as critical habitat currently provide all of those habitat components necessary to meet the primary biological needs of the Pacific Coast WSP, as defined by the primary constituent elements. The areas proposed for designation are those areas most likely to substantially contribute to conservation of the Pacific Coast WSP, which when combined with future management of certain habitats suitable for restoration efforts, will contribute to the long-term survival and recovery of the species.

We are proposing 35 units in Washington, Oregon, and California as critical habitat for the Pacific Coast WSP. All these units are within the range occupied by the species, and constitute our best assessment at this time of the areas containing habitat features essential for the conservation of the Pacific Coast WSP. The approximate area encompassed within each proposed critical habitat unit is shown in Table 3, below.

TABLE 1.—APPROXIMATE AREA EXCLUDED FROM PROPOSED CRITICAL HABITAT FOR THE PACIFIC COAST WSP PURSUANT TO SECTIONS 3(5)(A), 4(A)(3) AND 4(B)(2) OF THE ACT

Location	Size	Basis of exclusion	Applicable section of the act
San Nicholas Island, Ventura County, CA. 1 unit .....	524 ac (212 ha)	INRMP* .....	4(a)(3).
Salinas River National Wildlife Refuge, Monterey County, CA. Part of one unit.	142 ac (57 ha)	CCP* .....	4(b)2 and 3(5)(a).
Guadalupe/Nipomo Dunes National Wildlife Refuge, San Luis Obispo County, CA. Part of one unit.	235 ac (95 ha)	Plover mgt plan with section 7 consultation.	
San Diego, CA. One subunit .....	23 ac (9 ha)	HCP*.	
Marine Corps Base Camp Pendleton, San Diego County, CA. 2 subunits.	507 ac (205 ha)	Use of area for military training .....	4(b)(2) alone.
Naval Amphibious Base, Coronado, San Diego County, CA. 1 subunit.	144 ac (58 ha)		
San Francisco Bay, CA. 6 subunits totaling .....	1,847 ac (747 ha)	Multi-agency mgt plan in preparation .....	
Total Excluded Area .....	3,422 ac 1,385 (ha)		

\*INRMP: Integrated Natural Resource Management Plan.  
 \*\*CCP: Comprehensive Conservation Plan.  
 \*\*\*HCP: Habitat Conservation Plan.

TABLE 2.—APPROXIMATE AREA OF ALL LOCATIONS FITTING THE CRITERIA DEFINED ABOVE AND SUPPORTING HABITAT FEATURES ESSENTIAL TO CONSERVATION (FIRST COLUMN). THESE LOCATIONS ARE BROKEN DOWN ACCORDING TO: UNOCCUPIED AREAS NOT PROPOSED (SECOND COLUMN); EXCLUDED AREAS (THIRD COLUMN); AND PROPOSED CRITICAL HABITAT AREA FOR THE PACIFIC COAST WSP (FOURTH COLUMN)

Areas with essential features	Unoccupied areas not proposed	Excluded areas	Total proposed critical habitat
22,359 (9,048 ha) .....	1,638 ac (663 ha) .....	3,422 ac (1,385 ha) .....	17,299 ac (7,001 ha).



TABLE 3.—CRITICAL HABITAT UNITS PROPOSED FOR THE PACIFIC COAST WSP

Unit	Proposed?	Federal	State/ local	Private	Total				
					acres	ha	acres	ha	acres
<b>Washington</b>									
WA 1. Copalis Spit .....	No .....	0	0	446	180.5	0	0	446	180.5
WA 2. Damon Pt, Oyhut .....	Yes .....	0	0	908	368	0	0	908	368
WA 3. Midway Beach .....	Yes .....	0	0	266	108	520	210	786	318
WA 4. Leadbetter Pt .....	Yes .....	270	109	627	254	172	70	1,069	433
Subtotal .....	.....	270	109	1,801	729	692	280	2,763	1,118
<b>Oregon</b>									
OR 1. Clatsop Spit:									
OR 1A. Columbia River Spit .....	No .....	65	26.3	0	0	0	0	65	26.3
OR 1B. Necanicum River Spit ..	No .....	0	0	78	31.6	0	0	78	31.6
OR 2. Nehalem River Spit .....	No .....	0	0	145	58.7	0	0	145	58.7
OR 3. Bayocean Spit .....	Yes .....	85	34	122	49	0	0	207	84
OR 4. Netarts Spit .....	No .....	0	0	143	57.9	0	0	143	57.9
OR 5. Sand Lake:									
OR 5A. Sand Lake North .....	No .....	0	0	38	15.4	0	0	38	15.4
OR 5B. Sand Lake South .....	No .....	0	0	0	0	104	42.1	104	42.1
OR 6. Nestucca River Spit .....	No .....	0	0	147	59.5	0	0	147	59.5
OR 7. Sutton/Baker Beaches .....	Yes .....	260	105	0	0	0	0	260	105
OR 8. Siltcoos to Tenmile:									
OR 8A. Siltcoos River Spit .....	Yes .....	188	76	0	0	0	0	188	76
OR 8B. Dunes Overlook/ Tahkenitch Creek Spit.	Yes .....	375	152	0	0	0	0	375	152
OR 8C. N Umpqua River Spit ...	No .....	74	29.9	37	15	0	0	111	44.9
OR 8D. Tenmile Creek Spit .....	Yes .....	235	95	0	0	0	0	235	95
OR 9. Coos Bay N Spit .....	Yes .....	278	113	0	0	0	0	278	113
OR 10. Bandon/Cape Blanco:									
OR 10A. Bandon to Floras Lk ...	Yes .....	321	130	196	79	163	66	680	275
OR 10B. Sixes River Spit .....	No .....	0	0	73	29.5	0	0	73	29.5
OR 10C. Elk River Spit .....	No .....	0	0	0	0	88	35.6	88	35.6
OR 11. Euchre Creek Spit .....	No .....	0	0	0	0	75	30.4	75	30.4
OR 12. Pistol River Spit .....	No .....	0	0	116	46.9	0	0	116	46.9
Subtotal .....	.....	1,742	705	318	129	163	66	2,223	900
<b>California</b>									
CA 1. Lake Earl .....	Yes .....	0	0	13	5	78	32	91	37
CA 2. Big Lagoon .....	Yes .....	0	0	280	113	0	0	280	113
CA 3. McKinleyville Area:									
CA 3A. Clam Beach/Little Riv ...	Yes .....	0	0	131	53	24	10	155	63
CA 3B. Mad River .....	Yes .....	0	0	161	65	217	88	377	153
CA 4. Eel River Area:									
CA 4A. Humboldt Bay, S Spit ...	Yes .....	20	8	354	143	0	0	375	152
CA 4B. Eel Riv N Spit/Beach ...	Yes .....	0	0	278	112	5	2	283	114
CA 4C. Eel Riv S Spit/Beach ...	Yes .....	0	0	4	2	397	161	402	163
CA 4D. Eel River Gravel Bars ..	Yes .....	0	0	255	103	938	379	1,193	483
CA 5. MacKerricher Beach .....	Yes .....	0	0	1,017	412	31	13	1,048	424
CA 6. Manchester Beach .....	Yes .....	0	0	336	136	5	2	341	138
CA 7. Dillon Beach .....	Yes .....	0	0	0	0	30	12	30	12
CA 8. Pt Reyes Beach .....	Yes .....	462	187	0	0	0	0	462	187
CA 9. Limantour Spit .....	Yes .....	124	50	0	0	0	0	124	50
CA 10. Half Moon Bay .....	Yes .....	0	0	37	15	0	0	37	15
CA 11. Santa Cruz Coast:									
CA 11A. Waddell Cr Beach .....	No .....	0	0	8.1	3.3	1.3	0.5	9.3	3.8
CA 11B. Scott Cr. Beach .....	Yes .....	0	0	0	0	19	8	19	8
CA 11C. Wilder Cr. Beach .....	Yes .....	0	0	10	4	0	0	10	4
CA 12. Monterey Bay Beaches:									
CA 12A. Jetty Rd to Aptos .....	Yes .....	0	0	272	110	0	0	272	110
CA 12B. Elkhorn Sl Mudflat .....	Yes .....	0	0	281	114	0	0	281	114
CA 12C. Monterey—Moss Lnd	Yes .....	10	4	792	321	0	0	803	325
CA 13. Pt Sur Beach .....	Yes .....	0	0	61	25	0	0	61	25
CA 14. San Simeon Beach .....	Yes .....	0	0	28	11	0	0	28	11
CA 15. Estero Bay Beaches:									
CA 15A. Villa Cr Beach .....	Yes .....	0	0	17	7	0	0	17	7
CA 15B. Atascadero Beach .....	Yes .....	0	0	144	58	0	0	144	58
CA 15C. Morro Bay Beach .....	Yes .....	0	0	611	247	0	0	611	247
CA 16. Pismo Beach/Nipomo .....	Yes .....	0	0	770	312	499	202	1,269	513

TABLE 3.—CRITICAL HABITAT UNITS PROPOSED FOR THE PACIFIC COAST WSP—Continued

Unit	Proposed?	Federal	State/ local	Private	Total				
					acres	ha	acres	ha	acres
CA 17. Vandenberg									
CA 17A. Vandenberg North .....	Yes .....	626	253	0	0	0	0	626	253
CA 17B. Vandenberg South .....	Yes .....	304	123	0	0	0	0	304	123
CA 18. Devereaux Beach .....	Yes .....	0	0	36	15	0	0	36	15
CA 19. Oxnard Lowlands:									
CA 19A. Mandalay to Santa Clara R Mouth.	Yes .....	0	0	245	99	105	42	350	142
CA 19B. Ormond Beach .....	Yes .....	0	0	203	82	0	0	203	82
CA 19C. Mugu Lagoon N .....	Yes .....	321	130	0	0	0	0	321	130
CA 19D. Mugu Lagoon S .....	Yes .....	69	28	18	7	0	0	87	35
CA 20. Zuma Beach .....	Yes .....	0	0	60	24	8	3	68	28
CA 21. Santa Monica Bay:									
CA 21A. Santa Monica Beach ..	Yes .....	0	0	6	2	19	8	25	10
CA 21B. Dockweiler N .....	Yes .....	0	0	43	17	0	0	43	17
CA 21C. Dockweiler S .....	Yes .....	0	0	13	5	11	5	24	10
CA 21D. Hermosa Beach .....	Yes .....	0	0	10	4	0	0	10	4
CA 22. Bolsa Chica Area:									
CA 22A. Bolsa Chica Reserve ..	Yes .....	0	0	0	0	591	239	591	239
CA 22B. Huntington St. Beach	Yes .....	0	0	4	2	0	0	4	2
CA 23. Santa Ana River Mouth .....	Yes .....	0	0	12	5	1	0	13	5
CA 24. San Onofre St Beach .....	Yes .....	3	1	46	19	9	4	58	24
CA 25. Batiquitos Lagoon:									
CA 25A. Batiquitos West .....	Yes .....	0	0	15	6	6	3	21	9
CA 25B. Batiquitos Middle .....	Yes .....	0	0	15	6	8	3	23	9
CA 25C. Batiquitos East .....	Yes .....	0	0	0	0	21	8	21	8
CA 26. Los Penasquitos .....	Yes .....	0	0	24	10	0	0	24	10
CA 27. S San Diego:									
CA 27A. North Island N. ....	Yes .....	117	47	0	0	0	0	117	47
CA 27B. North Island S. ....	Yes .....	68	28	0	0	0	0	68	28
CA 27C. Silver Strand .....	Yes .....	75	30	96	39	3	1	174	70
CA 27D. Delta Beach .....	Yes .....	85	35	0	0	0	0	85	35
CA 27E. Sweetwater NWR .....	Yes .....	77	31	0	0	51	21	128	52
CA 27F. Tijuana River Beach ...	Yes .....	84	34	76	31	22	9	182	74
Subtotal .....	.....	2,444	989	6,774	2,741	3,095	1,253	12,313	4,983
Total .....	.....	4,456	1,804	8,893	3,599	3,950	1,599	17,299	7,001

**Unit Descriptions**

The proposed units described below all contain habitat features essential for the conservation of the Pacific Coast WSP, as defined in the “Primary Constituent Elements” section above. All units are located within the range of the population, in the states of Washington, Oregon, and California. They are all considered currently occupied (with documented use by plovers since 2000), unless otherwise noted. Those units not currently occupied are considered essential to the conservation of the population for the reasons provided in the description.

*Washington*

WA 1, Copalis Spit, 446 ac (180.5 ha): (Unoccupied Area, Identified for Possible Inclusion)

This is the northernmost unit in the range of the species. Copalis Spit is located along the central Washington coast, approximately 20 miles (mi) (32.2 kilometers (km) northwest of Hoquiam.

It is a 1.4 mi (2.25 km) long sand spit that is bounded on the landward side by the Copalis River. The unit consists of a long sandy beach with sparsely vegetated dunes that extend to the river, providing nesting and foraging opportunities as well as protection from the weather. The recent northward shift of Connor Creek washed out the beach access road at the southern end, effectively closing the area to motorized vehicles. Because of its relatively remote location, the area receives little human use. The spit historically supported 6 to 12 nesting pairs of plovers, but no use has been documented since 1984 (WDFW 1995). The unit is entirely within Griffith Priday State Park (WA State Parks). The primary threat to the unit at this time is erosion caused by the northward movement of Connor Creek. While this natural occurrence is limiting human use in the area, it has resulted in a gradual but steady decline in available habitat over the past 50 years. Habitat restoration (beachgrass eradication) would improve the

likelihood for plovers to recolonize the site in the future.

WA 2, Damon Point/Oyhut Wildlife Area, 908 ac (368 ha)

This unit is located at the southern end of the community of Ocean Shores and is a sandy spit that extends into Grays Harbor. Damon Point includes the following features essential to the conservation of the species: sandy beaches that are relatively undisturbed by human or tidal activity (nesting habitat), large expanses of sparsely vegetated barren terrain, and mudflats and sheltered bays that provide ample foraging areas. Research in the mid 1980’s indicated that up to 20 snowy plovers used the area for nesting. Plover use has declined somewhat over the past 20 years; currently between 6 and 9 adult birds use the site during the breeding season (average reproductive success at Damon is 1.5 chicks per male) (WDFW *in litt.* 2003). The conservation goal for WA 2 is 12 adult plovers. Approximately 99 percent of the 908-

acre unit is administered by the State (Washington Department of Fish and Wildlife—227 ac (92 ha); Washington State Parks—63.6 ac (25.7 ha); and Washington Department of Natural Resources—605.6 ac (245.1 ha)). The western edge of the unit lies adjacent to a municipal wastewater treatment facility that is managed by the City of Ocean Shores (9 ac (3.6 ha)). As with Copalis Spit, the access road has washed out and the area is currently inaccessible to motorized vehicles. The primary threats to plovers at this time are recreational use (pedestrians with dogs), habitat loss from European beachgrass, and potential re-opening of the vehicle access road.

#### WA 3, Midway Beach, 786 ac (318 ha)

This unit is located between the community of Grayland and Willapa Bay and covers an area called Twin Harbors Beaches. Midway is an expansive beach and is nearly 0.5 mi (0.8 km) wide at the widest point. Beach accretion since 1998 has greatly improved habitat conditions, resulting in the re-establishment of a plover population at this site (WDFW *in litt.* 2000). Nearly half of the birds that nest and/or over-winter at Midway were banded in Oregon or Humboldt County, California (WDFW *in litt.* 2003). Threats at Midway include motorized vehicles combined with a lack of enforcement of the wet sand driving restrictions and human activity on holiday weekends (e.g., Fourth of July fireworks). Although public access is restricted on private property, beach driving is permitted below MHW. Approximately 2/3 (about 520 ac (210.4 ha)) of this unit is on private property with the remainder (266 ac (107.6 ha)) on State park lands. Private property rights extend to the mean low water line (MLW) in Washington State. The conservation goal for Midway Beach is 30 adult breeding birds. Twenty-eight plovers nested at this site during the 2003 breeding season, and the site has shown a relatively high average annual production of 1.3 to 1.9 chicks per male (WDFW *in litt.* 2003).

#### WA 4, Leadbetter Point/Gunpowder Sands, 1,069 ac (433 ha)

The Leadbetter Point/Gunpowder Sands unit is located at the northern end of the Long Beach Peninsula, a 26-mi (41.8-km) long spit that defines the west side of Willapa Bay and extends down to the mouth of the Columbia River. The unit is located just north of the community of Ocean Park. The end of the spit is within the Willapa National Wildlife Refuge. The refuge jurisdiction extends to the mean high

-tide mark. The beach below high tide is administered by the Washington Department of Natural Resources, and State regulations, including seasonal motorized vehicle access and recreational use, apply to this area. The area of the beach that falls under State jurisdiction is included in the unit. Leadbetter is the largest of the four proposed critical habitat units in Washington and covers approximately 1,069 ac (433 ha) and over 7 mi (11.3 km) of coastline. Two hundred seventy acres (109.3 ha) of WA 4 is on Willapa National Wildlife Refuge. The Refuge has a plover management plan, which has not yet undergone section 7 consultation. Six hundred twenty-seven acres (253.7 ha) of WA 4 are on State lands, generally below the mean high water line (MHW). Another 172 ac (69.6 ha) of the unit are on private land. Since Leadbetter National Wildlife Refuge extends to the mean high-water line, the area below MHW makes up an important portion of this unit. We therefore used historic aerial photos to estimate a more typical seaward boundary of the north end of the spit. As with the other units, however, the true seaward boundary is the edge of the tidal water. Approximately 30 snowy plovers nest and over-winter on the spit, with about 20–25 birds nesting north of the Refuge boundary and 5–10 birds using the State park and private beaches to the south (Service *in litt.* 2004). The unit provides sandy beaches and sparsely vegetated dunes for nesting as well as miles of surf-cast organic debris and sheltered bays for foraging. The combined dynamics of weather and surf cause large quantities of wood and shell material to accumulate on the spit, providing prime nesting habitat, hiding areas from predators, foraging opportunities, and shelter from inclement weather for plover broods. The plover population at Leadbetter has been slowly increasing since monitoring began in 1993 and we consider the area capable of supporting up to 30 breeding plovers given appropriate management. The primary threat is human disturbance during spring razor clam season, which opens beaches to motorized vehicles and provides access into plover nesting areas that normally receive limited human use. Beaches south of the Refuge are open to public use. The State Parks department is considering posting areas being used by plovers and increasing enforcement of the wet sand driving regulations (Service *in litt.* 2004).

#### Oregon

##### OR 1. Clatsop Spit: (Unoccupied Area, Identified for Possible Inclusion)

Although the unit is currently occupied (L. Kelly, Service, *in litt.* 2003), it was not occupied at the time of listing (F. Seavey, Service *in litt.* 2004).

##### Subunit OR 1A, Columbia River South Spit, 65 ac (26 ha): (Unoccupied Area, Identified for Possible Inclusion)

This subunit is on the northwestern coast of Clatsop County, Oregon, about 20 miles (32.2 km) northwest of the City of Astoria. It is bounded by the Columbia River and Fort Stevens State Park and is located about 1 mi (1.6 km) east of the base of the Columbia River South Jetty. The subunit is characteristic of a dune-backed beach adjacent to mud flats and an estuary. It includes the following features essential to the conservation of the species (PCEs): Areas of sandy beach relatively undisturbed by human or tidal activity (for nesting and foraging); areas of sandy beach above and below the high-tide line with occasional surf-cast wrack supporting small invertebrates (for foraging); and close proximity to tidally influenced estuarine mud flats (for foraging). This subunit is part of a larger unit of the 17-mile (27.4 km) Clatsop Plains that is located between the Necanicum River to the south and the Columbia River to the north. Most recently documented plovers for the Clatsop Plains include one breeding plover in 1983 and 1 wintering plover in 1985 (ODFW *in litt.* 1994). The subunit consists of 65 ac (26 ha) of federally owned land. The Oregon Parks and Recreation Department manages the subunit under a Department of Army license. The primary threats that may require special management in this subunit are introduced European beachgrass that encroaches on the available nesting and foraging habitat; disturbance from humans, dogs, and off-highway vehicles (OHVs) in important foraging and nesting areas; and predators such as the American crow and common raven.

##### Subunit OR 1B, Necanicum River Spit, 78 ac (32 ha): (Unoccupied Area, Identified for Possible Inclusion)

This subunit is on the western coast of Clatsop County, Oregon, next to the City of Gearhart and less than 1 mi (1.6 km) north of the City of Seaside. It is bounded by the Necanicum River estuary on the south, City of Gearhart to the east, and the Pacific Ocean to the west. The subunit is characteristic of a dune-backed beach adjacent to mud

flats and an estuary. It includes the following features essential to the conservation of the species: Wide sand spits or washovers relatively undisturbed by human or tidal activity and sparsely vegetated (for nesting and foraging); areas of sandy beach above and below the high-tide line with occasional surf-cast wrack supporting small invertebrates (for foraging); and close proximity to tidally influenced estuarine mud flats (for foraging). This subunit is part of a larger unit of the 17-mi (27.4 km) Clatsop Plains that is located between the Necanicum River to the south and the Columbia River to the north. Two breeding plovers were documented in this subunit in 2002 (Lauten *et al. in litt.* 2003). This subunit consists of 55 State-owned acres (22 ha) and 23 city-owned acres (9 ha). The Oregon Parks and Recreation Department is the primary land manager. Threats that may require special management in this subunit are introduced European beachgrass that encroaches on the available nesting and foraging habitat; disturbance from humans, dogs, and OHVs in important foraging and nesting areas; and predators such as American crow and raccoons.

OR 2, Nehalem River Spit, 145 ac (59 ha): (Unoccupied Area, Identified for Possible Inclusion)

This unit is on the northwestern coast of Tillamook County, Oregon next to the City of Manzanita and about 19 miles (30.6 km) northwest of the City of Tillamook. It is bounded by Nehalem Bay on the east, the City of Manzanita to the north, and the Pacific Ocean to the west. The unit is characteristic of a dune-backed beach and sand spit adjacent to mud flats and an estuary. It includes the following features essential to the conservation of the species: A wide sand spit or washover area relatively undisturbed by human or tidal activity and sparsely vegetated (for nesting and foraging); areas of sandy beach above and below the high tide line with occasional surf-cast wrack supporting small invertebrates (for foraging); and close proximity to tidally influenced estuarine mud flats (for foraging). One breeding plover was documented in this unit in 1984 (ODFW *in litt.* 1994). This unit provides habitat capable of supporting four breeding plovers under proper management. The unit consists of 145 State-owned acres (58.7 ha) and is managed by the Oregon Parks and Recreation Department as part of the Nehalem Bay State Park. The primary threats that may require special management in this unit are introduced European beachgrass that encroaches on

the available nesting and foraging habitat, disturbance from humans and dogs in important foraging and nesting areas, and predators such as American crows and common ravens.

OR 3, Bayocean Spit, 207 ac (84 ha)

This unit is on the western coast of Tillamook County, Oregon, and about 8 mi (12.9 km) northwest of the City of Tillamook. It is bounded by Tillamook Bay on the east, the Tillamook Bay South Jetty to the north, and the Pacific Ocean to the west. The unit is characteristic of a dune-backed beach in close proximity to mud flats and an estuary. It includes the following features essential to the conservation of the species (PCEs): large areas of sandy dune relatively undisturbed by human or tidal activity (for nesting and foraging); areas of sandy beach above and below the high tide line with occasional surf-cast wrack supporting small invertebrates (for foraging); and close proximity to tidally influenced estuarine mud flats (for foraging). Two breeding plovers and one wintering plover were documented in this unit in 1993 and 2000, respectively (ODFW *in litt.* 1994; Service *in litt.* 2004). This unit contributes significantly to the conservation goal for the region by providing habitat capable of supporting 16 breeding plovers under proper management. The unit consists of 85 ac (34.4 ha) of federally owned land and 122 ac (49.4 ha) of county-owned land. The primary threats that may require special management in this unit are introduced European beachgrass that encroaches on the available nesting and foraging habitat; disturbance from humans, dogs and horses in important foraging and nesting areas; and predators such as the common raven.

OR 4, Netarts Spit, 143 ac (58 ha): (Unoccupied Area, Identified for Possible Inclusion)

This unit is on the western coast of Tillamook County, Oregon, about 5 mi (8.0 km) southwest of the City of Tillamook. It is bounded by the Pacific Ocean to the west and Netarts Bay to the east and the north. The unit is characteristic of a dune-backed beach and sand spit in close proximity to mud flats. It includes the following features essential to the conservation of the species: Wide sand spits or washovers and large areas of sandy dune relatively undisturbed by human or tidal activity and sparsely vegetated (for nesting and foraging); areas of sandy beach above and below the high tide line with occasional surf-cast wrack supporting small invertebrates (for foraging); and close proximity to tidally influenced

mud flats (for foraging). The unit is considered unoccupied, although three breeding plovers were documented in this unit in 1982 (ODFW *in litt.* 1994). The unit consists of 143 State-owned acres (57.9 ha) managed by Oregon Parks and Recreation Department as Cape Lookout State Park. The primary threats that may require special management in this subunit are introduced European beachgrass that encroaches on the available nesting and foraging habitat, disturbance from humans and dogs in important foraging and nesting areas, and predators such as the common raven.

OR 5. Sand Lake: (Unoccupied Area, Identified for Possible Inclusion)

This unit includes two subunits, one each on the north and south spits of Sand Lake estuary. Most recently documented plovers for the Sand Lake unit include four breeding plovers in 1986 (ODFW *in litt.* 1994).

Subunit OR 5A, Sand Lake North, 38 ac (15.4 ha): (Unoccupied Area, Identified for Possible Inclusion)

This subunit is on the southwestern coast of Tillamook County, Oregon, about 7 miles (11.3 km) north of Pacific City. It is bounded by the Sand Lake estuary to the south, the Siuslaw National Forest's Sand Lake National Recreation Area to the north, and the Pacific Ocean to the west. The subunit is characteristic of a dune-backed beach and sand spit in close proximity to mud flats and an estuary. It includes the following features essential to the conservation of the species: Wide sand spits or washovers and sparsely vegetated areas of sandy dune relatively undisturbed by human or tidal activity (for nesting and foraging); areas of sandy beach above and below the high tide line with occasional surf-cast wrack supporting small invertebrates (for foraging); and close proximity to tidally influenced mud flats (for foraging). The subunit consists of 38 county-owned acres (15.4 ha). The primary threats that may require special management in this subunit are introduced European beachgrass that encroaches on the available nesting and foraging habitat, disturbance from humans and dogs in important foraging and nesting areas, and predators such as American crows and common ravens.

Subunit OR 5B, Sand Lake South, 104 ac (42.1 ha): (Unoccupied Area, Identified for Possible Inclusion)

This subunit is on the southwestern coast of Tillamook County, Oregon, about 7 mi (11.3 km) north of Pacific City. It is bounded by the Pacific Ocean

to the west and the Sand Lake estuary to the north and east. The subunit is characteristic of a dune-backed beach and sand spit in close proximity to mud flats and an estuary. It includes the following features essential to the conservation of the species: Wide sand spits or washovers and sparsely vegetated areas of sandy dune relatively undisturbed by human or tidal activity (for nesting and foraging); areas of sandy beach above and below the high tide line with occasional surf-cast wrack supporting small invertebrates (for foraging); and close proximity to tidally influenced mud flats (for foraging). The subunit consists of 104 privately owned acres (42.1 ha). The primary threats that may require special management in this subunit are introduced European beachgrass that encroaches on the available nesting and foraging habitat; disturbance from humans, dogs, and OHVs in important foraging and nesting areas; and predators such as the common raven.

OR 6, Nestucca River Spit, 147 ac (59.5 ha): (Unoccupied Area, Identified for Possible Inclusion)

This unit is on the southwestern coast of Tillamook County, Oregon, next to Pacific City and about 20 mi (32.2 km) southwest of the City of Tillamook. It is bounded by Pacific City to the north, Nestucca Bay to the east and south, and the Pacific Ocean to the west. The unit is characteristic of a dune-backed beach and sand spit in close proximity to mud flats and an estuary. It includes the following features essential to the conservation of the species: Wide sand spits or washovers relatively undisturbed by human or tidal activity and sparsely vegetated (for nesting and foraging); areas of sandy beach above and below the high tide line with occasional surf-cast wrack supporting small invertebrates (for foraging); and close proximity to tidally influenced estuarine mud flats (for foraging). Most recently documented plovers for this unit include 2 breeding plovers in 1988 (ODFW *in litt.* 1994). We therefore consider this unit to be currently unoccupied. The unit consists of 147 State-owned acres (59.5 ha) and is managed by the Oregon Parks and Recreation Department as Robert W. Straub State Park. The primary threats that may require special management in this subunit are introduced European beachgrass that encroaches on the available nesting and foraging habitat; disturbance from humans, dogs and horses in important foraging and nesting areas; and predators such as American crows and common ravens.

OR 7, Sutton/Baker Beaches, 260 ac (105.2 ha)

This unit is on the western coast of Lane County, Oregon, about 8 mi (12.9 km) north of the City of Florence. It is bounded by Sutton Creek to the south, Heceta Head to the north, and the Pacific Ocean to the west. The unit is characteristic of a dune-backed beach and wide sand spits with overwash areas. It includes the following features essential to the conservation of the species: large areas of sandy dunes or sand spit overwashes relatively undisturbed by human or tidal activity (for nesting and foraging) and areas of sandy beach above and below the high tide line with occasional surf-cast wrack supporting small invertebrates (for foraging). Most recently documented plovers for this unit include an average of 2 breeding plovers in 2003 and 8 wintering plovers in 2004 (Lauten *et al. in litt.* 2003; Service *in litt.* 2004). This unit is capable of supporting 12 breeding plovers under proper management. The unit consists of 260 federally owned ac (105.2 ha) managed by the U.S. Forest Service in Siuslaw National Forest. The primary threats that may require special management in this unit are introduced European beachgrass that encroaches on the available nesting and foraging habitat; disturbance from humans, dogs and horses in important foraging and nesting areas; and predators such as the American crow and common raven.

OR 8. Siltcoos to Tenmile

This unit includes four subunits, all within five miles of each other in Lane, Douglas and Coos Counties, Oregon.

Subunit OR 8A, Siltcoos River Spit, 188 ac (76.1 ha)

This subunit is on the southwestern coast of Lane County, Oregon, about 7 mi (11.3 km) southwest of the City of Florence. It includes the sand spits to the north and south of the Siltcoos River and is bounded by the Pacific Ocean to the west. The subunit is characteristic of a dune-backed beach and sand spit in close proximity to a tidally influenced river mouth. It includes the following features essential to the conservation of the species: Wide sand spits or washovers and sparsely vegetated areas of sandy dune relatively undisturbed by human or tidal activity (for nesting and foraging); areas of sandy beach above and below the high tide line with occasional surf-cast wrack supporting small invertebrates (for foraging); and close proximity to tidally influenced freshwater areas (for foraging). Most recently documented plovers for this

subunit include an average of six breeding plovers in 2003 and 20 wintering plovers in 2004 (Lauten *et al. in litt.* 2003; Service *in litt.* 2004). This subunit, in conjunction with subunit OR 8B, below, is capable of supporting 20 breeding plovers under proper management. The subunit consists of 188 federally owned acres (76.1 ha) managed by the U.S. Forest Service as the Oregon Dunes National Recreation Area in the Siuslaw National Forest. The primary threats that may require special management in this subunit are introduced European beachgrass that encroaches on the available nesting and foraging habitat; disturbance from humans, dogs and OHVs in important foraging and nesting areas; and predators such as the American crow and common raven.

Subunit OR 8B, Dunes Overlook/ Tahkenitch Creek Spit, 375 ac (151.8 ha).

This subunit is on the northwestern coast of Douglas County, Oregon, about 10 mi (16.1 km) northwest of the City of Reedsport. It is bounded by Tahkenitch Creek to the south, Carter Lake to the north and the Pacific Ocean to the west. The subunit is characteristic of a dune-backed beach and sand spit. It includes the following features essential to the conservation of the species: wide sand spits or washovers and sparsely vegetated areas of sandy dune relatively undisturbed by human or tidal activity (for nesting and foraging); areas of sandy beach above and below the high tide line with occasional surf-cast wrack supporting small invertebrates (for foraging); and close proximity to tidally influenced freshwater areas (for foraging). Most recently documented plovers for this subunit include an average of seven breeding plovers in 2003 and one wintering plover in 2000 (Lauten *et al. in litt.*; 2003; Service *in litt.* 2004). This subunit is capable of supporting 20 breeding plovers in conjunction with subunit OR 8A (above) under proper management. The subunit consists of 375 federally owned acres (151.8 ha) managed by the U.S. Forest Service as the Oregon Dunes National Recreation Area. The primary threats that may require special management in this subunit are introduced European beachgrass that encroaches on the available nesting and foraging habitat; disturbance from humans, dogs and OHVs in important foraging and nesting areas; and predators such as the American crow and common raven.

Subunit OR 8C, North Umpqua River Spit, 111 ac (44.9 ha): (Unoccupied Area, Identified for Possible Inclusion)

This subunit is on the western coast of Douglas County, Oregon, about 5 mi. (8.0 km) west of the City of Reedsport. It is bounded by the Umpqua River North Jetty to the south and the Pacific Ocean to the west. The subunit is characteristic of a dune-backed beach. It includes the following features essential to the conservation of the species: areas of sandy beach above and below the high tide line with occasional surf-cast wrack supporting small invertebrates (for nesting and foraging). This subunit is capable of supporting four breeding plovers under proper management. The subunit consists of 74 ac (29.9 ha) of federally owned land and 37 ac (15 ha) of State-owned land. The primary land manager is the U.S. Forest Service for the Oregon Dunes National Recreation Area. Threats that may require special management in this subunit are introduced European beachgrass that encroaches on the available nesting and foraging habitat; disturbance from OHVs in important foraging and nesting areas; and predators such as the American crow and common raven.

Subunit OR 8D, Tenmile Creek Spit, 235 ac (95.1 ha)

This subunit is on the northwestern coast of Coos County, Oregon, about 12 mi. (19.3 km) southwest of the City of Reedsport. It includes the sand spits and beaches to the north and south of the Tenmile River and is bounded by the Pacific Ocean to the west. The subunit is characteristic of a dune-backed beach and sand spit. It includes the following features essential to the conservation of the species: Wide sand spits or washovers and sparsely vegetated areas of sandy dune relatively undisturbed by human or tidal activity (for nesting and foraging); areas of sandy beach above and below the high tide line with occasional surf-cast wrack supporting small invertebrates (for nesting and foraging); and close proximity to tidally influenced freshwater areas (for foraging). The most recently documented plovers for this subunit include an average of 10 breeding and eight wintering plovers in 2003 (Lauten *et al. in litt.* 2003; Service *in litt.* 2004). This subunit is capable of supporting 20 breeding plovers under proper management. The subunit consists of 235 federally owned acres (95.1 ha) managed as the Oregon Dunes National Recreation Area by the U.S. Forest Service. The primary threats that may require special management in this subunit are introduced European

beachgrass that encroaches on the available nesting and foraging habitat; disturbance from humans and dogs in important foraging and nesting areas; and predators such as the American crow and common raven.

OR 9, Coos Bay North Spit, 278 ac (112.5 ha)

This unit is on the western coast of Coos County, Oregon, about 5 mi (8.0 km) west of the City of Coos Bay. It is bounded by Coos Bay to the east, the Coos Bay North Jetty to the south, and the Pacific Ocean to the west. The unit is characteristic of a dune-backed beach and interior interdune flats created through dredge material disposal or through habitat restoration. It includes the following features essential to the conservation of the species (PCEs): Expansive sparsely vegetated interdune flats (for nesting and foraging); areas of sandy beach above and below the high tide line with occasional surf-cast wrack supporting small invertebrates (for nesting and foraging); and close proximity to tidally influenced estuarine areas (for foraging). The most recently documented plovers for this unit include an average of 17 breeding and 3 wintering plovers in 2003 (Lauten *et al. in litt.* 2003; Service *in litt.* 2004). This unit contributes significantly to the regional conservation goal by providing habitat capable of supporting 54 breeding plovers under proper management. The unit consists of 278 federally owned acres (112.5 ha) primarily managed by the Bureau of Land Management. Threats that may require special management in this unit are introduced European beachgrass that encroaches on the available nesting and foraging habitat; disturbance from humans, dogs and OHVs in important foraging and nesting areas; and predators such as the American crow and common raven.

OR 10, Bandon/Cape Blanco Area

This unit consists of three subunits within five miles of each other near the town of Bandon, in Coos and Curry Counties, Oregon.

Subunit OR 10A, Bandon to Floras Lake, 680 ac (275.2 ha)

This subunit is on the southwestern coast of Coos County, Oregon, about 4 mi (6.4 km) south of the City of Bandon. It is bounded by China Creek to the north, the New River to the east, Floras Lake to the south, and the Pacific Ocean to the west. The subunit is characteristic of a dune-backed beach and barrier spit. It includes the following features essential to the conservation of the species: wide sand spits or washovers

and sparsely vegetated areas of sandy dune relatively undisturbed by human or tidal activity (for nesting and foraging); areas of sandy beach above and below the high tide line with occasional surf-cast wrack supporting small invertebrates (foraging); and close proximity to tidally influenced freshwater areas (for foraging). The most recently documented plovers for this subunit include an average of 15 breeding and 18 wintering plovers in 2003 (Lauten *et al. in litt.* 2003; Service *in litt.* 2004). This subunit is capable of supporting 54 breeding plovers under proper management. The subunit consists of 321 ac (129.9 ha) of federally owned land, 184 ac (75 ha) of State-owned land, 12 ac of county-owned land (5 ha), and 163 ac (66 ha) of privately owned land. The Bureau of Land Management and the Oregon Parks and Recreation Department are the unit's primary land managers. Threats that may require special management in this subunit are introduced European beachgrass that encroaches on the available nesting and foraging habitat; disturbance from humans, dogs, horses and OHVs in important foraging and nesting areas; and predators such as the common raven and red fox.

Subunit OR 10B, Sixes River Spit, 73 ac (29.5 ha): (Unoccupied Area, Identified for Possible Inclusion)

This subunit is on the northwestern coast of Curry County, Oregon, about 8 mi (12.9 km) northwest of the City of Port Orford and just north of Cape Blanco. It includes the sand spits to the north and south of the Sixes River and is bounded by the Pacific Ocean to the west. The subunit is characteristic of a dune-backed beach and sand spit in close proximity to a tidally influenced river mouth. It includes the following features essential to the conservation of the species: Wide sand spits or washovers and sparsely vegetated areas of sandy dune relatively undisturbed by human or tidal activity (for nesting and foraging); areas of sandy beach above and below the high tide line with occasional surf-cast wrack supporting small invertebrates (for foraging); and close proximity to tidally influenced freshwater areas (for foraging). No plover use has been documented for this unit, which may be attributed to little, if any, historic survey effort. This subunit is capable of supporting 4 breeding plovers under proper management. The subunit consists of 73 State-owned acres (29.5 ha) managed by Oregon Parks and Recreation Department. The primary threats that may require special management in this subunit are introduced European

beachgrass that encroaches on the available nesting and foraging habitat; disturbance from humans and dogs in important foraging and nesting areas; and predators such as the common raven.

Subunit OR 10C, Elk River Spit, 88 ac (35.6 ha): (Unoccupied Area, Identified for Possible Inclusion)

This subunit is on the northwestern coast of Curry County, Oregon, about 4 mi (6.4 km) northwest of the City of Port Orford and just south of Cape Blanco. It is bounded by the Elk River to the east and north, and the Pacific Ocean to the west. The subunit is characteristic of a dune-backed beach and sand spit in close proximity to a tidally influenced river mouth. It includes the following features essential to the conservation of the species: Wide sand spits or washovers and sparsely vegetated areas of sandy dune relatively undisturbed by human or tidal activity (for nesting and foraging); areas of sandy beach above and below the high tide line with occasional surf-cast wrack supporting small invertebrates (for foraging); and close proximity to tidally influenced freshwater areas (for foraging). This subunit is capable of supporting four breeding plovers under proper management. The subunit consists of 88 privately owned acres (35.6 ha). The primary threats that may require special management in this subunit are introduced European beachgrass that encroaches on the available nesting and foraging habitat; disturbance from humans, dogs and OHVs in important foraging and nesting areas; and predators such as the common raven and red fox.

OR 11, Euchre Creek Spit, 75 ac (30.4 ha): (Unoccupied Area, Identified for Possible Inclusion)

This unit is on the western coast of Curry County, Oregon, about 12 mi (19.3 km) north of the City of Gold Beach. It includes the sand spits to the north and south of the Euchre River and is bounded by the Pacific Ocean to the west. The unit is characteristic of a dune-backed beach and sand spit in close proximity to a tidally influenced river mouth. It includes the following features essential to the conservation of the species: Wide sand spits or washovers and sparsely vegetated areas of sandy dune relatively undisturbed by human or tidal activity (for nesting and foraging); areas of sandy beach above and below the high tide line with occasional surf-cast wrack supporting small invertebrates (for foraging); and close proximity to tidally influenced freshwater areas (for foraging). No

Pacific Coast WSP have been documented using the area in recent years, so we consider it to be currently unoccupied. The unit consists of 75 privately owned acres (30.4 ha). The primary threats that may require special management in this unit are European beachgrass that encroaches on the available nesting and foraging habitat; disturbance from humans and dogs in important foraging and nesting areas; and predators such as the common raven and red fox.

OR 12, Pistol River Spit, 116 ac (46.9 ha): (Unoccupied Area, Identified for Possible Inclusion)

This unit is on the southwestern coast of Curry County, Oregon, about 12 mi (19.3 km) south of the City of Gold Beach. It is bounded by the Pistol River to the east and north, and the Pacific Ocean to the west. The unit is characteristic of a dune-backed beach and sand spit in close proximity to a tidally influenced river mouth. It includes the following features essential to the conservation of the species: Wide sand spits or washovers and sparsely vegetated areas of sandy dune relatively undisturbed by human or tidal activity (for nesting and foraging); areas of sandy beach above and below the high tide line with occasional surf-cast wrack supporting small invertebrates (for foraging); and close proximity to tidally influenced freshwater areas (for foraging). The unit is not considered to be currently unoccupied, as the most recently documented plover in the area was one wintering plover in 1978 (Wilson 1980). The unit consists of 116 State-owned acres (46.9 ha) managed by the Oregon Parks and Recreation Department as the Pistol River State Park. The primary threats that may require special management in this unit are introduced European beachgrass that encroaches on the available nesting and foraging habitat; disturbance from humans, dogs and horses in important foraging and nesting areas; and predators such as the American crow and common raven.

#### *California*

CA 1, Lake Earl, 91 ac (37 ha)

This unit is located directly west of the Lake Earl/Lake Tolowa lagoon system and the proposed Pacific Shores housing development. The unit extends from the lagoon breach site in the south, to Kellogg Road at the unit's northern end. The Lake Earl lagoon lies approximately 2 miles (3.2 km) north of Point Saint George and the McNamara Airfield. Essential features of the unit for Pacific Coast WSP conservation

include sandy beaches above and below the mean high tide line, wind-blown sand in dune systems immediately inland of the active beach face, and the washover area at the lagoon mouth. The Lake Earl unit is a historical breeding site, and has had a small population of wintering plovers in recent years (Watkins, pers. comm. 2004). We expect this unit to be able to support ten breeding plovers with proper management. The unit contains 90.8 ac (36.7 ha) total. Approximately 12.9 ac (5.2 ha) are managed by the State under the jurisdiction of the California Department of Fish and Game, with the remaining 77.9 ac (31.5 ha) in private ownership. The unit is approximately 3 mi (4.8 km) in length. Degradation of the sand dune system has resulted from the encroachment of European beachgrass. Off-road vehicle (OHV) use is the greatest threat to wintering and nesting plovers using the unit. The U.S. Army Corps of Engineers authorizes the mechanical breach of the Lake Earl/Lake Tolowa lagoon on an annual basis. Monitoring indicates that the practice of breaching has only temporary, short-term effects to wintering plovers.

CA 2, Big Lagoon, 280 ac (113 ha)

This unit consists of a large sand spit that divides the Pacific Ocean from Big Lagoon. The northern extent of the Big Lagoon spit is approximately three mi (4.8 km) south of the Town of Orick. The unit contains the following features essential to the conservation of the Pacific Coast WSP (PCEs): Low lying sandy dunes and open sandy areas that are relatively undisturbed by humans; sandy beach above and below the high tide line that supports small invertebrates; and areas of overwash. The Big Lagoon spit is historical nesting habitat, and currently maintains a winter population of fewer than 10 plovers (Watkins, pers. comm. 2001). We estimate the unit can support 16 breeding plovers. The unit is located on the spit, which is approximately 3.8 mi (6.1 km) in length. Most of the unit (279.2 ac, 113.0 ha) is managed by the California Department of Parks and Recreation (CA State Parks). An additional 0.6 ac (0.26 ha) are Humboldt County-managed. State Parks has conducted habitat restoration at this unit through the hand-removal of non-native vegetation. The primary threat to wintering and breeding plovers that may require special management is the disturbance from humans and dogs walking through winter flocks and potential nesting areas.

## CA 3, McKinleyville Area

This unit consists of two subunits in the vicinity of McKinleyville, California, in Humboldt County.

## CA 3A, Clam Beach/Little River, 155 ac (63 ha)

The Little River/Clam Beach subunit's northern boundary is directly across from the south abutment of the U.S. Highway 101 bridge that crosses the Little River. The southern subunit boundary is aligned with the north end of the southernmost, paved Clam Beach parking area. The length of the unit is approximately 1.8 mi (2.8 km). Essential features of the subunit that contribute towards the conservation of the Pacific Coast WSP include large areas of sandy dunes, areas of sandy beach above and below the high tide line, and generally barren to sparsely vegetated terrain. The subunit currently supports a breeding population of approximately 12 plovers, and a winter population of up to 55 plovers (Colwell, *et al.* 2003). It has developed into one of four primary nesting locations within northern California. We expect the subunit to be able to support six breeding plovers. The primary threats to nests, chicks, and both wintering and breeding adult plovers in this subunit are OHV use, predators, and disturbance caused by humans and dogs. Of the total 154.9 ac (62.7 ha), approximately 81.5 acres (33 ha) are under the jurisdiction of the CA State Parks, 24.1 acres (9.8 ha) are in private ownership, and 49.5 acres (20 ha) are under the ownership and management of Humboldt County.

## CA 3B, Mad River Beach, 377 ac (153 ha)

This subunit was largely swept clean of European beachgrass when the Mad River temporarily shifted north in the 1980's and 1990's. The Mad River Beach subunit is approximately 2.8 mi (4.5 km) long, and ranges from the U.S. Highway 101 Vista Point below the Arcata Airport in the north, to School Road in the south. One hundred sixty-one acres (65 ha) are owned and managed by Humboldt County, and 216.5 (87.6 ha) are privately owned. Essential features of the subunit that contribute towards the conservation of the Pacific Coast WSP include large areas of sandy dunes, areas of sandy beach above and below the high tide line, and generally barren to sparsely vegetated terrain. We expect the subunit to eventually support 12 breeding plovers with proper management. The current breeding population is believed to be less than 5 plovers, although plovers from this subunit readily

intermix with plovers in CA 3A (Colwell, *et al.* 2003). Occasional winter use by plovers has been intermittently documented, with most wintering within the adjacent critical habitat unit to the north (Hall, pers. comm. 2003). The primary threats to nests, chicks, and both wintering and breeding adult plovers are OHV use, and disturbance caused by equestrians and humans with accompanying dogs.

## CA 4, Eel River Area

This unit consists of four subunits, one each on the north and south spits of the mouth of the Eel River, one for the Eel River gravel bars supporting nesting plovers about five to ten miles inland, and one extending from the south spit of Humboldt Bay to the beach adjacent to the north Eel River spit subunit.

## Subunit CA 4A, Humboldt Bay, South Spit Beach, 375 ac (152 ha)

This subunit is located across Humboldt Bay, less than one mile (<1.6 km) west of the City of Eureka, with the southern boundary being Table Bluff. Three hundred forty-four acres (139.3 ha) of the unit are owned by the California Department of Fish and Game, but are managed by the Federal Bureau of Land Management, 10.1 ac (4.1 ha) are owned and managed by the County of Humboldt, and 20.2 ac (8.2 ha) are owned by the U.S. Army Corps of Engineers. The subunit is 4.8 mi (7.7 km) in total length. The following features essential to the conservation of the Pacific Coast WSP can be found within the unit: large areas of sandy dunes, areas of sandy beach above and below the high tide line, and generally barren to sparsely vegetated terrain. The plover wintering population is estimated at under 15 individuals, and three nests, from 4 breeders, were attempted within the subunit in 2003 (Colwell, *et al.* 2003). This subunit is capable of supporting 30 breeding plovers. The Bureau of Land Management has conducted habitat restoration within the subunit, in consultation with us. The primary threats to adult plovers, chicks, and nests, are OHV use, and disturbance from equestrians and humans with dogs.

## Subunit CA 4B, Eel River North Spit and Beach, 283 ac (114 ha)

This subunit stretches from Table Bluff on the north to the mouth of the Eel River in the south. The subunit is estimated to be 3.9 miles (6.3 km) long, and is managed by the California Department of Fish and Game, except for five acres of private land. Essential features of the unit include: large areas

of sandy, sparsely vegetated dunes for reproduction and foraging, and areas of sandy beach above and below the high tide line supporting small invertebrates for foraging. Driftwood is an important component of the habitat in this subunit, providing shelter from the wind both for nesting plovers and for invertebrate prey species. The subunit's winter population of plovers is estimated at less than 20 (LeValley, 2004). As many as 11 breeders have been observed during breeding season window surveys, with a breeding population estimated at less than 15 (Colwell, *et al.* 2003). We expect this subunit to eventually support 20 breeding plovers with proper management. Threats include predators, OHVs, and disturbance from equestrians and humans with dogs.

## Subunit CA 4C, Eel River South Spit and Beach, 402 ac (163 ha)

This subunit encompasses the beach segment from the mouth of the Eel River, south to Centerville Road, approximately 4 miles (6.4 km) west of the Town of Ferndale. The subunit is 5 miles (8.3 km) long, 397.1 acres (160.7 ha) are private, and the remaining 4.4 ac (1.8 ha) are managed by Humboldt County. Essential features of the subunit include: large areas of sandy dunes, areas of sandy beach above and below the high tide line, and generally barren to sparsely vegetated terrain. This subunit is capable of supporting 20 breeding plovers. A single nest was found during the 2004 breeding season (McAllister, pers. comm. 2004). The winter population is estimated at under 80 plovers, many of which breed on the Eel River gravel bars (CA 5) (McAllister, pers. comm. 2003, Transou, pers. comm. 2003). Threats include predators, OHVs, and disturbance from equestrians and humans with dogs.

## Subunit CA 4D, Eel River Gravel Bars, 1,193 ac (483 ha)

This subunit is inundated during winter months due to high flows in the Eel River. It is 6.4 miles (10.3 km) from the Town of Fernbridge, upstream to the confluence of the Van Duzen River. The Eel River is contained by levees in this section, and consists of gravel bars and wooded islands. The subunit contains a total of 1,192.8 acres (482.7 ha), of which 176.3 ac (71.3 ha) are owned and managed by Humboldt County, 79.1 ac (32 ha) are under the jurisdiction of the California State Lands Commission, and 937.5 ac (379.4 ha) are privately owned. Essential features of this subunit include: bare open gravel bars comprised of both sand and cobble, which support reproduction and



foraging. The Eel River gravel bars are the most important breeding habitat in California north of San Francisco Bay, and have the highest fledging success rate of any areas from Mendocino County to the Oregon border. This subunit is capable of supporting 40 breeding plovers. Twenty-two breeding birds were recorded in this subunit during recent window surveys (LeValley, pers. comm. 2004). Threats include predators, OHVs, and disturbance from gravel mining and humans with dogs.

CA 5, MacKerricher Beach, 1,048 ac (424 ha)

This unit is approximately 3.5 miles (5.5 km) long. The unit is just south of the Ten Mile River, and approximately 4 miles (6.4 km) north of the City of Fort Bragg. 1,017.2 acres (411.6 ha) are managed by CA State Parks, and 31.2 acres (12.6 ha) are private. Essential features of the unit include: large areas of sandy dunes, areas of sandy beach above and below the high tide line, and generally barren to sparsely vegetated terrain. State Parks has been conducting removal of European beachgrass to improve habitat for the Pacific Coast WSP and other sensitive dune species within the unit. This unit is capable of supporting 20 breeding plovers. The current breeding population is estimated at less than 10 (Colwell, *et al.* 2003). The winter population of plovers is under 45 (Cebula, pers. comm. 2004). Threats to nests, chicks and both wintering and breeding adults include predators and disturbance from equestrians and humans with dogs.

CA 6, Manchester Beach, 341 ac (138 ha)

The Manchester Beach unit is approximately 3.5 miles (5.7 km) in length. California State Parks manages 336.2 ac (136.1 ha) of the unit, while the remaining 4.8 ac (1.9 ha) are private. Essential features of the unit include: large areas of sandy dunes, areas of sandy beach above and below the high tide line, and generally barren to sparsely vegetated terrain. This unit provides an important wintering site for the region (Service 2001). In 2003, a pair of plovers nested within the unit, and successfully hatched 2 chicks. However, those chicks did not survive (Colwell, *et al.* 2003). The current wintering population is estimated at less than 20 (Cebula, pers. comm. 2004). Threats to nests, chicks and both wintering and breeding adults include predators and disturbance from equestrians and humans with dogs.

CA 7, Dillon Beach, 30 ac (12 ha)

This unit is located at the mouth of Tomales Bay, just south of the town of Dillon Beach. It stretches for about 1.25 mi (2.01 km) north from Sand Point. PCEs provided by the unit include surf-cast debris supporting small invertebrates for foraging, and large stretches of relatively undisturbed, sparsely vegetated sandy beach, both above and below high tide line, for foraging and potentially for nesting. Although nesting has not been noted here, the unit is an important wintering area. One hundred twenty three wintering plovers were counted at this spot during the last winter survey in January 2004 (Page *in litt.* 2004). Other than State lands intermittently exposed below mean high tide, the unit is entirely on private land. Potential threats that may require special management include predators and disturbance by humans and their pets.

CA 8, Pt. Reyes Beach, 462 ac (187 ha)

This unit occupies most of the west-facing beach between Point Reyes and Tomales Point. It is located entirely within the Point Reyes National Seashore, and consists primarily of dune backed beaches. The unit includes the following PCEs essential to plover conservation: sparsely vegetated sandy beach above and below high tide for nesting and foraging, wind-blown sand dunes for nesting and predator avoidance, and tide-cast debris attracting small invertebrates for foraging. It supports both nesting and wintering plovers, and can support 50 breeding birds with proper management. Threats in the area that may require special management include disturbance by humans and pets, and predators (particularly ravens and crows).

CA 9, Limantour Spit, 124 ac (50 ha)

Limantour Spit is a roughly 2.25 mile (4.0 km) sand spit at the north end of Drake's Bay. The unit includes the end of the spit, and contracts to include only the south-facing beach towards the base of the spit. It is completely within the Point Reyes National Seashore. CA 10 can support both nesting and wintering plovers, although nesting has not been documented since 2000 (Page *in litt.* 2003, 2004). Ninety-five wintering plovers were counted at the site during the January 2004 survey (Page *in litt.* 2004). The unit is expected to contribute significantly to plover conservation in the region by providing habitat capable of supporting ten nesting birds. PCEs at the unit include sparsely vegetated beach sand, above and below high tide

for nesting and foraging, and tide-cast debris supporting small invertebrates. Threats that may require special management include disturbance by humans and pets, and nest predators such as crows and ravens.

CA 10, Half Moon Bay, 37 ac (15 ha)

This unit stretches for about 1.25 mi (2.01 km) along Half Moon Bay State Beach, and is entirely within California State Parks land. It includes sandy beach above and below the high tide line for nesting and foraging, and surf-cast debris to attract small invertebrates. Small numbers of breeding birds have been found at the location in the past three surveys, including four breeding birds in the most recent survey, conducted in 2003 (Page *in litt.* 2003). The unit also supports a sizeable winter flock, which was 65 birds in 2004 (Page *in litt.* 2004). We expect the unit to eventually support ten breeding birds in the unit under proper management, which makes it a potentially significant contributor to plover conservation. Potential threats in the area that may require special management include disturbance by humans and pets, and nest predators.

CA 11. Santa Cruz Coast

This unit consists of three relatively small pocket beaches in Santa Cruz County, California. The unit forms an important link between larger breeding beaches to the north and south, such as Half Moon Bay and the Monterey Bay beaches.

Subunit CA 11A, Waddell Creek Beach, 9 ac (4 ha): (Unoccupied Area, Identified for Possible Inclusion)

This subunit includes the mouth of Waddell Creek and is located about 20 mi (32.2 km) north of the city of Santa Cruz. It extends about 0.7 mi (1.1 km) north along the coast from a point about 0.1 mi (0.2 km) south of the creek mouth to a point about 0.6 mi (0.4 km) north of the creek. The area provides several essential habitat features, including wind-blown sand dunes, areas of sandy beach above and below the high tide line with occasional surf-cast wrack supporting small invertebrates (for nesting and foraging) and generally barren to sparsely vegetated terrain (for foraging and predator avoidance). With proper management, and in conjunction with the other two small units proposed for Santa Cruz County (CA 11B and 11C), this subunit can attract additional nesting plovers and thereby facilitate genetic interchange between the larger units at Half Moon Bay (CA 10) and Palm Beach and Moss Landing (CA 12) (see Criterion 3, Methods section,

above). CA 11A encompasses approximately 8.1 ac (3.3 ha) of State land and 1.3 ac (0.5 ha) of private land. Human disturbance is the primary threat to plovers in the subunit that might require special management.

Subunit CA 11B, Scott Creek Beach, 19 ac (8 ha)

This subunit includes the mouths of Scott and Molino creeks and is located about 13 mi (20.9 km) north of the city of Santa Cruz. It extends about 0.7 mi (1.1 km) north along the coast from the southern end of the sandy beach (0.3 mi (0.5 km) south of Molino Creek) to a point about 0.1 mi (0.4 km) north of Scott Creek. Recent surveys have found from 12 (in 2000) to 1 (in 2004) nesting plovers occupying the area (Page *in litt.* 2004), and it is an important snowy plover wintering area, with up to 114 birds each winter (Page *in litt.* 2004). This subunit is essential to the conservation of the species because with proper management, and in conjunction with the other two small units proposed for Santa Cruz County (CA 11B and 11C), it can attract additional nesting plovers and thereby facilitate genetic interchange between the larger units at Half Moon Bay (CA 10) and Palm Beach and Moss Landing (CA 12) (see Criterion 3, Methods section, above). The subunit includes the following habitat features essential to the species: Areas of sandy beach above and below the high tide line with occasional surf-cast wrack supporting small invertebrates (for nesting and foraging) and generally barren to sparsely vegetated terrain (for foraging and predator avoidance). CA 13 is situated entirely on private land. Human disturbance and predators are the primary threats to snowy plovers in this subunit that may require special management.

Subunit CA 11C, Wilder Creek Beach, 10 ac (4 ha)

This subunit is located at the mouth of Laguna Creek and is about 8 mi (12.9 km) north of the city of Santa Cruz. It extends about 0.5 mi (0.3 km) north along the coast from the southern end of the sandy beach to the northern end of the beach across the mouth of Laguna Creek. Five nesting plovers were found in the area in 2000 (Page *in litt.* 2004). The subunit includes the following essential features: Areas of sandy beach above and below the high tide line with occasional surf-cast wrack supporting small invertebrates (for nesting and foraging) and generally barren to sparsely vegetated terrain (for foraging and predator avoidance). CA 11C is capable of supporting sixteen breeding birds under proper management. The

subunit is entirely situated on State-owned land. Disturbance from humans and pets, development, OHV use, pets, and predators are the primary threats to snowy plovers in this subunit that may require special management.

CA 12. Monterey Bay Beaches

This unit includes three subunits within Monterey Bay, California, including parts of Santa Cruz and Monterey Counties. Two of the subunits are stretches of beach, while the third (CA 12B) includes a wetland adjacent to the shore.

Subunit CA 12A, Jetty Rd to Aptos, 272 ac (110 ha)

This subunit is about 5 mi (8 km) west of the city of Watsonville and includes Sunset and Zmudowski State beaches. The mouth of the Pajaro River is located near the center of the unit, and Elkhorn Slough is at the south end of the unit. It extends about 8.5 mi (13.7 km) north along the coast from Elkhorn Slough to Zils Road. This is an important snowy plover nesting area, with 8–38 birds nesting each year, and is also an important wintering area, with up to 250 birds each winter (Page *in litt.* 2004). This subunit is capable of supporting 54 breeding birds under proper management. It includes the following features essential to the species: Areas of sandy beach above and below the high tide line with occasional surf-cast wrack supporting small invertebrates (for nesting and foraging) and generally barren to sparsely vegetated terrain (for foraging and predator avoidance). CA 12A exists entirely on State lands. Human disturbance, development, horses, OHV use, pets, predators, and dune-stabilizing vegetation such as European beachgrass are the primary threats to snowy plovers in this subunit that may require special management.

Subunit CA 12B, Elkhorn Slough Mudflats, 281 ac (114 ha)

CA 12B is about 3.5 mi (5.6 km) north of the city of Castroville along the north side of Elkhorn Slough east of Highway 1. It extends about 1 mi (1.6 km) along the north shore of Elkhorn Slough east of Highway 1 and about 0.5 mi (0.8 km) north from Elkhorn Slough to Bennett Slough. This is an important nesting area, with 6–47 birds nesting each year, and is also an important wintering area, with up to 95 birds each winter (Page *in litt.* 2004, Stenzel *in litt.* 2004). This subunit is capable of supporting 80 breeding birds under proper management. It includes the following features essential to the species: areas of sandy beach above and below the high

tide line with occasional surf-cast wrack supporting small invertebrates (for nesting and foraging) and generally barren to sparsely vegetated terrain (for foraging and predator avoidance). The subunit is situated entirely on State-owned land. Human disturbance, development, horses, OHV use, pets, predators, and vegetation are the primary threats to snowy plovers in this subunit that may require special management.

Subunit CA 12C, Monterey to Moss Landing, 803 ac (325 ha)

CA 12C includes the beaches along the southern half of Monterey Bay from the city of Monterey at the south end of the subunit to Moss Landing and the mouth of Elkhorn Slough at the north end of the unit. The mouth of the Salinas River is located near the center of the unit. It extends about 15 mi (24.2 km) north along the coast from Monterey to Moss Landing. This is an important nesting area, with 61 to 104 nesting birds each year, and is also an important snowy plover wintering area, with up to 190 birds each winter (Page *in litt.* 2004, Stenzel *in litt.* 2004). This subunit is capable of supporting 162 breeding birds under proper management. It includes the following habitat features essential to the species: areas of sandy beach above and below the high tide line with occasional surf-cast wrack supporting small invertebrates (for nesting and foraging) and generally barren to sparsely vegetated terrain (for foraging and predator avoidance). CA 12C includes approximately 792.2 ac (320.6 ha) of State and local lands, and 10.4 ac (4.2 ha) of Federal land. It would include an additional 142 ac (57.5 ha) of Federal land in the Salinas River National Wildlife Refuge, but we are excluding that area based on the existence of a Comprehensive Conservation Plan for Salinas River NWR that has undergone section 7 consultation (see Exclusions section, below). Human disturbance, development, horses, OHV use, pets, predators, and habitat changes resulting from exotic vegetation are the primary threats to snowy plovers in this subunit that may require special management.

CA 13, Point Sur Beach, 61 ac (25 ha)

This unit is about 17 mi (27.4 km) south of the city of Monterey and immediately north of Point Sur. It extends about 1 mi (1.6 km) north along the coast from Point Sur. This is an important snowy plover wintering area, with up to 65 birds each winter (Page *in litt.* 2004). A few nesting pairs (1–2) also occupy this unit each year (Stenzel *in litt.* 2004). This unit is capable of

supporting 20 breeding birds under proper management. It includes the following features essential to the species: wind-blown sand dunes, areas of sandy beach above and below the high tide line with occasional surf-cast wrack supporting small invertebrates (for nesting and foraging) and generally barren to sparsely vegetated terrain (for foraging and predator avoidance). This unit is situated entirely on State-owned land. Human disturbance and habitat changes due to exotic vegetation are the primary threats to snowy plovers in this unit that may require special management.

CA 14, San Simeon Beach, 28 ac (11 ha)

CA 14, which is entirely within San Simeon State Beach, is located about 5 mi (8 km) south of San Simeon. It extends about 0.9 mi (1.5 km) north along the coast from a point opposite the intersection of Highway 1 and Moonstone Beach Drive to the northwestern corner of San Simeon State Beach. This is an important snowy plover wintering area, supporting 143 birds as documented by the most recent winter survey (Page *in litt.* 2004). The unit also supports a small number of nesting plovers: one nest hatched three chicks in 2002, and one nest was initiated but lost to predators in 2003 (Orr *in litt.* 2004). This unit includes the following features essential to the species: areas of sandy beach above and below the high tide line with occasional surf-cast wrack supporting small invertebrates (for nesting and foraging) and generally barren to sparsely vegetated terrain (for foraging and predator avoidance). Human disturbance, pets, and dune stabilizing vegetation are the primary threats to snowy plovers in this unit that may require special management.

CA 15, Estero Bay Beaches

This unit includes three subunits in Estero Bay, California, San Luis Obispo County. The subunits include a pocket beach at the north end of the bay (15A), and the beaches north and south of Morro Rock (15B and 15C), in the vicinity of Morro Bay, California.

Subunit CA 15A, Villa Creek Beach, 17 ac (7 ha)

The Villa Creek subunit is about 3.5 mi (5.6 km) northwest of the city of Cayucos, and is managed by the California Department of Parks and Recreation. Villa Creek Beach is located near the northern boundary of the Estero Bluffs property. It extends 0.3 mi (0.5 km) northwest along the beach from an unnamed headland 1.4 mi (2.3 km) north of Point Cayucos to an unnamed

headland northwest of Villa Creek, and inland (north) for 0.25 mi (0.4 km) along Villa Creek. This subunit is an important breeding area that supports between 21 and 38 adults during the breeding season, and up to 31 nests (Larson 2003a). This area is also an important wintering site that supports up to 30 wintering birds (George 2001). It includes the following features essential to the species: Areas of sandy beach above and below the high tide line with occasional surf-cast wrack supporting small invertebrates (for nesting and foraging) and generally barren to sparsely vegetated terrain (for foraging and predator avoidance). Threats that may require special management include human disturbance, pets, horses, and predators.

Subunit CA 15B, Atascadero Beach, 144 ac (58 ha)

This subunit is located at Morro Strand State Beach near the city of Morro Bay, and is managed entirely by the California Department of Parks and Recreation. It extends about 2.1 mi (3.4 km) north along the beach from Morro Creek to an unnamed rocky outcrop opposite the end of Yerba Buena Street at the north end of Morro Bay. This is an important breeding area supporting up to 40 nests each year (Larson 2003b). CA 15B is also an important wintering area, with up to 152 wintering birds (Page *in litt.* 2004). This subunit is capable of supporting 40 breeding birds under proper management. It includes the following features essential to the species: Areas of sandy beach above and below the high tide line with occasional surf-cast wrack supporting small invertebrates (for nesting and foraging) and generally barren to sparsely vegetated terrain (for foraging and predator avoidance). Human disturbance, pets, and predators are the primary threats to plovers in this subunit that may require special management.

Subunit CA 15C, Morro Bay Beach, 611 ac (247 ha)

This subunit is located at Morro Bay near Morro Rock. The majority of the beach is managed by the California Department of Parks and Recreation, while the northern tip of the sand spit is owned by the city of Morro Bay. It extends 6.9 mi (11.1 km) north along the beach from a rocky outcrop about 0.2 mi (0.3 km) north of Hazard Canyon to the northern tip of the sand spit. This is an important breeding area that supports more than 100 breeding adults (Page *in litt.* 2003). This is also an important wintering area that supports up to 148 wintering birds (Page *in litt.* 2004). This

subunit is capable of supporting 110 breeding birds under proper management. It includes the following features essential to the species: wind-blown sand dunes, areas of sandy beach above and below the high tide line with occasional surf-cast wrack supporting small invertebrates (for nesting and foraging) and generally barren to sparsely vegetated terrain (for foraging and predator avoidance). Human disturbance, horses, pets, predators, and dune-stabilizing vegetation are the primary threats to plovers in this subunit that may require special management.

CA 16, Pismo Beach/ Nipomo Dunes, 1,269 ac (513 ha)

This unit consists of two larger areas connected by a narrow strip of land below the mean high water (MHW) line. The narrow strip is all that remains of that part of the unit after the exclusion of Guadalupe/Nipomo Dunes National Wildlife Refuge (see Exclusions section, below). The unit is located south of Grover City and Oceano and includes areas of Rancho Guadalupe County Park, managed by Santa Barbara County; and the Guadalupe Oil Field, the Oso Flaco Natural Area and Oceano Dunes Off-road Vehicular Recreation Area, managed by the California Department of Parks and Recreation. The unit extends about 12 mi (19 km) north along the beach from a point about 0.4 mi (0.6 km) north of Mussel Point to a point on the north side of Arroyo Grande Creek at the south end of Strand Way in Oceano. This is an important breeding area capable of supporting between 123 and 246 breeding adults and over 300 wintering birds (George 2001). This unit is capable of supporting 350 breeding birds under proper management. It includes the following features essential to the species: Wind-blown sand dunes, areas of sandy beach above and below the high tide line with occasional surf-cast wrack supporting small invertebrates (for nesting and foraging) and generally barren to sparsely vegetated terrain (for foraging and predator avoidance). This unit includes approximately 769.7 ac (311.5 ha) of State and local land, and 498.9 ac (201.9 ha) of private land. CA State Parks and Santa Barbara County Parks are in the early stages of drafting separate HCPs for lands they manage within the unit. If completed by the time of the final critical habitat designation, these HCPs might provide a basis for further exclusions. Potential threats that may require special management include direct human disturbance, OHVs, horses, pets, and predators.

## CA 17. Vandenberg

This unit is located on Vandenberg Air Force Base in Santa Barbara County, California. It includes two subunits.

Subunit CA 17A, Vandenberg North, 626 ac (253 ha)

This subunit is located on Vandenberg Air Force Base about 14 mi (22.5 km) southwest of the city of Santa Maria. It extends about 7.9 mi (12.7 km) north along the coast from a point along the beach 0.5 mi (0.8 km) south of Purisima Point to an unnamed creek or canyon 0.6 mi (1 km) south of Lion's Head, an area of rocky outcrops. This is an important breeding area that supports between 90 and 145 breeding adults (SRS 2003). This is also an important wintering area with up to 265 wintering birds (Page *in litt.* 2004). This subunit is capable of supporting 250 breeding birds under proper management. It includes the following features essential to the species: Wind-blown sand dunes, areas of sandy beach above and below the high tide line with occasional surf-cast wrack supporting small invertebrates (for nesting and foraging) and generally barren to sparsely vegetated terrain (for foraging and predator avoidance). The subunit is entirely owned by the U.S. Air Force. Disturbance of nesting by humans and pets, military activities, predators, and the spread of dense vegetation are the primary threats to plovers in this subunit that may require special management.

Subunit CA 17B, Vandenberg South, 304 ac (123 ha)

This subunit is located on Vandenberg Air Force Base about 9 mi (14.5 km) west of the city of Lompoc, and is entirely on U.S. Air Force land. It extends about 4.6 mi (7.4 km) north along the coast from an unnamed rocky outcrop 0.2 mi (0.3 km) north of Cañada la Honda Creek to the first rock outcropping along the beach north of the Santa Ynez River (0.8 mi (0.3 km) north of the river). This is an important breeding area that supports between 10 and 97 breeding adults (SRS 2003). This is also an important wintering area with up to 233 wintering birds (Page *in litt.* 2004). This subunit is capable of supporting 150 breeding birds under proper management. It includes the following features essential to the species: Wind-blown sand dunes, areas of sandy beach above and below the high tide line with occasional surf-cast wrack supporting small invertebrates (for nesting and foraging) and generally barren to sparsely vegetated terrain (for foraging and predator avoidance).

Human disturbance, military activities, pets, predators, and the spread of dense-growing vegetation are the primary threats to plovers in this subunit that may require special management.

CA 18, Devereaux Beach, 36 ac (15 ha)

This unit is situated entirely on State and local land at Coal Oil Point, about 7 mi (11.3 km) west along the coast from the city of Santa Barbara. It extends about 3.1 mi (1.9 km) north along the coast from the western boundary of Isla Vista County Park to a point along the beach opposite the end of Santa Barbara Shores Drive. In recent years, up to 18 breeding plovers have occupied this unit (Sandoval 2004). This unit is also an important wintering area; three hundred and sixty birds were found in the area in the most recent winter survey (Page *in litt.* 2004). The unit includes the following features essential to the species: Areas of sandy beach above and below the high tide line with occasional surf-cast wrack supporting small invertebrates (for nesting and foraging) and generally barren to sparsely vegetated terrain (for foraging and predator avoidance). Disturbance by humans and pets is the primary threat to snowy plovers in this unit that may require special management.

CA 19. Oxnard Lowlands

This unit includes four subunits near the city of Oxnard in Ventura County, California. This is an important snowy plover breeding location for this region of the coast, as the next concentration of nesting snowy plovers to the south is located on Camp Pendleton Marine Corps Base about 100 mi (160 km) away.

Subunit CA 19A, Mandalay Beach to Santa Clara River, 350 ac (142 ha)

This subunit is located near the city of Oxnard. It extends about 6.1 mi (9.8 km) north along the coast from the north jetty of Channel Islands Harbor to a point about 0.5 mi (0.8 km) north of the Santa Clara River mouth. This is an important snowy plover nesting area, with 9 to 70 birds nesting each year and is also an important wintering area for the plover, with up to 33 birds each winter (Page *in litt.* 2004). This subunit is capable of supporting 64 breeding birds under proper management. It includes the following features essential to the species: Wind-blown sand dunes, areas of sandy beach above and below the high tide line with occasional surf-cast wrack supporting small invertebrates (for nesting and foraging) and generally barren to sparsely vegetated terrain (for foraging and predator avoidance). This subunit includes approximately 104.5 ac (42.3

ha) of private land. The remaining 245.3 ac (99.3 ha) belongs to State or local agencies. Potential threats that may require special management include direct human disturbance, development, pets, and dune-stabilizing vegetation.

Subunit CA 19B, Ormond Beach, 203 ac (82 ha)

This subunit is located on State lands near the cities of Port Hueneme and Oxnard. It extends about 2.9 mi (4.7 km) northwest along the coast from Arnold Road and the boundary of the Navy Base Ventura County, Point Mugu (NBVC) to a point about 0.5 mi (0.8 km) east of the south jetty of Port Hueneme. This is an important snowy plover nesting area for this region of the coast, as the next concentration of nesting snowy plovers to the south (other than the adjacent subunit CA 19C) is located on Camp Pendleton Marine Corps Base about 100 mi (160 km). The number of birds nesting within this subunit has varied from about 20 to 34 per year (Stenzel *in litt.* 2004). CA 19B is also an important wintering area for the plover, with up to 123 birds each winter (Page *in litt.* 2004). This subunit is capable of supporting 50 breeding birds under proper management. It includes the following features essential to the species: Wind-blown sand dunes, areas of sandy beach above and below the high tide line with occasional surf-cast wrack supporting small invertebrates (for nesting and foraging) and generally barren to sparsely vegetated terrain (for foraging and predator avoidance). Although this subunit is contiguous with CA 19C to the southeast, we have divided the area into two subunits because the beaches within CA 19C are managed by the NBVC. Disturbance from humans and pets is the primary threat that may require special management for snowy plovers in this subunit.

Subunit CA 19C, Mugu Lagoon North, 321 ac (130 ha)

This subunit begins immediately adjacent to subunit CA 19B, at the northern coastal boundary of Navy Base Ventura County, Pt Mugu (NBVC), and extends about 3.3 mi (5.3 km) southeast. Surveys have generally provided information for the entire "Mugu Lagoon Beach" area, so plover population information provided here for CA 19C applies to CA 19D as well. The number of birds nesting in the area has varied from about 40 to 80 per year (Stenzel *in litt.* 2004). CA 19C and 19D are also important wintering areas for the plover, with up to 62 birds each winter (Page *in litt.* 2004). CA 19C and 19D are capable of supporting 110

breeding birds under proper management. They include the following features essential to the species: Areas of sandy beach above and below the high tide line with occasional surf-cast wrack supporting small invertebrates (for nesting and foraging) and generally barren to sparsely vegetated terrain (for foraging and predator avoidance). CA 19C encompasses approximately 321 ac (130 ha), all of which are owned by the U.S. Air Force. CA 29C is located entirely within the boundaries of the NBVC. Important threats that may require special management include direct human disturbance, military activities, and predators.

Subunit CA 19D, Mugu Lagoon South, 87 ac (35 ha)

This subunit includes the southern spit of land marking the coastal boundary of Mugu Lagoon, and extends southeast along the coast for about 1.7 mi (2.7 km). It is almost entirely on Naval Base Ventura County, Pt Mugu (NBVC) property, except for 18.3 ac (7.4 ha) at its southern end, which extends into Pt Mugu State Park, owned by the California Department of Parks and Recreation. Because surveys have commonly treated CA 19C and 19D as a single unit, plover population information for both subunits is provided in the narrative for CA 19C above.

CA 20, Zuma Beach, 68 ac (28 ha)

This unit is located about 8 mi (3.2 km) west of the city of Malibu. It extends about 2.8 mi (4.5 km) north along the coast from the north side of Point Dume to the base of Trancas Canyon. This unit is an important wintering location for the plover, with 130 birds surveyed in January, 2004 (Page *in litt.* 2004). It includes the following essential features: areas of sandy beach above and below the high tide line with occasional surf-cast wrack supporting small invertebrates (for foraging) and generally barren to sparsely vegetated terrain (for foraging and predator avoidance). This unit encompasses approximately 60 ac (24.3 ha) of CA State Parks lands, and 8 ac (3.2 ha) of privately owned land. Direct human disturbance, development, horses, and pets are the primary threats to snowy plovers in this unit that may require special management.

CA 21, Santa Monica Bay

This unit includes four subunits in Santa Monica Bay, Los Angeles County, California.

Subunit CA 21A, Santa Monica Beach, 25 ac (10 ha)

This subunit is on the west coast of Los Angeles County, immediately west of the City of Santa Monica. It stretches roughly 0.9 miles (1.4 km) from Montana Avenue to the mouth of Santa Monica Canyon. This location includes the following essential habitat features: A wide sandy beach with occasional surf-cast wrack supporting small invertebrates. It supported a wintering flock of 32 plovers in 2004 (Page *in litt.* 2004), and annually supports a significant wintering flock of plovers in a location with high quality breeding habitat. The subunit consists of 25 ac (10 ha), of which 6 ac (2.4 ha) are owned by the CA State Parks, and 19 acres (7.7 ha) are private. The primary threats that may require special management in this subunit are disturbance from human recreational use, as well as beach raking, which removes the wrack line and reduces food resources.

Subunit CA 21B, Dockweiler North, 43 ac (17 ha)

This subunit is located immediately west of the Los Angeles International Airport, south of Ballona Creek and west of the El Segundo Dunes. It stretches roughly 0.5 miles (0.8 km) centered at Sandpiper Street. Essential habitat features (PCEs) in the subunit include a wide sandy beach with occasional surf-cast wrack supporting small invertebrates. This subunit, in conjunction with subunits 21C and 21D, annually supports a significant wintering flock of plovers in a location with high quality breeding habitat (Page *in litt.* 2004). It is entirely owned by the California Department of Parks and Recreation. The primary threats that may require special management are disturbance from human recreational use, as well as beach raking, which removes the wrack line and reduces food resources.

Subunit CA 21C, Dockweiler South, 24 ac (10 ha)

This subunit is located immediately west of the City of El Segundo and the Hyperion Wastewater Treatment Plant. It stretches roughly 0.7 miles (1.1 km) centered at Grand Avenue. This location includes the following essential habitat features: A wide sandy beach with occasional surf-cast wrack supporting small invertebrates. In conjunction with subunits 21B and 21D it annually supports a significant wintering flock of plovers in a location with high quality breeding habitat (Page *in litt.* 2004). This subunit consists of 24 acres (9.7 ha), of which 13 acres (5.3 ha) are owned by

the California Department of Parks and Recreation, and 11 acres (4.5 ha) are privately owned. The primary threats that may require special management in this subunit are disturbance from human recreational use, as well as beach raking, which removes the wrack line and reduces food resources.

Subunit CA 21D, Hermosa State Beach, 10 ac (4 ha)

This subunit is located immediately west of the City of Hermosa Beach. This subunit stretches roughly 0.25 miles (0.4 km) from 2nd Street to 6th Street. This location includes a wide sandy beach with occasional surf-cast wrack supporting small invertebrates. This location contained a wintering flock of 33 plovers in 2004, and 43 in 2003 (Clark *in litt.* 2004; Page *in litt.* 2004). In conjunction with subunits 21B and 21C it annually supports a large and significant wintering flock of plovers. This subunit consists of 10 acres (4 ha), all of which are owned by the California Department of Parks and Recreation. The primary threats that may require special management in this subunit are disturbance from human recreational use, as well as beach raking, which removes the wrack line and reduces food resources.

CA 22, Bolsa Chica Area

This unit includes two subunits in the vicinity of the Bolsa Chica wetlands in Orange County, California. The first of these subunits includes essential habitat in the wetlands themselves, while the second comprises a small area of beach immediately adjacent.

Subunit CA 22A, Bolsa Chica Reserve, 591 ac (239 ha)

This subunit is located immediately west of the City of Huntington Beach and east of the Pacific Coast Highway. It contains the following essential habitat features: Tidally influenced estuarine mud flats supporting small invertebrates, and seasonally dry ponds that provide nesting and foraging habitat for snowy plovers. This location supported 31 breeding adult plovers in 2003, and 38 in 2002 (Page *in litt.* 2003). This subunit annually supports one of the largest breeding populations of snowy plovers in the region, and contributes significantly to the conservation goal for the region by providing habitat capable of supporting 50 breeding birds under proper management. This subunit consists of 591 acres (239.2 ha), all of which are privately owned. The primary threat that may require special management in this subunit is egg and chick predation. This site, an abandoned oil field, is

planned to undergo significant reconstruction and restoration, which should greatly increase the available breeding habitat for snowy plovers

Subunit CA 22B, Huntington State Beach, 4 ac (2 ha)

This subunit is located immediately west of the City of Huntington Beach and south of CA 22A. It stretches roughly 0.26 miles (0.4 km) from Seapoint Avenue north to the future lagoon mouth channel into Bolsa Chica Ecological Reserve. This location includes the following essential habitat features: a wide sandy beach with occasional surf-cast wrack supporting small invertebrates. The subunit contained a wintering flock of 11 plovers in 2004 (Page *in litt.* 2004), and annually supports a significant wintering flock of plovers in a location with high quality breeding habitat. This subunit consists of 12 ac (4.9 ha) owned by the California Department of Parks and Recreation and 1 ac (0.4 ha) that is privately owned. The primary threats that may require special management in this subunit are disturbance from human recreational use, as well as beach raking, which removes the wrack line and reduces food resources.

CA 23, Santa Ana River Mouth, 13 ac (5 ha)

This unit is on the west coast of Orange County, immediately west of the City of Huntington Beach. It includes the following essential habitat features: a wide sandy beach with surf-cast wrack supporting small invertebrates, and tidally influenced estuarine mud flats that provide nesting and foraging habitat for snowy plovers. This site contains a large breeding colony of California Least Terns and has also supported breeding snowy plovers. This unit is the only beach front location in Orange County that supports adult plovers through the breeding season (see Criterion 3 above). The entire unit is owned by the California Department of Parks and Recreation. The primary threat that may require special management in this unit is disturbance from human recreational use.

CA 24, San Onofre Beach, 58 ac (24 ha)

This unit is on the west coast of San Diego County, at the northwest corner of Marine Corps Base Camp Pendleton. This unit stretches roughly 1.4 miles (2.2 km) from the mouth of San Mateo Creek to the mouth of San Onofre Creek and includes the following essential habitat features: a wide sandy beach with occasional surf-cast wrack supporting small invertebrates. This location contained a wintering flock of

14 plovers in January, 2004, with 60 recorded in January, 2003 (Clark *in litt.* 2004, Page *in litt.* 2004). This unit annually supports a large and significant wintering flock of plovers (Page *in litt.* 2004) and contributes significantly to the conservation goal for the region by providing habitat capable of supporting 15 breeding birds under proper management. The unit consists of 58 acres (23.5 ha), of which 46 ac (18.6 ha) are owned by the California Department of Parks and Recreation, 3 ac (1.2 ha) are owned by the Department of Defense, and 9 ac (3.6 ha) are privately owned. The primary threat that may require special management in this unit is disturbance from human recreational use.

CA 25 (A, B and C), Batiquitos Lagoon, 65 ac (26 ha)

This unit is on the west coast of San Diego County, between the cities of Carlsbad and Encinitas. This unit includes three subunits that make up the breeding islands created for nesting seabirds and shorebirds during restoration of the lagoon in 1996. Also included is a portion of South Carlsbad State Beach that supports a significant wintering population of plovers. This unit includes the following essential habitat features: sandy beaches and tidally influenced estuarine mud flats with tide-cast organic debris supporting small invertebrates. This location contained a wintering flock of 82 plovers in 2004 (Page *in litt.* 2004). Nineteen breeding adults were recorded during the 2003 window survey (Page *in litt.* 2003). This unit annually supports a large and significant wintering flock of plovers, and contributes significantly to the conservation goal for the region by providing habitat capable of supporting 70 breeding birds under proper management. This unit consists of a total of 65 acres (26 ha), of which 9 acres (4 ha) are owned by the California Department of Parks and Recreation, 21 acres (8 ha) are owned by the California Department of Fish and Game, and 35 acres (14 ha) are non-public. The primary threats that may require special management in this unit are egg and chick predation, as well as disturbance from human recreational use at South Carlsbad State Beach.

CA 26, Los Penasquitos, 24 ac (10 ha)

This unit is located in San Diego County, immediately south of the City of Del Mar. It includes a portion of Torrey Pines State Beach that supports a significant wintering population of plovers. Essential habitat features supported by the unit include a wide sandy beach with occasional surf-cast

wrack supporting small invertebrates, as well as tidally influenced estuarine mud flats with tide-cast organic debris. This location contained a wintering flock of 21 plovers in 2004, and 39 in 2003 (Clark *in litt.* 2004, Page *in litt.* 2004). This unit annually supports a large and significant wintering flock of plovers, and contributes significantly to the conservation goal for the region by providing habitat capable of supporting ten breeding birds under proper management. The unit consists of 24 acres (10 ha), all of which are owned by the California Department of Parks and Recreation. The primary threat that may require special management in this unit is disturbance from human recreational use.

CA 27, South San Diego Beaches

This unit includes six subunits in south San Diego County, California. Four of these subunits are on the Pacific coast, extending southwards from the mouth of San Diego Bay. The remaining two subunits (27D and 27E) are located in the San Diego Bay itself while a sixth subunit (27E) is in San Diego Bay itself.

Subunits CA 27A and CA 27B, North Island/Coronado, 185 ac (75 ha)

These two subunits are separated by a narrow stream outlet and will be considered together here. They are located immediately west of the City of Coronado. The two subunits stretch roughly 2.5 miles (4 km) from Zuniga Point to the south end of Coronado City Beach. They include the following essential habitat features: A wide sandy beach with occasional surf-cast wrack supporting small invertebrates, as well as wind-blown sand in dune systems immediately inland of the active beach face. This location contained a wintering flock of 37 plovers in January, 2004 (Page *in litt.* 2004). Biologists also recorded 17 breeding adults during the 2003 window survey (Page *in litt.* 2003). These subunits annually support a large and significant wintering flock of plovers, and contribute significantly to the conservation goal for the region by providing habitat capable of supporting 20 breeding birds under proper management. CA 27A consists of 117 ac (47 ha), while CA 27B is comprised of 68 ac (28 ha). Both subunits are entirely on land owned by the Department of Defense. The primary threats that may require special management in these subunits are disturbance from human recreational use and military activities, as well as beach raking, which removes the wrack line and reduces food resources.

Subunit CA 27C, Silver Strand, 174 ac (70 ha)

This subunit is located immediately south of the City of Coronado. It stretches roughly 3.5 miles (5.6 km) along the Pacific coast side of the Silver Strand, from the southern end of NAB Coronado to the south end of the Naval Radio Receiving Facility. The essential habitat features of this subunit include a wide sandy beach with occasional surf-cast wrack supporting small invertebrates, as well as wind-blown sand in dune systems immediately inland of the active beach face. In conjunction with excluded habitat on NAB Coronado (see Exclusions, below) this location contained wintering flocks totaling 56 plovers in 2004 (Page *in litt.* 2004). Fifty eight breeding adults were recorded during the 2003 window survey (Page *in litt.* 2003). This subunit annually supports a large and significant wintering flock of plovers (Page *in litt.* 2004), and will contribute significantly to the recovery goal for the region by supporting 65 breeding birds under proper management. The subunit consists of 174 ac (70 ha), of which 75 ac (30 ha) are owned by the U.S. Department of Defense (Navy), 96 ac (39 ha) are owned by the California Department of Parks and Recreation, and 3 ac (1 ha) are non-public land. The primary threat that may require special management in this unit is disturbance from human recreational use and military training, as well as egg and chick predation.

Subunit CA 27D, Delta Beach, 85 ac (35 ha)

This subunit is located immediately south of the City of Coronado on the west side of San Diego Bay. It includes the following essential habitat features: sandy beaches above and below mean high tide line and tidally influenced estuarine mud flats with tide-cast organic debris that provide nesting and foraging habitat for snowy plovers. This location contained a wintering flock of 32 plovers in 2004 (Page *in litt.* 2004). It annually supports a large and significant wintering flock of plovers, and contributes significantly to the conservation goal for the region by providing habitat capable of supporting 10 breeding birds under proper management. This subunit consists of 85.3 acres (34.5 ha), all of which are owned by the Department of Defense. The primary threat that may require special management in this subunit is egg and chick predation.

Subunit CA 27E, Sweetwater National Wildlife Refuge, 128 ac (52 ha)

This subunit is located immediately west of the City of Chula Vista on the east side of San Diego Bay. It includes the following essential habitat features: Sandy beaches above and below mean high tide line and tidally influenced estuarine mud flats that provide nesting and foraging habitat for snowy plovers. This location contained a wintering flock of 36 plovers in 2004 (Page *in litt.* 2004). It annually supports a large and significant wintering flock of plovers, and contributes significantly to the conservation goal for the region by providing habitat capable of supporting 20 breeding birds under proper management. This subunit consists of 128 ac (51.8 ha), of which 77 ac (31.2 ha) are owned by the U.S. Fish and Wildlife Service, and 51 ac (20.6 ha) are privately owned. The primary threat that may require special management in this subunit is egg and chick predation.

Subunit CA 27F, Tijuana River Beach, 182 ac (74 ha)

This subunit is located immediately south of the City of Imperial Beach. It stretches roughly 2.3 miles (3.7 km) from the end of Seacoast Drive to the U.S./Mexico border. This location includes the following essential habitat features: A wide sandy beach with occasional surf-cast wrack supporting small invertebrates, as well as tidally influenced estuarine mud flats with tide-cast organic debris supporting small invertebrates for foraging. This subunit contained wintering flocks totaling 93 plovers in 2004 (Page *in litt.* 2004). It also supported at least 12 breeding adults in 2003, as indicated by the 2003 window survey (Page *in litt.* 2003). This subunit annually supports a large and significant wintering flock of plovers, and contributes significantly to the conservation goal for the region by providing habitat capable of supporting 40 breeding birds under proper management. The subunit is 182.4 ac (73.8 ha), of which 76 acres (30.8 ha) are owned by the California Department of Parks and Recreation, 83 acres (34 ha) are owned by the U.S. Fish and Wildlife Service, 22 acres (8.9 ha) are non-public, and 1.4 acres (0.5 ha) are owned by the Department of Defense. The primary threats that may require special management in this unit are disturbance from human recreational use and predation of chicks and eggs.

#### **Effects of Critical Habitat Designation**

##### *Section 7 Consultation*

The regulatory effects of a critical habitat designation under the Act are

triggered through the provisions of section 7, which applies only to activities conducted, authorized, or funded by a Federal agency (Federal actions). Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR 402. Individuals, organizations, States, local governments, and other non-Federal entities are affected by the designation of critical habitat only if their actions occur on Federal lands, require a Federal permit, license, or other authorization, or involve Federal funding.

Section 7(a)(2) of the Act requires Federal agencies, including the Service, to insure that their actions are not likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of designated critical habitat. This requirement is met through section 7 consultation under the Act. Our regulations define "jeopardize the continued existence of" as to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species (50 CFR 402.02). "Destruction or adverse modification of designated critical habitat" is defined as a direct or indirect alteration that appreciably diminishes the value of the critical habitat for both the survival and recovery of the species (50 CFR 402.02). Such alterations include, but are not limited to, adverse changes to the physical or biological features, *i.e.*, the primary constituent elements, that were the basis for determining the habitat to be critical. We are currently reviewing the regulatory definition of adverse modification in relation to the conservation of the species.

Section 7(a)(4) of the Act requires Federal agencies to confer with us on any action that is likely to jeopardize the continued existence of a proposed species or result in destruction or adverse modification of proposed critical habitat. Conference reports provide conservation recommendations to assist Federal agencies in eliminating conflicts that may be caused by their proposed actions. The conservation measures in a conference report are advisory.

We may issue a formal conference report, if requested by the Federal action agency. Formal conference reports include an opinion that is prepared according to 50 CFR 402.14, as if the species was listed or critical habitat designated. We may adopt the formal



conference report as the biological opinion when the species is listed or critical habitat designated, if no substantial new information or changes in the action alter the content of the opinion (50 CFR 402.10(d)).

If a species is listed or critical habitat is designated, section 7(a)(2) of the Act requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of such a species or to destroy or adversely modify its critical habitat. If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency (action agency) must enter into consultation with us. Through this consultation, the Federal action agency would ensure that the permitted actions do not destroy or adversely modify critical habitat.

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

Regulations at 50 CFR 402.16 require Federal agencies to reinstate consultation on previously reviewed actions under certain circumstances, including instances where critical habitat is subsequently designated and the Federal agency has retained discretionary involvement or control over the action or such discretionary involvement or control is authorized by law. Consequently, some Federal agencies may request reinstatement of consultation or a conference with us on actions for which formal consultation has been completed, if those actions may affect designated critical habitat, or adversely modify or destroy proposed critical habitat.

Federal activities that may affect the Pacific Coast WSP or its critical habitat will require consultation under section 7. Activities on private, State, or county lands, or lands under local jurisdictions requiring a permit from a Federal agency, such as Federal Highway Administration or Federal Emergency Management Act funding, or a permit from the Corps under section 404 of the Clean Water Act, will continue to be subject to the section 7 consultation process. Federal actions not affecting listed species or critical habitat, and actions on non-Federal lands that are not federally funded, authorized, or permitted, do not require section 7 consultations.

Section 4(b)(8) of the Act requires us to evaluate briefly and describe, in any proposed or final regulation that designates critical habitat, those activities involving a Federal action that may adversely modify such habitat or that may be affected by such designation. Activities that may destroy or adversely modify critical habitat include those that alter the primary constituent elements to an extent that the value of critical habitat for both the survival and recovery of Pacific Coast WSP is appreciably reduced. We note that such activities also may jeopardize the continued existence of the species.

Activities that, when carried out, funded, or authorized by a Federal agency, may adversely affect critical habitat for the Pacific Coast WSP include, but are not limited to:

(1) Actions and management efforts affecting Pacific Coast WSP on Federal lands such as national seashores, parks, and wildlife reserves;

(2) Dredging and dredge spoil placement that permanently removes PCEs to the extent the essential biological function of plovers are affected for the foreseeable future;

(3) Construction and maintenance of roads, walkways, marinas, access points, bridges, culverts and other structures which interfere with plover nesting, breeding, or foraging or produce increases in predation;

(4) Stormwater and wastewater discharge from communities;

(5) Flood control actions that change the PCEs to the extent that the habitat no longer contributes to the conservation of the species.

It is important to note that while all lands proposed for designation as critical habitat are within the historical geographic area occupied by the species, and are likely to be used by the Pacific Coast WSP habitat whether for foraging, breeding, growth of juveniles, dispersal, migration or sheltering. Some of these lands are currently subject to activities

identified as potentially adversely modifying the critical habitat. To the extent the activities currently take place on designated land, those activities do not adversely modify the habitat. We consider all lands included in this designation to be essential to the conservation of the species. Federal agencies already consult with us on activities in areas currently occupied by the species, or if the species may be affected by the action, to ensure that their actions do not jeopardize the continued existence of the species.

If you have questions regarding whether specific activities will constitute destruction or adverse modification of critical habitat, contact the Field Supervisor, Sacramento Fish and Wildlife Office (see **ADDRESSES** section). Requests for copies of the regulations on listed wildlife and plants and inquiries about prohibitions and permits may be addressed to the Field Supervisor, Sacramento Fish and Wildlife Office (see **ADDRESSES** section)

#### **Application of Section 3(5)(A) and 4(a)(3) and Exclusions Under Section 4(b)(2) of the Act**

Section 3(5)(A) of the Act defines critical habitat as the specific areas within the geographic area occupied by the species on which are found those physical and biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protection. Therefore, areas within the geographic area occupied by the species that do not contain the features essential for the conservation of the species are not, by definition, critical habitat. Similarly, areas within the geographic area occupied by the species that do not require special management also are not, by definition, critical habitat. To determine whether an area requires special management, we first determine if the essential features located there generally require special management to address applicable threats. If those features do not require special management, or if they do in general but not for the particular area in question because of the existence of an adequate management plan or for some other reason, then the area does not require special management.

Generally, we consider a current plan to provide adequate management or protection if it is complete and provides a conservation benefit to the species and is reasonably certain of being implemented that those responsible for implementing the plan are capable of accomplishing the objectives, and have an implementation schedule or adequate funding for implementing the



management plan); and the plan provides a basis for the conservation strategies adopted and their effectiveness (*i.e.*, it identifies biological goals, has provisions for reporting progress, and is of a duration sufficient to implement the plan and achieve the plan's goals and objectives).

Section 318 of the fiscal year 2004 National Defense Authorization Act (Pub. L. No. 108–136) amended the Act to address the relationship of Integrated Natural Resources Management Plans (INRMPs) to critical habitat by adding a new section 4(a)(3)(B). This provision prohibits the Service from designating as critical habitat any lands or other geographical areas owned or controlled by the Department of Defense, or designated for its use, that are subject to an INRMP prepared under section 101 of the Sikes Act (16 U.S.C. 670a), if the Secretary of the Interior determines in writing that such plan provides a benefit to the species for which critical habitat is proposed for designation.

Further, section 4(b)(2) of the Act states that critical habitat shall be designated, and revised on the basis of the best scientific data available after taking into consideration the economic impact, the impact on national security, and any other relevant impact of specifying any particular area as critical habitat. An area may be excluded from critical habitat if it is determined, following an analysis, that the benefits of such exclusion outweigh the benefits of specifying a particular area as critical habitat, unless the failure to designate such area as critical habitat will result in the extinction of the species.

In our critical habitat designations we may use both the provisions outlined in sections 3(5)(A) and 4(b)(2) of the Act to evaluate those specific areas that we are considering proposing to designate as critical habitat, as well as for those areas that are formally proposed for designation as critical habitat. Lands we have found do not meet the definition of critical habitat under section 3(5)(A), and lands excluded pursuant to section 4(b)(2), include those covered by the following types of plans if they provide assurances that the conservation measures they outline will be implemented and effective: (1) Legally operative HCPs that cover the species; (2) draft HCPs that cover the species and have undergone public review and comment; (3) Tribal conservation plans that cover the species; (4) State conservation plans that cover the species; and (5) National Wildlife Refuge System Comprehensive Conservation Plans. We note that additional areas may also be considered for exclusion in the final rule and that

any exclusions made in the final rule will be the result of a consideration of new information received, including consideration of all comments received and the findings of the economic and NEPA analyses.

#### **Exclusions**

We have considered and excluded ten entire units and portions of two other units from this proposal, based on the three provisions of the Act discussed above.

#### **Section 4(a)(3)**

Under section 4(a)(3) of the Act (resource management plans on military land), we are excluding one entire unit, consisting of 534 ac (212 ha) of beach habitat on San Nicholas Island, in Ventura County, California. This area, corresponding roughly to location CA–100 in our Draft Recovery Plan, is owned by the U.S. Navy, and contains habitat capable of supporting 150 breeding plovers with proper management. We base the exclusion of this unit on a completed INRMP addressing plover management for the area which has received a concurring biological opinion from us during formal consultation under section 7 of the Act.

#### **Section 3(5)(A) and Section 4(b)(2)**

Under a combination of sections 3(5)(A) (special management) and 4(b)(2) (benefits comparison), we are excluding one entire unit in San Diego, California, as well as portions of two other units in Monterey and San Luis Obispo counties, California. The San Diego unit consists of 23 ac (9.3 ha) at the mouth of the San Diego Flood Control Channel, within area CA–126 in our Draft Recovery Plan (Service 2001). This area falls within the bounds of an approved subarea plan established under the San Diego Multiple Species Conservation Program (MSCP), a regional HCP encompassing more than 236,000 ha (582,000 ac) and involving the City and County of San Diego and numerous other local governments. The MSCP provides for the establishment of approximately 69,573 ha (171,000 ac) of preserve areas for 85 federally listed and sensitive species, including the Pacific Coast WSP. This regional HCP is also a regional subarea plan under the NCCP program and is being developed in cooperation with California Department of Fish and Game.

On the basis of the conservation benefits afforded the Pacific Coast WSP from the measures of the approved subarea plans of the MSCP and the provisions of section 4(b)(2) of the Act, we have excluded from proposed

critical habitat those lands determined to be essential to the conservation of the Pacific Coast WSP that are within the boundaries of the approved subareas of the MSCP. We have further determined that the exclusion of these areas from critical habitat would not result in the extinction of the Pacific Coast WSP. The rationale for this determination is detailed below.

We are also excluding those portions of units CA 17 and CA 23 that fall within the Salinas River National Wildlife Refuge (NWR) and the Guadalupe-Nipomo Dunes NWR respectively. The Salinas River NWR has completed a Comprehensive Conservation Plan (CCP) that addresses plovers, while the Guadalupe-Nipomo Dunes NWR has completed a plover management plan. Both plans have undergone section 7 review, and provide a conservation benefit to the species. The amounts of land excluded are 142 ac (57.5 ha) at Salinas River NWR, and 234 ac (94.7 ha) at Guadalupe-Nipomo Dunes NWR.

The three essential habitat areas discussed above do not meet the definition of critical habitat under section 3(5)(A) of the Act because management plans already in place are adequate, and no special management will be required. We are simultaneously excluding them under section 4(b)(2) of the Act because, given the existence of approved management plans, the benefits of exclusion outweigh the benefits of inclusion.

#### **(1) Benefits of Inclusion**

The benefits of including areas in a critical habitat designation which are covered by approved HCPs, NCCP/HCPs, CCPs or species-specific NWR management plans are normally small. The principal benefit of any designated critical habitat area is that federally funded or authorized activities in such habitat, that may affect it, require consultation under section 7 of the Act. Such consultation would help ensure the provision of adequate protection to avoid adverse modification or destruction of the critical habitat. Where approved management plans are in place, our experience indicates that this benefit is small or non-existent. The section 7 consultation process for approved and permitted management plans helps assure that such plans are crafted to ensure the long-term survival and conservation of listed and covered species and the protection of their essential habitat within the plan area. Where we have approved such plans, areas located within plan boundaries that we ordinarily would designate as critical habitat for a listed species will

be protected through creation of habitat reserves or through other conservation methods. Such approved plans include habitat management measures and protections for conservation lands designed to protect, restore, and enhance their value as habitat for covered species.

Another possible benefit to including these lands is that the designation of critical habitat can serve to educate landowners and the public regarding the potential conservation value of an area. This may focus and contribute to conservation efforts by other parties by clearly delineating areas of high conservation value for certain species. However, NWR lands typically are already understood by the public to have a high conservation value, while the HCP or NCCP/HCP development process for non-Federal lands typically involves extensive public outreach and opportunity for public review, thereby accomplishing the same public education function as might critical habitat designation.

#### (2) Benefits of Exclusion

The benefits of excluding areas protected by HCPs, NCCP/HCPs, or other approved management plans include relieving landowners, communities, and counties of any additional regulatory burden that might be imposed by critical habitat. This benefit is particularly compelling because we have made the determination that once an HCP, NCCP/HCP, or other approved management plan is negotiated and approved by us after public comment, activities consistent with the plan will satisfy the requirements of the Act. Many such management plans can take years to develop, but are considered worth the effort due in part to the streamlining of regulatory compliance that such plans can produce. The imposition of an additional regulatory layer of review after the completion of such plans may therefore jeopardize conservation efforts and partnerships in many areas, and could be viewed as a disincentive to the development of such plans. By excluding areas protected by such management plans, we also afford greater regulatory certainty, and encourage the involvement and development of conservation partnerships with entities such as local governments, private conservation organizations, and private landowners.

Another benefit of excluding HCPs or NCCP/HCPs is that it would encourage the continued development of partnerships with HCP or NCCP/HCP participants, including States, local governments, conservation

organizations, and private landowners, that together can implement conservation actions we would be unable to accomplish. By excluding areas covered by HCPs or NCCP/HCPs from critical habitat designation, we clearly maintain our commitments, preserve these partnerships, and, we believe, set the stage for more effective conservation actions in the future.

In addition, an approved management plan must undergo consultation pursuant to section 7 of the Act. While this consultation will not include a formal evaluation of the plan's potential to adversely modify critical habitat unless critical habitat has already been designated within the proposed plan area, it will carefully analyze the effects of the plan on essential habitat areas as part of its jeopardy analysis under section 7 of the Act and (for HCPs or NCCP/HCPs) as part of its evaluation of the adequacy of the plan under section 10 of the Act. Because virtually all such plans are developed to minimize and mitigate the impacts of take (as defined in the Act) of covered species resulting from habitat loss within the plan area, a fundamental goal of these plans is to identify and protect habitat essential to the covered species while directing development to non-habitat or lower-quality habitat areas. Thus, the plan's effectiveness in protecting essential habitat within the plan boundaries will have been thoroughly addressed in the management plan itself, and consulted upon. Future Federal actions that may affect listed species would continue to require consultation under section 7 of the Act.

Further, HCPs typically provide for greater conservation benefits to a covered species than consultations pursuant to section 7 of the Act because HCPs assure the long-term protection and management of a covered species and its habitat, and funding for such management through the standards found in the 5 Point Policy for HCPs (64 FR 35242) and the HCP No Surprises regulation (63 FR 8859). Such assurances are typically not provided by consultations under section 7 of the Act that, in contrast to HCPs, often do not commit the project proponent to long-term special management or protections. Thus, a consultation typically does not accord the lands it covers the extensive benefits an HCP or NCCP/HCP provides. The development and implementation of an HCP or NCCP/HCP provides other important conservation benefits, including the development of biological information to guide conservation efforts and assist in species conservation, and the creation of

innovative solutions to conserve species while allowing for development.

#### (3) The Benefits of Exclusion Outweigh the Benefits of Inclusion

In general, we find that the benefits of critical habitat designation for the Pacific Coast WSP on lands covered by the approved HCP that protects this population, or on NWR lands with approved CCPs or plover management plans, are small while the benefits of excluding such lands from designation of critical habitat are substantial. After weighing the small benefits of including these lands against the much greater benefits derived from exclusion, including encouraging the pursuit of additional conservation partnerships, we are excluding lands within approved sub-areas of the San Diego MSCP, and within the Salinas River and Guadalupe-Nipomo Dunes NWRs, from proposed critical habitat for the Pacific Coast WSP.

We find that the above-mentioned management plans adequately protect essential Pacific Coast WSP habitat within their boundaries and provide appropriate management to maintain and enhance the long-term value of such habitat. The education benefits of critical habitat designation have been achieved through the public outreach and notice and comment procedures required prior to approval of these plans. For these reasons, we find that designation of critical habitat has little benefit in areas covered by these plans, and that such benefits are outweighed by the benefits of maintaining proactive partnerships with plan participants and encouraging additional conservation partnerships that will result from exclusion of essential habitat in these plan areas. We also find that the exclusion of these lands from proposed critical habitat will not result in the extinction of the Pacific Coast WSP, nor hinder its recovery because these plans have already been evaluated under section 7 of the Act to ensure that their implementation will not jeopardize the continued existence of the Pacific Coast WSP.

#### Exclusions Under Section 4(b)(2) Alone

##### (A) Exclusions of Military Lands

We are also excluding under section 4(b)(2) three units on military lands based on letters we have received from the base commanders establishing that the areas are used for military training. All of these bases are in San Diego County, California. Two of the excluded units, 79 ac (32 ha) and 428 ac (173 ha) in size respectively, are on Marine Corps Base Camp Pendleton (MCBCP)

(roughly corresponding to areas CA-114 and 115 in the Draft Recovery Plan) (Service 2001), while the third (219 ac, 88.6 ha) is on Naval Amphibious Base Coronado (NABC) (CA-128 in the Draft Recovery Plan). Based on the following analysis, we find that after taking into account the impact on national security, the benefit of excluding these units outweighs the benefit of including them.

#### (1) Benefits of Inclusion

The primary effect of designating any particular area as critical habitat is the requirement for Federal agencies to consult with us pursuant to section 7 of the Act to ensure actions they carry out, authorize, or fund do not destroy or adversely modify designated critical habitat. Absent critical habitat designation, Federal agencies remain obligated under section 7 to consult with us on actions that may affect a federally listed species to ensure such actions do not jeopardize the species' continued existence. The Marine Corps routinely consults with us for activities on MCBCP that may affect federally listed species to ensure that the continued existence of such species are not jeopardized. The Navy does the same for activities on NABC.

Designation of critical habitat may also provide educational benefits by informing land managers of areas essential to the conservation of the Pacific Coast WSP. In this case such educational value would be minimal, since the areas of essential habitat correspond closely to areas identified as important in the Draft Recovery Plan (CA-114, CA-115, and CA-128 Service 2001). Additionally, NABC was designated as critical habitat for the Pacific Coast WSP in our original designation (Service 1999).

#### (2) Benefits of Exclusion

The Marine Corps Base, Camp Pendleton is an amphibious training base that promotes combat readiness for military forces and is the only Marine Corps facility on the West Coast where amphibious operations can be combined with air, sea, and ground assault training activities year-round. The Naval Amphibious Base Coronado and its adjacent beaches provide training for Navy SEALs, amphibious insertion and other small units. It is one of only two amphibious training bases in the United States.

Designation of critical habitat in mission-essential training areas at either base would trigger a requirement for the Marine Corps or Navy to consult on activities that may affect designated critical habitat and to reinstate consultation on activities for which a

consultation may have already been completed that assessed the effects to a federally listed species. The requirement to undertake additional consultations or revisit already completed consultations specifically to address the effects of activities on designated critical habitat could delay or impair the ability of the Marine Corps or Navy to train marines and SEALs for combat in support of continuous, global deployment to the western Pacific and southwest Asia (Department of the Navy; 2003 letter).

#### (3) The Benefits of Exclusion Outweigh the Benefits of Inclusion

Based on the impact to national security and the need of the Navy and Marine Corps to maintain a high level of military readiness and combat capability, we determine that the benefits of excluding mission-essential training areas from proposed critical habitat for the Pacific Coast WSP outweigh the benefits of including them in such designation. We, in conducting this analysis pursuant to section 4(b)(2) of the Act, determined that the exclusion of these lands from critical habitat will not result in the extinction of the Pacific Coast WSP. Although these lands are not included in designated critical habitat, the Marine Corps and Navy will still be required to consult with us on activities that may affect the Pacific Coast WSP, to ensure such activities do not jeopardize the continued existence of the species. Based on our analysis above, we are excluding these lands from proposed critical habitat for the plover pursuant to section 4(b)(2) of the Act based on the potential impacts on national security.

##### (B) San Francisco Bay Exclusions

We are also excluding under section 4(b)(2) of the Act six units bordering the south San Francisco Bay and totaling 1,847 ac (747.4 ha). Plover habitat in this region consists primarily of artificial salt ponds and associated levees, much of which has recently come under the management of various Local, State and Federal agencies including ourselves and the California Department of Fish and Game. The agencies are developing a management and restoration plan for the salt ponds that will take into account the conflicting habitat needs of at least four threatened or endangered species (Pacific Coast WSPs, clapper rails, salt marsh harvest mice, and least terns), as well as millions of migrating waterfowl and shorebirds that use the areas yearly. The plan is expected to be completed in 2007. (Margaret Kolar, U.S. Fish and Wildlife Service, *in litt.*, May 4, 2004).

#### (1) Benefits of Inclusion

By including the six San Francisco Bay units in our proposed and final critical habitat designations, we could provide those areas with critical habitat protection by October, 2005, rather than waiting for the salt pond management plan to be completed in 2007. However, as discussed in the analyses for other excluded units above, the protections provided by critical habitat designation largely overlap protections already provided under section 7 of the Act. Three of the excluded units are on the Don Edwards San Francisco Bay National Wildlife Refuge, which is managed by the Service. Any significant changes to salt pond operations within those units would trigger consultation under section 7, as will the completion of the salt pond management plan itself. Two of the units are on land managed by the California Department of Fish and Game (CDFG), while the final and smallest unit is on land managed by a county governmental agency called the Hayward Area Recreation District (HARD). Both of these agencies are participating in development of the management plan, and neither would be directly affected by critical habitat designation since they are not federal agencies. Service participation in development of the management plan, and the consequent necessity to review the plan under section 7 when a draft has been completed, actually afford the Service greater opportunity to influence management of the state and locally owned units than would designating them as critical habitat.

#### (2) Benefits of Exclusion

By excluding the units from critical habitat designation we avoid interfering with the development of the salt pond management plan, which might otherwise establish habitat managed for plovers in other locations. The six excluded San Francisco Bay units were chosen based on recent high usage of those areas by plovers, but the plovers have demonstrated a willingness to travel relatively large distances within the Bay area to nest wherever habitat is most appropriate (Kolar *in litt.* 2004). Since plover habitat in the area can easily be created or removed in different areas by drying or flooding particular ponds, the management planners currently have the flexibility to move plover habitat to wherever it would be most advantageous in light of the conservation needs of the population and of other threatened and endangered species present in the Bay area. By designating critical habitat according to the current locations of essential habitat,

we would tend to lock the current management scheme into place for the designated units.

Additionally, the management planning process is a collaborative effort involving cooperation and input from numerous stakeholders such as landowners, public land managers, and the general public. This allows the best information and local knowledge to be brought to the table, and may encourage a sense of commitment to the plover's continuing well-being. Due to time constraints, we are unable to match this level of public participation in the critical habitat designation process. Finally, the enhancement and management of plover habitat will benefit greatly from coordination between the various owners and managers in the area. The ongoing planning process can provide for that coordination, whereas the critical habitat designation process cannot.

### (3) The Benefits of Exclusion Outweigh the Benefits of Inclusion

We find that the plover will obtain greater benefits if we avoid designating habitat in the San Francisco Bay and instead allow participating agencies to complete their salt pond management plan unencumbered by critical habitat considerations. While the salt pond management plan offers considerable benefits in comparison to critical habitat, we must also consider the likelihood that the plan will be completed. In this case we find the likelihood to be high because the major participants are all resource management agencies, and because the management plan is related to the recent purchase by us and CDFG of 16,500 ac (6,677 ha) of salt ponds from a salt manufacturing company. This purchase involved the close cooperation of numerous resource management and environmental organizations, and had the strong support and active participation of U.S. Senator Diane Feinstein of California (Feinstein *in litt.* 2002). Accordingly, we are excluding six units in the south San Francisco Bay from designation. For the same reasons discussed above, and also because the south San Francisco Bay is a relatively small portion of the overall range of the population, we also find that such exclusion will not be likely to result in the population's extinction.

### *Areas Which May Be Excluded From Final Critical Habitat Designation*

Parts of the proposed critical habitat Unit CA 23 (Pismo Beach/Nipomo) in San Luis Obispo County, and all the proposed units in Oregon are located within the potential planning areas of

three HCPs which are currently in their planning and development stages. We may exclude some or all of those units in our final designation if the HCPs have undergone public review and provide sufficient assurances of conservation implementation and effectiveness at the time of our final designation. Other units which may be excluded from the final designation following further management planning or consultation include CA 24 and CA 25 (Vandenberg North and South) in Santa Barbara County, California, which are owned by the U.S. Air Force. Vandenberg Air Force Base has been managing plovers according to annual management plans, but presently does not have a long-term plover management plan or INRMP that has undergone formal section 7 consultation with us.

### Economic Analysis

Section 4(b)(2) of the Act requires us to designate critical habitat on the basis of the best scientific and commercial data available and to consider the economic impact, impact on national security, and other relevant impacts of designating a particular area as critical habitat. We may exclude areas from critical habitat upon a determination that the benefits of such exclusions outweigh the benefits of specifying such areas as critical habitat. We cannot exclude such areas from critical habitat when such exclusion will result in the extinction of the species.

An analysis of the economic impacts of proposing critical habitat for the Pacific Coast WSP habitat is being prepared. We will announce the availability of the draft economic analysis as soon as it is completed, at which time we will seek public review and comment. At that time, copies of the draft economic analysis will be available for downloading from the Internet at <http://sacramento.fws.gov>, or by contacting the Sacramento Fish and Wildlife Office directly (see **ADDRESSES** section).

### Peer Review

In accordance with our joint policy published in the **Federal Register** on July 1, 1994 (59 FR 34270), we will seek the expert opinions of at least three appropriate specialists regarding this proposed rule. The purpose of such review is to ensure that our critical habitat designation is based on scientifically sound data, assumptions, and analyses. We will send these peer reviewers copies of this proposed rule immediately following publication in the **Federal Register**, and we will invite them to comment during the public comment period on the assumptions

and conclusions regarding the proposed designation of critical habitat.

We will consider all comments and information received during the comment period on this proposed rule during preparation of a final rulemaking. Accordingly, the final decision may differ from this proposal.

### Public Hearings

The Act provides for one or more public hearings on this proposal, if requested. Requests for public hearings must be made in writing at least 15 days prior to the close of the public comment period. Such requests must be made in writing and be addressed to the Field Supervisor (see **ADDRESSES** section). We will schedule public hearings on this proposal, if any are requested, and announce the dates, times, and places of those hearings in the **Federal Register** and local newspapers at least 15 days prior to the first hearing.

### Clarity of the Rule

Executive Order 12866 requires each agency to write regulations and notices that are easy to understand. We invite your comments on how to make this proposed rule easier to understand, including answers to questions such as the following: (1) Are the requirements in the proposed rule clearly stated? (2) Does the proposed rule contain technical jargon that interferes with the clarity? (3) Does the format of the proposed rule (grouping and order of the sections, use of headings, paragraphing, and so forth) aid or reduce its clarity? (4) Is the description of the proposed rule in the **SUPPLEMENTARY INFORMATION** section of the preamble helpful in understanding the proposed rule? (5) What else could we do to make this proposed rule easier to understand?

Send a copy of any comments on how we could make this proposed rule easier to understand to: Office of Regulatory Affairs, Department of the Interior, Room 7229, 1849 C Street, NW., Washington, DC 20240. You may e-mail your comments to this address: [Exsec@ios.doi.gov](mailto:Exsec@ios.doi.gov).

### Required Determinations

#### *Regulatory Planning and Review*

In accordance with Executive Order 12866, this document is a significant rule in that it may raise novel legal and policy issues, but it is not anticipated to have an annual effect on the economy of \$100 million or more or adversely affect the economy in a material way. Due to the timeline for publication in the **Federal Register**, the Office of Management and Budget (OMB) has not

formally reviewed this rule. We are preparing a draft economic analysis of this proposed action. We will use this analysis to meet the requirement of section 4(b)(2) of the Act to determine the economic consequences of designating the specific areas as critical habitat. This economic analysis also will be used to determine compliance with Executive Order 12866, Regulatory Flexibility Act, Small Business Regulatory Enforcement Fairness Act, and Executive Order 12630.

The availability of the draft economic analysis will be announced in the **Federal Register** and in local newspapers so that it is available for public review and comments.

*Regulatory Flexibility Act (5 U.S.C. 601 et seq.)*

Under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*, as amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA) of 1996), whenever an agency is required to publish a notice of rulemaking for any proposed or final rule, it must prepare and make available for public comment a regulatory flexibility analysis that describes the effects of the rule on small entities (*i.e.*, small businesses, small organizations, and small government jurisdictions). However, no regulatory flexibility analysis is required if the head of the agency certifies the rule will not have a significant economic impact on a substantial number of small entities. The SBREFA amended the Regulatory Flexibility Act (RFA) to require Federal agencies to provide a statement of the factual basis for certifying that the rule will not have a significant economic impact on a substantial number of small entities.

At this time, the Service lacks the available economic information necessary to provide an adequate factual basis for the required RFA finding. Therefore, the RFA finding is deferred until completion of the draft economic analysis prepared pursuant to section 4(b)(2) of the ESA and E.O. 12866. This draft economic analysis will provide the required factual basis for the RFA finding. Upon completion of the draft economic analysis, the Service will publish a notice of availability of the draft economic analysis of the proposed designation and reopen the public comment period for the proposed designation for an additional 60 days. The Service will include with the notice of availability, as appropriate, an initial regulatory flexibility analysis or a certification that the rule will not have a significant economic impact on a substantial number of small entities accompanied by the factual basis for

that determination. The Service has concluded that deferring the RFA finding until completion of the draft economic analysis is necessary to meet the purposes and requirements of the RFA. Deferring the RFA finding in this manner will ensure that the Service makes a sufficiently informed determination based on adequate economic information and provides the necessary opportunity for public comment.

*Small Business Regulatory Enforcement Fairness Act (5 U.S.C. 802(2))*

In the draft economic analysis, we will determine whether designation of critical habitat will cause (a) any effect on the economy of \$100 million or more; (b) any increases in costs or prices for consumers, individual industries, Federal, State, or local government agencies, or geographic regions; or (c) any significant adverse effects on competition, employment, investment, productivity, innovation, or the ability of U.S.-based enterprises to compete with foreign-based enterprises.

*Executive Order 13211*

On May 18, 2001, the President issued an Executive Order (E.O. 13211) on regulations that significantly affect energy supply, distribution, and use. Executive Order 13211 requires agencies to prepare Statements of Energy Effects when undertaking certain actions. This proposed rule to designate critical habitat for the Pacific Coast WSP habitat is considered a significant regulatory action under Executive Order 12866 as it may raise novel legal and policy issues. However, this designation is not expected to significantly affect energy supplies, distribution, or use because there are no pipelines, distribution facilities, power grid stations, etc. within the boundaries of proposed critical habitat. Therefore, this action is not a significant energy action and no Statement of Energy Effects is required. We will, however, further evaluate this issue as we conduct our economic analysis and, as appropriate, review and revise this assessment as warranted.

*Unfunded Mandates Reform Act (2 U.S.C. 1501 et seq.)*

In accordance with the Unfunded Mandates Reform Act (2 U.S.C. 1501 *et seq.*), the Service makes the following findings:

(a) This rule will not produce a Federal mandate. In general, a Federal mandate is a provision in legislation, statute, or regulation that would impose an enforceable duty upon State, local, tribal governments, or the private sector and includes both "Federal

intergovernmental mandates" and "Federal private sector mandates." These terms are defined in 2 U.S.C. 658(5)-(7). "Federal intergovernmental mandate" includes a regulation that "would impose an enforceable duty upon State, local, or Tribal governments" with two exceptions. It excludes "a condition of Federal assistance." It also excludes "a duty arising from participation in a voluntary Federal program," unless the regulation "relates to a then-existing Federal program under which \$500,000,000 or more is provided annually to State, local, and Tribal governments under entitlement authority, "if the provision would "increase the stringency of conditions of assistance" or "place caps upon, or otherwise decrease, the Federal Government's responsibility to provide funding" and the State, local, or tribal governments "lack authority" to adjust accordingly. (At the time of enactment, these entitlement programs were: Medicaid; AFDC work programs; Child Nutrition; Food Stamps; Social Services Block Grants; Vocational Rehabilitation State Grants; Foster Care, Adoption Assistance, and Independent Living; Family Support Welfare Services; and Child Support Enforcement.) "Federal private sector mandate" includes a regulation that "would impose an enforceable duty upon the private sector, except (i) a condition of Federal assistance; or (ii) a duty arising from participation in a voluntary Federal program."

The designation of critical habitat does not impose a legally binding duty on non-Federal government entities or private parties. Under the Act, the only regulatory effect is that Federal agencies must ensure that their actions do not destroy or adversely modify critical habitat under section 7. While non-Federal entities who receive Federal funding, assistance, permits, or otherwise require approval or authorization from a Federal agency for an action may be indirectly impacted by the designation of critical habitat, the legally binding duty to avoid destruction or adverse modification of critical habitat rests squarely on the Federal agency. Furthermore, to the extent that non-Federal entities are indirectly impacted because they receive Federal assistance or participate in a voluntary Federal aid program, the Unfunded Mandates Reform Act would not apply; nor would critical habitat shift the costs of the large entitlement programs listed above onto State governments.

(b) Due to current public knowledge of the species' protection, the prohibition against take of the species

both within and outside of the designated areas, and the fact that critical habitat provides no incremental restrictions, we do not anticipate that this rule will significantly or uniquely affect small governments. As such, Small Government Agency Plan is not required. We will, however, further evaluate this issue as we conduct our economic analysis and revise this assessment if appropriate.

#### Takings

In accordance with Executive Order 12630 ("Government Actions and Interference with Constitutionally Protected Private Property Rights"), this rule is not anticipated to have significant takings implications. A takings implication assessment is not required. As discussed above, the designation of critical habitat affects only Federal actions. Although private parties that receive Federal funding, assistance, or require approval or authorization from a Federal agency for an action may be indirectly impacted by the designation of critical habitat, the legally binding duty to avoid destruction or adverse modification of critical habitat rests squarely on the Federal agency. Due to current public knowledge of the species' protections, the prohibition against take of the species both within and outside of the proposed areas we do not anticipate that property values will be affected by the critical habitat designation. However, we have not yet completed the economic analysis for this proposed rule. Once the economic analysis is available, we will review and revise this preliminary assessment as warranted.

#### Federalism

In accordance with Executive Order 13132, the rule does not have significant Federalism effects. A Federalism assessment is not required. In keeping with DOI and Department of Commerce policy, we requested information from, and coordinated development of, this proposed critical habitat designation with appropriate State resource agencies in California, Oregon and Washington. The designation of critical habitat in areas currently occupied by the Pacific Coast WSP habitat imposes no additional restrictions to those currently in place and, therefore, has little incremental impact on State and local governments and their activities. The designation may have some benefit to these governments in that the areas essential to the conservation of the species are more clearly defined, and the primary constituent elements of the habitat necessary to the survival of the species are specifically identified.

While making this definition and identification does not alter where and what federally sponsored activities may occur, it may assist these local governments in long-range planning (rather than waiting for case-by-case section 7 consultations to occur).

#### Civil Justice Reform

In accordance with Executive Order 12988, the Office of the Solicitor has determined that the rule does not unduly burden the judicial system and meets the requirements of sections 3(a) and 3(b)(2) of the Order. We have proposed designating critical habitat in accordance with the provisions of the Act. This proposed rule uses standard property descriptions and identifies the primary constituent elements within the designated areas to assist the public in understanding the habitat needs of the Pacific Coast WSP habitat.

#### Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.)

This rule does not contain any new collections of information that require approval by OMB under the Paperwork Reduction Act. This rule will not impose recordkeeping or reporting requirements on State or local governments, individuals, businesses, or organizations. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

#### National Environmental Policy Act

It is our position that, outside the Tenth Circuit, we do not need to prepare environmental analyses as defined by the NEPA in connection with designating critical habitat under the Act. We published a notice outlining our reasons for this determination in the **Federal Register** on October 25, 1983 (48 FR 49244). This assertion was upheld in the courts of the Ninth Circuit (*Douglas County v. Babbitt*, 48 F.3d 1495 (9th Cir. Ore. 1995), cert. denied 116 S. Ct. 698 (1996).] This final determination does not constitute a major Federal action significantly affecting the quality of the human environment.

#### Government-to-Government Relationship With Tribes

In accordance with the President's memorandum of April 29, 1994, "Government-to-Government Relations with Native American Tribal Governments" (59 FR 22951), Executive Order 13175, and the Department of Interior's manual at 512 DM 2, we readily acknowledge our responsibility to communicate meaningfully with

recognized Federal Tribes on a government-to-government basis. We have determined that there are not tribal lands located in areas determined essential for the conservation of the Pacific Coast WSP habitat.

#### References Cited

A complete list of all references cited in this rulemaking is available upon request from the Field Supervisor, Sacramento Fish and Wildlife Office (see **ADDRESSES** section).

#### Author(s)

The primary author of this package is the Sacramento Fish and Wildlife Office staff (see **ADDRESSES** section).

#### List of Subjects in 50 CFR Part 17

Endangered and threatened species, Exports, Imports, Reporting and record keeping requirements, Transportation.

#### Proposed Regulation Promulgation

Accordingly, we propose to amend part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations, as set forth below:

#### PART 17—[AMENDED]

1. The authority citation for part 17 continues to read as follows:

**Authority:** 16 U.S.C. 1361–1407; 16 U.S.C. 1531–1544; 16 U.S.C. 4201–4245; Pub. L. 99–625, 100 Stat. 3500; unless otherwise noted.

2. In § 17.95(b), revise the entry for "Charadrius alexandrinus nivosus" under "BIRDS" to read as follows:

#### § 17.95 Critical habitat—fish and wildlife.

\* \* \* \* \*

(b) Birds.

\* \* \* \* \*

Western Snowy Plover (*Charadrius alexandrinus nivosus*)—Pacific coast population

(1) Critical habitat units are depicted on the maps below for the following States and counties:

Washington: Grays Harbor and Pacific counties;

Oregon: Clatsop, Coos, Curry, Douglas, Lane, Lincoln, and Tillamook, counties;

California: Del Norte, Humboldt, Los Angeles, Marin, Mendocino, Monterey, Orange, San Diego, San Luis Obispo, Santa Barbara, Santa Cruz, Sonoma, and Ventura counties.

(2) The primary constituent elements of critical habitat for the Pacific Coast WSP are the habitat components that provide:

(i) Sparsely vegetated areas above daily high tides (such as sandy beaches, dune systems immediately inland of an active beach face, salt flats, seasonally exposed gravel bars, dredge spoil sites,

artificial salt ponds and adjoining levees) that are relatively undisturbed by the presence of humans, pets, vehicles or human-attracted predators (essential for reproduction, food, shelter from predators, protection from disturbance, and space for growth and normal behavior).

(ii) Sparsely vegetated sandy beach, mud flats, gravel bars or artificial salt ponds subject to daily tidal inundation but not currently under water, that support small invertebrates (essential for food).

(iii) Surf or tide-cast organic debris such as seaweed or driftwood (essential to support small invertebrates for food, and to provide shelter from predators and weather for reproduction).

(3) Critical habitat does not include existing features and structures, such as buildings, paved areas, boat ramps, and other developed areas not containing one or more of the primary constituent elements. Any such structures that were inside the boundaries of a critical habitat unit at the time it was designated are not critical habitat. The land on which such structures directly sit is also not critical habitat, so long as the structures remain in place.

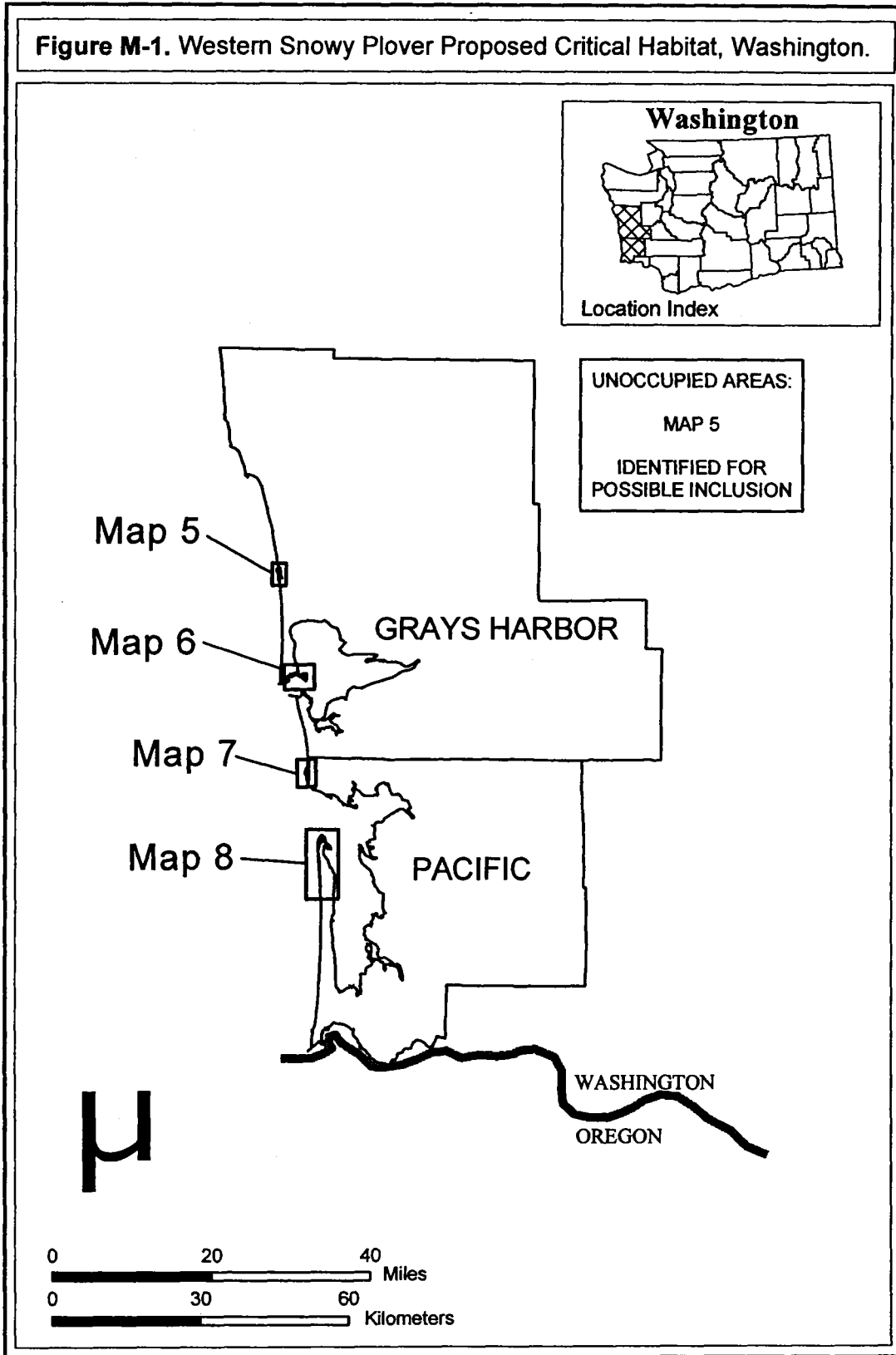
(4) Critical Habitat Map Units—Data layers defining map units were created on a base of USGS 7.5' quadrangles, and critical habitat units were then mapped using Universal Transverse Mercator, North American Datum 1927 (UTM NAD 27) coordinates. These coordinates establish the vertices and endpoints of

the landward bounds of the units. Other bounds are established descriptively according to compass headings and the position of the mean low waterline (MLW). For purposes of estimating unit sizes, we approximated MLW in California using the most recent GIS projection of mean high water (MHW). We chose MHW both because it is the only approximation of the coastline currently available in GIS format. We were unable to obtain recent GIS maps of MHW or MLW for Oregon and Washington; therefore, we approximated MLW for units in those States based on aerial photographs.

(5) **Note:** Maps M1–M4 (index maps) follow:

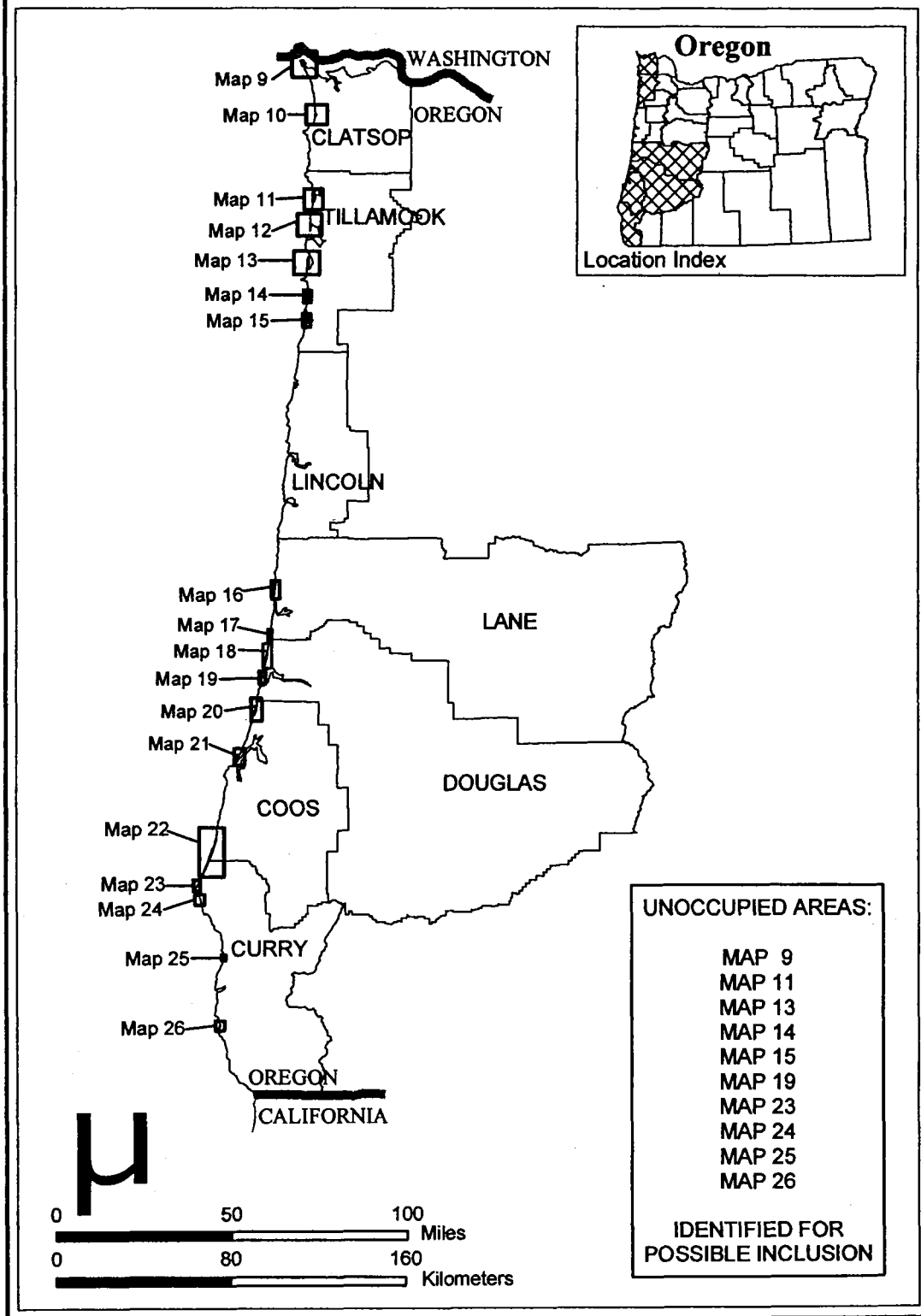
**BILLING CODE 4310–55–P**

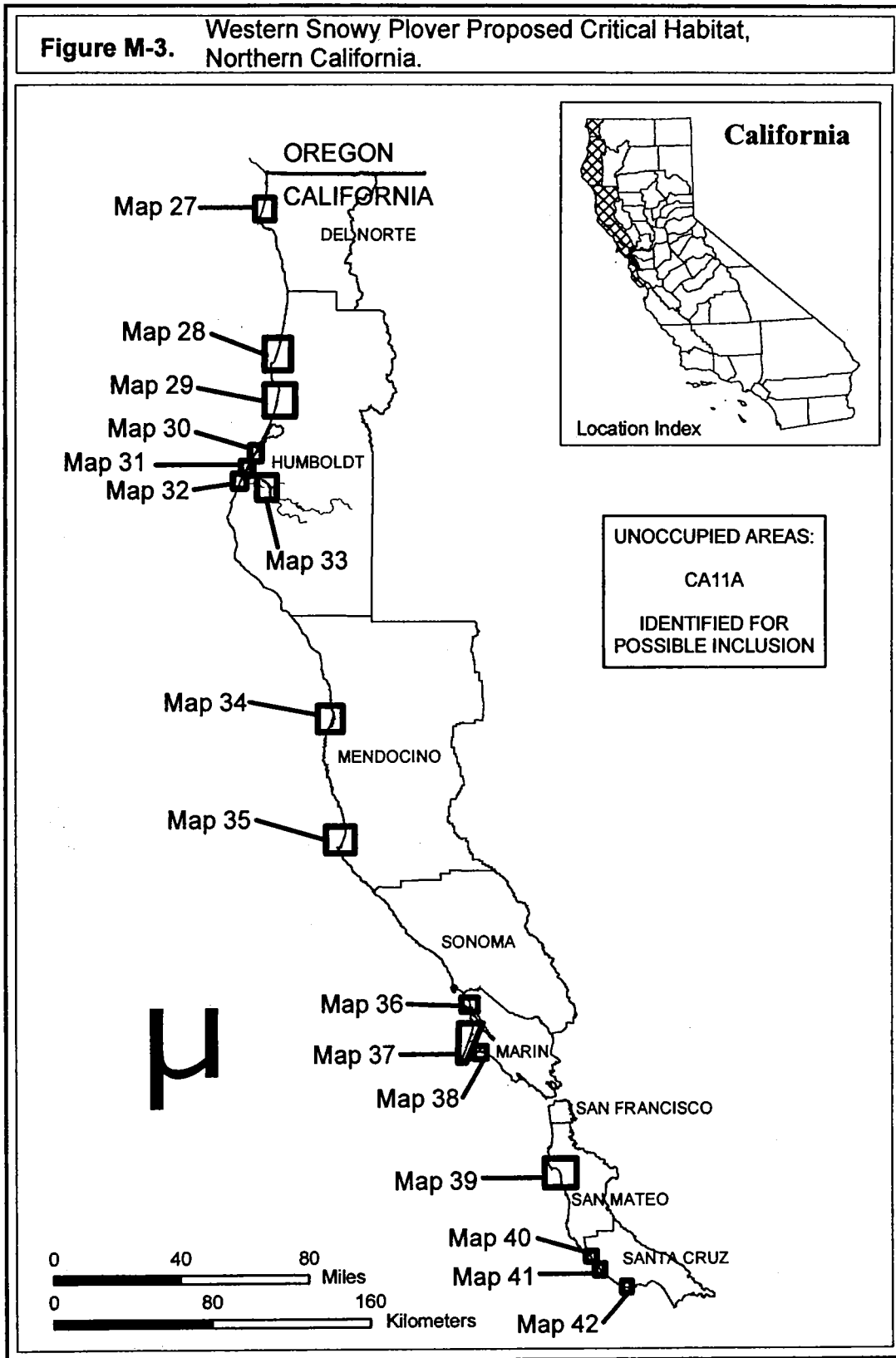
**Figure M-1. Western Snowy Plover Proposed Critical Habitat, Washington.**



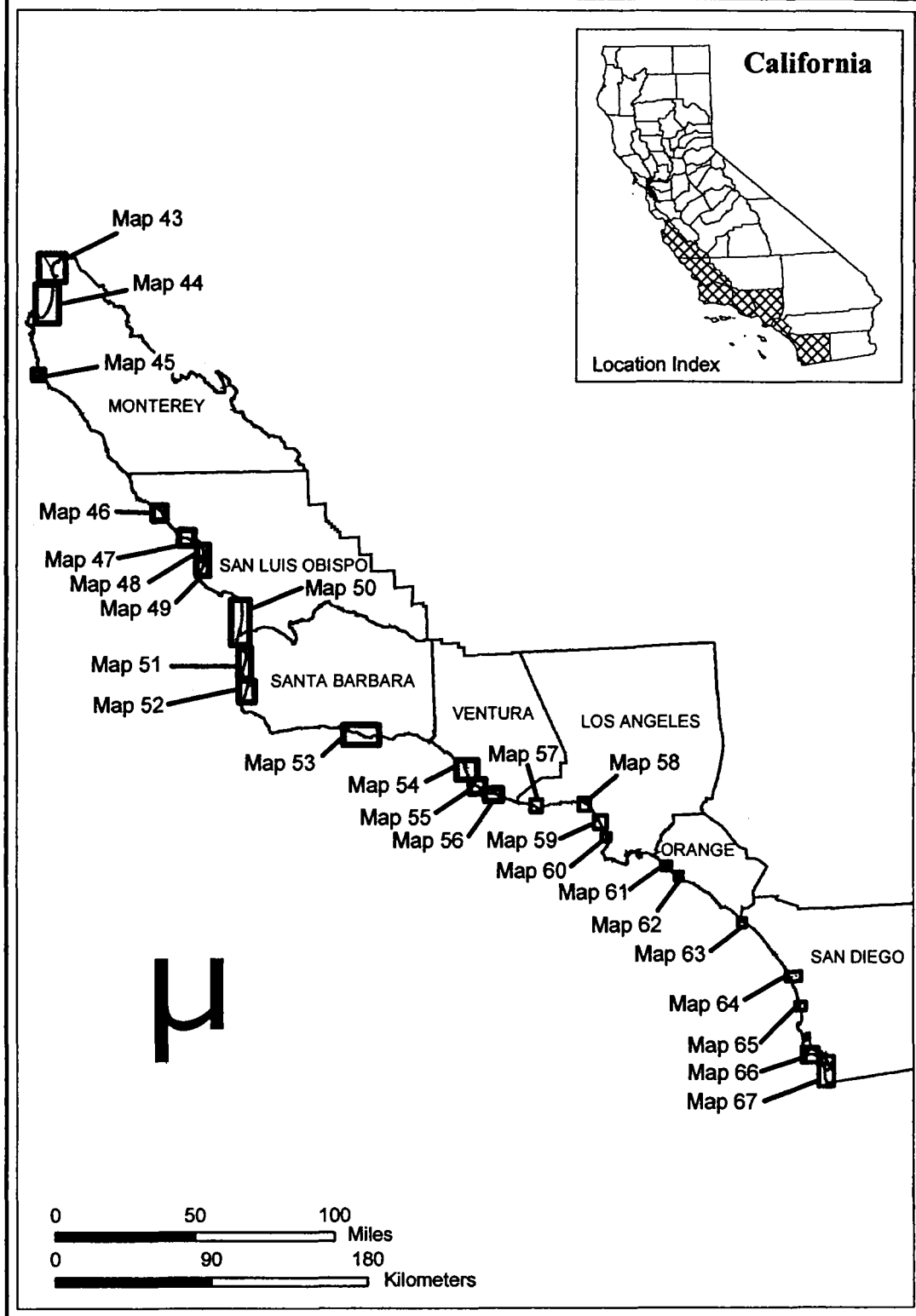


**Figure M-2. Western Snowy Plover Proposed Critical Habitat, Oregon.**





**Figure M-4.** Western Snowy Plover Proposed Critical Habitat, Southern California.



(6) Unit WA-1, Gray's Harbor County, Washington.

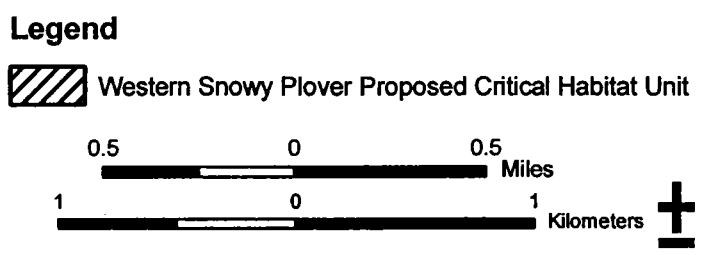
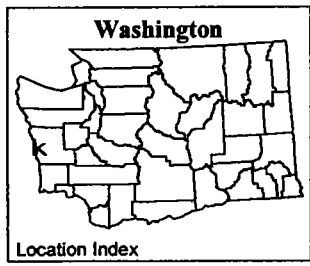
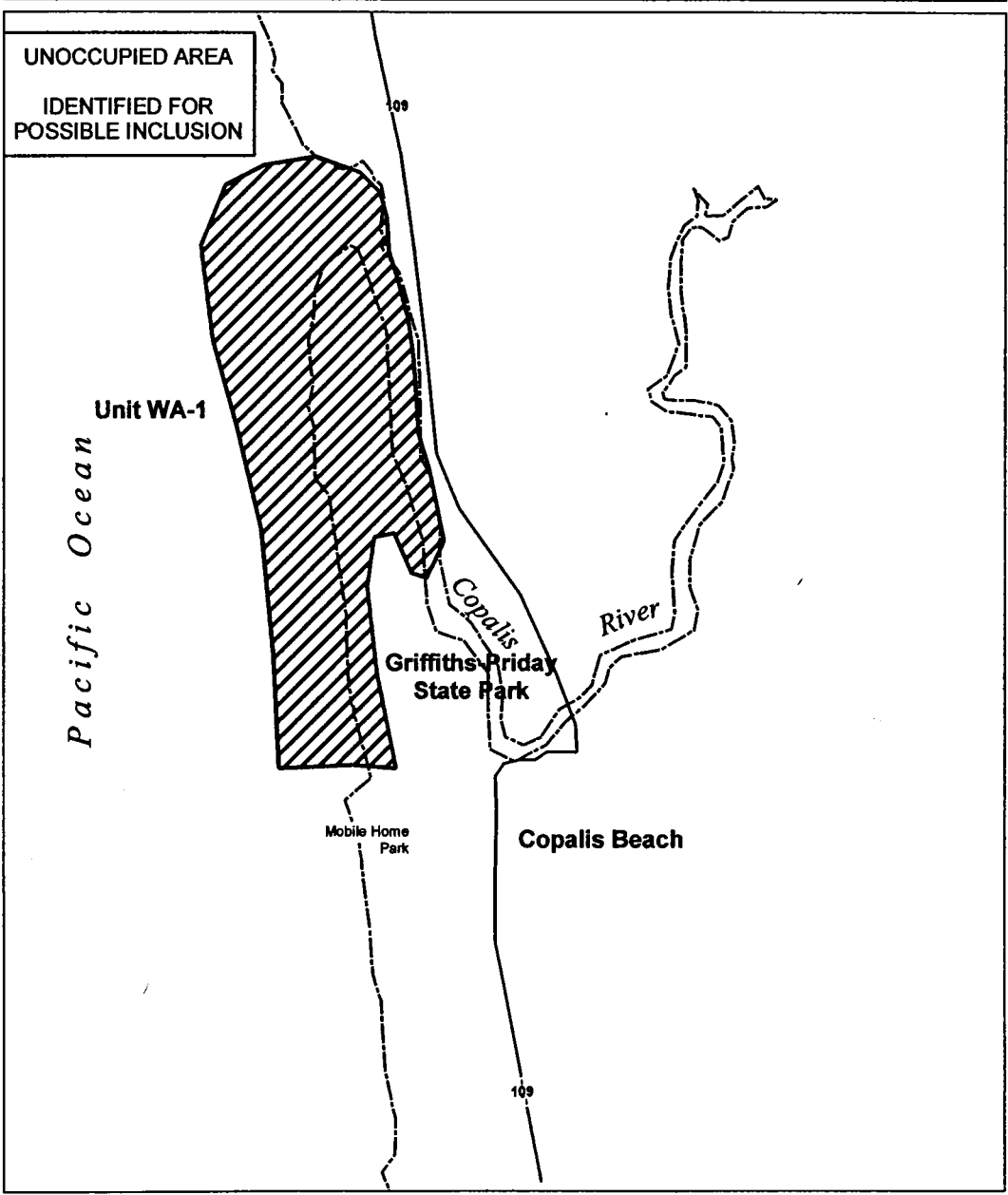
(i) From USGS 1:24,000 quadrangle map Copalis Beach, Washington, land bounded by the following UTM 10 NAD 27 coordinates (E,N): 409895, 5219820; 409792, 5220191; 409737, 5220607; 409846, 5220869; 410019, 5220958;

410246, 5220997; 410440, 5220925; 410529, 5220839; 410558, 5220730; 410568, 5220582; 410613, 5220443; 410652, 5220285; 410672, 5220152; 410692, 5219934; 410702, 5219781; 410746, 5219637; 410781, 5219464; 410815, 5219316; 410737, 5219152; 410668, 5219174; 410592, 5219348;

410504, 5219330; 410475, 5219112; 410519, 5218732; 410603, 5218317; 410415, 5218331; 410083, 5218317; 410059, 5218816; 410004, 5219365; returning to 409895, 5219820.

(ii) **Note:** Unit WA 1 (Map M5) follows:

**Map 5. Copalis Spit (WA-1) Grays Harbor County, Washington.**



(7) Unit WA-2, Gray's Harbor County, Washington.

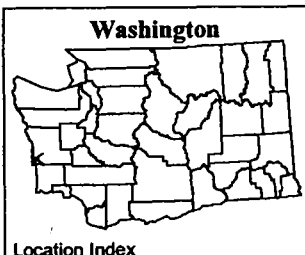
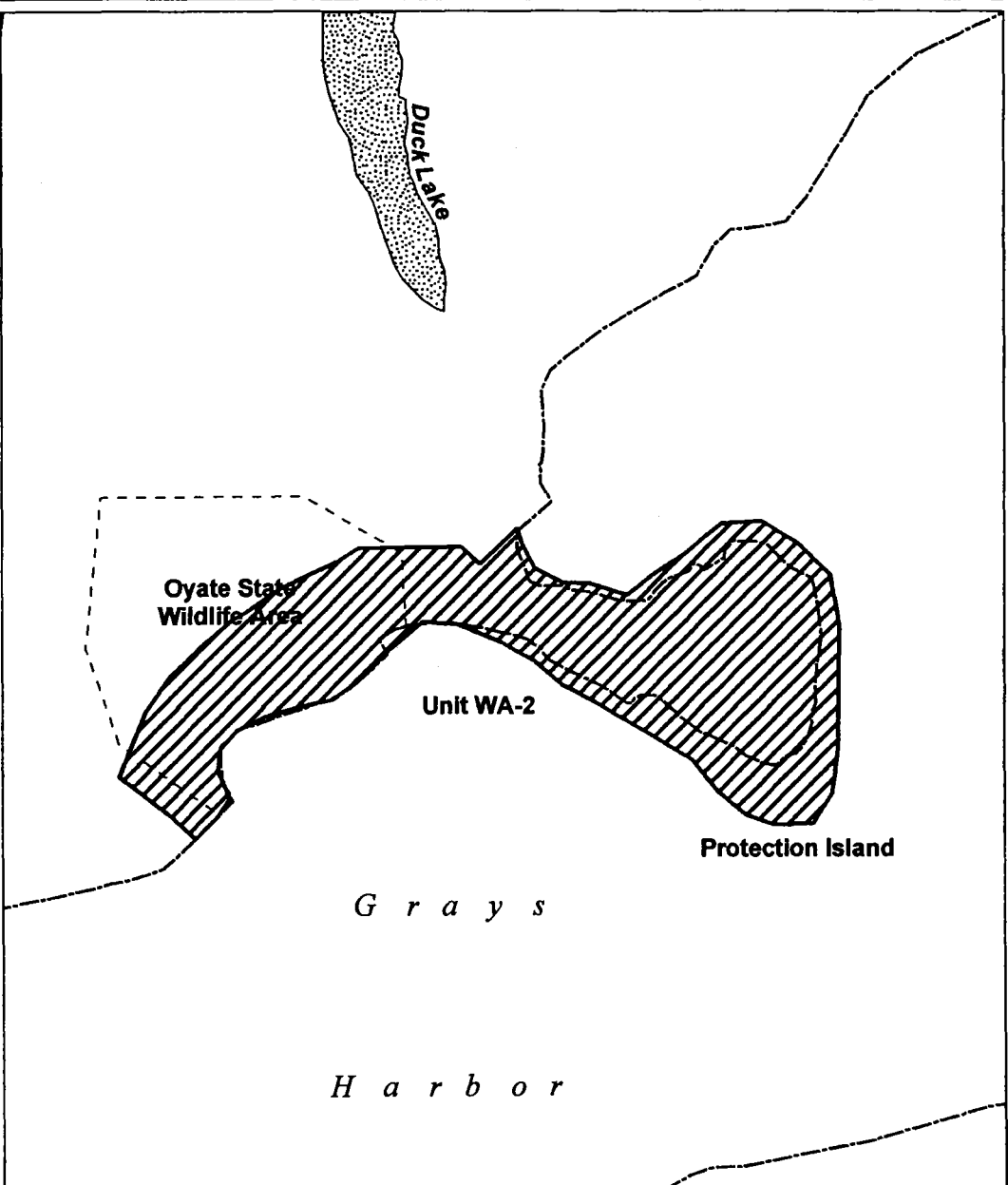
(i) From USGS 1:24,000 quadrangle maps West Port, and Point Brown, Washington, land bounded by the following UTM 10 NAD 27 coordinates (E,N): 411969, 5198743; 412118, 5198955; 412321, 5199143; 412474, 5199276; 412581, 5199342; 412760, 5199464; 412914, 5199534; 413095, 5199617; 413220, 5199696; 413634, 5199705; 413834, 5199702; 413941, 5199606; 414011, 5199668; 414163,

5199815; 414189, 5199727; 414265, 5199581; 414434, 5199496; 414600, 5199488; 414816, 5199423; 414960, 5199536; 415149, 5199660; 415368, 5199839; 415604, 5199856; 415808, 5199733; 416012, 5199539; 416064, 5199233; 416059, 5198892; 416059, 5198535; 416020, 5198256; 415914, 5198083; 415679, 5198078; 415512, 5198134; 415356, 5198262; 415200, 5198457; 414976, 5198591; 414791, 5198696; 414626, 5198794; 414430, 5198897; 414260, 5199040; 414064,


5199151; 413809, 5199254; 413603, 5199268; 413412, 5199107; 413205, 5198905; 413067, 5198813; 412875, 5198772; 412670, 5198713; 412504, 5198634; 412411, 5198529; 412393, 5198396; 412460, 5198236; 412387, 5198123; 412260, 5197998; 412114, 5198138; 411995, 5198227; 411816, 5198366; returning to 411969, 5198743.

(ii) **Note:** Unit WA 2 (Map M6) follows:

**Map 6.** Damon Point/Oyhut Wildlife Area(WA-2) Grays Harbor County, Washington.




**Legend**

 Western Snowy Plover Proposed Critical Habitat Unit

0 0.4 0.8 Miles

0 1 2 Kilometers



(8) Unit WA-3, Pacific County, Washington.

(i) From USGS 1:24,000 quadrangle maps Grayland, and North Cove, Washington, land bounded by the following UTM 10 NAD 27 coordinates (E,N): 416476, 5177381; 415946, 5177482; 415875, 5177830; 415806, 5178119; 415755, 5178555; 415630,

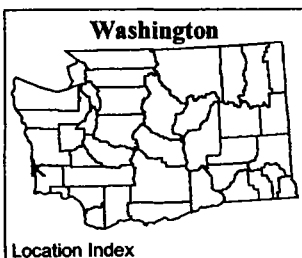
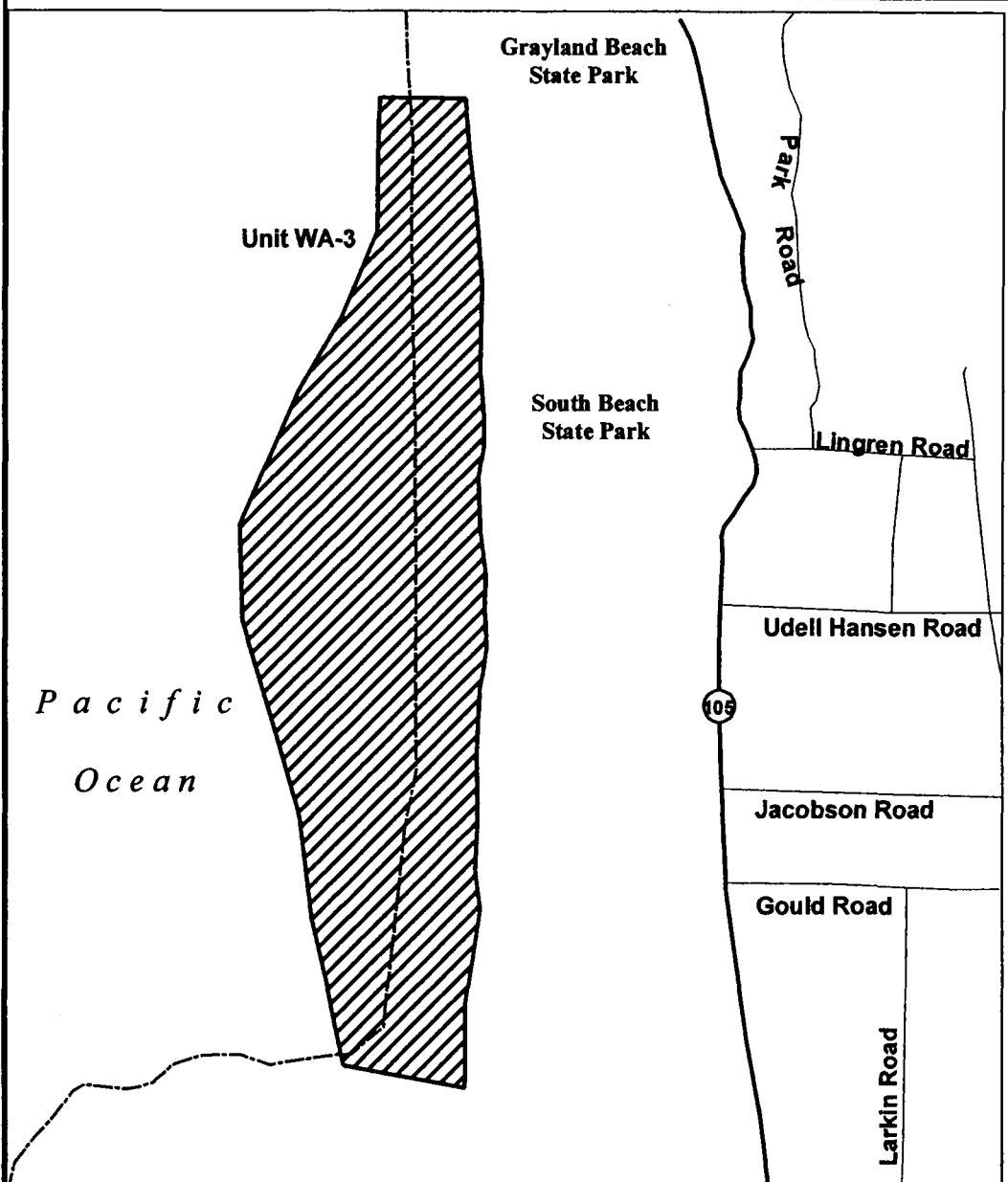
5178985; 415500, 5179419; 415492, 5179835; 415746, 5180411; 415933, 5180734; 416091, 5181113; 416093, 5181429; 416098, 5181688; 416474, 5181685; 416492, 5181483; 416521, 5181242; 416550, 5180859; 416543, 5180507; 416559, 5180293; 416559, 5180171; 416537, 5180035; 416541, 5179894; 416545, 5179798; 416570,

5179614; 416563, 5179469; 416574, 5179293; 416561, 5179199; 416543, 5179101; 416528, 5178820; 416534, 5178526; 416523, 5178330; 416545, 5178157; 416516, 5177956; 416481, 5177740; 416481, 5177511; returning to 416476, 5177381.

(ii) **Note:** Unit WA 3 (Map M7) follows:




**Map 7. Midway Beach (WA-3) Pacific County, Washington.**



**Legend**

 Western Snowy Plover Proposed Critical Habitat Unit

 Highway

 Local road

0.3 0 0.3 Miles

0.8 0 0.8 Kilometers



(9) Unit WA-4, Pacific County, Washington.

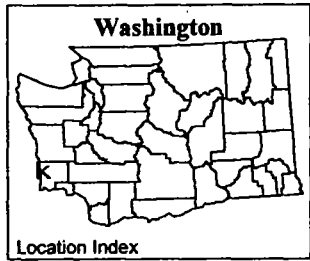
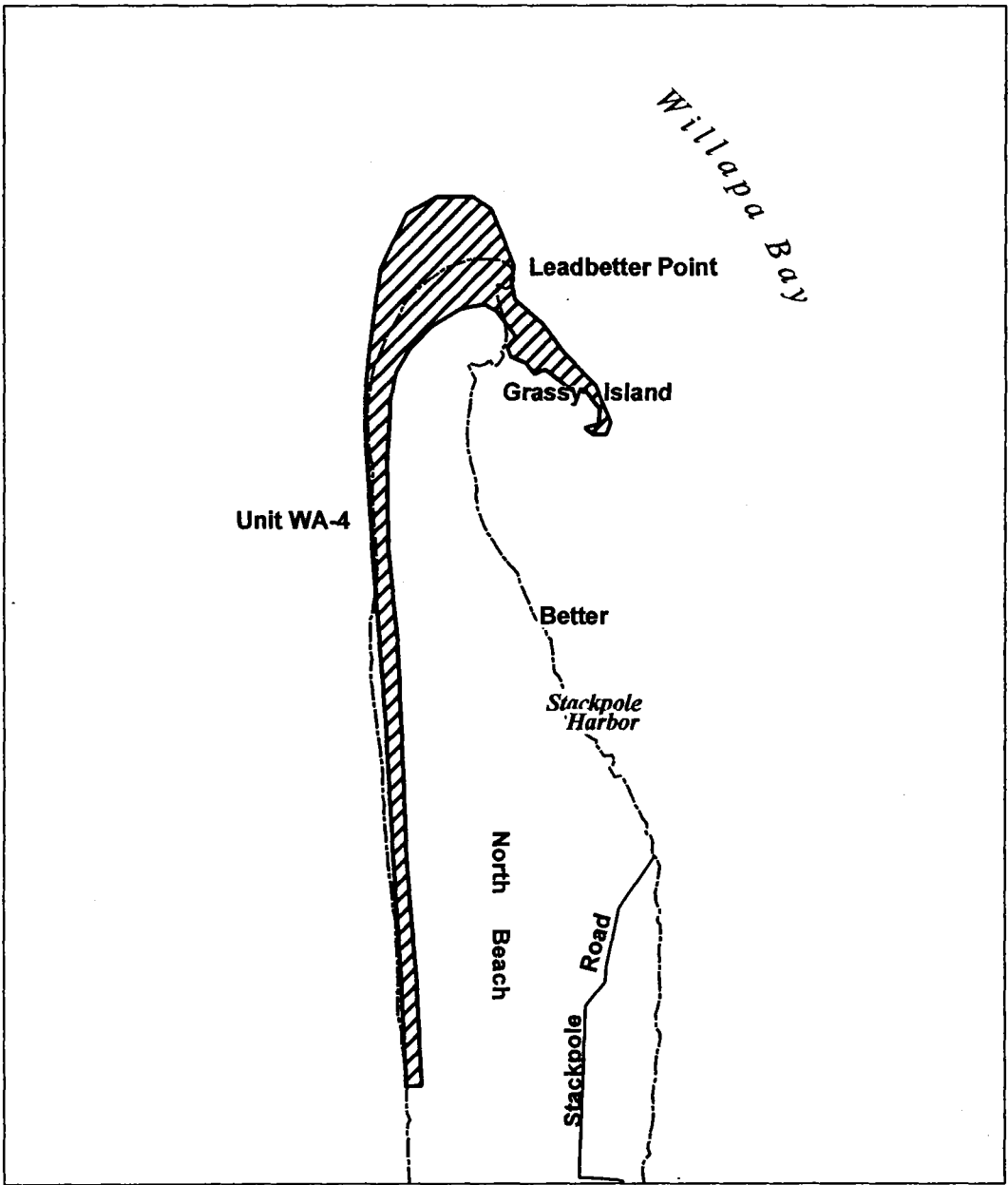
(i) From USGS 1:24,000 quadrangle maps North Cove, and Oysterville, Washington, land bounded by the following UTM 10 NAD 27 coordinates (E,N): 418747, 5156518; 418673, 5156518; 418673, 5156666; 418617, 5157830; 418525, 5159271; 418433, 5160860; 418285, 5162689; 418193, 5164185; 418201, 5164730; 418262, 5165289; 418377, 5166088; 418684,

5166723; 419029, 5166925; 419464, 5166919; 419684, 5166777; 419815, 5166467; 419951, 5166110; 419928, 5165908; 419966, 5165719; 420273, 5165450; 420539, 5165109; 420908, 5164721; 421093, 5164278; 421040, 5164147; 420879, 5164141; 420790, 5164219; 420951, 5164266; 420964, 5164444; 420797, 5164647; 420665, 5164635; 420317, 5164906; 420188, 5164850; 420088, 5164980; 419916, 5165052; 419874, 5165165; 419975,

5165284; 419744, 5165589; 419600, 5165670; 419319, 5165608; 418994, 5165420; 418728, 5165146; 418559, 5164873; 418488, 5164536; 418451, 5163797; 418470, 5162818; 418577, 5161684; 418631, 5160435; 418690, 5159126; 418802, 5157775; 418863, 5156521; returning to 418747, 5156518.

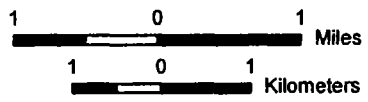
(ii) **Note:** Unit WA 4 (Map M8) follows:

**Map 8.** Leadbetter Point/Gunpowder Sands (WA-4) Pacific County, Washington.



**Legend**

-  Western Snowy Plover Proposed Critical Habitat Unit
-  Local Road



(10) Unit OR-1A, Clatsop County, Oregon.

(i) From USGS 1:24,000 quadrangle maps Clatsop Spit, and Warrenton, Oregon, land bounded by the following UTM 10 NAD 27 coordinates (E,N):

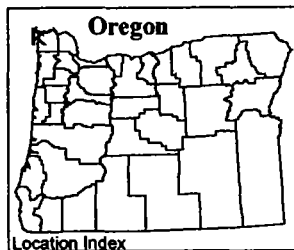
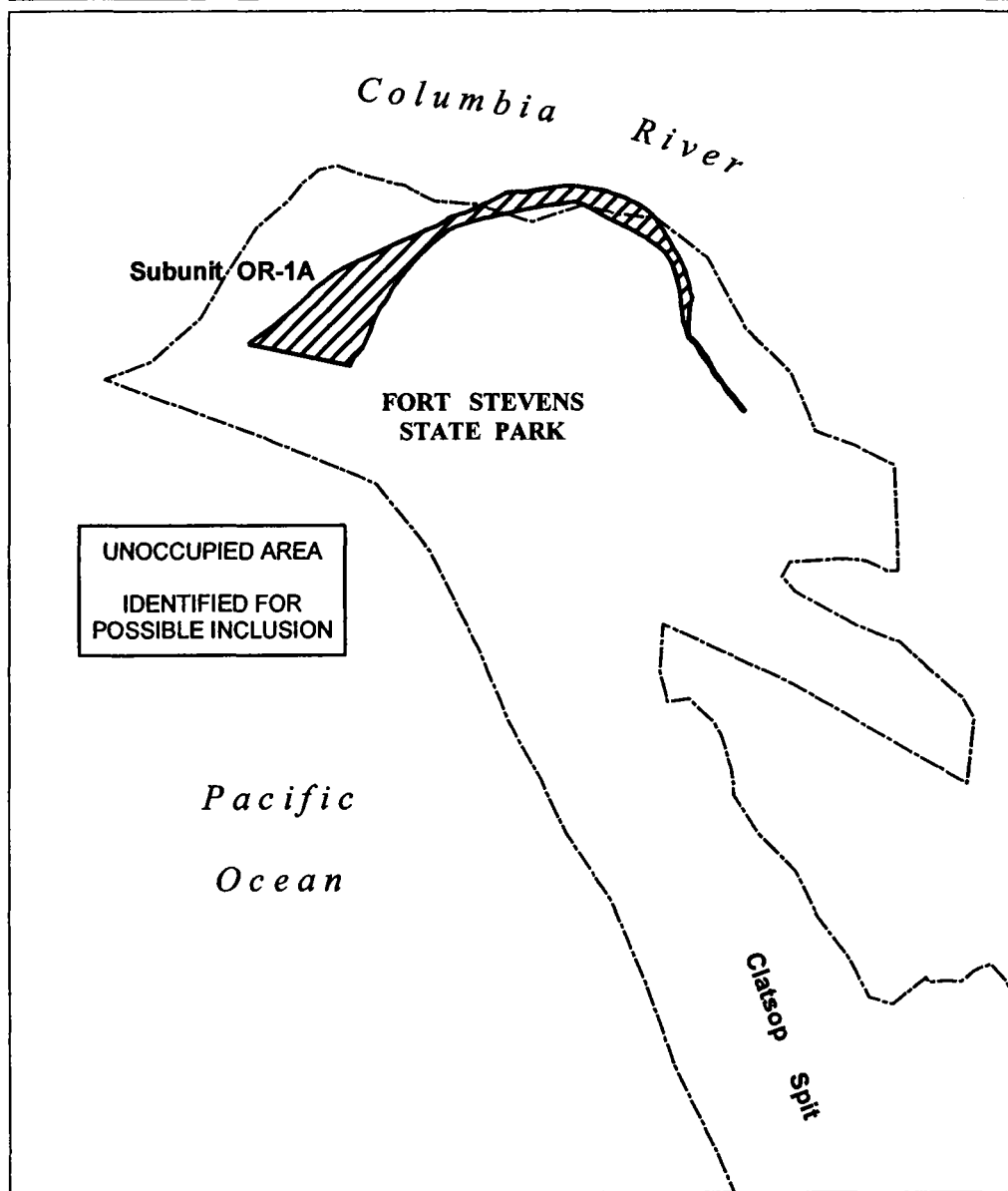
423261, 5119887; 423249, 5119889;  
423241, 5119898; 423229, 5119913;  
423212, 5119937; 423194, 5119957;  
423180, 5119974; 423169, 5119994;  
423153, 5120013; 423134, 5120034;  
423125, 5120048; 423120, 5120063;  
423112, 5120076; 423101, 5120088;  
423088, 5120105; 423073, 5120125;  
423063, 5120147; 423047, 5120169;  
423037, 5120178; 423023, 5120194;  
423015, 5120224; 423004, 5120246;  
422999, 5120292; 422995, 5120328;  
422985, 5120405; 422968, 5120466;  
422948, 5120514; 422926, 5120548;  
422896, 5120574; 422844, 5120609;  
422775, 5120649; 422684, 5120689;  
422613, 5120729; 422589, 5120743;  
422548, 5120758; 422537, 5120757;  
422515, 5120754; 422486, 5120751;

422428, 5120744; 422355, 5120731;  
422257, 5120711; 422164, 5120690;  
422079, 5120666; 422036, 5120653;  
422013, 5120641; 421945, 5120587;  
421885, 5120533; 421858, 5120503;  
421815, 5120452; 421770, 5120391;  
421748, 5120349; 421723, 5120319;  
421695, 5120260; 421685, 5120228;  
421647, 5120151; 421616, 5120111;  
421596, 5120075; 421165, 5120166;  
421191, 5120183; 421251, 5120227;  
421306, 5120269; 421377, 5120329;  
421442, 5120393; 421534, 5120465;  
421675, 5120532; 421794, 5120587;  
421842, 5120607; 421883, 5120624;  
421923, 5120643; 421951, 5120653;  
421962, 5120659; 422000, 5120681;  
422024, 5120696; 422054, 5120705;  
422082, 5120712; 422124, 5120732;  
422179, 5120757; 422222, 5120781;  
422250, 5120795; 422269, 5120801;  
422301, 5120800; 422337, 5120799;  
422388, 5120809; 422449, 5120819;  
422506, 5120825; 422555, 5120823;  
422619, 5120813; 422663, 5120805;

422706, 5120793; 422755, 5120776;  
422778, 5120765; 422824, 5120743;  
422852, 5120725; 422872, 5120707;  
422893, 5120679; 422903, 5120662;  
422919, 5120640; 422943, 5120598;  
422962, 5120567; 422982, 5120530;  
422996, 5120501; 423005, 5120480;  
423013, 5120460; 423018, 5120440;  
423024, 5120417; 423033, 5120379;  
423038, 5120365; 423038, 5120351;  
423029, 5120294; 423023, 5120237;  
423024, 5120218; 423027, 5120210;  
423031, 5120203; 423033, 5120194;  
423039, 5120187; 423048, 5120180;  
423058, 5120170; 423070, 5120153;  
423080, 5120139; 423087, 5120126;  
423102, 5120109; 423111, 5120092;  
423120, 5120076; 423128, 5120060;  
423135, 5120049; 423160, 5120015;  
423178, 5119990; 423195, 5119968;  
423205, 5119956; 423220, 5119939;  
423234, 5119922; 423246, 5119906;  
returning to 423261, 5119887.

(ii) **Note:** Unit OR 1A (Map M9) follows:

**Map 9. Columbia River Spit (OR-1A), Clatsop County, Oregon.**



**Legend**

 Western Snowy Plover Proposed Critical Habitat Unit

0.5 0 0.5  
Miles

0.8 0 0.8  
Kilometers



(11) Unit OR-1B, Clatsop County, Oregon.

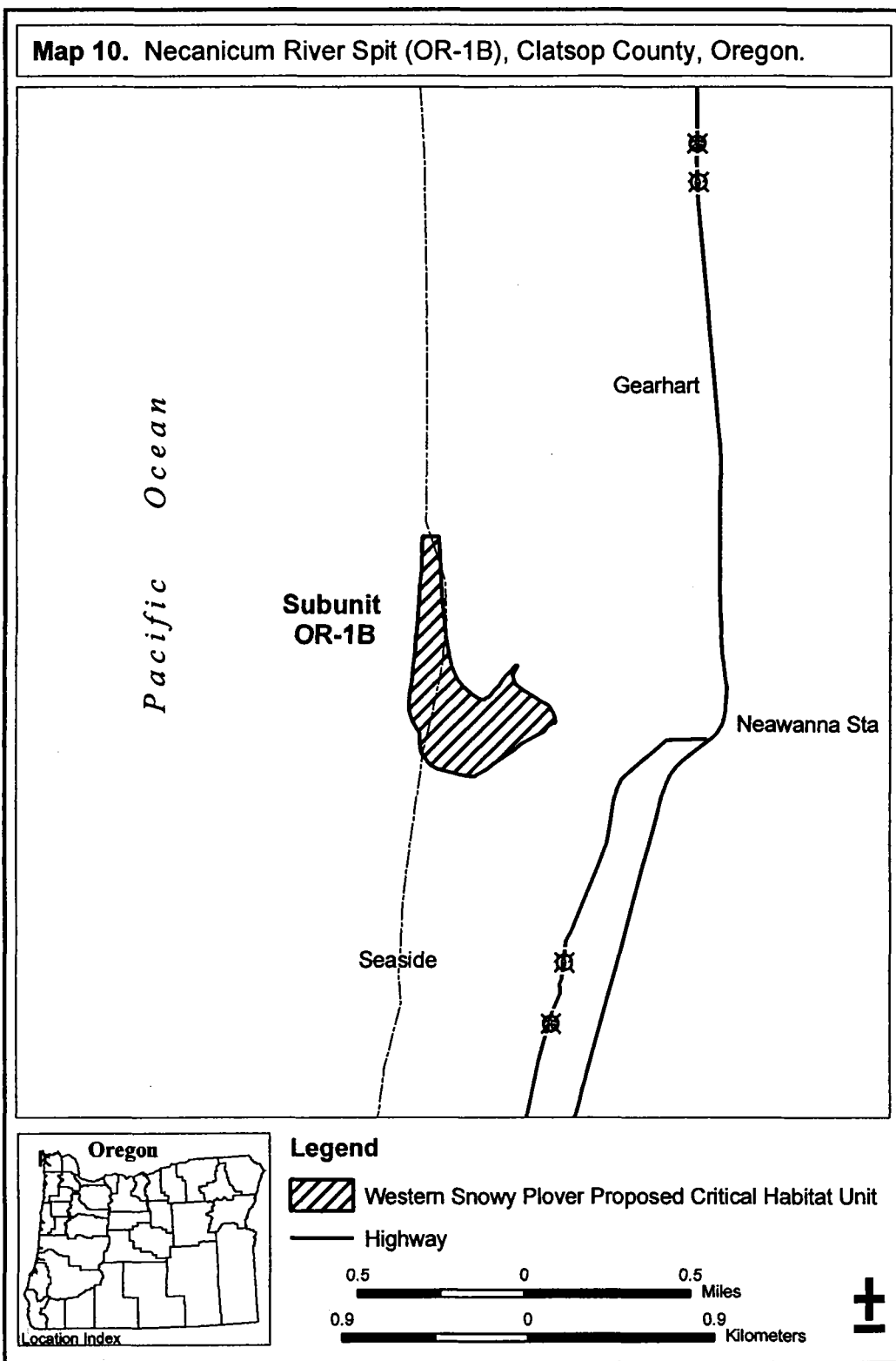
(i) From USGS 1:24,000 quadrangle map Gearhart, Oregon, land bounded by the following UTM 10 NAD 27

coordinates (E,N): 428373, 5095247;  
428372, 5095242; 428347, 5095244;  
428265, 5095257; 428188, 5095276;  
428150, 5095296; 428127, 5095323;  
428107, 5095351; 428098, 5095397;  
428098, 5095450; 428061, 5095508;  
428045, 5095554; 428046, 5095596;  
428049, 5095636; 428058, 5095694;  
428068, 5095768; 428074, 5095824;  
428078, 5095923; 428087, 5095993;

428095, 5096141; 428103, 5096225;  
428107, 5096353; 428111, 5096391;  
428189, 5096392; 428193, 5096303;  
428205, 5096107; 428213, 5096007;  
428220, 5095939; 428230, 5095882;  
428247, 5095802; 428255, 5095763;  
428269, 5095732; 428279, 5095706;  
428302, 5095679; 428340, 5095645;  
428373, 5095623; 428394, 5095611;  
428411, 5095612; 428422, 5095619;  
428432, 5095623; 428443, 5095634;  
428462, 5095659; 428483, 5095679;  
428498, 5095703; 428518, 5095730;  
428538, 5095748; 428555, 5095767;  
428564, 5095775; 428574, 5095774;

428564, 5095754; 428550, 5095728;  
428552, 5095709; 428564, 5095683;  
428605, 5095653; 428646, 5095627;  
428686, 5095601; 428719, 5095583;  
428737, 5095558; 428752, 5095528;  
428757, 5095499; 428743, 5095496;  
428723, 5095486; 428705, 5095458;  
428685, 5095449; 428660, 5095435;  
428632, 5095420; 428595, 5095400;  
428552, 5095366; 428503, 5095335;  
428465, 5095309; 428430, 5095280;  
returning to 428373, 5095247.

(ii) **Note:** Unit OR 1B (Map M10) follows:



(12) Unit OR-2, Tillamook County, Oregon.

(i) From USGS 1:24,000 quadrangle map Nehalem, Oregon, land bounded by the following UTM 10 NAD 27

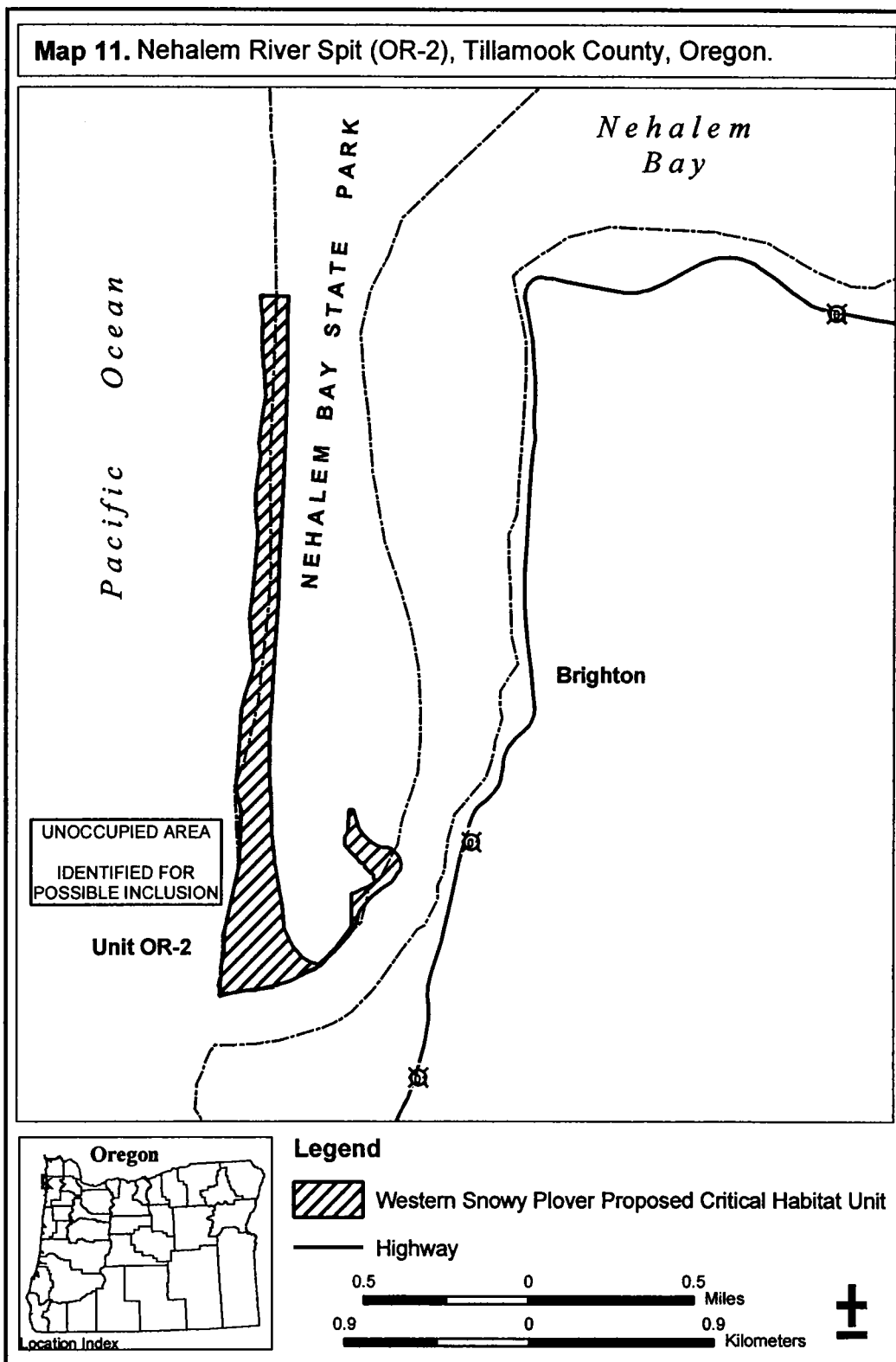
coordinates (E,N): 426638, 5056202; 426648, 5056302; 426646, 5056338; 426661, 5056396; 426661, 5056458; 426663, 5056510; 426687, 5056614; 426732, 5056817; 426740, 5056973; 426742, 5057098; 426718, 5057204; 426726, 5057301; 426737, 5057468; 426745, 5057574; 426761, 5057643; 426803, 5057778; 426792, 5057915; 426782, 5058021; 426792, 5058093; 426808, 5058259; 426824, 5058421; 426811, 5058532; 426811, 5058627; 426824, 5058717; 426835, 5058799; 426827, 5058865; 426844, 5059001; 426860, 5059088; 426852, 5059200; 426844, 5059277; 426841, 5059362; 426845, 5059456; 426836, 5059519; 426831, 5059570; 426968, 5059568; 426964, 5059469; 426963, 5059215; 426955, 5058919; 426943, 5058617; 426927, 5058311; 426922, 5058110;

426910, 5057915; 426900, 5057761; 426893, 5057610; 426881, 5057478; 426882, 5057364; 426882, 5057264; 426889, 5057130; 426892, 5056994; 426900, 5056918; 426908, 5056844; 426917, 5056790; 426933, 5056698; 426943, 5056642; 426954, 5056531; 426996, 5056441; 427037, 5056392; 427080, 5056366; 427119, 5056356; 427129, 5056363; 427150, 5056378; 427180, 5056406; 427204, 5056433; 427245, 5056486; 427274, 5056526; 427281, 5056538; 427282, 5056592; 427282, 5056667; 427281, 5056692; 427285, 5056696; 427300, 5056700; 427323, 5056712; 427356, 5056727; 427391, 5056746; 427396, 5056755; 427389, 5056768; 427389, 5056787; 427370, 5056799; 427349, 5056822; 427345, 5056826; 427348, 5056832; 427340, 5056841; 427333, 5056841; 427321, 5056849; 427314, 5056859; 427303, 5056871; 427285, 5056887; 427267, 5056906; 427249, 5056929; 427249, 5056947; 427248, 5056964; 427256, 5056980; 427262, 5057004;

427266, 5057067; 427266, 5057081; 427267, 5057099; 427291, 5057099; 427300, 5057059; 427312, 5057025; 427318, 5057006; 427341, 5056974; 427377, 5056945; 427400, 5056929; 427425, 5056920; 427454, 5056918; 427476, 5056912; 427502, 5056888; 427517, 5056862; 427525, 5056834; 427522, 5056811; 427506, 5056796; 427494, 5056776; 427478, 5056754; 427434, 5056724; 427380, 5056682; 427342, 5056636; 427321, 5056611; 427317, 5056595; 427312, 5056566; 427296, 5056535; 427273, 5056498; 427249, 5056469; 427196, 5056414; 427165, 5056384; 427146, 5056363; 427128, 5056348; 427098, 5056332; 427067, 5056320; 427029, 5056299; 426991, 5056279; 426969, 5056271; 426936, 5056261; 426896, 5056252; 426872, 5056246; 426843, 5056238; 426812, 5056231; 426790, 5056232; 426767, 5056231; 426715, 5056220; returning to 426638, 5056202.

(ii) **Note:** Unit OR 2 (Map M11) follows:





(13) Unit OR-3, Tillamook County, Oregon.

(i) From USGS 1:24,000 quadrangle map Garibaldi, Oregon, land bounded by the following UTM 10 NAD 27 coordinates (E,N): 425807, 5046046; 425855, 5046042; 425953, 5046029; 426052, 5045994; 426095, 5045969; 426142, 5045939; 426175, 5045895; 426208, 5045840; 426224, 5045807;

426227, 5045780; 426208, 5045772; 426184, 5045778; 426149, 5045794; 426122, 5045784; 426098, 5045756; 426081, 5045721; 426091, 5045643; 426120, 5045495; 426128, 5045441; 426159, 5045231; 426167, 5045131; 426167, 5045049; 426151, 5045006; 426143, 5044953; 426151, 5044898; 426159, 5044844; 426124, 5044732; 426104, 5044648; 426078, 5044433;

426052, 5044257; 426020, 5044062; 425972, 5043800; 425889, 5043253; 425718, 5043279; 425706, 5043277, proceed generally N following the mean low water mark (defined at the beginning of the section) and returning to 425807, 5046046.

(ii) **Note:** Unit OR 3 (Map M12) follows: