DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

RIN 1018–AC33

Endangered and Threatened Wildlife and Plants; Final Designation of Critical Habitat for the Marbled Murrelet

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: The U.S. Fish and Wildlife Service originally proposed to designate critical habitat for the marbled murrelet (*Brachyramphus marmoratus marmoratus*) in Washington, Oregon, and California on January 27, 1994 (59 FR 3811). Based on comments received on the original proposal and additional information, the Service published a supplemental proposed designation of critical habitat for the marbled murrelet on August 10, 1995 (60 FR 40892).

The marbled murrelet is listed as a threatened species under the Endangered Species Act (Act). It is a small seabird of the Alcidae family that forages in the near-shore marine environment and nests in large trees in coniferous forests. Located primarily on Federal land, and to a lesser extent on State, county, city, and private lands, this final critical habitat rule would provide additional protection requirements under section 7 of the Act with regard to activities that are funded, authorized, or carried out by a Federal agency. Section 4 of the Act requires the Service to designate critical habitat for listed species on the basis of the best scientific information available and to consider the economic and other relevant impacts of including particular areas in the designation.

EFFECTIVE DATE: June 24, 1996.

ADDRESSES: The complete file for this rule is available at the U.S. Fish and Wildlife Service, Oregon State Office, 2600 S.E. 98th Avenue, Suite 100, Portland, Oregon 97266. The file for this rule will be available for public inspection, by appointment, during normal business hours at the above address.

FOR FURTHER INFORMATION CONTACT: Mr. Russell D. Peterson, State Supervisor, U.S. Fish and Wildlife Service, see ADDRESSES section or telephone 503–231–6179 or FAX 503–231–6195.

SUPPLEMENTARY INFORMATION:

Background

Previous Federal Actions

On January 15, 1988, the U.S. Fish and Wildlife Service (Service) received a petition to list the North American subspecies of the marbled murrelet (*Brachyramphus marmoratus marmoratus*) in Washington, Oregon, and California as a threatened species under the Endangered Species Act. On October 17, 1988, the Service published a finding that the petition had presented substantial information to indicate that the requested action may be warranted (53 FR 40479). Because of the increased research effort and new information available, the status review period was reopened, with the concurrence of the petitioners, from March 5, 1990, through May 31, 1990 (55 FR 4913).

On June 20, 1991, the Service published a proposal to list the marbled murrelet in Washington, Oregon, and California as a threatened species (56 FR 28362). The comment period was reopened for 30 days on January 30, 1992, to gather the most updated information about the species (57 FR 3804). On October 1, 1992, following an order by the U.S. District Court for the Western District of Washington denying a 6-month extension, the Service published the final rule listing the marbled murrelet in Washington, Oregon, and California as a threatened species (57 FR 45328). In February 1993, the Service appointed a Recovery Team to develop a recovery plan for the marbled murrelet.

On November 2, 1993, the U.S. District Court for the Western District of Washington granted a motion by the plaintiffs in *Marbled Murrelet v. Babbitt* to compel a proposed designation of critical habitat. In the ruling, the court ordered the Secretary of the Interior to propose designating critical habitat for the marbled murrelet no later than January 21, 1994, and to make a final designation of critical habitat as soon as reasonably possible under applicable law.

On January 27, 1994, the Service published a proposed rule for the designation of critical habitat for the marbled murrelet (59 FR 3811). Public comment was due by April 27, 1994. On March 14, 1994, the Service received a request for a public hearing. To allow additional comment, the public comment period was reopened for 30 days on May 9, 1994. The public hearing was conducted on May 24, 1994, in North Bend, Oregon.

Based on comments received from the Marbled Murrelet Recovery Team, other commenters, and additional information, the Service significantly amended its proposed critical habitat designation and published a supplemental proposed rule on August 10, 1995 (60 FR 40892). The Service held five public hearings on the supplemental proposed rule in Washington, Oregon, and California during the public comment period. Public comment was accepted through October 10, 1995.

Based on the Service's interpretation of Public Law 104–6 as prohibiting the expenditure of funds for making a final determination of critical habitat, the record was closed and the comments archived at the end of the public comment period. On February 29, 1996, Judge Rothstein denied a motion to vacate her previous order on completion of the designation of critical habitat and ordered the Service to complete the final designation by May 15, 1996. This rule complies with that order.

Ecological Considerations

The marbled murrelet is a small seabird of the Alcidae family. The North American subspecies ranges from the Aleutian Archipelago in Alaska, eastward to Cook Inlet, Kodiak Island, Kenai Peninsula and Prince William Sound, south along the coast through the Alexander Archipelago of Alaska, British Columbia, Washington, and Oregon to central California. Some wintering birds are found in southern California. A separate subspecies (*Brachyramphus marmoratus perdix*) occurs in Asia. Though recent genetic analysis indicates that the two subspecies may warrant full specific status (Friesen *et al.* 1994), a status change has not yet been recognized.

Marbled murrelets spend most of their lives in the marine environment where they feed primarily on small fish and invertebrates in near-shore marine waters. They forage by pursuit diving in waters generally up to 80 meters (260 feet) deep and 0.3 to 2 kilometers (0.2 to 1.2 miles) off-shore. Pairs are often seen diving simultaneously, which researchers suggest may increase foraging efficiency (Strachan *et al.* 1995). Courtship behaviors have been observed at sea although copulation rarely has been witnessed. Marbled murrelets also aggregate, loaf, preen, and exhibit wing-stretching behaviors on the water.

Marbled murrelets nest inland in Washington, Oregon, and California, typically in large-diameter old-growth trees in low-elevation forests with multi-layered canopies (Hamer and Nelson 1995b). Marbled murrelets have been found occasionally on rivers and

inland lakes (Carter and Sealy 1986; Strachan *et al.* 1995).

Dispersal mechanisms are not well understood, however, social interactions may play an important role. The presence of marbled murrelets in a forest stand may attract other pairs to currently unoccupied habitat within the vicinity. This may be one of the reasons marbled murrelets have been observed in habitat not currently suitable for nesting, but in close proximity to known nesting sites (Hamer and Cummins 1990, Hamer *et al.* 1991, Suddjian 1995). Although marbled murrelets appear to be solitary in their nesting habits, they are frequently detected in groups in the forest (Nelson and Peck 1995; USFWS 1995a). Two nests discovered in Washington during 1990 were located within 46 meters (150 feet) of each other (Hamer and Cummins 1990), and two nests discovered in Oregon during 1994 were located within 33 meters (100 feet) of each other (S. K. Nelson, Oregon Cooperative Wildlife Research Unit, pers. comm. 1995). Therefore, unoccupied habitat in the vicinity of occupied habitat may be more important for recovering the species than suitable habitat isolated from occupied habitat (USFWS 1995a). Similarly, murrelets are more likely to discover newly developing habitat in proximity to occupied sites.

Nesting occurs over an extended period from late March to late September (Carter and Sealy 1987; Hamer and Nelson 1995b). During the breeding period, the female marbled murrelet lays a single egg in a tree containing a suitable nesting platform (e.g., large or forked limbs, dwarf mistletoe (*Arceuthobium* spp.) infections, witches' brooms, deformities, etc. (Hamer and Nelson 1995b). Both sexes incubate the egg in alternating 24-hour shifts for approximately 30 days, and the young fledge after an additional 27 to 40 days (Simons 1980; Hirsch *et al.* 1981; Singer *et al.* 1991; Hamer and Nelson 1995a; Nelson and Hamer 1995a). Adults feeding young fly from ocean feeding areas to nest sites at all times of the day, but most often at dusk and dawn (Nelson and Hamer 1995a). Chicks are fed at least once a day. The adults usually carry only one fish at a time to the young (Hamer and Cummins 1991; Singer *et al.* 1992; Nelson and Hamer 1995a). The young are semi-precocial. Before leaving the nest, the young molt into a distinctive juvenile plumage. A fledgling's first flight is from the nest directly to the marine environment (Hamer and Cummins 1991).

Marbled murrelets have been observed at some inland sites during all months of the year (Paton *et al.* 1987; Naslund 1993). Attendance at breeding sites during the non-breeding season may enhance pair bond maintenance, facilitate earlier breeding, or reinforce familiarity with flight paths to breeding sites (Naslund and O'Donnell 1995; O'Donnell *et al.* 1995).

With respect to critical habitat, the Service considered two components of marbled murrelet habitat that are biologically essential—(1) terrestrial nesting habitat and associated forest stands, and (2) marine foraging habitat used during the breeding season. Forested areas with conditions that support nesting marbled murrelets are referred to as ''suitable nesting habitat.'' Marine areas with conditions that support foraging marbled murrelets are referred to as ''suitable foraging habitat.'' Because only terrestrial habitat is being designated as critical habitat, the primary focus of this description will be on the terrestrial environment.

Throughout the forested portion of the species' range, marbled murrelets typically nest in forested areas containing characteristics of older forests (Binford *et al.* 1975; Hamer and Cummins 1991; Quinlan and Hughes 1990; Kuletz 1991; Singer *et al.* 1991, 1992; Hamer *et al.* 1994; Hamer and Nelson 1995b; Ralph *et al.* 1995a). The marbled murrelet population in Washington, Oregon, and California nests in most of the major types of coniferous forests in the western portions of these states, wherever older forests remain inland of the coast. Although marbled murrelet nesting habitat characteristics are somewhat variable throughout the range of the species, some general habitat attributes are characteristic throughout its range, including the presence of nesting platforms, adequate canopy cover over the nest, landscape condition, and distance to the marine environment.

Individual tree attributes that provide conditions suitable for nesting include large branches (average of 32 centimeters (13 inches), range of 10 to 81 centimeters (4 to 32 inches) in Washington, Oregon, and California) or forked branches, deformities (e.g., broken tops), dwarf mistletoe infections, witches' brooms, or other structures large enough to provide a platform for a nesting adult murrelet (Hamer and Cummins 1991; Singer *et al.* 1991, 1992; Hamer and Nelson 1995b). These structures are typically found in old-growth and mature forests, but may be found in a variety of forest types including younger forests containing remnant large trees.

Northwestern forests and trees typically require 200 to 250 years to attain the attributes necessary to support marbled murrelet nesting, although characteristics of nesting habitat sometimes develop in younger coastal redwood (*Sequoia sempervirens*) and western hemlock (*Tsuga heterophylla*) forests. Forests with older residual trees remaining from previous forest stands may also develop into nesting habitat more quickly than those without residual trees. These remnant attributes can be products of fire, wind storms, or previous logging operations that did not remove all of the trees (Hansen *et al.* 1991; McComb *et al.* 1993). Other factors that may affect the time required to develop suitable nesting habitat characteristics include site productivity and microclimate.

Through the 1995 nesting season, at least 95 active or previously used tree nests had been located in North America, including 9 in Washington, 41 in Oregon, and 12 in California (S. K. Nelson, pers. comm. 1996; W. Ritchie, Washington Dept. of Fish and Wildlife, pers. comm. 1996; Binford *et al.* 1975; Quinlan and Hughes 1990; Hamer and Cummins 1990, 1991; Kuletz 1991; Singer *et al.* 1991, 1992; Hamer and Nelson 1995b). All of the nests for which data are available in Washington, Oregon, and California were in large trees that were more than 81 centimeters (32 inches) diameter at breast height (dbh) (Hamer and Nelson 1995b). Of the 37 nests for which data were available, 70 percent were on a moss substrate and 30 percent were on litter, such as bark pieces, conifer needles, small twigs, or duff. Fifty-nine percent of the nests were on large or deformed branches, 16 percent were on forked limbs, 6 percent were on a limb where it attached to the tree bole, 11 percent were on dwarf mistletoe, and 8 percent were on other structures (Hamer and Nelson 1995b; T. Hamer, Hamer Environmental, pers. comm. 1995).

More than 94 percent of the nests for which data were available were in the top half of the nest trees, which may allow easy nest access and provide shelter from potential predators and weather. Canopy cover directly over the nests was typically high (average 84 percent; range 5 to 100 percent) in Washington, Oregon, and California (Hamer and Nelson 1995b; T. Hamer, pers. comm. 1995). This cover may provide protection from predators and weather. Such canopy cover may be provided by trees adjacent to the nest tree, and/or by the nest tree itself. Canopy closure of the nest stand/site varied between 12 and 99 percent and averaged 48 percent (Hamer and Nelson 1995b; T. Hamer, pers. comm. 1995).

Nests have been located in forested areas dominated by coastal redwood, Douglas-fir (*Pseudotsuga menziesii*), mountain hemlock (*Tsuga mertensiana*), Sitka spruce (*Picea sitchensis*), western hemlock, and western redcedar (*Thuja plicata*) (Binford *et al.* 1975; Quinlan and Hughes 1990; Hamer and Cummins 1991; Singer *et al.* 1991, 1992; Hamer and Nelson 1995b). Individual nests in Washington, Oregon, and California have been located in Douglas-fir, coastal redwood, western hemlock, western redcedar, and Sitka spruce trees.

For nesting habitat to be accessible to marbled murrelets, it must occur close enough to the marine environment for murrelets to fly back and forth. The farthest inland distance for a known occupied site is 84 kilometers (52 miles) in Washington. The farthest known inland occupied sites in Oregon and California are 61 and 56 kilometers (38 and 35 miles), respectively. Occupied sites are defined as forest stands where marbled murrelets have been observed exhibiting behaviors associated with nesting. Additionally, detections (not occupied sites) have been documented farther inland in Oregon (S. K. Nelson, pers. comm. 1995) and California.

Marbled murrelet nests are difficult to locate for several reasons—(1) nests are generally located high in the canopy; (2) adults and juveniles have cryptic plumage during most of the nesting season; (3) adults are often (but not always) extremely quiet in the vicinity of nests (Nelson and Peck 1995); and (4) adults may show activity near the nest only once per day, usually under low light conditions. Therefore, identification of occupied sites and suitable nesting habitat are the best indicators of potential nest sites. Indicators of occupied habitat include active nests; egg shell fragments; young found on the forest floor; marbled murrelets seen flying through the forest beneath the canopy, landing in trees, circling above the canopy, and calling from a stationary perch; or large numbers of murrelets heard calling from in and around a forest stand.

Inland, marbled murrelets are generally easier to detect at high-use sites during the spring and late summer when breeding activities peak (Paton and Ralph 1988; Nelson 1989). Inland detections of the species are less frequent during the early fall when murrelets have presumably completed breeding and are undergoing a flightless molt at sea. Similarly, murrelets may be more difficult to detect in areas that support low numbers of reproducing pairs, perhaps because birds occurring in lower densities appear to be less vocal (Rodway *et al.* 1993; Dillingham *et al.* 1995).

Marbled murrelets spend most of their lives in the marine environment where they consume a diversity of prey species. Areas that support populations of prey species juxtaposed with nesting areas are essential to maintaining successfully reproducing marbled murrelet populations (Burkett 1995). Murrelets often aggregate near local food concentrations, resulting in a clumped distribution in the marine environment (Sealy and Carter 1984). Prey breeding areas (e.g., near-shore kelp beds, sand or gravel beaches, sand banks, etc.) and areas where prey may concentrate (e.g., near-shore upwellings, waters at the mouths of bays and coastal rivers, eddies in the vicinity of headlands, river mouths and associated plumes, and tidal rips, etc.) are likely the most important features determining murrelet foraging opportunities (Ainley *et al.* 1995; Hunt 1995). Human-caused disturbances (e.g., intense commercial or recreational fishing) may affect prey density or accessibility.

Most of the information available about prey species of marbled murrelets is from the Gulf of Alaska and British Columbia, and is summarized by Burkett (1995). Marbled murrelets generally forage in near-shore marine waters at distances of 0.3 to 2 kilometers (0.2 to 1.2 miles) from shore; however, they occur at distances up to 24 kilometers (14 miles) from shore in reduced numbers. Marine systems producing sufficient prey to support marbled murrelets provide suitable foraging habitat for the species.

Marbled murrelets have been reported feeding on a wide variety of small fish and invertebrates, indicating their flexibility and capability to use alternative prey sources. Prey include Pacific sandlance (*Ammodytes hexapterus*), Pacific herring (*Clupea harengus*), northern anchovy (*Engraulis mordax*), osmerids, sea perch (*Cymatogaster aggregata*), euphausiids (*Euphausia pacifica* and *Thysanoessa spinifera*), mysids (*Neomysis* spp.), and amphipods, among others (Sealy 1975; Sanger 1987; Sanger and Jones 1981; Carter and Sealy 1990; Strong *et al.* 1993; Burkett 1995). Fish are an important component of the diet during the summer, which coincides with the nestling and fledgling periods, while euphausiids, mysids, and amphipods seem to be more important in the winter and spring in some areas (Munro and Clemens 1931; Sealy 1975; Krasnow and Sanger 1982; Sanger 1983, 1987; Carter 1984; Carter and Sealy 1990; Vermeer 1992; Burkett 1995).

Prior to euroamerican settlement in the Pacific Northwest, nesting habitat for the marbled murrelet was well-distributed, particularly in the wetter portions of its range in Washington, Oregon, and California. This habitat was generally found in large, contiguous blocks (Ripple 1994) as described under the Management Considerations section of this rule. The Recovery Team and others (Ralph *et al.* 1995b) considered the loss of nesting habitat to be one of the primary factors limiting current population size from British Columbia to California.

Areas where marbled murrelets are concentrated at sea during the breeding season are likely determined by a combination of terrestrial and marine conditions. However, nesting habitat appears to be the most important factor affecting marbled murrelet distribution and numbers. Recent marine survey data confirm earlier conclusions (60 FR 40892) that marine observations of murrelets during the nesting season generally correspond to the largest remaining blocks of suitable forest nesting habitat (Nelson *et al.* 1992; Ralph *et al.* 1995b; Ralph and Miller 1995; Strong 1995; Varoujean *et al.* 1994). For example, suitable nesting habitat data from aggregated GIS databases (S. Holzman, U.S. Fish and Wildlife Service, pers. comm. 1996) were overlain on the aerial survey data provided by Varoujean *et al.* (1994) and the boat survey data provided by Strong (1995). Highest densities of murrelets seen in 1992, 1993, 1994, and 1995 closely corresponded with the presence of large blocks of suitable nesting habitat on the coasts of northern coastal Washington and central and southern coastal Oregon.

Consistent with Varoujean *et al.*'s (1994) 1993 and 1994 aerial surveys, Thompson (1996) found murrelets to be more numerous along Washington's northern outer coast and less abundant along the southern coast. He reported that this distribution appears to be correlated with (1) proximity of old growth forest, (2) the distribution of rocky shoreline/substrate versus sandy shoreline/substrate, and (3) abundance of kelp; his analysis of these variables is continuing. In British Columbia, Rodway *et al.* (1995) observed murrelets aggregating on the water close to breeding areas at the beginning of the breeding season and, for one of their two study areas, again in July as young were fledging. Burger (1995) reported that the highest at-sea murrelet densities in both 1991 and 1993 were seen immediately adjacent to two tracts of old-growth forest, while areas with very

low densities of murrelets were adjacent to heavily logged watersheds.

In contrast, where nesting habitat is limited in southwest Washington, northwest Oregon, and portions of California, few marbled murrelets are found at sea during the nesting season (Ralph and Miller 1995; Ralph *et al.* 1995b; Strong 1995; Varoujean and Williams 1995; Thompson 1996). The area between the Olympic Peninsula in Washington and Tillamook County in Oregon (160 kilometers (100 miles)) has few occupied sites or sightings at sea of marbled murrelets. In California, approximately 480 kilometers (300 miles) separate the large breeding populations to the north in Humboldt and Del Norte Counties from the southern breeding population in San Mateo and Santa Cruz Counties. Currently this reach contains few marbled murrelets during the breeding season; however, the area likely contained significant numbers of marbled murrelets before extensive logging (Paton and Ralph 1988, Larsen 1991).

In addition to the proximity of suitable nesting habitat, it is likely that marine factors such as prey abundance influence the local distribution of breeding murrelets (Ralph and Miller 1995; Strachen *et al.* 1995; Strong 1995). The influence of prey distribution and abundance on the distribution of other alcids has been well documented (Bradstreet and Brown 1985). In general, nesting murrelets, which must return to their nest at least once per day, must balance the energetic costs of foraging trips with the benefits for themselves and their young (Skutch 1979; Ydenberg 1989; USFWS 1995a). Therefore, breeding adults are energetically justified in taking relatively long foraging trips only when they can gain access to high quality foraging areas (Bradstreet and Brown 1985; Gaston 1985; Carter and Sealy 1990). Breeding murrelets are known to cover large areas at sea to take advantage of foraging opportunities (Carter and Sealy 1990; Ralph and Miller 1995; Rodway *et al.* 1995). Therefore, use of marine habitat is constrained during the breeding season by its distance from nesting habitat and the quality of forage resources available. This is consistent with the observed juxtaposition of suitable nesting habitat and distribution of murrelets during the breeding season described above, and it may explain the differences observed in marine distribution patterns between murrelets and other non-forest nesting seabirds (Varoujean *et al.* 1994). During years of low prey availability, the distance from nesting areas to adequate foraging areas is probably a critical determinant of reproductive success (USFWS 1995a).

Marbled murrelets can be adversely affected by impacts to their nesting habitat, marine foraging habitat, and food supply, as well as direct mortality from human activities such as oil spills and gillnet fisheries. These impacts, and the resulting decline from historical population levels, formed the basis for the listing of the species as threatened in 1992 (57 FR 45328). Based on an analysis of likely ranges of fecundity and survivorship of this species, Beissinger (1995) developed a population model that estimated that marbled murrelets in Washington, Oregon, and California may be declining at a rate between 4 and 6 percent per year. These results are consistent with the evidence of a long-term decline from historical populations.

This decline may be a result of several factors. In addition to habitat loss and fragmentation, which may reduce nesting success, declines may be exacerbated by high mortality rates of the young of the year prior to reaching the ocean, and high mortality rates of juveniles and adults in the marine and terrestrial environments.

Marbled murrelets are believed to be highly vulnerable to predation when on the nesting grounds, and the species has evolved a variety of morphological and behavioral characteristics indicative of selection pressures from predation (Ralph *et al.* 1995b). For example, plumage and eggshells exhibit cryptic coloration, and adults fly to and from nests by indirect routes and often under low-light conditions (Nelson and Hamer 1995a). Potential nest predators include the common raven (*Corvus corax*), Steller's jay (*Cyanocitta stelleri*), American crow (*Corvus brachyrhynchos*), gray jay (*Perisoreus canadensis*), great horned owl (*Bubo virginianus*), sharp-shinned hawk (*Accipiter striatus*), Cooper's hawk (*Accipiter cooperii*), northern goshawk (*Accipiter gentilis*), raccoon (*Procyon lotor*), marten (*Martes americana*), Townsend chipmunk (*Eutamias townsendii*), northern flying squirrel (*Glaucomys sabrinus*), Douglas squirrel (*Tamiasciurus douglasi*), and fisher (*Martes pennanti*) (Marzluff *et al.* 1996). Ravens, Steller's jays, and possibly great horned owls are known predators of eggs or chicks (Nelson and Hamer 1995b).

From 1974 through 1993, of those marbled murrelet nests in Washington, Oregon, and California where success/failure was documented, approximately 64 percent of the nests failed. Of those nests, 57 percent failed due to predation (Nelson and Hamer 1995b). The relatively high predation rate could be biased because nests near forest edges may be more easily located by observers and more susceptible to predation and because observers may attract predators. Hamer and Nelson (1995b) believed that researchers had minimal impacts on predation in most cases because the nests were monitored from a distance and relatively infrequently, and precautions were implemented to minimize predator attraction.

Several possible reasons exist for the high observed predation rates of marbled murrelet nests. The first possibility is that these high predation rates are normal, although it is unlikely that a stable population could have been maintained under the predation rates presently being observed (Beissinger 1995).

Another reason could be that populations of marbled murrelet predators such as corvids (jays, crows, and ravens) and great horned owls are increasing in the western United States, largely in response to habitat changes and food sources provided by humans (Robbins *et al.* 1986; Rosenberg and Raphael 1986; Johnson 1993; Marzluff *et al.* 1994, 1996; National Biological Service 1996), resulting in increased predation rates on marbled murrelets. It has also been proposed that creation of excessive forest edge habitat may increase the vulnerability of murrelet nests to predation and ultimately lead to higher rates of predation. Edge effects have been implicated in increased forest bird nest predation rates for other species of birds (Chasko and Gates 1982; Yahner and Scott 1988).

The potential relationship between forest fragmentation, edge, and adverse effects on forest nesting birds has received increased attention during the last few decades. In a comprehensive review of the many studies on this topic, Paton (1994) concluded that ''strong evidence exists that avian nest success declines near edges.'' Small patches of habitat have a greater proportion of edge than do large patches of the same shape (Schieck *et al.* 1995). However, Paton (1994) noted that many of these studies involved lands where forests and agricultural or urban areas interface, or they involved experiments with ground nests that are not readily applicable to canopy nesters such as marbled murrelets. Paton (1994) therefore stressed the need for studies specific to forests fragmented by timber harvest in the Pacific Northwest and elsewhere.

Some research on this topic has been conducted in areas dominated by timber production and using nests located off the ground (Ratti and Reese 1988;

Rudnicky and Hunter 1993; Marzluff *et al.* 1996; Vander Haegen and DeGraaf in press). Vander Haegen and DeGraaf (in press) found that nests in shrubs less than 75 meters from an edge were three times as likely to be depredated than nests greater than 75 meters from an edge. Likewise, Rudnicky and Hunter (1993) found that shrub nests on the forest edge were depredated almost twice as much as shrub nests located in the forest interior. They also observed that shrub nests were taken primarily by avian predators such as crows and jays, which is consistent with the predators believed to be impacting murrelets, while ground nests were taken by large mammals such as raccoons and skunks. Ratti and Reese (1988) did not find the edge relationship documented by Rudnicky and Hunter (1993), Vander Haegen and DeGraaf (in press), and others cited in Paton (1994). However, Ratti and Reese (1988) did observe lower rates of predation near ''feathered edges'' compared to ''abrupt'' edges (e.g., clearcut or field edges), and suggested that the vegetative complexity of the feathered edge may better simulate natural edge conditions than do abrupt edges. These authors also concluded that their observations were consistent with Gates and Gysel's (1978) hypothesis that birds are poorly adapted to predator pressure near abrupt artificial edge zones.

Studies of artificial and natural nests conducted in Pacific Northwest forests also indicate that predation of forest bird nests may be affected by habitat fragmentation, forest management, and land development (Hansen *et al.* 1991; Vega 1993; Bryant 1994; C. Chambers, Oregon State University, pers. comm. 1994; Nelson and Hamer 1995b; Marzluff *et al.* 1996). Nelson and Hamer (1995b), in the only direct measure of marbled murrelet reproductive success, found that successful murrelet nests were further from edge than unsuccessful nests. Marzluff *et al.* (1996) are conducting the only experimental predation study that uses simulated marbled murrelet nests, and they have documented predation of artificial murrelet nests by birds and arboreal mammals. Although the study is still continuing, preliminary results indicate that proximity to human activity and landscape contiguity may interact to determine rate of predation (J. Marzluff, pers. comm. 1996). Interior forest nests in contiguous stands far from human activity appear to experience the least predation (Marzluff *et al.* 1996).

In addition to studies of edge effects, some research has been initiated to look at the importance of stand size. Among all Pacific Northwest birds, the marbled murrelet is considered to be one of the most sensitive to forest fragmentation (Hansen and Urban 1992). Murrelet nest stand size in Washington, Oregon, and California varied between 3 and 1,100 hectares (7 and 2,717 acres) and averaged 206 hectares (509 acres) (Hamer and Nelson 1995b). Nelson and Hamer (1995b) found that successful murrelets tended to nest in larger stands than did unsuccessful murrelets, but these results were not statistically significant. Miller and Ralph (1995) compared murrelet survey detection rates among four stand size classes in California. Recording a relatively consistent trend, they observed that a higher percentage of large stands (33.3 percent) had occupied detections when compared to smaller stands (19.8 percent), while a greater percentage of the smallest stands (63.9 percent) had no presence or occupancy detections when compared to the largest stands (52.4 percent) (Miller and Ralph 1995). However, these results were not statistically significant, and the authors did not conclude that murrelets preferentially select or use larger stands. The authors suggested the effects of stand size on murrelet presence and use may be masked by other factors such as stand history and proximity of a stand to other old-growth stands. Schieck *et al.* (1995) found that murrelet presence and abundance was positively correlated with old-growth stand size in British Columbia, but their data were not statistically significant. Rodway *et al.* (1993) recommended caution when interpreting murrelet detection data, such as that used by Miller and Ralph (1995) and Schieck *et al.* (1995), because numbers of detections at different sites may be affected by variation caused by weather, visibility, and temporal shifts.

In addition to stand size, general landscape condition may influence the degree to which marbled murrelets nest in an area. In Washington, marbled murrelet detections increased when old-growth/mature forests comprised more than 30 percent of the landscape (Hamer and Cummins 1990). Hamer and Cummins (1990) found that detections of marbled murrelets decreased in Washington when the percentage of clear-cut/meadow in the landscape increased above 25 percent. Additionally, Raphael *et al.* (1995) found that the percentage of old-growth forest and large sawtimber was significantly greater within 0.8-kilometer (0.5-mile) of sites (203-hectare (501-acre) circles) that were occupied by murrelets than at sites where they were not detected. Raphael *et al.* (1995) suggested tentative guidelines based on this analysis that sites with 35 percent old-growth and large sawtimber in the landscape are more likely to be occupied. In California, Miller and Ralph (1995) found that the density of old-growth cover and the presence of coastal redwood were the strongest predictors of murrelet presence.

Although ongoing research should shed more light on the specific factors that affect murrelet nest predation and stand size preferences, the best available information strongly suggests that marbled murrelet reproductive success may be adversely affected by forest fragmentation associated with certain land management practices. Based on this information, the Service concludes that the maintenance and development of suitable habitat in relatively large contiguous blocks as described in this rule and the draft Marbled Murrelet (Washington, Oregon, and California Population) Recovery Plan (draft Recovery Plan) (USFWS 1995a) will contribute to the recovery of the marbled murrelet. These blocks of habitat should contain the structural features and spatial heterogeneity naturally found at the landscape level, the stand level, and the individual tree level in Pacific Northwest forest ecosystems (Hansen *et al.* 1991; Hansen and Urban 1992; Ripple 1994; Bunnell 1995; Raphael *et al.* 1995; Schieck *et al.* 1995).

In addition to predation at the nest, adult and juvenile murrelets are vulnerable elsewhere in the terrestrial and marine environments. For example, in the terrestrial environment adult marbled murrelets have been preyed upon by sharp-shinned hawks, peregrine falcons (*Falco peregrinus*), bald eagles (*Haliaeetus leucocephalus*), and possibly merlins (*F. columbarius*) (Marks and Naslund 1994).

In the marine environment, oil spills and commercial net fisheries adversely affect marbled murrelets. Clean water is important for survival and completion of the murrelet's life cycle and for the conservation of the species. Clean, unpolluted water is essential for maintaining the health of individual marbled murrelets and prey species, and for providing areas for social interactions and other behaviors.

Marbled murrelets have a high vulnerability to oiling, and oil spills have had catastrophic effects when large spills have occurred in the vicinity of murrelet concentrations. Impacts have been particularly severe in Prince William Sound in Alaska, western Washington, and central California (Carter and Kuletz 1995). The 45 marbled murrelets recovered after the

Tenyo Maru spill in 1991 at the mouth of the Strait of Juan de Fuca in Washington was the greatest number of murrelets recovered in any oil spill, with the exception of the *Exxon Valdez* oil spill, and represented a significant portion of the local population (Carter and Kuletz 1995). Oil spills may also affect forage fish populations (Irons 1992; Oakley and Kuletz 1994; Piatt and Anderson In press), reduce reproductive success, and disrupt breeding activity (Carter and Kuletz 1995). Chronic oil pollution can cause mortality through oiling and ingestion of oil. Other forms of pollution may also affect birds directly through toxic effects on their food supply.

Mortality of marbled murrelets from entanglement and drowning in fishing nets has declined in recent years in Washington, Oregon, and California, as fishing effort has declined and regulations to reduce mortality have been implemented. However, mortality is still a concern, particularly in Washington. Gillnet fisheries are most significant as a threat to murrelets in the marine environment in Washington, although closures of some areas, specifically to protect marbled murrelets, were implemented in the 1995 season (USFWS 1995b, 1995c). Gillnet fisheries no longer occur in Oregon, with the exception of those in the Columbia River. In California, fishing regulations protect most murrelets from this type of mortality (Carter *et al.* 1995).

Gillnet fisheries may occur at the mouth of the Columbia River, in Willapa Bay, Grays Harbor, the Strait of Juan de Fuca, and Puget Sound, although fishing efforts in coastal fisheries have been greatly reduced because of depressed salmon (*Oncorhynchus* spp.) runs. An observer program in 1994 in the all-citizens and Tribal sockeye salmon (*Oncorhynchus nerka*) drift gillnet fishery of north Puget Sound, which is the most significant fishery in Puget Sound, estimated an entanglement of 15 murrelets, with a range of 2 to 59 murrelets (Pierce *et al.* 1996). A National Marine Fisheries observer program for marine mammals on the outer coast fisheries of Washington, where low numbers of marbled murrelets are present, did not document marbled murrelet mortality (Jeffries and Brown 1993). However, a number of entangled birds of the Alcidae family were not identified to species. Entanglement in other Washington drift net and set gillnet fisheries has also been documented (Speich and Wahl 1989; Craig and Cave 1994; BIA 1994; J. Grettenberger, USFWS, pers. comm. 1995). Observer programs in 1993 and 1994 in Puget Sound salmon purse seine fisheries indicated that entanglement rates of marbled murrelets were much lower with this gear type (Natural Resources Consultants 1995). To date, there has not been any documented murrelet mortalities from gillnet fisheries at the mouth of the Columbia River.

It is likely that marbled murrelets, like many other seabirds, are affected by fluctuations in marine environmental conditions such as El Niño events (USFWS 1995a). In general, increased mortality of adult seabirds and decreased reproductive efforts have been linked with El Niño episodes when food supplies are depressed (Schrieber and Schrieber 1984; Hodder and Graybill 1985; Boekelheide *et al.* 1990), although there may be marked differences in effects across regions and among species with different foraging styles (Hatch 1987). Marbled murrelets are relatively opportunistic foragers and probably have a great flexibility in prey choice (USFWS 1995a). This capability may enable them to respond, to some degree, to changes in prey availability caused by fluctuating environmental conditions (USFWS 1995a). In general, unfavorable conditions can result in adult mortality and reduced productivity. However, a seabird's relatively long life span is an adaptation which allows an individual to reproduce successfully despite adverse conditions during its lifetime. This life history strategy serves to maintain a population despite environmental fluctuations (USFWS 1995a). However, cumulative impacts (including nest habitat loss, oil spills, etc.), in addition to repeated El Niño events in localized areas over a short time period could cause serious population declines or extirpations (USFWS 1995a).

Management Considerations

Marbled murrelets are found in forests containing a variety of forest structure, which is in part the result of varied management practices and natural disturbance (Hansen *et al.* 1991; McComb *et al.* 1993). In many areas, management practices have resulted in fragmentation of the remaining older forests and creation of large areas of younger forests that have yet to develop habitat characteristics suitable for marbled murrelet nesting (Hansen *et al.* 1991). Past and current forest management practices have also resulted in a forest age distribution skewed toward younger even-aged stands at a landscape scale (Hansen *et al.* 1991; McComb *et al.* 1993).

In many portions of the range of the marbled murrelet during the last 50–70 years, forest management has concentrated on clear-cut logging (Hansen *et al.* 1991). After forests are clear-cut, the sites are traditionally replanted to a single or few tree species and maintained as even-aged stands for maximum wood-fiber production. Site-preparation and management activities may further decrease species diversity (Hansen *et al.* 1991). These methods include prescribed burning and the use of herbicides or mechanical methods to control competing vegetation.

Prior to the widespread application of clearcut timber harvest, historical logging practices in some portions of the species' range consisted of more selective timber harvest, leaving remnant patches of forests of varying ages with older forest characteristics. The uneven-aged management practices used in these areas usually resulted in more diverse forests that may currently provide some nesting habitat where a few trees containing suitable marbled murrelet nesting structure remain (Hansen *et al.* 1991).

Current and historic loss of marbled murrelet nesting habitat is generally attributed to timber harvest and land conversion practices, although, in some areas, natural catastrophic disturbances such as forest fires have caused losses (Hansen *et al.* 1991; Ripple 1994; Bunnell 1995). Reduction of the remaining older forest has not been evenly distributed in western Washington, Oregon, and California. Timber harvest has been concentrated at lower elevations and in the Coast Ranges (Thomas *et al.* 1990), generally overlapping the range of the marbled murrelet.

Habitat for marbled murrelets has been generally declining since the arrival of European settlers. Bolsinger and Waddell (1993) estimated that old-growth forest in Washington, Oregon, and California has declined by two-thirds statewide during the last five decades. Information specific to the range of the marbled murrelet is not available. Historic forest conditions have been estimated for western Washington and Oregon by several authors. Marbled murrelet habitat represents a significant portion of area included in these estimates; therefore, trends in habitat are assumed to follow the same general pattern identified for the larger area.

Although the extent of mature and old-growth forest before the 1800s is difficult to quantify, western Washington and Oregon are estimated to have been covered by approximately 9.7 to 12.8 million hectares (24 to 32 million acres) of forest at the time of euroamerican settlement in the early to

mid-1800s, of which about 5.6 to 7.9 million hectares (14 to 20 million acres) (60 to 70 percent) are estimated to have been old-growth (Society of American Foresters Task Force 1983; Spies and Franklin 1988; Morrison 1988; Norse 1988; Booth 1991; Ripple 1994). As of 1991, there were approximately 1.4 million hectares (3.4 million acres) of old-growth forest remaining in western Washington and Oregon, an 82 percent reduction from estimated prelogging levels (Booth 1991).

Estimates for a similar time period in northwestern California are not as precise, but suggest there were between 526,000 and 1.3 million hectares (1.3 and 3.2 million acres) of old-growth Douglas-fir/mixed conifer forest and approximately 890,000 hectares (2.2 million acres) of old-growth coastal redwood forest (Society of American Foresters Task Force 1983; Laudenslayer 1985; Fox 1988; California Department of Forestry and Fire Protection 1988; Morrison 1988). Currently there are approximately 28,000 hectares (70,000 acres) of old-growth coastal redwood forest remaining in California (Larsen 1991).

Some of the forests that were affected by past natural disturbances, such as forest fires and windthrow, currently provide suitable nesting habitat for marbled murrelets because they retain scattered individual or clumps of large trees that provide structure for nesting (Hansen *et al.* 1991; McComb *et al.* 1993; Bunnell 1995). This is particularly true in coastal Oregon where extensive fires occurred historically. Marbled murrelet nests have been found in remnant old-growth trees in mature forests in Oregon.

Forests providing suitable nesting habitat and nest trees generally require 200 to 250 years to develop characteristics that supply adequate nest platforms for marbled murrelets. This time period may be shorter in redwood and western hemlock forests and in areas where significant remnants of the previous stand remain. Intensively managed forests in Washington, Oregon, and California have been managed on average cutting rotations of 70 to 120 years (USDI 1984; USDA 1988). Cutting rotations of 40 to 50 years are common for some private lands. Timber harvest strategies on Federal lands and some private lands have emphasized dispersed clear-cut patches and even-aged management. Forest lands that are intensively managed for wood fiber production are generally prevented from developing the characteristics required for marbled murrelet nesting. Suitable nesting habitat that remains under these harvest patterns is highly fragmented.

Previous Management Efforts

Since 1990, several different approaches to management of older forests and their associated species (including marbled murrelets) have been developed through various Federal efforts. These include the Interagency Scientific Committee's Conservation Strategy for the Northern Spotted Owl (Thomas *et al.* 1990), the Scientific Panel on Late Successional Forest ecosystems commissioned by the U.S. House of Representatives (Johnson *et al.* 1991), the designation of spotted owl critical habitat by the Service (57 FR 1796), and the U.S. Forest Service's (Forest Service) Scientific Analysis Team Report (Thomas *et al.* 1993). All of these efforts would have provided some level of protection to marbled murrelets but most did not address murrelets specifically or provide a framework for a specific marbled murrelet management strategy.

In July 1993, the Service, Forest Service, U.S. Bureau of Land Management, National Park Service, National Marine Fisheries Service, and U.S. Environmental Protection Agency released the Report of the Forest Ecosystem Management Assessment Team (FEMAT Report) (USDA *et al.* 1993a). Information from this report was used in developing the Final Supplemental Environmental Impact Statement on Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl (USDA *et al.* 1993b) and the Record of Decision for Amendments to the Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl (ROD). This ROD is referred to as the Northwest Forest Plan (USDA and USDI 1994). The FEMAT report and ROD provide a specific marbled murrelet management strategy for Federal lands.

Within the range of the marbled murrelet, the Northwest Forest Plan designates a system of Late-Successional Reserves, which provides large areas expected to eventually develop into contiguous, unfragmented forest. In addition to Late-Successional Reserves, the Northwest Forest Plan designates a system of Adaptive Management Areas, where efforts focus on answering management questions, and matrix areas, where most forest production occurs. Administratively withdrawn lands, as described in the individual National Forest or Bureau of Land Management land use plans, are also part of the Northwest Forest Plan.

Specific measures in the Northwest Forest Plan protect *all* occupied murrelet sites on Federal lands outside of the Federal reserve system. These measures include surveys prior to activities that may affect habitat and protection of contiguous marbled murrelet nesting and recruitment habitat (stands capable of becoming suitable nesting habitat within 25 years) within 0.8-kilometer (0.5-mile) of areas occupied by murrelets.

An assessment of population viability of marbled murrelets was conducted by the FEMAT. The assessment group concluded that ''We believe there is only about a 60 percent likelihood (with a range of 50 to 75 percent) that the marbled murrelet population on Federal lands would be stable and well distributed after 100 years, regardless of which option is selected.'' An additional assessment based only on the projected habitat condition at 100 years concluded that there was an 80 percent likelihood that nesting habitat would be well distributed on Federal lands at 100 years under the option most similar to the current Northwest Forest Plan.

The Service recognizes the value of the Northwest Forest Plan (USDA and USDI 1994) and acknowledges its integral role in marbled murrelet conservation. The Northwest Forest Plan complements this critical habitat designation by stressing the need for protection of large, unfragmented areas of suitable nesting habitat that are well-distributed throughout the species' range, with special emphasis on areas close to the marine environment.

Concurrently with the implementation of the Northwest Forest Plan, the Marbled Murrelet Recovery Team continues to work on a Recovery Plan that will outline a strategy for recovering the species. The Recovery Plan, which builds on the Northwest Forest Plan, also addresses management needs on non-Federal lands and in the marine environment.

The Marbled Murrelet Recovery Team is completing a final Recovery Plan that will outline a strategy for recovering the species. The draft Recovery Plan (USFWS 1995a) suggested the establishment of six Marbled Murrelet Conservation Zones where viable populations of murrelets should be maintained in Washington, Oregon, and California. The Recovery Team would designate the Marbled Murrelet Conservation Zones to address differing needs for recovery actions in portions of the marbled murrelet's range and to maintain well-distributed populations. The zones are generally described as follows: (1) the Puget Sound Conservation Zone includes all the waters of Puget Sound, the eastern waters of the Strait of Juan de Fuca and

associated inland habitat extending 80 km (50 miles) from eastern Puget Sound and bisecting of the Olympic Peninsula; (2) the Western Washington Coast Range Conservation Zone includes the outer coast of Washington, the western waters of the Strait of Juan de Fuca and associated inland habitat extending inland to the midpoint of the Olympic Peninsula and in southwest Washington as far as 80 km (50 miles) from the Pacific Ocean shoreline; (3) the Oregon Coast Range Conservation Zone includes most of the coastal waters of Oregon (between the Columbia River and Coos Bay) within 2 km (1.2 miles) of the shoreline and associated inland habitat extending inland a distance of 56 km (35 miles); (4) the Siskiyou Coast Range Conservation Zone includes a portion of the coastal waters of Oregon and California (between Coos Bay, Oregon and the southern boundary of Humboldt County, California) within 2 km (1.2 miles) of the shoreline and associated inland habitat extending inland a distance of 56 km (35 miles) from the Pacific Ocean shoreline; (5) the Mendocino Conservation Zone includes a portion of the California coastal waters (from the Humboldt County line to the mouth of San Francisco Bay) within 2 km (1.2 miles) of the shoreline and associated inland habitat extending inland a distance of up to 40 km (25 miles) from the Pacific Ocean shoreline; and (6) the Santa Cruz Mountains Conservation Zone includes a portion of the central California coastal waters (from the mouth of San Francisco Bay to Point Sur, Monterey County) within 2 km (1.2 miles) of the shoreline and associated inland habitat extending inland a distance of up to 24 km (15 miles) from the Pacific Ocean shoreline (USFWS 1995a).

In the marine environment, several laws apply that benefit murrelets directly or indirectly. The Oil Pollution Act of 1990 addresses the development of a national planning and response system for spills in marine and freshwater environments. A variety of planning efforts are underway that address responses to worst-case discharges of oil or hazardous substances, and mitigation or prevention of a substantial threat of discharge from a vessel, offshore facility, or onshore facility. Planning efforts include the development of a national contingency plan, regional area contingency plans, and local geographic response plans. The Service has worked extensively with the U.S. Coast Guard, industry representatives, local response communities, and other State, Federal, and Tribal natural resource trustees to develop area contingency plans and geographic response plans for Pacific coastal areas. These plans address mechanical recovery, use of dispersants, in-situ burning, shoreline cleanup, protection of sensitive areas, and protection, rescue, and rehabilitation of fish and wildlife. These planning efforts and associated spill exercises should help prevent or minimize the impact of spills on natural resources.

Several other marine laws address threats to murrelets. These include the Clean Water Act, which regulates the discharge of pollution into marine waters and establishes National Contingency plans to minimize damage from oil spills; the Coastal Zone Management Act, which establishes the Coastal Nonpoint Source Pollution Control Program; the Marine Protection, Research and Sanctuaries Act, which restricts ocean dumping of waste, including dredged materials, and establishes marine sanctuaries; and the Outer Continental Shelf Act, which regulates offshore oil development.

Mortality of marbled murrelets in commercial net fisheries in Washington is being addressed through changes in State and Tribal regulations. In 1995, the State of Washington and the Tribes instituted area closures in a number of areas with high densities of marbled murrelets to reduce the potential for entanglement. In 1995, the first year of a 2-year study to evaluate modified gillnets designed to reduce seabird entanglement was completed, and the initial results were encouraging (Melvin and Conquest 1996). Research was also conducted in 1995 to evaluate the extent of fisheries/murrelet overlap and factors that affect entanglement. Educational programs have been implemented that provide material to fishermen on marbled murrelet identification and distribution. As a result of section 7 consultation, observer programs were required in 1993 and 1994 to evaluate and quantify the extent of marbled murrelet mortality in purse seine and gillnet salmon fisheries (USFWS 1995b, 1995c).

Finally, the Forest Service published the ''Ecology and Conservation of the Marbled Murrelet,'' a compilation of original studies and literature reviews that represents the most current treatise on marbled murrelets (Ralph *et al.* 1995a). The document is particularly valuable for management, because it has assembled and synthesized most of what is known about the marbled murrelet.

Critical Habitat

Critical habitat is defined in section 3(5)(A) of the Act as ''(i) the specific areas within the geographical area occupied by the species, at the time it is listed * * * on which are found those physical or biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protection; and (ii) specific areas outside the geographical area occupied by a species at the time it is listed * * * upon a determination * * * that such areas are essential for the conservation of the species.'' 16 U.S.C. 1532(5)(A). The term ''conservation,'' as defined in section 3(3) of the Act, means ''* * * to use and the use of all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to this Act are no longer necessary * * *'' 16 U.S.C. 1532(3).

Role in Species Conservation

The use of the term ''conservation'' in the definition of critical habitat indicates that its designation would include habitat essential to a species' eventual recovery and delisting. However, when critical habitat is designated at the time a species is listed or before a recovery plan is completed, the Service frequently does not know all of the habitat areas that are essential for a species' recovery. Thus, the Act provides that critical habitat designations may be revised from time to time (16 U.S.C. 1533(a)(3)(B)).

The designation of critical habitat is only one of several measures available to contribute to the conservation of a listed species. Critical habitat helps focus conservation activities by identifying areas that contain essential habitat features (primary constituent elements), thus alerting Federal agencies and the public to the importance of an area in the species' conservation. Critical habitat also identifies areas that may require special management or protection. The identification of these areas may be helpful in planning federally regulated land use activities. The added emphasis on these areas for conservation of the species may shorten the time needed to achieve recovery.

Critical habitat receives consideration under section 7 of the Act with regard to actions carried out, authorized, or funded by a Federal agency. As such, designation may affect non-Federal lands only where such a Federal nexus exists. Federal agencies must insure that their actions are not likely to result in destruction or adverse modification of critical habitat. Aside from this added consideration under section 7, the Act does not provide any additional protection to lands designated as critical

habitat. Designating critical habitat does not create a management plan for the areas; does not establish numerical population goals or prescribe specific management actions (inside or outside of critical habitat); and does not have a direct effect on areas not designated as critical habitat. Specific management recommendations for critical habitat are addressed in recovery plans, management plans, and in section 7 consultation.

In Washington, specific State Forest Practices rules are triggered by Federal critical habitat designation covering private lands. Under Forest Practices rules, a forest management activity within designated critical habitat is classified as a ''Class IV—special'' forest practice. The applicant for the forest practices permit must submit, in addition to the usual information for the Forest Practices permit, an environmental checklist under the State Environmental Policy Act (SEPA). This checklist covers all resources, not just the species or critical habitat in question. The Washington Department of Natural Resources (WDNR) then makes a threshold determination from this information. The WDNR may make a determination of nonsignificance, mitigated determination of nonsignificance, or a determination of significance. If a determination of nonsignificance or mitigated determination of nonsignificance is reached, the action can proceed. If a determination of significance is made, preparation of an Environmental Impact Statement is required. This includes public involvement, and may involve significant time delays and costs. However, the State Forest Practices Board has the option to exclude any Federal critical habitat from this designation under a Class IV special. State regulations exclude from critical habitat, and Class IV—Special review requirements, areas covered by a conservation plan and permit approved the Service. State agencies are required to conduct SEPA review on all State land projects, so the designation of critical habitat designation will have less effect on their process.

In Oregon, State laws and regulations do not recognize critical habitat. Therefore, no effect can be attributed to Federal critical habitat through Oregon State law for critical habitat designated on non-federal land.

In California, the California Endangered Species Act (CESA) contains a similar concept to critical habitat called essential habitat. The State does not necessarily designate essential habitat in terms of mapped and described areas, as does critical habitat. Laws and regulations do not specifically defer to or recognize Federal critical habitat. California Department of Fish and Game biologists, in their normal CESA and California Environmental Quality Act (CEQA) review of proposed activities, may be aware of critical habitat and consider it in lieu of essential habitat. However, there is no requirement to do so, nor any prescribed manner for treating critical habitat. In the absence of critical habitat, State biologists continue to consider the concept of essential habitat. While State biologists may use Federal critical habitat during CESA and CEQA reviews, the impact is not expected to exceed impacts under the above laws in the absence of critical habitat.

Primary Constituent Elements

A designation of critical habitat begins by identifying areas essential to conservation of a species. In determining which areas to designate as critical habitat, the Service considers those physical and biological features essential to a species' conservation and that may require special management considerations or protection. Such physical and biological features, as stated in 50 CFR 424.12, include, but are not limited to, the following:

(1) Space for individual and population growth, and for normal behavior;

(2) Food, water, air, light, minerals or other nutritional or physiological requirements;

(3) Cover or shelter;

(4) Sites for breeding, reproduction, rearing of offspring; and

(5) Habitats that are protected from disturbance or are representative of the historic geographical and ecological distributions of a species.

The Service is required to base critical habitat designations on the best scientific data available (16 USC 1533(b)(2)). In designating critical habitat for the marbled murrelet in Washington, Oregon, and California, the Service has reviewed its overall approach to the conservation of the species. For a thorough discussion of the ecology and life history of this subspecies, see the Service's Biological Report (Marshall 1988); the final listing rule published in the Federal Register on October 1, 1992 (57 FR 45328); The Status and Conservation of the Marbled Murrelet in North America (Carter and Morrison 1992); the Biology of the Marbled Murrelet: Inland and at Sea (Nelson and Sealy 1995); the draft Recovery Plan (USFWS 1995a); the Ecology and Conservation of the Marbled Murrelet (Ralph *et al.* 1995a); and the Ecological Considerations section of this rule.

The Service has determined that the physical and biological habitat features (referred to as the primary constituent elements) associated with the terrestrial environment that support nesting, roosting, and other normal behaviors are essential to the conservation of the marbled murrelet and require special management considerations.

Within areas essential for successful marbled murrelet nesting, the Service has focused on the following primary constituent elements: (1) individual trees with potential nesting platforms, and (2) forested areas within 0.8 kilometers (0.5 miles) of individual trees with potential nesting platforms, and with a canopy height of at least one-half the site-potential tree height. This includes all such forest, regardless of contiguity. These primary constituent elements are essential to provide and support suitable nesting habitat for successful reproduction of the marbled murrelet.

Individual nest trees include large trees, generally more than 81 centimeters (32 inches) dbh with the presence of potential nest platforms or deformities such as large or forked limbs, broken tops, dwarf mistletoe infections, witches' brooms, or other formations providing platforms of sufficient size to support adult murrelets. Because marbled murrelets do not build nests, moss or detritus may be important to cushion or hold the egg. Platforms should have overhead cover for protection from predators and weather, which may be provided by overhanging branches, limbs above the nest area, or branches from neighboring trees. Based on current information from Washington, Oregon, and California, nests have been found in Douglas-fir, coastal redwood, western hemlock, western redcedar, or Sitka spruce (Hamer and Nelson 1995b).

On a landscape basis, forests with a canopy height of at least one-half the site-potential tree height in proximity to potential nest trees are likely to contribute to the conservation of the marbled murrelet. These forests may reduce the differences in microclimates associated with forested and unforested areas (Chen *et al.* 1992; Chen *et al.* 1993), reduce potential for windthrow during storms (Chen *et al.* 1992), and provide a landscape that has a higher probability of occupancy by marbled murrelets (Raphael *et al.* 1995). The site-potential tree height is the average maximum height for trees given the local growing conditions, and is based on species-specific site index tables. Nest trees may be scattered or clumped

throughout the area. Potential nesting areas may contain fewer than one suitable nesting tree per acre.

Within the boundaries of designated critical habitat, only those areas that contain one or more primary constituent element are, by definition, critical habitat. Areas without any primary constituent elements are excluded by definition.

Criteria Used To Identify Critical Habitat

Several qualitative criteria were considered in the selection of specific areas for inclusion in critical habitat. These criteria are similar to criteria used in the development of several recent Federal management proposals, such as the Scientific Panel (Johnson *et al.* 1991) and Northwest Forest Plan (USDA and USDI 1994). The following is a description of the criteria considered:

Suitable Nesting Habitat: The presence of suitable nesting habitat as defined in the previous section. Suitable habitat was located through the use of specific site knowledge, GIS data, remote sensing data, and aerial photos.

Survey Data: Information about presence/absence and occupancy were used to indicate murrelet use areas. Critical habitat units include most of the known sites occupied by marbled murrelets on Federal, State, county, and private lands. However, known occupied sites may represent only a small portion of the population due to the limited coverage of past survey efforts.

Proximity to Marine Foraging Habitat: During the nesting season, marbled murrelets forage in the marine environment and return to the nest at least once daily carrying a prey item to their young. Foraging and nesting habitat areas must be juxtaposed within the flight capabilities and energetic limits of the species. Critical habitat units were designated taking into account the distance of murrelet detections from the marine environment in a given area.

Large, Contiguous Blocks of Nesting Habitat: In response to the problems of fragmentation of suitable habitat, potential increases in predation, and reduced reproductive success, the Service concentrated on defining critical habitat units in terms of large, contiguous blocks of late-successional forest. The Service used the Late-Successional Reserve system identified in the Northwest Forest Plan (USDA and USDI 1994) to the extent possible to provide large blocks of habitat. Marbled murrelet locations and habitat were considered in the development of these reserves. State, county, private, and city lands were included where large blocks of Federal reserve areas were insufficient or not available, but where critical habitat was crucial to retaining distribution of the species.

Rangewide Distribution: To maintain the current distribution of the species and reduce the impact of catastrophic losses of habitat or murrelets, critical habitat units were identified throughout the range of the species in the three states. Well distributed critical habitat reduces the probability that a natural or human-caused catastrophe would threaten the survival or recovery of the species in Washington, Oregon, and California. Catastrophes that might threaten the species include wildfires, windstorms or oil spills. Given the intense site fidelity of many alcid species, maintaining rangewide distribution may also be needed to provide potential source populations for the recolonization of future habitat.

Adequacy of Existing Protection and Management: The Service considered the existing legal status of lands in designating areas as critical habitat. Areas with permanent legal protection of wildlife, such as congressionally designated wilderness areas, National Parks, and National Wildlife Refuges are not proposed unless specific threats were identified that are not addressed by existing management and protection. State park regulations vary, but are often more recreation oriented, and less restrictive or protective of wildlife.

Designated Areas Identified by Applying Criteria

Application of the foregoing criteria and consideration of comments and information received as a result of the supplemental proposal has resulted in the designation of most of the Late-Successional Reserves (LSR), as described in the Northwest Forest Plan, on Federal lands within the range of the marbled murrelet in Washington, Oregon, and California. These areas, as managed under the Northwest Forest Plan, should develop into large blocks of suitable murrelet nesting habitat given sufficient time. However, LSRs are plan-level designations with less assurance of long-term persistence than areas designated by Congress. Designation of LSRs as critical habitat compliments and supports the Northwest Forest Plan and helps to ensure persistence of this management directive over time. In some areas, these large blocks of Federal land can provide the necessary contribution for recovery of the species. In other areas, Federal ownership is limited and Federal lands alone cannot meet recovery needs to reverse the current population decline in marbled murrelets and maintain a well-distributed population.

The FEMAT report recognized the limited ability of Federal agencies to recover this species on Federal lands alone. ''Although the Forest Ecosystem Management Assessment was designed to address only Federal lands within the range of the northern spotted owl, the marbled murrelet is an example of a species whose life history requirements cannot be accommodated only on Federal lands. The marbled murrelet is a seabird that nests inland and therefore is influenced by both the marine and terrestrial environments. Its nesting range in the three-state area includes land that is south of the range of the northern spotted owl. In addition, several areas that are considered key to the recovery of the marbled murrelet involve private and state lands'' (FEMAT Report at IV–151 and IV–152, USDA *et al.* 1993a).

Based on information provided in public comments, including the recommendations of the Marbled Murrelet Recovery Team in the draft Recovery Plan (USFWS 1995a), the Service is designating selected non-Federal lands that meet the requirements identified in the Criteria for Identifying Critical Habitat section, where Federal lands alone are insufficient to provide suitable nesting habitat for the recovery of the species.

Non-Federal lands are designated as critical habitat where Federal lands are limited or nonexistent, and where non-Federal lands are essential for maintaining marbled murrelet populations and nesting habitat. State lands are particularly important in southwestern Washington, northwestern Oregon, and California south of Cape Mendocino. Small segments of county lands are also included in northwestern Oregon and central California. This is consistent with the Memorandum of Understanding between the Service and the State of California signed in 1991.

Some private lands are being designated as critical habitat because they provide essential elements and occur where Federal lands are very limited, although habitat availability on private land is typically much more limited than on public lands. These areas include the Arlecho Basin, which supports occupied sites in the lowlands of northern Washington; land supporting known occupied sites in southwestern Washington and in the Siletz River drainage in Oregon; nesting habitat and occupied sites for the at-sea murrelet population in the southern portion of the Draft Recovery Plan's proposed Marbled Murrelet Conservation Zone 4 in California,

including the Headwaters Forest area; and nesting habitat for the central California population. State, county, city, and private lands contain the last remnants of nesting habitat for the southern-most population of murrelets, which is the smallest, most isolated, and most susceptible to extirpation.

Areas Not Designated

Not all suitable nesting habitat is included in the designated critical habitat units. Emphasis has been placed on those areas considered most essential to the species' conservation in terms of habitat, distribution, and ownership. That does not mean that lands outside of designated critical habitat units are not important to the marbled murrelet. Some Federal lands outside of designated critical habitat will receive additional protection from the marbled murrelet conservation measures outlined in the Northwest Forest Plan. Under the ROD, *all* marbled murrelet habitat will be surveyed prior to removal or degradation of habitat, and *all* occupied sites will be protected. The Adaptive Management Areas, matrix lands, and administratively withdrawn lands contain areas of occupied habitat that would be protected from timber harvest.

Some areas outside this critical habitat designation may prove to contain elements important to the recovery of the species. This includes several areas recommended in public comment (see Issue 26). However, under the Administrative Procedure Act (5 U.S.C. 553), the Service cannot finally designate areas which were not included in a proposed rule; and the Service was under court order to finalize this designation by May 15, 1996. The Service will consider these areas for potential inclusion in any future revisions of marbled murrelet critical habitat.

In considering whether tribal lands would be designated as critical habitat, the Service gave particular attention to the Federal government's trust responsibilities to Native Americans. The Hoopa Valley Indian Reservation (Reservation) was considered but not designated as critical habitat because no occupied sites have been documented after 3 years of surveys on various portions of the Reservation. The Reservation contains only a small quantity of fragmented marbled murrelet habitat and is surrounded by Federal lands. Some of those Federal lands contain high quality habitat supporting occupied sites and are either designated as critical habitat or protected as a Congressionally Withdrawn Area.

Three other areas of Tribal land were considered for inclusion in critical habitat, including portions of the Quinault and Makah Indian Reservations in Washington and lands owned by the Siletz Tribe in Oregon. The Makah Indian Reservation was not designated because little suitable habitat remains in this area. The Siletz lands support marbled murrelets and contain suitable habitat. However, because these parcels are small, isolated, and relatively few, they have limited ability to contribute to recovery, especially considering the proximity of Federal land in the area. Many of these tribal lands contain murrelet occupied sites and activities on these areas undergo section 7 consultation through the Bureau of Indian Affairs, providing an option for achieving essential conservation contributions. Therefore, the Siletz lands were not included in the supplemental proposed rule, for any future revisions to critical habitat for the marbled murrelet.

The Quinault lands are considered important to the conservation of the marbled murrelet. The North Boundary Area of the Quinault Indian Reservation contains large blocks of contiguous, old-growth habitat. Much of this habitat currently supports marbled murrelets. However, the Quinault lands were not included in the supplemental proposed rule after consideration of the Federal government's trust responsibilities and the options for achieving essential conservation contributions through other alternatives. The Service is still considering the appropriateness of designating critical habitat on Quinault lands, for any future revisions to critical habitat for the marbled murrelet.

The Service considered including five marine areas in critical habitat. Clean water and accessible foraging opportunities are important life history requirements for the marbled murrelet. These five areas support the highest concentrations of murrelets during the breeding season in Washington, Oregon, and California. One area consisted of the waters of Puget Sound and the Strait of Juan de Fuca in Washington, including the waters surrounding the San Juan Islands. The Service also considered near shore waters (within 2 km (1.2 mi) of the shore) along the Pacific coast from Cape Flattery to Point Grenville in Washington, from Newport Bay to Coos Bay in Oregon, from the California State border to Cape Mendocino in northern California, and from Pillar Point to Davenport in central California.

While these marine areas are very important to the conservation of marbled murrelets, the Service does not believe that they require special management consideration or protection at this time beyond that provided by the existing Federal laws and regulations discussed in the Previous Management Efforts section. These laws and regulations specifically address reducing the threats identified in the marine environment.

While the draft Recovery Plan clearly indicates that marine habitat is important to the survival of marbled murrelets, it also indicates that the primary concern with respect to declining murrelet populations is loss of nesting habitat. The Service's evaluation of the effects of actions in the terrestrial environment focuses on the impacts to the species' nesting habitat, although take of murrelets is also addressed. With respect to the marine environment the Service is primarily concerned with mortality issues.

Activities or events that adversely affect marbled murrelets at sea seem to be more associated with the mortality of individual birds than with long-term destruction or adverse modification of habitat. For example, gillnet fisheries result in incidental capture of murrelets, but may not significantly adversely affect the prey base. Murrelets appear to forage opportunistically on available fish, and are likely able to respond to minor changes in fish abundance and location.

Murrelets are also adversely affected by spills of oil and other pollutants. Although these events undoubtedly harm the murrelet prey base, their principal adverse impact is the death of birds in the area of the event. The effects of these events on the murrelet prey base are somewhat more difficult to predict than are the effects on any murrelets that happen to be in the area. The Service's assessments of these events typically relies upon an assessment of the mortality issue rather than an assessment of habitat issues such as prey base.

Many of the threats specifically result in the loss of individuals through death or injury. Such effects related to projects authorized, funded, or carried out by a Federal agency can and should be considered under section 7 of the Act. The Service will continue to monitor marine threats and may propose marine critical habitat in the future if warranted.

Changes From the Supplemental Proposal

The Service reviewed public comments, information on forest stands provided by landowners during the public comment period, aerial photographs, and updated GIS data. The Service dropped areas and corrected

area descriptions accordingly. Generally, the corrections were relatively minor adjustments to boundary lines.

A number of proposed units in southwest Washington on private and State lands were reduced in size if it was determined that: (1) primary constituent elements were not present or, (2) the area removed was not considered necessary for the conservation of the species. The north portion of Capital Forest (WA–04–a) was removed because of the lack of primary constituent elements, coupled with high levels of motorized recreational use that further reduce habitat potential.

In Oregon, the Elliott State Forest was originally proposed for designation as critical habitat. The State of Oregon has since completed the Elliott State Forest Habitat Conservation Plan that includes provisions for the marbled murrelet and received an incidental take permit. This permit describes how the area will be managed for murrelets. Therefore, the Service has removed this area from the final designation.

On Federal lands in Oregon, the Service included approximately 100 acres and deleted approximately 300 acres of land on the Siuslaw National Forest at the request of the Forest Service. This change reflects a land exchange intended to protect marbled murrelet occupied sites. The Service deleted areas managed by the Siskiyou National Forest (portions of subunits OR–07–e and OR–07–f); and the Eugene, Roseburg and Medford Districts of the Bureau of Land Management (subunits OR–04–h, and portions of subunits OR–06–d, OR–04–f, and OR–04–I) based on survey information provided by the agencies during the public comment period. Survey information included the location and results (positive and negative) of murrelet surveys in the eastern portion of these areas. The survey locations were based on planned timber sales and habitat-based surveys in many areas, rather than a statistically designed study to determine the inland distribution of marbled murrelets. Therefore, the Service was only able to utilize the survey information in critical habitat units where the survey effort was greatest. The Service interprets lack of detections or occupied sites, when coupled with habitat information, to indicate that these areas are currently likely to support much lower densities of murrelets than areas closer to the coast. The Service does not consider these survey data to be sufficient at this time to define the full inland distribution of murrelets in these areas and does not propose to change the murrelet zones used in the Northwest Forest Plan.

In California, some portions of proposed critical habitat on private and Federal lands in the Siskiyou Coast Range Zone (unit CA–10–b and the east half of unit CA–10–a) and on city and state lands in the Santa Cruz Mountains Zone were dropped based on information provided by the landowners and land management agencies or other new information available to the Service. These areas were dropped because the Service determined that they did not contain the primary constituent elements or were not considered essential to the conservation of the species. All of Golden Gate National Recreation Area was dropped based on information provided by the National Park Service indicating that the Federal government owns the timber rights to any potentially suitable murrelet habitat within the area. After reviewing this information, the Service has determined that Federal lands within the Golden Gate National Recreation Area do not require special management.

Portions of primary constituent element (3) from the supplemental rule (forested areas of at least one-half the site-potential tree height regardless of the presence of potential nest platforms) have been incorporated into primary constituent element (2) in the final rule, and the remainder dropped. Forested areas surrounding nest trees were retained because they likely contribute to successful reproductive efforts by providing the microclimate suitable for maintaining nest tree characteristics and potentially reducing predation. The contribution of forested areas to successful reproduction likely decreases with increasing distance from the nest tree and at some distance the contribution becomes indistinguishable. Raphael *et al.* (1995) found an increased chance of occupancy in landscape conditions with increased amounts of large saw timber and old growth components within a 0.8 km (0.5 mile) radius circle. Specific studies are lacking to document the value of forested conditions to marbled murrelet nesting beyond the 0.8 km (0.5 mile) radius. Therefore, until these studies are completed, it is the best professional judgement of Service biologists that forested conditions within 0.8 km (0.5 mile) of a potential nest tree contribute more significantly to successful reproduction than those beyond this area and the Service has changed the primary constituent elements accordingly.

Congressionally Withdrawn Areas

Congressionally Withdrawn Areas (e.g., wilderness areas and national parks) are limited in the range of the marbled murrelet in Washington, Oregon, and California. Few wilderness areas are within the flight distance of marbled murrelets from the marine environment, although those that are provide crucial contributions to the conservation of the species. Wilderness areas and national parks contain approximately 302,000 hectares (747,000 acres) of marbled murrelet nesting habitat, representing 29 percent of the suitable nesting habitat on Federal lands in the range of the marbled murrelet. However, a substantial portion of the remainder of these areas is incapable of producing marbled murrelet nesting habitat because of forest composition, lack of forest cover, elevation, and other constraints. By themselves, Congressionally Withdrawn Areas are incapable of supporting stable and interactive populations of marbled murrelets.

Marbled murrelet habitat in congressionally designated wilderness areas, national parks, national monuments (natural areas), and national wildlife refuges is generally managed by statutory requirements to protect natural ecosystems and for the benefit of wildlife. Thus, habitat in these areas does not require special management consideration or protection. For example, a potential highway realignment through the Redwood National Park in northern California could result in the removal of occupied habitat. The Park's statutory authority and general management goals, however, are considered adequate to conserve the species without the additional designation of critical habitat.

However, not all Congressionally Withdrawn Areas are managed in this manner. For example, some national recreation areas may not be managed to maintain older forest habitats or may face external actions (e.g., outside ownership of mineral or timber rights) which may threaten marbled murrelet habitat within the area. One congressionally withdrawn area in California, the Golden Gate National Recreation Area, was proposed for designation. Area staff indicated that potential marbled murrelet habitat within the area might still be subject to timber harvest and loss, because the National Park Service does not control rights to the standing timber on some parts of the recreation area. During the public comment period the National

Park Service was able to verify that any lands where timber rights may not be secure do not contain potentially suitable marbled murrelet habitat. Therefore the Recreation Area was dropped from designation because murrelet habitat within the area no longer needs special management consideration or protection beyond the area's existing statutory requirements.

Several other congressionally designated areas were considered important to recovery of the marbled murrelet because of their location within the range of the species and presence of suitable nesting habitat, but are not designated because they do not require special management in light of their existing statutory requirements. These include: (1) North Cascades, Olympic, and Mount Rainier National Parks; Willapa National Wildlife Refuge; Mount Saint Helens National Volcanic Monument; Mount Baker, Noisy Diobsud, Glacier Peak, Boulder River, Henry M. Jackson, Alpine Lakes, Clearwater, Norse Peak, Glacial View, Tatoosh, Buckhorn, The Brothers, Mount Skokomish, Wonder Mountain, and Colonel Bob Wilderness Areas in Washington; (2) Drift Creek, Cummins Creek, Rock Creek, Grassy Knob, Wild Rogue, and Kalmiopsis Wilderness Areas in Oregon; and (3) the Kalmiopsis, Siskiyou, and Trinity Wilderness Areas; Muir Woods National Monument and Point Reyes National Seashore in California. Portions of the Smith River National Recreation Area in California were not included because they did not contain high-quality nesting habitat. External threats in these areas are very limited, management goals are generally adequate to conserve the species, and these areas do not require special management consideration or protection beyond their individual statutory authorities.

Economic Analysis Summary

Section 1(b)(2) of the Act requires the Service to consider the economic and other relevant impacts of specifying any particular area as critical habitat. The Secretary may exclude areas from critical habitat if the benefits of exclusion outweigh the benefits of including the area in critical habitat, unless failure to designate a specific area would result in extinction of the species. The Service contracted with ECONorthwest, a consulting firm in Eugene, Oregon, to conduct an economic analysis of the potential economic effects of designating critical habitat for the marbled murrelet. As required by the Act, the report addresses only the incremental economic consequences of the proposed critical habitat. It does not address the consequences of listing the species or other actions that have been proposed or taken to protect marbled murrelets prior to this designation.

The habitat covered by the designation plays a complex role in the regional economy by producing multiple, valuable goods and services, including: the marbled murrelet itself; other species, including salmon; fresh water; recreational opportunities; and timber. The data regarding the designation's impacts on some of these goods and services are not sufficient to support a detailed conclusion about whether the proposed designation would result in net economic benefits or costs. Evidence indicates, however, that the designation's economic benefits largely offset, and may even outweigh, its economic costs. The overall net effect is expected to be close to zero.

The designation will have few immediate and direct impacts on the economy. The primary effect of critical habitat is through the section 7 requirement for Federal agencies to avoid the destruction or adverse modification of critical habitat through actions they fund, permit, or carry out. The Service, with information provided by the cooperating Federal agencies, has determined that the designation of critical habitat for the marbled murrelet is not likely to significantly restrict the activities of any Federal agency, whether on Federal or non-federal lands. In particular, although the designation will reinforce the efforts of the Forest Service and Bureau of Land Management to protect and enhance the terrestrial habitat of the marbled murrelet, it will not cause these agencies to manage Federal lands in a manner that will have immediate, direct impacts on the flow of timber and other goods and services from these lands.

For non-federal landowners with lands included in this designation, the primary potential for an impact of critical habitat will be on actions that require a Federal permit or involve Federal funding. One of these activities is the issuance of incidental take permits under section 10(a) of the Act. The Service works with landowners, at their request, in the development of the HCP required for issuance of the permit to allow activities to proceed while minimizing and mitigating for impacts to listed species. The Service consults under section 7 on the issuance of the permit, to ensure the permit will not jeopardize the species or adversely modify critical habitat. The Service has defined critical habitat for marbled murrelets to exclude lands covered by a legally-operative incidental take permit for the species, including marbled murrelet incidental take permits that may be issued subsequent to the designation. Other permitting or funding agencies have indicated that they do not expect critical habitat to have a significant effect on permits or funding.

The designation may, however, lead to changes in the actions of the Washington Department of Natural Resources (WDNR), which is required by State regulations to take Federal critical habitat designations into account when assessing applications for permits to conduct logging and other activities. These regulations require WDNR to scrutinize more thoroughly the potential impacts on all aspects of the environment—natural, recreational, cultural, and infrastructural—when a proposed activity will occur inside designated critical habitat. However, marbled murrelet critical habitat is defined to exclude areas covered by marbled murrelet incidental take permits. Washington State Forest Practices regulations exclude areas covered by a marbled murrelet incidental take permit from this requirement.

The economy most directly affected by the designation—western Washington, western Oregon, and northwestern California—is highly diversified and growing rapidly. Any potential loss of jobs should be compensated for by other employment opportunities as has happened over the last 15 years in this area. Markets are expected to respond quickly, whatever the designation's impacts on the timber industry. The designation is unlikely to cause any change in the prices of timber and derivative products.

Summary of the Exclusion Process

Under section 4(b)(2) of the Act, the Secretary may exclude any area from critical habitat if he determines that the benefits of such exclusions outweigh the benefits of specifying such areas as part of the critical habitat, unless he determines that the failure to designate such areas will result in the extinction of the species concerned. To determine whether to include or exclude an area, the Service has analyzed the economic and conservation benefits of retaining or excluding critical habitat areas, and weighed those benefits.

The economic analysis focused on Federal agencies because the primary impact of critical habitat occurs through a Federal nexus. For the supplemental proposed rule, the Service contacted all Federal agencies operating within the range of the murrelet in Washington, Oregon, and California. The Service

discussed the potential effects of critical habitat and the various regulatory activities of the agencies, to assist in determining whether the proposed designation would have a potential to affect the agency's actions, including funding and permitting activities on non-federal lands. Each agency contact was sent a questionnaire requesting information on the potential impacts of the designation on any projects or activities funded, permitted, or carried out by their agency, followed by personal contact. Follow-up contacts were made with the various agencies to answer any additional questions. For the final rule, updates were requested.

Several portions of critical habitat were dropped from the proposed rule due to new information made available to the Service during the public comment period. Because the effects of critical habitat designation vary by ownership and State regulation, the Service evaluated the effect of the designation on areas defined by state and ownership, beginning with critical habitat areas on Federal land in the three States. Federal lands are managed under the same requirements, through the Northwest Forest Plan. Therefore, potential effects of critical habitat are similar for all these lands. Baseline condition of Federal lands was established in the Northwest Forest Plan.

Within each state, the Service examined the potential effects of critical habitat on the various ownerships and areas defined by differences in the baseline condition. Effects examined included any potential effects where Federal permits or funding were involved. In addition, any effects of state regulations that tier to Federal critical habitat were examined.

Based on the impacts revealed by the economic analysis summarized above, and careful examination of the conservation benefits of the critical habitat units, the Service has determined that the overall conservation and other benefits to be gained from the designation outweigh the benefits of excluding any remaining areas. Therefore, the Service did not exclude any areas during this process and has made a final determination to designate critical habitat for the marbled murrelet. A copy of the economic analysis and description of the exclusion process with supporting documents are included in the Service's administrative record.

Effects of the Designation

This designation of critical habitat for the marbled murrelet identifies 32 critical habitat units encompassing approximately 1,573,340 hectares (3,887,800 acres) of Federal and non-Federal lands based on information available in the Interagency Geographic Information System (GIS). Twenty-two critical habitat units include State, county, city, or private lands. See Table 1.

TABLE 1.—DESIGNATED CRITICAL HABITAT BY STATE, OWNERSHIP, AND LAND ALLOCATION

	Hectares	Acres
Washington:		
Federal Lands:		
Congressionally Withdrawn Lands	740	1,800
Late-Successional Reserves	485,680	1,200,200
Non-Federal Lands:		
State Lands	172,720	426,800
Private Lands	1,020	2,500
Oregon:		
Federal Lands:		
Late-Successional Reserves	541,530	1,338,200
Non-Federal Lands:		
State Lands	70,880	175,100
County Lands	440	1,100
Private Lands	350	900
California (Northern):		
Federal Lands:		
Late-Successional Reserves	193,150	477,300
Non-Federal Lands:		
State Lands	71,040	175,500
Private Lands	16,360	40,400
California (Central):		
State Lands	14,080	34,800
County Lands	3,230	8,000
City Lands	400	1,000
Private Lands	1,720	4,200

Some small areas of naturally occurring or human-created unsuitable habitat (i.e., areas that have never been or will likely never be marbled murrelet nesting habitat, such as alpine areas, water bodies, serpentine meadows, lava flows, airports, roads, buildings, parking lots, etc.) are inside the boundaries of critical habitat units but are not affected by the designation because they do not contain primary constituent elements. Where possible, these areas were not included within the critical habitat boundaries and acreage totals were adjusted to reflect the exclusion of this non-suitable habitat. However, many of these areas are small and could not be physically identified on the GIS maps. Current mapping information does not allow precise identification of the location of all forest areas containing primary constituent elements. This is particularly true for potential nest trees. These trees are often a small component of the forest stands and are not recorded on many timber-oriented data systems. The Service used the best existing data to locate the forest areas most likely to contain the primary constituent elements. Where possible in the time frame available, the Service refined the boundaries of the critical habitat units to eliminate significant identified areas that do not contain one or more of the primary constituent elements based on the best data available.

Efforts by Federal agencies to survey for marbled murrelets have been concentrated in areas of proposed

timber sales or limited research locations. A small fraction of suitable nesting habitat has been surveyed to date, and surveys have not been uniformly spread throughout the range of the species. Therefore, known occupied sites provide only a partial indication of the areas used by the species. In addition, there are a significant number of known occupied sites within Redwood National Park that are not currently on the database and are therefore not reported here. The designated critical habitat includes 695 (86 percent) of the 807 known occupied sites on Federal lands.

The Service had limited information about the amount of suitable nesting habitat or habitat containing one or more of the primary constituent elements on non-Federal lands within the species' range. The Service relied on analysis of satellite imagery that does not identify small features such as potential nest trees. The Service is aware of at least 354 known occupied sites on non-Federal lands, of which 218 (61 percent) are included within critical habitat. Several of the occupied sites outside of critical habitat are within the Elliott State Forest, which is operating under an active incidental take permit for murrelets. The Service did receive specific and detailed information in the public comments from some non-Federal landowners relative to the forest condition on their lands. Based on this information, the Service has removed from the designation lands that are unlikely to contain either primary constituent element.

Available Conservation Measures

Two of the principal purposes of the Act, as stated in section 2(b), are to provide a means to conserve the ecosystems upon which endangered and threatened species depend and to provide a program for the conservation of listed species. The Act mandates the conservation of species through several different mechanisms, such as section 7 (requiring Federal agencies to ensure that their actions will not likely jeopardize the continued existence of the listed species or result in the destruction or adverse modification of critical habitat); section 9 (prohibition of taking of listed species); section 10 (habitat conservation plans); and section 6 (cooperative State and Federal grants).

Recovery Planning

Designation of critical habitat does not offer specific direction for managing marbled murrelet nesting or foraging habitat and does not provide a management or conservation plan for the species. Guidance for conservation is generally provided in recovery plans, which usually include management recommendations for designated critical habitat. The Service continues to work closely with the Marbled Murrelet Recovery Team relative to critical habitat.

Recovery planning is an ''umbrella'' that guides conservation activities under the Act and promotes a species' conservation. Recovery plans provide guidance, which may include population goals and identification of areas that are in need of protection or special management. Recovery plans also include management recommendations for areas proposed or designated as critical habitat. Critical habitat promotes recovery by highlighting areas that should be given additional consideration in local planning processes. Critical habitat helps focus conservation activities by identifying areas that contain essential habitat features (primary constituent elements) and that may require special management or protection. Critical habitat complements recovery plans by providing a regulatory mechanism when a Federal nexus is present to increase immediate protection of primary constituent elements and essential areas and preserve options for the long-term conservation of the species.

Section 7 Consultation

Section 7(a)(2) of the Act requires Federal agencies to insure that activities they authorize, fund, or carry out are not likely to destroy or adversely modify designated critical habitat. This Federal responsibility accompanies, and is in addition to, the requirement in section 7(a)(2) of the Act that Federal agencies insure that their actions are not likely to jeopardize the continued existence of any listed species. A Federal agency must consult with the Service if its proposed action may affect a listed species or critical habitat. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR 402.

Destruction or adverse modification of critical habitat is defined as ''* * * a direct or indirect alteration that appreciably diminishes the value of critical habitat for both the survival and recovery of a listed species. Such alterations include, but are not limited to, alterations adversely modifying any of those physical or biological features that were the basis for determining the habitat to be critical.'' 50 CFR 402.02. Jeopardy is defined at 50 CFR 402.02 as any action that would be expected to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild. The scope of analysis for evaluating the impacts of an activity on marbled murrelet critical habitat is the broadly defined unit and conservation zone, not each individual acre. The designation of critical habitat does not create de facto wilderness or prohibit all human activities within the boundaries. Many activities may take place in critical habitat without resulting in the destruction or adverse modification of the critical habitat.

Section 10 Incidental Take Permits (Habitat Conservation Plans)

Section 10(a) of the Act authorizes the Service to issue permits for the taking of listed species incidental to otherwise lawful activities. Incidental take permit applications must be supported by a habitat conservation plan (HCP) that identifies conservation measures that the permittee agrees to implement for the species to minimize and mitigate the impacts of the requested incidental take. The issuance of an incidental take permit is a Federal action and is subject to the consultation requirements of section 7 of the Act. The Service cannot issue an incidental take permit if the HCP would jeopardize any listed species, or destroy or adversely modify any critical habitat.

The Service expects that critical habitat may be used as a tool to help identify areas within the range of the murrelet most critical for the conservation of the species and the Service will encourage development of HCPs for such areas on non-federal lands. The Service considers HCPs to be one of the most important methods through which non-Federal landowners can resolve endangered species conflicts. The Service provides technical assistance and works closely with applicants throughout the development of HCPs to help identify special management considerations for the murrelet. Several HCP efforts are currently underway in areas designated as murrelet critical habitat in Washington, Oregon, and California.

HCPs, coupled with Federal management under the Northwest Forest Plan, provide an opportunity to develop a package of sufficient management considerations that meet or enhance the conservation of the species. Thus, they may remove the need for special management consideration or protection, thereby removing the need to designate such areas as critical habitat. Therefore, any lands within critical habitat that are covered by a legally-operative incidental take permit for marbled murrelets based on an approved HCP that addresses conservation of the marbled murrelet are excluded from the critical habitat

while the permit is active. The State of Oregon is currently operating under an incidental take permit for murrelets on the Elliott State Forest, therefore this area has been excluded from critical habitat.

Basis for Section 7 Analysis

Designation of critical habitat focuses on the primary constituent elements within the designated habitat units and their contribution to the species' survival and recovery. The evaluation of actions that may affect critical habitat for the marbled murrelet would consider the effects of a Federal action on any of the factors that were the basis for determining the habitat to be critical, including the primary constituent elements of potential nest trees and surrounding forest.

The range of the marbled murrelet has been subdivided by the Recovery Team into six Marbled Murrelet Conservation Zones (USFWS 1995a), as discussed in the Previous Management Efforts section. These subdivisions were not based on identification of separate populations of marbled murrelets, but rather on the need for potentially different recovery actions in various portions of the marbled murrelet's range, and the need to maintain well-distributed populations. Marbled murrelets within the conservation zones are likely to interact across zone boundaries at some level.

For a wide-ranging species such as the marbled murrelet, where multiple critical habitat units are designated, each unit has a regional (conservation zone) and range-wide role in contributing to the conservation of the species. The basis for an adverse modification opinion would be whether a proposed action appreciably reduces the ability of critical habitat to function in achieving the regional conservation zone goals. In evaluating the effect of a proposed action, the Service will analyze the impacts to individual units in light of their overall contribution to the survival and recovery of murrelets in the conservation zone described in the Previous Management Efforts section, and the overall range of the marbled murrelet in Washington, Oregon, and California. Thus, an adverse modification finding would be based upon a broader inquiry than the mere assessment of adverse effects at the local unit level. The loss of populations throughout one or more conservation zones, or even a major part of a conservation zone, could lead to genetic and demographic isolation of parts of the population.

Examples of Proposed Actions

Section 4(b)(8) of the Act requires, for any proposed or final regulation concerning critical habitat, a brief description and evaluation of those activities (public or private) that may adversely modify such habitat or may be affected by the critical habitat designation. Regulations found at 50 CFR 402.02 define destruction or adverse modification of critical habitat as a direct or indirect alteration that appreciably diminishes the value of critical habitat for both the survival and recovery of a listed species. Such alterations include, but are not limited to, alterations adversely modifying any of those physical or biological features that were the basis for determining the habitat to be critical.

A variety of ongoing or proposed activities that disturb or remove primary constituent elements may adversely affect, though not necessarily ''adversely modify'' marbled murrelet critical habitat as that term is used in section 7 consultations. Examples of such activities include, but are not limited to, (1) forest management activities which greatly reduce stand canopy closure, appreciably alter the stand structure, or reduce the availability of nesting sites; (2) land disturbance activities such as mining, sand and gravel extraction, construction of hydroelectric facilities and road building, and (3) harvest of certain types of commercial forest products (e.g. moss). These activities have the following effects on the primary constituent elements of murrelet critical habitat:

(1) Removal or degradation of individual trees with potential nesting platforms, or the nest platforms themselves, that results in a significant decrease in the value of the trees for future nesting use. Moss may be an important component of nesting platforms in some areas.

(2) Removal or degradation of trees adjacent to trees with potential nesting platforms that provide habitat elements essential to the suitability of the potential nest tree or platform, such as trees providing cover from weather or predators.

(3) Removal or degradation of forested areas with a canopy height of at least one half the site-potential tree height and regardless of contiguity, within 0.8 km (0.5 mile) of individual trees containing potential nest platforms. This includes removal or degradation of trees currently unsuitable for nesting that contribute to the structure/integrity of the potential nest area (i.e., trees that contribute to the canopy of the forested area). These trees provide the canopy and stand conditions important for marbled murrelet nesting.

For a proposed action to result in the destruction or adverse modification of critical habitat, it must appreciably diminish the value of critical habitat for both the survival and recovery of a listed species in the affected conservation zone. Each proposed action requiring a section 7 consultation must be evaluated individually, in light of the baseline condition of the critical habitat unit and conservation zone, unique history of the area, and effect of the impact on the critical habitat unit in light of its regional and range-wide role in the conservation of the species. Activities that are acceptable in one critical habitat unit or conservation zone may cause serious effects in another, due to differences in current condition and conservation needs. Therefore, the Service cannot provide, in this rule, a detailed description of the threshold for future actions that would result in the destruction or adverse modification of critical habitat applicable throughout the range of the species.

A variety of activities would not affect the primary constituent elements and therefore would not adversely modify critical habitat. Such activities would include, but are not limited to, certain recreational use and personal-use commodity production (e.g., mushroom picking, Christmas tree cutting, rock collecting, recreational fishing along inland rivers) and certain commercial commodity production (e.g., mushroom picking, brush picking). Actions that affect forest stands not within 0.8 km (0.5 miles) of individual trees with potential nesting platforms (are not primary constituent elements) also would not adversely modify critical habitat, even if they are within the boundaries of the area designated as critical habitat.

Activities that do not affect the primary constituent elements in the forests are unlikely to be affected by the designation. However, even though an action may not adversely modify critical habitat, it may still affect marbled murrelets (e.g. through disturbance) and may, therefore, still be subject to consultation under section 7 of the Act.

Activities conducted according to the standards and guidelines for Late-Successional Reserves, as described in the ROD for the Northwest Forest Plan would be unlikely to result in the destruction or adverse modification of marbled murrelet critical habitat. Activities in these areas would be limited to manipulation of young forest stands that are not currently marbled murrelet nesting habitat. These forest management activities would be

conducted in a manner that would not slow the development of these areas into future nesting habitat, and should speed the development of some characteristics of older forest.

Summary of Comments and Recommendations on the Supplemental Proposed Rule

In the August 10, 1995, supplemental proposed rule for designation of marbled murrelet critical habitat, the Service requested all interested parties to submit information and comments concerning the proposal. Additional comments were received at five public hearings held on the supplemental proposed rule in Washington, Oregon, and California.

During the public comment period, the Service received 339 written comments. In addition, 60 people testified at the public hearings. All comments received are part of the record for this designation and are available for public review. Issues raised during the public comment period that were not addressed in the body of the final rule are discussed next.

Legal/Policy

Issue 1: Two commenters questioned whether the language of a temporary injunction granted by Judge Chesney of the United States District Court for the Northern District of California expanded the scope of activities subject to consultation under section 7 of the Act, and therefore the impact of critical habitat on non-federal lands.

Service Response: Judge Chesney ruled that there was a serious question as to whether the Service's advice to a timber company, that proposed logging would not result in take of the marbled murrelet in violation of section 9 of the Act, was an action subject to section 7 consultation. On May 7, 1996, the U.S. Court of Appeals for the Ninth Circuit reversed Judge Chesney's ruling and concluded that the Service's advice to a private entity on compliance with section 9 is not an action subject to section 7. *Marbled Murrelet* v. *Babbitt*, No. 95–16945 (9th Cir.).

A Federal nexus refers to a situation where a Federal agency authorizes, funds, or carries out an action.

Issue 2: One commenter questioned whether the acceptance of Federal funding for a project on a portion of a State forest would create a Federal nexus for all activities on the forest.

Service Response: The Federal nexus would apply only to the funded activity and related actions. Actions that are interrelated and interdependent with the federally-funded activity would be considered in the biological opinion and could be subject to modification. Any modifications suggested by the Service would, for a non-jeopardy/non-adverse modification action, be confined to ''minor'' changes which would still allow the goals and intent of the project to be met. Other unrelated actions would not be covered in the consultation.

Issue 3: Several commenters questioned the statement that critical habitat designation would not affect activities on State, local, or private lands unless there is a Federal permit, license, or funding involved, citing potential impacts of the designation through State laws.

Service Response: During the public comment period, the Service sought and received additional information on the potential impact of critical habitat designation resulting from State laws and regulations. The potential impacts vary by state. See the *Role in Species Conservation* section for a detailed discussion of the effects by state.

Issue 4: Several commenters recommended that the Service postpone issuing a final rule until additional studies are conducted and better information on the species' biology and threats is available. Other commenters suggested that the Service should seek new information before adopting a final rule.

Service Response: The Service is required to use the best available information in designating critical habitat. The Service is under court order to complete the designation of murrelet critical habitat by May 15, 1996. The Service did solicit new biological data and public participation during the comment period and public hearings on the revised proposed rule. The Service will continue to monitor and collect new information and may revise the critical habitat designation in the future if new information supports a change.

Issue 5: Several commenters raised issues already addressed in the supplemental proposed rule for the designation of critical habitat for the marbled murrelet (60 FR 40892). These include issues related to the listing of the species, the potential for critical habitat to result in the ''take'' of private lands, access across critical habitat, the need for an Environmental Impact Statement, and questions on the prehistorical condition of habitat in the Oregon Coast Ranges.

Service Response: The Service incorporates by reference its responses to these issues contained in the supplemental proposed rule (60 FR 40892). No new information was provided that would result in any significant changes to the responses in the supplemental proposed rule.

Issue 6: One commenter maintained that the Service failed to distinguish recovery objectives from the designation of critical habitat.

Service Response: In the revised proposed rule, the Service provided information on the link between recovery and critical habitat. The areas designated as murrelet critical habitat conform to the Act's requirements for critical habitat designations. Critical habitat includes the areas ''essential to the conservation of the species'' (16 USC 1532(5)(A)). Conservation is defined in the Act as actions necessary to promote recovery of the species (16 USC 1532(3)). Therefore, critical habitat is linked to recovery.

The commenter also confused the issuance of a ''no jeopardy'' biological opinion on the Northwest Forest Plan with conservation of the murrelet throughout three-state range. The biological opinion on the Northwest Forest Plan addressed only the impacts on Federal lands. Conservation of the murrelet has to be analyzed more broadly.

Issue 7: One commenter maintained that the Service failed to provide reasoned explanation for changes between the first and second proposals.

Service Response: The Service addressed the basis and rationale for the differences in the supplemental proposed rule (60 FR 40892). In the first proposal, the Service had indicated that some revisions might be necessary and had requested information to assist the Service in making changes.

Issue 8: One commenter suggested that the Service provide a method to correct legal descriptions without going through the formal rule-making process. Other commenters suggested that the Service specify that lands traded from public to private ownership be excluded from critical habitat once the trade is complete. Several commenters believed that failure to exclude traded areas would effectively halt the land exchanges.

Service Response: A rule designating critical habitat is required to contain a sufficient description of areas designated to allow persons to determine whether a particular segment of land is included or excluded. If corrections or clarifications become necessary, the Service will make them.

Areas were chosen because of their value to the conservation of the marbled murrelet. The Service conducts section 7 consultation on any land exchange that may affect critical habitat. During the consultation process, the Service considers the conservation value of the

areas acquired, as well as the potential effects of the lands traded in determining whether the action as a whole would destroy or adversely modify critical habitat. Even in the event that a proposed exchange would result in the destruction or adverse modification of critical habitat, the Service will work with the action agency and any applicants to craft reasonable and prudent alternatives that would allow the action to proceed.

Changes in ownership do not by themselves change an area's status as critical habitat. If a portion of land is moved from Federal to non-Federal ownership, the effects of the designation may change. Regardless of the original ownership, activities on non-Federal lands are likely to be affected by the designation only when there is a Federal nexus or where State law is triggered by the Federal designation.

Issue 9: One commenter charged that the Service did not use the best scientific information. The commenter interpreted the Act to allow and require the use of only data, not theories or interpretations of the data.

Service Response: The Service believes it has used the best scientific information available, and will continue to review new information as it arises. The Service reviewed all information provided by commenters on the supplemental rule to determine if it supported alternative conclusions. Science involves not only the use of raw data, but the hypotheses, theories, and interpretations derived from those data. Failure to use such information would be contrary to good scientific practice and would not satisfy the Act's requirements. The commenter provided several specific examples, which have been addressed in the ''Ecological Considerations'' section as well as the Biological Issues in this section of the rule.

Issue 10: One commenter contends that the Service erred by designating areas not ''occupied by murrelets at the time of listing.'' The commenter asserts that on September 28, 1992 (the time of listing), the species had completed nesting and were all on the ocean, therefore no nesting habitat could be considered occupied at the time of listing.

Service Response: The commenter's interpretation of ''geographical areas occupied by the species at the time of listing'' is erroneous. The commenter appears to have confused the definition of ''occupied'' in the Pacific Seabird Protocol (designed to determine potential breeding by birds located in a specific area in a specific year) with the biological determination of species occupancy. Biologists consider all areas used by members of a species, regardless of life stage or season, as within the occupied range of the species.

Issue 11: One commenter suggested that the legal descriptions of critical habitat in areas of intermingled Federal ownership should specifically exclude the non-Federal lands through description, rather than by definition.

Service Response: In the supplemental proposed rule, the Service specified the ownerships included in the designation for each area described. Within Federal LSRs, only Federal lands are included by definition, thereby excluding any non-federal lands. In addition, only lands that contain the primary constituent elements are included by definition. This approach satisfies the requirements of the Act. The Service continues to work on improving the descriptions of critical habitat units. We appreciate the specific information provided by private landowners on their ownerships within the Federal and State lands designated. However, in this court-ordered final designation, the Service has included and excluded areas by definition.

Issue 12: One commenter maintained that the Service had ignored the presence of marbled murrelet habitat in Congressionally-withdrawn areas, thereby increasing the area of non-Federal lands designated as critical habitat.

Service Response: The Service is cognizant of the murrelet habitat in lower-elevation, Congressionally-withdrawn areas, including Redwood National Park. The Service assumes these areas will retain murrelet habitat based on the statutory requirements applicable to these areas and considered this in its designation of murrelet critical habitat.

Issue 13: Several commenters suggested that the rationale for excluding Congressionally-withdrawn lands from designation as critical habitat should also apply to the Late-Successional Reserves under the Northwest Forest Plan because these areas were being managed to provide old-growth habitat.

Service Response: Congressionally-withdrawn lands are designated by statute, which secures their status. Any change to their management requires an act of Congress. Those areas designated for management in a manner consistent with murrelet conservation are expected to remain so. Therefore, there is no added value to designating them as critical habitat. In contrast, plan-level designations, such as Late-Successional Reserves, are reviewed and revised periodically (at least every 10–15 years), and therefore do not have the secure status of Congressionally-withdrawn areas. Critical habitat designation serves to remind future planners of the importance of these areas to the conservation of the marbled murrelet. Therefore, designation of these areas as critical habitat is valuable, even if current management is consistent with murrelet conservation.

Issue 14: Several commenters suggested that the explanation for the exclusion of Tribal lands, Congressionally-withdrawn areas, and marine habitat could also be applied to all terrestrial critical habitat.

Service Response: The Service discussed of the reasons for each of these exclusions in the final rule. A major consideration in the exclusion of Tribal lands were factors related to the Federal government's trust responsibilities and government to government relationships with Native American tribes. Congressionally-withdrawn lands have special and statutory designations that provide management protection for wildlife.

In examining the information provided on marine habitat, the Service identified two key components of the marine habitat that are essential to the conservation of the murrelet, clean water and food. Marine habitat is not generally subject to incremental and continuing losses or removal as terrestrial habitat is. Threats in the marine environment are often related to catastrophic events that cause loss of individuals, not habitat. The primary identified threats to marine murrelet habitat are pollution and toxic spills. Fishing does not appear to be a threat to habitat at this time. Several laws regulate activities that could result in pollution or toxic spills in the marine environment that have no counterparts in the terrestrial environment, and are briefly described in the Previous Management Efforts section. Other marine concerns, such as the effect of El Niño and ocean currents, are outside human control and would not be affected by the designation of critical habitat. The Service will continue to monitor the degree to which these and other regulatory measures ameliorate identified threats and the need for special management consideration or protection.

Issue 15: A number of commenters identified areas that they thought should not be designated as critical habitat.

Service Response: If site-specific documentation on a site was provided to the Service providing a rationale as to why an area should not be designated

critical habitat, that information was evaluated and a determination made as to whether modifications in the proposal were appropriate. For example, habitat maps were provided by State and private landowners in southwest Washington that allowed the Service to modify critical habitat boundaries due to the absence of primary constituent elements. Federal agencies in Oregon provided habitat and survey information that allowed the Service to modify boundaries.

Issue 16: Some commenters suggested that the Service was breaching the Memorandum of Understanding with the State of California signed in 1991 because the Service is designating non-Federal lands in California.

Service Response: The Service chose non-Federal lands on the basis of limited amounts of Federal lands in the vicinity that could support a well-distributed population of marbled murrelets and on the basis of the non-Federal land's contribution to recovery.

Issue 17: One commenter raised the question of the need to designate private lands when they would never provide the large, contiguous blocks of nesting habitat most desirable for marbled murrelets.

Service Response: The Service acknowledges that private lands in general do not have, nor will they probably have in the future, the large contiguous blocks of habitat most desirable for the conservation of the marbled murrelet. However, Federal lands, where large, contiguous blocks of habitat could be developed, are lacking in portions of the marbled murrelet's range. In these areas, critical habitat units have been designated because smaller blocks of suitable habitat on non-Federal lands are essential for maintaining the species' range-wide distribution and numbers.

Issue 18: One commenter requested that we be more specific about which, if any, gillnet fisheries create problems for marbled murrelets. The commenter specifically stated that the Columbia River gillnet fishery was not a fishery causing problems for marbled murrelets.

Service Response: The Service presently considers the Columbia River gillnet fishery a very minor threat to marbled murrelets relative to other fisheries, such as the Puget Sound commercial salmon fishery. This is in part because of the very limited effort which now occurs in this fishery. It is also because the Service recognizes that there are currently few marbled murrelets present in the vicinity of the mouth of the Columbia, although their historic presence in the area is well-documented. However, while the observer program conducted from 1991–1993 (Jeffries and Brown 1993) did not specifically describe any entanglement of marbled murrelets, significant numbers of unidentified alcids were entangled. Therefore, it cannot be stated conclusively that the Columbia River gillnet fishery does not pose a threat to marbled murrelets, particularly if fishing effort were to increase dramatically.

Issue 19: One commenter stated that the economic analysis was flawed because it failed to analyze the economic effects for each area separately.

Service Response: The economic analysis for this critical habitat designation is sufficient for consideration of the relevant impacts of specifying particular areas as critical habitat.

Issue 20: Several commenters expressed the opinion that the Service should consider the economic effects of critical habitat without adjusting for the effects of the listing or the Northwest Forest Plan.

Service Response: The economic analysis is conducted to allow informed consideration of the impacts of designating particular areas as critical habitat. Areas may be excluded from critical habitat if the benefits of excluding the area outweigh the benefits of including the area, so long as the exclusion does not lead to the extinction of the species. For this, the Service needs to determine the incremental increase in economic effects from the designation. In the absence of critical habitat, the listing of the species, other laws, and existing Federal land management plans remain in effect. Therefore, to determine the actual impact of a designation, the Service must determine the effect that will occur with the designation above and beyond the existing requirements. To attribute all economic effects of murrelet conservation to critical habitat alone would not provide an accurate assessment of the impacts of the designation.

Issue 21: Several commenters maintained that the removal of 4.4 million acres from the timber base would have severe economic impacts. Other commenters addressed individual areas in a similar manner, making the assumption that designation would stop all harvest.

Service Response: Critical habitat does not stop or prevent all timber harvest or other activities on designated lands. In the absence of a Federal nexus (funding, permitting, authorization, or action by a Federal agency) or State regulations tiered to a designation, there is no effect. Even with a Federal nexus, projects are not affected unless they would appreciably diminish the value of critical habitat for both the survival and recovery of the species. Whether a particular activity will appreciably diminish the value of critical habitat will depend on several factors, including the scope, magnitude, and location of the activities, as well as the condition of the critical habitat unit and the Marbled Murrelet Conservation Zone described by the Recovery Team (USFWS 1995a). If the critical habitat areas in a zone are generally in good condition, the potential for individual projects to diminish its value is lower than where critical habitat in a zone is in poor condition. Based on the application of previous designations, significant adverse impacts to individual critical habitat areas may not trigger the above threshold.

In addition, timber harvest in accordance with an approved HCP that addresses marbled murrelets should also be unaffected by the present determination of critical habitat, given the Service's intention to defer to the special management considerations for the murrelet under the HCP and the Service's exclusion of lands covered by an HCP from critical habitat.

Issue 22: Some commenters disagreed with the use of sites identified as occupied by marbled murrelets under the Pacific Seabird Group protocol as a criterion for critical habitat designation, because the commenters believe that some of the behaviors that resulted in occupied status were not indicative of nesting. One commenter suggested that ''the 1994 protocol dropped circling behavior from the definition of occupied behaviors.

Service Response: The Service used all available information in the selection of areas for designation as critical habitat. Survey information was only one of the criteria considered in selecting areas for proposed critical habitat designation. Survey results (including occupied sites, marbled murrelet presence, and lack of detections) were used as indicators of the presence/absence of marbled murrelets in specific areas. However, survey efforts have been minimal in many areas, and coverage of areas is discontinuous. Such information was of limited use in designating critical habitat in portions of the range.

The 1994 protocol did not remove circling behavior from the definition of occupied behaviors. In fact, both the 1993 (p. 11) (Ralph *et al.* 1993) and 1994 (p. 12) (Ralph *et al.* 1994) versions of the protocol include it under criteria indicating occupancy. This relationship

has been statistically analyzed and verified. Under ''occupied stands'' (p. 13 and again on pg. 21) in the 1994 protocol, Ralph *et al.* (1994) clearly state that birds circling above the canopy is a criterion indicating occupancy. This conclusion was affirmed in the March 8, 1995 addendum to the 1995 protocol (Ralph *et al.* 1995c), as well as in a signed declaration prepared by Dr. C.J. Ralph on September 27, 1995 (Ralph 1995).

Issue 23: Some commenters suggested that the Service designate additional habitat to compensate for the loss of high quality occupied murrelet nesting habitat that may be harvested as a consequence of timber sales released by the so-called ''Salvage Rider'' (Public Law 104–19, Section 2001).

Service Response: The government's position is that section 2001(k)(2) of P.L. 104–19 expressly forbids the harvest of identified nesting sites. The Federal District Court for the District of Oregon disagreed with the government's position and directed the government to release for harvest the majority of these sites. The Government has appealed this decision to the Ninth Circuit Court of Appeals, and as of this writing the harvest is temporarily stayed until the Ninth Circuit rules on the case. Therefore, the Service believes any compensatory designation of additional critical habitat is unwarranted at this time.

Issue 24: Several commenters expressed concern that critical habitat is a disincentive to landowners contemplating developing habitat conservation plans (HCPs) within designated areas.

Service Response: The Service does not intend to discourage HCPs with the designation of critical habitat. We expect that critical habitat may be used as a tool to help identify areas within the range of the murrelet more critical for the conservation of the species. The Service considers HCPs to be one of the most important methods by which non-Federal landowners can resolve endangered species conflicts.

All HCPs are reviewed to determine whether they are likely to jeopardize the continued existence of the species or cause adverse modification to designated critical habitat. In most cases, the Service provides technical assistance and works closely with the applicant throughout the development of the HCP to reduce the probability of the applicant developing an HCP that would not meet these criteria. Well developed HCPs should be able to meet the section 7 requirement to avoid adverse modification of critical habitat by providing sufficient special management considerations for the constituent elements identified for murrelet critical habitat. The Service does not anticipate that the designation of critical habitat for the marbled murrelet will affect ongoing negotiations for HCPs with landowners like the State of Washington or various large timber companies.

Issue 25: Several commenters disagreed with removing areas covered under an HCP from designation. Whereas in contrast, another commenter felt that planning approaches such as the development of multi-species HCPs were preferable to critical habitat designation.

Service Response: The Service recognizes that critical habitat is only one of many conservation measures for federally-listed species. HCPs are perhaps one of the most important tools for reconciling land use with the conservation of listed species on non-Federal lands. Since HCPs can provide an alternative means of addressing the special management considerations necessary for the constituent elements of marbled murrelet critical habitat, those areas covered by a legally-operative incidental take permit for marbled murrelets based on an approved HCP are excluded from critical habitat.

Consistent with this approach, the Service has not designated the Elliott State Forest in Oregon as critical habitat based on the State completing an HCP for that forest. Other areas without completed HCPs have been included in this designation. When those HCPs are completed and incidental take permits for marbled murrelets issued, critical habitat will be lifted.

Issue 26: Numerous commenters recommended that the Service designate marine critical habitat. Several commenters recommended addition of the following terrestrial areas as critical habitat:

In California, commenters recommended inclusion of private lands in Del Norte, Humboldt, Mendocino, Sonoma, San Mateo, and Santa Cruz Counties. One private property owner requested designation of her 60 acres in the Santa Cruz Mountains Zone. The Midpeninsula Regional Open Space District requested that the District's Purisima Creek Redwoods Open Space Preserve be designated in San Mateo County. Commenters also suggested inclusion of county parks along the Van Duzen River. State lands recommended for inclusion included Van Damme State Park and Navarro River Redwood State Park in the Mendocino Zone, and Nisene Marks State Park and Soquel State Demonstration Forest in the Santa Cruz Mountains Zone. In Washington, commenters recommended the inclusion of Washington Department of Natural Resource lands in the Clallam Bay block and the Chehalis State Forest, Deception Pass State Park, additional lands adjacent to Jim Creek, private lands in the Mineral block, and private lands with occupied sites in the north Cascades.

Service Response: Under the Administrative Procedures Act (5 U.S.C. 553), the Service cannot finally designate areas as critical habitat unless they were proposed for designation in a proposed rule. Further, the Service is under a court order to finalize this critical habitat designation by May 15, 1996. These recommendations will be considered in any future revisions of critical habitat for the marbled murrelet.

Biology

Issue 27: Commenters suggested that prey distribution and abundance, rather than inland forest conditions, may dictate murrelet distributions at sea.

Service Response: As described in the *Ecological Considerations* section, the Service agrees that prey distribution and abundance is an important ecological factor for murrelets at sea. However, particularly during the nesting season, marbled murrelets are found in high numbers in close proximity to areas where inland forested conditions are considered suitable for nesting throughout large portions of coastal Washington, Oregon, and California (Carter and Erickson 1992; Ralph and Miller 1995; Ralph *et al.* 1995b; Strong 1995, Varoujean and Williams 1995). Conversely, marine concentrations tend to be low where on-shore habitat is limited. Concentrations of other alcids during the nesting season in 1994 did not correspond closely to murrelet distribution patterns (Varoujean *et al.* 1994), which one would expect if prey distribution was the single or most important determinant of seabird distribution.

The distribution of marbled murrelets in the marine environment changes after the nesting season. This suggests that proximity to their nesting habitat is important for marbled murrelets during the breeding season even though food may be more abundant elsewhere (Ralph *et al.* 1995b). However, changes in prey distribution and abundance may sometimes occur coincidentally with the end of the nesting season. Marbled murrelets have been documented to use a variety of prey species, which suggests that they are capable of exhibiting flexibility regarding food resources available to them during the nesting season. Therefore, the Service believes

that the condition of inland nesting habitat is an important factor explaining distributions in the marine environment during the nesting season.

Issue 28: Some commenters disagreed with Service statements that marbled murrelets are found in high numbers at sea in close proximity to areas where inland forested conditions are considered suitable for nesting throughout large portions of coastal Washington, Oregon, and California. They contend that the 1994 and 1995 at-sea survey data did not support this assertion.

Service Response: As described in the *Ecological Considerations* section, the Service believes murrelet concentrations at sea are likely to be determined by a combination of terrestrial and marine conditions. However, we believe that recent at-sea survey data support our earlier conclusions that marine observations during the nesting season generally correspond to the largest remaining blocks of suitable forest nesting habitat (Nelson *et al.* 1992; Varoujean *et al.* 1994; Ralph and Miller 1995; Ralph *et al.* 1995b; Strong 1995).

Issue 29: One commenter stated that the proposed designation was premised on the incorrect assumption that the most important problem for marbled murrelet conservation was the availability of terrestrial nesting habitat. They stated that Beissinger's model, along with an additional modeling effort and other life-history information, shows that the marine environment is much more important than the terrestrial environment and, therefore, the Service should concentrate critical habitat designation on marine habitat features.

Service Response: The Service agrees that the marine environment is very important to the murrelet, as discussed both in the supplemental critical habitat proposal (60 FR 40892) and the draft Recovery Plan (USFWS 1995a). However, there are a number of reasons why critical habitat is only being designated in the terrestrial environment. Currently, factors affecting the marine environment and murrelets while at-sea can be addressed through existing laws and regulations as discussed in this final rule (see Areas Not Designated section). In addition, numerous sources have stated the importance of nesting habitat as a major limiting factor in murrelet recovery. Although adult mortality does occur at-sea, it also has been documented in the terrestrial environment. Therefore, the designation of critical habitat in the terrestrial environment is appropriate at this time.

Issue 30: Several commenters raised issues related to nest predation and predator numbers. These were primarily related to the effects of timber harvest and forest edge on predator numbers and marbled murrelet nest predation rates and the appropriateness of applying nest predation studies from other regions of the country to the Pacific Northwest. One commenter raised the potential use of predator control as a management tool. Several commenters suggested that predator numbers correlated with human use and therefore private lands may have fewer predators than public lands.

Service Response: The Service has amended the final rule to reflect the comments and to provide additional documentation on statements related to predation. However, as discussed in the *Ecological Considerations* section, the Service believes that existing data strongly suggest that nest predation may be significantly higher for some forest birds nesting near artificially created edges, even if the exact causal mechanisms that affect the predation rates are unclear. The Service agrees with Paton (1994) and the commenters that research addressing this issue in Pacific Northwest forests is needed, and the Service is currently supporting such efforts (e.g., Marzluff *et al.* 1996). However, the few completed studies addressing this issue in the Northwest or in commercial timberland areas elsewhere indicate the timber harvest in a forest can increase nest predation rates on forest birds under certain circumstances (Ratti and Reese 1988; Rudnicky and Hunter 1993; Vega 1993; Bryant 1994; Vander Haegen and DeGraaf, in press). In fact, Ratti and Reese (1988) found that abrupt forest edges created by commercial timber harvest could lead to increased nest predation rates, and they concluded that their data are consistent with the hypothesis that birds are poorly adapted to predator pressure near abrupt artificial edge zones.

Some commenters failed to distinguish between the studies that address ground nesting birds (e.g., Small and Hunter 1988), and those cited by the Service that concern species that nest above the ground like the marbled murrelet. Small and Hunter (1988) investigated predation rates on ground nests and concluded that distance from edge was not related to nest predation (although they did conclude that nests in smaller forest fragments were more vulnerable than nests located in larger forest stands). They felt their results were due to the relatively high numbers of ground predators (i.e., fox, raccoon, and skunk) compared to low numbers of bird predators (corvids). These findings are consistent with the more recent work of Vander Haegen and DeGraaf (in press) and Rudnicky and Hunter (1993). Both of these studies found no edge effect for ground nests but a two- to three-fold increase in predation for above-ground nests near edges when compared to above-ground nests in the forest interior. Although not completely representative of the high canopy nesting situation of murrelets, these results are significant because they more closely approximate the potential impacts of the avian predators believed to be affecting murrelets.

Predator control as a management tool to recover species has been used effectively only in very limited situations. It may serve as a short-term solution to address an immediate threat while long-term solutions are being formulated. The high cost, logistical difficulties and high probability that the predator control will be unsuccessful (Goodrich and Buskirk 1996), however, argue against the use of predator control for a wide-ranging species such as the marbled murrelet.

Regarding the issue that levels of human activity on public lands may result in predation rates which are higher than on private lands, the Service agrees that public lands that are easily accessible have higher levels of human use, with resultant activities that are attractive to corvids. However, corvids have also been shown to travel significant distances to urban centers, dumps, etc. which are often as close or closer to private lands than to public lands (Marzluff *et al.* 1996). The other factor which appears to increase predation rates is higher levels of landscape fragmentation (Marzluff *et al.* 1996), which is generally greater on private lands. Therefore, it is difficult to generalize about the relationship between land ownership and predation rates.

Issue 31: One commenter suggested that the Service ignored the findings of Raphael *et al.* (1995) that occupied murrelet sites had more complex patterns with more edge, greater variety of cover types, and more complex shapes than unoccupied sites. The commenter indicated that these conclusions seem to contradict statements made by the Service concerning forest edge and landscape patterns.

Service Response: The Service disagrees with this commenter's interpretation of Raphael *et al.* (1995). The most important and relevant conclusions of Raphael *et al.* (1995) (M. Raphael, pers. comm.), are: (1) proportions of old-growth and large saw

timber were greater among sites occupied by murrelets compared to unoccupied sites, and (2) mean size of patches of old-growth and large saw timber were also greater among occupied sites compared to unoccupied sites. As Raphael *et al.* (1995) state, these findings are consistent with earlier research documenting the value of large old-growth stands to nesting murrelets.

These findings support, rather than contradict, the hypothesis that murrelets are preferentially selecting larger stands of older trees for breeding because these stands and trees have the specific structural features the birds require. That the murrelets occur more often in larger patches (i.e., less edge relative to area) of old-growth compared to smaller patches is also consistent with the edge-effect concerns expressed in this rule. The Service believes that resident marbled murrelets may be made more vulnerable to predation associated with the newly created edges when existing old-growth stands are further fragmented into smaller patches.

Issue 32: One commenter suggested that the Service conduct a population viability analysis (PVA) of the marbled murrelet before designating critical habitat.

Service Response: This final rule is directly related to management directives that preceded or were developed simultaneously with the critical habitat rule. Of greatest significance were the draft Recovery Plan (USFWS 1995a) and the marbled murrelet viability panels of the FEMAT process (USDA *et al.* 1993a). It is the Service's opinion that these efforts incorporate many of the concepts which should be considered when a formal PVA is not conducted (Ruggiero *et al.* 1994), and provide the best guidance for management. The function of a PVA is to incorporate what is known about population dynamics of a species, and to analyze the effects of stochastic events and changes in parameters, as well as to identify factors for study, management and monitoring (Lacey in Press). However, PVA's can be compromised because of a lack of natural history data (Minta and Kareiva 1994). Therefore, the Service believes that a PVA developed based on current knowledge of the marbled murrelet would be premature, and is not a suitable tool for determining critical habitat.

Issue 33: Several commenters suggested that the Service has dismissed natural marine phenomena as unimportant in affecting marbled murrelet population fluctuations and distributions. One commenter used the extinction of the Labrador duck (*Camptorhynchus labradorus*) as an example of how marine fluctuations can cause natural extinctions of marine birds, and suggested that the current decline of the marbled murrelet is analogous to the extinction of the Labrador duck.

Service Response: As stated in the *Ecological Considerations* section and elsewhere, the Service appreciates the role that natural marine fluctuations play in the demography of the marbled murrelet. The murrelet, like many other seabirds, is affected by stochastic factors such as gross water temperature changes and shifting patterns of prey abundance. Likewise, it is affected by terrestrial stochastic factors such as fire and windthrow. It is a generally accepted tenet of conservation biology that extinction for a declining species becomes more likely due to natural stochastic factors as a population becomes smaller and more fragmented. Maintenance of high quality nesting habitat in key areas will better enable the species to successfully endure marine and terrestrial stochastic events when they do occur. For example, Clark *et al.* (1990) found that limited availability of suitable nest sites hindered the population growth and recovery of red-tailed tropicbirds (*Phaethon rubricauda*) following catastrophic ocean events.

The Service disagrees with the commenter's assertion that the Labrador duck went extinct solely from natural causes, and that this so-called natural decline is analogous to natural forces acting to depress the marbled murrelet population. Although the Labrador duck was never very abundant, the best available information suggests that over-exploitation by humans caused the extinction of the species; the bird was hunted for market and for down, and its eggs were collected (Ehrlich *et al.* 1988; Terres 1980; Bellrose 1976).

Issue 34: Some commenters questioned the quality of the data that the Service used to determine critical habitat. One commenter questioned the Service's use of satellite imagery to identify critical habitat.

Service Response: The Act requires the Service to make biological decisions involving designation of critical habitat based on the best scientific and commercial data available. The Service utilized a number of sources to identify critical habitat including aerial photographs and personal knowledge. The Service maintains that sufficient data are available to warrant designation of critical habitat and that this final rule is based on the best information available.

Issue 35: Two commenters suggested exclusion of the proposed critical habitat units that contain Bishop pine.

Service Response: Two critical habitat units in California contain mature Bishop pine forests, Tomales Bay State Park and Salt Point State Park. These areas currently do not have any known records of murrelet detections; however, the Service is unaware of any surveys which have been conducted to determine if Bishop pine forests are used by marbled murrelets. The Service has determined that it is appropriate to designate these Bishop pine areas as critical habitat because of the lack of survey data, proximity of these areas to the ocean, availability of suitable nesting platforms, and high canopy cover. In the future, if surveys determine that murrelets are not nesting in these stands the boundaries of these critical habitat units may be revised.

National Environmental Policy Act

The Service has determined that Environmental Assessments and Environmental Impact Statements, as defined under the authority of the National Environmental Policy Act of 1969, need not be prepared in conjunction with regulations adopted pursuant to section 4(a) of the Endangered Species Act of 1973, as amended. A notice outlining the Service's reasons for this determination was published in the Federal Register on October 25, 1983 (48 FR 49244).

Required Determinations

The final rule has been reviewed by the Office of Management and Budget under Executive Order 12866. The Department of the Interior finds that timely compliance with the provisions of the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*) is impracticable in light of the emergency situation resulting from the court order requiring designation by May 15, 1996. Consequently, the completion of a Regulatory Flexibility Analysis is deferred at this time and will be completed within 180 days. Based on the information discussed in this final rule concerning public projects and private activities within critical habitat units, it is not clear whether significant economic impacts would result from the critical habitat designation. Also, no direct costs, enforcement costs, information collection, or record-keeping requirements would be imposed on small entities by this designation. Further, the rule contains no record-keeping requirements as defined by the Paperwork Reduction Act of 1980.

Finally, the Department has assessed the effects of this rule-making action on State, local, and tribal governments, and the private sector. The Service has determined and certifies pursuant to the Unfunded Mandates Act, 16 U.S.C. 1502 et seq., that this rulemaking will not impose a cost of $100 million or more in any given year on local or State governments or private entities.

References Cited

A compete list of all references cited herein is available upon request from the State Supervisor, U.S. Fish and Wildlife Service, Oregon State Office, 2600 SE 98th Avenue, Suite 100, Portland, Oregon, 97266; telephone (503) 231–6179.

List of Subjects in 50 CFR Part 17

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

Regulation Promulgation

Accordingly, the Service hereby amends 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.

§ 17.11 [Amended]

2. Section 17.11(h) is amended by revising the ''Critical habitat'' entry for ''Murrelet, marbled'' under BIRDS to read: 17.95(b).

3. Section 17.95(b) is amended by adding critical habitat for the marbled murrelet, in alphabetical order, as follows.

§ 17.95 Critical habitat—fish and wildlife

* * * * *

(b) Birds

* * * * *

MARBLED MURRELET (*Brachyramphus marmoratus marmoratus*)

1. Critical habitat units are depicted for the States of Washington, Oregon, and California on the maps below.

2. The primary constituent elements: individual trees with potential nest platforms and forest lands of at least one half site-potential tree height regardless of contiguity within 0.8 kilometers (0.5 miles) of individual trees with potential nesting platforms and that are used or potentially used by the marbled murrelet for nesting or roosting.

3. A description of the critical habitat units follows. Where a critical habitat unit includes Federal lands within the boundaries of a Late Successional Reserve established by the Northwest Forest Plan, those boundaries include any minor adjustments. Critical habitat units do not include non-federal lands covered by a legally operative incidental take permit for marbled murrelets issued under section 10(a) of the Act.

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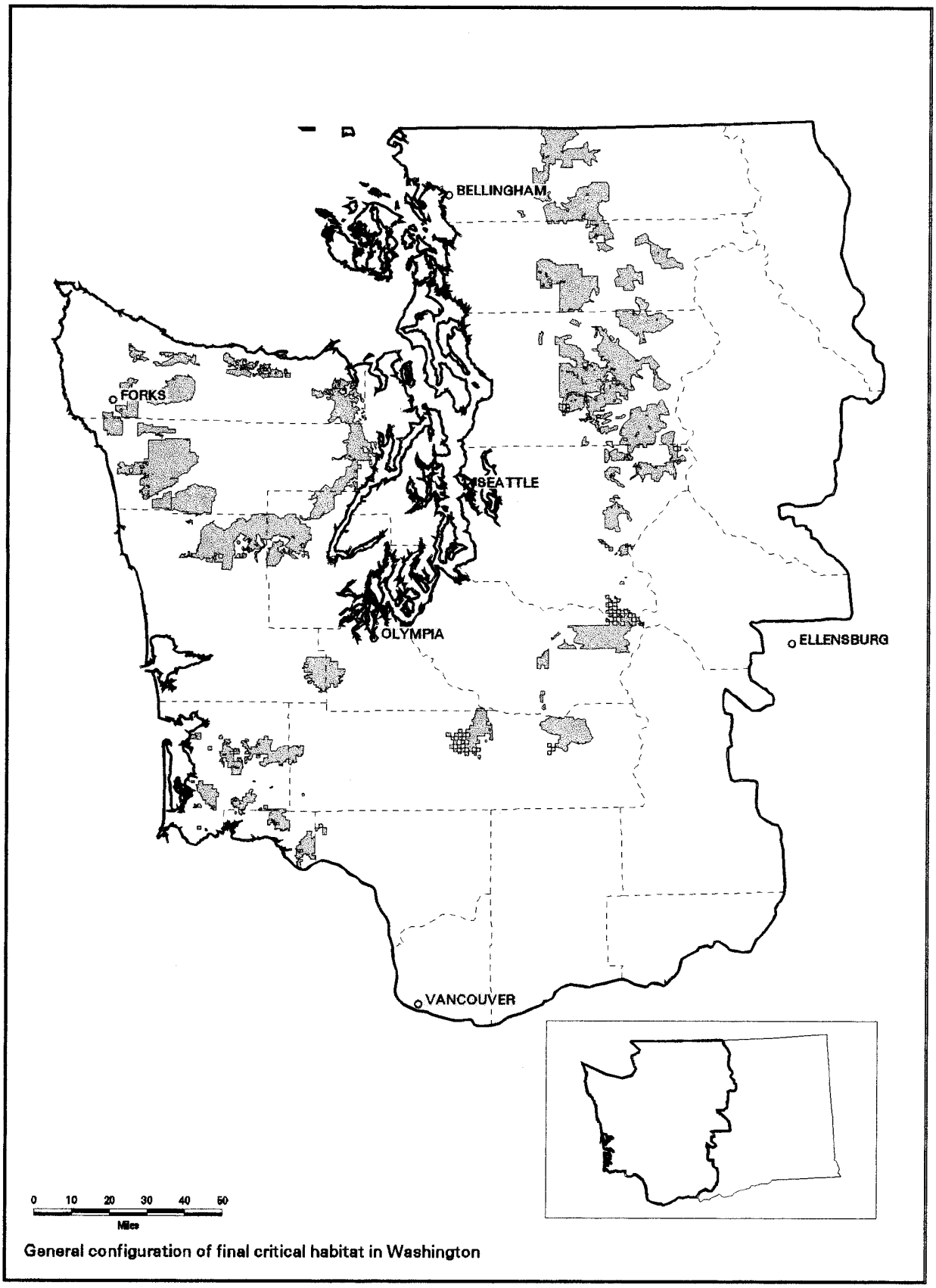
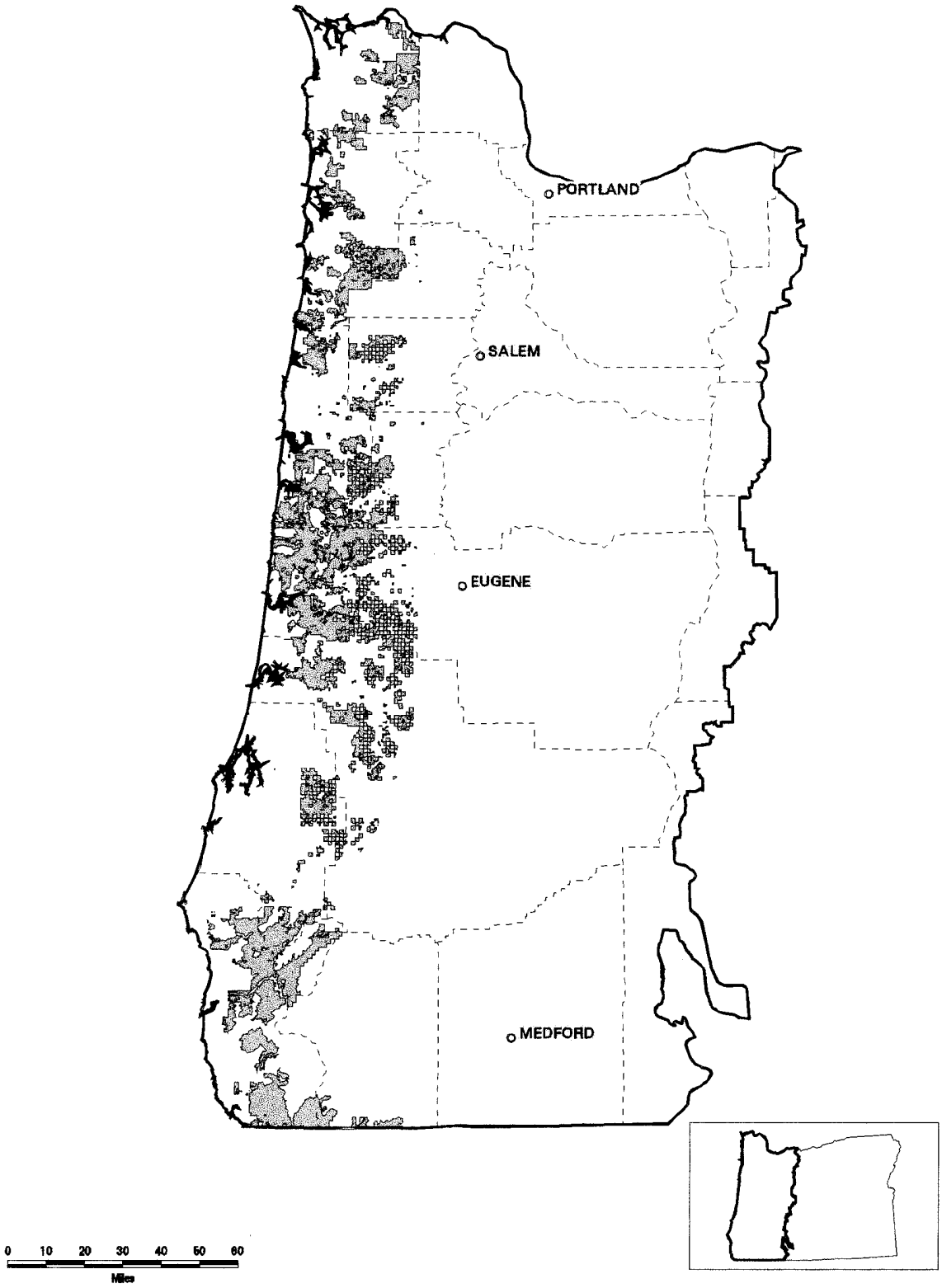
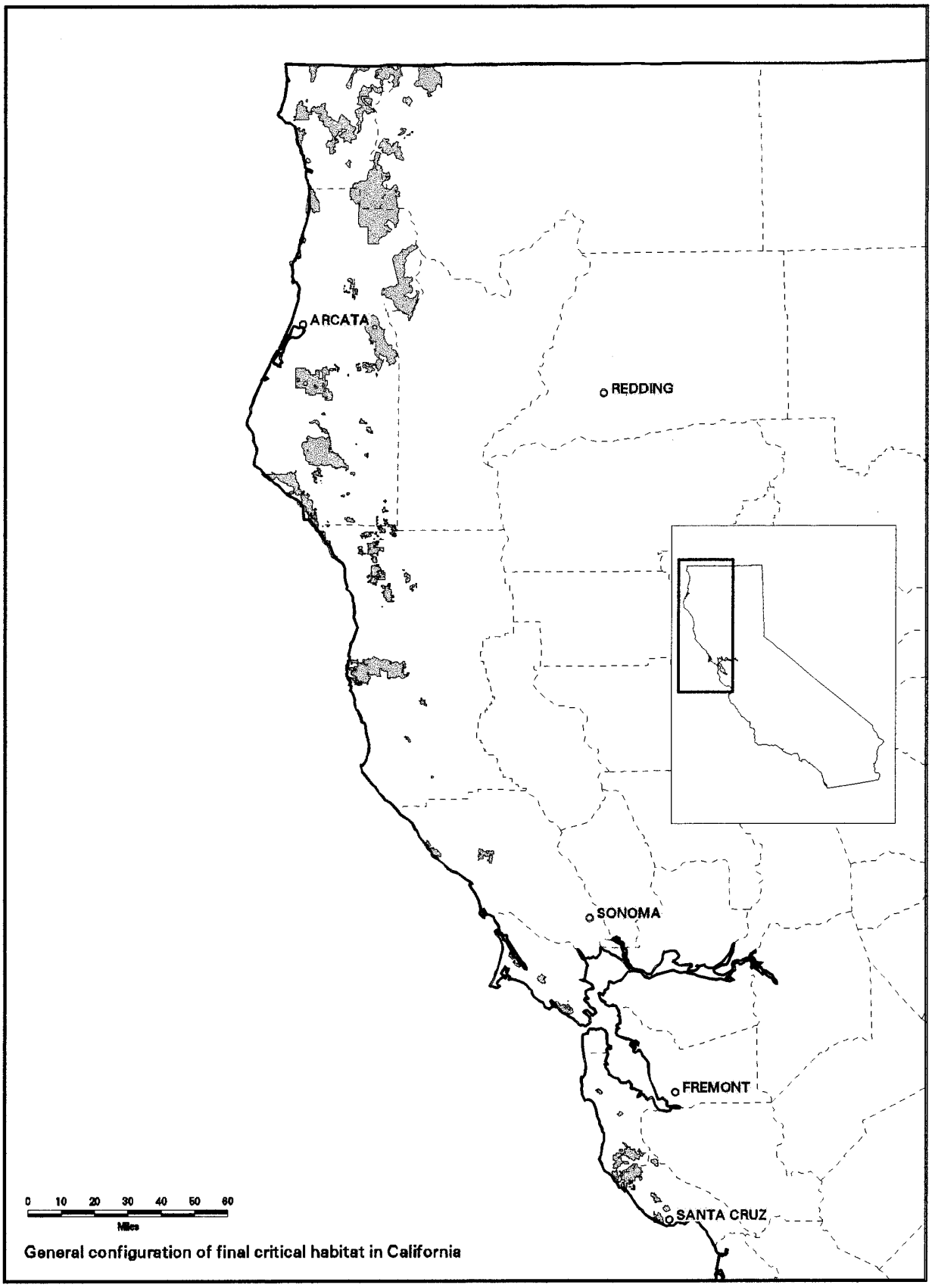


General configuration of final critical habitat in Washington



General configuration of final critical habitat in Oregon



General configuration of final critical habitat in California

BILLING CODE 4310–55–P

Map and description of WA–01–a taken from United States Fish and Wildlife Service 1:100,000 map; Cape Flattery, Forks, and Port Angeles, Washington; 1995.

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.28N., R.10W. Willamette Meridian: W½ W½ Section 1; Sections 2–8; NW¼, N½ SW¼, N½ NE¼, SW¼ NE¼ Section 9; N½ NW¼, NE¼ Section 10; W½ NW¼, NE¼ NW¼, N½ NE¼ Section 11; NW¼ NW¼ Section 12.

T.28N., R.11W. Willamette Meridian: Sections 1–5; S½ SW¼, SE¼, S½ NE¼, NE¼ NE¼ Section 6; Sections 7–12; N½ NW¼ Section 13; N½ Section 14; N½ N½ Section 15; N½ Section 16; N½, N½ SW¼ Section 17; N½ N½ Section 18.

T.28N., R.12W. Willamette Meridian: SW¼ SW¼ Section 1; SW ¼, S½ SE¼ Section 2; S½ SW¼, SE¼ Section 3; N½ N½ Section 10; N½ Section 11; Section 12 except SW¼ SW¼, N½ NE¼ Section 13.

T.29N., R.10W. Willamette Meridian: SW¼ NW¼, W½ SW¼, SE¼ SW¼ Section 1; Section 2 except N½ NE¼; Section 3 except N½ NE¼; Sections 4–5; SE¼ NW¼, SW¼ SW¼, E½ Section 6; Sections 7–24; Section 25 except SE¼ SE¼; Sections 26–35; NW¼, N½ SW¼, SW¼ SW¼, W½ NE¼ Section 36.

T.29N., R.11W. Willamette Meridian: SE¼ SW¼, SE¼, SE¼ NE¼ Section 12; Section 13; N½, N½ SW¼, SE¼ Section 14; E½ SE¼ Section 22; S½, NE¼ Section 23; Sections 24–27; S½, S½ NE¼ Section 28; SE¼ Section 29; SE¼ SE¼ Section 31; S½ SW¼, NE¼ SW¼, SE¼, S½ NE¼, NE¼ NE¼ Section 32; Sections 33–36.

T.30N., R.09W. Willamette Meridian: S½ SW¼ Section 18; N½ NW¼ Section 19.

T.30N., R.10W. Willamette Meridian: E½ NW¼, E½ SW¼, SW¼ SW¼, SE¼, SW¼ NE¼ Section 1; S½ SW¼, SW¼ SE¼ Section 2; Section 3 except NE¼; Section 4; E½ NW¼, S½ SW¼, NE¼ SW¼, E½ Section 5; S½ Section 6; Sections 7–12; Section 13 except SW¼ SW¼; NW¼ NW¼, NE¼ Section 14; Section 15; N½, N½ SE¼ Section 16; N½ Section 17; Section 18 except S½ SE¼; NW¼ NW¼ Section 19; SW¼ SW¼ Section 35.

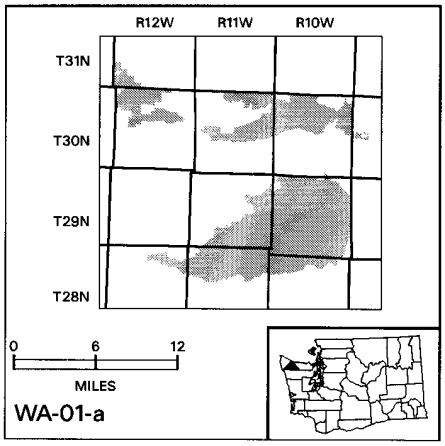
T.30N., R.11W. Willamette Meridian: Sections 1–2; Section 3 except S½ SW¼, SW¼ SE¼; Section 4 except S½ SW¼, SW¼ SE¼; NE¼ NE¼ Section 10; N½ NW¼, SE¼ SE¼, W½ NE¼, NE¼ NE¼ Section 11; NW¼ NW¼, S½, E½ NE¼ Section 12; Sections 13–14; S½, S½ NE¼ Section 15; S½ Section 17; SE¼ Section 18; N½ NW¼, SE¼ NW¼, NE¼ Section 20; N½, N½ SE¼ Section 21; N½, N½ S½ Section 22; N½, N½ SW¼ Section 23; NW¼, W½ NE¼, NE¼ NE¼ Section 24.

T.30N., R.12W. Willamette Meridian: NW¼ NW¼ Section 2; W½, N½ NE¼ Section 3; Section 4–5; Section 6 except W½ NW¼, NW¼, N½ SE¼, NE¼ Section 7; Section 8 except SW¼ SW¼; N½ N½, SE¼ SE¼ Section 9; S½ Section 10; S½ SW¼, SW¼ SE¼ Section 11; W½ NW¼ Section 13; N½, N½ SW¼ Section 14; N½, NE¼ SE¼ Section 15; Section 17 except NW¼ NW¼, SE¼ SE¼.

T.31N., R.12W. Willamette Meridian: Section 30 except NE¼; Section 31; Section 32 except NE¼; S½ SW¼ Section 33.

Critical Habitat includes only State or County lands described within the following areas:

T.30N., R.12W. Willamette Meridian: N½ Section 16.



Map and description of WA–01–b taken from United States Fish and Wildlife Service 1:100,000 map; Port Angeles, Washington; 1995.

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.29N., R.07W. Willamette Meridian: N½ NW¼ Section 1; NE¼ Section 2.

T.30N., R.07W. Willamette Meridian: NW¼ SW¼, SW¼ SE¼, SW¼ NE¼ Section 26; S½ SW¼ Section 29; Section 30 except SE¼ NE¼, N½ NE¼; Section 31 except SW¼ SW¼; W½ W½, NE¼ NW¼ Section 32; W½ NW¼, N½ SW¼, SE¼ SW¼, N½ SE¼, S½ NE¼, NE¼ NE¼ Section 33; NW¼, N½ SE¼, W½ NE¼, SE¼ NE¼ Section 34; Sections 35–36.

T.30N., R.08W. Willamette Meridian: Section 25; Section 26 except NW¼ NE¼; Sections 27–29; N½ N½ Section 32; N½, NE¼ SE¼ Section 33; N½, N½ SW¼, SE¼ Section 34; N½, W½ SW¼, NE¼ SW¼, N½ SE¼ Section 35; N½, N½ S½ Section 36.

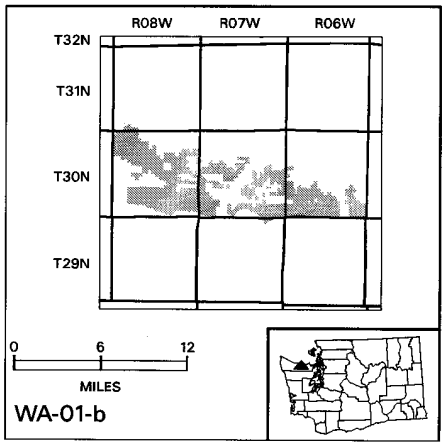
Critical Habitat includes only State or County lands described within the following areas:

T.30N., R.06W. Willamette Meridian: N½ SW¼, NW¼ SE¼ Section 18; NW¼ NW¼, SW¼, W½ SE¼ Section 19; SW¼ SW¼ Section 20; SW¼ SW¼, E½ SW¼ Section 21; SE¼ SE¼ Section 23; NW¼ NW¼, W½ SW¼, SE¼ SW¼ Section 25; E½ Section 26; SE¼ NW¼, S½ Section 27; Section 28 except SE¼ SW¼, NE¼ NE¼; Section 29; Section 30 except S½ SW¼; Sections 31–34; W½ W½, E½ E½ Section 35; Section 36.

T.30N., R.07W. Willamette Meridian: SE¼ SE¼ Section 9; S½ SW¼ Section 10; S½ S½, NE¼ SE¼ Section 13; SE¼ SW¼, SE¼, SE¼ NE¼ Section 14; SW¼ NW¼, NE¼ NW¼, NW¼ SW¼, SE¼ SE¼ Section 15; SW¼, S½ SE¼, NE¼ SE¼, S½ NE¼ Section 16; S½, S½ N½, NW¼ NE¼ Section 17; NW¼ NW¼, S½, E½ NE¼ Section 18; W½ NW¼, SE¼ NW¼, SW¼, N½ SE¼ Section 19; SW¼, SW¼ SE¼, E½ NE¼ Section 20; NW¼, SW¼ SW¼, NW¼ NE¼ Section 21; SE¼ SW¼, E½ E½ Section 22; S½ NW¼, NE¼ NW¼, SE¼, SE¼ SE¼, W½ NE¼, NE¼ NE¼ Section 23; N½, NW¼ SW¼, N½ SE¼, SE¼ SE¼ Section 24; S½ NW¼, NE¼ Section 25; N½, NW¼ SE¼ Section 27.

T.30N., R.08W. Willamette Meridian: S½ SW¼ Section 4; Section 5 except E½ NE¼; Section 6 except NW¼ NW¼; Section 7 except S½ SW¼; Section 8; Section 9 except NW¼ NE¼; SW¼ SW¼, SE¼ Section 10; W½ SW¼, SE¼ SW¼, SE¼, SE¼ NE¼ Section 11; SW¼ NW¼, N½ S½, SE¼ SE¼, S½ NE¼ Section 12; NW¼ NW¼, W½ SW¼, SE¼ SW¼, SE¼ SE¼, NE¼ NE¼ Section 13; Section 14; Section 15 except N½ SE¼, S½ NE¼; Section 16 except SW¼ SE¼; E½ NW¼, NW¼ NW¼, NE¼ Section 17; NE¼ NW¼, N½ NE¼, SW¼ NE¼ Section 20; N½ NW¼, SE¼ NW¼, SW¼ SE¼, E½ SW¼, NE¼ Section 22; W½, N½ SE¼, SW¼ NE¼ Section 23; SW¼ NW¼, NE¼ NW¼, N½ S½, N½ NE¼ Section 24.

T.31N., R.08W. Willamette Meridian: E½ SE¼ Section 31; W½ SW¼, SE¼ SW¼, SW¼ SE¼ Section 32.



Map and description of WA–02–a taken from United States Fish and Wildlife Service 1:100,000 map; Cape Flattery and Forks, Washington; 1995.

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.28N., R.12W Willamette Meridian: S½, S½ N½ Section 4; S½, S½ N½ Section 5; S½, NW¼, S½ NE¼, Section 6; Sections 7–9; Sections 16–21; Sections 28–33.

T.29N., R.12W. Willamette Meridian: S½ Section 7; SW¼, SW¼ SE¼ Section 8; S½ SW¼, SW¼ SE¼ Section 9; NW¼, W½ SW¼, W½ NE¼ Section 16; Section 17 except SE¼ SW¼, SW¼ SE¼; Section 18; Section 19 except W½ SE¼; W½ W½ Section 20; W½ Section 30.

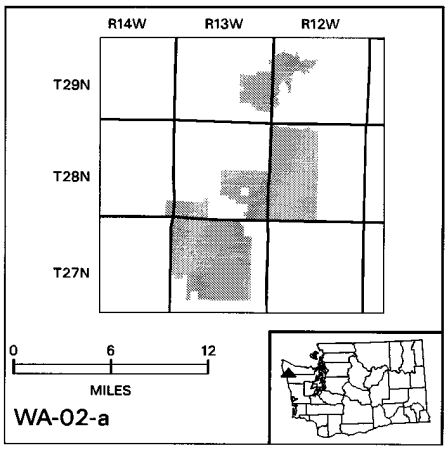
T.29N., R.13W. Willamette Meridian: S½ S½, NE¼ NE¼ Section 13; Section 23 except SW¼ SW¼; Sections 24–25; N½, N½ S½, SE¼ SE¼ Section 26, N½ N½ Section 36.

Critical Habitat includes only State or County lands described within the following areas:

T.27N., R.13W. Willamette Meridian: W½ NW¼, SE¼ NW¼, SW¼ Section 2; Sections 3–11; Sections 14–18; N½, NE¼ SW¼, NW¼ SE¼ Section 19; Sections 20–23; Sections 26–28; N½, W½ SW¼, E½ SE¼ Section 29.

T.28N., R.13W. Willamette Meridian: Sections 22–25; W½ NW¼, S½, E½ NE¼ Section 26; N½, N½ SE¼ Section 27; SW¼ SW¼ Section 28; Sections 31–32; W½ W½ Section 33; E½ E½, W½ SE1/4 Section 35; Section 36.

T.28N., R.14W. Willamette Meridian: E½ Section 36.



Map and description of WA–02–b taken from United States Fish and Wildlife Service 1:100,000 map; Forks and Mt Olympus, Washington; 1995.

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.25N., R.10W. Willamette Meridian: Sections 29–30; Section 31 except SE¼ SE¼; N½ NW¼, SW¼ NW¼ Section 32.

Critical Habitat includes only State or County lands described within the following areas:

T.24N., R.11W. Willamette Meridian: N½ N½ Section 1; N½, N½ SW¼ Section 2; Sections 3–8; Section 9 except SE¼; N½ NW¼ Section 10; NW¼ Section 16; NW¼, NW¼ SW¼, W½ NE¼ Section 17; Section 18 except SE¼ SE¼; NW¼ NW¼ Section 19.

T.24N., R.12W. Willamette Meridian: NW¼ NW¼, S½ NW¼, SW¼, W½ SE¼, SE¼ SE¼, SW¼ NE¼ Section 1; SE¼, NW¼ NE¼, E½ NE¼ Section 2; W½ SE¼, NE¼ SE¼, S½ NE¼ Section 10; Section 11; Section 12 except NE¼ SE¼; W½, W½ NE¼, NE¼ NE¼ Section 13; N½, S½ SE¼, NE¼ SE¼ Section 14; NE¼ NW¼, N½ SE¼, NE¼ Section 23; N½, N½ SW¼ Section 24.

T.25N., R.09W. Willamette Meridian: NW¼, W½ SW¼, N½ NE¼, SW¼ NE¼ Section 6.

T.25N., R.10W. Willamette Meridian: Sections 1–11; W½ NW¼, NE¼ NW¼ Section 12; NW¼, N½ SW¼, N½ NE¼, NE¼ NE¼ Section 14; Section 15 except SE¼ SW¼, S½ SE¼; Sections 16–20; N½ Section 21.

T.25N., R.11W. Willamette Meridian: Section 1–19; Section 20 except NE¼ NW¼; Sections 21–36.

T.25N., R.12W. Willamette Meridian: Section 1 except N½ N½; Section 2 except NE¼ NE¼; Section 3 except NE¼ NW¼; E½ Section 4; SE¼ Section 5; SE¼ SW¼ Section 6; Section 7; N½ Section 8; Section 9; Section 10 except NE¼ NE¼; SE¼ NW¼, S½ Section 11; Section 12; Section 13 except S½ SW¼; W½ W½, E½ Section 14; Sections 15–16; W½ W½, SE¼ SW¼, S½ SE¼, NE¼ SE¼ Section 17; Section 18; E½ NW¼, N½ NE¼, SW¼ NE¼ Section 19; N½ N½ Section 20; N½ N½ Section 21; N½ N½ Section 22; NW¼ NW¼, NE¼ NE¼ Section 23; NE¼ NW¼, E½ SW¼, NE¼ Section 24; Section 25; Section 26 except W½ NW¼, NE¼ NW¼, NW¼ NE¼; Sections 35–36.

T.25N., R.13W. Willamette Meridian: Section 1 except NE¼ SE¼, N½ NE¼, SE¼ NE¼; Section 2 except NW¼; NE¼ NW¼, S½ S½, N½ NE¼, SE¼ NE¼ Section 11; Section 12; Section 13 except SW¼ SW¼; Section 14; N½ NW¼ Section 23; NE¼ NW¼, NW¼ NE¼ Section 24.

T.26N., R.09W. Willamette Meridian: S½ NW¼, SW¼, W½ SE¼, SE¼ SE¼, SW¼ NE¼ Section 19; W½ Section 29; Sections 30–31; W½ W½ Section 32.

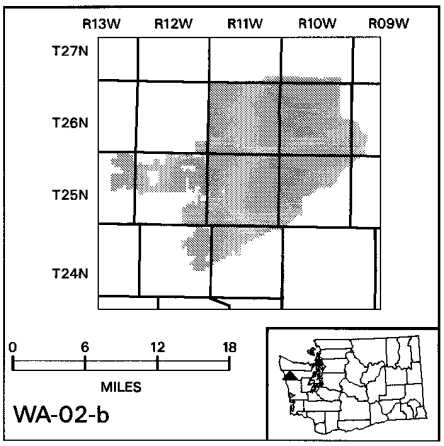
T.26N., R.10W. Willamette Meridian: Sections 2–11; W½ SW¼, SE¼ SW¼, SW¼ SE¼ Section 13; Sections 14–36.

T.26N., R.11W. Willamette Meridian: Sections 1–36.

T.26N., R.12W. Willamette Meridian: Section 36.

T. 27N., R. 10W. Willamette Meridian: S½ Section 31; S½ Section 32; S½ Section 33; S½ Section 34; S½ Section 35.

T. 27N., R. 11W. Willamette Meridian: SE¼ Section 35; S½ Section 36.



Map and description of WA–02–c taken from United States Fish and Wildlife Service 1:100,000 map; Forks and Mt Olympus, Washington; 1995.

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T. 23N., R. 9W. Willamette Meridian: NW¼, NW¼ SW¼, NW¼ NE¼ Section 6.

T. 23N., R. 10W. Willamette Meridian: N½, N½ SW¼, SW¼ SW¼, N½ SE¼ Section 1; N½ N½, SE¼ NE¼ Section 2; NW¼, N½ NE¼, SW¼ NE¼ Section 3; E½ NW¼, NE¼ Section 4; N½, SW¼ SW¼, NE¼ SW¼, SE¼ SE¼, NE¼ SE¼ Section 15; S½ NW¼, NE¼ SW¼, SE¼, NW¼ NE¼, S½ NE¼ Section 16; NE¼ NE¼ Section 22.

T. 23N., R. 11W. Willamette Meridian: E½ NW¼, N½ SE¼, NE¼ Section 1.

T. 24N., R. 09W. Willamette Meridian: S½ N½, S½ Section 3; Sections 4–10; Section 15 except SE¼ SE¼, NE¼ NE¼; Sections 16–21; Sections 28–33.

T. 24N., R. 10W. Willamette Meridian: Sections 1–3; S½, NE¼ Section 4; S½ Section 5; S½ Section 6; Sections 7–30; N½, N½ S½, SE¼ SE¼ Section 31; Sections 32–36.

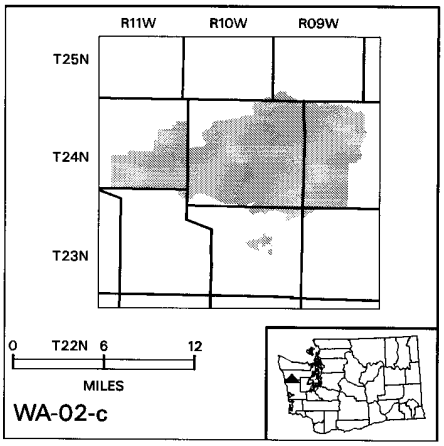
T. 24N., R. 10½W. Willamette Meridian: S½ SE¼ Section 1; Section 12 except W½ W½; Section 13; Section 14 except NW¼ NW¼; Sections 23–26; NW¼, N½ SW¼, N½ NE¼, SW¼ NE¼ Section 35; N½ NW¼, NE¼ Section 36.

T. 25N., R. 09W. Willamette Meridian: S½, SE¼ NW¼, S½ NE¼ Section 31; NW¼ SW¼, S½ SW¼ Section 32.

T. 25N., R. 10W. Willamette Meridian: S½ SE¼ Section 36.

Critical Habitat includes only State or County lands described within the following areas:

T. 24N., R. 11W. Willamette Meridian: S½ SW¼, NE¼ SW¼, SE¼ Section 12; Sections 13–14; SE¼ SE¼ Section 15; S½ S½ Section 20; S½ Section 21; E½ NE¼, S½ Section 22; Sections 23–29; Sections 32–36.



Map and description of WA–02–d taken from United States Fish and Wildlife Service 1:100,000 map; Forks, Washington; 1995.

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

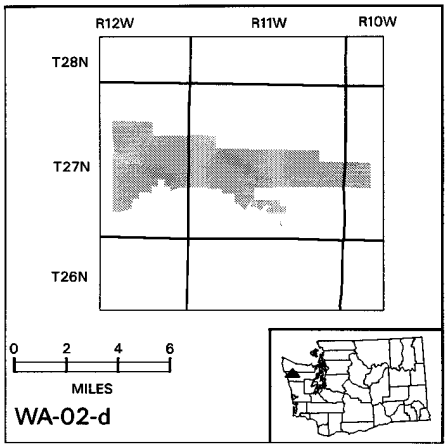
T.27N., R.11W. Willamette Meridian: N½ SW¼, SE¼ SW¼, SW¼ SE¼ Section 27; S½ NW¼, N½ SW¼, SW¼ SW¼, SE¼ Section 28; NE¼ SE¼, SE¼ NE¼ Section 29; SW¼ NE¼ Section 34.

Critical Habitat includes only State or County lands described within the following areas:

T.27N., R.10W. Willamette Meridian: Section 19.

T.27N., R.11W. Willamette Meridian: S½ Section 14; S½ Section 15; S½ Section 16; S½ Section 17; Sections 18–24; S½ SW¼ Section 27; N½ NW¼, NE¼ SW¼, NW¼ SE¼ Section 28; N½ N½ Section 29; NE¼ NE¼ Section 30.

T.27N., R.12W. Willamette Meridian: S½ Section 10; SW¼ Section 11; Sections 13–15; Section 22; Section 23 except SE¼ SE¼; Section 24; NE¼ NW¼, N½ NE¼ Section 25; N½ NW¼ Section 26; Section 27 except E½ SE¼.



Map and description of WA–03–a taken from United States Fish and Wildlife Service 1:100,000 map; Mt Olympus and Shelton, Washington; 1995.

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.21N., R.07W. Willamette Meridian: N½ NW¼, SE¼ NW¼, NE¼ SW¼, W½ SE¼ Section 3.

T.21N., R.08W. Willamette Meridian: Sections 4–9; N½, SW¼, NW¼ SE¼ Section 16; Sections 17–18; NW¼ NW¼ Section 21.

T.21N., R.09W. Willamette Meridian: Section 1; Section 2 except NW¼ NW¼; Section 3 except SE¼, S½ NE¼, NE¼ NE¼; Section 4; E½ Section 5; N½ Section 6.

T.22N., R.07W. Willamette Meridian: Section 1; NE¼ NW¼, E½ SE¼, NW¼ SE¼, NE¼ Section 2; W½ Section 3; Sections 4–5; SE¼ NW¼, S½ SW¼, NE¼ SW¼, E½ Section 6; NW¼, N½ NE¼ Section 7; SE¼ NW¼, NE¼ SW¼, S½ SE¼, NE¼ SE¼, NW¼ NE¼, E½ NE¼ Section 8; Section 9; W½, W½ SE¼, SE¼ SE¼ Section 10; NE¼ SE¼, NE¼ Section 11; NW¼ NW¼, S½ NW¼, SW¼, W½ SE¼ Section 12; N½ NW¼, S½ SW¼, W½ SE¼, NE¼ SE¼, W½ NE¼ Section 13; SW¼ NW¼, SW¼, SW¼ SE¼ Section 14; Section 15 except SE¼ NW¼, NE¼ SW¼, SW¼ NE¼; Section 16; Section 17 except W½ NW¼, NE¼ NW¼; SW¼, E½ SE¼, NE1/4 NE1/4 Section 19; Section 20 except SE1/4; Section 21 except SE¼ SE¼; N½ Section 22; N½, E½ SW¼, W½ SE¼, NE¼ SE¼ Section 23; W½ NW¼, NE¼ NW¼ Section 24; NW¼ Section 26; S½ NW¼, SW¼, N½ SE¼, NE¼ Section 27; N½ NW¼ Section 28; NW¼, N½ NE¼ Section 29; SW¼ SW¼ Section 30; W½, N½ SE¼, W½ NE¼ Section 31; W½ Section 34.

T.22N., R.08W. Willamette Meridian: E½ SE¼ Section 1; N½ NW¼, W½ SW¼, NW¼ NE¼ Section 2; Sections 3–9; W½, W½ NE¼, NE¼ NE¼ Section 10; SE¼ NW¼, S½, S½ NE¼ Section 11; W½ SW¼, NE¼ NE¼ Section 12; NW¼ NW¼, SW¼ SE¼ Section 13; NE¼ NW¼, N½ NE¼ Section 14; Section 15 except E½ SE¼, NE¼; Sections 16–21; Section 22 except E½ SE¼, NE¼; E½ SE¼, NW¼ SE¼, NE¼ Section 24; SE¼ SE¼, NE¼ NE¼ Section 25; Section 27 except E½ E½; Sections 28–33; N½ NW¼, SW¼ NW¼, SE¼ SW¼, E½ SE¼, SW¼ SE¼, W½ NE¼ Section 34; Section 35 except NW¼ NW¼; SE¼ SW¼, S½ SE¼, NE¼ SE¼, NE¼ Section 36.

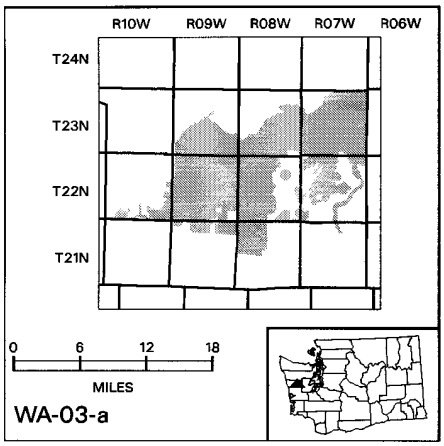
T.22N., R.09N. Willamette Meridian: Sections 1–5; E½, E½ W½ Section 6; E½, E½ W½ Section 7; Sections 8–25; Section 26 except SW¼; Sections 27–33; Section 34 except S½ SE¼; Section 35 except N½ NW¼, W½ SW¼.

T.22N., R.10W. Willamette Meridian: SE¼ Section 13; SE¼ NW¼, SW¼ SW¼, E½ SW¼, SE¼, E½ NE¼ Section 24; SE¼ NW¼, SW¼, E½ Section 25; W½ SW¼, SE¼ SE¼ Section 27; S½ SE¼, NE¼ SE¼ Section 31; SW¼ NW¼, E½ NW¼, S½, S½ NE¼ Section 32; NW¼ NW¼, S½ SW¼, SW¼ SE¼, NE¼ SE¼ Section 33; W½ NW¼, N½ SW¼, NW¼ SE¼, SE¼ SE¼, NE¼ NE¼ Section 34; Section 35 except SW¼ SW¼; Section 36.

T.23N., R.07W. Willamette Meridian: Sections 1–3; S½, S½ NE¼, NE¼ NE¼ Section 4; SW¼ SW¼ Section 7; SE¼ SW¼, SE¼, SE¼ NE¼ Section 8; Sections 9–17; Section 18 except N½ NE¼; Sections 19–30; N½, N½ SW¼, SE¼ Section 31; Section 32–33; Section 34 except S½ SE¼; Sections 35–36.

T.23N., R.08W. Willamette Meridian: S½ NW¼, N½ SW¼, SE¼ SW¼, SE¼, S½ NE¼ Section 11; Section 12 except N½ N½; Sections 13–14; S½, NE¼ Section 15; S½ SE¼, NE¼ SE¼ Section 16; SE¼ SE¼ Section 20; S½, NE¼ Section 21; Sections 22–29; W½ NW¼, SE¼ NW¼, S½, SE¼ NE¼ Section 30; Sections 31–34; Section 35 except E½ SE¼; N½, NE¼ SE¼ Section 36.

T.23N., R.09W. Willamette Meridian: E½ NW¼, SW¼, SW¼ SE¼, W½ NE¼ Section 15; S½ SE¼, NE¼ SE¼ Section 16; SE¼ SE¼ Section 19; S½, S½ NE¼, NE¼ NE¼ Section 20; Sections 21–22; W½ NW¼, SW¼, W½ SE¼, SE¼ SE¼ Section 23; SW¼ SW¼ Section 24; Sections 25–29; SW¼, SW¼, E½ SW¼, SE¼, S½ NE¼ NE¼ NE¼ Section 30; E½ W½, E½ Section 31; Sections 32–36.



Map and description of WA–03-b taken from United States Fish and Wildlife Service 1:100,000 map; Mt Olympus and Shelton, Washington; 1995.

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.21N., R.06W. Willamette Meridian: W½, NW1/4 NE¼ Section 3; Sections 4–8; E½, NE¼ Section 9; N½ NW¼ Section 10.

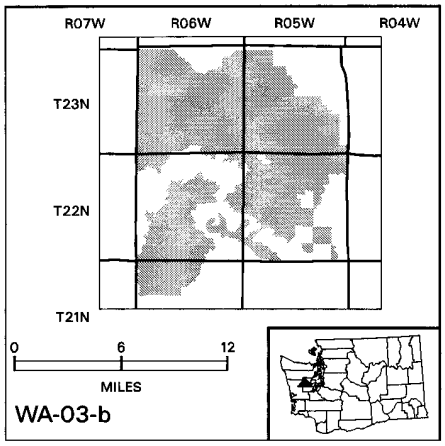
T.22N., R.05W. Willamette Meridian: Sections 1–4; S½, SW¼ NW¼, E½ NW¼, NE¼ Section 5; Sections 6–10; Section 11 except SE¼ SE¼; W½ Section 14; N½ NW¼, W½ SW¼ Section 15; Sections 16–18; N½, W½ SW¼, N½ SE¼, SE¼ SE¼ Section 19; Sections 20–22; Section 26; Section 28 except SW¼ SW¼; N½ NW¼, NE¼ SE¼, N½ NE¼, SE¼ NE¼ Section 29; NW¼ NW¼, S½ SW¼, NE¼ SW¼, W½ SE¼, NE¼ SE¼, S½ NE¼ Section 30; N½ NW¼, SE¼ NW¼, N½ SE¼, SE¼ SE¼, NE¼ Section 31; W½, SE¼, S½ NE¼ Section 32; W½ SW¼, SE¼ SW¼ Section 33; NE¼ Section 34; W½ W½, NE¼ SW¼ Section 36.

T.22N., R.06W. Willamette Meridian: N½, E½ SE¼ Section 1; NW¼, N½ NE¼, SE¼ NE¼ Section 2; N½ NE¼ Section 3; NW¼, W½ SW¼, NE¼ SW¼, NW¼ SE¼, W½ NE¼, NE¼ NE¼ Section 5; Section 6 except S½ SE¼; N½ NW¼, S½ SE¼, NE¼ SE¼ Section 8; S½ Section 9; S½ NW¼, NE¼ NW¼, S½, W½ NE¼, SE¼ NE¼ Section 10; SW¼, SW¼ SE¼ Section 11; NE¼ SE¼, S½ SE¼ Section 12; Section 13; NW¼, N½ SW¼ Section 14; Sections 15–16; E½ Section 17; N½ SE¼, SE¼ SE¼, S½ NE¼, NW¼ NE¼ Section 19; Sections 20–21; W½ NW¼, NE¼ NW¼, W½ SW¼, E½ SE¼ Section 22; S½, SW¼ NE¼ Section 23; NE¼ NW¼, W½ SW¼, E½ SE¼, N½ NE¼, SE¼ NE¼ Section 24; S½ N½, NW¼ NW¼, N½ S½, SE¼ SE¼, NE¼ NE¼ Section 25; N½, SW¼ SW¼, NE¼ SE¼ Section 26; Section 27 except NW¼ NE¼; Sections 28–29; E½ Section 30; Section 31 except W½ NW¼; Sections 32–34; NW¼ Section 35.

T.23N., R.05W. Willamette Meridian: W½ W½ Section 4; S½ N½, S½ Section 5; S½ N½, S½ Section 6; Sections 7–9; W½ SW¼ Section 10; S½ SW¼, SW¼ SE¼ Section 14; NW¼, NW¼ SW¼, S½ SW¼, S½ SE¼ Section 15; Sections 16–22; Section 23 except

SE¼ NE¼, N½ NE¼; NW¼ SW¼, S½ SW¼ Section 24; W½ Section 25; Sections 26–35; Section 36 except NE¼.

T.23N., R.06W. Willamette Meridian: SE¼ NW¼, S½, S½ NE¼ Section 1; E½ SE¼ Section 2; SW¼ NW¼, SW¼, W½ SE¼, SE¼ SE¼ Section 4; Sections 5–9; NW¼ NW¼, S½ N½, S½ Section 10; Sections 11–32; Section 33 except SE¼ SE¼; Section 34 except SW¼; Sections 35–36.



Map and description of WA–04–a taken from United States Fish and Wildlife Service 1:100,000 map; Shelton and Chehalis River, Washington; 1995.

Critical Habitat includes only State or County lands described within the following areas:

T.16N., R.03W. Willamette Meridian: NW¼, W½ SW¼, W½ NE¼ Section 4; Sections 5–7; NW¼, W½ SW¼, W½ NE¼, NE¼ NE¼ Section 8; NW¼ NW¼; NW¼ NW¼ Section 16; W½, NE¼ Section 17; Section 18; Section 19 except S½ SE¼.

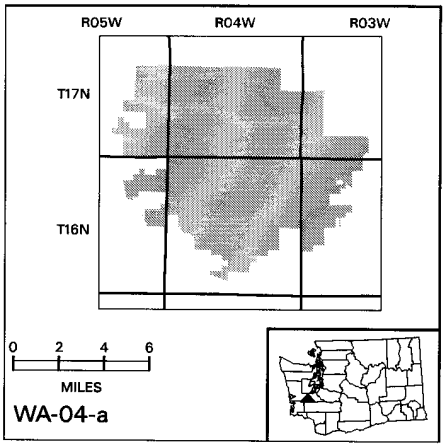
T.16N., R.04W. Willamette Meridian: Sections 1–17; Section 18 except SW¼; NE¼ Section 19; Section 20 except W½ SW¼; Sections 21–23; N½ NW¼ Section 26; Section 27 except E½ SE¼; N½ NW¼, S½ SE¼, NE¼ SE¼, NE¼ Section 28; N½ NW¼, W½ NE¼ Section 33.

T.16N., R.05W. Willamette Meridian: S½ SW¼, SE¼ Section 1; S½ SE¼, NE¼ SE¼ Section 2; N½, SW¼, NW¼ SE¼ Section 11; N½ Section 12; Section 13 except N½ NW¼, NW¼ NE¼.

T.17N., R.03W. Willamette Meridian: Section 19; Sections 30–32; Section 33 except SE¼ SE¼.

T.17N., R.04W. Willamette Meridian: Sections 14–36.

T.17N., R.05W. Willamette Meridian: Section 13; E½ Section 14; S½, NE¼ Section 23; Sections 24–25; NW¼ SW¼, S½ S½ Section 26; S½ SE¼, NE¼ SE¼, SE¼ NE¼ Section 27; Sections 35–36.



Map and description of WA–05–a taken from United States Fish and Wildlife Service 1:100,000 map; Chehalis River, Washington; 1995.

Critical Habitat includes only State or County lands described within the following areas:

T.12N., R.08W. Willamette Meridian: Section 2 except NE¼ NE¼; Sections 3–5; Section 9; Section 10 except NW¼ NW¼; W½, N½ NE¼, SW¼ NE¼ Section 11; W½, W½ NE¼ Section 14; Sections 15–16.

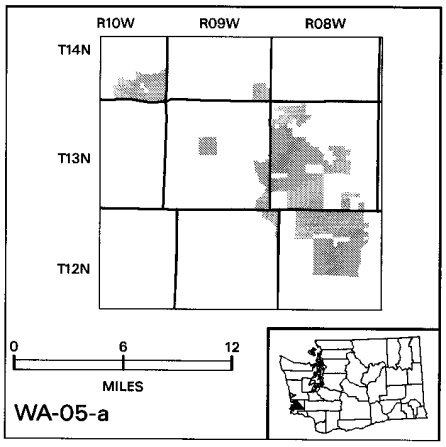
T.12N., R.09W. Willamette Meridian: N½, N½ SE¼, SE¼ SE¼ Section 1.

T.13N., R.08W. Willamette Meridian: SW¼ SW¼ Section 4; Section 5 except N½ NW¼, NW¼ NE¼; SE¼ NW¼, S½ SE¼, NE¼ SE¼, S½ NE¼ Section 6; Section 7 except SE¼ NW¼; NW¼ NW¼, W½ SW¼, W½ NE¼, NE¼ NE¼ Section 8; SW¼ Section 14; NE¼ SW¼, SE¼ Section 15; Sections 16–20; N½ Section 21; SW¼ NW¼, S½, S½ NE¼, NE¼ NE¼ Section 22; W½ NW¼, SE¼ NW¼, SW¼ Section 23; Section 28–29; Section 30 except N½ N½; Sections 32–33.

T.13N., R.09W. Willamette Meridian: Section 16; S½ N½, S½, NE¼ NE¼ Section 24; E½ NW¼, NW¼ SE¼, E½ SE¼, NE¼ Section 25; Section 36 except N½ NW¼.

T.14N., R.09W. Willamette Meridian: Section 36 except NE¼ NE¼.

T.14N., R.10W. Willamette Meridian: S½, S½ NE¼ Section 25; S½ Section 26; SE¼ Section 27; Section 34 except NW¼ NW¼; Section 35 except NW¼ NE¼, SE¼ NE¼; Section 36.



Map and description of WA–05–b taken from United States Fish and Wildlife Service 1:100,000 map; Astoria, Oregon-Washington; 1995.

Critical Habitat includes only State or County lands described within the following areas:

T.10N., R.09W. Willamette Meridian: N½, N½ SE¼, NE¼ SW¼ Section 3; N½ NE¼ Section 4.

T.11N., R.09W. Willamette Meridian: Sections 4–10; W½ Section 14; Sections 15–18; Section 19 except SW¼ SW¼; Sections 20–22; Sections 27–29; NW¼, E½ Section 33; Section 34 except SW¼.

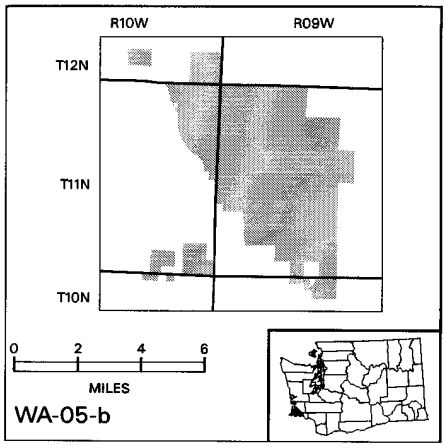
T.11N., R.10W. Willamette Meridian: Section 1; E½ NW¼, E½ Section 2; E½ E½ Section 11; Section 12; N½ NW¼, SE¼ NW¼, NW¼ SE¼, E½ SE¼, NE¼ Section 13; Section 36 except E½ NE¼.

T.12N., R.10W. Willamette Meridian: NW¼, E½ NE¼ Section 34; Section 36.

Critical Habitat includes only Private lands described within the following areas:

T.11N., R.10W. Willamette Meridian: S½ NW¼, N½ SW¼, SW¼ SW¼, that portion of the SE¼ SW¼ west of Ellsworth Creek, NW¼ SE¼, SW¼ NE¼ Section 35.

T.10N., R.10W. Willamette Meridian: NW¼ NW¼, NW¼ NE¼ Section 2; NE¼ NE¼ Section 3.



Map and description of WA–05–c taken from United States Fish and Wildlife Service 1:100,000 map; Astoria, Oregon-Washington; 1995.

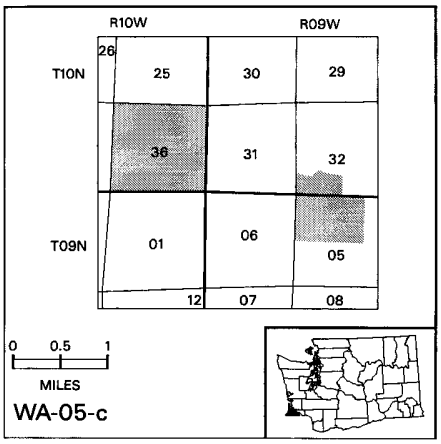
Critical Habitat includes only State or County lands described within the following areas:

T.10N., R.10W. Willamette Meridian: Section 36.

Critical Habitat includes only Private lands described within the following areas:

T.09N., R.09W. Willamette Meridian: NW1/4, W1/2 NE1/4 Section 5.

T.10N., R.09W. Willamette Meridian: That portion of the S1/2 SW1/4 Section 32 south of Bean Creek.



Map and description of WA–05–d taken from United States Fish and Wildlife Service 1:100,000 map; Cape Flattery, Washington; Astoria, Oregon-Washington; 1995.

Critical Habitat includes only State or County lands described within the following areas:

T. 10N., R. 06W. Willamette Meridian: Sections 2–5; N½ Section 6; S½ SE¼, NE¼ SE¼, N½ NE¼, SE¼ NE¼ Section 7; Sections 8–10; Sections 14–17; E½ Section 18; Section 19; SW¼ NW¼, SW¼, W½ NE¼, NE¼ NE¼ Section 20; Section 21–27; S½ NW¼, S½ Section 28; NE¼ Section 29; NW¼, W½ NE¼ Section 30; N½, N½ SW¼ Section 33; N½, W½ SE¼ Section 34; N½, SW¼, NW¼ SE¼ Section 35; N½, NW¼ SW¼, S½ SE¼, NE¼ SE¼ Section 36.

T. 10N., R. 08W. Willamette Meridian: N½ NW¼, NW¼ NE¼ Section 1; Section 2; NW¼ Section 10; E½ NW¼, N½ SE¼, NE¼ Section 11; W½ NW¼, SE¼ NW¼, SW¼ NE¼ Section 12.

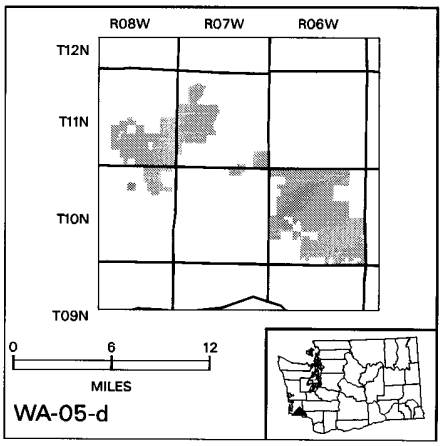
T. 11N., R. 07W. Willamette Meridian: N½, SW¼, W½ SE¼ Section 8; Section 16 except SE¼ SE¼; Sections 17–20; W½, SW¼ SE¼ Section 21; N½ Section 29; N½, SW¼ Section 30; N½ NW¼ Section 31; Section 36.

T. 11N., R. 08W. Willamette Meridian: S½, S½ NE¼ Section 21; NW¼ NW¼, S½ NW¼, SE¼ Section 22; Sections 24–28; E½ SE¼, NE¼ Section 33; N½, SE¼ Section 34; Sections 35–36.

Critical Habitat includes only Private lands described within the following areas:

T. 10N., R. 07W. Willamette Meridian: N½ NW¼, SW¼ NW¼ Section 2; NE¼ Section 3.

T. 11N., R. 07W. Willamette Meridian: S½ SW¼ Section 35.



Map and description of WA–05–e taken from United States Fish and Wildlife Service 1:100,000 map; Astoria, Oregon-Washington; 1995.

Critical Habitat includes only State or County lands described within the following areas:

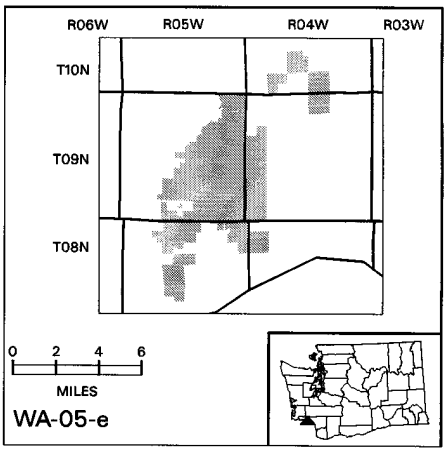
T. 08N., R. 04W. Willamette Meridian: S½ Section 6; N½ Section 7.

T. 08N., R. 05W. Willamette Meridian: Section 1; NE¼ Section 2; E½, W½ NE¼ Section 3; Section 4; N½ SE¼, SE¼ SE¼ Section 5; NW¼, SE¼, N½ NE¼ Section 9; SW¼ Section 10; NE¼ Section 12; Section 16; N½, N½ SE¼ Section 21.

T. 09N., R. 04W. Willamette Meridian: Section 3; SE¼ Section 7; Sections 18–19; Sections 30–31.

T. 09N., R. 05W. Willamette Meridian: Section 1; N½ SE¼, SE¼ SE¼, N½ NE¼, SE¼ NE¼ Section 2; SW¼ SE¼, E½ SE¼ Section 10; Section 11 except N½ NW¼; Sections 12–14; Section 15 except N½ NW¼; S½ SE¼ Section 16; SE¼, SE¼ NE¼ Section 21; Sections 22–28; SE¼ SE¼ Section 29; W½ NW¼, SW¼, W½ SE¼ SE¼ SE¼, E½ NE¼ Section 33; Section 34 except NW¼; Sections 35–36.

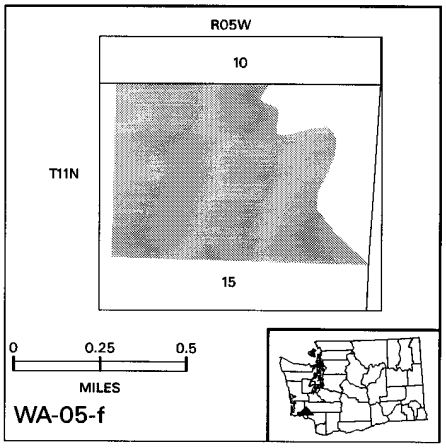
T.10N., R.04W. Willamette Meridian: Section 28 except NE¼ NE¼; W½, NE¼ Section 32; Section 34.



Map and description of WA–05–f taken from United States Fish and Wildlife Service 1:100,000 map; Astoria, Oregon-Washington; 1995.

Critical Habitat includes only Private lands described within the following areas:

T.11N., R.05W. Willamette Meridian: E½ NW¼, that portion of the NE¼ west of the East Fork Chehalis River Section 15.

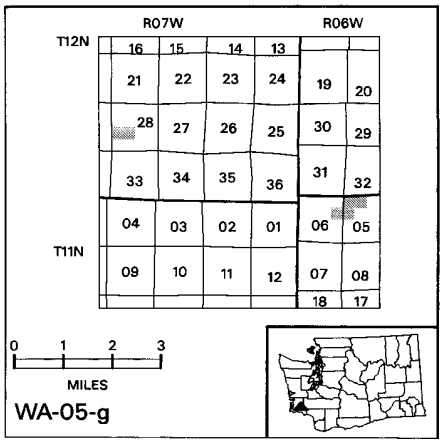


Map and description of WA–05–g taken from United States Fish and Wildlife Service 1:100,000 map; Astoria, Oregon-Washington; 1995.

Critical Habitat includes only Private lands described within the following areas:

T.11N., R.06W. Willamette Meridian: N½ NW¼, SW¼ NW¼ Section 5; SE¼ NE¼ Section 6.

T.12N., R.07W. Willamette Meridian: N½ SW¼ Section 28.



Map and description of WA–05–h taken from United States Fish and Wildlife Service 1:100,000 map; Chehalis River, Washington; 1995.

Critical Habitat includes only State or County lands described within the following areas:

T.12N, R.05W. Willamette Meridian: NW¼ Section 6.

T.12N, R.06W. Willamette Meridian: NE¼ Section 1; N½, N½ S½ Section 3; N½ N½ Section 6.

T.12N, R.07W. Willamette Meridian: N½, N½ SW¼ Section 1; N½, N½ S½ Section 2, NE¼ Section 3.

T.12N, R.08W. Willamette Meridian: NE¼ Section 1.

T.13N, R.05W. Willamette Meridian: S½ S½ Section 7; NE¼ SW¼, S½ SW¼, SE¼ Section 8; S½ SW¼, NE¼ SW¼ Section 9; S½ Section 10; Sections 15–21; Section 22 except SE¼ SW¼, SW¼ SE¼, E½ E½; N½ NW¼, SW¼ NW¼ Section 27; NE¼ Section 28; Section 29–31; Section 32 except W½ SW¼.

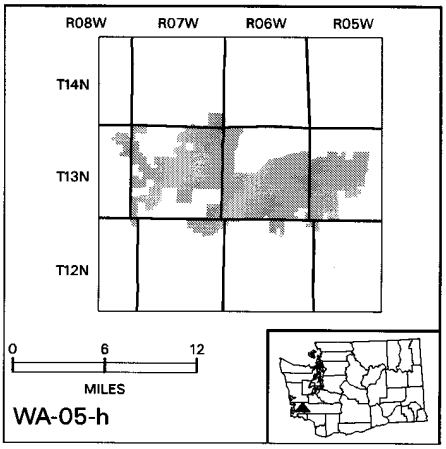
T.13N, R.06W. Willamette Meridian: NW¼, W½ SW¼, NE¼ SW¼, W½ NE¼ Section 5; Sections 6–7; W½ NW¼ Section 8; S½ SE¼ Section 10; S½ SW¼, SE¼ Section 11; S½ Section 12; Sections 13–15; SE¼ Section 16; Sections 18–33; Section 34 except SW¼ SW¼; Section 35; N½, SW¼ NW¼, SW¼ SW¼, E½ SE¼ Section 36.

T.13N, R.07W. Willamette Meridian: Sections 1–2; Section 3 except N½ NW¼; N½, W½ SW¼ Section 6; W½, SW¼ SE¼ Section 7; SE¼ NE¼, NE¼ SE¼ Section 9; Section 10 except NE¼; Sections 11–16; W½ SW¼, SE¼ SW¼, S½ SE¼, NE¼ SE¼, NE¼ Section 17; NW¼, E½ Section 18; S½ NW¼, S½, E½ NE¼ Section 19; N½, SE¼ Section 20; Sections 21–24; Section 27; Section 29 except W½ NW¼; S½ Section 30; W½ Section 31; NW¼, NW¼ NE¼, Section 32; Section 36.

T.13N, R.08W. Willamette Meridian: S½ Section 1; S½ SE¼ Section 2; N½ NW¼, SE¼ SW¼, E½ Section 12.

T.14N, R.06W. Willamette Meridian: SW¼ NW¼, W½ SW¼ Section 31.

T.14N, R.07W. Willamette Meridian: SE¼ SE¼ Section 34; SW¼ SW¼, SE¼ SE¼ Section 35; Section 36.



Map and description of WA–06–a taken from United States Fish and Wildlife Service 1:100,000 map; Port Angeles, Mt Olympus and Seattle, Washington; 1995.

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.26N., R.02W. Willamette Meridian: W½ SW¼, NE¼ SE¼, NE¼ Section 2; Section 3 except E½ NE¼; NW¼, E½ Section 4; W½, W½ SE¼, N½ NE¼ Section 5; Sections 6–7; W½, S½ SE¼ Section 8; S½ S½, NE¼ NE¼ Section 9; Section 10 except SW¼ NW¼; Section 14 except E½ SE¼; N½ NW¼, S½ SW¼, NE¼ SE¼, E½ NE¼, NW¼ NE¼ Section 15; Section 16–21; W½, SW¼ SE¼ Section 22; Section 27 except NE¼ NE¼.

T.26N., R.03W. Willamette Meridian: Sections 1–3; E½, E½ W½ Section 10; Sections 11–13; Section 14 except the SW¼ SW¼; S½ NW¼, NE¼ NW¼, SW¼, SW¼ SE¼, NE¼ Section 15; S½ Section 16; SE¼ SE¼ Section 17; S½ N½, N½ S½ Section 19; S½ NW¼, NE¼ NW¼, N½ SW¼, NE¼ Section 20; NE¼ Section 21; N½ NW¼, N½ SE¼, NE¼ Section 22; Section 23 except SW¼ SW¼, NE¼ SE¼; Section 24 except N½ SW¼.

T.26N., R.04W. Willamette Meridian: E½ NW¼, NE¼ SW¼, NE¼ Section 24.

T.27N., R.02W. Willamette Meridian: SW¼ SW¼ Section 5; Section 6 except NE¼ NE¼; Section 7; W½ W½ Section 8; W½, W½ SE¼ Section 17; Sections 18–19; Section 20 except the NE¼ NE¼; S½ NW¼, SW¼ Section 28; Sections 29–33; W½, N½ NE¼ Section 34; N½ NW¼, E½ Section 35.

T.27N., R.03W. Willamette Meridian: Sections 1–2; N½ SE¼, SE¼ SE¼, NE¼ Section 3; Section 11–13; Section 14 except SW¼ NW¼; SE¼ Section 15; E½, SE¼ SW¼ Section 22; Sections 23–26; Section 27 except NW¼ NW¼; S½ Section 28; E½ NW¼, NE¼ Section 33; N½ NW¼, SE¼ NW¼, S½ SW¼, NE¼ SW¼, E½ Section 34; Sections 35–36.

T.28N., R.02W. Willamette Meridian: N½ N½, SW¼ NE¼ Section 5; SW¼ SW¼ Section 7; S½ SW¼ Section 8; N½ NW¼, NW¼ SE¼, S½ SE¼ Section 17; NW¼, S½ NE¼ Section 18; NW¼, S½ SW¼ Section 20; SW¼ Section 28; NW¼, W½ NE¼ Section 29; SE¼ SW¼, S½ SE¼ Section 30; S½ NW¼, SW¼, W½ SE¼, N½ NE¼ Section 31.

T.28N., R.03W. Willamette Meridian: N½, W½ SE¼, NE¼ SE¼ Section 1; W½, SW¼ SE¼, NE¼ Section 2; Sections 3–10; W½, NW¼ SE¼, S½ SE¼ Section 11; S½ SW¼, NE¼ SW¼, SE¼, SE¼ NE¼ Section 12; Sections 13–23; N½, NW¼ SW¼, NE¼ SE¼ Section 24; N½ SW¼, W½ NW¼ Section 25; Sections 26–29; N½, N½ SW¼, SW¼ SW¼, N½ SE¼ Section 30; NE¼ NW¼, E½ Section 32; Section 33 except S½ SW¼, SW¼ SE¼; Section 34; Section 35 except NE¼ SE¼, SE¼ NE¼; SE¼ Section 36.

T.28N., R.04W. Willamette Meridian: NE¼ NE¼ Section 1; SE¼ SE¼, SE¼ NE¼ Section 12; S½ SW¼, NE¼ SW¼, SE¼, SW¼ NE¼, E½ NE¼ Section 13; E½ SE¼, SE¼ NE¼ Section 23; Sections 24–25; SE¼ SW¼, S½ SE¼, NE¼ SE¼, E½ NE¼ Section 26; E½ W½, E½ Section 35; NW¼, N½ SW¼, SW¼ SW¼, N½ NE¼, SW¼ NE¼ Section 36.

T.29N., R.02W. Willamette Meridian: W½ NW¼, SE¼ NW¼, S½, S½ NE¼ Section 30; SW¼ NW¼, W½ SW¼, NE¼ SE¼ Section 31; W½ NW¼, SE¼ NW¼, SW¼, W½ SE¼ Section 32.

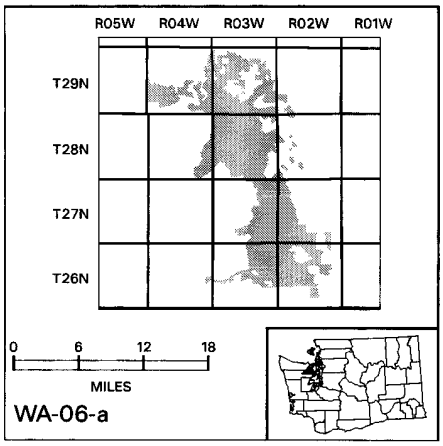
T.29N., R.03W. Willamette Meridian: Section 19; NW¼, W½ SW¼ Section 20; SE¼ SE¼ Section 22; SE¼ NW¼, S½, SW¼ NE¼, E½ NE¼ Section 23; Section 24 except NE¼ SE¼, SE¼ NE¼; Section 25; N½, N½ SW¼, E½ SE¼ Section 26; S½, SW¼ NE¼, E½ NE¼ Section 27; SE¼ NW¼, SW¼ Section 28; Section 29 except NE¼ NE¼; Sections 30–34; S½, SW¼ NW¼, NE¼ NE¼ Section 35; Section 36.

T.29N., R.04W. Willamette Meridian: S½, S½ NW¼, NW¼ NW¼, SW¼ NE¼ Section 19; S½ Section 20; S½ Section 21; E½ W½, SW¼ SW¼, W½ SE¼, NE¼ Section 22; E½ SW¼, NW¼ SW¼, E½, NW¼ NW¼ Section 23; Section 24; Section 25 except NW¼ NW¼; W½ NW¼, NE¼ SW¼, E½ Section 26; N½, N½ SE¼ Section 27; Sections 28–30; N½ Section 32; N½ NW¼, SW¼ NW¼, NW¼ NE¼ Section 33; E½ NE¼, SW¼ NE¼, NE¼ SW¼ Section 34; W½ NW¼, SE¼ NW¼, N½ SW¼, NE¼ SW¼, N½ SE¼, S½ NE¼, NE¼ NE¼ Section 35; Section 36 except SW¼ SW¼.

Critical Habitat includes only State or County lands described within the following areas:

T.29N., R.03W. Willamette Meridian: W½ SW¼, SE¼ SW¼, SW¼ SE¼ Section 4; S½ SW¼, SE¼, SW¼ NE¼ Section 5; SW¼ NW¼, W½ SW¼, S½ SE¼ Section 6; Section 7 except E½ NW¼; Sections 8–9; W½ NW¼, SE¼ NW¼, SW¼, NW¼ SE¼, NE¼ Section 10; NW¼, E½ SW¼, SE¼, SE¼ NE¼ Section 11; NW¼, E½ SW¼ Section 13; Section 14 except W½ NW¼, SE¼ NW¼; N½ NW¼ Section 15; W½, NW¼ NE¼, NW¼ SE¼ Section 16; Section 17; NW¼ NW¼, E½ NW¼, NE¼ SW¼, E½ Section 18; S½ NW¼, NE¼ SE¼, NE¼ Section 21; NE¼ NE¼ Section 28.

T.29N, R.04W. Willamette Meridian: E½ SE¼, SW¼ SE¼ Section 1; E½, SE¼ SW¼ Section 12; E½ NW¼, NE¼ SW¼, N½ SE¼, SW¼ SE¼, NE¼ Section 18.



Map and description of WA–06–b taken from United States Fish and Wildlife Service 1:100,000 map; Mt Olympus and Shelton, Washington; 1995.

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.23N., R.04W. Willamette Meridian: NW¼, N½ NE¼ Section 3; Section 4 except SE¼ SE¼; Sections 5–6; N½ Section 7; N½ Section 8; NW¼ Section 9.

T.23N., R.05W. Willamette Meridian: E½ SW¼, SE¼ Section 3; NE¼ NW¼, NE¼ SE¼, NE¼ Section 10; S½ N½, N½ S½ Section 11; S½ NW¼, NE¼ NW¼, NE¼ Section 12.

T.24N., R.03W. Willamette Meridian: Sections 5–6; NW¼, NW¼ NE¼ Section 7.

T.24N., R.04W. Willamette Meridian: Sections 1–5; E½ E½ Section 6; Section 7 except NW¼ NW¼, SE¼ SE¼; Sections 8–16; SE¼ SW¼, E½ Section 17; N½ NW¼ Section 18; N½ SE¼, SE¼ SE¼, S½ NE¼, NE¼ NE¼ Section 19; Sections 20–24; Section 25 except SE¼ SE¼; Sections 26–29; SE¼, S½ NE¼, NE¼ NE¼ Section 30; Section 31 except NW¼ NW¼; Sections 32–35; N½ NW¼ Section 36.

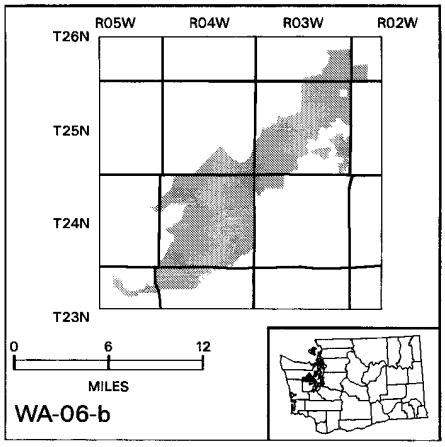
T.24N., R.05W. Willamette Meridian: SE¼ SE¼ Section 12; N½ NW¼, NE¼ Section 13.

T.25N., R.03W. Willamette Meridian: Section 1 except E½ SW¼, W½ SE¼; Sections 2–3; E½ E½ Section 4; E½ E½ Section 9; Sections 10–12; N½, N½ SE¼, SE¼ SE¼ Section 13; Sections 14–15; Section 16 except NW¼ NW¼; SE¼ NW¼, S½, S½ NE¼ Section 17; SE¼ SE¼ Section 18; E½ NW¼, S½ SW¼, NE¼ SW¼, E½ Section 19; Sections 20–21; Section 22 except S½ SE¼; SE¼ Section 23; S½ NW¼, S½ Section 24; Section 25; S½ NW¼, SW¼, E½ SE¼, SW¼ NE¼ Section 26; NW¼, N½ S½, S½ NE¼ Section 27; Sections 28–32; Section 33 except E½ E½, SW¼ SE¼; SE¼ NW¼, E½ SW¼; NW¼ SE¼, NE¼ Section 36.

T.25N., R.04W. Willamette Meridian: E½ E½, SW¼ SE¼ Section 25; SW¼ Section 26; S½, S½ NE¼ Section 27; S½, NE¼ Section 33; Sections 34–36.

T.26N., R.02W. Willamette Meridian: Section 31.

T.26N., R.03W. Willamette Meridian: Section 25; E½ Section 26; S½ Section 34; Section 35 except W½ NW¼; Section 36.



Map and description of WA–07–a taken from United States Fish and Wildlife Service 1:100,000 map; Bellingham and Mt. Baker, Washington; 1995.

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.37N., R.06E. Willamette Meridian: NE¼ Section 1.

T.37N., R.07E. Willamette Meridian: W½, W½ E½ Section 3; Sections 4–5; N½, N½ SE¼ Section 6; NE¼ NW¼, N½ NE¼ Section 8; NE¼ NW¼, NW¼ NE¼ Section 10.

T.38N., R.06E. Willamette Meridian: Section 1; Sections 12–13; E½, E½ W½ Section 36.

T.38N., R.07E. Willamette Meridian: NW¼, N½ SW¼, SW¼ SW¼ Section 3; Sections 4–8; Section 9 except S½ SE¼; W½ NW¼ Section 10; NW¼ Section 16; Section 17 except E½ SE¼; Sections 18–19; NW¼, W½ NE¼, NW¼ SW¼ Section 20; SW¼, W½ SE¼ Section 27; E½ SE¼ Section 28; SW¼ SW¼ Section 29; Section 30 except NE¼ SE¼; Sections 31–33; W½ Section 34.

T.39N., R.06E. Willamette Meridian: Section 25; Section 36.

T.39N., R.07E. Willamette Meridian: Sections 1–4; Section 5 except SW¼ SW¼, SE¼ SE¼; E½ Section 8; Sections 9–12; Sections 14–15; N½, SE¼ Section 16; NE¼ Section 17; Section 21 except NW¼; W½ Section 22; NE¼ NW¼, N½ NE¼ Section 23; W½, SW¼ NE¼ Section 27; Section 28; W½ SW¼ Section 30; Sections 31–33; W½ Section 34.

T.39N., R.08E. Willamette Meridian: Sections 1–12; W½ Section 15; Sections 16–17; SE¼ SW¼, SE¼, S½ NE¼, NE¼ NE¼ Section 19; Sections 20–21; W½ Section 22.

T.39N., R.09E. Willamette Meridian: N½ NW¼, SW¼ NW¼, NW¼ SW¼, S½ SW¼, N½ NE¼ Section 3; Sections 4–8; Section 9 except SW¼ SE¼; Section 10 except E½ E½; SW¼ NW¼, NW¼ SW¼ Section 14; NE¼ NW¼, NE¼ SE¼, NE¼ Section 15; W½ Section 16; Section 17; NE¼, N½ SE¼, SE¼ SE¼ Section 18; NE¼ NW¼, NE¼ Section 20; NW¼, N½ SW¼, W½ NE¼ Section 21.

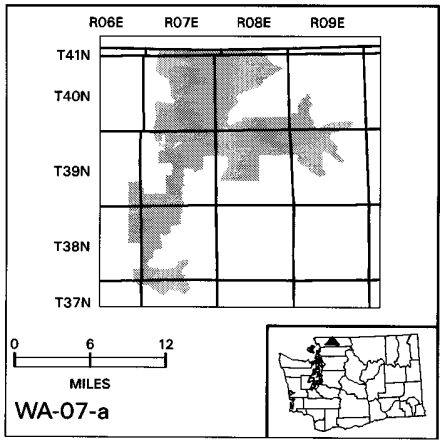
T.40N., R.07E. Willamette Meridian: Sections 1–4; E½, E½ W½ Section 5; E½ NW¼, N½ SE¼, NE¼ Section 8; Section 9 except SW¼ SW¼; Sections 10–15; E½ NW¼, E½ Section 16; SE¼, E½ SW¼ Section 20; SW¼, E½ Section 21; Sections 22–28; E½ W½, E½ Section 29; Sections 32–36.

T.40N., R.08E. Willamette Meridian: Section 2 except NE¼, NE¼ NW¼, NE¼ SE¼; Sections 3–10; Section 11 except S½ SE¼; NW¼ Section 12; NW¼, N½ SW¼, NW¼ SE¼, NE¼ Section 15; Sections 16–20; NW¼, W½ SW¼, NW¼ NE¼ Section 29; Sections 30–31; S½, W½ NW¼, S½ NE¼ Section 32; Section 33 except NW¼ NW¼; Sections 34–36.

T.40N., R.09E. Willamette Meridian: SE¼ SE¼ Section 19; S½ NW¼, SW¼, W½ E½ Section 20; Section 29 except E½ SE¼, SE¼ NE¼; S½ SW¼, NE¼ SW¼, S½ SE¼, NE¼ SE¼, E½ NE¼ Section 30; Sections 31–32; S½ S½, N½ SE¼ Section 33; Section 34 except N½ N½; S½ N½, SW¼, N½ SE¼, SW¼ SE¼ Section 35.

T.41N., R.07E. Willamette Meridian: Sections 32–36.

T.41N., R.08E. Willamette Meridian: Sections 31–34, W½ SW¼ Section 35.



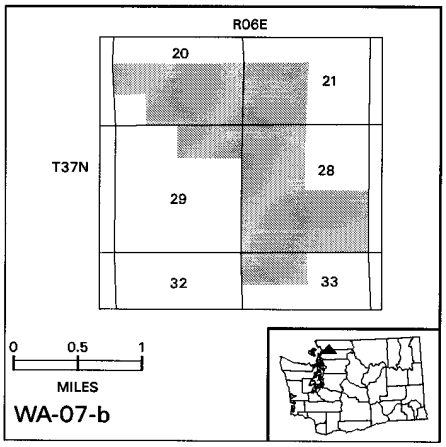
Map and description of WA–07–b taken from United States Fish and Wildlife Service 1:100,000 map; Bellingham, Washington; 1995.

Critical Habitat includes only State or County lands described within the following areas:

T.37N., R.06E. Willamette Meridian: SW¼ SW¼ Section 20; NE¼ NE¼ Section 28.

Critical Habitat includes only Private lands described within the following areas:

T.37N., R.06E. Willamette Meridian: N½ SW¼, SE¼ SW¼, SE¼ Section 20; SW¼ Section 21; Section 28 except NE¼; N½ NE¼ Section 29; N½ NW¼ Section 33.



Map and description of WA–07–c taken from United States Fish and Wildlife Service 1:100,000 map; Mt Baker and Sauk River, Washington; 1995.

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.35N., R.09E. Willamette Meridian: Sections 1–2; E½ W½, E½ Section 11; Section 12; NE¼ NE¼ Section 13; NE¼ NW¼, N½ NE¼ Section 14.

T.35N., R.10E. Willamette Meridian: W½ NW¼, SE¼ NW¼, SW¼, S½ SE¼ Section 6; Section 7; Section 8 except N½ NE¼; W½ SW¼ Section 9; N½ NW¼ Section 17; N½ NE¼, NW¼ Section 18.

T.36N., R.07E. Willamette Meridian: Section 1; E½ SE¼, NE¼ Section 2; Section 3; E½ E½ Section 4.

T.36N., R.08E. Willamette Meridian: Section 5; W½ W½ Section 6.

T.36N., R.09E. Willamette Meridian: Sections 1–4; E½ Section 5; Section 8 except S½ SE1/4; W½ NW¼, NW¼ SW¼, NE¼ NE¼ Section 9; N½ NW¼, N½ SE¼, SE¼ SE¼, NW¼ NE¼ Section 10; Section 11 except S½ NW¼, NE¼ NW¼; Sections 12–15; Sections 21–24; S½ NW¼ Section 26; Section 27 except SW¼ SW¼; Section 28 except SE¼ SE¼; S½, S½ NE¼, SE¼ NW¼ Section 33.

T.36N., R.10E. Willamette Meridian: SW¼ SW¼ Section 5; S½ S½ Section 6; Section 7; W½ W½ Section 8; W½, W½ SE¼ Section 17; Sections 18–20; SW¼ Section 21; W½ Section 28; Sections 29–30; N½, SW¼ Section 31; N½ N½ Section 32; N½ NW¼ Section 33.

T.37N., R.07E. Willamette Meridian: S½ SE¼ Section 9; S½, S½ NE¼ Section 10; S½, NE¼ Section 11; SW¼ NW¼, NW¼ SW¼ Section 12; W½ NW¼, W½ SW¼, SE¼ SW¼, S½ SE¼ Section 13; Sections 14–15; Section 16 except NW¼ NW¼; E½ SE¼ Section 17; NE¼ NE¼ Section 20; Sections 21–27; Section 28 except E½ E½, SE¼ SW¼; E½, NE¼ NW¼ Section 33; Sections 34–36.

T.37N., R.08E. Willamette Meridian: Sections 1–3; N½ NW¼, SE¼ NW¼, N½ SE¼ SE¼ SE¼, NE¼ Section 4; NE¼ SW¼, SE¼, S½ NE¼ Section 7; S½ Section 8; Section 9 except N½ NW¼; Sections 10–16; N½, N½ SE¼ Section 17; SW¼ SW¼, NE¼ NE¼ Section 18; Section 19; Section 20 except NE¼ NE¼; Section 21 except NW¼ NW¼; Sections 22–36.

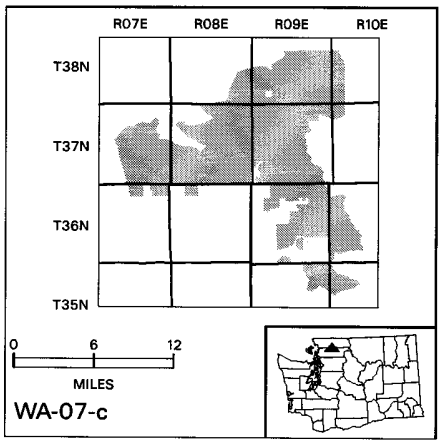
T.37N., R.09E. Willamette Meridian: Sections 1–10; N½ N½, SW¼ NW¼, W½ SW¼, SE¼ SW¼ Section 11; NE¼ NE¼ Section 12; N½ NW¼, W½ SW¼ Section 14; Sections 15–22; W½ W½, SE¼ SW¼ Section 23; SW¼ SW¼ Section 25; W½, SE¼ Section 26; Sections 27–29; Section 30 except SW¼ SW¼; Section 31 except NW¼ NW¼, S½ NW¼, SW¼ SW¼; Sections 32–35; W½ Section 36.

T.37N., R.10E. Willamette Meridian: Section 6; N½ NW¼, NW¼ NE¼ Section 7.

T.38N., R.08E. Willamette Meridian: E½ SE¼ Section 23; S½, S½ NE¼ Section 24; Section 25; E½, E½ SW¼ Section 26; S½ SW¼ Section 33; S½ S½ Section 34; Section 35 except W½ NW¼; Section 36.

T.38N., R.09E. Willamette Meridian: Sections 13–15; Section 16 except W½ NW¼; S½ SE¼ Section 17; Section 19 except N½ N½; Section 20 except N½ NW¼; Sections 21–31; Section 32 except NW¼; Sections 33–36.

T.38N., R.10E. Willamette Meridian: Section 18 except N½ NE¼; Section 19; Sections 30–31.



Map and description of WA–07–d taken from United States Fish and Wildlife Service 1:100,000 map; Cape Flattery, Mt Baker and Sauk River, Washington; 1995.

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.34N, R.12E. Willamette Meridian: Sections 1–3; NE¼ NW¼, N½ NE¼ Section 10; N½ N½ Section 11; N½ NW¼, NW¼ NE¼ Section 12.

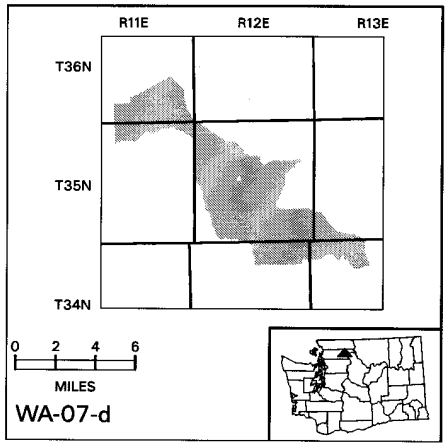
T.34N, R.13E. Willamette Meridian: W½ Section 4; Sections 5–6; N½ NW¼, N½ NE¼, SE¼ NE¼, NE¼ SE¼ Section 8; NW¼, W½ NE¼ Section 9.

T.35N, R.11E. Willamette Meridian: N½, N½ SE¼ Section 1; N½, NW¼ SW¼ Section 2; N½, N½ SW¼, SW¼ SW¼ Section 3; Section 4.

T.35N, R.12E. Willamette Meridian: S½ SW¼, NW¼ SW¼ Section 5; W½, SE¼, S½ NE¼ Section 6; Sections 7–8; Section 9 except NE¼, NE¼ SE¼, NE¼ NW¼; SW¼ SW¼ Section 10; N½ NW¼, SW¼ NW¼ Section 13; Section 14 except S½ SE¼; Sections 15–18; Section 19 except SW¼ NW¼, W½ SW¼; Sections 20–22; NW¼, N½ SW¼, SW¼ SW¼ Section 23; S½, S½ N½ Section 25; S½, S½ N½, NW¼ NW¼ Section 26; Sections 27–29; NE¼, E½ SE¼ Section 30; NE¼ NW¼ Section 31; Sections 32–36.

T.35N, R.13E. Willamette Meridian: SW¼, SW¼ SE¼ Section 30; Section 31 except NE¼ NE¼; SW¼, S½ SE¼ Section 32; S½ SW¼ Section 33.

T.36N, R.11E. Willamette Meridian: SE¼ SW¼, SE¼ Section 23; SW¼ SW¼ Section 24; W½ Section 25; Section 26; Section 27 except N½ NW¼, NW¼ NE¼; E½ SE¼ Section 28; Sections 33–35; Section 36 except E½ NE¼.



Map and description of WA–08–a taken from United States Fish and Wildlife Service 1:100,000 map; Bellingham, Mt. Baker and Sauk River, Washington; 1995.

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.32N., R.08E. Willamette Meridian: N½ Section 1; N½ Section 3; NW¼ NW¼, S½ NW¼, NE¼ Section 4; N½ Section 5; N½ Section 6.

T.33N., R.08E. Willamette Meridian: Sections 1–30; Section 31 except S½ SE¼; Section 32; Section 33 except S½ SE¼; Section 34 except SE¼ SW¼; Section 35; Section 36 except N½ SE¼, SE¼ NE¼.

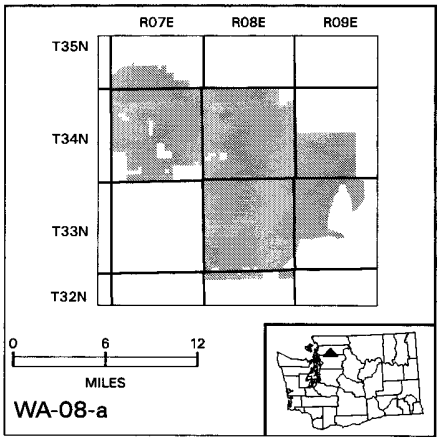
T.33N., R.09E. Willamette Meridian: W½, W½ E½ Section 2; Section 3 except S½ SW¼; Sections 4–8; Section 9 except E½ SE¼, SE¼ NE¼; E½ E½, NW¼ NE¼ Section 10; W½, NW¼ SE¼, W½ NE¼ Section 11; NW¼ NW¼ Section 14; NE¼ NE¼ Section 15; W½ Section 16; Sections 17–20; Section 21 except NE¼; S½ SW¼ Section 22; N½ NW¼ Section 29; NW¼, W½ SW¼, N½ NE¼ Section 30.

T.34N., R.07E. Willamette Meridian: Sections 1–6; Section 7 except N½ SE¼, SE¼ SE¼; Section 8 except SW¼ SW¼; Sections 9–15; Section 16 except W½ E½; Sections 17–21; Section 22 except SW¼; Sections 23–26; S½ Section 27; Sections 28–29; N½ NW¼, S½, NW¼ NE¼ Section 32; Section 33; Section 34 except SW¼ NE¼.

T.34N., R.08E. Willamette Meridian: Sections 2–11; Section 12 except N½ NW1/4; Sections 13–28; Section 29 except S½ NW¼, N½ SW¼; Section 30 except SE¼ NW¼, N½ SW¼, SW¼ NE¼; Sections 31–36.

T.34N., R.09E. Willamette Meridian: Sections 19–22; Sections 27–34.

T.35N., R.07E. Willamette Meridian: S½ SW¼, NE¼ SW¼ Section 27; S½ Section 28; Section 29 except NW¼ NW¼, NE¼; SE¼ SW¼, SE¼ Section 30; Sections 31–34; S½ Section 35.



Map and description of WA–08–b taken from United States Fish and Wildlife Service 1:100,000 map; Sauk River, Washington; 1995.

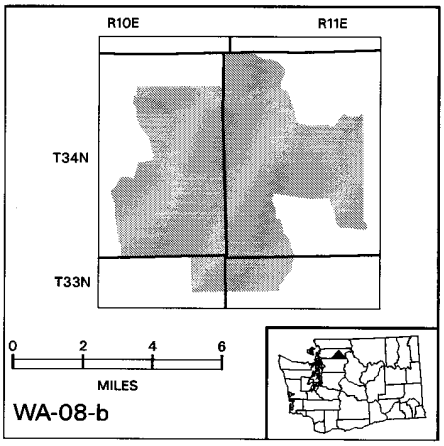
Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.33N., R.10E. Willamette Meridian: Section 1.

T.33N., R.11E. Willamette Meridian: Section 5 except E½ SE¼; Section 6.

T.34N., R.10E. Willamette Meridian: SE¼ NW¼, NE¼ SW¼, E½ Section 10; Sections 11–14; NW¼ NE¼, E½ E½ Section 15; E½ SE¼ Section 21; Section 22 except NW¼, NW¼ NE¼; Sections 23–27; NW¼ NE¼, E½ E½ Section 28; NE¼ SE¼, E½ NE¼ Section 33; Sections 34–36.

T.34N., R.11E. Willamette Meridian: Section 5 except N½ NE¼, NE¼ NW¼; Sections 6–8; W½ SW¼ Section 9; S½ SE¼, SE¼ SW¼ Section 10; SW¼ SW¼ Section 11; W½ W½ Section 14; Section 15 except NW¼ NW¼; Section 16 except N½ NE¼; Sections 17–22; W½ W½ Section 23; W½ W½ Sections 26–27 except W½ SW¼; N½ Section 28; W½, N½ NE¼, SE¼ NE¼, W½ SE¼ Section 29; Sections 30–31; Section 32 except NE¼ NE¼; NE¼ NW¼, N½ NE¼ Section 34; NW¼ NW¼ Section 35.

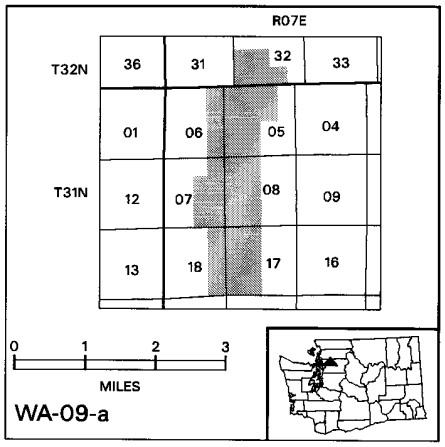


Map and description of WA–09–a taken from United States Fish and Wildlife Service 1:100,000 map; Sauk River, Washington; 1995.

Critical Habitat includes only Federal lands described within the following areas:

T.31N., R.07E. Willamette Meridian: W½, W½ NE¼ Section 5; E½ E½ Section 6; SE¼, S½ NE¼, NE¼ NE¼ Section 7; W½ Section 8; W½ Section 17; E½ E½ Section 18.

T.32N., R.07E. Willamette Meridian: SW¼, SW¼ SE¼ Section 32.



Map and description of WA–09–b taken from United States Fish and Wildlife Service 1:100,000 map; Sauk River, Washington; 1995.

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.29N., R.09E. Willamette Meridian: Section 1; N½ Section 2; Sections 3–6; N½ Section 7; N½ Section 8; N½ Section 9; NW¼ Section 10.

T.29N., R.10E. Willamette Meridian: Sections 1–3; W½ Section 6; Sections 11–13.

T.29N., R.11E. Willamette Meridian: W½ NW¼ Section 2; NE¼, NE¼ NW¼ Section 3; NW¼ NW¼ Section 5; Sections 6–7; W½ NW¼, SW¼, S½ SE¼, NW¼ SE¼ Section 17; Section 18; N½ NW¼, SE¼ NW¼, NE¼, N½ SE¼ Section 19; N½, N½ SW¼, NW¼ SE¼ Section 20.

T.30N., R.08E. Willamette Meridian: Sections 1–3; N½ Section 4; N½ Section 5; N½, SE¼ Section 11; Sections 12–13; E½ Section 14; SW¼ Section 15; Sections 16–17; Section 18 except S½ NW¼, N½ SW¼; Sections 19–26; N½ Section 27; N½ Section 28; N½, SE¼ Section 35.

T.30N., R.09E. Willamette Meridian: NW¼, SE¼, N½ NE¼, SW¼ NE¼ Section 1; E½ NE¼ Section 2; W½, SW¼ SE¼, N½ NE¼ Section 6; Section 7; S½ NW¼, S½, SW¼ NE¼ Section 8; S½ SE¼ Section 9; S½ SW¼ Section 10; E½ NW¼, NE¼ Section 12; S½ NW¼, SW¼, W½ SE¼ Section 14; Section 15; Section 16 except NW¼ NW¼; SE¼, S½ NE¼ Section 17; W½ Section 18; Section 19 except W½ NE¼; Section 20 except NE¼ NW¼, SW¼; Sections 21–22; Section 23 except NE¼ NE¼; S½ NW¼, S½, SE¼ NE¼ Section 24; Sections 25–36.

T.30N., R.10E. Willamette Meridian: Sections 1–6; N½, NE¼ SE¼ Section 7; Sections 8–17; E½ Section 18; Sections 19–

28; N½, N½ SE¼ Section 29; Section 30 except SE¼ SE¼; Section 31 except N½ NE¼; SW¼ NW¼, NW¼ SW¼ Section 32; NE¼, E½ NW¼, N½ SE¼, SE¼ SE¼ Section 33; Sections 34–36.

T.30N., R.11E. Willamette Meridian: SW¼ SE¼, S½ NW¼, SW¼ Section 5; Sections 6–8; SW¼ NW¼, NE¼ SW¼, SE¼ Section 9; Section 10 except N½ NW¼, SW¼ NW¼, NW¼ NE¼; Section 15 except SE¼ SE¼; Sections 16–22; NW¼ NW¼ Section 27; Section 28 except E½ SE¼, SE¼ NE¼; Sections 29–31; Section 32 except SE¼; Section 33 except SW¼ SW¼; Section 34 except NE¼, N½ NW¼, SE¼ NW¼, NE¼ SE¼.

T.31N., R.07E. Willamette Meridian: S½ SW¼, SW¼ SE¼ Section 1; Sections 12–13.

T.31N., R.08E. Willamette Meridian: W½ SW¼ Section 3; S½ Section 4; S½ Section 5; SE¼ SE¼ Section 6; Section 7; Section 8 except S½ SE¼; N½, NW¼ SW¼ Section 9; W½ NW¼ Section 10; W½, W½ SE¼ Section 17; Sections 18–21; Section 22 except NE¼ NE¼; S½ NW¼, SW¼, W½ SE¼ Section 23; Section 25 except N½ NE¼, SE¼ NE¼; Sections 26–36.

T.31N., R.09E. Willamette Meridian: Section 1; E½ E½, NW¼ NE¼ Section 2; E½, E½ SW¼ Section 3; E½ NW¼, NE¼ SW¼, W½ NE¼ Section 10; NE¼ NW¼, SE¼ SW¼, E½ Section 12; Section 13 except W½ NW¼; Section 23 except N½ NW¼; Sections 24–26; S½ Section 27; N½ SE¼, SE¼ SE¼, S½ NE¼ Section 28; W½, SW¼ SE¼ Section 31; N½ NW¼, E½ Section 35; Section 36.

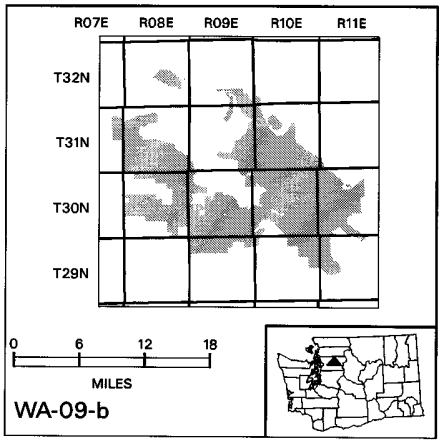
T.31N., R.10E. Willamette Meridian: Section 6 except E½ E½; Sections 7–8; W½ NW¼, SW¼, W½ SE¼ Section 9; SE¼ SW¼, SW¼ SE¼ Section 10; Section 15 except E½ E½; NW¼, S½ SE¼, NE¼ SE¼ Section 16; Sections 17–21; Section 22 except E½ NE½; SW¼ SW¼ Section 23; SW¼, S½ SE¼, SW¼ NW¼ Section 25; Section 26 except NE¼ NE¼; Sections 27–36.

T.31N., R.11E. Willamette Meridian: W½ NW¼, SW¼ Section 31.

T.32N., R.08E. Willamette Meridian: SW¼ Section 14; S½ Section 15; E½ NE¼ Section 21; N½, N½ SW¼, SE¼ Section 22; Section 23 except NE¼ NE¼; W½ SW¼, NW¼ SE¼, SW¼ NE¼ Section 24; W½ NW¼ Section 25; N½ N½ Section 26.

T.32N., R.09E. Willamette Meridian: S½ Section 26; N½ SW¼, SE¼ SW¼, SE¼ Section 27; N½ SE¼ Section 28; E½ Section 34; E½, N½ NW¼, SE¼ NW¼, NE¼ SW¼ Section 35; Section 36 except NE¼, NE¼ SE¼.

T.32N., R.10E. Willamette Meridian: Section 31 except E½ E½, NW¼ NE¼, NE¼ NW¼.



Map and description of WA–09–c taken from United States Fish and Wildlife Service 1:100,000 map; Sauk River and Skykomish River, Washington; 1995.

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.27N., R.09E. Willamette Meridian: E½ NW¼, NE¼ Section 1.

T.27N., R.10E. Willamette Meridian: N½ N½ Section 6.

T.28N., R.09E. Willamette Meridian: S½ S½ Section 23; S½ SW¼ Section 24; Section 25; Section 26 except N½, SW¼ SW¼; SE¼ SW¼, S½ SE¼, NE¼ SE¼, NE¼ NE¼ Section 36.

T.28N., R.10E. Willamette Meridian: S½ Section 19; Section 20 except NW¼ NW¼; SW¼ NW¼, W½ SW¼ Section 21; SE¼ SE¼ Section 23; S½ SW¼ Section 24; NW¼, N½ SW¼, W½ NE¼ Section 25; S½ NW¼, SW¼, W½ SE¼, NE¼ SE¼, NE¼ Section 26; S½ Section 27; NW¼, NW¼ NE¼ Section 29; N½, SW¼ Section 30; Section 31 except SW¼ NW¼; Section 32 except E½ E½.

T.29N., R.08E. Willamette Meridian: SE¼ SW¼, SW¼ SE¼ Section 22; NE¼ SE¼ Section 25; NW¼, N½ NE¼ Section 27; E½ NE¼ Section 28.

T.29N., R.09E. Willamette Meridian: Section 30 except N½ N½.

Critical Habitat includes only State or County lands described within the following areas:

T.27N., R.09E. Willamette Meridian: NW¼ NW¼, SW¼ Section 2; N½, NE¼ SW¼, SE¼ Section 3; NE¼ NE¼ Section 4; N½ NE¼, SE¼ NE¼ Section 10; NW¼, S½ SW¼, SE¼, S½ NE¼ Section 11; Section 12; Section 13 except SE¼ SE¼; N½ NW¼, N½ SE¼, NE¼ Section 14.

T.27N., R.10E. Willamette Meridian: Section 7; S½ Section 8; Section 9 except N½ NW¼; NW¼, N½ SW¼, SW¼ SW¼ Section 10; N½ NW¼ Section 16; N½, NW¼ SW¼ Section 17; Section 18 except W½ SW¼, SE¼ SE¼.

T.28N., R.08E. Willamette Meridian: Sections 1–2; Section 3 except N½ NW¼; Sections 4–5; W½ SW¼, SE¼ SW¼ Section 6; Section 7; E½ SE¼, NE¼ Section 8; SE¼ SW¼, E½ E½, SW¼ SE¼, NW¼ NE¼ Section 9; Sections 10–12; N½ N½, NW¼ SE¼, S½ NE¼ Section 13; N½ Section 14; Section 15; S½ S½, E½ NE¼, NE¼ SE¼ Section 16; Section 17 except NW¼ SW¼, NW¼; Section 18 except SW¼; W½ Section 20; N½ NW¼ Section 21; NE¼ NW¼, NE¼ Section 36.

T.28N., R.09E. Willamette Meridian: Sections 1–4; S½ Section 5; N½, SW¼ Section 6; W½, W½ E½ Section 7; NE¼ Section 8; Sections 9–11; Section 12 except S½ SE¼; S½ S½, NE¼ SE¼ Section 13; Sections 14–16; N1/2 NW¼, SE¼ NW¼, E½ Section 17; SW¼, W½ SE¼, SE¼ SE¼ Section 20; Section 21; Section 27; Section 28 except E½ SW¼; Section 29 except NW¼; N½ NW¼, N½ SE¼, NE¼ Section 31; N½ N½, S½ NW¼ Section 32; N½ NW¼, S½ Section 33; Section 34 except NE¼ SE¼; SW¼ Section 35.

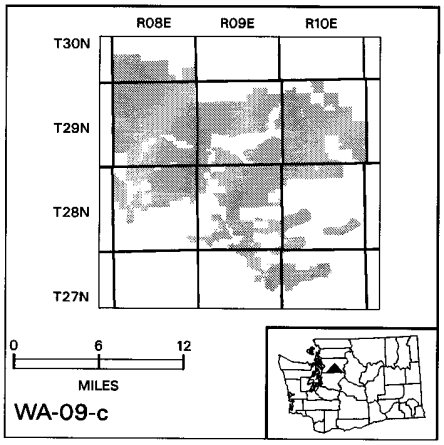
T.28N., R.10E. Willamette Meridian: W½ Section 2; Section 3; Section 4 except N½ NE¼, SW¼ NE¼; Sections 5–6; NW¼ Section 7.

T.29N., R.08E. Willamette Meridian: Sections 1–21; Section 22 except SE¼ SW¼, S½ SE¼; Section 23 except SW¼ SW¼; Section 24; N½ NW¼, SE¼ NW¼, NE¼, S½ S½ Section 25; SW¼ NW¼, SW¼, S½ SE¼, N½ NE¼ Section 26; Section 27 except NW¼, N½ NE¼; N½ NW¼, SE¼ Section 28; Sections 29–30; Sections 32–34; Section 35 except S½ SW¼; Section 36.

T.29N., R.09E. Willamette Meridian: S½ Section 2; S½ Section 7; S½ Section 8; S½ Section 9; S½, NE¼ Section 10; Sections 11–12; W½ NW¼, SE¼ SW¼, SE¼, E½ NE¼ Section 13; Sections 14–19; Section 20 except S½ SW¼; Section 21; Section 22 except S½ S½; Section 23 except S½ S½; NE¼ Section 24; Section 25; Section 26 except NW¼, N½ NE¼; SE¼ SW¼, S½ SE¼ Section 27; S½ SW¼, SW¼ SE¼ Section 29; N½ N½ Section 30; W½, NW¼ SE¼, W½ NE¼, NE¼ NE¼ Section 31; Section 32 except W½ NW¼, NW¼ SW¼; Section 33 except NE¼ NW¼, N½ NE¼; Section 34 except SW¼ NW¼, SW¼ SE¼; Sections 35–36.

T.29N., R.10E. Willamette Meridian: Section 4 except W½ SW¼; SE¼ SW¼, S½ SE¼, NE¼ SE¼ Section 6; Sections 7–8; S½ SW¼, SW¼ SE¼ Section 9; Section 10 except SE¼ SW¼; Section 14; Section 15 except N½ NW¼, NW¼ NE¼; Sections 16–24; Section 25 except SE¼ SE¼; Section 26 except NW¼ SW¼; Sections 28–33; SW¼ NW¼, W½ SW¼, SE¼ SW¼, S½ SE¼ Section 34; Section 36.

T.30N., R.10E. Willamette Meridian: S½ Section 27; S½ Section 28; Sections 29–34; SW¼ Section 35; Section 36.



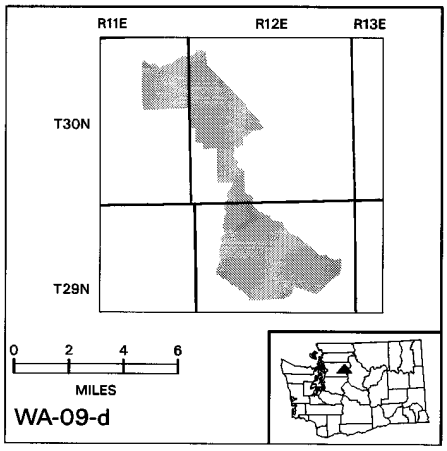
Map and description of WA–09–d taken from United States Fish and Wildlife Service 1:100,000 map; Sauk River, Washington; 1995.

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.29N., R.12E. Willamette Meridian: SW¼ Section 3; Section 4 except N½ NE¼; Section 5; Sections 8–10; SW¼, SW¼ SE¼ Section 11; Section 13 except E½, SE¼ SW¼; Sections 14–17; NE¼ SE¼ Section 18; NE¼ Section 20; N½, N½ N½ Section 21; N½, N½ SW¼ Section 22; N½ Section 23; NW¼ NW¼ Section 24.

T.30N., R.11E. Willamette Meridian: S½ SW¼, SE¼ Section 1; S½ S½ Section 2; Sections 11–12; N½ Section 13; N½ Section 14.

T.30N., R.12E. Willamette Meridian: S½ Section 6; Section 7; SW¼ NW¼, SW¼, SW¼ SE¼ Section 8; SW¼ NW¼, SW¼ Section 16; Sections 17–18; N½ NW¼, E½, SE¼ NW¼, NE¼ SW¼ Section 19; Section 20; NW¼, NW¼ SW¼, W½ NE¼ Section 21; Section 29 except E½ NE¼; N½ NW¼, E½ SW¼, E½ Section 32; W½ SW¼, SE¼ SW¼ Section 33.



Map and description of WA–09–e taken from United States Fish and Wildlife Service 1:100,000 map; Sauk River, Washington; 1995.

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.31N., R.11E. Willamette Meridian: N½ Section 1; N½ NW¼, SW¼ NW¼, SW¼, N½ NE¼ Section 2; Section 3; Section 4 except SE¼ SE¼; E½ NW¼, E½ Section 5; N½ NW¼, W½ NE¼ Section 9; E½ NW¼, E½ Section 10; W½, W½ SE¼ Section 11; W½, W½ NE¼, SE¼ Section 14; E½ SW¼, E½ Section 15; E½ NW¼, NE¼ Section 22; N½ N½ Section 23.

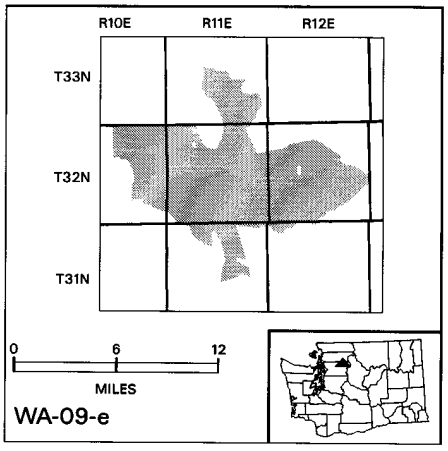
T.31N., R.12E. Willamette Meridian: N½ NE¼ Section 4; NW¼, W½ NE¼ Section 5; N½, N½ SE¼ Section 6.

T.32N., R.10E. Willamette Meridian: Sections 1–3; Sections 10–14; N½ N½, SE¼ NE¼ Section 15; Sections 23–25; N½, SE¼ Section 26; N½ NE¼ Section 36.

T.32N., R.11E. Willamette Meridian: NW¼ NW¼ Section 1; Section 2; E½ W½, E½ Section 3; Sections 5–8; W½ NW¼, S½ Section 9; Section 10 except NW¼ NW¼; Section 11; W½ NW¼, SE¼ SW¼, S½ SE¼ Section 12; Sections 13–30; N½, NE¼ SW¼, SE¼ Section 31; Section 32–36.

T.32N., R.12E. Willamette Meridian: S½ S½, NE¼ SE¼ Section 7; S½, S½ NE¼ Section 8; Section 9 except N½ N½; SW¼, S½ SE¼, NW¼ SE¼ Section 10; S½ SW¼ Section 13; W½, S½ SE¼ Section 14; Sections 15–16; Section 17 except SE¼ SE¼; Sections 18–19; Section 20 except NE¼ NE¼; Sections 21–23; Section 24 except NE¼ NE¼; NW¼, NW¼ SW¼, NW¼ NE¼ Section 25; Sections 26–33; N½, W½ SW¼, NE¼ SW¼ Section 34; N½ NW¼, SW¼ NW¼ Section 35.

T.33N., R.11E. Willamette Meridian: S½ SW¼, SW¼ SE¼ Section 15; E½ SW¼, SE¼ Section 16; Sections 21–22; S½ NW¼, SW¼, NW¼ SE¼, SW¼ NE¼ Section 23; W½, W½ E½ Section 25; Section 26 except NE¼ NE¼; Section 27; E½ NW¼, E½ SE¼, NE¼ Section 28; Section 34 except W½ SW¼; Section 35; NW¼, W½ SW¼ Section 36.



Map and description of WA–10-a taken from United States Fish and Wildlife Service 1:100,000 map; Skykomish River, Washington; 1995.

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.26N., R.10E. Willamette Meridian: W½ W½ Section 4; NW¼ NW¼, E½ NW¼, N½ SE¼, NE¼ Section 5; Section 7 except NE¼ NE¼; S½ SW¼, SE¼ Section 8; Section 9 except N½ N½; W½ W½, SE¼ SW¼, S½ SE¼ Section 10; S½ SW¼ Section 11; S½ Section 13; Section 14 except N½ NE¼; Sections 15–19; N½ NW¼, E½ Section 20; Sections 21–23; Section 24 except E½ NW¼, NW¼ SW¼, NW¼ NE¼; N½ N½ Section 25; N½ N½ Section 26; N½ Section 27; N½ Section 28; N½ NE¼ Section 29; W½, W½ NE¼, NE¼ NE¼ Section 30.

T.26N., R.11E. Willamette Meridian: Section 2; Sections 4–7; NW¼, W½ SW¼, NE¼ SW¼, NW¼ NE¼ Section 8; NW¼, N½ SW¼, SE¼ SW¼, N½ NE¼ Section 18; E½ Section 19; SW¼ NW¼, W½ SW¼ Section 20; NW¼ NW¼ Section 29; N½ N½ Section 30.

T.27N., R.09E. Willamette Meridian: S½ SE¼ Section 19; Section 30 except NW¼ NW¼; Section 31; W½, NW¼ SE¼, W½ NE¼ Section 32.

T.27N., R.10E. Willamette Meridian: Section 1 except NW¼ NW ¼; E½ SE¼, SW¼ SE¼ Section 2; E½, E½ SW¼ Section 11; Sections 12–13; Section 14 except SW¼; E½ SE¼ Section 15; NE¼ NE¼ Section 22; N½, N½ SW¼, SE¼ Section 23; Section 24; N½ N½, SE¼ NE¼ Section 25; SW¼ SW¼, E½ SW¼, E½ Section 26; E½ NW¼, NE¼ SW¼, E½ Section 31; Section 32; Sections 35–36.

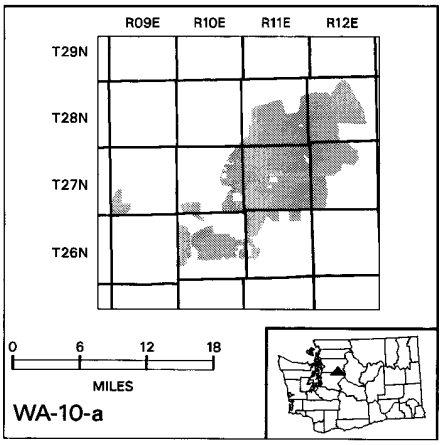
T.27N., R.11E. Willamette Meridian: Sections 1–20; W½ NW¼, N½ SW¼, SE¼ Section 21; Sections 22–36.

T.27N., R.12E. Willamette Meridian: SW¼ SW¼ Section 2; Section 3 except N½ NE¼; Sections 4–10; W½ W½, NW¼ SW¼ Section 11; N½ N½ Section 15; N½, W½ SW¼, NE¼ SW¼, NW¼ SE¼ Section 16; Sections 17–19; W½ Section 20; W½ Section 29; Sections 30–31; NW¼, N½ SW¼, SW¼ SW¼ Section 32.

T.28N., R.10E. Willamette Meridian: SW¼ SE¼, E½ SE¼ Section 36.

T.28N., R.11E. Willamette Meridian: S½ SW¼, SW¼ SE¼ Section 10; E½ SW¼, SE¼ Section 12; Section 13 except W½ W½; Section 15 except NE¼ NE¼; Section 16; S½, SE¼ NW¼, S½ NE¼ Section 17; E½ SE¼ Section 18; E½ E½, SW¼ SE¼ Section 19; Sections 20–29; E½ Section 30; Section 31 except NW¼ NW¼; Sections 32–36.

T.28N., R.12E. Willamette Meridian: S½ NW¼, SW¼, SW¼ SE¼ Section 3; SW¼ SE¼, E½ SE¼ Section 4; Section 7 except N½ N½; SW¼, W½ SE¼, SE¼ SE¼ Section 8; Section 9 except NW¼ NW¼; Section 10; SW¼ SW¼ Section 11; W½, W½ SE¼ Section 14; Sections 15–23; SW¼ NW¼ Section 25; N½ Section 26; N½ Section 27; W½, NE¼, SW¼ SE¼ Section 28; Sections 29–32; W½, W½ E½ Section 33.



Map and description of WA–10–b taken from United States Fish and Wildlife Service 1:100,000 map; Skykomish River, Washington; 1995.

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.25N., R.10E. Willamette Meridian: Sections 3–5; S½, SE¼ NE¼ Section 6; Sections 7–8; W½, W½ SE¼ Section 9; NE¼ Section 10; W½, S½ SE¼ Section 16; Section 17; N½, SE¼, NE¼ SW¼ Section 18; NE¼ Section 20; N½, N½ SE¼ Section 21; W½ NW¼, SE¼ NW¼, S½ Section 22; SW¼ SW¼ Section 23; W½ SW¼, SE¼ SW¼ Section 25; NW¼, N½ SW¼, SE¼ SW¼, SE¼, S½ NE¼, NW¼ NE¼ Section 26; NE¼ NW¼, N½ SE¼, NE¼ Section 27.

T.25N., R.11E. Willamette Meridian: Sections 1–4; Sections 9–12; N½, N½ S½ Section 13; N½, N½ S½ Section 14; Section 15; N½, SW¼, N½ SE¼, SE¼ SE¼ Section 16; SE¼, SE¼ SW¼ Section 17; SE¼, S½ NE¼ Section 19; NW¼, NW¼ SW¼, N½ NE¼ Section 20; Section 22 except SW¼ SW¼; W½ W½ Section 23; NE¼ SW¼, NE¼ SE¼, N½ NE¼, SW¼ NE¼ Section 27.

T.25N., R.12E. Willamette Meridian: Sections 1–5; W½ Section 6; Section 7; Section 8 except NE¼ NW¼; Sections 9–13; N½ NW¼, N½ SE¼, NE¼ Section 14; Sections 16–20; NW¼, W½ SW¼, NE¼ SW¼, W½ NE¼, NE¼ NE¼ Section 21; W½ NW¼, NW¼ SW¼ Section 28; N½, N½ S½ Section 29; NE¼ SE¼, NE¼ Section 30.

T.25N., R.13E. Willamette Meridian: W½ W½ Section 6; W½ Section 7; W½, W½ SE¼, SW¼ NE¼ Section 18; W½ Section 19.

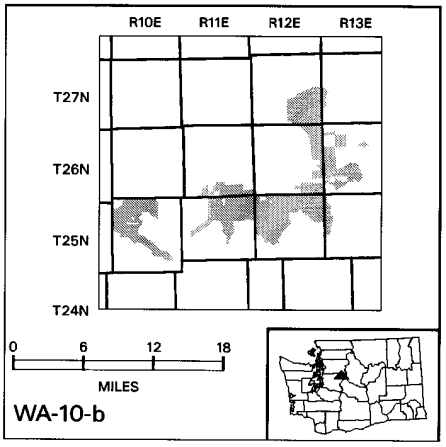
T.26N., R.11E. Willamette Meridian: S½ SW¼ Section 27; SE¼ SE¼ Section 28; S½ SW¼, E½ Section 32; N½ SW¼, NE¼ Section 33; Sections 34–35; S½ Section 36.

T.26N., R.12E. Willamette Meridian: Section 1; NW¼, E½ Section 2; N½ NE¼ Section 3; E½ E½ Section 11; Sections 12–13; E½ E½, NW¼ SE¼ Section 24; N½, N½ S½ Section 25; S½ NE¼ Section 34; Sections 35–36

T.26N., R.13E. Willamette Meridian: S½ S½, NE¼ SE¼ Section 6; Section 8; S½ Section 10; Sections 18–19; W½ W½, SE¼ SW¼, SW¼ SE¼, E½ SE¼ Section 20; S½, SE¼ NW¼, SW¼ NE¼ Section 21; W½ SW¼ Section 22; W½ Section 27; Section 28 except SW¼ SE¼; N½, NW¼ SW¼, S½ S½ Section 29; N½, SW¼ Section 30; E½ NE¼, NW¼ NE¼, NE¼ SE¼ Section 31; N½, N½ SW¼ Section 32.

T.27N., R.12E. Willamette Meridian: S½ S½ Section 13; NE¼ SW¼, S½ SW¼, SE¼ Section 22; Section 23 except NW¼ NW¼; Sections 24–27; Section 34 except SW¼ SW¼; Sections 35–36.

T.27N., R.13E. Willamette Meridian: SW¼ SW¼ Section 18; W½ Section 19; NW¼, W½ SW¼ Section 30.



Map and description of WA–10-c taken from United States Fish and Wildlife Service 1:100,000 map; Cape Flattery, Skykomish River and Snoqualmie Pass, Washington; 1995.

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.20N., R.10E. Willamette Meridian: S½ N½, S½ Section 2.

T.21N., R.10E. Willamette Meridian: NE¼ NW¼, N½ NE¼ Section 36.

T.22N., R.09E. Willamette Meridian: S½ S½ Section 2; N½ NW¼, SE¼ NW¼, NE¼ Section 11; W½ NW¼, S½, NE¼ NW¼, SE¼ NE¼ Section 12.

T.22N., R.10E. Willamette Meridian: S½, NE¼, S½ NW¼ Section 13; S½, SE¼ NE¼ Section 14; W½, SE¼ Section 18; Section 20; S½ SE¼, NE¼ SE¼, E½ NE¼ Section 22; Sections 23–26; SE¼ Section 28; NE¼ NE¼ Section 34; N½ NW¼, NW¼ NE¼ Section 35; N½ N½ Section 36.

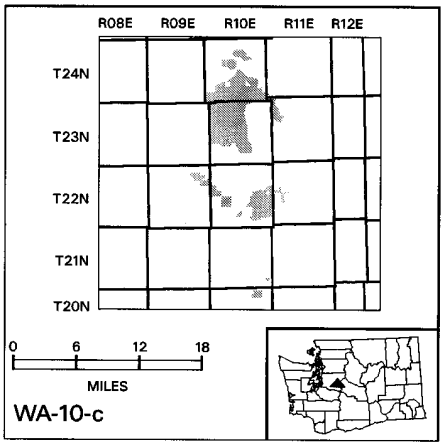
T.22N., R.11E. Willamette Meridian: S½ SW¼, SE¼ Section 18; W½ W½, NE¼ NW¼, SE¼ SW¼ Section 20.

T.23N., R.10E. Willamette Meridian: NW¼ NW¼ Section 2; W½, N½ NE¼, SW¼ NE¼ Section 3; Sections 4–9; W½, SW¼ SE¼ Section 10; W½, W½ E½ Section 15; Sections 16–21; Section 22 except NE¼ SE¼, E½ NE¼; Section 27; NW¼ NW¼, E½ SE¼, NE¼ Section 28; N½ N½ Section 29.

T.23N., R.11E. Willamette Meridian: Section 6 except E½ NE¼, NE¼ SE¼; Section 7; SW¼ Section 8; W½ NW¼ Section 17; N½ NE¼, SE¼ NE¼ Section 18.

T.24N., R.10E. Willamette Meridian: S½ SE¼, NE¼ SE¼, E½ NE¼ Section 9; N½, N½ SW¼, SE¼ Section 10; SW¼, SW¼ NW¼, SW¼ SE¼ Section 11; W½ W½, SE¼ SW¼, SW¼ SE¼, NE¼ NE¼ Section 15; N½, N½ SW¼, SE¼ Section 16; E½ NE¼, NE¼ SE¼ Section 17; SE¼ SW¼, SE¼ Section 21; Section 22 except NE¼ NE¼; SW¼, SW¼ NW¼, S½ SE¼ Section 23; SW¼ SW¼ Section 24; Section 25 except E½ SE¼, NE¼; NE¼ NW¼, S½, NE¼ Section 26; Section 27; Section 28 except NW¼; Section 29 except NW¼ NW¼; Sections 31–36.

T.24N., R.11E. Willamette Meridian: W½ SW¼, SE¼ SW¼, SW¼ SE¼ Section 31.



Map and description of WA–11–a taken from United States Fish and Wildlife Service 1:100,000 map; Snoqualmie Pass and Mt Rainier, Washington; 1995.

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.17N., R.10E. Willamette Meridian: Sections 1–3; E½ E½ Section 4.

T.17N., R.11E. Willamette Meridian: W½ SW¼, SE¼ SW¼ Section 6; NE¼ NW¼ Section 7.

T.18N., R.08E. Willamette Meridian: Sections 1–2; NW¼, E½ Section 3; N½ Section 4; N½ NE¼, SE¼ NE¼ Section 10; Section 11 except S½ SW¼; Sections 12–13; S½ SW¼, NE¼ SW¼, E½ Section 14; E½ E½ Section 22; Sections 23–25; N½, N½ SE¼ Section 26; E½ NE¼ Section 27; SE¼ SW¼, SE¼ Section 36.

T.18N., R.09E. Willamette Meridian: Sections 1–30; Section 31 except NW¼ NW¼; Sections 32–36.

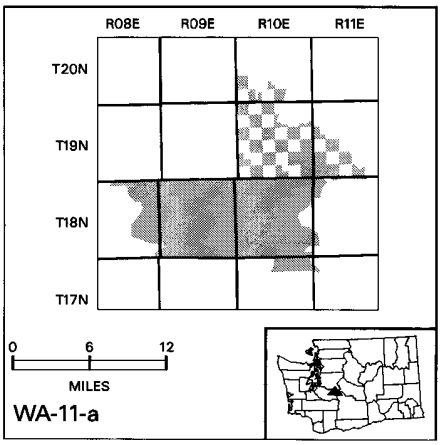
T.18N., R.10E. Willamette Meridian: Sections 1–12; NW¼, N½ SW¼, SW¼ SW¼, N½ NE¼, SW¼ NE¼ Section 13; Sections 14–23; SW¼ NW¼, NW¼ SW¼, S½ S½ Section 24; Sections 25–35; Section 36 except SE¼ NE¼.

T.18N., R.11E. Willamette Meridian: NW¼ NW¼ Section 2; N½ N½ Section 3; N½ NW¼ Section 4; N½ NE¼, SW¼ NW¼ Section 5; Section 6; NW¼, N½ SW¼, W½ NE¼ Section 7; W½ Section 30; N½ NW¼ Section 31.

T.19N., R.10E. Willamette Meridian: Section 4; Section 6; Section 8; W½, S½ SE¼ Section 10; S½ SW¼, SE¼ Section 12; Section 14; Section 16; Section 18; Section 20; Section 22; Sections 24–26; Section 28; W½, SE¼ Section 30; Section 32; W½, SE¼ Section 34; Section 36.

T.19N., R.11E. Willamette Meridian: W½, SE¼ Section 18; Section 20; Section 28; Sections 30–32, Section 34 except NW¼ NE¼.

T.20N., R.10E. Willamette Meridian: W½ SE¼, SE¼ SE¼ Section 28; Section 30; Section 32 except NW¼ SE¼, SW¼ NE¼, N½ NE¼; Section 34 except SE¼ SE¼.



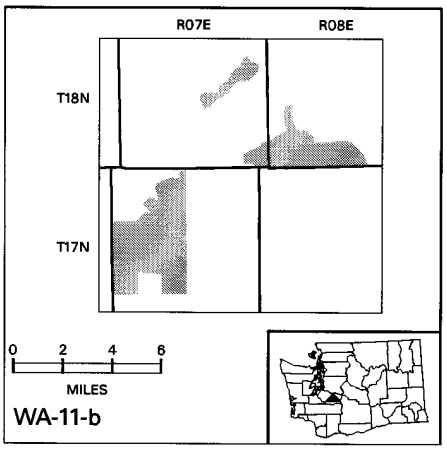
Map and description of WA–11–b taken from United States Fish and Wildlife Service 1:100,000 map; Snoqualmie Pass and Mt Rainier, Washington; 1995.

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.17N, R.07E. Willamette Meridian: S½ N½, S½, NE¼ NE/14 Section 4; E½ SE¼ Section 5; Section 8 except W½ NW¼; Section 9; Sections 16–21; Section 28; N½ N½ Section 29; Section 30.

T.18N, R.07E. Willamette Meridian: SW¼, SW¼ SE¼ Section 12; NW¼, W½ NE¼ Section 13; SE¼ NW¼, SW¼, N½ SE¼, NE¼ Section 14; E½ NW¼, NE¼ SW¼, NW¼ SE¼, NE¼ Section 22; NW¼ NW¼ Section 23; Section 36 except W½ NW¼, NE¼ NW¼.

T.18N, R.08E. Willamette Meridian: SW¼ Section 20; S½ SW¼, SE¼ SW¼ Section 28; Section 29 except NE¼; S½ SW¼, NE¼ SW¼, SE¼ Section 30; Sections 31–34; SW¼ NW¼, W½ SW¼, SE¼ SW¼ Section 35.



Map and description of WA–11–c taken from United States Fish and Wildlife Service 1:100,000 map; Tacoma and Centralia, Washington; 1995.

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

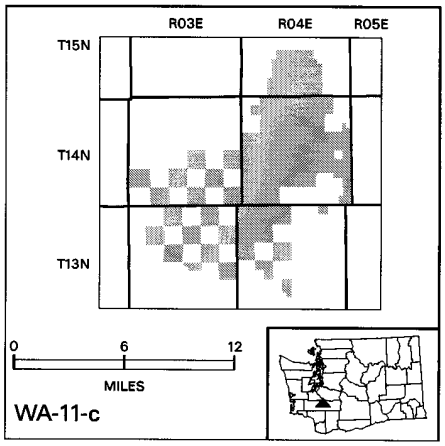
T.13N., R.03E. Willamette Meridian: Section 2; Section 4; Section 8; Section 10; Section 12; Section 14; Section 16; N½ NW¼, SE¼ NW¼, NE¼ Section 22; Section 24.

T.13N., R.04E. Willamette Meridian: NE¼ Section 2; Sections 4–8; Section 16; Section 18; N½, SE¼ Section 20; N½ SE¼, SE¼ SE¼, NE¼ Section 28.

T.14N., R.03E. Willamette Meridian: Section 22; Section 24; Section 26; Section 28; Section 30; Section 32; Section 34; Section 36.

T.14N., R.04E. Willamette Meridian: Sections 2–5; SE¼ Section 6; Sections 8–10; W½ Section 11; W½ SE¼, SE¼ SE¼ Section 12; Sections 13–23; Section 24 except NW¼; Section 25 except SW¼; N½ N½ Section 26; Sections 27–32; E½ SW¼, E½ Section 36.

T.15N., R.04E. Willamette Meridian: S½ Section 21; S½ Section 22; NW¼ NW¼, S½ NW¼, SW¼ Section 26; Sections 27–28; E½ E½ Section 29; E1/2 Section 32; Sections 33–34; W½ Section 35.



Map and description of WA–11–d taken from United States Fish and

Wildlife Service 1:100,000 map; Mt. Rainier, Washington; 1995.

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.13N., R.07E. Willamette Meridian: Section 10; Section 12; Section 14; Section 22.

T.13N., R.08E. Willamette Meridian: Sections 1–8; Section 9 except SE¼ SE¼; N½ N½ Section 10; N½ NW¼ NE¼ SE¼, NE¼ Section 11; N½, NW¼ SW¼ Section 12; W½, NW¼ SE¼ Section 16; Section 17; Section 18 except S½ S½; N½ NW¼, SE¼ NW¼, N½ SE¼, NE¼ Section 20; NW¼, N½ SW¼ Section 21.

T.13N., R.09E. Willamette Meridian: NW¼ NW¼ Section 3; Section 4 except S½ SE¼; Sections 5–6; N½, N½ S½ Section 7; N½, N½ SW¼ Section 8; N½ NW¼ Section 9.

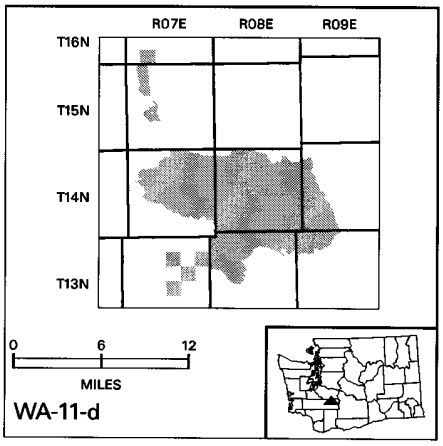
T.14N., R.07E. Willamette Meridian: SW¼ NW¼, S½ Section 1; Section 2 except N½ NE¼; Section 3; S½ SW¼, SE¼ Section 4; E½ SE¼ Section 7; S½, S½ N½ Section 8; Sections 9–17; N½ NE¼, SE¼ NE¼ Section 18; Section 20 except SW¼, S½ SE¼; N½, N½ SW¼, SE¼ Section 21; Sections 22–24; Section 25 except SW¼ SW¼; Section 26 except S½ S½; N½, N½ SE¼ Section 27; NE¼ NE¼ Section 28; NE¼ SE¼, NE¼ NE¼ Section 36.

T.14N., R.08E. Willamette Meridian: S½ SE¼ Section 2; SW¼, W½ SE¼ Section 3; Section 4; Section 5 except NW¼ NW¼; SW¼ NW¼, S½ Section 6; Sections 7–36.

T.14N., R.09E. Willamette Meridian: Section 7; W½ W½ Section 8; W½, SW¼ SE¼ Section 17; Sections 18–19; Section 20 except NE¼ NE¼; W½ SW¼ Section 21; W½, W½ SE¼ Section 28; Section 29–32; Section 33 except NE¼ NE¼; SW¼ SW¼ Section 34.

T.15N., R.07E. Willamette Meridian: W½, W½ SE¼ Section 5; E½ E½ Section 6; E½ E½ Section 7; W½, W½ E½ Section 8; SW¼ SW¼ Section 16; N½ NW¼, NW¼ NE¼, E½ SE¼ Section 17; S½ NW¼, N½ SW¼, SE¼ SW¼, E½ Section 20; W½ W½, SE¼ SW¼ Section 21; S½ S½ Section 34.

T.16N., R.07E. Willamette Meridian: Section 32.



Map and description of OR–01-a taken from United States Fish and Wildlife Service 1:100,000 map; Astoria, Nehalem River, Oregon; 1995.

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.05N., R.07W. Willamette Meridian: S½ SE¼ Section 3; N½ NE¼ Section 10.

Critical Habitat includes only State lands described within the following areas:

T.08N., R.06W. Willamette Meridian: W½ SW¼, SW¼ NW¼ Section 17; Section 18 except NE¼ NE¼; Section 19; W½ W½ Section 20; W½ Section 28; E½ Section 29; NW¼, N½ SW¼ Section 30; W½ SW¼, SE¼ SW¼ Section 31; E½ Section 32; W½ Section 33.

T.08N., R.07W. Willamette Meridian: Section 13; E½ Section 14; Section 23 except NW¼; Section 24–26; Section 36.

T.07N., R.06W. Willamette Meridian: N½ SW¼, SE¼ SW¼ Section 2; W½ W½, SE¼ SW¼ Section 3; Section 4; Sections 9–11; Sections 13–14; Section 16; Sections 25–36.

T.07N., R.07W. Willamette Meridian: Sections 30–31; NW¼, S½ SW¼ Section 32.

T.07N., R.08W. Willamette Meridian: Section 22 except N½ N½; Section 23 except N½ NW¼; Section 24 except NE¼; Section 25; Section 26 except S½ SW¼; N½, N½ SW¼, SE¼ SW¼ Section 27; NE¼ Section 28; S½, NE¼ NW¼ Section 35; Section 36.

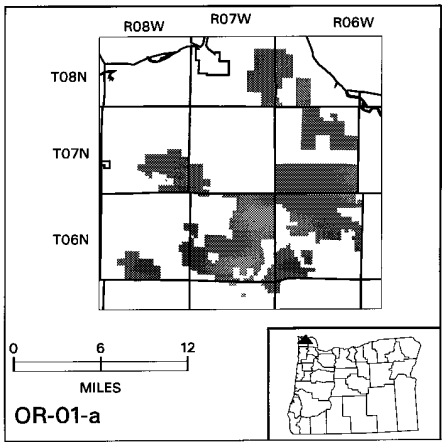
T.06N., R.06W. Willamette Meridian: Section 1 except N½ NE¼; Sections 2–6; NE¼ NE¼ Section 7; Sections 8–10; S½, NW¼ NW¼, S½ NW¼ Section 11; W½ SW¼ Section 12; Section 13 except SW¼, NE¼ NE¼; Section 14 except S½ SE¼, NW¼ SE¼; Section 15; Section 16 except SW¼ SE¼, SE¼ SW¼; Section 17 except N½ NW¼; SE¼ NE¼ Section 18; S½ SE¼, NE¼ SE¼, S½ SW¼ Section 19; E½ NE¼ Section 21; N½ N½ Section 22; N½ NW¼ Section 23; NE¼ NW¼, E½ Section 24; W½ Section 28; SW¼, W½ NW¼, E½ NE¼, SW¼ SE¼ Section 29; Sections 30–32; S½ NW¼, W½ SW¼, SW¼ NE¼ Section 33.

T.06N., R.07W. Willamette Meridian: Sections 1–3; N½ NE¼, NE¼ NW¼ Section 4; NW¼ NW¼ Section 5; N½ NE¼ Section 6; E½ SE¼ Section 9; Sections 10–15; NE¼ NE¼, S½ SW¼ Section 16; S½ S½ Section 17; W½ Section 18; S½, W½ NW¼ Section 19; Sections 20–23; W½ SW¼ Section 24; W½ NW¼, NW¼ SW¼, SE¼ SE¼ Section 25; Sections 26–28; S½, W½ NW¼ Section 29; Section 30; NE¼, N½ NW¼ Section 31; E½ SE¼, N½ Section 32; Section 33; NE¼, S½ SW¼, SE¼ SE¼ Section 34; N½ NE¼, SW¼ NE¼, E½ SW¼, SW¼ SW¼ Section 35; E½, SW¼ SW¼, E½ SW¼ Section 36.

T.06N., R.08W. Willamette Meridian: NE¼ Section 13; SE¼, E½ SW¼, S½ NE1/4 Section 24; E½ Section 25; SW¼ Section 27; Section 28 except NE¼; Section 29 except NW¼; E½ Section 32; Sections 33–34.

T.05N., R.06W. Willamette Meridian: N½ NW¼, SW¼ NW¼, NW¼ SW¼, NE¼ SW¼ Section 6.

T.05N., R.07W. Willamette Meridian: E½ NW¼, NW¼ NW¼, NE¼, N½ SE¼ Section 1; N½ NW¼ Section 3; NE¼ NE¼ Section 4.



Map and description of OR–01–b taken from United States Fish and Wildlife Service 1:100,000 map; Nehalem River, Oregon; 1995.

Critical Habitat includes only State lands described within the following areas:

T.03N., R.08W. Willamette Meridian: Sections 6–7; Sections 16–17; Section 18 south of Foss River; Sections 19–21; Sections 27–28.

T.03N., R.09W. Willamette Meridian: Section 1 except W½ NW¼; SE¼ SW¼, SE¼ Section 2; NW¼, W½ SW¼ Section 3; E½, S½ SW¼, NE¼ NW¼ Section 4; Section 5 except W½ NW¼; Section 8 except SW¼ NW¼, NW¼ SW¼; Sections 9–16; Section 21 except W½ NW¼, SE¼ NW¼; Section 23 lying N of Foss River; E½, NW¼ Section 24 lying N of Foss River; Section 28.

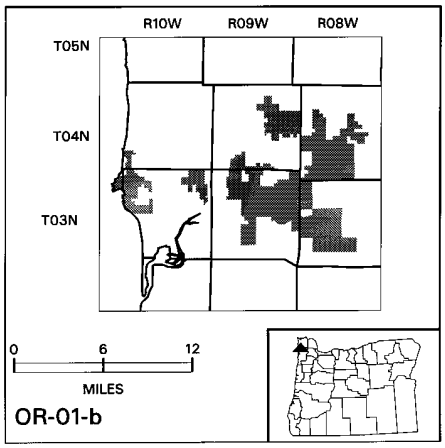
T.03N., R.10W. Willamette Meridian: W1/2 Section 1; Section 2 except NW¼; SW¼, S½ SE¼ Section 5; Section 6 except NW¼ NW¼, NE¼ NE¼; Section 7; N½ NE¼, SE¼ NE¼, NW¼ NW¼ Section 8; W½ NE¼ Section 11; Section 12 except E½ E½, W½ SW¼; NW¼ NE¼ Section 13; S½, E½ NE¼ Section 17; Section 18 except N½ NE¼, SE¼ NE¼.

T.03N., R.11W. Willamette Meridian: S1/2 Section 1; Section 12.

T.04N., R. 08W. Willamette Meridian: SW¼, S½ NW¼, NW¼ SE¼, S½ SE¼ Section 8; SE¼ Section 10; S½ S½, W½ NW¼, SE¼ NW¼ Section 14; Section 15 except NW¼; Section 17 except NW¼ SW¼; Sections 19–20; Section 21 except N½ NW¼; Section 22 except S½ NE¼, NW¼ NE¼; E½ NW¼, NW¼ NW¼, W½ NE¼ Section 23; Section 27–29; SE¼, N½ NE¼, SE¼ NE¼, NE¼ NW¼, E½ SW¼, SW¼ SW¼ Section 31; Sections 32–34.

T.04N., R.09W. Willamette Meridian Section 10 except NW1/4; SW¼ Section 11; Sections 13–14; NE¼, S½ SE¼, NE¼ SE¼ Section 15; NE¼, NW¼ SE¼ Section 22; Section 23 except S½ SE¼, NW¼ SE¼; N½, NW¼ SW¼, NW¼ SE¼ Section 24; SW¼ SW¼ Section 28; Section 32 except W½ W½, NE¼ NW¼; W½ W½, S½ SE¼, SE¼ SW¼ Section 33; Section 34 except N½, NE¼ SW¼; SW¼ SW¼ Section 35.

T.04N., R.10W. Willamette Meridian: S½ SW¼, SW¼ SE¼, SE¼ SE¼ Section 30; E½ W½, NW¼ NW¼, W½ SW¼ Section 31.



Map and description of OR–01–c taken from United States Fish and Wildlife Service 1:100,000 map; Nehalem River and Yamhill River, Oregon; 1995.

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.01N., R.09W. Willamette Meridian: W½ SW¼, SE¼ SW¼, SW¼ NW¼ Section 25; SE¼, SE¼ SW¼, SE¼ NE¼ Section 26; E½ SE¼, SE¼ NE¼ Section 34; Section 35 except SW¼.

T.01S., R.08W. Willamette Meridian: Section 7 except E½ NE¼, SE¼; S½ Section 17; S½, SE¼ NE¼ Section 18; N½ N½, SW¼ NE¼, SE¼ NW¼, SE¼ SE¼ Section 19; N½ N½, NE¼ SW¼, SW¼ SW¼ Section 20; Section 21 except N½ NE¼, S½ SW¼; W½ Section 22; S½ SW¼, SE¼ NW¼, NE¼ SW¼, SW¼ NE¼, W½ SE¼ Section 27; S½ NW¼, S½ SE¼, N½ SW¼, SE¼ SW¼ Section 28; S½ NE¼, N½ SE¼, S½ SW¼, NE¼ SW¼ Section 29; NE¼, N½ NW¼, SW¼ NW¼, SE¼ SE¼ Section 30; N½ NE¼ Section 31.

T.01S., R.09W. Willamette Meridian: Section 1 except E½ E½; E½ E½, NW¼ NE¼ Section 2; N½ SW¼ Section 3; Section 4 except SE¼ SE¼; NE¼, N½ SE¼, E½ NW¼ Section 5; S½ NE¼, NW¼ NE¼, N½ NW¼, SE¼ NW¼, E½ SW¼, E½ SE¼ Section 9; S½, S½ NW¼, SW¼ NE¼ Section 10; Section 11 except N½ NE¼; NW¼, W½ SW¼, E½ NE¼, Section 12; E½ NW¼, SW¼ NE¼ Section 13; W½ NE¼, NW¼, NE¼ SW¼, SW¼ SW¼ Section 14; N½ NW¼, NE¼ NE¼ Section 15.

T.01S., R.11W. Willamette Meridian: SE¼ SE¼ Section 13.

Critical Habitat includes only State lands described within the following areas:

T.02N., R.09W. Willamette Meridian: Section 3; E½, NW¼ Section 7; S½ Section 16; Section 18 except SW¼ NW¼, N½ NW¼; Sections 19–22; Sections 29–32.

T.02N., R.10W. Willamette Meridian: E½ E½, NW¼ SE¼ Section 24; S½ SE¼ Section 25; Section 36 except NW¼ NW¼, NW¼ SW¼.

T.01N., R.09W. Willamette Meridian: Section 9; Section 16 except SW¼; SW¼, E½ SE¼ Section 19; Section 20 except NE¼ NE¼; S½ SW¼, NW¼ SW¼ Section 21; Section 26 except SE¼, SE¼ SW¼, SE¼ NE¼; Section 27; W½ Section 28; Section 29 except NW¼; Section 30; NE¼, N½ NW¼, NE¼ SE¼ Section 31; N½, S½ SE¼, NE¼ SE¼ Section 32; S½ SW¼, SE¼, N½ NW¼, SW¼ NW¼, NW¼ SW¼ Section 33; Section 34 except E½ SE¼, SE¼ NE¼, S½ SW¼, NW¼ SW¼, SW¼ NW¼; NW¼ NW¼ Section 35; Section 36.

T.01N., R.10W. Willamette Meridian: N½ NE¼ Section 1; SW¼ SW¼ Section 2; SE¼ SE¼ Section 3; E½ NE¼, NE¼ SE¼ Section 10; W½, SE¼ SE¼ Section 11; Section 13 except N½ NE¼; S½ SE¼ Section 14; SE¼, SE¼ NW¼, NE¼ SW¼ Section 22; Section 23 except W½ NW¼; Sections 24–26; E½, NW¼, E½ SW¼ Section 27; N½ NE¼ Section 34; NE¼, N½ SE¼ Section 35; NE¼ Section 36.

T.01S., R.08W. Willamette Meridian: N½ Section 6; SE¼ Section 7; SW¼ Section 16; N½ S½, SE¼ NW¼ Section 17; NW¼ NW¼, SE¼ NW¼, SW¼ NE¼, NW¼ SE¼ Section 18; Section 19 except SW¼, SW¼ NW¼, SE¼ NE¼, N½ SE¼, SW¼ SE¼; Section 20 except S½ S½, N½ N½, NE¼ SW¼; S½ SW¼, Section 21; N½ N½, SW¼ NE¼ Section 28.

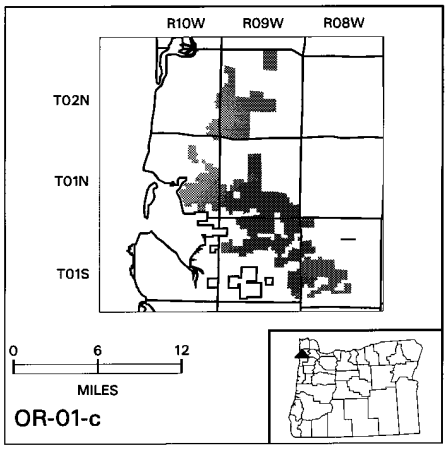
T.01S., R.09W. Willamette Meridian: E½ E½ Section 1; Section 3 except N½ SW¼; SE¼ SE¼ Section 4; S½ SE¼, NE¼ SE¼, SE¼ SW¼ Section 7; E½ SE¼ Section 8; W½ SW¼, W½ SE¼ Section 9; Section 13 except N½ NW¼, SE¼ NW¼, SW¼ NE¼; S½ SE¼, SE¼ SW¼ Section 14; N½ NE¼, NW¼ Section 16; N½, N½ SE¼ Section 17; NE¼, E½ NW¼ Section 18; NW¼, W½ NE¼ Section 23; S½ SW¼, NE¼ SE¼, S½ SE¼ Section 24; Section 25; NE¼, E½ NW¼, N½ SE¼ Section 36.

Critical Habitat includes only State owned and State managed lands described within the following areas:

NE¼, N½ SE¼, NW¼ SE¼, E½ NW¼ Section 13.

Critical Habitat includes only County lands described within the following areas:

T.01N., R.09W. Willamette Meridian: SW¼ Section 16; N½, SE¼, NE¼ SW¼ Section 21; E½ Section 28; NE¼ Section 33.



Map and description of OR–01–d taken from United States Fish and Wildlife Service 1:100,000 map; Nehalem River, Oregon; 1995.

Critical Habitat includes only State lands described within the following areas:

T.04N., R.06W. Willamette Meridian: W½ NW¼, NE¼ NW¼, NW¼ NE¼ Section 4; Section 5 except SW¼; Section 30 except NE¼; N½ NW¼, SW¼ NW¼, NW¼ NE¼ Section 31.

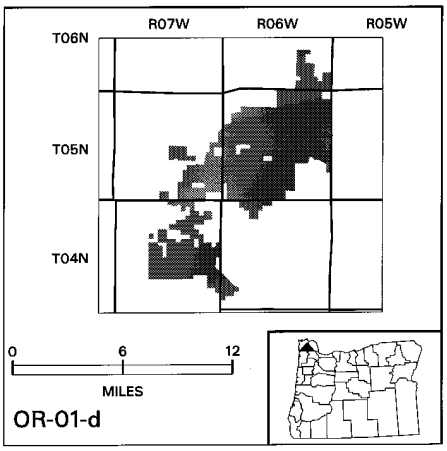
T.04N., R.07W. Willamette Meridian: SW¼, S½ NW¼ Section 1; Section 2 except NE¼, SW¼ NW¼; N½ N½, SE¼ NE¼, S½ NE¼ Section 3; SE¼, S½ NE¼, NW¼ SW¼ Section 9; N½ N½, S½ SW¼, SE¼ NE¼, SE¼ SE¼ Section 10; Section 11 except N½ NE¼, SE¼ NE¼, SW¼ SE¼, NW¼ SW¼; Section 13 except NW¼ NE¼, SE¼ SE¼; Section 14 except NW¼ NE¼; Section 15; Section 16 except E½ NE¼, NE¼ SE¼; Sections 21–22; Section 23 except S½ SE¼; Section 24 except E½ NE¼, SW¼ SW¼; NE¼, E½ NW¼, E½ SE¼ Section 25.

T.05N., R.06W. Willamette Meridian: Section 1 except NE¼; Sections 2–3; SE¼, S½ SW¼, S½ NE¼ Section 7; Sections 8–18; Section 19 except E½ NE¼; Section 20 except N½ NW¼; Sections 21–22; Section 23 except SE¼ SE¼; Section 24; E½ NE¼, NW¼ NE¼ Section 25; Sections 27–30; Section 31 except W½ W½; Sections 32–33; Section 34 except SE¼.

T.05N., R.07W. Willamette Meridian: E½ E½, SW¼ SE¼, SE¼ SW¼ Section 13; Section 22 except S½ S½; N½ SW¼ Section 23; Section 24 except NE¼, NW¼ NW¼; Sections 25–26; E½ SE¼, SE¼ NE¼ Section 27; SE¼ Section 33; E½ Section 34; Section 35 except N½ NE¼, NE¼ NW¼; N½ Section 36.

T.05N., R.08W. Willamette Meridian: S½ NW¼ Section 25; SE¼ NE¼ Section 26.

T.06N., R.06W. Willamette Meridian: S½ SW¼, SW¼ SE¼ Section 23; Section 26 except NE¼; Section 35 except SW¼ NE¼; Section 36 except N½ NW¼, SE¼ NW¼.



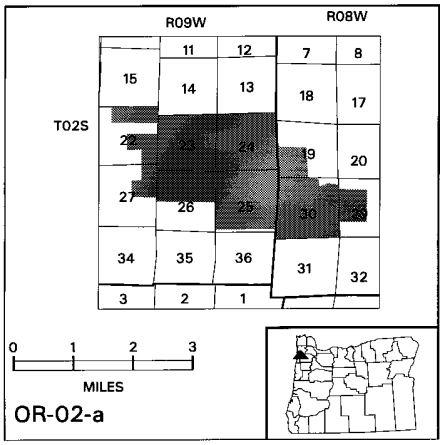
Map and description of OR–02–a taken from United States Fish and Wildlife Service 1:100,000 map; Yamhill River, Oregon; 1995.

Critical Habitat includes only State lands described within the following areas:

T.02S., R.09W. Willamette Meridian: Section 22 except SW¼, S½ NW¼, S½

NE¼, SW¼ SE¼; Sections 23–25; N½ Section 26; E½ NE¼, SW¼ NE¼ Section 27.

T.02S., R.08W. Willamette Meridian: SW¼ Section 19; N½ SW¼, NW¼ Section 29; Section 30.



Map and description of OR–02–b taken from United States Fish and Wildlife Service 1:100,000 map; Yamhill River, Oregon; 1995.

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.03S., R.09W. Willamette Meridian: SW¼, W½ SE¼, SW¼ NW¼ Section 3; S½, SW¼ NW¼, SE¼ NE¼, W½ NE¼; Section 4; E½ SE¼ Section 8; Section 9; Section 10 except N½ SE¼; NW¼ Section 15; N½ Section 16; S½ NW¼, N½ SW¼ Section 19; S½ SW¼ Section 32.

T.03S., R.10W. Willamette Meridian: SE¼, E½ SW¼, S½ NE¼ Section 22; Section 23 except N½ NW¼; S½, E½ NE¼, SW¼ NW¼ Section 24; W½ NW¼ Section 25; Section 26; Section 27 except SW¼ NE¼; E½, E½ W½ Section 28; Section 32 except N½ N½, W½ SW¼; Section 33; N½ NE¼, W½ SW¼, NW¼ Section 34; Section 35 except S½ S½, NW¼ SW¼.

T.04S., R.09W. Willamette Meridian: S½ SW¼, SW¼ SE¼ Section 4; W½, W½ E½, SE¼ SE¼ Section 5; Section 6 except W½ W½; Section 7 except W½ NW¼; Sections 8–9; SW¼, SW¼ SE¼, S½ NW¼ Section 10; NW¼, W½ NE¼ Section 15; N½, SE¼ Section 16; N½ Section 17; N½ Section 18.

T.04S., R.10W. Willamette Meridian: SW¼, S½ NW¼, NW¼ NW¼, W½ E½ Section 3; E½, N½ NW¼, SE¼ NW¼, SE¼ Section 4; N½, SW¼, W½ SE¼ Section 5; E½ SW¼, E½ Section 6; N½ NE¼, NE¼ NW¼ Section 7; NE¼ Section 9.

T.05S., R.09W. Willamette Meridian: SW¼ Section 5; SE¼, SW¼ NE¼, E½ SW¼ Section 6; Section 7; W½, S½ SE¼, NW¼ SE¼ Section 8; NW¼, SE¼ SW¼, W½ NE¼, N½ SW¼ Section 17; Section 18; N½ Section 19; NW¼ NW¼ Section 20.

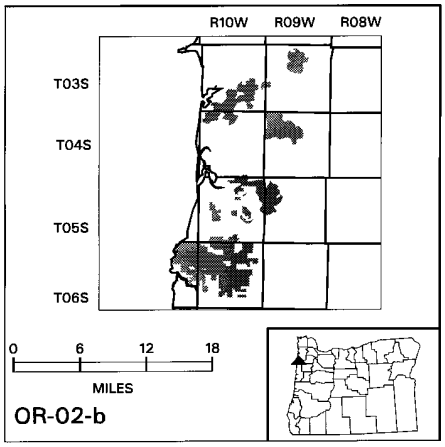
T.05S., R.10W. Willamette Meridian: Section 1; Section 2 except S½ S½, NE¼ NE¼; NE¼, E½ NW¼, SE¼ SW¼, SW¼ NW¼, SW¼ SE¼, NE¼ SW¼ Section 3; S½ NE¼ Section 4; N½ NE¼, E½ NW¼, NW¼ NW¼, SW¼ SE¼, SE¼ SW¼ Section 10; NW¼ NW¼, SE¼ NW¼, NW¼ SW¼ Section 11; E½, E½ NW¼, SW¼ NW¼, NE¼ SW¼ Section 12; NE¼ NW¼, E½ Section 13; SW¼ Section 14; SW¼, SW¼ NW¼ Section 17; Section 20 except W½ W½, SE¼ NE¼; NW¼, E½ SE¼ Section 22; SE¼ NW¼, NW¼ SE¼, SW¼ NE¼, SW¼ SW¼, SE¼ SE¼, NW¼ SE¼, N½ N½ Section 23; NW¼ NE¼, E½ NW¼ Section 24; N½ N½ Section 26; S½ Section 32; S½ S½, NE¼ SE¼, NW¼ SW¼, SW¼ NW¼, SE¼ NE¼ Section 33; W½ SE¼ Section 34.

T.06S., R.10W. Willamette Meridian: Section 2; W½ W½, SE¼ SE¼, NE¼ SW¼ Section 3; Section 4; N½ S½, N½ Section 5; W½ W½, E½ SW¼, E½ SE¼ Section 6; Section 7; Section 8 except N½ NE¼; Section 9 except NW¼ NW¼, SE¼ SW¼, S½ SE¼; Section 10; Section 11 except NE¼, SE¼ SE¼; SW¼ Section 12; S½, NW¼ NE¼ Section 14; W½, SE¼ Section 15; Section 16 except N½ NE¼; Section 17–18; NW¼, W½ SW¼, W½ E½ Section 19; W½ NE¼, E½ NW¼ Section 20; Sections 21–22; W½, W½ E½ Section 23; S½ NW¼, S½ SW¼ Section 26; W½ W½, NE¼, NE¼ NW¼, SE¼ SE¼ Section 27; Section 28 except SW¼ NW¼; NE¼, NW¼ SE¼ Section 30.

T.06S., R.11W. Willamette Meridian: Section 1–2; Section 11; Section 12; Section 13 except SE¼ NW¼, SW¼ NE¼; NE¼, N½ SE¼ Section 14; Section 24 except SE¼ SE¼, N½ NW¼.

Critical Habitat includes only State lands described within the following areas:

T.05S., R.10W. Willamette Meridian: S½ NE¼, E½ SE¼ Section 10; E½ SE¼, SE¼ NE¼ Section 11.



Map and description of OR–02–c taken from United States Fish and Wildlife Service 1:100,000 map; Yamhill River and Corvallis, Oregon; 1995.

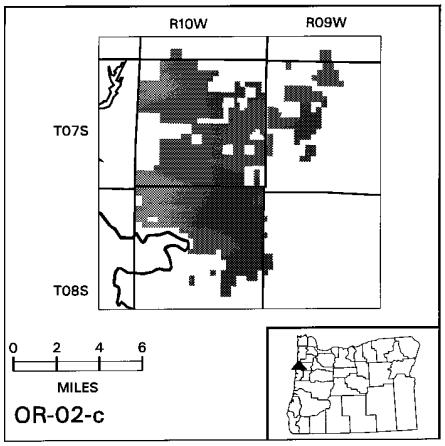
Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.06S., R.10W. Willamette Meridian: SE¼ Section 32.

T.07S., R.09W. Willamette Meridian: SW¼, W½ NW¼, SE¼ NW¼, SW¼ SE¼ Section 3; SE¼, E½ NE¼, SW¼ NE¼, NE¼ SW¼ Section 4; W½ NW¼ Section 5; Section 8 except S½ SW¼ SW¼ SE¼; Section 9 except N½ NE¼, SE¼ NE¼, NE¼ NW¼, SW¼ SE¼, SE¼ SW¼; Section 16 except E½ E½, NE¼ NW¼; S½, E½ NE¼ Section 17; Section 18 except NE¼ NE¼; SW¼, S½ NW¼ Section 19; NE¼, NW¼ SE¼ Section 20; W½ NW¼, NE¼ NW¼, S½ SW¼ Section 21; N½ NW¼, SW¼ NW¼ Section 28; SE¼ NE¼ Section 29; N½ NW¼ Section 30.

T.07S., R.10W. Willamette Meridian: SW¼, NW¼ SE¼ Section 3; Section 4 except E½ NE¼; Section 5; Sections 7–9; Section 10 except E½ NW¼, NE¼; N½ S½, E½ NE¼, SW¼ SE¼, SE¼ NE¼ Section 11; Section 12 except S½ NW¼, N½ SW¼, E½ NE¼; Section 13; Section 14 except N½ NW¼, SW¼ NW¼, W½ SW¼, NE¼ NE¼; Section 15 except S½ S½; Section 16 except SE¼ SE¼; Section 17; N½ Section 18; S½ S½ Section 20; NE¼, SW¼ Section 21; Sections 22–23; Section 24 except NW¼ SE¼, SW¼ NE¼, NE¼ SW¼; Section 25 except NW¼; Section 26 except NW¼; Sections 27–29; Section 31 except N½ NW¼, NW¼ NE¼; Sections 32–35.

T.08S., R.10W. Willamette Meridian: Sections 1–5; Section 6 except NW¼ SW¼, SW¼ NW¼; Section 7 except NW¼ SW¼, S½ SW¼, S½ SE¼ S½ NE¼; Section 8 except S½ S½; Sections 9–14; Section 15 except SE¼ SE¼; E½ E½, NW¼ NE¼, SW¼ SE¼ Section 16; SW¼ SE¼ Section 22; Sections 23 except SW¼ NW¼, NW¼ SW¼; Section 24 except SE¼ SE¼; NE¼ NW¼, NW¼ NE¼ Section 25; Section 26 except SE¼, E½ NE¼; W½ NE¼ Section 28.



Map and description of OR–02–d taken from United States Fish and Wildlife Service 1:100,000 map; Corvallis, Oregon; 1995.

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.07S., R.06W. Willamette Meridian: SW¼ Section 4; Section 5 except N½ NE¼, NW¼ NW¼; Section 6 except NE¼, N½ NW¼, NW¼ SE¼; Section 7; S½ S½, NE¼ SW¼, N½ SE¼, SE¼ NE¼ Section 9; Section 17 except NW¼, W½ NE¼, NW¼ SW¼.

T.07S., R.07W. Willamette Meridian: Section 1 except N½ NE¼; Sections 2–3;

Section 4 except N½ NW¼, NW¼ NE¼; Section 5; Section 7; N½ Section 8; Section 9; Section 11 except SE¼ SW¼, SW¼ SE¼; Section 13 except NE¼ SE¼; Section 15; Section 17; N½ Section 18; Section 19; Section 21; Section 23; N½ Section 25; N½ Section 26; Section 27; Section 29; Section 31; Section 33; NW¼ Section 34.

T.07S., R.08W. Willamette Meridian: Section 1; SE¼ Section 12; Section 13; S½, S½ N½ Section 14; Section 15 except W½ W½; Section 17; Section 18 except W½ W½; Section 19 except W½ W½; W½ Section 20; Section 23; Section 25; Section 27; Section 28 except E½ SW¼, S½ NW¼; Section 29 except SE¼; Section 30 except W½ W½; Section 31 except W½ W½, E½ SE¼; Section 32 except NE¼; N½, N½ SW¼, NW¼ SE¼ Section 33; Section 35.

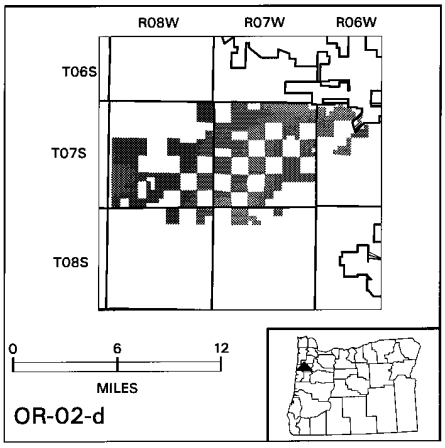
T.08S., R.07W. Willamette Meridian: NE¼ Section 3; SW¼ SE¼, N½ SW¼, SE¼ SW¼ Section 4; Section 5; NE¼ NE¼ Section 17.

T.08S., R.08W. Willamette Meridian: Section 1 except SE¼; Section 3 except W½ W½.

Description of Lands Using Protracted Public Land Survey Lines

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.07S., R.06W. Willamette Meridian: SE¼ SW¼, SW¼ SE¼ Section 4; E½ NW¼ Section 9.



Map and description of OR–02–e taken from United States Fish and Wildlife Service 1:100,000 map; Yamhill River, Oregon; 1995.

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.01S., R.05W. Willamette Meridian: Section 19 except NW¼.

T.02S., R.05W. Willamette Meridian: N½ N½ Section 3; SW¼ NE¼ Section 5; SW¼ SE¼, SE¼ NE¼ Section 7.

T.02S., R.06W. Willamette Meridian: S½ NW¼ Section 25; S½ NW¼, NE¼, S½ S½ Section 26; Section 35.

T.02S., R.08W. Willamette Meridian: Section 31 except W½ NW¼, E½ SE¼; NW¼, SW¼ NE¼, SE¼, N½ SW¼ Section 32; Section 33 except NW¼ NW¼; W½ NW¼, NW¼ SW¼ Section 34.

T.03S., R.06W. Willamette Meridian: N½ NW¼ Section 1; Section 7; SE¼, NE¼ SW¼ Section 13; S½ SW¼ Section 16; Sections 17–20; W½, W½ E½ Section 21; SE¼ SE¼ Section 27; SW¼, S½ NW¼, NW¼ SE¼, SW¼ NE¼ Section 28; Section 29; Section 30 except NE¼; Section 31; W½ Section 32; Section 33 except SW¼; SE¼ Section 36.

T.03S., R.07W. Willamette Meridian: S½ Section 5; Section 7; S½ NE¼, W½ NW¼, N½ SW¼, N½ SE¼, SE¼ SE¼ Section 8; Section 9; Section 10 except N½ NE¼, NW¼ NW¼; Section 11; Section 12 except E½ E½, SW¼ NE¼; Sections 13–15; S½ Section 16; Section 17; SW¼, N½ NE¼, W½ NW¼ Section 18; Section 19; Section 20 except W½ W½, SE¼ SW¼; Sections 21–25; E½ Section 26; Sections 27–29; E½ Section 30; Section 31; Section 32 except S½ SE¼, NE¼ SE¼; Section 33 except NW¼ NW¼, SW¼ SW¼; N½, SE¼ Section 34; Section 35; W½ Section 36.

T.03S., R.08W. Willamette Meridian: SW¼, S½ SE¼ Section 1; SW¼ SE¼ Section 2; Section 3; NW¼, S½ SE¼, W½ SW¼, SE¼ SW¼ Section 4; Section 5 except NW¼, SW¼ NE¼; N½ NW¼, SE¼ Section 6; Section 7 except N½ NE¼, SW¼ NE¼, E½ NW¼; Section 8 except S½ SE¼; Section 9; Section 10 except N½ NW¼, NW¼ NE¼; Section 11; Section 13; NE¼, N½ NW¼, SE¼ SW¼ Section 14; Section 15 except SW¼; W½ SW¼ Section 16; SW¼ SE¼, NW¼ NW¼ Section 17; Section 18 except S½ SE¼; Section 19 except N½ NE¼; NE¼ Section 20; Section 21 except NW¼, N½ NE¼; Section 22 except SW¼ NE¼, SE¼ NW¼; Section 23; Section 24 except N½ NE¼, SE¼ NE¼; Section 25 except NE¼ SW¼, SW¼ NE¼, NW¼ SE¼, SE¼ NW¼; N½ NE¼, NW¼ NW¼, SE¼ SE¼; Section 26; Section 27 except NE¼ SW¼, SW¼ NE¼, NW¼ SE¼, SE¼ NW¼; S½ S½, NW¼ NW¼ Section 29; S½, W½ NW¼ Section 31; Section 32 except SW¼, SW¼ NW¼, W½ SE¼; Sections 33–34; S½ Section 35; W½ NE¼ Section 36.

T.03S., R.09W. Willamette Meridian: Section 1 except S½ SE¼, NE¼ SE¼, SW¼ NW¼; SE¼ SE¼ Section 2; SE¼ SE¼ Section 10; Section 11 except NW¼; Section 12 except NE¼ NE¼; Section 13 except W½ NW¼, E½ NE¼; Section 14 except SW¼; NE¼ NE¼ Section 15; NE¼ Section 23; E½ NW¼, NE¼ Section 24.

T.04S., R05W. Willamette Meridian: NW¼ SE¼ Section 19.

T.04S., R.06W. Willamette Meridian: Section 5 except E½ E½, SW¼ SE¼; Sections 6–7; S½ SW¼, W½ SE¼ Section 18.

T.04S., R.07W. Willamette Meridian: Section 1 except NE¼; W½, N½ NE¼ Section 2; Section 3 except NW¼; E½ E½, NW¼ NE¼, NE¼ NW¼, SE¼ SW¼, SW¼ SE¼ Section 4; N½, E½ SE¼, SW¼ SW¼ Section 5; Section 6 except NE¼, W½ SE¼; Section 7; SW¼, NE¼ SE¼ Section 8; Section 9; N½ Section 10; Section 11; Section 12 except SE¼ SW¼; Section 13; Section 14 except N½ NW¼, S½ NE¼, E½ SE¼; Section 15 except SW¼ SW¼; E½ E½, NW¼ NE¼ Section 16; Section 17 except N½ S½; Section 18 except NW¼.

T.04S., R.08W. Willamette Meridian: SE¼ NE¼, SE¼, Section 1; NW¼ NE¼, N½ NW¼, E½ SW¼, SE¼ Section 2; N½ N½, S½ S½ Section 3; Section 4 except S½ SE¼, NE¼ SE¼, SE¼ SW¼; Sections 5–8; Section 9 except NW¼ NE¼, NE¼ NW1/4; Section 10; Section 11 except SE¼ NE¼, NE¼ SE¼; Section 12 except NE¼ SE¼, E½ NE¼; Sections 13–14; Section 15 except N½ NE¼; Section 16; Sections 17–25; Section 26 except W½ SW¼; Section 27 except E½ SE¼; Section 28–35; N½ Section 36.

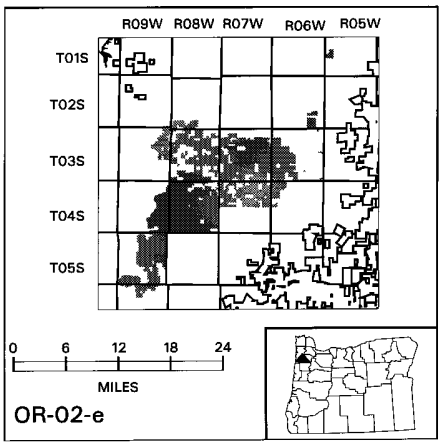
T.04S., R.09W. Willamette Meridian: SE¼, SE¼ NE¼ Section 1; SE¼, E½ SW¼ Section 11; Section 12 except NW¼; Section 13; E½, E½ NW¼ Section 14; SE¼ SE¼ Section 22; Section 23 except N½ NW¼, SW¼ NW¼; Sections 24–26; SE¼, E½ NE¼, SW¼ NE¼, SE¼ NW¼ Section 27; NE¼, SE¼ SE¼ Section 34; N½ N½, S½ S½, SW¼ NW¼, SE¼ NE¼, NE¼ SE¼ Section 35; Section 36.

T.05S., R.09W. Willamette Meridian: Sections 1–2; NE¼ NE¼, SW¼, SE¼, SW¼ NW¼ Section 3; Section 4 except N½ N½, SW¼ NW¼, W½ SW¼; W½, NE¼ NW¼ Section 9; Section 10–15; Section 16 except W½ W½, NE¼ NW¼; Section 21 except W½ W½, SE¼ SW¼ ¼; Section 22; Section 23 except SE¼, SW¼ NW¼; Section 24 except SW¼; NE¼ NE¼ Section 25; Section 26 except E½ E½; Section 27 except E½ NE¼, SW¼, NW¼ NW¼; Section 31 except N½ NW¼; Section 32; Section 33 except E½ E½; Section 34 except W½; Section 35.

T.06S., R.09W. Willamette Meridian: N½ SW¼, NW¼ NE¼, NW¼ Section 2; N½, N½ SW¼, SW¼ SW¼ Section 3; Section 4 except SE¼ SE¼, SW¼ NW¼, W½ SW¼; N½ Section 5; N½ N½ Section 6; NE¼, E½ NW¼ Section 9.

Critical Habitat includes only State lands described within the following areas:

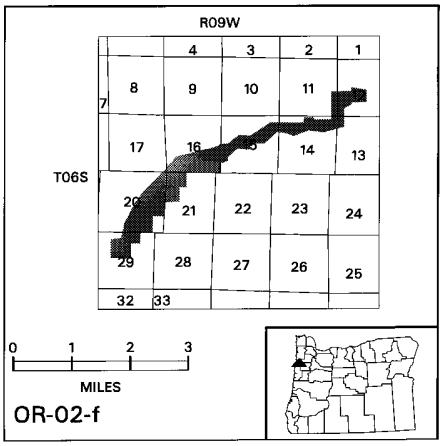
T.03S., R.07W. Willamette Meridian: N½ Section 16.



Map and description of OR–02-f taken from United States Fish and Wildlife Service 1:100,000 map; Yamhill River, Oregon; 1995.

Critical Habitat includes only State lands described within the following areas:

T.06S., R.09W. Willamette Meridian: E½ SE¼ Section 11; N½ SW¼, SW¼ SW¼ Section 12; NW¼ NW¼ Section 13; N½ NE¼, NW¼ Section 14; S½ NE¼, S½ NW¼, N½ SW¼, NE¼ NE¼, SW¼ SW¼ Section 15; S½ SW¼, SE¼, NE¼ SW¼ Section 16; E½ NE¼, SW¼ NE¼, SE¼, SE¼ SW¼ Section 20; W½ NW¼, NE¼ NW¼ Section 21; W½ NE¼, E½ NW¼ Section 29.



Map and description of OR–03–a taken from United States Fish and Wildlife Service 1:100,000 map; Corvallis, Oregon; 1995.

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.09S., R.09W. Willamette Meridian: SE¼ SE¼ Section 33; SW¼ SW¼ Section 34.

T.10S., R.10W. Willamette Meridian: NW¼ SE¼ Section 2.

Critical Habitat includes only State lands described within the following areas:

T.09S., R.09W. Willamette Meridian: E½ SW¼, W½ SE¼, NE¼ SE¼ Section 34.

T.10S., R.09W. Willamette Meridian: NW¼, W½ NE¼ Section 16; N½ NE¼, NE¼ NW¼ Section 17.

Critical Habitat includes only County lands described within the following areas:

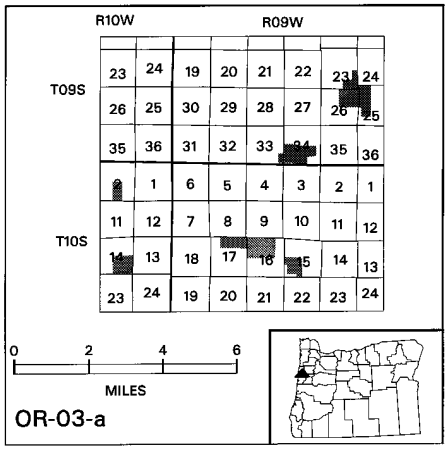
T.10S., R.10W. Willamette Meridian:SW¼ SE¼ Section 2.

Critical Habitat includes only Private lands described within the following areas:

T.09S., R.09W. Willamette Meridian: S½ SE¼, NE¼ SE¼ Section 23; W½ NW¼, NW¼ SW¼ Section 25; NE¼ Section 26; W½ SW¼ Section 34.

T.10S., R.09W. Willamette Meridian: SW¼ Section 15.

T.10S., R.10W. Willamette Meridian: SE¼ Section 14.



Map and description of OR–03–b taken from United States Fish and Wildlife Service 1:100,000 map; Corvallis, Oregon; 1995.

Critical Habitat includes only State lands described within the following areas:

T.10S., R.06W. Willamette Meridian: W½ SW¼ Section 30.

T.10S., R.07W. Willamette Meridian: S½ Section 25; N½ Section 36.

T.11S., R.07W. Willamette Meridian: S½ N½, SE¼ Section 16; N½ Section 21; S½, NW¼ Section 29; Section 31; Section 32 except E½ SE¼, NE¼ SE¼.

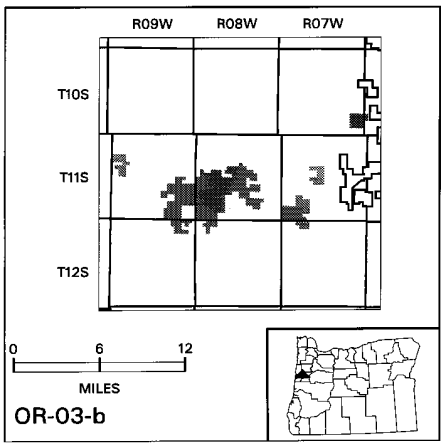
T.11S., R.08W. Willamette Meridian: W½ SW¼ Section 14; Section 15 except N½ NE¼; Section 16 except S½ SW¼; SW¼, W½ SE¼ Section 17; S½ SE¼, E½ SW¼ Section 18; Sections 19–21; W½, S½ SE¼, NE¼ SE¼, NE¼ NE¼ Section 22; SW¼, NW¼ NW¼ Section 23; SW¼, NW¼ SE¼, S½ N½ Section 26; Section 27 except SW¼, NE¼ NE¼; N½ NW¼ Section 28; Sections 29–31; Section 32 except SE¼; N½ NW¼ Section 35.

T.11S., R.09W. Willamette Meridian: S½ Section 7; NW¼ NW¼ Section 17; SE¼, S½ NE¼, NE¼ NE¼, SE¼ NW¼ Section 18; Section 23 except NW¼; S½, NW¼ NW¼ Section 24; Section 25; Section 26 except S½ NW¼, N½ SW¼; NE¼ Section 27; E½ SE¼, SE¼ NE¼ Section 34; Section 35.

T.12S., R.07W. Willamette Meridian: Section 5 except S½, SW¼ NW¼.

T.12S., R.08W. Willamette Meridian: NW¼ Section 5; E½ E½, SW¼ NE¼ Section 6.

T.12S., R.09W. Willamette Meridian S½ SW¼, N½ NW¼, SE¼ NW¼, NW¼ NE¼ Section 1; E½, E½ NW¼ Section 2.



Map and description of OR–03–c taken from United States Fish and Wildlife Service 1:100,000 map; Corvallis, Oregon; 1995.

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.08S., R.06W. Willamette Meridian: SE¼ NE¼, NE¼ NE¼, SW¼ NE¼, S½ NW¼, NW¼ NW¼, S½ SE¼, SW¼ Section 31; W½ NW¼ Section 33.

T.08S., R.07W. Willamette Meridian: Section 31 except S½ SE¼.

T.09S., R.06W. Willamette Meridian: N½ NE¼, NW¼ Section 5; NE¼, NW¼, N½ SE¼ Section 7.

T.09S., R.07W. Willamette Meridian: Section 1 except NW¼ NW¼; Section 3 except NE¼; Section 9 except SE¼ SE¼; Section 11; Section 13; W½, W½ NE¼, NW¼ SE¼ Section 15; SE¼, E½ SW¼ Section 17; NW¼, NW¼ SW¼ Section 21; E½ NE¼, NE¼ SE¼ Section 23; Section 29 except SE¼; Section 31; S½, SE¼ NW¼ Section 33; W½ W½, NE¼ NE¼ Section 35.

T.09S., R.08W. Willamette Meridian: N½ NW¼, SW¼ NW¼, W½ SW¼ Section 11; Section 27 except N½ NE¼; Section 35.

T.10S., R.05W. Willamette Meridian: SW¼ NE¼, W½ SE¼, SW¼, SE¼ NW¼ Section 29.

T.10S., R.07W. Willamette Meridian: N½ Section 1; W½ NW¼ Section 4; N½ Section 5.

Critical Habitat includes only State lands described within the following areas:

T.08S., R.07W. Willamette Meridian: SE¼ Section 11; SE¼ ¼ Section 12; N½, N½ SE¼ Section 13; E½, SW¼ Section 14.

T.09S., R.08W. Willamette Meridian: Section 28 except N½ N½; S½, NW¼, S½ NE¼ Section 29; SE¼ Section 32; NE¼ Section 33; Section 34 except NW¼; Section 36 except N½ N½.

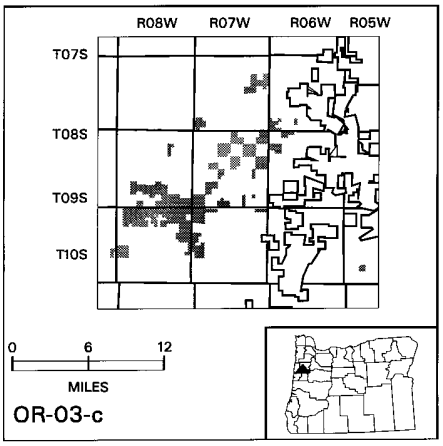
T.10S., R.07W. Willamette Meridian: Section 6; N½ N½ Section 7; NW¼, SW¼, SE¼ SE¼, NW¼ NE¼ Section 18; Section 19 except W½ SW¼.

T.10S., R.08W. Willamette Meridian: Section 1 except SE¼; Section 2; NE¼, NW¼, NW¼ SW1¼, SW¼ SW¼, NE¼ SE¼, NW¼ SE¼ Section 3; Section 4 except SW¼ SE¼, SE¼ SW¼; Section 5; E½

Section 6; NE¼ Section 7; NE¼, E½ NW¼, NW¼ NW¼ Section 8; NW¼, NE¼ NE¼ Section 9; NW¼, NE¼ Section 10; N½ N½ Section 11; Section 12; Section 13 except S½ SW¼, SW¼ SE¼; Section 19; E½ NE¼, N½ SE¼ Section 24.

Critical Habitat includes only Private lands described within the following areas:

T.09S., R.08W. Willamette Meridian: S½ SW¼ Section 29.



Map and description of OR–04–a taken from United States Fish and Wildlife Service 1:100,000 map; Corvallis, Waldport and Eugene, Oregon; 1995.

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.11S., R.10W. Willamette Meridian: SE¼ SE¼ Section 35.

T.12S., R.09W. Willamette Meridian: N½ N½ Section 6; Section 7 except NW¼ NE¼; Section 8 except NE¼ NW¼, W½ NE¼, NE¼ NE¼; SE¼ SE¼ Section 14; S½ NW¼, SW¼, W½ SE¼ Section 15; S½, S½ N½ Section 16; Sections 17–18; Section 19 except W½ W½, NE¼ NE¼, SE¼ SW¼; Section 20 except SE¼ NW¼, S½ NE¼; Section 21; Section 22 except NE¼ NE¼; Section 23 except NW¼ NW¼; Section 26 except NE¼ NE¼, SE¼ SE¼; Sections 27–28; N½ NW¼, NW¼ NE¼ Section 29; W½ Section 33.

T.12S., R.10W. Willamette Meridian: Sections 1–2; Section 3 except E½ NW¼, S½ NE¼; Section 4; S½, E½ NE¼, SW¼ NW¼ Section 5; SE¼ SE¼ Section 6; Sections 7–8; N½, N½ SE¼ Section 9; N1½ Section 10; Section 11 except SW¼ SW¼; Section 12; W½ NE¼, E½ NW¼, NE¼ NE¼ Section 13; Sections 16–17; Section 18; Sections 19–21; Section 25 except S½ S½, N½ NW¼; S½ SE¼ Section 26; Section 28; Section 29 except SW¼, NW¼ SE¼; Section 30 except S½ S½; E½ SE¼ Section 31; Section 32 except W½ NW¼; Section 33 except SW¼ SE¼; N½ SE¼, NE¼ Section 35.

T.12S., R.11W. Willamette Meridian: S½ NW¼, S½ SW¼, NE¼ SW¼, W½ SE¼, SW¼ NE¼ Section 9; SE¼, S½ SW¼, SW¼ SW¼ Section 11; S½ Section 12; Section 13 except S½ S½; Section 14 except N½ SW¼, N½ SE¼, SE¼ SE¼; NE¼ Section 22; Sections 23–24; Section 25 except W½ SW¼, SW¼ NW¼; Section 26 except SE¼ NE¼; E½ Section 27; Section 35; Section 36 except E½ SE¼, SE¼ NE¼.

T.13S., R.09W. Willamette Meridian: Section 2 except SE¼; NE¼ Section 4; SW¼ Section 5; Section 6–7; W½ Section 8; Sections 18–19; N½ SW¼, E½ SE¼, NW¼ SE¼ Section 20; SW¼ SW¼ Section 21; Section 28 except N½ NE¼, NE¼ NW¼; Section 29 except NW¼ SW¼; Section 30; Section 31 except N½ SW¼, S½ NW¼; Section 32–33; W½ W½, E½ SW¼, SE¼ Section 34; SW¼ SE¼, SE¼ SW¼ Section 35.

T.13S., R.10W. Willamette Meridian: Section 1; Section 2; E½ E½ Section 3; S½ SW¼, SW¼ NE¼, W½ SE¼ Section 7; E½ SE¼ Section 9; Section 10 except SW¼ NW¼; Sections 11–15; Section 16 except N½ NW¼; Section 17 except N½, NW¼ SW¼; Section 18; Sections 19–25; Section 26 except SW¼ SW¼, SE¼ SE¼; N½ NE¼, SE¼ NE¼, Section 27; SE¼ SW¼, NW¼ Section 28; Section 29; N½, N½ SE¼, NE¼ SW¼, SW¼ SW¼ Section 30; S½, E½ NE¼ Section 31; E½ SE¼, S½ SW¼, NW¼ SW¼, NW¼, NW¼ NE¼ Section 32; W½ Section 33; E½ SE¼, NE¼ SE¼, NE¼ NE¼ Section 34; Section 35 except SE¼ NE¼, NE¼ NW¼.

T.13S., R.11W. Willamette Meridian: Section 1 except SE¼ SE¼; Section 2; Section 11 except W½ SW¼, SE¼ SW¼; NW¼, W½ NE¼, W½ SW¼, SE¼ SE¼ Section 12; Section 13 except W½ W½, NE¼ NW¼, S½ SE¼; N½ N½, SW¼ NW¼, S½ SW¼, SW¼ SE¼, SE¼ SW¼ Section 14; Section 15 except N½ NW¼, SW¼ NW¼, NW¼ SW¼; NE¼ NW¼, N½ NE¼ Section 22; NW¼, SW¼ NE¼ Section 23; S½ NE¼, S½, NW¼ NW¼ Section 24; Section 25 except S½ N½, N½ SE¼; S½ SW¼, NW¼ SW¼, SE¼ Section 26; E½, E½ W½ Section 34; Section 35; Section 36 except SE¼, E½ NE¼.

T.14S., R.09W. Willamette Meridian: Section 2 except NE¼ NE¼, S½ S½; Section 3 except S½ S½, N½ SW¼; Section 4 except S½ S½, N½ SE¼; Section 5 except S½ SE¼, N½ SW¼, SE¼ SW¼, NW¼ SE¼; E½, S½ SW¼ Section 6; Section 7 except S½ SW¼, NW¼ SE¼, NE¼ SW¼; N½ NW¼, SE¼, S½ SW¼, SE¼ NE¼ Section 8; Section 9 except NW¼ NW¼; Section 10 except N½ NE¼; Section 11 except N½ NW¼, NE¼, N½ SE¼, SW¼ SE¼; S½ S½ Section 12; SW¼, S½ SE¼, N½ NW¼, NW¼ NE¼ Section 13; Sections 14 except NW¼ NE¼, SE¼ NW¼, N½ SW¼, SE¼ SW¼; Sections 15–16; S½ NE¼, N½ SW¼, SE¼ NW¼, SW¼ SW¼ Section 18; N½ NW¼, NE¼, SW¼ NW¼, NE¼ SE¼, SE¼ SW¼ Section 19; S½ NW¼, NW¼ SW¼ Section 20; N½ NE¼, NE¼ NW¼ Section 21; NW¼ NW¼ Section 22; E½, E½ NW¼ Section 23; W½ W½ Section 24; W½, W½ E½ Section 25; E½ Section 26; S½ NW¼, NW¼ NW¼ Section 36.

T.14S., R.10W. Willamette Meridian: Section 1 except N½ SE¼, E½ NE¼; Section 2; Section 3 except SW¼; Section 4; Section 5 except W½ NE¼, SE¼ NW¼; Section 6; N½ Section 7; Section 8 except SW¼; Section 9 except S½ SW¼; Sections 10–13; Section 14; Section 15; N½, N½ SE¼, SE¼ SE¼, NE¼ SW¼ Section 16; Section 17 except N½ NW¼; N½ Section 20; E½, E½ NW¼, NW¼ SW¼ Section 23; Section 24 except E½ NE¼, NE¼ SE¼; NW¼ Section 25.

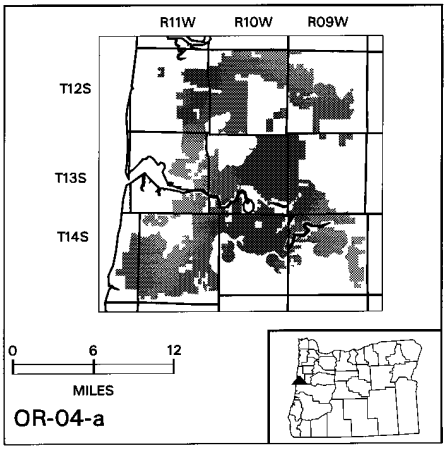
T.14S., R.11W. Willamette Meridian: Sections 1–2; SE¼ NW¼, SW¼ SE¼; Section 3; N½ NE¼, NE¼ NW¼, W½ NW¼ Section 4; S½ NW¼, NW¼ NW¼, SW¼ SE¼, NE¼, S½ SW¼ Section 5; NE¼, SE¼ NW¼ Section 6; Section 7; Section 8 except NE¼ NE¼; S½ SE¼, NE¼ SE¼, SW¼ NW¼, W½ SW¼ Section 9; Section 10 except W½ W½, NE¼ NW¼, NE¼ SW¼, NE¼ NE¼; Section 11; W½, NW¼ NE¼ Section 12; W½ W½, NE¼ NW¼ Section 13; Section 14; Section 15 except NE¼ SE¼; Section 16 except NW¼ NW¼; Section 17 except SE¼ NE¼; Sections 18–21; Section 22 except S½ N½, N½ SW¼, N½ NE¼; Section 23; Section 24 except NE¼; Section 25 except W½ NW¼; Section 26 except NE¼ NE¼, S½ SE¼, NE¼ SW¼; Sections 27–30; N½, NE¼ SW¼ Section 31; NW¼, N½ NE¼, N½ SW¼ Section 32; N½ Section 33; N½ N½, SW¼ NW¼ Section 34; N½ NW¼ Section 35.

T.14S., R.12W. Willamette Meridian: S½ SE¼, SE¼ SW¼ Section 1; Section 12 except W½ W½; Section 13 except NW¼ NW¼; E½ SE¼, SE¼ NE¼ Section 14; SE¼, E½ NE¼, W½ SW¼ Section 23; Sections 24–25.

Description of Lands Using Protracted Public Land Survey Lines

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.14S., R.09W. Willamette Meridian: E½ NW¼, W½ NE¼ Section 8.



Map and description of OR–04–b taken from United States Fish and Wildlife Service 1:100,000 map; Waldport, Eugene, Oregon; 1995.

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.14S., R.09W. Willamette Meridian: SE¼, S½ SW¼, NW¼ SW¼, SW¼ NW¼ Section 28; Section 29 except N½ NE¼; S½, S½ N½ Section 30; Section 31; Section 32; Section 33 except SE¼ NE¼, NE¼ SW¼; Section 34 except W½ NW¼, W½ NE¼; S½ S½, SW¼ NW¼, E½ NW¼, N½ SW¼ Section 35.

T.14S., R.10W. Willamette Meridian: SE¼ NE¼, E½ SE¼ Section 25; Section 29 except NE¼ NE¼; Sections 30–32.

T.14S., R.11W. Willamette Meridian: SE¼, S½ SW¼ Section 35; Section 36 except NW¼, N½ NE¼.

T.15S., R.09W. Willamette Meridian: W½ W½ Section 1; Sections 2–5; Section 6 except S½ SW¼, SW¼ SE¼; E½ NE¼, SW¼ NE¼, SW¼, W½ SE¼, W½ NW¼ Section 7; N½ NW¼, NW¼ NE¼, E½ SE¼, SW¼ SE¼, SE¼ SW¼ Section 8; Section 9 except S½ SW¼; Section 10 except SE¼; Section 11; N½ SW¼, S½ NW¼, NW¼ NW¼ Section 12; E½, E½ SW¼, SW¼ SW¼, NW¼ NW¼, SE¼ NW¼ Section 13; Section 14 except NE¼ SE¼; Section 15; E½ NE¼, SW¼ NE¼, S½ NW¼, NW¼ NW¼, SE¼, E½ SW¼ Section 16; E½ NE¼, SW¼ NE¼, W½ SW¼ Section 17; Section 18 except NE¼ NE¼; Section 19; SE¼, NW¼ NW¼, S½ NE¼ Section 20; Section 21; Section 22 except E½ SW¼; Sections 23–26; E½, E½ SW¼, SW¼ SW¼, SE¼ NW¼ Section 27; Section 28; E½, E½ NW¼, SE¼ SW¼ Section 29; N½ NW¼, NW¼ NE¼ Section 30; Section 32 except W½ NW¼, NW¼ SW¼; Sections 33–36.

T.15S., R.10W. Willamette Meridian: Section 1 except N½ NW¼, SE¼ NW¼, NW¼ NE¼, SE¼; E½ SE¼ Section 2; W½ SW¼, SE¼ SW¼ Section 4; Sections 5–8; W½, W½ SE¼, SW¼ NE¼ Section 9; NE¼ NE¼ Section 11; NW¼, E½ Section 12; E½ NE¼, NW¼ NE¼, S½ SW¼ Section 13; SW¼, SW¼ NW¼, SE¼ SE¼ Section 14; SW¼ SW¼, E½ SW¼, E½ NW¼, E½ Section 15; S½ S½ Section 16; Sections 17–22; E½, SE¼ SW¼, NW¼ NW¼ Section 23; Section 24 except NE¼ NE¼, SW¼ SE¼; SW¼ Section 25; Section 26 except NE¼; Sections 27–34; E½, N½ NW¼, SE¼ NW¼, NE¼ SW¼ Section 35; NE¼ NW¼ Section 36.

T.15S., R.11W. Willamette Meridian: Section 1; N½ N½, SE¼ NE¼, SW¼ SW¼, SE¼ SE¼ Section 2; E½ SE¼, SW¼ SE¼, S½ SW¼ Section 3; Section 4 except N½ NW¼; NW¼ SW¼, SW¼ NW¼ Section 5; SW¼, W½ NW¼, SE¼ NW¼, S½ NE¼, SE¼ Section 6; W½ Section 7; NE¼, S½ NW¼, NE¼ SW¼, N½ SE¼, NE¼ NW¼ Section 8; Section 9 except SW¼ SW¼, NW¼ NE¼, NE¼ NW¼; Section 10–11; Section 12 except SE¼ SW¼; Section 13 except N½ NW¼, SE¼ NW¼; Section 14; Section 15 except SW¼; NE¼ NE¼ Section 16; E½ SE¼ Section 21; E½ E½, W½ SE¼, SW¼ Section 22; Sections 23–27; Section 28 except N½ N½; S½, SE¼ NE¼ Section 29; S½, S½ NW¼, SW¼ NE¼ Section 30; Section 31 except N½ NW¼, NW¼ NE¼, SE¼ NE¼; Section 32 except S½ N½, NE¼ SE¼; Section 33 except S½ SE¼; Section 34 except S½ S½, NE¼ SE¼, SE¼ NE¼; Section 35 except SW¼ NW¼, NW¼ NE¼, NW¼ SW¼, S½ SW¼; Section 36.

T.15S., R.12W. Willamette Meridian: Section 1 except NW¼; Section 2; E½, E½ NW¼ Section 3; N½ NE¼, SE¼ NE¼, NE¼ NW¼ Section 10; Section 11 except SE¼ SE¼; Section 12 except S½ S½; SE¼ Section 22; Section 25 except NE¼ NE¼; S½, NE¼, S½ NW¼ Section 26; E½ E½ Section 27; E½ Section 34; Section 35; Section 36 except N½ N½.

T.16S., R.09W. Willamette Meridian: Section 1 except N½ S½, SE¼ SE¼; Section 2 except E½ SE¼; Sections 3–5; Section 6 except N½ N½, SW¼ NE¼; Section 7 except E½ NE¼; Sections 8–15; Section 16 except SE¼; Section 17; Section 18 except SW¼ SW¼; Section 19; NW¼ NW¼, NW¼ SW¼, N½ NE¼ Section 20; Section 21 except SW¼ SW¼; Sections 22–24; N½ NW¼, NW¼ SW¼, W½ NE¼, SW¼ NW¼ Section 25; Section 26 except S½ SE¼; Sections 27–28; Section 29 except N½ NW¼, NW¼ NE¼; Section 30; W½ Section 31; Sections 32–34; Section 35 except NE¼, S½ SW¼, E½ NW¼.

T.16S., R.10W. Willamette Meridian: SE¼, S½ NE¼ Section 1; SW¼ SE¼, SW¼ Section 2; Section 3 except E½ NE¼, NE¼ SE¼, NW¼ SW¼; SW¼, NW¼ NW¼, S½ SE¼, NE¼ NE¼ Section 4; Section 5 except SE¼ NE¼; Sections 6–9; Section 10 except SE¼ NE¼, SW¼ SW¼; N½, NW¼ SE¼, NE¼ SE¼, SW¼ SW¼ Section 11; Section 12 except SW¼ NE¼, NW¼; Section 13 except S½ SE¼, SE¼ SW¼; Section 14; Section 15 except W½ W½, SE¼ SW¼, NE¼ NW¼; Section 16 except N½ NE¼, S½ SE¼; Section 17–21; Section 22 except W½ E½, NE¼ NE¼; Section 23; Section 24 except NW¼ NE¼, E½ NW¼, NE¼ SW¼; N½ NW¼, NE¼ NE¼, E½ SE¼, W½ SW¼ Section 25; Section 26 except S½ SW¼, NW¼ SW¼; Section 27 except S½ NE¼, E½ SE¼, NW¼ SE¼; Section 28; Section 29 except SW¼ SE¼, SE¼ SW¼; Section 30 except NW¼ SE¼, NE¼ SW¼; Section 31; Section 32 except N½ N½; Section 33 except W½ NW¼, SE¼ NW¼, E½ NE¼, SW¼ NE¼; NW¼ NE¼, NW¼, W½ SW¼ Section 34; NE1/4 Section 35.

T.16S., R.11W. Willamette Meridian: E½, E½ NW¼ Section 1; Section 2 except SW¼ NW¼; W½ Section 3; Section 4–6; N½ N½, S½ NE¼ Section 8; N½ Section 9; Section 10 except SE¼ SE¼; Section 11 except S½ SW¼, SW¼ SE¼; Section 12 except NE¼ NW¼; Section 13; Section 14 except N½ NW¼; S½ NE¼, SE¼ Section 15; Section 19 except N½ N½, SE¼ NE¼, NE¼ SE¼; S½ SW¼, NE¼ SE¼, W½ SE¼ Section 20; S½ SE¼, SW¼ Section 21; Section 22 except NW¼ NW¼; Sections 23–27; Section 28 except NW¼ NW¼; Section 29 except NE¼ NE¼; Sections 30–36.

T.16S., R.12W. Willamette Meridian: Sections 1 except S½ S½; Section 2; E½ Section 3; NE¼, N½ SE¼, SW¼ SE¼, E½ SW¼ Section 10; N½ Section 11; S½ S½ Section 14; W½, SE¼ SE¼ Section 15; N½ NE¼ Section 22; Section 23 except N½ NE¼; Sections 24–26; Sections 35–36.

T.17S., R.08W. Willamette Meridian: N½ SE¼ Section 18.

T.17S., R.09W. Willamette Meridian: Section 1 except E½ SE¼, SW¼ SE¼; Section 2 except E½ W½, S½ NE¼; Section 3 except S½ SE¼, NE¼ SE¼, SE¼ NE¼; Section 4 except S½ SW¼, SW¼ SE¼; Section 5; Section 6 except NW¼; Section 7; Section 8; W½ Section 9; N½ NW¼, NW¼ NE¼ Section 10; W½ NE¼, E½ NW¼, NE¼ NE¼, S½ SW¼ Section 11; SE¼ SE¼ Section 14; W½ W½ Section 16; Section 17 except W½ SE¼, SE¼ SW¼; Sections 18–19; Section 20 except E½ E½, NW¼ NE¼; NW¼ NW¼ Section 21; S½ SW¼ Section 25; S½ SE¼ Section 26; W½ NW¼ Section 28; N½ Section 29; N½ N½, W½ SW¼, SW¼ NW¼, SE¼ SW¼ Section 30; Section 31 except S½ NE¼, NE¼ SE¼; E½ NE¼, NW¼ NE¼, S½ SE¼, SW¼ NW¼ Section 32; S½ SE¼ Section 33; S½ S½, N½ SE¼ Section 34; S½ SE¼, SE¼ SW¼ Section 35.

T.17S., R.10W. Willamette Meridian: SE¼ SE¼ Section 1; Section 3 except E½, NE¼ NW¼; Section 4; Section 5 except SW¼ NW¼; Section 6 except S½ NE¼, NW¼ SE¼; Section 7–9; N½, NW¼ SE¼, W½ SW¼ Section 10; SW¼ NW¼ Section 11; E½ E½, NE¼ NW¼, NW¼ NE¼, SW¼ SE¼, S½ SW¼ Section 12; Section 13; S½, SE¼ NE¼, SW¼ NW¼ Section 14; SE¼, NW¼ NW¼, SE¼ NE¼ Section 15; Section 16 except W½ NE¼, NE¼ SE¼; Sections 17–18; Section 19 except SW¼ NW¼, SW¼ SE¼, S½ SW¼; Section 20–21; Section 22 except N½ NW¼; Section 23 except N½ SW¼, S½ SE¼; NW¼, N½ NE¼, N½ SW¼ Section 24; Section 25 except N½ NE¼; Section 26; Section 27 except SW¼ SW¼, SW¼ NW¼, NE¼ NW¼; Section 28 except SE¼ SE¼; Section 29 except S½ SW¼; Sections 30–31; Section 32 except N½ NW¼, NE¼ NW¼ ; Section 33 except NE¼ NE¼; NE¼, SW¼, SW¼ NW¼, SW¼ SE¼, NE¼ SE¼, NE¼ NW¼ Section 34; Section 35 except SW¼ SW¼, SW¼ SE¼.

T.17S., R.11W. Willamette Meridian: Section 1 except SE¼ SW¼, S½ SE¼; Section 2; S½, E½ NE¼, NW¼ NW¼, S½ NW¼ Section 3; Sections 4–5; Section 6 except S½ SE¼; S½ NE¼, S½, NE¼ NW¼, S½ NW¼ Section 7; Sections 8–9; NW¼, NW¼ SW¼ Section 10; Section 11 except SE¼ NW¼, W½ NW¼, SW¼; Section 12; SE¼ NE¼, N½ N½ Section 13; NE¼ NE¼, SW¼ SE¼, E½ SW¼ Section 14; Section 16 except E½ E½; W½, S½ SE¼, NW¼ SE¼ Section 17; Section 18; Section 19 except NW¼ NW¼, SW¼ SW¼; Section 20; W½, SW¼ NE¼, NW¼ SE¼ Section 21; E½ NE¼ Section 22; NW¼, W½ NE¼, N½ S½ Section 23; SE¼ SE¼ Section 24; Section 25 except N½ NW¼; E½ SE¼ Section 26; W½ Section 28; Section 29; S½ NW¼, NE¼, N½ SE¼, E½ SW¼, NE¼ NW¼ Section 30; Section 31 except NW¼, NW¼ NE¼, NW¼ SW¼; Section 32; W½ Section 33; SE¼, SE¼ NE¼ Section 34; Section 35 except N½ NW¼, NW¼ NE¼; Section 36.

T.17S., R.12W. Willamette Meridian: Section 1; Section 2 except W½ NW¼; SE¼, NE¼ SW¼ Section 3; NE¼, NE¼ SE¼ Section 10; N½ Section 11; Section 12 except S½ SW¼, NW¼ SW¼; E½ Section 13; E½ NE¼, E½ SE¼, NW¼ SE¼ Section 24.

T.18S., R.09W. Willamette Meridian: W½ NE¼, E½ NW¼, NW¼ NW¼ Section 1; Section 2 except S½ SE¼, NE¼ SE¼, SE¼ NE¼; Section 3; Section 4 except W½ SW¼; N½ NE¼ Section 5; N½ NE¼, NE¼ SE¼, SE¼ NE¼ Section 7; Section 8 except S½ S½, N½ NW¼; N½ N½, SW¼ NE¼ Section 9; E½ NE¼, SW¼ NE¼ Section 10; NE¼ NW¼ Section 11.

T.18S., R.10W. Willamette Meridian: N½ NE¼, SW¼ NE¼, NE¼ NW¼ Section 4; N½ NE¼, NW¼, W½ SW¼ Section 5; Section 6; N½ NE¼ Section 7; NW¼ NW¼ Section 8.

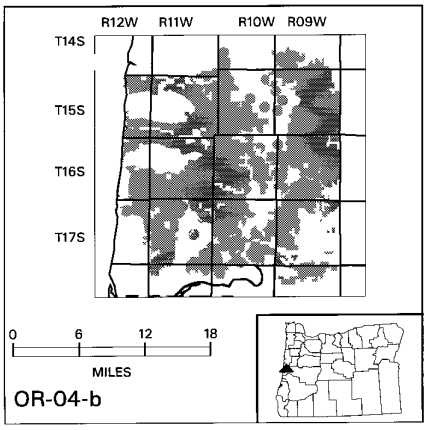
T.18S., R.11W. Willamette Meridian: Section 1 except SW¼ SW¼, SE¼ SE¼; N½, NW¼ SE¼ Section 2; NE¼, N½ SE¼, SE¼ SE¼ Section 3; NW¼ NW¼ Section 4; W½ NW¼, NE¼ NE¼, NE¼ NW¼ Section 5; Section 6 except SW¼ SW¼.

Critical Habitat includes only State lands described within the following areas:

T.17., R.08W. Willamette Meridian: S½ SE¼, NE¼ SE¼ Section 18; NE¼, NW¼ SE¼ Section 19.

T.17., R.09W. Willamette Meridian: N½ SW¼, SW¼ NE¼, S½ NW¼ Section 25; SE¼ NE¼, N½ SE¼ Section 26; Section 32 except N½ S½, E½ NE¼, SW¼ NW¼; S½ NW¼, NE¼ NW¼, NW¼ NE¼, NE¼ SW¼, S½ SW¼ Section 33.

T.18S., R.09W. Willamette Meridian: W½ SW¼ Section 4; SE¼, S½ NE¼, N½ NW¼ Section 5; N½ SE¼, SE¼ NE¼ Section 9.



Map and description of OR–04–c taken from United States Fish and Wildlife Service 1:100,000 map; Reedsport, Eugene and Cottage Grove, Oregon; 1995.

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.18S., R.09W. Willamette Meridian: SE¼ Section 23; Section 25; S½ SW¼, NW¼ SW¼, SW¼ SE¼ Section 26; Section 27 except N½, NW¼ SW¼; S½ SE¼ Section 28; S½ Section 32; Section 33 except NW¼ NW¼; Sections 34–36.

T.18S., R.10W. Willamette Meridian: SE¼ SE¼ Section 8; Section 9 except NE¼ SE¼, N½; NW¼ NW¼ Section 10; Section 15 except N1/2 NE¼, SE¼ NE¼; SW¼ SW¼ Section 16; Section 17 except NE1/4 NE¼; Section 18; Sections 19–20; E½ NE¼, SW¼ NW¼ Section 21; Section 22 except E½ NE¼, NW¼ NE¼, NE¼ SE¼; Section 23 except NE¼, N½ NW¼, NW¼ SE¼; Section 25; Section 26; Section 27 except SE¼ SW¼, N½ SW¼; W½ W½, E½ E½ Section 28; Section 29–32; Section 33 except E½ W½, NW¼ SW¼, SW¼ SE¼; Section 34 except SW¼, NE¼ NW¼, S½ NW¼, NW¼ SE¼; Section 35 except NE¼ NW¼.

T.18S., R.11W. Willamette Meridian: S½ S½ Section 11; S½ S½ Section 12; Section 13; Section 14 except NW¼ NW¼; Section 22 except N½ NW¼, SW¼ SW¼; Sections 23–26; E½, E½ NW¼ Section 27; S½ SW¼, W½ SE¼ Section 28; SE¼, NE¼ NE¼, S½ NE¼ Section 29; NE¼ NE¼ Section 32; Section 33–36.

T.19S., R.09W. Willamette Meridian: Sections 1–2; Section 3 except S½ SW¼, NW¼ SW¼; Section 4; Section 5 except NE¼ SW¼; Section 6 except N½ NW¼, E½ SE¼, S½ SW¼; Section 7 except N½ NE¼, SE¼ NE¼, W½ SW¼; Sections 8–9; E½ Section 11; E½ NW¼, NE¼ Section 12; Section 13; Section 15; Section 17; Section 18 except W½ SW¼; Sections 19–23; Section 24 except S½ SE¼, NE¼ SE¼, SE¼ NE¼; Section 25; N1/2 N1/2, SW¼ NW¼, W½ SW¼, S½ SE¼ Section 26; Sections 27–33; N½ NE¼, W½ W½ Section 34; Section 35; Section 36 except E½ NW¼, W½ NE¼, NE¼ SW¼.

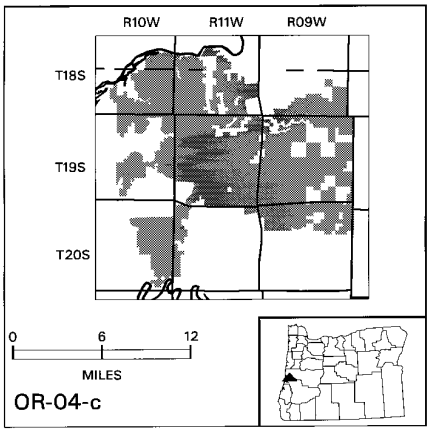
T.19S., R.10W. Willamette Meridian: Section 1; Section 2 except W½ SE¼, SE¼ NE¼; Section 3; Section 4 except S½ SE¼; Sections 5–8; Section 9 except E½ NE¼; Section 10 except N½ N½, SW¼ NW¼, SE¼ NE¼; Section 11 except N½ N½, SW¼ NW¼; Section 12 except E½ SE¼; Section 13 except S½ SE¼, NE¼ SE¼; Sections 14–23; Section 24 except N½ NE¼, NE¼ NW¼; Sections 25–26; Section 27 except SE¼ SE¼; Section 28; Section 29 except W½ SW¼; N½ Section 30; E½ SE¼ Section 31; Section 32 except S½ SE¼, SE¼ SW¼; Section 33–36.

T.19S., R.11W. Willamette Meridian: Section 1; N½ N½, W½ SW¼, SW¼ NW¼ Section 2; Section 3 except SW¼ SW¼; Section 4; Section 9 except E½ NE¼, S½ SW¼, NW¼ SW¼, SE¼, SE¼ SE¼; Section 10 except S½, W½ NW¼; Section 12 except N½ SW¼, SW¼ SW¼; Section 13; E½ SE¼, SW¼ SE¼ Section 14; SW¼ SE¼, SW¼ Section 15; SE¼ SE¼ Section 16; Section 21 except N½ NW¼; Section 22 except E½ NE¼; Section 23 except S1/2 SW¼; Section 24; NE¼, N½ NW¼ Section 25; NE¼ NE¼ Section 26; N½, W½ SW¼ Section 27; Section 28 except NE¼ SW¼; N½ NE¼, SE¼ NW¼, SW¼ NE¼, NW¼ SE¼, NE¼ SW¼ Section 33.

T.20S., R.09W. Willamette Meridian: Section 1 except SE¼ SW¼; Section 2 except SW¼ SW¼; Section 3 except S½ SE¼; Sections 4–6; Section 7 except W½ W½; Section 8; Section 9 except SE¼ SE¼; SE¼, S½ NW¼ Section 10; Section 11 except NW¼ NW¼; Section 12 except NE¼ NW¼, NW¼ SW¼; N½ NW¼, NW¼ NE¼ Section 13; NE¼ NW¼, N½ NE¼ Section 14.

T.20S., R.10W. Willamette Meridian: N½ Section 1; N½ NW¼ Section 5; Section 6 except NW¼ NW¼; W½, N½ NE¼, NW¼ SE¼, S½ SE¼ Section 7; Section 18 except SE¼ SW¼, E½ SE¼; SW¼, NW¼ SE¼, W½ NW¼, SE¼ NW¼, SW¼ NE¼ Section 19; W½ Section 30.

T.20S., R.11W. Willamette Meridian: Section 10 except S½ SW¼, NW¼ SW¼; Sections 11–14; E½ Section 15; NE¼ Section 22; Section 23 except SW¼; Section 24–25; NE¼, E½ SE¼ Section 26; N½ SE¼, S½ NE¼ Section 35; NW¼, N½ NW¼, N½ NE¼ Section 36.



Map and description of OR–04-d taken from United States Fish and Wildlife Service 1:100,000 map; Reedsport and Cottage Grove, Oregon; 1995.

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.20S., R.10W. Willamette Meridian: S½ Section 11; W½ SW¼ Section 12; NW¼ SW¼ Section 13; NE¼, N½ SE¼, N½ NW¼ Section 14; SE¼ SE¼ Section 22; W½, S½ SE¼, NW¼ SE¼, W½ NE¼ Section 23; SW¼ NW¼ Section 25; Section 26; Section 27 except W½ W½, E½ SW¼; NE¼ Section 34; Section 35.

T.21S., R.09W. Willamette Meridian: S½ SW¼, NE¼ SW¼ Section 2; Section 3 except NW¼ NE¼; E½ E½, NE¼ SW¼, SW¼ SW¼ Section 5; SE¼, SW¼ NE¼, E½ SW¼, SE¼ NW¼ Section 6; Sections 7–8; Section 9 except S½ NE¼; SW¼, SE¼ NW¼ Section 10; Section 11; Section 14 except E½ E½; Section 15; Sections 17–19; NW¼ Section 20; Section 21; W½ NE¼ Section 22; Section 23; Section 29; Sections 31–33.

T.21S., R.10W. Willamette Meridian: Section 2–3; NE¼ NE¼ Section 4; SW¼, S½ SE¼, S½ NW¼ Section 6; Section 7; Section 8 except NE¼; W½ SW¼ Section 9; N½ E½ Section 10; Sections 11–14; Section 15 except W½ NW¼; NW¼ NW¼ Section 16; Sections 17–21; Section 22 except NW¼; Sections 23–35.

T.21S., R.11W. Willamette Meridian: SE¼ SE¼ Section 1; E½ NE¼ Section 12; S½ NE¼, S½ SW¼, NW¼, S½ SE¼, NE¼ SE¼ Section 23; Sections 24–25; Section 26 except N½ NW¼; Section 27 except N½ N½; Section 28 except N½ N½, N½ SW¼; NW¼, N½ NE¼, SW¼ NE¼ Section 33; N½, N½ SE¼ Section 34; Section 35 except S½ NW¼, SW¼, S½ SE¼; Section 36 except SW¼ SW¼.

T.22S., R.09W. Willamette Meridian: NE¼ NE¼, N½ NW¼, SW¼ NW¼, SW¼ Section 4; Section 5 except SW¼, S½ NW¼; Section 6 except SE¼, S½ NE ¼; Section 7

except E½ SE¼; Section 9 W½ SW¼; NW¼ SW¼, NW¼ NW¼ Section 17.

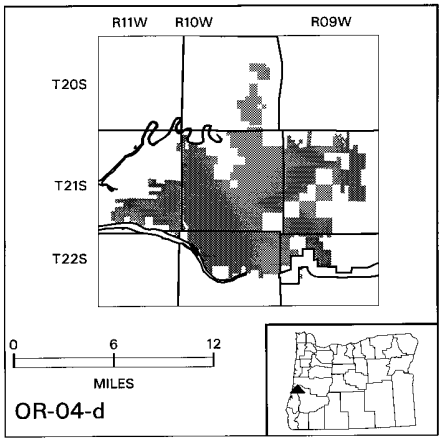
T.22S., R.10W. Willamette Meridian: Sections 1–5; E½ Section 6; Section 8 except W½ W½; Sections 9–12; N½ Section 13; N½ N½, SE¼ NE¼, SW¼ NW¼, NE¼ SE¼ Section 14; NW¼, W½ NE¼, NW¼ SW¼ Section 15; NE¼ Section 17.

T.22S., R.11W. Willamette Meridian: NE¼ Section 1.

Description of Lands Using Protracted Public Land Survey Lines

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.22S., R.11W. Willamette Meridian: SE¼ NE¼ Section 1.



Map and description of OR–04-e taken from United States Fish and Wildlife Service 1:100,000 map; Cottage Grove and Roseburg, Oregon; 1995.

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.23S., R.08W. Willamette Meridian: Section 3 except NW¼ NW¼; Section 5; S½, SE¼ NE¼, SW¼ NW¼ Section 6; Section 7; Section 9; NW¼, S½ S½, NW¼ SW¼ Section 11; Section 13 except N½ NE¼; Section 14 except N½ NE¼, NE¼ NW¼, W½ SW¼, SE¼ SW¼, S½ SE¼; Section 15; Section 17–19; Section 20 except N½ NE¼, SE¼ NE¼, NE¼ SE¼; Section 21; Section 23 except S½ NE¼, SW¼ NW¼; Section 27; Section 28 except N½ NE¼, SE¼ NE¼, NE¼ NW¼; Sections 29–33; Section 35 except E½ NE¼.

T.23S., R.09W. Willamette Meridian: Section 3 except NE¼; Sections 7–8; Section 13 except NE¼ SW¼, NW¼ SE¼; Sections 14–17; Section 20 except S½ N½; Sections 21–22; N½ Section 23; Sections 24–25; Section 26 except NW¼; Section 27; Section 28 except E½ SE¼; Section 29.

T.23S., R.10W. Willamette Meridian: Section 1.

T.24S., R.07W. Willamette Meridian: SE¼ NW¼ Section 6; Section 7; E½ Section 18; Section 19 except E½ E½, SW¼ SE¼.

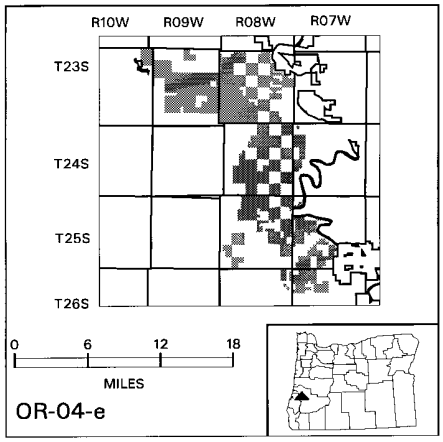
T.24S., R.08W. Willamette Meridian: Section 1; Section 3; E½, E½ SW¼ Section 9; Sections 10–11; Section 13; Section 15; SW¼ NE¼, SE¼ Section 17; Section 20 except NW¼; Section 21; SE¼ Section 22; Section 23; Section 25; Sections 27–29; Section 33; Section 35.

T.25S., R.07W. Willamette Meridian: S½ S½, NW¼ SE¼ Section 6; S½ S½ Section 7; S½ SW¼ Section 9; NW¼ NW¼ Section 15; Section 17; Section 18 except W½ W½; Section 19; NE¼ NW¼ Section 20; S½ S½, NW¼ SE¼ NE¼ SW¼ Section 21; Section 27 except NE¼ NE¼, E½ SE¼; SW¼ Section 28; SE¼, S½ NE¼, NE¼ NE¼, E½ SW¼ Section 29; NW¼ NW¼ Section 30; E½, E½ SW¼ Section 31; W½ Section 32; W½, W½ NE¼, NE¼ NE¼, NW¼ SE¼ Section 33; NW¼ NW¼ Section 34.

T.25S., R.08W. Willamette Meridian: Section 1; Sections 3–4; E½ E½ Section 5; Section 8 except W½; Section 9; N½ NE¼, NE¼ NW¼, NW¼ SW¼ Section 10; Section 11; NE¼ NE¼ Section 12; Section 13; S½ SW¼, NE¼ NW¼ Section 14; N½ N½, SW¼, SW¼ NW¼, SE¼ SE¼ Section 15; Section 20; Section 23; Section 24 except SE¼, W½ NW¼; Section 25; Section 30 except SW¼, W½ NW¼; Section 32 except SE¼.

T.26S., R.07W. Willamette Meridian: Section 5; Section 6 except NW¼; Section 7 except NW¼ SW¼, SW¼ NW¼; N½ NE¼, SE¼ NE¼, E½ SE¼, N½ SW¼, NW¼ NW¼ Section 8; Section 9 except N½ NW¼.

T.26S., R.08W. Willamette Meridian: W½, E½ SE¼, SE¼ NE¼ Section 1; NW¼ SE¼, SE¼ NW¼ Section 12.



Map and description of OR–04–f taken from United States Fish and Wildlife Service 1:100,000 map; Cottage Grove and Roseburg, Oregon; 1995.

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

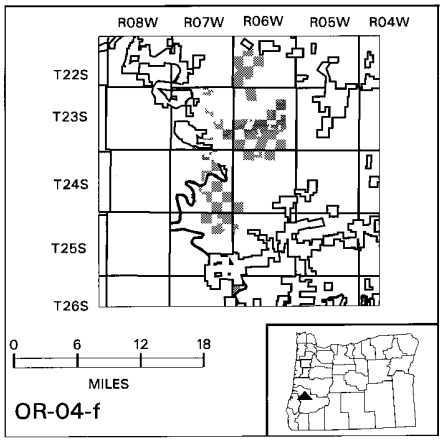
T.22S., R.06W. Willamette Meridian: S½, S½ NE¼ Section 17; Section 19; Section 21; Section 29; Section 30 except W½ NW¼, SE¼ NW¼, NW¼ SW¼; Section 31; NW¼ NE¼, NE¼ NW¼ Section 32.

T.23S., R.06W. Willamette Meridian: W½ W½ Section 4; Section 5; N½ NE¼, NE¼ NW¼ Section 8; NW¼ NW¼ Section 9; Section 19; Section 31; W½ NW¼, NW¼ SW¼ Section 32.

T.23S., R.07W. Willamette Meridian: N½ NW¼, S½ NE¼, N½ SW¼, NW¼ SE¼ Section 3; NE¼ NE¼ Section 4; SE¼ SE¼ Section 14; E½ NW¼, S½ NE¼, NE¼ SE¼ Section 15; Section 23 except N½ NW¼, SE¼ NW¼, W½ NE¼, SW¼ SW¼; Section 25; S½ S½ Section 27; S½ S½ Section 33.

T.24S., R.07W. Willamette Meridian: N½ NW¼ Section 2; S½ SW¼, NW¼ SW¼, SW¼ SE¼, SE¼ NE¼ Section 3; Section 11 except NE¼, NE¼ NW¼; N½ N½, W½ SW¼, SW¼ NW¼ Section 15; E½ SE¼, SE¼ NE¼, SW¼ SW¼ Section 21; Section 23; Section 25; Section 27 except SW¼, S½ NW¼; SE¼ SW¼, NW¼ SW¼, SW¼ NW¼ Section 28; Section 35.

T.25S., R.07W. Willamette Meridian: Section 1; NE¼ Section 2; Section 3; Section 11 except N½ NW¼; NW¼ SW¼ Section 12.



Map and description of OR–04–g taken from United States Fish and Wildlife Service 1:100,000 map; Cottage Grove, Oregon; 1995.

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.21S., R.06W. Willamette Meridian: Section 31.

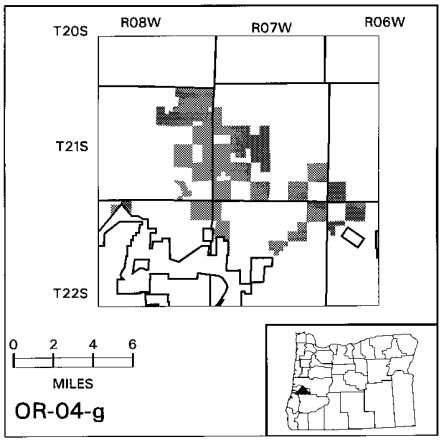
T.21S., R.07W. Willamette Meridian: W½ Section 7; Section 16 except NW¼; Section 17; N½ Section 18; Section 19; NW¼, N½ NE¼, SW¼ NE¼, NE¼ SW¼, NW¼ SE¼ Section 20; Section 21; Section 25; NE¼ Section 28; Section 29; N½, N½ SW¼, SW¼ SW¼, NE¼ SE¼ Section 30; Section 31; Section 33; Section 35.

T.21S., R.08W. Willamette Meridian: Section 1; Section 2 except W½ SW¼; Section 10 except N½ NE¼; Section 11; Section 12 except S½ SW¼, NE¼ NE¼; Section 13; Section 23; E½ Section 24; Section 25; N½ N½ Section 26; Section 35 except SW¼ NW¼, E½ NE¼, SE¼ SE¼, NW¼ SW¼.

T.22S., R.06W. Willamette Meridian: Section 5; NW¼, N½ NE¼, N½ SW¼ Section 7.

T.22S., R.07W. Willamette Meridian: Section 1; W½ Section 6; Section 7 except W½ NW¼; Section 11 except NW¼; NW¼, N½ NE¼, SW¼ NE¼, NE¼ SW¼ Section 15.

T.22S., R.08W. Willamette Meridian: Section 1; NE¼, S½ NW¼, N½ SW¼, SW¼ SW¼ Section 5; NE¼ SE¼ Section 12.



Map and description of OR–04–i taken from United States Fish and Wildlife Service 1:100,000 map; Eugene and Cottage Grove, Oregon; 1995.

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.17S., R.06W. Willamette Meridian: SE¼ SE¼ Section 35; SW¼ SW¼ Section 36.

T.17S., R.07W. Willamette Meridian: Section 11; S½, SW¼ NW¼ Section 13; Section 15; NW¼, S½ S½, NW¼ NE¼ Section 19; SE¼ Section 25; Section 29 except E½ W½, W½ NE¼.

T.17S., R.08W. Willamette Meridian: Section 13 except N½ NW¼; Section 17 except SW¼, NE1/ 4 NE¼, NW¼ NW¼; Section 21; S½ SW¼, NW¼ NW¼ Section 22; Section 23; Section 25; Section 27; NE¼ SW¼ Section 28; E½ E½ Section 33; Section 35.

T.18S., R.06W. Willamette Meridian: Section 5 except SW¼ SW¼; SE¼ Section 11; Section 19; Section 21 except E½ SE¼, SE¼ NE¼; SW¼ Section 23; Section 27 except S½ NE¼; Section 31; NE¼, W½ SE¼, E½ SW¼ Section 35.

T.18S., R.07W. Willamette Meridian: Section 1; N½ Section 7; Section 17 except SE¼ SW¼, NW¼ SW¼; Section 19; Section 21; Section 25; Section 27; Section 29; Section 31; Section 33 except NE¼ SW¼, NW¼ SE¼; Section 35.

T.18S., R.08W. Willamette Meridian: E½ NW¼, NW¼ NE¼ Section 1; E½ NE¼ Section 2; Section 3; Section 4 except NE¼, NW¼ NW¼, N½ SE¼, SE¼ SE¼; Section 9; Section 11 except E½ SE¼, SW¼ SE¼, SE¼ SW¼; Section 13 except N½ NE¼, E½ NW¼, W½ SW¼; N½ N½, S½ SW¼, NE¼ SE¼, SE¼ NE¼, SW¼ NW¼ Section 15; Section 19; Section 21 except E½ NW¼, NW¼ SE¼; S½, SE¼ NE¼, SW¼ NW¼ Section 23; Section 25; Section 27; SE¼ Section 28; Section 29 except E½ NE¼; Section 31; NW¼ NE¼ Section 32; Section 33 except NE¼; Section 35 except S½ SW¼, SW¼ SE¼.

T.19S., R.06W. Willamette Meridian: Section 1 except N½ NW¼, SW¼ NW¼; Section 3; Section 5; Section 7 except N½ NE¼; NW¼ SW¼, W½ NW¼ Section 8; E½, S½ SW¼, SE¼ NW¼ Section 15; Section 17 except NE¼ NE¼, SW¼ NW¼; Section 19 except SE¼ SE¼; E½ NW¼, SW¼ NE¼ Section 20; Section 21; Section 23; Section 25; Section 27; Section 29; Section 31; Section 33; SE¼ NE¼ Section 34; Section 35.

T.19S., R.07W. Willamette Meridian: Section 1 except S½ SE¼, SE¼ SW¼; Section 3 except SW¼ SE¼, SW¼ SW¼; S½, E½ NE¼, NW¼ NW¼ Section 5; Section 7; Section 9 except N½ NW¼, SW¼ NW¼; Section 11 except N½ N½, SE¼ NW¼, SW¼ NE¼; Section 13; Section 15; Section 17; Section 19 except N½ SW¼; Section 21; Section 23; N½ NE¼, S½ SE¼ Section 25; Section 27; Section 29; S½, W½ NW¼ Section 30; Section 31; W½ NW¼ Section 32; Section 33; Section 35 except NW¼ NE¼.

T.19S., R.08W. Willamette Meridian: Section 1; Section 5; N½ NW¼ Section 6; Section 7; SW¼, W½ SE¼ Section 8; W½ Section 9; NE¼, E½ NW¼, NW¼ NW¼, NE¼ SE¼ Section 13; Section 17; N½ S½, SE¼ NE¼, NW¼ NW¼ Section 18; Section 19; Section 21; SE¼ SE¼ Section 22; Section 23; SE¼ SE¼ Section 24; Section 25; NW¼ Section 26; Section 27; SE¼ SE¼ Section 28; Section 29; SE¼, SW¼ SW¼ Section 30; Section 31; W½ W½ Section 32; Section 33; Section 35.

T.20S., R.06W. Willamette Meridian: Section 1 except S½ SW¼; Section 3 except E½ SW¼, SW¼ SW¼; SE¼ NE¼ Section 4; Section 5; S½ S½ Section 6; Section 7; Section 9; Section 11 except W½ NW¼, NW¼ SW¼, SE¼ NE¼; Section 13; Section 15; Section 17; W½ W½, E½ SE¼ Section 18; Section 19; Section 21; Section 23; N½ SE¼, SW¼ SE¼ Section 26; Section 27; Section 29; Section 31; E½ NE¼ Section 32; SE¼, NW¼, NW¼ NE¼, S½ NE¼, SE¼ SW¼ Section 33; Section 35 except S½ SW¼.

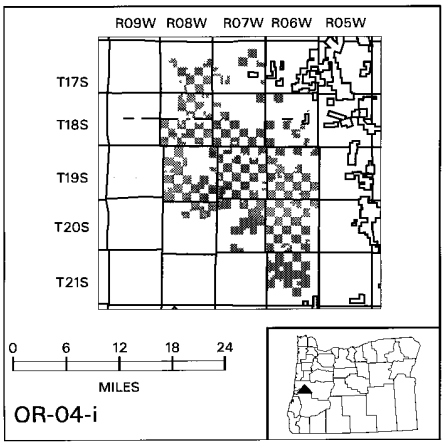
T.20S., R.07W. Willamette Meridian: Section 1; E½ E½ Section 2; Section 3 except NE¼ NW¼; Section 5; Section 6 except N½ N½; N½ N½ Section 7; Section 11; Section 12 except E½ E½, NW¼ SE¼, SW¼ NE¼; Section 13–15; Section 21; Section 22 except SE¼, SE¼ NE¼; Section 23 except W½ SW¼, SW¼ NW¼; Section 33 except E½ NE¼; SW¼ Section 34.

T.20S. R.08W. Willamette Meridian: Section 1; SW¼ Section 2; Section 3; SE¼ SE¼ Section 4; N½ NE¼ Section 6; E½ E½ Section 8; Section 9; Section 11; W½ W½ Section 12.

T.21S., R.06W. Willamette Meridian: Section 3; Section 5; W½ SW¼, SW¼ NW¼, SE¼ SW¼ Section 6; Section 7; Section 8 except SE¼; Section 9; Section 11; Section 14 except NE¼; Sections 15–17; Section 18 except NW¼ NW¼, S½ NW¼, NE¼, NW¼ SE¼, E½ SW¼, SW¼ SW¼; Section 19; NW¼ NE¼ Section 20; Section 21; S½ NE¼, N½ SE¼ Section 22; Section 23; Section 27.

Critical Habitat includes only State lands described within the following areas:

T.17S., R.08W. Willamette Meridian: SE¼ NW¼ Section 28.



Map and description of OR–04–j objective taken from United States Fish and Wildlife Service 1:100,000 map; Eugene, Oregon; 1995.

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.13S., R.06W. Willamette Meridian: S½ Section 31.

T.14S., R.06W. Willamette Meridian: NW¼, W½ SW¼ Section 6; Section 7; W½ W½ Section 18; W½ W½ Section 19; W½ W½ Section 30; Section 31.

T.14S., R.07W. Willamette Meridian: Section 1; Section 9; Section 11 except E½ SE¼; Section 12 except S½ SW¼; Section 13 except SW¼, SW¼ SE¼; SE¼ SW¼ Section 14; Section 17; Section 19; Section 20 except NW¼ NW¼, E½ NW¼, NE¼, E½ SE¼; Section 21 except W½ NW¼, NE¼ NW¼; Section 23 except SW¼ SE¼; S½ SE¼, NE¼ SE¼, SE¼ NE¼ Section 24; Section 25; Section 26 except N½ N½, SE¼ SW¼; Section 27; S½ Section 28; Sections 29–34.

T.14S., R.08W. Willamette Meridian: Section 19 except N½ N½, SW¼ NE¼, NW¼ SE¼; E½ SE¼ Section 20; S½ SE¼, SW¼ Section 21; S½ SW¼, W½ SE¼ Section 22; S½ SW¼ Section 23; E½ SE¼, NE¼ Section 25; NW¼ Section 26; Section 27; E½ SW¼ Section 28; Section 29 except N½ N½; Section 30 except N½ NE¼, SE¼ NE¼, SE¼, NE¼ NW¼; Section 31 except N½ S½; Section 32; Section 33 except S½ S½; NW¼, N½ NE¼, NW¼ SW¼ Section 34.

T.15S., R.06W. Willamette Meridian: Section 29; Section 31; Section 33 except NE¼, E½ SE¼, SW¼ NW¼; SE¼ SE¼ Section 34; SW¼ SW¼ Section 35.

T.15S., R.07W. Willamette Meridian: Section 3 except SW¼ SW¼; Section 4 except E½ NE¼, N½ SE¼; Sections 5–6; Section 7 except S½ SW¼, N½ SE¼; NW¼ NE¼ Section 8; Sections 18–21; Section 25 except SE¼ NE¼; Section 27; Section 29; Section 31; Section 33 except NE¼; SE¼ NW¼, SE¼ NE¼, NE¼ SE¼, SW¼ SE¼ Section 35.

T.15S., R.08W. Willamette Meridian: Section 1; S½, NE¼ NE¼ Section 2; S½ SE¼ Section 3; SW¼ SW¼ Section 4; Section 5 except S½ NE¼, SE¼ NW¼, SW¼, N½ SE¼; Section 6 except SE¼

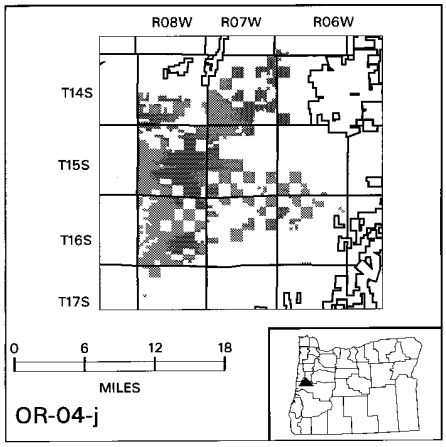
NW¼, S½ SW¼, SW¼ NE¼, SE¼; Section 7 except N½ N½, SE¼ NE¼; Section 9 except E½ E½, SW¼ SE¼; Section 11; Sections 13–14; Section 15 except NW¼ NW¼; Sections 16–20; Section 21 except SW¼ NW¼; Sections 22–27; N½ Section 28; Sections 29–31; N½, W½ SW¼ Section 32; Section 33; Section 35; W½ Section 36.

T.16S., R.06W. Willamette Meridian: SE¼, E½ SW¼, NW¼ SW¼, SW¼ NW¼ Section 3; Section 5 except S½ SW¼, NW¼ SW¼, SW¼ NW¼; Section 7 except S½ SE¼, NE¼ SE¼; Section 9; SW¼ NE¼, NE¼ NW¼ Section 12; NW¼, N½ NE¼, W½ SE¼, SW¼ SW¼ Section 17; S½ S½ Section 33.

T.16S., R.07W. Willamette Meridian: Section 1; Section 3 except S½ SW¼; Section 5 except W½ SW¼; S½ SW¼ Section 6; Section 7 except NE¼, S½ NW¼, NE¼ SE¼; NE¼, N½ SE¼, SE¼ NW¼ Section 11; Section 13; E½, SW¼ Section 15; W½ NW¼ Section 18; S½ Section 19; Section 21.

T.16S., R.08W. Willamette Meridian: Section 1; Sections 3–4; Section 5 except S½ NW¼, SW¼ NE¼, NW¼ SW¼; NW¼, N½ SW¼, SW¼ SW¼, NW¼ NE¼ Section 6; Section 7 except W½, S½ NE¼, N½ SE¼; Sections 8–9; W½ W½ Section 10; Section 11; Section 13 except S½ SE¼; Section 15; Section 17 except SW¼ NW¼; Section 18 except NW¼, W½ E½, NE¼ NE¼, SE¼ SW¼; Section 19 except E½ SW¼, S½ NE¼, NW¼ NE¼, SE¼ NW¼; Section 20 except W½ SE¼, S½ SW¼; Sections 21–23; SW¼ SW¼, SW¼ SE¼ Section 24; Section 25; N½ Section 26; Section 27; Section 28 except S½ SE¼; Section 29 except NW¼ NW¼; S½ SE¼, SE¼ NE¼ Section 30; Section 31 except N½ NW¼; Section 32 except SE¼, Section 33; S½ Section 34; N½, NW¼ SE¼ Section 35.

T.17S., R.08W. Willamette Meridian: Section 5; N½ NE¼ Section 6.



Map and description of OR–04–k taken from United States Fish and Wildlife Service 1:100,000 map; Corvallis, Eugene, Oregon; 1995.

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.12S., R.07W. Willamette Meridian: SE¼, S½ SW¼, S½ NE¼ Section 10; Section 11 except N½ N½; W½ W½ Section 13; Sections 14–15; Section 16 except NW¼ NW¼; Section 19 except N½ N½; Section 20 except SW¼ SW¼; Sections 21–23; W½, S½ SE¼ Section 24; Section 25; Section 26 except SW¼; Section 27; Section 28 except NE¼ NW¼; Sections 29–31; Section 32 except NW¼, NW¼ NE¼; Sections 33–35; W½ W½, NE¼ NW¼ Section 36.

T.12S., R.08W. Willamette Meridian: SW¼, SW¼ NW¼, S½ SE¼ Section 3; NE¼, N½ SW¼, S½ SE¼ Section 5; N½ SE¼ Section 8; Section 9 except NE¼ NE¼, W½ SW¼, SE¼ SW¼, W½ SE¼; SE¼, NE¼ NE¼ Section 10; Section 11 except N½ NE¼, SE¼ SE¼; S½ Section 12; E½, E½ SW¼ Section 13; N½ NW¼, NE¼, SE¼ SW¼ Section 15; N½ NE¼ Section 16; Section 17 except NW¼, NW¼ NE¼; SW¼, W½ SE¼, SW¼ NW¼ Section 18; W½, SW¼ SE¼ Section 19; S½ NE¼ Section 20; Section 21; Section 22 except NW¼ NW¼; SE¼, S½ SW¼ Section 23; W½ W½ Section 24; Section 25; N½ Section 26; Section 27; Section 29 except NE¼; W½ SW¼, N½ NW¼, NW¼ NE¼, NE¼ SE¼ Section 30; Section 31; Section 33 except SE¼, W½ NE¼; Section 35 except SW¼ NW¼, NW¼ SW¼.

T.12S., R.09W. Willamette Meridian: SE¼ SE¼ Section 13; E½ E½ Section 24.

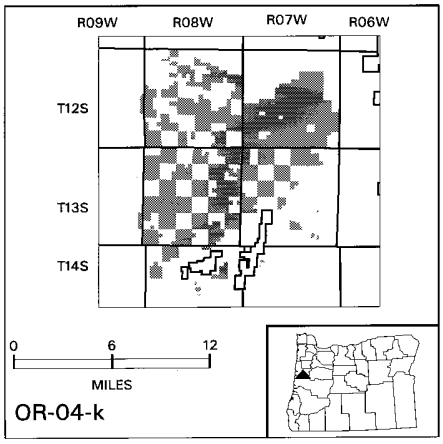
T.13S., R.07W. Willamette Meridian: Section 2 except N½ NE¼, NE¼ NW¼, SE¼ NE¼, NE¼ SE¼; Section 3; Section 5; W½ Section 6; Section 7; Section 9; N½ NW¼, SW¼ NW¼ Section 15; Section 17; SW¼ SW¼ Section 18; Section 19 except NE¼ SE¼; E½ NW¼, NE¼ SW¼, W½ NE¼ Section 21; S½ SE¼ Section 23; SW¼, W½ SE¼, SW¼ NW¼ Section 27; N½ SE¼, SE¼ NE¼, NW¼ NE¼, E½ NW¼ Section 35.

T.13S., R.08W. Willamette Meridian: Section 1; NE¼ Section 2; Section 3 except N½ NE¼, SW¼ NE¼; Section 5; S½ Section 6; Section 7; E½ SE¼ Section 8; Section 9 except NW¼ NE¼; Section 11; W½ NW¼, SE¼ NW¼, E½ SE¼, NW¼ SE¼, SE¼ NE¼, NE¼ SW¼ Section 12; Section 13; E½, NE¼ SW¼ Section 14; Section 15; Section 17; Sections 19–21; Section 23; W½ W½, SE¼ NW¼, SE¼ NE¼ Section 24; Section 25; W½ SE¼, E½ SW¼, SW¼ SW¼ Section 26; Section 27; Section 29; NW¼, SW¼ SE¼ Section 30; Section 31; SE¼ SE¼, SW¼ NW¼ Section 32; Section 33; SW¼ NW¼ Section 34; Section 35 except E½ SE¼, SW¼ SE¼.

T.13S., R.09W. Willamette Meridian: E½ E½ Section 25.

T.14S., R.07W. Willamette Meridian: SW¼ SW¼ Section 5; NE¼ NE¼ Section 7.

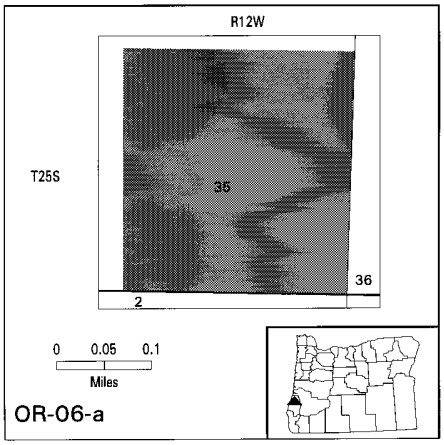
T.14S., R.08W. Willamette Meridian: N½ NE¼, NE¼ NW¼ Section 3; Section 5 except S½ SE¼; Section 7 except W½ W½, NE¼ NW¼, NE¼ NE¼; Section 11 except NW¼, NW¼ NE¼, N½ SW¼; N½ SW¼, W½ NW¼ Section 15.



Map and description of OR–06–a taken from United States Fish and Wildlife Service 1:100,000 map; Coos Bay, Oregon; 1995.

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.25S., R.12W. Willamette Meridian: SE¼ SE¼ Section 35.



Map and description of OR–06–b taken from United States Fish and Wildlife Service 1:100,000 map; Roseburg, Oregon; 1995.

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.25S., R.10W. Willamette Meridian: Section 31; Section 33.

T.26S., R.09W. Willamette Meridian: SE¼, E½ SW¼ Section 9; Section 10 except NE¼; Section 17; S½ S½ Section 18; Section 19; SW¼ Section 20; Section 21; N½ N½, S½ S½ Section 28; Section 29; Section 31 except N½ SW¼, SW¼ SW¼; SW¼, W½ SE¼, SE¼ NW¼ Section 32; Section 33.

T.26S., R.10W. Willamette Meridian: Sections 3–5; E½, SE¼ NW¼ Section 6; Section 7; SW¼, S½ NE¼ Section 8; Section 9; Section 11; Section 13; N½ Section 14; Sections 15–17; Section 19; SE¼ Section 20; N½ Section 21; W½ Section 22; Section 23; N½ N½, N½ S½ Section 24; Section 25; Section 27; NE¼ Section 28; Sections 29–31;

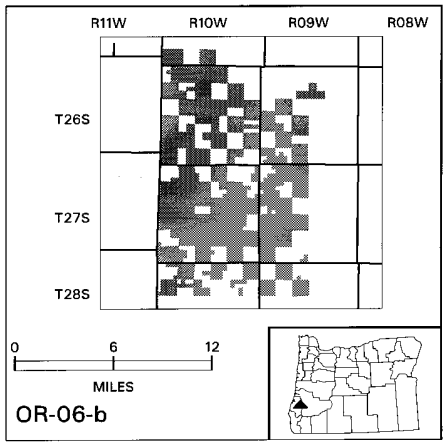
E½ Section 32; Section 33; Section 35 except SE¼.

T.27S., R.09W. Willamette Meridian: Sections 4–5; SE¼, NE¼ NE¼, SE¼ SW¼ Section 6; Section 7 except NW¼ SW¼; N½ NW¼, W½ SW¼ Section 8; Section 9; Section 17; Section 18 except SW¼, SE¼ SE¼; Sections 19–21; Sections 29–31; E½ SE¼, SW¼ SE¼ Section 33.

T.27S., R.10W. Willamette Meridian: E½ E½, W½ SE¼ Section 1; Section 3; W½ SW¼, SW¼ NW¼ Section 4; Section 5; S½ SE¼ Section 6; Sections 7–9; NE¼, SE¼ SE¼ Section 10; Section 11; S½ NW¼, W½ SW¼, SE¼ SE¼ Section 12; Sections 13–15; N½ Section 16; Sections 17–20; Sections 21–23; W½ NW¼, NW¼ SW¼ Section 24; Sections 25–29; NE¼, SW¼ SW¼ Section 30; Section 31; W½ W½, SE¼ NW¼, NE¼ SW¼ Section 32; Section 33; SW¼ NW¼ Section 34; Section 35.

T.28S., R.09W. Willamette Meridian: SE¼ SW¼ Section 4; Section 5; Section 7; Section 9.

T.28S., R.10W. Willamette Meridian: Section 1; Section 3 except E½ SE¼; N½ SE¼ Section 4; Section 5; N½ NE¼, NE¼ NW¼, SE¼ SE¼ Section 6; Section 7 except W½ NW¼, NW¼ SW¼; S½ N½, NE¼ NW¼ Section 8; Section 9 except NE¼; N½ NE¼, E½ NW¼, E½ SE¼ Section 11; NW¼ NW¼ Section 12.



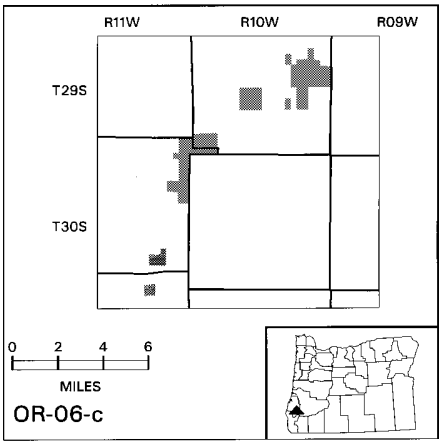
Map and description of OR–06–c taken from United States Fish and Wildlife Service 1:100,000 map; Roseburg and Canyonville, Oregon; 1995.

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.29S., R.10W. Willamette Meridian: S½ SE¼, W½ SW¼ Section 11; SW¼ NW¼, W½ SW¼, SE¼ SW¼ Section 12; Section 13; E½ W½, E½ Section 14; NE¼ NE¼ Section 20; Section 21; E½, W½ SW¼ Section 23; Section 31.

T.30S., R.11W. Willamette Meridian: E½, SE¼ SW¼ Section 1; E½ Section 12; E½, NW¼ Section 13; N½ SE¼, S½ NE¼, NE¼ NE¼, NE¼ SW¼, SE¼ NW¼ Section 35.

T.31S., R.11W. Willamette Meridian: SW¼ Section 2.



Map and description of OR–06–d taken from United States Fish and Wildlife Service 1:100,000 map; Roseburg, Oregon; 1995.

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

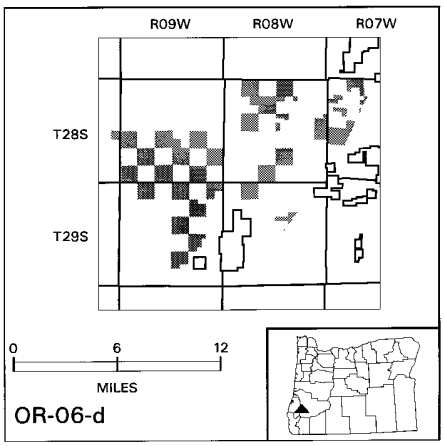
T.28S., R.08W. Willamette Meridian: Section 3; Section 5; NE¼ Section 8; Section 9; N½ NW¼ Section 10; NW¼ NW¼ Section 11; N½ NW¼, W½ NE¼, W½ SW¼ Section 15; Section 17; Section 27; Section 33.

T.28S., R.09W. Willamette Meridian: Section 19; Section 21; SW¼ Section 22; Section 23; Section 25; Section 27; Section 29; Section 31; Section 33; Section 35.

T.28S., R.10W. Willamette Meridian: NE¼ Section 24.

T.29S., R.08W. Willamette Meridian: Section 5.

T.29S., R.09W. Willamette Meridian: Section 1 except SE¼; Section 3; Section 5; Section 11 except N½ NE¼; Section 15; Section 23 except S½ SE¼, NE¼ SE¼, SE¼ NE¼; Section 27 except S½ SE¼.



Map and description of OR–07–a taken from United States Fish and Wildlife Service 1:100,000 map; Port Orford, Oregon; 1995.

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.31S., R.12W. Willamette Meridian: N½ NW¼, SW¼ NW¼ Section 5; SE¼, E½ SW¼, SW¼ SW¼, NE¼ NW¼ Section 15; Section 21; Section 22 except SE¼; Section 23 except E½ NE¼, SW¼ NE¼; W½ NW¼ Section 25; Section 27.

T.32S., R.10W. Willamette Meridian: Section 2 except E½ E½; Section 3 except E½ NE¼, SW¼ NE¼, SW¼ SW¼; E½ SE¼, SE¼ NE¼ Section 4; S½ Section 7; SW¼ SW¼, E½ SE¼, NE¼ NE¼, S½ NE¼ Section 8; Section 9 except SE¼, S½ NE¼; Section 10; Section 11 except E½ E½, W½ SE¼, E½ SW¼; N½ NW¼, W½ SW¼, SW¼ NW¼ Section 15; Sections 16–17; Section 18 except E½ SE¼, SE¼ NE¼; Section 19 except S½ NW¼, NE¼ NW¼, NW¼ NE¼, E½ SE¼, SW¼ SE¼; Section 20–21; W½ NW¼ Section 22.

T.32S., R.11W. Willamette Meridian: SE¼ Section 1; N½ N½, SW¼ NW¼ Section 4; Section 5; N½, NE¼ SE¼ Section 6; NE¼ SE¼ Section 7; Section 8 except SW¼ NW¼; W½ Section 9; Section 12 except SW¼ SW¼; Section 13; SE¼, E½ SW¼ Section 14; W½ Section 16; Section 17; Section 18 except N½ NW¼, E½ SW¼, NW¼ SE¼; Section 19; Section 20 except S½ SE¼; SE¼ Section 22; Section 23 except SE¼ NE¼, NW¼ NW¼; Section 24 except S½ NW¼, N½ SW¼; Section 25 except E½ E½; Section 26; NE¼ Section 27; E½, NE¼ SW¼, S½ SW¼ Section 28; S½ S½, NW¼ NW¼, NW¼ SW¼ Section 29; Sections 30–34; Section 35 except NE¼ NE¼; W½ W½ Section 36.

T.32S., R.12W. Willamette Meridian: E½ NE¼, N½ SE¼, SW¼ SE¼ Section 1; W½ NW¼ Section 2; Section 3; Section 10; E½ SE¼, SE¼ NE¼ Section 13; W½, NW¼ NE¼ Section 15; Sections 19–20; W½, W½ NE¼ Section 21; SE¼ SE¼ Section 23; E½ E½, S½ SW¼ Section 24; Section 25; Section 26 except N½ NW¼; S½ S½, NE¼ SW¼ Section 27; SE¼ SE¼ Section 28; N½ NW¼, SW¼ NW¼ Section 29; Section 30 except SE¼ SE¼; W½, W½ E½, S½ SE¼ Section 31; E½, E½ SW¼ Section 33; Sections 34–36.

T.32S., R.13W. Willamette Meridian: Section 4 except N½ N½; S½ Section 5; S½, SE¼ NE¼ Section 6; N½ N½, SE¼ NE¼, S½ S½, NE¼ SE¼ Section 7; Section 8; Sections 22–23; S½, S½ N½ Section 24; Sections 25–27; E½ NE¼, NE¼ SE¼ Section 31; Sections 32–36.

T.32S., R.14W. Willamette Meridian: N½ Section 17; W½ SW¼, SE¼ SW¼ Section 19; NE¼, N½ SE¼ Section 22; Section 23 except S½ S½, NE¼ SE¼; Section 24 except W½ SW¼, NW¼ NE¼, NE¼ NW¼; E½ NE¼, NW¼ NE¼, NE¼ SE¼ Section 25; S½ Section 29; SE¼, SE¼ SW¼, SE¼ NE¼, NW¼ NW¼ Section 30; Section 31 except W½ W½, NE¼ SW¼, E½ NW¼; Section 32 except SE¼ SE¼.

T.33S., R.11W. Willamette Meridian: Sections 7–8; Section 9 except E½ NW¼, W½ NE¼; Sections 10–11; W½ Section 12; N½ NE¼ Section 13; Section 14 except SE¼, SE¼ SW¼; Sections 15–20; Section 21 except SE¼; Section 22 except SE¼ SE¼; W½ NW¼, NW¼ SW¼ Section 23; N½ NW¼, SW¼ NW¼ Section 27; S½ NE¼, N½ SE¼, SE¼ SW¼ Section 28; W½, N½ NE¼ Section 29; Sections 30–31; Section 32 except N½ NE¼; NW¼ NW¼ Section 33.

T.33S., R.12W. Willamette Meridian: Section 7 except W½ SW¼; Section 8; W½ SW¼, SE¼, W½ NW¼ Section 9; Section 10 except N½ NW¼; Sections 11–32; Section 33 except E½ SE¼; Section 34 except N½ SW¼; Sections 35–36.

T.33S., R.13W. Willamette Meridian: E½ Section 8; Sections 9–11; Section 12 except SE¼ SE¼; Section 13 except N½ NE¼, NE¼ NW¼, SW¼ NW¼, NW¼ SW¼; Section 14 except S½ S½, NE¼ SW¼; SW¼, E½ NE¼, NW¼ NW¼ Section 15; S½, S½ NW¼ Section 16; SE¼, SE¼ NE¼ Section 17; Sections 19–20; Section 21 except SE¼; E½ NE¼ Section 22; Section 23 except SW¼ SW¼, N½ NW¼, NW¼ NE¼; Sections 24–25; S½ SE¼, SE¼ SW¼ Section 26; NW¼ Section 28; Section 29 except S½ SW¼, SE¼; Section 30 except S½ SE¼; NW¼, N½ SW¼ Section 31; E½ NE¼, SE¼ Section 34; Sections 35–36.

T.33S., R.14W. Willamette Meridian: Section 7 except N½ N½, S½ NE¼, E½ SE¼, NW¼ SW¼, SW¼ NW¼; S½ SE¼ Section 13; SW¼ SW¼ Section 15; S½ SE¼, NW¼, NW¼ SW¼, NW¼ SE¼ Section 17; SE¼ Section 18; NW¼, N½ NE¼, SE¼ NE¼ Section 20; Section 21 except NW¼ NW¼, SW¼; Section 22 except SW¼, E½ NE¼; Section 23 except N½ N½, SW½ NE¼; Sections 24–28; Section 29 except NW¼; Sections 32–35; Section 36 except NW¼, E½ SE¼.

T.34S., R.11W. Willamette Meridian: NW¼, NW¼ NE¼ Section 4; Sections 5–6; Section 7 except NE¼ SE¼; NW¼ NW¼, E½ NE¼, SW¼ NE¼ Section 8; W½ NW¼ Section 9; NE¼ Section 18; N½ NW¼, SW¼ NW¼, NW¼ SW¼, SE¼ Section 19; NE¼, E½ NW¼ Section 30; W½ SW¼, SW¼ NW¼ Section 31.

T.34S., R.12W. Willamette Meridian: Sections 1–3; Section 4 except W½ SW¼; Section 5 except S½ S½; Section 6 except N½ NE¼; Section 7 except E½ NE¼, SE¼; SE¼ Section 8; Sections 9–36.

T.34S., R.13W. Willamette Meridian: Sections 1–2; NE¼, N½ SE¼, E½ NW¼ Section 3; Sections 11–14; E½ Section 15; SW¼, W½ SE¼ Section 17; Section 20 except NW¼ SW¼, S½ SW¼; Section 21 except NW¼ NW¼; Section 22 except NW¼ NE¼; Section 23 except NW¼ NW¼; Sections 24–26; N½, NE¼ SE¼ Section 27.

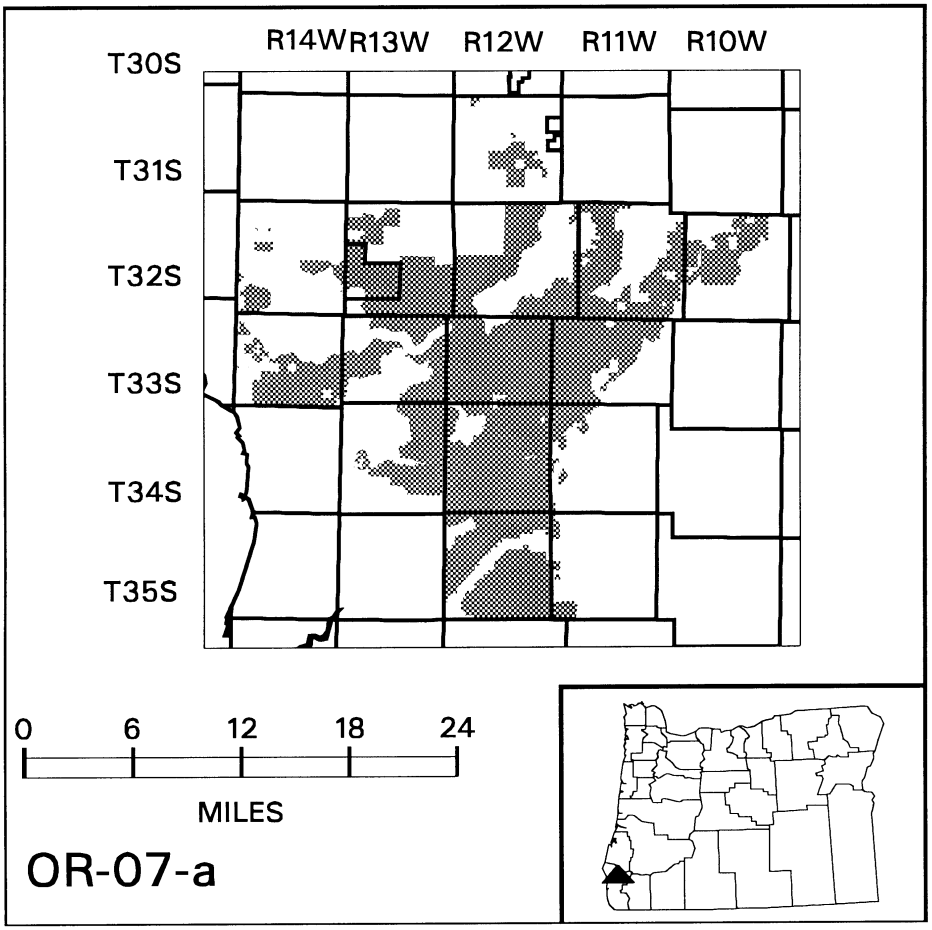
T.35S., R.11W. Willamette Meridian: SW¼, W½ NW¼ Section 6; NW¼ Section 7; S½ SW¼ Section 18; N½ NW¼, NE¼ SW¼ Section 19; Section 31; W½ Section 32.

T.35S., R.12W. Willamette Meridian: Sections 1–4; Section 5 except SW¼ SW¼, NE¼ SW¼; Section 6 except SE¼ SE¼, SW¼ SW¼; SE¼ SW¼, E½ Section 7; Sections 8–9; N½, NW¼ SW¼ Section 10; N½ N½, SW¼ NW¼, SW¼ SE¼ Section 11; NE¼ NE¼ Section 12; Section 13 except SE¼ NE¼, NE¼ SE¼, N½ N½; Section 14; Section 15 except NW¼; SE¼ SE¼, W½ NE¼, NW¼, N½ SW¼ Section 16; Sections 17–19; Section 20 except E½ NE¼, N½ SE¼; Section 21 except NW¼, NW¼ NE¼, NW¼ SW¼; Sections 22–28; Section 29 except N½ NW¼, SW¼ NW¼, W½ NE¼; Section 30 except SE¼ NE¼, SE¼, SE¼ SW¼; Section 32 except SW¼ SW¼; Sections 33–36.

Description of Lands Using Protracted Public Land Survey Lines

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.32S., R.13W. Willamette Meridian: Sections 18–21; Sections 28–29; N½, NW¼ SW¼ Section 30.



Map and description of OR–07-b taken from United States Fish and Wildlife Service 1:100,000 map; Port Orford and Gold Beach, Oregon; 1995.

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.35S., R.12W. Willamette Meridian: Section 31 except E½ E½, N½ N½, SW¼ NW¼.

T.35S., R.13W. Willamette Meridian: NW¼, N½ NE¼, S½ SE¼, S½ SW¼, NW¼ SW¼ Section 31; N½ N½ Section 32; N½ Section 33; N½, NE¼ SE¼ Section 34; Section 35; W½, NW¼ NE¼ Section 36.

T.36S., R.12W. Willamette Meridian: Sections 1–4; NE¼, E½ SE¼, SE¼ NW¼, N½ NW¼, NW¼ SE¼ Section 5; E½ E½, W½ SE¼, SW¼ NE¼ Section 8; Sections 9–17; S½ SE¼ Section 18; NE¼, E½ SE¼ Section 19; Sections 20–23; Section 24 except SE¼ SE¼; N½ NW¼ Section 25; Section 26 except N1/2 SE1/4; Sections 27–29; NE¼, E½ SE¼, NW¼ SE¼, E½ NW¼ Section 30; SE¼, E½ SW¼, E½ NE¼, SW¼ SW¼ Section 31; Sections 32–35; SW¼, W½ NW¼ Section 36.

T.36S., R.13W. Willamette Meridian: S½ S½, E½ NE¼, NE¼ SE¼, N½ NW¼ Section 1; SW¼, S½ SE¼, NE¼ NE¼ Section 2; Section 3; NE¼, N½ SE¼, N½ NW¼ Section 4; Section 5; NW¼, SE¼, NE¼ SW¼, E½ NE¼, SW¼ NE¼ Section 6; N½, SW¼ SE¼, NW¼ SW¼ Section 7; Section 8 except SE¼ NE¼, NE¼ SE¼; Section 9 except NW¼ NE¼, NE¼ NW¼, SW¼ NW¼, NW¼ SW¼; Sections 10–11; Section 12 except E½ SE¼, SE¼ NE¼; Section 13 except SE¼, E½ SW¼; Section 14 except SW¼; Section 15 except W½ NW¼, NW¼ SW¼; N½ NE¼, SW¼, S½ SE¼ Section 17; E½, E½ SW¼ Section 18; E½ SE¼, NE¼, S½ SW¼, NE¼ NW¼ Section 19; NW¼, SW¼ NE¼ Section 20; E½, NE¼ SW¼ Section 22; Section 23; Section 24 except NE¼; Sections 25–26; Section 27 except N½ NW¼, SW¼ NW¼; SE¼ SE¼, NW¼ NW¼ Section 28; Sections 29–32; W½ W½, E½ E½ Section 33; Section 34; N½, W½ SW¼ Section 35; N½ N½ Section 36.

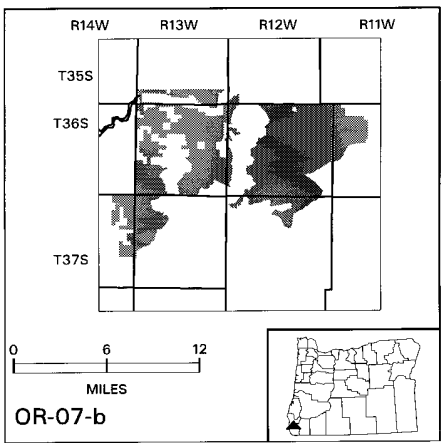
T.36S., R.12 ½W. Willamette Meridian: Section 1 except SE¼ NE¼, SE¼; S½, NW¼ Section 12; NW¼, N½ NE¼ Section 13; W½ Section 24; W½ Section 25; W½ NW¼ Section 36.

T.37S., R.12W. Willamette Meridian: NW¼ NW¼ Section 1; Section 2 except SE¼, SE¼ SW¼; Section 3 except NW¼ SW¼; Section 4 except NE¼ SE¼; N½ N½, S½ NW¼ Section 5; Section 6 except S½, SE¼ NW¼; NE¼, E½ SE¼, N½ NW¼ Section 9; W½, NW¼ NE¼ Section 10.

T.37S., R.13W. Willamette Meridian: W½, N½ NE¼ Section 5; Sections 6–8; W½ W½, NE¼ SW¼, SE¼ NW¼ Section 9; W½, W½ NE¼, NE¼ NE¼ Section 17; Section 18; N½ NE¼, NW¼, W½ SW¼ Section 19; NW¼ NW¼ Section 20; NW¼ NW¼ Section 30.

T.37S., R.14W. Willamette Meridian: Section 1 except SW¼ SW¼; E½ SE¼, NE¼ Section 2; E½ Section 11; Section 12 except W½ NW¼, N½ SW¼; SE¼, N½ N½ Section 13; Section 24 except NW¼ NE¼.

T.37S., R.12 ½W. Willamette Meridian: Section 1 except N½ NW¼, S½ SW¼.



Map and description of OR–07–c taken from United States Fish and Wildlife Service 1:100,000 map; Gold Beach, Oregon; 1995.

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.37S., R.12W. Willamette Meridian: E½ SW¼, W½ SE¼, SE¼ SE¼ Section 17; SE¼ SE¼ Section 18; Section 19 except N½ NW¼; Section 20; W½ W½ Section 21; S½ SE¼, SW¼, NW¼, NW¼ SE¼ Section 28; Sections 29–33; W½, NW¼ SE¼, SW¼ NE¼ Section 34; S½ SE¼, SE¼ SW¼ Section 35.

T.37S., R.13W. Willamette Meridian: SE¼, E½ SW¼, S½ NE¼ Section 24; Section 25; Section 26 except NE¼ NW¼, NW¼ NE¼; E½ E½ Section 27; SE¼, E½ NE¼, E½ SW¼ Section 34; Sections 35–36.

T.37S., R.12 ½W. Willamette Meridian: Section 24 except NW¼ NW¼; Sections 24–25; Section 36.

T.37 ½S. R.11W. Willamette Meridian: W½ SW¼, SW¼ NW¼ Section 31.

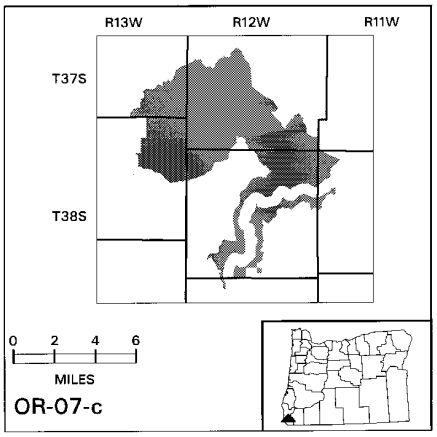
T.37 ½S. R.12.W. Willamette Meridian: Section 25 except E½; Section 26 except E½ NW¼; Sections 27–32; Section 33 except S½ SW¼; Sections 34–35; Section 36 except N½ NE¼.

T.38S., R.11W. Willamette Meridian: Section 6 except N½ NE¼, S½ SE¼, NE¼ SE¼; W½, W½ SE¼, Section 7; NW¼, W½ SW¼, NW¼ NE¼ Section 18.

T.38S., R.12W. Willamette Meridian: Sections 1–2; Section 3 except W½ SW¼, SE¼ SW¼; NE¼ NE¼ Section 4; NW¼, W½ NE¼ Section 5; Section 6; N½ NW¼ Section 7; S½ S½, NE¼, N½ SE¼, NE¼ SW¼ Section 9; Sections 10–12; N½ N½, S½ NE¼, NW¼ SE¼ Section 13; N½, N½ S½ Section 14; Sections 15–16; E½ SE¼ Section 17; E½ E½ Section 20; Section 21; W½ W½, NE¼ NW¼, NW¼ NE¼ Section 22; W½ Section 27; Section 28; Section 29 except NW¼ NW¼; S½ SE¼ Section 30; N½ NE¼ Section 31; Section 32; Section 33 except S½ SE¼; W½ NW¼, NW¼ SW¼ Section 34.

T.38S., R.13W. Willamette Meridian: Sections 1–2; SE¼ SE¼ Section 3; E½ E½, SW¼ SE¼ Section 10; Sections 11–13; Section 14 except S½ SW¼, SW¼ SE¼; NE¼ Section 15; N½ N½ Section 24.

T.39S., R.12W. Willamette Meridian: N½ NW¼, SE¼ NW¼, NE¼ SW¼, NE¼ NE¼ Section 5.



Map and description of OR–07–d taken from United States Fish and Wildlife Service 1:100,000 map; Gold Beach and Grants Pass, Oregon; 1995.

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.38S., R.11W. Willamette Meridian: S½ SE¼, NE¼ SE¼, SE¼ NE¼ Section 31.

T.39S., R.11W. Willamette Meridian: SW¼, SW¼ SE¼ Section 4; S½, S½ NW¼ Section 5; E½, E½ W½ Section 6; Section 7 except NW¼ NW¼; Section 8 except SW¼ SW¼; Section 9; W½ W½, E½ SW¼ Section 10; NW¼, SW¼ SW¼ Section 15; Section 16 except NW¼ SW¼, SW¼ NW¼; N½ NE¼, SE¼ SW¼, S½ SE¼ Section 17; Section 18 except N½ NE¼; Sections 19–20; Section 21 except SE¼ SE¼; W½ NW¼ Section 22; NW¼ NW¼, W½ SW¼, SE¼ SW¼, SW¼ SE¼ Section 29; Sections 30–32; SW¼, S½ NW¼, W½ SE¼ Section 33.

T.39S., R.12W. Willamette Meridian: S½ S½ Section 1; S½ S½, N½ SE¼ Section 2; S½ Section 3; Section 10 except SE¼ SE¼; Section 11 except S½ SW¼; Section 12; Section 13 except SW¼, SW¼ NW¼; NE¼ NE¼ Section 14; W½, W½ E½, E½ SE¼ Section 19; S½, E½ NE¼ Section 20; Section 21; S½ S½, NW¼ SW¼, W½ NW¼, NE¼ SE¼ Section 22; S½, S½ N½ Section 23; Sections 24–36.

T.39S., R.13W. Willamette Meridian: Section 33.

T.40S., R.09W. Willamette Meridian: SW¼ Section 4; S½, S½ NW¼ Section 5; SE¼, SE¼ NE¼ Section 6; Section 7 except S½ SE¼; Section 8 except S½ S½; N½ NW¼, SW¼ NW¼ Section 9; W½ NW¼, NE¼ NW¼ Section 18; Section 19 except E½ NW¼, NE¼ SW¼; SW¼, S½ NW¼ Section 20; S½ SE¼ Section 21; Section 27 except NE¼ NE¼; Section 28; SE¼, SE¼ SW¼, SE¼ NE¼, NE¼ NW¼ Section 29; Section 30 except E½ SE¼, SE¼ NE¼, SW¼ SE¼, SE¼ SW¼; S½, W½ NW¼ Section 31; Section 32 except NW¼ NW¼; Section 33; Section 34 except E½ SE¼, SE¼ NE¼, SW¼ SE¼.

T.40S., R.10W. Willamette Meridian: SW¼ SW¼ Section 1; SE¼, S½ SW¼, E½ NE¼ Section 2; S½ SW¼ Section 3; SE¼ SE¼ Section 4; SE¼, S½ NE¼ Section 8; Section 9 except N½ NW¼; Sections 10–11; Section 12 except NW¼ NE¼; Sections 13–16; Section 17 except N½ NW¼, SW¼ NW¼; Section 19 except NW¼, NW¼ SW¼, NW¼ NE¼; Sections 20–36.

T.40S., R.11W. Willamette Meridian: N½ NW¼, SW¼ NW¼, NW¼ NE¼ Section 4; Sections 5–8; W½ NW¼, S½ SE¼, SW¼ Section 9; Section 16 except E½ E½; Sections 17–21; E½ SE¼, SW¼ SE¼ Section 25; Section 27 except E½, NE¼ NW¼; Sections 28–33; W½ Section 34; SE¼ SE¼, SE¼ NE¼ Section 35; Section 36.

T.40S., R.12W. Willamette Meridian: Sections 1–30; Section 31 except W½ SW¼, SW¼ NW¼; Sections 32–36.

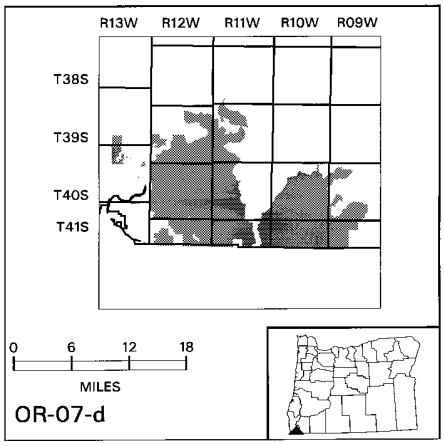
T.40S., R.13W. Willamette Meridian: Section 4 except SE¼ SE¼; W½, NW¼ NE¼, S½ SE¼, NE¼ SE¼ Section 9; W½, NE¼ Section 10; SE¼ SW¼ Section 12; N½ NW¼ Section 13.

T.41S., R.09W. Willamette Meridian: Sections 4–8; Sections 17–18.

T.41S., R.10W. Willamette Meridian: Sections 1–18.

T.41S., R.11W. Willamette Meridian: Section 1; Section 2 except NW¼ NE¼, NE¼ NW¼; Sections 3–15; Sections 17–18.

T.41S., R.12W. Willamette Meridian: Sections 1–4; Section 5 except W½, SW¼ SE¼; Section 7 except NW¼, W½ SW¼, NW¼ NE¼; W½, S½ SE¼ Section 8; Section 9 except S½ S½, NW¼ SW¼; Section 10; Section 11 except SE¼ SW¼, W½ SW¼; Sections 12–13; Section 14 except NE¼ NW¼, NW¼ NE¼; Section 15; Section 17; Section 18 except W½ W½.



Map and description of OR–07–f taken from United States Fish and Wildlife Service 1:100,000 map; Port Orford, Canyonville, Gold Beach and Grants Pass, Oregon; 1995.

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.32S., R.09W. Willamette Meridian: Section 34.

T.32S., R.10W. Willamette Meridian: Section 25; E½, NE¼ NW¼, SE¼ SW¼ Section 26; Section 35 except W½ NW¼; Section 36 except SE¼ SW¼, SW¼ SE¼.

T.33S., R.09W. Willamette Meridian: Section 2; Sections 3–4; Section 5 except SE¼ NW¼, E½ SW¼; Section 6 except SE¼; Section 7 except E½ NW¼, W½ NE¼; Section 8 except NE¼ NW¼; Sections 9–10; Sections 17–19.

T.33S., R.10W. Willamette Meridian: Section 1 except NE¼, N½ SW¼, S½ NW¼; Section 2 except NE¼ SE¼; Section 3 except NW¼, N½ NE¼, SW¼ SW¼, N½ SW¼; Section 9 except W½, N½ NE¼, SW¼ SE¼; Section 10; Section 11 except NE¼ NW¼; Section 12 except NW¼, SE¼ NE¼; Sections 13–14; Section 15 except W½ SW¼; Section 21 except W½; Sections 22–24; Sections 26–27; Section 28 except N½ NW¼; Section 29 except NW¼ SW¼; SE¼ SE¼ Section 30; Section 31 except W½, W½ SE¼; Sections 32–34.

T.34S., R.10W. Willamette Meridian: Sections 4–5; Section 6 except NW¼ NE¼, N½ NW¼, SW¼ NW¼; Sections 7–8; Section 18.

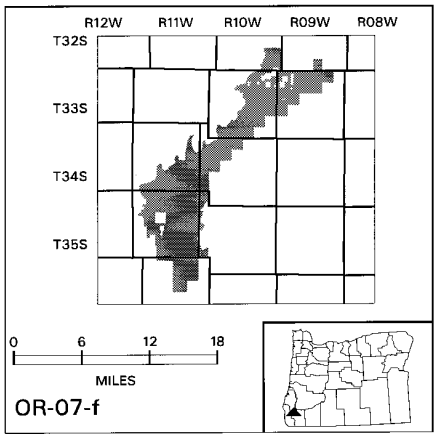
T.34S., R.10 ½W. Willamette Meridian:S½ Section 7; Section 18 except NW¼ NW¼; Sections 19; Sections 30–31.

T.34S., R.11W. Willamette Meridian: E½ SE¼, SE¼ NE¼ Section 11; Section 12 except E¼; Section 13 except NE¼; E½ E½, SW¼ SW¼ Section 14; SE¼ SE¼ Section 15; Section 21 except N½, E½ SE¼, NW¼ SW¼; Section 22 except NW¼, W½ NE¼, NW¼ SE¼, N½ SW¼, SW¼ SW¼; Section 23 except NE¼ NW¼, NW¼ NE¼; Sections 24–28; S½ NE¼, SE¼ Section 31; Section 32 except N½ NW¼; Sections 33–36.

T.35S., R.10 ½W. Willamette Meridian: Section 6; Section 7 except E½ E½, W½ SE¼, NE¼ SW¼; Section 18 except E½, E½ SW¼; NW¼, W½ SW¼, NW¼ NE¼ Section 19; W½ SW¼ Section 30; Section 31.

T.35S., R.11W. Willamette Meridian: Sections 1–4; Section 5 except SW¼ SW¼; E½ NE¼ Section 6; E½ E½ Section 7; Sections 8–15; Section 17; E½ NE¼, NW¼ NE¼ Section 18; Section 20 except SW¼ NW¼, W½ SW¼; Section 21 except SW¼ NE¼; Sections 22–28; NE¼ NW¼, E½ E½ Section 29; Section 33 except W½ SW¼; Sections 34–36.

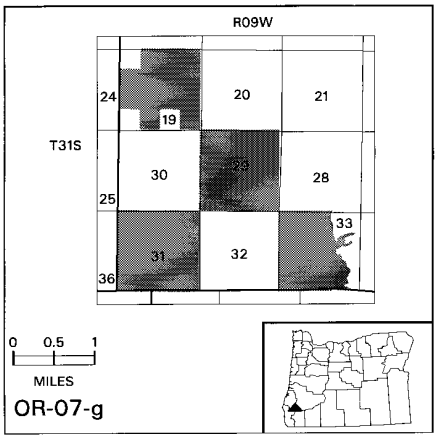
T.36S., R.11W. Willamette Meridian: Sections 2–3; N½ N½, SE¼ NE¼, E½ SE¼ Section 4; NE¼ NW¼, N½ NE¼ Section 5; E½ E½ Section 9; Sections 10–11; Section 15; E½ E½ Section 16.



Map and description of OR–07–g taken from United States Fish and Wildlife Service 1:100,000 map; Canyonville, Oregon; 1995.

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.31S., R.09W. Willamette Meridian: Section 19 except NW¼ NW¼, SW¼ SW¼, SW¼ SE¼; Section 29; Section 31; Section 33 except NE¼ NE¼.

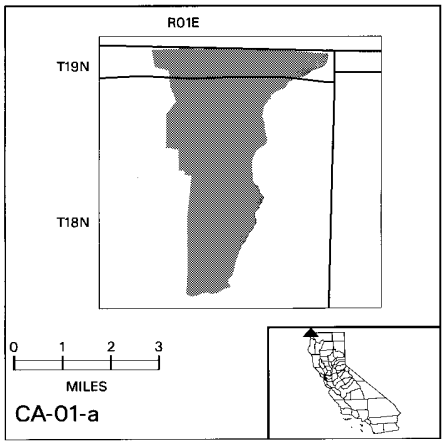


Map and description of CA–01–a taken from United States Fish and Wildlife Service 1:100,000 map; Grants Pass, Oregon; Crescent City and Happy Camp, California; 1995.

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.18N., R.01E. Humboldt Meridian: NW¼ NW¼ Section 1; W½, NE¼, NW¼ SE¼ Section 2; Section 3; E½ Section 4; NE¼, E½ SE¼ Section 9; Section 10; W½ NE¼, NW¼, SW¼, Section 11; W½ Section 14; Section 15; NE¼ NE¼ Section 16; Section 22; NW¼, NW ¼ SW¼ Section 23; N½, N½ SW¼, NW¼ SE¼ Section 27.

T.19N., R.01E. Humboldt Meridian: Section 33 except W½ SW¼; Sections 34–35; Section 36 except SE¼ SE¼.



Map and description of CA–01–b taken from United States Fish and

Wildlife Service 1:100,000 map; Crescent City and Happy Camp, California; 1995.

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.17N., R.02E. Humboldt Meridian: SW¼ SE¼, SE¼ SW¼ Section 29; Section 31 except N½ NW¼, SW¼ NW¼; W½, W½ NE¼ Section 32.

T.17N., R.01E. Humboldt Meridian: S½ SW¼ Section 35; SE¼, SE¼ SW¼ Section 36.

T.16N., R.03E. Humboldt Meridian: S½ SW¼, NW¼ SW¼, SW¼ SE¼ Section 17; SE¼, E½ SW¼, SW¼ SW¼, S½ NE¼, SE¼ NW¼ Section 18; Sections 19–20; SW¼, S½ NW¼, Section 21; W½ SW¼, SW¼ NW¼ Section 27; Section 28 except NE¼ NE¼; Sections 29–33; S½ NW¼, SW¼, W½ SE¼, SE¼ SE¼ Section 34.

T.16N., R.02E. Humboldt Meridian: W½, SW¼ SE¼ Section 5; Sections 6–8; W½ Section 9; W½ NW¼, SW¼, S½ SE¼ Section 16; Section 17; Section 18 except W½ NW¼, SE¼ NW¼; Sections 19–21; Section 22 except N½ NE¼, SE¼ NE¼; SW¼ SW¼ Section 23; S½, S½ NE¼, NE¼ NE¼ Section 25; Section 26 except NE¼ NE¼; Sections 27–29; N½ N½, SE¼ NE¼ Section 30; Section 32 except SW¼; Sections 33–36.

T.16N., R.01E. Humboldt Meridian: Sections 1–2; SE¼, E½ NE¼ Section 3; NE¼, SW¼ NW¼, NE¼ NW¼ Section 10; N½, SE½ SE¼, N½ S½ Section 11; Section 12; S½ SE¼ Section 13; NE¼ Section 24.

T.15N., R.03E. Humboldt Meridian: Sections 2–6; N½, N½ SW¼ Section 7; SE¼, S½ SW¼, NE¼ SW¼ Section 8; Sections 9–10; W½, W½ NE¼ Section 11; SW¼ SW¼ Section 13; Section 14 except N½ NE¼, SE¼ NE¼; Sections 15–17; Section 18 except NW¼, NW¼ SW¼; NE¼, NE¼ NW¼ Section 19; Section 20 except SW¼; Sections 21–23; W½ NW¼, NW¼ SW¼ Section 24; Section 27 except E½ E½, SW¼ SW¼; Section 28 except S½, SW¼ NE¼, SE¼ NW¼; NE¼, NW¼ SE¼, NE¼ SW¼, E½ NW¼ Section 29.

T.15N., R.02E. Humboldt Meridian: Sections 1–3; N½ NW¼, NE¼, E½ SE¼ Section 4; NE¼ NE¼ Section 5; Section 10 except W½ SW¼; Sections 11–12; Section 13 except E½ NE¼, SE¼; Section 14; NE¼, E½ SE¼, NW¼ SE¼ Section 15; E½ SE¼ Section 22; Section 23 except SE¼ NE¼, SW¼ SE¼; SW¼ Section 24; Section 25 except E½ NE¼; Section 26 except NE¼ NE¼; S½, S½ N½ Section 27; SE¼, SE¼ SW¼, S½ NE¼ Section 28; Section 33–34; Section 35 except E½ E½.

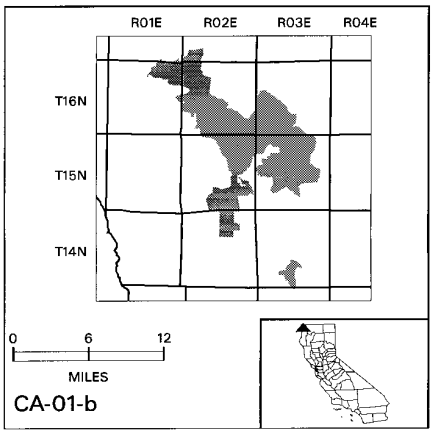
T.14N., R.02E. Humboldt Meridian: N½ NW¼, W½ W½, NW¼ NE¼ Section 2; Section 3; N½ N½, E½ E½ Section 4; E½ E½ Section 9; Section 10; NW¼, N½ SW¼, W½ NE¼, NW¼ SE¼ Section 11; NW¼ NW¼ Section 14; N½ N½ Section 15.

Description of Lands Using Protracted Public Land Survey Lines

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.14N., R.03E. Humboldt Meridian: SE¼ SE¼ Section 21; SW¼ SW¼ Section 22; W½ SW¼, W½ NE¼, NW¼ Section 27; Section 28 except NW¼; SE¼ SE¼ Section 29; E½ Section 33 except W½ W½, E½ SW¼, SW¼ SE¼; W½ W½ Section 34.

T.13N., R.03E. Humboldt Meridian: NW¼ NW¼ Section 3.



Map and description of CA–01–c taken from United States Fish and Wildlife Service 1:100,000 map; Happy Camp and Hoopa, California; 1995.

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T. 11N., R.06E. Humboldt Meridian: N½ NW¼, SW¼ NW¼, W½ SW¼ Section 30.

T. 11N., R.05E. Humboldt Meridian: W½ NE¼, NW¼, E½ SW¼, W½ SE¼ Section 36.

Description of Lands Using Protracted Public Land Survey Lines

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T. 14N., R.05E. Humboldt Meridian: S½ Section 7; Section 18 except E½ SE¼, SE¼ NE¼; W½, NW¼ NE¼ Section 19; W½ SW¼, NW¼ NW¼ Section 30; Section 31 except NE¼, NE¼ NW¼; SW¼ SW¼ Section 32.

T. 14N., R.04E. Humboldt Meridian: SE¼, SE¼ SW¼ Section 12; Section 13 except W½ W½, Sections 24–25; E½ NE¼ Section 26; SE¼, E½ NE¼ Section 35; Section 36.

T. 13N., R.05E. Humboldt Meridian: SW¼, W½ NW¼, NE¼ NW¼, W½ SE¼ Section 5; Sections 6–7; Section 8 except NE¼, NE¼ SE¼; S½ S½ Section 9; E½ SW¼, SW¼ SW¼, W½ SE¼ Section 10; NW¼, N½ SW¼, W½ NE¼, NW¼ SE¼, SE¼ SE¼ Section 15; Section 16 except SE¼ SE¼; Sections 17–21; Section 22 except SE¼ SE¼; N½ NW¼ Section 27; N½ NW¼, NW¼ NE¼ Section 28; Section 29 except E½ SE¼; Sections 30–31, Section 32 except E½ NE¼; S½ SE¼ Section 35; SW¼, W½ SE¼, SE¼ SE¼ Section 36.

T. 13N., R.04E. Humboldt Meridian: Section 1; Section 2 except NW¼; S½ SE¼ Section 3; SE¼ SE¼ Section 9; Section 10 except NW¼ NW¼; Sections 11–15; E½ E½ Section 16; SE¼, S½ NE¼, NE¼ NE¼, S½ SW¼ Section 21; Sections 22–28; Section 29 except N½ N½; Section 30 except N½ N½; Sections 31–36.

T. 13N., R.03E. Humboldt Meridian: S½ Section 25; S½ SE¼ Section 26; Section 35 except W½ NW¼; Section 36.

T. 12N., R.06E. Humboldt Meridian: W1/2 SW¼ Section 6; SW¼ Section 7; W½, W½ SE¼ Section 18; N½ NW¼, NW¼ NE¼ Section 19.

T. 12N., R.05E. Humboldt Meridian: Section 1; Section 2 except NW¼, NW¼ SW¼; S½ S½, NW¼ SW¼ Section 3; Section 4 except N½ NE¼, SE¼ NE¼; Sections 5–11; Section 12 except S½ NE¼; Sections 13–23; Section 24 except E½ SE¼, SE¼ NE¼; Section 25 except E½ NE¼; Sections 26–36.

T. 12N., R.04E. Humboldt Meridian: Sections 1–36.

T. 12N., R.03E. Humboldt Meridian: Sections 1–2; Section 3 except NW¼, W½ SW¼, W½ NE¼, NE¼ NE¼; Section 10 except W½ W½, NE¼ NW¼; Sections 11–14, Section 15 except W½ W½, SE¼ SW¼, SW¼ SE¼; SW¼ SE¼ Section 22; Section 23 except SW¼ SW¼; Section 24; Section 25 except SW¼ SE¼; N½ NE¼, SE¼ NE¼ Section 26.

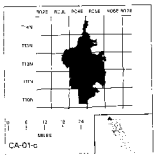
T. 11N., R.06E. Humboldt Meridian: SW¼, W½ NW¼, Section 6; W½ Section 7; NW¼ NW¼ Section 18; SW¼, SW¼ NW¼ Section 19.

T. 11N., R.05E. Humboldt Meridian: Sections 1–25; Section 26 except SW¼, SW¼ SE¼; NE¼ NE¼, Section 27; Section 28 except SE¼ SE¼; Sections 29–32; Section 33 except NE¼, E½ NW¼; W½ SW¼ Section 34.

T. 11N., R.04E. Humboldt Meridian: Sections 1–30, Section 31 except SW¼, S½ NW¼; Sections 32–36.

T. 10N., R.05E. Humboldt Meridian: W½ SW¼ Section 2; Section 3 except NE¼, Sections 4–9, Section 10 except S½, SW¼ NW¼; N½ NW¼ Section 11; Section 16 except SE¼, SE¼ SW¼; Section 17–18; Section 19 except SE¼, SE¼ SW¼, SE¼ NE¼; N½ NW¼ Section 20; W½ W½, SE¼ SW¼ Section 30.

T. 10N., R.04E. Humboldt Meridian: Sections 1–3; Sections 10–15; Sections 22–27.



Map and description of CA–01-d taken from United States Fish and Wildlife Service 1:100,000 map; Happy Camp California; 1995.

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.17N., R.03E. Humboldt Meridian: NE¼, E½ SE¼ Section 24; E½ NE¼, SE¼, Section 25; N½, E½ SE¼ Section 36.

T.16N., R.03E. Humboldt Meridian: S½ SW¼, SE¼, NE¼ SW¼ Section 1; E½ E½ Section 11; Section 12; Section 13 except W½ SW¼, SW¼ NW¼; NE¼, E½ NW¼, E½ SE¼ Section 24; SE¼, SE¼ NE¼ Section 25; Section 36 except SW¼, NW¼ NW¼, W½ SE¼.

T.15N., R.07E. Humboldt Meridian: SW¼ NW¼, NW¼ SW¼ Section 7.

T.15N., R.06E. Humboldt Meridian: NW¼ Section 13.

T.15N., R.03E. Humboldt Meridian: E½ E½ Section 1; E½, SE¼ Section 12.

T.14N., R.06E. Humboldt Meridian: N½ NW¼, SW¼ NW¼, W½ SE¼ Section 4; Section 5; Section 8; SW¼, S½ NW¼, NW¼ NW¼ Section 9; W½ Section 16; Section 17; N½ Section 20; Section 21 except S½ SW¼, N½ NE¼ Section 21.

Description of Lands Using Protracted Public Land Survey Lines

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.18N., R.04E. Humboldt Meridian: SE¼ SW¼, SW¼ SE¼ Section 33; E½ SE¼ Section 35; SW¼, SW¼ SE¼, S½ NW¼ Section 36.

T.17N., R.06E. Humboldt Meridian: S½ SW¼, SW¼ SE¼ Section 14; S½ SW¼, NE¼ SE¼ Section 15; S½ SE¼ Section 16; E½ Section 21; Section 22; Section 23 except NE¼ NE¼; W½ SW¼ Section 24; Section 26 except E½ SE¼; Section 27 except SW¼, W½ SE¼, SE¼ NW¼; NE¼ NE¼ Section 28.

T.17N., R.05E. Humboldt Meridian: SW¼, SW¼ NW¼ Section 4; Section 5 except N½ N½, SW¼ NW¼; Section 6 except NE¼; Section 7 except S½ SE¼, SW¼ SE¼; Section 8 except SE¼ SE¼; W½ NW¼ Section 9.

T.17N., R.04E. Humboldt Meridian: Section 1 except SW¼, SW¼ NW¼; Section 2 except NE¼ NE¼, N½ NW¼, E½ SE¼; Section 3 except N½ N½; Section 4; SE¼ NE¼, SE¼ Section 5; Section 8 except NW¼; Sections 9–10; NE¼, NW¼, NW¼ SW¼ Section 11; NE¼ Section 12; Sections 16–17; W½, W½ E½ Section 20; SE¼, NE¼ SW¼ Section 21; S½, S½ N½ Section 22; S½, S½ N½ Section 23; W½ SW¼ Section 24; W½ NW¼, NW¼ SW¼ Section 25; Section 26; Section 27 except SW¼; NE¼, SW¼, SW¼ SE¼ Section 28; Section 29 except E½ NE¼; SW¼, W½ SE¼ Section 32; Section 33; N½ NE¼, SW¼, SE¼ Section 34; N½, N½ SE¼, SW¼ SW¼ Section 35.

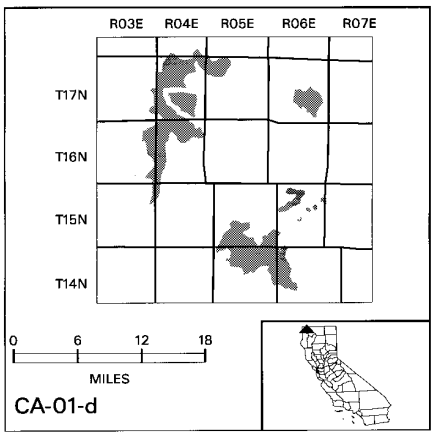
T.16N., R.04E. Humboldt Meridian: S½ SW¼, W½ SE¼ Section 1; Section 2 except NE¼; Sections 3–4; Section 5 except N½ NW¼; Section 8; W½ W½, NE¼ NE¼ Section 9; Section 10 except W½ SW¼; Section 11 except SE¼, S½ SW¼; S½ Section 12; E½ E½ Section 17; E½ E½ Section 20; Section 29 except SE¼, E½ NE¼; W½ Section 32.

T.15N., R.06E. Humboldt Meridian: W½ SW¼ Section 2; S½ Section 3; N½, E½ Section 4; SE¼ Section 9; Section 10 except W½ NW¼, E½ SE¼, S½ NW¼ Section 11; NE¼ SE¼, SE¼ NE¼ Section 12; NW¼ Section 13; SE¼ NW¼, SW¼ NE¼ Section 14; N½ NW¼ Section 15; NW¼, N½ SW¼, NW¼ NE¼ Section 16; NE¼ NE¼, N½ SE¼, NE¼, SE¼ NW¼ Section 17; SW¼, S½ NW¼, NW¼ SE¼ Section 29; S½ SW¼ Section 30.

T.15N., R.05E. Humboldt Meridian: SE¼ Section 20; S½ Section 21; S½ SW¼ Section 22; S½ NE¼, NE¼ SW¼, SE¼ Section 25; NW¼ Section 27; Section 28 except E½ SE¼; NW¼, NW¼ SW¼ Section 29; SE¼ SE¼ Section 30; E½ NE¼, SE¼ Section 31; Sections 32–33; Section 34 except N½ N½, E½ NE¼ Section 34; E½, SW¼ SW¼, E½ SW¼ Section 35; Section 36.

T.15N., R.04E. Humboldt Meridian: W½ Section 6; W½ NW¼ Section 7.

T.14N., R.05E. Humboldt Meridian: Sections 1–4; E½ SE¼, NE¼, N½ NW¼ Section 5; NE¼, E½ NW¼ Section 6; NE¼, NE¼ NW¼, N½ SE¼ Section 8; Section 9 except S½ SW¼, SW¼ SE¼; Section 10; Section 11 except S½ SE¼, SE¼ SW¼; Section 12 except W½ SW¼; W½, NE¼ NW¼ Section 13; N½ NE¼, NW¼ Section 15; NE¼ Section 24.



Map and description of CA–01–e taken from United States Fish and Wildlife Service 1:100,000 map; Grants Pass, Oregon; Happy Camp, California; 1995.

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.41S., R.07W. Willamette Meridian: S½ SW¼, NW¼ SW¼ Section 6; N½ NW¼, SW¼ NW¼ Section 7; SE¼, S½ NE¼ Section 8; S½ SE¼, W½ Section 9; Section 16; E½ E½ Section 17.

T.41S., R.08W. Willamette Meridian: Section 1 except SE¼ NW¼, W½ SW¼; Section 2 except SE¼ SE¼; Section 4; Section 9 except W½ W½; Section 11 except NE¼ NE¼; Section 12 except E½ SE¼; Section 13 except NE¼; Sections 14–16; E½ SE¼, SE¼ NE¼ Section 17.

T.19N., R.06E. Humboldt Meridian: E½ SE¼, SW¼ SE¼ Section 31; Section 32 except NW¼ NW¼; NW ¼, W½ NE¼, N½ SW¼ Section 33.

T.19N., R.05E. Humboldt Meridian: Section 32 except S½ SW¼; Section 33; Section 34 except E½ SE¼; Section 35 except S½ SW¼; W½ NW¼ Section 36.

T.19N., R.04E. Humboldt Meridian: Sections 32–34; SW¼ SW¼ Section 35.

T.18N., R.05E. Humboldt Meridian: Section 5 except NW¼, W½ NE¼; SE¼, E½ SW¼ Section 6; Section 7 except S½ S½, NW¼ SW¼; Sections 16–17; SE¼, S½ N½, NW¼ NW¼, Section 18; N½ Section 19.

T.18N., R.04E. Humboldt Meridian: W½ NW¼ Section 2; Section 3 except SE¼ SE¼, Section 4; N½ N½, SW¼ NE¼ Section 9.

T.18N., R.03E. Humboldt Meridian: Section 1; SE¼, E½ NE¼, NE¼ NE¼, SE¼ SW¼ Section 2; SE¼ SE¼ Section 10; Section 11 except NW¼ NW¼; NW¼ NE¼, NE¼ NW¼ Section 12; W½ NW¼ Section 14; E½, E½ SW¼ Section 15; W½, NW¼ SE¼, N½ NE¼, SW¼ NE¼ Section 22; W½ Section 27; SE¼, S½ NE¼, NE¼ NE¼, E½ SW¼ Section 28; E½ SE¼, SE¼ NE¼ Section 32; Section 33; W½ Section 34.

T.17N., R.03E. Humboldt Meridian: NW¼, NW¼ SW¼ Section 3; Section 4 except S½ S½, NW¼ SW¼; NE¼ NE¼ Section 5.

Description of Lands Using Protracted Public Land Survey Lines

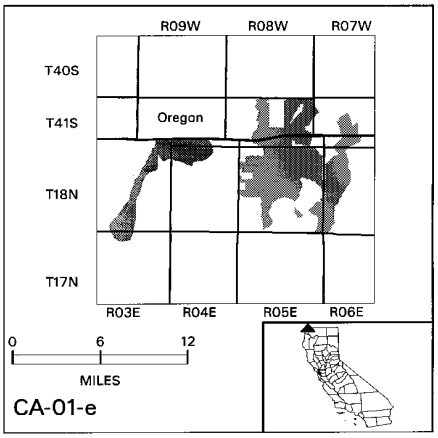
Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.18N., R.06E. Humboldt Meridian: Section 5 except E½ E½; E½ NE¼; SE¼ SW¼, SE¼ Section 6; Section 7; Section 8 except E½ NE¼; Section 17 except E½ SE¼; Sections 18–19; W½ NW¼, NE¼ NW¼, W½ SW¼ Section 20; Section 30 except E½ SE¼, SE¼ NE¼; Section 31 except E½ E½, SW¼ SE¼.

T.18N., R.05E. Humboldt Meridian: Section 1 except N½ NE¼; Sections 2–4; Sections 8–12; Section 13 except SW¼, SW¼ NW¼, SW¼ SE¼; Section 14 except SE¼, S½ NE¼; Section 15; Section 20 except SW¼; Section 21 except S½ SE ¼; Section 22 except SW¼ SE¼, S½ SW¼;

NW¼, NW¼ SW¼, SW¼ SW¼ Section 23; S½ SE¼, NE¼ SE¼, E½ NE¼ Section 24; Section 25 except S½ SW¼, NW¼ NW¼; W½ SW¼, NW¼, SE¼ SW¼ Section 28; E½ Section 29; E½ Section 32; NW¼, N½ SW¼ Section 33; E½, SE¼ SW¼ Section 36.

T.18N., R.04E. Humboldt Meridian: Section 5; N½ N½ Section 8.



Map and description of CA–02–a taken from United States Fish and Wildlife Service 1:100,000 map; Crescent City, California; 1995.

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.14N., R.01E. Humboldt Meridian: S½ NE¼, S½, SE¼ NW¼ Section 21; W½ SW¼, SE¼ SW¼ Section 22; NW¼, NW¼, NW¼ SW¼ Section 27; Section 28 except W½ SW¼, SE¼ SW¼, S½ SE¼.

T.17N., R.01E. Humboldt Meridian: SW¼ SW¼ Section 21; W½ NW¼, NW¼ SW¼ Section 28; E½ NE¼ Section 29.

Critical Habitat includes only State lands described within the following areas:

T.14N., R.01W. Humboldt Meridian: Section 1 above Mean High Water (MHW).

T.14N., R.01E. Humboldt Meridian: W½ Section 6; W½ Section 7; Sections 18–19 above MHW.

T.15N., R.01E. Humboldt Meridian: S½ Section 7; W½ Section 8; NW¼, W½ NE¼ Section 17; Sections 18–19; W½, N½ NE¼ Section 30; W½ Section 31.

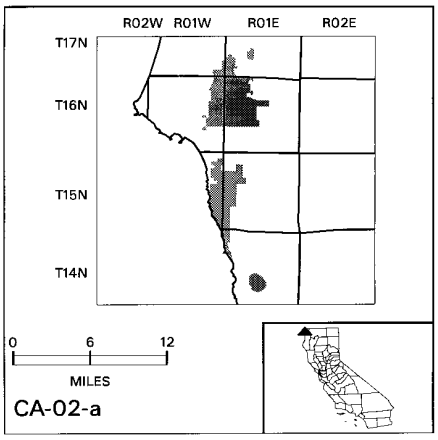
T.15N., R.01W. Humboldt Meridian: SE¼, S½ SW¼ Section 1; Section 12 except W½ NE¼; S½, NE¼, NE¼ NW¼ Section 13; Section 23 above MHW, Section 24, Sections 25–26 above MHW; Section 36 above MHW.

T.16N., R.01E. Humboldt Meridian: NW¼ Section 4; Sections 5–7; Section 8 except NE¼ SE¼; SW¼ NW¼ NW¼ SW¼ Section 9; NW¼ Section 15; W½, NE¼ Section 16; Sections 17–20; W½, W½ SE¼ Section 21.

T.16N., R.01W. Humboldt Meridian: Section 1; SE¼ SE¼ Section 2; E½ NE¼ Section 11; Sections 12–13; E½ E½ Section 14; SE¼, E½ NE¼, SW¼ NE¼, S½ NW¼ Section 23; Section 24.

T.17N., R.01E. Humboldt Meridian: SW¼, W½ SE¼ Section 30, Section 31 except E½ NE¼, NE¼ SE¼.

T.17N., R.01W. Humboldt Meridian: SE¼ SE¼ Section 25; S½, E½ NE¼ Section 36.



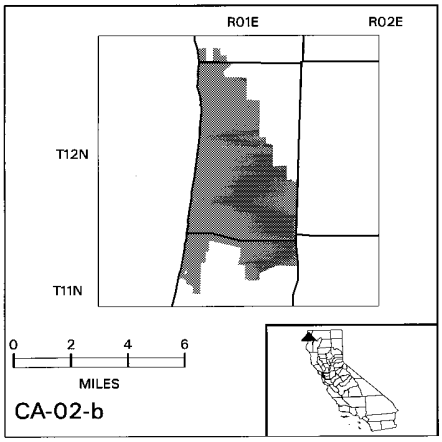
Map and description of CA–02–b taken from United States Fish and Wildlife Service 1:100,000 map; Orick and Hoopa, California; 1995.

Critical Habitat includes only State lands described within the following areas:

T.11N., R.01E. Humboldt Meridian: Sections 1–2 N½ N½ Section 3; Section 4 except E½ SE¼; Section 9 except E½ E½, SW¼ SW¼; N½ NE¼, SW¼ NE¼, E½ NW¼ Section 11; NW¼ NW¼ Section 12.

T.12N., R.01E. Humboldt Meridian: W½ NW¼, NE¼ NW¼, S½ Section 3; Section 4 above MHW; Section 9 above MHW; Section 10 except SE¼ NW¼; S½ NW¼, SW¼ Section 11; W½, NW¼ SE¼, S½ SE¼ Section 14; Section 15; Section 16 above MHW; Section 21 above MHW; Sections 22–23; SW¼ Section 24; Sections 25–27; Section 28 above MHW; Section 33 above MHW; Section 34–36.

T.13N., R.01E. Humboldt Meridian: SW¼, E½ SE¼ Section 33; SW¼ SW¼ Section 34.



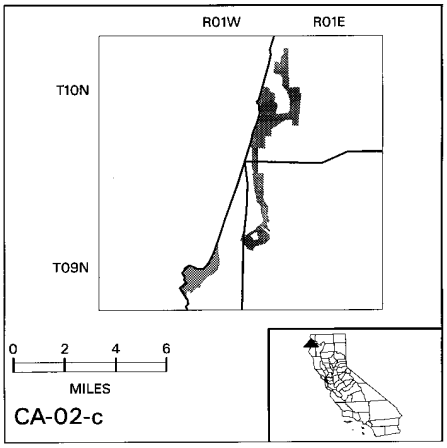
Map and description of CA–02–c taken from United States Fish and Wildlife Service 1:100,000 map; Orick, California; 1995.

Critical Habitat includes only State lands described within the following areas:

T.09N., R.01W. Humboldt Meridian: Section 23 above Mean High Water (MHW); Section 26 except SE¼, SE¼ SW¼; Section 27 above MHW; NE¼ Section 34; NW¼ NW¼ Section 35.

T.09N., R.01E. Humboldt Meridian: E½ NW¼, E½ SW¼, W½ SE¼ Section 6; W½ NE¼, E½ NW¼, W½ SE¼, SE¼ SE¼ Section 7; E½ NE¼, NE¼ SE¼ Section 18.

T.10N., R.01E. Humboldt Meridian: SW¼ SE¼, SE¼ SW¼ Section 8; W½ Section 17; Section 19 above MHW; E½ W½ W½ Section 20; Section 29 except SE¼, SW¼ NE¼, E½ SW¼, SW¼ SW¼; Section 30 above MHW; W½, N½ NE¼, E½ SW¼, SE¼ NW¼ Section 31.



Map and description of CA–03-a taken from United States Fish and Wildlife Service 1:100,000 map; Eureka and Hayfork, California; 1995.

Critical Habitat includes only Private lands described within the following areas:

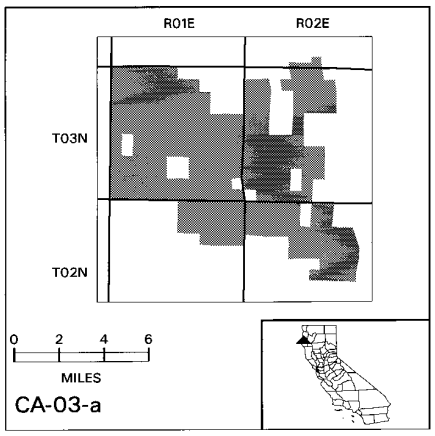
T.02N., R.01E. Humboldt Meridian: Section 1–3; N½ Section 10; Section 11–12.

T.02N., R.02E. Humboldt Meridian: Section 3; W½ Section 4; Section 5–6; N½ Section 7; N½ Section 8; Section 9–11; Section 14; Section 15 except SW¼; N½ Section 16; N½ Section 22; N½ Section 23.

T.03N., R.01E. Humboldt Meridian: S½ Section 3; Section 4–10; W½ Section 11; Section 13–18; W½ Section 19; Section 20–26; E½ Section 27; W½ Section 28; Section 29–35; Section 36 except NE¼.

T.03N., R.02E. Humboldt Meridian: Section 3 except NE¼; Section 4; SE¼ Section 5; S½ Section 6; Section 7; Section 9; Section 10; W½ Section 16; Section 18–20; Section 21 except NE¼; SW ¼ Section 22; W½ Section 27; Section 28 except SW¼; Section 29–30; Section 31 except SW¼; Section 32; Section 33 except NW¼.

T.04N., R.02E. Humboldt Meridian: S½ S½ Section 33; SW¼ Section 34.



Map and description of CA–04-a taken from United States Fish and Wildlife Service 1:100,000 map; Cape Mendocino and Garberville, California; 1995.

Critical Habitat includes only State lands described within the following areas:

T.01N., R.01E. Humboldt Meridian: SW¼ Section 23; S½ Section 24; SW¼ NW¼, N½ N½ Section 25; NE¼, E½ NW¼ Section 26.

T.01N., R.02E. Humboldt Meridian: E½ NE¼, NE¼ SE¼ Section 11; NW¼ Section 12; S½ Section 19; W½ W½ Section 29; N½, N½ SE¼, NE¼ SW¼ Section 30; NW¼ NW¼, S½ SE¼, E½ SW¼ Section 32.

T.01S., R.01E. Humboldt Meridian: S½ S½ Section 13; S½ NW¼, S½ Section 14; E½ SE¼ Section 15; E½ E½, SW¼ SE¼ Section 22; Sections 23–27; Section 28 except W½ NW¼; Section 33 except SW¼ NW¼, SW¼; Sections 34–36.

T.01S., R.02E. Humboldt Meridian: S½ NW¼, NW¼ SW¼, S½ SW¼, SW¼ SE¼ Section 3; Section 4 except SW¼ NW¼; NE¼ NE¼ Section 9; NW¼, W½ NE¼, E½ SE¼ Section 10; SW¼ SW¼ Section 11; W½ Section 14; SE¼, SW¼ SW¼ Section 15; S½ NW¼, SW¼, S½ SE¼ Section 16; S½, SE¼ NE¼ Section 17; S½ S½ Section 18; Sections 19–22; W½ Section 23; W½, SW¼ SE¼ Section 26; Sections 27–34; W½ NW¼, SE¼ NW¼, N½ SW¼, SW¼ SW¼, SW¼ NE¼, S½ SE¼, NW¼ SE¼ Section 35.

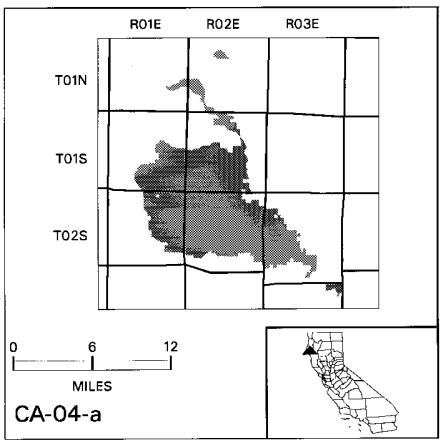
T.02S., R.01E. Humboldt Meridian: Sections 1–3; E½ E½ Section 4; E½ E½ Section 9; Sections 10–14; Section 15 except W½ SW¼, SW¼ NW¼; Section 22 except SW¼, W½ NW¼; Sections 23–25; Section 26 except, SW¼, S½ NW¼, SW¼ NE¼.

T.02S., R.02E. Humboldt Meridian: SW¼ Section 1; Section 2 except NE¼, E½ NW¼, NE¼ SE¼; Sections 3–24; Section 25 except SW¼ SW¼; N½ Section 26; Section 27 except S½ S½; Section 28 except S½ S½, NW¼ SW¼; Section 29 except NE¼ SE¼, S½ SE¼; Section 30 except S½ SW¼; NE¼ NW¼, N½ NE¼ Section 36.

T.02S., R.03E. Humboldt Meridian: Section 7 except N½; SW¼ SW¼ Section 8; Section 17 except NE¼, E½ SE¼; Sections 18–20; Section 21 except NW¼ NE¼, SE¼ NE¼, N½ SE¼, SE¼ SE¼; S½ S½, NW¼ SW¼, SW¼ NW¼ Section 27; Section 28 except NE¼ NE¼; Section 29 except W½ NW¼; Section 30 except SE¼ NE¼, NE¼ SE¼; Section 31 except S½ S½, NW¼ SE¼; Section 32 except SE¼ NE¼, S½; N½ NE¼, NE¼ NW¼ Section 33; E½, NW¼ Section 34; SE¼ NW¼, NW¼ NW¼ Section 35.

T.03S., R.03E. Humboldt Meridian: NW¼ Section 3; E½ NE¼ Section 11; N½, NW¼ SW¼, SE¼ Section 12; SE¼ SE¼, Section 13.

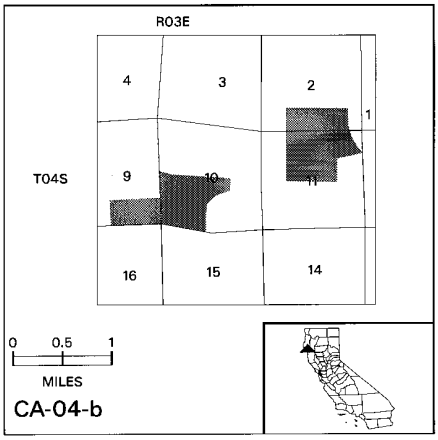
T.03S., R.04E. Humboldt Meridian: SW¼ SW¼ Section 18; NW¼, NW¼ SW¼ Section 30.



Map and description of CA–04–b taken from United States Fish and Wildlife Service 1:100,000 map; Garberville, California; 1995.

Critical Habitat includes only State lands described within the following areas:

T.04S., R.03E. Humboldt Meridian: SE¼ SW¼, S½ SE¼ Section 2; S½ SE¼ Section 9; SW¼, NW¼ SE¼ Section 10; E½ NW¼, SW¼ NE¼, N½ NE¼ Section 11.



Map and description of CA–05–a taken from United States Fish and Wildlife Service 1:100,000 map; Cape Mendocino, Garberville and Covelo, California; 1995.

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.02S., R.02E. Humboldt Meridian: SE¼ SE¼ Section 31; S½ SW¼, SW¼ SE¼ Section 32.

T.03S., R.02W. Humboldt Meridian: SE¼ NW¼, E½ SW¼, S½ SE¼, NW¼ SE¼ Section 12; Sections 13–14; Section 15–16 East of Mean High Water (MHW); Section 22–23 East of MHW; Section 24 except SE¼; N½ NE¼ Section 26 East of MHW.

T.03S., R.01W. Humboldt Meridian: SW¼ SW¼ Section 9; NE¼ SE¼ Section 10; S½, SE¼ NE¼ Section 11; SW¼ NW¼, S½ Section 12; Sections 13–18; N½ NW¼, SW¼ NW¼ Section 19; N½ NW¼, SE¼ NW¼, NE¼, N½ SE¼, Section 20; Sections 21–26; N½, E½ SE¼ Section 27; N½ NE¼ Section 28; NE¼ NW¼, NW¼ NE¼ Section 35; N½ NW¼, NE¼, E½ SW¼ Section 36.

T.03S., R.01E. Humboldt Meridian: N½ SE¼, SE¼ SE¼, NE¼ SW¼ Section 12; N½ SE¼, SE¼ SE¼, SE¼ NE¼ Section 13; SW¼ NW¼, W½ SW¼ Section 18; W½ NW¼, SW¼, W½ SE¼ Section 19; SE¼ NE¼, NE¼ SE¼ Section 24; W½ SW¼ Section 29; Section 30 except NE¼ NE¼; Section 31; W½ W½, NE¼ NW¼, NE¼ SW¼ Section 32.

T.03S., R.02E. Humboldt Meridian: W½ SW¼, NW¼, SE¼ NE¼, SW¼ SE¼ Section 5; E½ SE¼, SW¼ SE¼ Section 6; Section 7 except SW¼ NW¼, SE¼ SE¼; W½ W½, SE¼ NW¼, SW¼, W½ NE¼, W½ SE¼, SE¼ SE¼ Section 8; S½ SW¼ Section 9; E½ SW¼ Section 18; NE¼ NW¼, SE¼ SW¼, SW¼ SE¼ Section 19; SE¼ NE¼ Section 20; NW¼ NE¼ Section 22; NW¼ NW¼ Section 28; NW¼ NE¼ Section 30.

T.04S., R.01W. Humboldt Meridian: S½ S½, Section 1; SE¼ SE¼ Section 2; SE¼ SE¼ Section 10; S½, NE¼ Section 11; N½, W½ SW¼ Section 12; Section 14 east of MHW.

T.04S., R.01E. Humboldt Meridian: SW¼, W½ SE¼, SE¼ SE¼, S½ NE¼ Section 4; Section 5; Section 6 except S½ SW¼; NE¼, E½ NW¼, NE¼ SE¼ Section 7; N½ Section 8; Section 9 except N½ NW¼, NE¼ NE¼; S½, E½ NE¼ Section 10; SW¼, SW¼ NW¼ Section 11; Section 15; Section 16 except SW¼ SW¼; S½ SW¼ Section 20; E½, S½ SW¼ Section 21; Sections 22–23; S½ NW¼, NW¼ NW¼, SW¼ Section 24; W½ Section 25; Section 26–27; Section 28 except NW¼ NW¼; N½, SE¼ SE¼ Section 29; N½ N½ Section 33; E½ Section 34; Section 35; W½ Section 36.

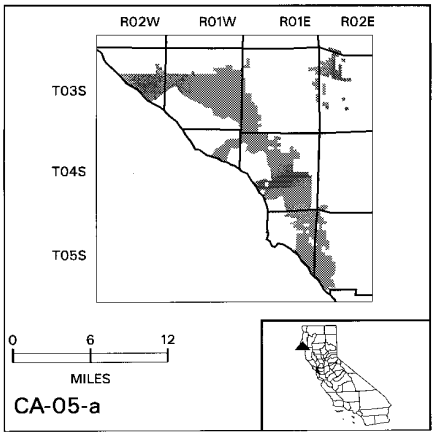
T.04S., R.02E. Humboldt Meridian: S½ SW¼, NE¼ SW¼, NW¼ SE¼ Section 31.

T.05S., R.01E. Humboldt Meridian: Section 1; Section 2 except N½ SW¼; E½ NE¼, SW¼ NE¼ Section 3; NE¼, S½ SE¼, NE¼ NW¼ Section 11; Section 12 except N½ NW¼, NE¼ SW¼; Section 13 except W½ NE¼, SE¼ NE¼, NE¼ SE¼; E½ Section 14; Section 23 East of MHW; Section 24; Section 25 East of MHW.

Description of Lands Using Protracted Public Land Survey Lines

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.05S., R.02E. Humboldt Meridian: Western ½ of the Western ½ of the Township T.05S., R.02E.



Map and description of CA–05–b taken from United States Fish and Wildlife Service 1:100,000 map; Covelo, California; 1995.

Critical Habitat includes only State lands described within the following areas:

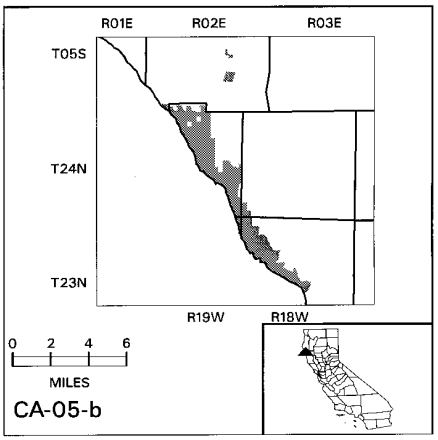
T.24N., R.19W. Mt. Diablo Meridian: W½ W½ Section 2; Section 3 except E½ NW¼; Section 4 except NE¼ NE¼; Section 5; Section 9 above MHW; Section 10; W½ W½, SE¼ SW¼ Section 11; W½ Section 14; Section 15 above MHW; Section 22 above MHW; Section 23 except NE¼, NE¼ SE¼; Section 24 except NE¼ NW¼, N½ NE¼; Section 25 except SW¼ SW¼; Section 26 above MHW; Section 36 above MHW.

T.24N., R.18W. Mt. Diablo Meridian: SW¼ NW¼, SE¼ SW¼, W½ SW¼ Section 31.

T.23N., R.19W. Mt. Diablo Meridian: Section 1 above MHW.

T.23N., R.18W. Mt. Diablo Meridian: Section 5; Section 6 except E½ NE¼ ; Section 7 above MHW; Section 8 except N½ NE¼, SE¼ NE¼, NE¼ SE¼; W½ SW¼, S½ SE¼ Section 15; Section 16 except NE¼ NW¼, NE¼, Section 21 above MHW; N½ Section 22.

T.05S., R.02E. Humboldt Meridian: NW¼ NW¼, SE¼ NW¼ Section 22; NE¼ Section 27.



Map and description of CA–06–a taken from United States Fish and Wildlife Service 1:100,000 map; Garberville and Covelo, California; 1995.

Critical Habitat includes only State lands described within the following areas:

T.05S., R.03E. Humboldt Meridian: SE¼ SE¼ Section 10; SW¼ SW¼ Section 11; Section 13 except NE¼; Section 14 except NW¼ NE¼; Section 15 except SW¼; NW¼ NE¼, NE¼ NW¼ Section 24.

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.24N., R.15W. Mt. Diablo Meridian: SW¼ NW¼, W½ SE¼, SW¼ Section 4; Section 5 except W½ SW¼; S½ NE¼ Section 6.

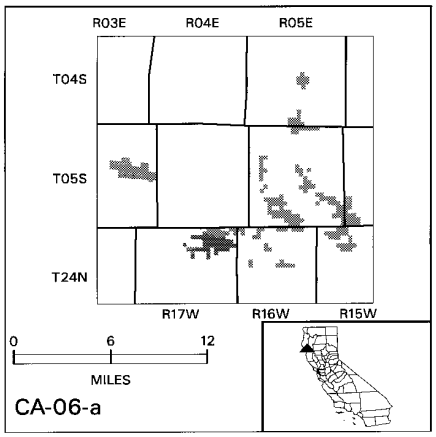
T.24N., R.16W. Mt. Diablo Meridian: N½ NE¼, NE¼ NW¼ Section 3; W½ NW¼, NW¼ SE¼, NE¼ NW¼, S½ SE¼, Section 5; SE¼ NE¼, N½ NW¼, Section 6; W½ SE¼ Section 7; SE¼ SW¼, W½ SE¼, SE¼ SE¼ Section 9; S½ SW¼ Section 10.

T.24N., R.17W. Mt. Diablo Meridian: Section 1 except S½ NE¼, NW¼ NW¼, SE¼ SE¼; Section 2 except SE¼ SW¼; S½ S½, NE¼ SE¼, S½ N½, NE¼ NE¼ Section 3; SE¼ SE¼, NW¼ SE¼ Section 4; W½ NW¼ Section 10; NW¼ NE¼, W½ NW¼ Section 11.

T.05S., R.05E. Humboldt Meridian: N½ NW¼ Section 2; N½ N½, SW¼ NW¼ Section 3; E½ NE¼ Section 4; SE¼ SE¼ Section 7; SW¼ SW¼ Section 8; SW¼ NW¼, N½ SW¼, SE¼ SW¼, NE¼ SE¼, Section 15; NW¼ SW¼ Section 17; E½ E½ Section 18; NE¼ NE¼, SE¼ SE¼ Section 19; NW¼ SW¼ Section 20; W½ NE¼, SE¼ NW¼, NE¼ SW¼, N½ SE¼, SW¼ SE¼ Section 22; NW¼ SW¼ Section 23; S½ NW¼, N½ SW¼, S½ SE¼, NW¼ SE¼ Section 25; NE¼ NW¼, NE¼ SW¼, W½ NE¼, SE¼ NE¼ Section 26; W½ W½, NE¼ SW¼ Section 28; S½ N½, E½ SW¼, N½ SE¼ Section 29; NE¼, NE¼ NW¼ Section 32; NW¼ NE¼, S½ NE¼, NW¼, NE¼ SW¼, SE¼ Section 33; SW¼ NW¼, N½ SW¼, SW¼ SW¼ Section 34; NE¼ NE¼ Section 36.

T.05S., R.06E. Humboldt Meridian: S½ NW¼, SW¼ Section 30; Section 31 except NE¼ NW¼, N½ NE¼, SE¼ NE¼.

T.04S., R.05E. Humboldt Meridian: SE¼ SW¼ Section 15; NW¼, W½ NE¼, NE¼ SW¼ Section 22; SE¼ Section 33; W½ W½, SE¼ SW¼ Section 34.



Map and description of CA–06–b taken from United States Fish and Wildlife Service 1:100,000 map; Covelo, California; 1995.

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.21N., R.15W. Mt. Diablo Meridian: W½ NW¼ Section 5; Sections 6–7; NW¼ NE¼, N½ NW¼, SW¼ NW¼, N½ S½, SW¼ SW¼ Section 8; W½ W½, SE¼ SW¼, S½ SE¼ Section 17; Section 18.

T.21N., R.16W. Mt. Diablo Meridian: Section 1; N½ NE¼, NE¼ NW¼, SE¼ SE¼ Section 2; E½ NE¼ Section 11; Section 12 except NW¼ SW¼ and S½ SW¼; NE¼, NE¼ SE¼ Section 13.

T.22N., R.14W. Mt. Diablo Meridian: NW¼ SW¼, S½ SW¼ Section 6; Section 7; Section 18 except E½ SE¼; ; SE¼ SE¼ Section 20; SW¼ SW¼, NE¼ SE¼ Section 21; E½ NE¼, W½ NW¼, NE¼ SE¼ Section 28; NE¼, NE¼ NW¼, S½ NW¼, SW¼, NW¼ SE¼ Section 29; S½ NE¼, N½ NW¼, N½ SE¼ Section 32.

T.22N., R.15W. Mt. Diablo Meridian: SW¼ NE¼, S½ Section 1; N½ Section 12; E½ Section 13; NE¼ SW¼, S½ SW¼, W½ SE¼ Section 19; NW¼ NE¼ Section 24; SW¼ NE¼, W½ NW¼, SW¼, W½ SE¼ Section 30; SW¼ NE¼, NW¼ NW¼, S½ NW¼, S½ Section 31.

T.22N., R.16W. Mt. Diablo Meridian: SW¼, SW¼ NW¼, W½ W½ Section 3; Section 4; Section 5 except S½ SE¼, NE¼ SE¼, SE¼ NE¼; E½, E½ W½, S½ SW¼, NE¼ NW¼ Section 6; E½ NE¼, N½ NW¼, SE¼ SW¼, SE¼ Section 7; N½ NE¼, E½ W½, S½ SE¼, SW¼ SW¼ Section 8; Section 9 except N½ NW¼ and SE¼ NW¼; SW¼ NE¼, W½, NW¼ SE¼, S½ SE¼ Section 10; W½ Section 17; Section 18 except N½ NW¼, W½ SW¼; S½ NE¼, NW¼ NE¼ Section 19; NW¼ SW¼ Section 20; SE¼ SE¼ Section 21; S½ SW¼, SW¼ SE¼ Section 22; SE¼ SE¼ Section 23; Section 26; Section 27 except NE¼ NE¼, W½ SW¼, S½ SE¼, SE¼ SW¼; SE¼ Section 34; Section 35.

T.22N., R.17W. Mt. Diablo Meridian: NE¼ NE¼, SW¼ NE¼, SE¼ NW¼, NE¼ SW¼, W½ SE¼ Section 12; S½ SE¼ Section 13; N½ NE¼ Section 24.

T.23N., R.16W. Mt. Diablo Meridian: W½ NW¼ Section 3; NE¼ NE¼ Section 4; SE¼ SW¼, E½ NE¼, NW¼ SE¼ Section 5; W½ W½ Section 6; Section 7 except NW¼; NE¼ NW¼, SW¼ NW¼, SW¼ SW¼ Section 8; W½ Section 17; Section 18 except, N½ NW¼, SW¼ NW¼, W½ SW¼, SE¼ SW¼; S½ SE¼, S½ SW¼, NE¼ SE¼ Section 19; S½ SW¼, NE¼ SW¼, N½ SE¼, SE¼ SE¼ Section 20; NW¼ NW¼, S½ NW¼, SW¼, SW¼ SE¼ Section 28; Section 29; Section 30 except NW¼ NW¼; Section 31 except SW¼ SW¼; Section 32 except SE¼ NE¼, SW¼ SE¼, E½ SE¼; Section 33 except NE¼ NE¼, S½ NW¼; S½ NW¼, N½ SW¼ Section 34.

T.23N., R.17W. Mt. Diablo Meridian: Section 1 except S½ SW¼; NE¼ SE¼ Section 2.

T.24N., R.16W. Mt. Diablo Meridian: SE¼ NE¼, SE¼ NW¼, NW¼ SW¼, SE¼ SW¼,

NE¼ SE¼ Section 17; W½ SE¼, E½ SW¼ Section 18; Section 19 except SW¼ SE¼; W½ NE¼, E½ NW¼ Section 20; S½ NW¼, SW¼ Section 27; Section 28 except N½ N½ and SE¼ SW¼; Section 29 except N½ NE¼, NW¼ NW¼; Section 30 except N½ NE¼; Section 31; Section 32 except SE¼ NE¼ and E½ SE¼; N½ NE¼, NW¼ NW¼ Section 33; NW¼ Section 34.

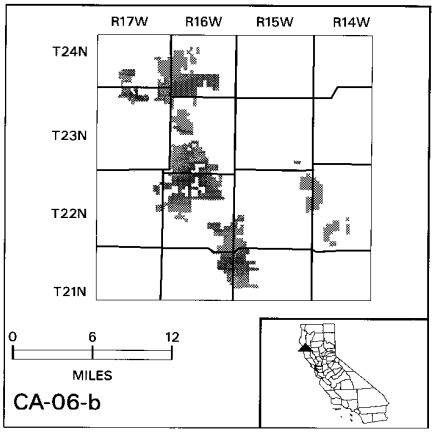
T.24N., R.17W. Mt. Diablo Meridian: NE¼ NE¼ Section 23; Section 24 except NE¼ NW¼, NW¼ NE¼; E½, E½ NW¼, NW¼ NW¼, SW¼ SW¼ Section 25, N½ SE ¼ Section 26, Section 36.

Critical Habitat includes only State lands described within the following areas:

T.21N., R.16W. Mt. Diablo Meridian: SW¼ NE¼, S½ NW¼ Section 26.

T.23N., R.17W. Mt. Diablo Meridian: N½ SW¼, S½ NW¼ Section 2; Section 3 except NE¼, S½ SE¼; E½ NW¼, SW¼ NW¼, NE¼ SE¼, NE¼ Section 4.

T.24N., R.17W. Mt. Diablo Meridian: Section 28 except SW¼ SW¼; NW¼ Section 27; W½ Section 33; SE¼ SW¼ Section 34.



Map and description of CA–07–a taken from United States Fish and Wildlife Service 1:100,000 map; Ukiah, California; 1995.

Critical Habitat includes only State lands described within the following areas:

T.17N., R.14W. Mt. Diablo Meridian: W½ SW¼, NE¼ SW¼ Section 6; W½ NW¼, NW¼ SW¼ Section 7.

T.17N., R.15W. Mt. Diablo Meridian: W½, SE¼ Section 2; Sections 3–8; Section 9 except SE¼ SE¼ ; Section 10 except S½ S½; Section 11; Section 12 except SW¼ SE¼; N½ NE¼ Section 14; Section 18 except SE¼, W½ SW¼.

T.17N., R.16W. Mt. Diablo Meridian: N½ N½ Section 1; Section 3 except W½ W½; Sections 4–6; NE¼, SW¼ Section 7; N½, N½ SW¼ Section 8; N½, N½ SE¼, SE¼ SE¼ Section 9; Section 10 except NE¼ NE¼; Section 18 except SE¼ SE¼; NW¼, W½ SW¼ Section 19; W½ NW¼ Section 30.

T.17N., R.17W. Mt. Diablo Meridian: Sections 1–3; NE¼, SW¼ NW¼, S½ Section 4; NE¼, N½ NW¼, SE¼ NW¼, NE¼ SE¼, S½ S½ Section 5; N½ NE¼ Section 6; Section 8 except W½ SW¼, SE¼ SW¼, SW¼ SE¼; Sections 9–15; SE¼ NE¼, N½ NE¼, NE¼ NW¼, S½ Section 16; S½ Section 17; S½, S½ NE¼ Section 18; NW¼ Section 19; N½ NE¼ Section 20; Section 21 except SE¼ SW¼; Section 22 except E½ SW¼ ; Section 23 except NW¼ SW¼; Section 24; NE¼ NW¼, NW¼ SW¼ Section 26; Section 27 except SW¼ NW¼, SE¼ SE¼, N½ NE¼; Section 28 except NE¼ NE¼, SW¼, S½ SE¼, W½ NW¼.

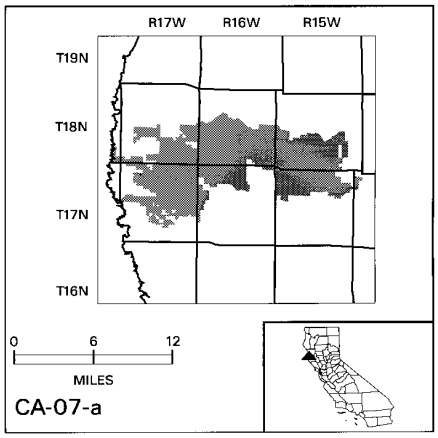
T.17N., R.18W. Mt. Diablo Meridian: SE¼ SE¼ Section 13.

T.18N., R.15W. Mt. Diablo Meridian: SW¼ Section 18; Section 19; SE¼ NE¼, NE¼ SW¼, S½ SW¼, SE¼ Section 20; Section 21; Section 22 except NE¼; Section 23 except N½ NW¼; W½ W½, SE¼ SW¼ Section 24; W½ Section 25; Section 26 except E½ E½; Sections 27–34; Section 35 except NE¼ SE¼.

T.18N., R.16W. Mt. Diablo Meridian: S½ Section 13; SE¼ Section 14; SW¼, W½ SE¼ Section 15; S½ N½, NW¼ NW¼, S½ Section 16; Section 17 except NW¼ NW¼; S½ Section 18; Sections 19–33; Section 34 except E½ SE¼; Section 35 except W½ SW¼, SE¼ SW¼; Section 36.

T.18N., R.17W. Mt. Diablo Meridian: Section 20 except N½ N½, SW¼ SW¼; Section 21 except NW¼ NE¼, N½ NW¼; NE¼, NE¼ SE¼, SW¼ SE¼ Section 23; Section 24; Section 25 except S½ S½, N½ SE¼ ; Section 26 except NW¼ NW¼; Section 27; NE¼ NE¼ Section 28; N½ NW¼, SW¼ NW¼ Section 29; NW¼ SW¼, NE¼ SE¼, S½ S½ Section 31; S½ NE¼, S½ Section 32; S½ N½, N½ S½, SE¼ SE¼ Section 33; Sections 34–36.

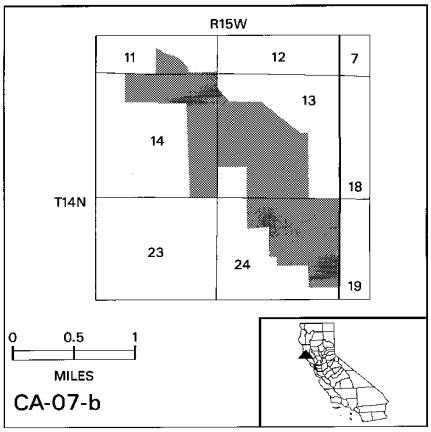
T.18N., R.18W. Mt. Diablo Meridian: SW¼ Section 25; W½, SE¼ Section 36.



Map and description of CA–07–b taken from United States Fish and Wildlife Service 1:100,000 map; Ukiah, California; 1995.

Critical Habitat includes only State lands described within the following areas:

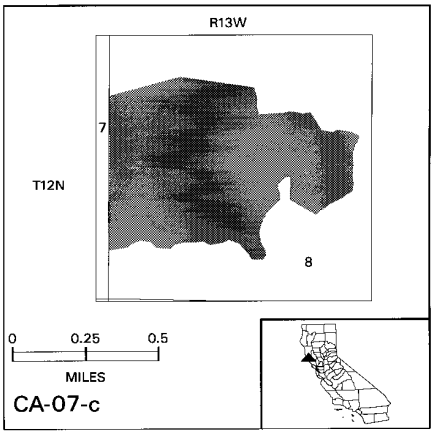
T.14N., R.15W. Mt. Diablo Meridian: E½ SW¼, SW¼ SE¼, SE¼ NW¼ Section 11; Section 13 except E½ E½, NE¼ NW¼, NW¼ NE¼; E½ E½, NE¼, NW¼, NW¼ NE¼ Section 14; NE¼, NE¼ NW¼, N½ SE¼ Section 24.



Map and description of CA–07–c taken from United States Fish and Wildlife Service 1:100,000 map; Point Arena, California; 1995.

Critical Habitat includes only State lands described within the following areas:

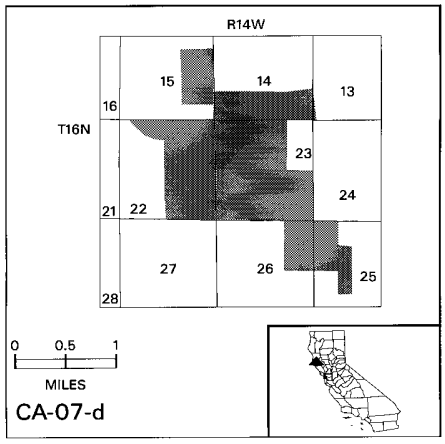
T.12N., R.13W. Mt. Diablo Meridian: S½ NW¼, SW¼, N½ SE¼, SW¼ SE¼, S½ NE¼ Section 8.



Map and description of CA–07–d taken from United States Fish and Wildlife Service 1:100,000 map; Ukiah, California; 1995.

Critical Habitat includes only State lands described within the following areas:

T.16N., R.14W. Mt. Diablo Meridian: S½ S½ Section 14; E½ SE¼, SE¼ NE¼ Section 15; E½ Section 22; Section 23 except E½ NE¼; W½ NW¼, SE¼ NW¼, NE¼ SW¼ Section 25; E½ NE¼ Section 26.



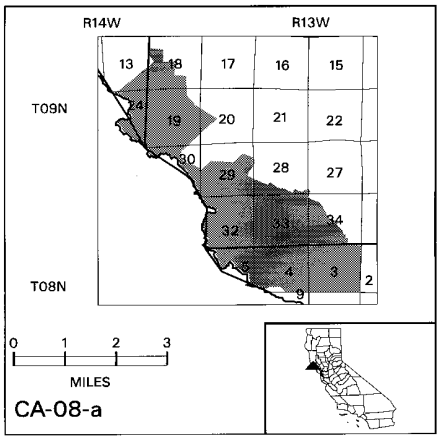
Map and description of CA–08–a taken from United States Fish and Wildlife Service 1:100,000 map; Point Arena, California; 1995.

Critical Habitat includes only State lands described within areas bounded by the following descriptions:

(a) starting at Station H–34 on the easterly line of the German Rancho, South 33° 50′ West for 3,200 feet, South 86° 20' West for 1,927 feet, North 53° West for 1,372 feet, North 37° West for 1,550.5 feet, North 48° East for 1,720 feet, South 86° 45′ East for 2,203.5 feet, North 55° East for 1,110.1 feet, South 8° 50′ East for 653 feet; and (b) starting at the westernmost point of Kruse Rhododendron State Reserve proceeding North 48° East along the Kruse Rhododendron State Reserve boundary to the intersection with Kruse Ranch Road, west on Kruse Ranch Road to the intersection with State Highway 1, north on State Highway 1 to Cannon Gulch, northeast along Cannon Gulch to the Rancho de German Spanish Land Grant boundary, northwest along the Rancho de German Spanish Land Grant boundary to the western edge of Range 13 West, South 29° 30″ from this point to Mean High Water (MHW), southwest along the shoreline at MHW to the south boundary of the Rancho de German Spanish Land Grant, east along the Spanish Land Grant boundary to the southeast corner of the land grant, north on the eastern boundary of the land grant to the eastern corner of the Kruse Rhododendron State Reserve, south along the Kruse Rhododendron State Reserve boundary to the westernmost point of the reserve.

Critical Habitat includes only State lands described within the following areas:

T.09N., R.13W. Mt. Diablo Meridian: SW¼, SW¼ NW¼, SW¼ SE¼ Section 18; NW¼ Section 19.



Map and description of CA–08–b taken from United States Fish and Wildlife Service 1:100,000 map; Point Arena and Healdsburg, California; 1995.

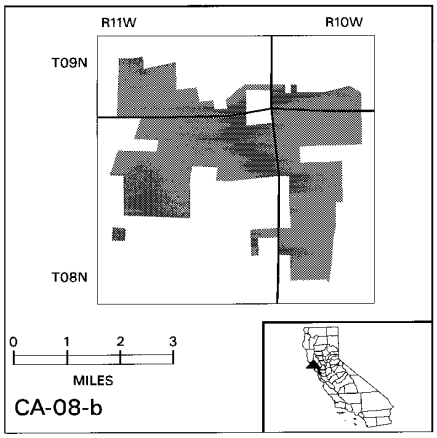
Critical Habitat includes only State lands described within the following areas:

T.08N., R.10W. Mt. Diablo Meridian: NW¼, S½ SW¼ Section 5; Section 6 except N½ SE¼; Section 7 except W½ W½; W½ W½ Section 8; W½ W½ Section 17; Section 18 except W½ SW¼.

T.08N., R.11W. Mt. Diablo Meridian: Section 1 except N½ NE¼; Section 2 except SW¼ SE¼; Section 3 except S½ NW¼, SW¼ NE¼; NE¼, N½ SE¼, E½ NW¼, NE¼ SW¼ Section 10; NW¼, N½ SW¼ Section 11; N½ NE¼, SW¼ NE¼ Section 13; NW¼ NW¼ Section 15.

T.09N., R.11W. Mt. Diablo Meridian: SW¼ SW¼ Section 27; SE¼ SE¼ Section 28; E½ E½ Section 33; Section 34; SW¼, S½ SE¼ Section 35.

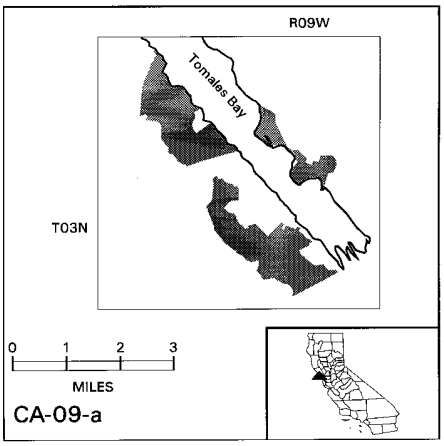
T.09N., R.10W. Mt. Diablo Meridian: SW¼, S½ SE¼ Section 31; SW¼ Section 32.



Map and description of CA–09–a taken from United States Fish and Wildlife Service 1:100,000 map; Napa, California; 1995.

Critical Habitat includes only State lands bounded by the following descriptions:

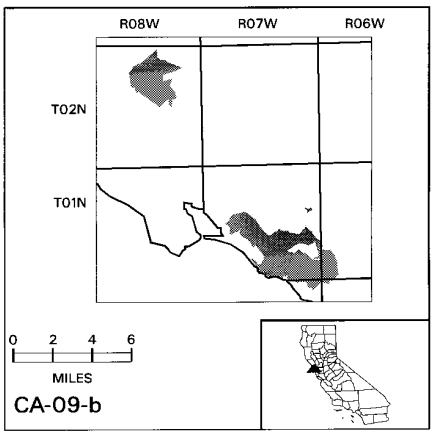
(a) on the west by Point Reyes National Seashore, on the east by the shoreline of Tomales Bay at Mean High Water (MHW), on the south by a line beginning at the intersection of Pierce Point Road with Sir Francis Drake Highway proceeding North 75° 07′03″ East for 4,734.31 feet to the shoreline of Tomales Bay at MHW; (b) on the east and north by Sir Francis Highway, on the west by Point Reyes National Seashore, on the south by the southern boundary of the Punta De Los Reyes (Randall) Spanish Land Grant; (c) State lands within the Nicasio (Halleck) Spanish Land Grant west of State Highway 1 and east of the shoreline of Tomales Bay at MHW; and (d) State lands within the Nicasio (Frink and Reynolds) Spanish Land Grant.



Map and description of CA–09–b taken from United States Fish and Wildlife Service 1:100,000 map; Napa and San Francisco, California; 1995.

Critical Habitat includes only State lands bounded by the following descriptions: (a) portions of Ranchos Nicasio, San Geronimo, and Tomales Y Baulines Spanish Land Grants bounded on the north, west, and south by Golden Gate National Recreation Area and on the east by a line 122° 41′33″ West; and (b) portions of Ranchos Tomales Y Bolinas, Las Baulines, and Sausalito Spanish Land Grants bounded by a line starting at the intersection of the Rancho Las Baulines Spanish Land Grant boundary line with McKinnan Gulch, west along McKinnan Gulch to the Pacific Ocean, south east along the Pacific Ocean at Mean High Water (MHW) to the intersection with Cold Stream, east along Cold Stream to the intersection with State Highway 1, south on State Highway 1 to the intersection with the south end of the Panoramic Highway, following the Panoramic Highway to the intersection with Rattlesnake Creek, north along Rattlesnake Creek to the intersection with the Rancho Sausalito Spanish Land Grant line, southwest along the Spanish Land Grant boundary to the intersection

with the Rancho Las Baulines Spanish Land Grant line, north along the Rancho Las Baulines Spanish Land Grant boundary to the intersection with McKinnan Gulch.



Map and description of CA–10–a taken from United States Fish and Wildlife Service 1:100,000 map; Grants Pass, Oregon; Happy Camp, California; 1995.

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.17N., R.07E. Humboldt Meridian: Section 1; Section 2 except NW¼ SW¼, S½ SW¼; N½ Section 3; NE¼ NE¼ Section 4; NE¼ SW¼, E½ Section 11; N½ N½, SW¼ NW¼, W½ SW¼ Section 12; NW¼, NW¼ SW¼ Section 13; NE¼, N½ SE¼ Section 14.

T.17N., R.08E. Humboldt Meridian: Section 6 except E½ E½, SW¼ SE¼.

T.18N., R.07E. Humboldt Meridian: Section 30 except NW¼; NE¼, N½ NW¼, Section 31; N½, NW¼ SW¼ Section 32; Section 36.

T.18N., R.08E. Humboldt Meridian: Section 31 except SE¼ SE¼.

T.41S., R.06W. Willamette Meridian: Section 4 except N½ NE¼; Section 5 except N½ NW¼, NW¼ NE¼; SE¼, S½ SW¼ Section 6; Sections 7–8; Section 9 except N½ SW¼, SE¼ SE¼; NW¼ SW¼, W½ NW¼ Section 10; S½, NW¼ Section 16; Sections 17–18.

T.41S., R.07W. Willamette Meridian: Section 10 except W½ NW¼, NE¼ NE¼, NW¼ SW¼; Section 11 except NW¼; Section 12 except NE¼ NW¼, W½ NE¼; Sections 13–15.

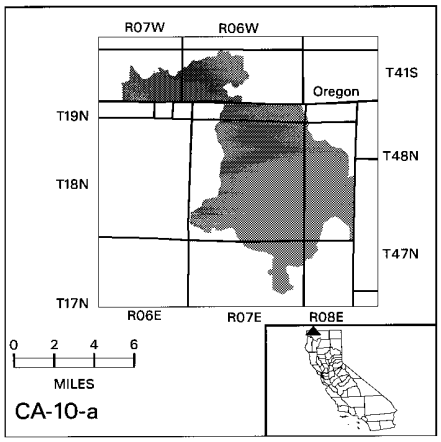
Description of lands using protracted Public Land Survey Lines

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.18N., R.07E. Humboldt Meridian: Section 1–4; E½ Section 5; NE¼, E½ SE¼ Section 8; Sections 9–16; E½ Section 17; SE¼ SE¼ Section 19; E½, S½ SW¼ Section 20; Sections 21–29; E½, N½ NW¼ Section 33; Sections 34–35.

T.18N., R.08E. Humboldt Meridian: SW¼, W½ NW¼, S½ SE¼ Section 6; Section 7; Section 8 except N½ NE¼, N½ NW¼; W½ SW¼ Section 9; W½, S½ SE¼ Section 16; Sections 17–21; Section 28; Section 29 except SW¼ SE¼; Section 30; NW¼ NW¼ Section 32; N½ NW¼, E½ Section 33.

T.19N., R.07E. Humboldt Meridian: E½ Section 32; Sections 33–36.



Map and description of CA–11–a taken from United States Fish and Wildlife Service 1:100,000 map; Hoopa and Hayfork, California; 1995.

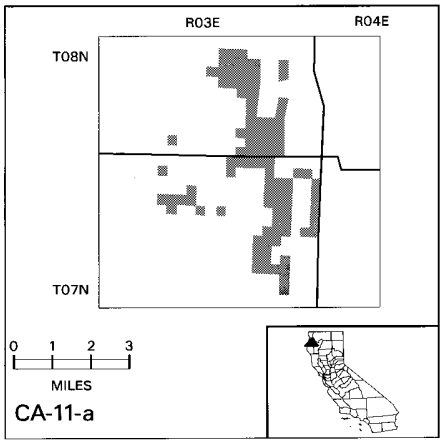
Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.07N., R.03E. Humboldt Meridian: E½ SE¼, W½ SW¼, SE¼ NW¼, SW¼ NE¼ Section 1; E½ NE¼, N½ NW¼, SE¼ Section 2; N½ NE¼, SW¼ NE¼ Section 3; SW¼ SE¼ Section 4; SE¼ NE¼ Section 5; NE¼ NE¼ Section 8; W½ NW¼, NE¼ NW¼, NW¼ NE¼, SE¼ NE¼ Section 9; SE¼ NW¼ Section 10; E½ E½, NW¼ NE¼, SW¼ SE¼ Section 11; W½ W½, E½ E½, SW¼ SE¼ Section 12; W½ SW¼ Section 13; E½ W½, W½ E½, NE¼ NE¼, SE¼ SE¼ Section 14; W½ NW¼ Section 24.

Description of Lands Using Protracted Public Land Survey Lines

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.08N., R.03E. Humboldt Meridian: SE¼, S½ NE¼, SE¼ NW¼, S½ SW¼, NE¼ SW¼ Section 22; SW¼, SW¼ NW¼, E½ SE¼ Section 23; W½, E½ SE¼ Section 26; NE¼ NW¼, N½ NE¼, SE¼ NE¼ Section 27; NW¼ SW¼ Section 33; SE¼ NE¼, SE¼ SE¼, Section 34; Section 35.



Map and description of CA–11–b taken from United States Fish and Wildlife Service 1:100,000 map; Hayfork, California; 1995.

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.03N., R.02E. Humboldt Meridian: SE¼ NE¼, SW¼ NW¼, N½ N½ Section 1; NE¼, E½ NW¼, N½ SE¼ Section 2.

T.03N., R.03E. Humboldt Meridian: N½ NE¼, SE¼ NW¼, NE¼ SW¼, W½ SE¼, Section 6.

T.03N., R.04E. Humboldt Meridian: W½ NE¼, NW¼ Section 1; Section 2 except SE¼ SE¼; E½ NE¼, SE¼ SW¼, SE¼ Section 3; W½ NE¼, NW¼ Section 5; E½ NE¼ Section 6.

T.03N., R.05E. Humboldt Meridian: NE¼, N½ SE¼ Section 6; SW¼ NW¼, N½ SW¼, SW¼ SW¼ Section 7; NW¼ NW¼ Section 18.

T.04N., R.02E. Humboldt Meridian: S½ SE¼ Section 25.

T.04N., R.03E. Humboldt Meridian: S½ NW¼, NW¼ SE¼, SE¼ SE¼ Section 31.

T.04N., R.04E. Humboldt Meridian: NE¼ Section 1; E½ E½ Section 12; S½ Section 25; SE¼ NW¼, NW¼ SW¼, SE¼ Section 26; S½ NE¼, NW¼, N½ SE¼ Section 27; N½, S½ S½, NE¼ SW¼, NE¼ SE¼ Section 28; SW¼ NW¼ Section 29; S½ NE¼, SW¼, W½ SE¼ Section 30; W½ NE¼, NW¼, N½ SE¼, NW¼ SW¼ Section 31; SE¼ NW¼, SW¼ Section 32; N½ N½, SE¼ NE¼, SE¼ NW¼, NE¼ SE¼ Section 33; Section 34 except N½ NE¼, S½ SW¼; Section 35 except N½ N½.

T.04N., R.05E. Humboldt Meridian: Sections 1–7; S½ S½ Section 8; Sections 9–12; Section 13 except E½ NE¼, E½ SE¼; Section 14; Section 15 except W½ NW¼ and SW¼; NE¼ NW¼, NW¼ NE¼ Section 16; NW¼ SW¼ Section 17; N½, N½ SE¼ Section 18; Section 19 except W½ W½; Section 20; NE¼ NW¼, SW¼ Section 21; NE¼, N½ SE¼, E½ NW¼ Section 22; Section 23; Section 24 except SE¼ SE¼; N½ NW¼ Section 25; NW¼ NE¼, NW¼, NW¼ SW¼ Section 26; NW¼ NW¼ Section 28; Section 29 except S½ NE¼, N½ SE¼, SE¼ SE¼; Section 30; Section 31 except SW¼ SW¼; NW¼, W½ SW¼ Section 32.

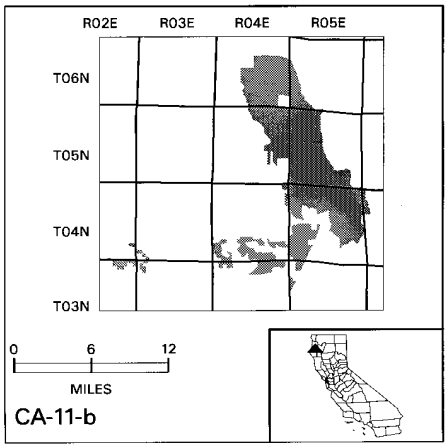
T.04N., R.06E. Humboldt Meridian: W½ W½ Section 6; W½ Section 7.

T.05N., R.04E. Humboldt Meridian: Sections 1–3; E½ NE¼ Section 4; NE¼, N½ NW¼, E½ E½ Section 10; Sections 11–13; Section 14 except SW¼, SW¼ NW¼; Section 23 except W½ SW¼, W½ SE¼; Section 24; N½ NW¼, S½ SE¼ Section 25; E½ NW¼ Section 26.

T.05N., R.05E. Humboldt Meridian: Section 4 except E½; Sections 5–8; Section 9 except E½; Section 16 except E½ E½; Sections 17–20; Section 21 except E½ NE¼; W½ SW¼ Section 22; W½ SW¼ Section 25; S½ Section 26; Section 27 except NE¼, N½ SE¼; Sections 28–35; W½ W½, S½ S½ Section 36.

T.06N., R.04E. Humboldt Meridian: Sections 13–15; Sections 21–27; Section 28 except SW¼ NW¼, NW¼ SW¼; Section 33 except W½ NW¼, SW¼; Sections 34–35.

T.06N., R.05E. Humboldt Meridian: W½, W½ SE¼ Section 18; Section 19 except E½ NE¼; SW¼ SW¼ Section 29; Sections 30–31; Section 32 except NE¼, NE¼ SE¼, NE¼ NW¼.



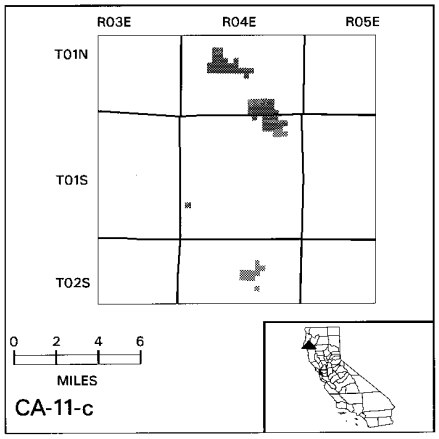
Map and description of CA–11–c taken from United States Fish and Wildlife Service 1:100,000 map; Garberville, California; 1995.

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.02S., R.04E. Humboldt Meridian: E½ NE¼, SW¼, N½ SE¼, SW¼ SE¼ Section 10; SW¼ NW¼ Section 11; SE¼ NE¼ Section 15.

T.01S., R.04E. Humboldt Meridian: SW¼ NW¼, SW¼ SW¼ Section 1; Section 2 except NE¼ NE¼ and S½ SW¼; NW¼ NE¼ Section 3; SE¼ NW¼ Section 30.

T.01N., R.04E. Humboldt Meridian: S½ SE¼ Section 17; E½, E½ SW¼ Section 20; SW¼ NE¼, SW¼ NW¼, SW¼, NW¼ SE¼, S½ SE¼ Section 21; S½ SW¼ Section 22; SW¼ NW¼ Section 23; NW¼ NW¼ Section 27; S½ NE¼, SE¼ NW¼, E½ SW¼, SE¼ Section 34; S½ NW¼, SW¼, SW¼ SE¼ Section 35.



Map and description of CA–11–d taken from United States Fish and Wildlife Service 1:100,000 map; Hoopa and Hayfork, California; 1995.

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.07N., R.05E. Humboldt Meridian: N½ NE¼ Section 8; NE¼, E½ SE¼, NE¼ NW¼ Section 9; Section 24 except W½ W½; NW¼, NE¼ SE¼ Section 25 ; SW¼ NW¼, W½ SW¼, NW¼, NE¼ SE¼ Section 34.

Description of Lands Using Protracted Public Land Survey Lines

Critical Habitat includes only Federal lands designated as Late Successional Reserves described within the following areas:

T.06N., R.06E. Humboldt Meridian: W½ W½ Section 1; Sections 2–3; Section 4 except W½ SW¼, SE¼ SW¼; NE¼ NE¼ Section 9; SE¼, N½, SE¼ NE¼ Section 10; Section 11 except E½ E½, S½ SE¼; NW¼ NE¼, SW¼ SW¼, N½ SW¼, NW¼ Section 14; NE¼ NE¼, E½ SE¼ Section 15.

T.07N., R.05E. Humboldt Meridian: Sections 1–3; Section 4 except NW¼ NW¼; E½, Section 5; Sections 10–13; N½ N½, SE¼ NE¼ Section 14.

T.07N., R.06E. Humboldt Meridian: W½ NE¼, N½ SW¼ NW¼, NW¼ SE¼ Section 2; Section 3 except S½ SE¼, SE¼ SW¼; Sections 4–8; NW¼, S½ Section 9; SW¼, NW¼ SE¼, S½ SE¼ Section 10; SW¼ SW¼ Section 11; SE¼ SE¼ Section 12; Section 13 except NW¼ NW¼; Sections 14–23; Section 24 except SE¼ SE¼; Section 25 except SE¼ SE¼; Sections 26–30; E½ E½, NW¼ NE¼ Section 31; Section 32 except SE¼ SW¼; Sections 33–35; W½ SW¼, NW¼ Section 36.

T.07N., R.07E. Humboldt Meridian: SW¼ SE¼, SW¼ Section 6; SW¼, NW¼, W½ NE¼ Section 7.

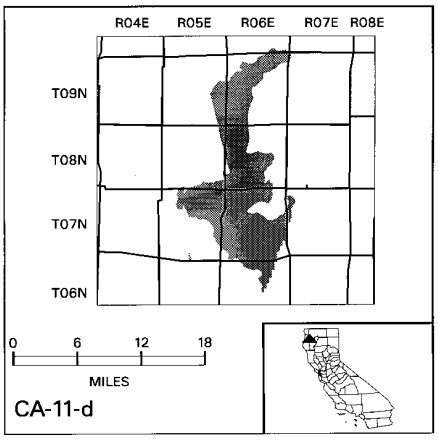
T.08N., R.05E. Humboldt Meridian: E½, E½ NW¼, NE¼ SW¼ Section 1; E½ E½, E½ NW¼ Section 12; NE¼ NE¼ Section 13; SE¼ SE¼ Section 25; SE¼ SE¼ Section 33; SE¼ NE¼, S½ Section 34; S½, S½ N½ Section 35; Section 36 except NW¼ NW¼.

T.08N., R.06E. Humboldt Meridian: W½ W½ Section 4; Sections 5–8; W½ W½ Section 9; S½ SW¼, SW¼ SE¼ Section 14; SW¼, S½ SE¼ Section 15; S½ Section 16; Sections 17–18; Section 19 except W½ W½; Sections 20–22; W½, W½ NE¼, NW¼ SE¼ Section 23; Sections 27–29; Section 30 except W½ NW¼; Sections 31–34; W½ SE¼, SE¼ NW¼, SW¼ Section 35.

T.09N., R.05E. Humboldt Meridian: Section 12; Section 13; E½ SE¼, SE¼ NE¼ Section 14; E½ E½, W½ NE¼, Sections 23–25; E½ NE¼ Section 26; Section 36 except SW¼ SW¼.

T.09N., R.06E. Humboldt Meridian: N½ SW¼ Section 1; Section 2 except SE¼ SE¼; Section 3 except N½ NW¼; N½ Section 4; SE¼, E½ SW¼ Section 5; SE¼, SE¼ NE¼, E½ SW¼ Section 7; Sections 8–9; N½ NE¼, SW¼ NE¼, W½ SE¼, W½ Section 10; Section 16 except SE¼; Sections 17–20; W½ E½, W½ Section 21; NW¼, W½ SW¼ Section 28; Sections 29–32; W½ W½ Section 33.

T.10N., R.06E. Humboldt Meridian: S½ S½, NE¼ SW¼, NW¼ SE¼ Section 35; S½ S½ Section 36.

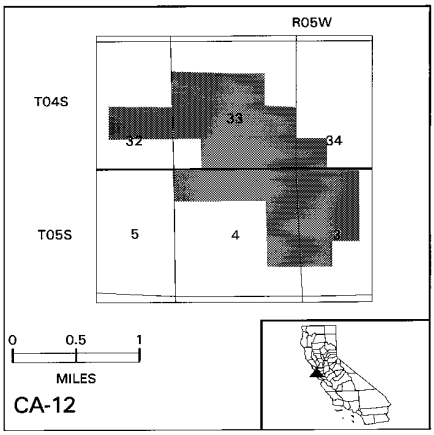


Map and description of CA–12 taken from United States Fish and Wildlife Service 1:100,000 map; California; 1995.

Critical Habitat includes only City lands described within the following areas:

T.04S., R.05W. Mount Diablo Meridian: N½ SE¼ Section 32; S½ NW¼, SE¼, SW¼ NE¼, N½ SW¼, SE¼ SW¼ Section 33; SW¼ SW¼ Section 34.

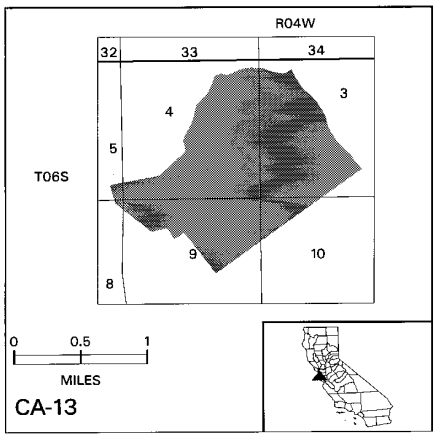
T.05S., R.05W. Mount Diablo Meridian: NW¼, NW¼ SW¼ Section 3; SE¼ NE¼, N½ N½, NE¼ SE¼ Section 4.



Map and description of CA–13 taken from United States Fish and Wildlife Service 1:100,000 map; California; 1995.

Critical Habitat includes only County lands bounded by the following description within Spanish Land Grant Canada de Raymundo:

Starting at the intersection of West Union Creek with the San Francisco State Fish and Game Refuge boundary, west along the San Francisco State Fish and Game Refuge boundary to the intersection with State Highway 35, southeast on State Highway 35 to the intersection with the San Francisco State Fish and Game Refuge boundary, southeast along the San Francisco State Fish and Game Refuge boundary to Woodside City boundary, northeast along Woodside City boundary to the intersection with Greer Road, northwest on Greer Road to the intersection with West Union Creek, north along West Union Creek to the intersection with the San Francisco State Fish and Game Refuge boundary.



Map and description of CA–14–a taken from United States Fish and Wildlife Service 1:100,000 map; California; 1995.

Critical Habitat includes only County lands described within the following areas:

T.07S., R.03W. Mount Diablo Meridian: S½, SE¼ NE¼ Section 31; W½ SW¼, SW¼ NW¼ Section 32.

T.07S., R.04W. Mount Diablo Meridian: S½ NE¼, SE¼ Section 22; S½ SW¼, NW¼ SW¼ Section 23; SW¼, W½ SE¼, S½ NW¼, SW¼ NE¼ Section 25; Section 26 except SW¼, NE¼ NE¼, S½ SE¼, W½ NW¼; E½, SE¼ NW¼ Section 33; S½, SW¼ NW¼ Section 34; Section 35 except N½ N½; Section 36 except E½ NE¼.

T.08S., R.03W. Mount Diablo Meridian: Sections 6–7; S½ S½ Section 8; SW¼ SW¼ Section 9; NW¼ Section 16; N½ N½, SW¼ NW¼ Section 17; N½, N½ SE¼ Section 18.

T.08S., R.04W. Mount Diablo Meridian: Sections 1–2; SE¼ Section 3; NE¼ NE¼, N½ NW¼ Section 10; NE¼, N½ NW¼ Section 11; Section 12 except SW¼ SW¼.

Critical Habitat includes only Private lands described within the following areas:

T.07S., R.04W. Mount Diablo Meridian: N½ NE¼ Section 35.

T.08S., R.04W. Mount Diablo Meridian: S½ Section 4; SE¼ Section 5; Sections 7–8; N½ Section 9; Section 16–18; Section 20 except NW¼, SE¼ SE¼; NW¼ Section 21.

Description of Lands Using Protracted Public Land Survey Lines

Critical Habitat includes only State lands described within the following areas:

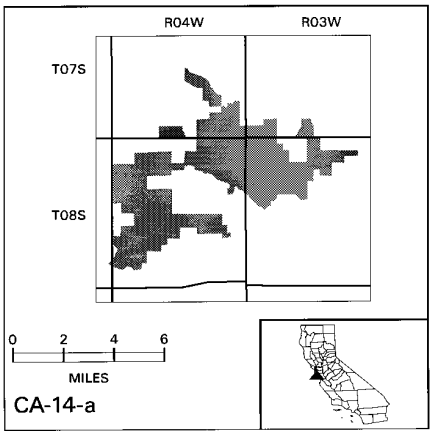
T.07S., R03W. Mount Diablo Meridian: W½ SE¼, SW¼, SE¼ NW¼, SW¼ NE¼ Section 33.

T.08S., R03W. Mount Diablo Meridian: N½ SW¼ Section 2; S½ Section 3; E½ Section 4; S½ NW¼, NW¼ NW¼, SW¼, W½ SE¼ Section 5; Section 8 except SW¼ SW¼; Section 9 except S½ SE¼, NE¼ SE¼, SE¼ NE¼; NW¼ Section 10.

T.08S., R04W. Mount Diablo Meridian: Section 19; S½ SE¼ Section 20; Section 21 except NW¼; Section 22 except SE¼, E½ SW¼; Section 23 except S½ S½; W½ SW¼ Section 24; NW¼, NW¼ NE¼ Section 28; Sections 29–30; N½ Section 32.

Critical Habitat includes only State lands within Rancho Punta del Ano Nuevo Spanish Land Grant bounded by the following description:

Starting at the intersection of Butano Park Road with Cloverdale Road, south along Cloverdale Road to the intersection with Gazos Creek Road, east along Gazos Creek Road to the intersection with Punta del Ano Nuevo Spanish Land Grant boundary, north along the Punta del Ano Nuevo Spanish Land Grant boundary to the intersection with Butano Park Road, west along Butano Park Road to the intersection of Butano Park Road with Cloverdale Road.



Map and description of CA–14–b taken from United States Fish and Wildlife Service 1:100,000 map; California; 1995.

Description of Lands Using Protracted Public Land Survey Lines

Critical Habitat includes only State lands described within the following areas:

T.08S., R.03W. Mount Diablo Meridian: SE¼ SW¼, S½ SE¼ Section 19; S½ SW¼ Section 20; NE¼ NE¼, SW¼ SE¼ Section 26, Section 29 ; Section 30 except NW¼ NW¼; Sections 31–33.

T.08S., R.04W. Mount Diablo Meridian: SE¼, S½ SW¼ Section 25; S½ Section 35; Section 36.

T.09S., R.03W. Mount Diablo Meridian: NW¼ Section 3; Sections 4–8; SE¼ NW¼, SW¼, N½ NE¼, SE¼ NE¼, N½ SE¼, SE¼ SE¼ Section 9; S½ SW¼, NW¼ SW¼, Section 10; NW¼ Section 15; NE¼, N½ SE¼ Section 16; W½ NW¼ Section 17; Section 18; N½ NW¼, SE¼ NW¼, N½ SW¼ Section 19; S½ NE¼, NW¼ SE¼, SE¼ SE¼ Section 30; S½ N½, NE¼ NE¼ Section 31.

T.09S., R.04W. Mount Diablo Meridian: Sections 1–2; Section 3 except N½ NW¼, E½ SW¼; NW¼ NE¼, SE¼ NE¼ Section 4; SE¼, S½ SW¼, NE¼ SW¼, S½ NE¼ Section 9; Section 10 except NW¼; Sections 11–12; Section 13 except SW¼ SE¼; Section 14; Section 15 except SE¼ SE¼; Section 16; NE¼ NE¼ Section 21; Section 22 except SW¼ SE¼, SE¼ SW¼; Section 23; Section 24; N½ NW¼, SE¼ SE¼, SE¼ SW¼ Section 25; W½, W½ E½ Section 26; Section 27 except NW¼ NW¼; Section 34; NE¼ NW¼, W½ W½ SE¼ SW¼ Section 35.

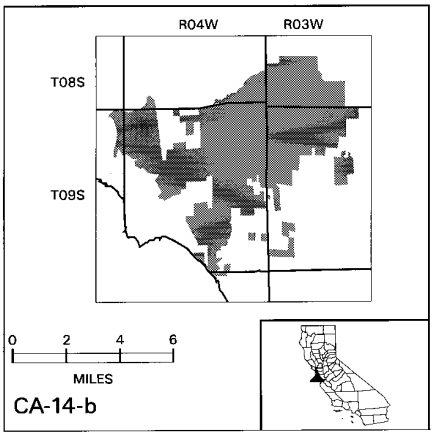
T.10S., R.04W. Mount Diablo Meridian: Sections 2–3.

Critical Habitat includes only Private lands described within the following areas:

T.09S., R.04W. Mount Diablo Meridian: Section 16; Section 21 except S½, E½ NE¼.

Critical Habitat includes only State lands bounded by the following description within Spanish Land Grant Punta de Ano Nuevo:

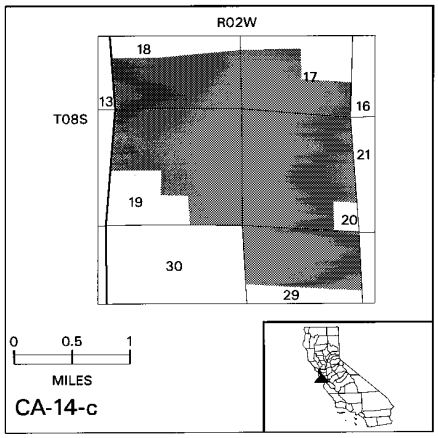
Starting at the intersection of the Spanish Land Grant boundary with Green Oaks Creek, north along the Spanish Land Grant boundary to the intersection with Gazos Creek, west along Gazos Creek to the intersection with State Highway 1, south on State Highway 1 to the intersection with Green Oaks Creek, and east along Green Oaks Creek to the Spanish Land Grant boundary.



Map and description of CA–14–c taken from United States Fish and Wildlife Service 1:100,000 map; California; 1995.

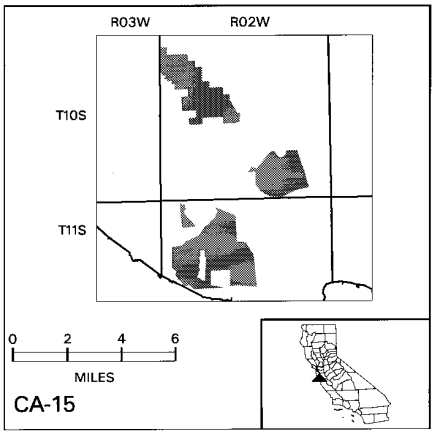
Critical Habitat includes only State lands described within the following areas:

T.08S., R.02W. Mount Diablo Meridian: SW¼, S½ SE¼ Section 17; S½ Section 18; Section 19 except S½ SW¼, NW¼ SW¼; Section 20 except SE¼ SE¼; N½ Section 29.



Map and description of CA–15 taken from United States Fish and Wildlife Service 1:100,000 map; California; 1995.

Critical Habitat includes only State lands described within the following areas:



T.10S., R.02W. Mount Diablo Meridian: S½ S½, NW¼ SW¼ Section 6; Section 7 except S½ SW¼, ; SW¼, S½ NW¼, SW¼ SE¼, NW¼ NW¼ Section 8; SW¼, S½ NW¼, NW¼ NW¼, S½ SE¼, NW¼ SE¼ Section 16; Section 17 except SW¼ SW¼; SE¼ NE¼, NE¼ SE¼ Section 18; N½ NW¼ Section 20; NE¼, E½ NW¼ Section 21.

Critical Habitat includes only State lands within the following area:

Spanish Land Grant Canada del Rincon en el Rio de San Lorenzo de Santa Cruz west of Graham Hill Road.

Critical Habitat includes only State lands bounded by the following description within Spanish Land Grant Rancho Refugio:

Starting at the intersection of State Highway 1 with the western boundary of the Rancho Refugio Spanish Land Grant, proceeding east on State Highway 1 to its intersection with Moore Creek, north along Moore Creek to the intersection with Empire Grade Road, northwest on Empire Grade Road to the intersection with the eastern boundary of the Rancho Refugio Spanish Land Grant, west and then southwest along the Rancho Refugio Spanish Land Grant boundary to the intersection with State Highway 1.

* * * * *

Dated: May 15, 1996.

George T. Frampton, Jr.,

Assistant Secretary for Fish and Wildlife and Parks.

[FR Doc. 96–12647 Filed 5–23–96; 8:45 am]

BILLING CODE 4310–55–P