

## FINAL REPORT OF THEFT RATES FOR MODEL YEAR 2007 PASSENGER MOTOR VEHICLES STOLEN IN CALENDAR YEAR 2007—Continued

	Manufacturer	Make/model (line)	Thefts 2007	Production (Mfr's) 2007	2007 theft rate (per 1,000 vehicles produced)
183 .....	BMW .....	MINI COOPER .....	15	38511	0.3895
184 .....	JAGUAR .....	S-TYPE .....	1	2582	0.3873
185 .....	TOYOTA .....	PRIUS .....	53	158715	0.3339
186 .....	SAAB .....	9-3 .....	7	22401	0.3125
187 .....	HONDA .....	ODYSSEY VAN .....	64	208166	0.3074
188 .....	FORD MOTOR CO .....	MERCURY MARINER .....	6	20842	0.2879
189 .....	VOLVO .....	C70 .....	1	5612	0.1782
190 .....	TOYOTA .....	LEXUS SC .....	8	80617	0.0992
191 .....	ASTON MARTIN .....	DB9 .....	0	688	0.0000
192 .....	BENTLEY MOTORS .....	ARNAGE .....	0	140	0.0000
193 .....	BENTLEY MOTORS .....	AZURE .....	0	184	0.0000
194 .....	CHRYSLER .....	CROSSFIRE .....	0	3412	0.0000
195 .....	FERRARI .....	141 .....	0	364	0.0000
196 .....	FERRARI .....	612 SCAGLIETTI .....	0	66	0.0000
197 .....	FERRARI .....	430 .....	0	1382	0.0000
198 .....	GENERAL MOTORS .....	CADILLAC LIMOUSINE .....	0	648	0.0000
199 .....	JAGUAR .....	XJ8/XJ8L .....	0	1645	0.0000
200 .....	JAGUAR .....	XJR .....	0	221	0.0000
201 .....	LAMBORGHINI .....	MURCIELAGO .....	0	164	0.0000
202 .....	LAMBORGHINI .....	GALLARDO .....	0	558	0.0000
203 .....	MASERATI .....	QUATTROPORTE .....	0	2176	0.0000
204 .....	SAAB .....	9-5 .....	0	4084	0.0000
205 .....	SPYKER .....	C8 .....	0	7	0.0000
206 .....	VOLVO .....	V70 .....	0	3899	0.0000

Issued on: March 4, 2010.

**Stephen R. Kratzke,**

*Associate Administrator for Rulemaking.*

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## DEPARTMENT OF THE INTERIOR

### Fish and Wildlife Service

#### 50 CFR Part 17

[Docket No. FWS-R1-ES-2009-0010]

[MO 92210-0-0009-B4]

RIN 1018-AV87

#### Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for Oregon Chub (*Oregonichthys crameri*)

**AGENCY:** Fish and Wildlife Service, Interior.

**ACTION:** Final rule.

**SUMMARY:** We, the U.S. Fish and Wildlife Service (Service), designate critical habitat for the Oregon chub (*Oregonichthys crameri*) under the Endangered Species Act of 1973, as amended (Act). In total, approximately 53 hectares (ha) (132 acres (ac)) located in Benton, Lane, Linn, and Marion Counties, Oregon, fall within the boundaries of the critical habitat designation.

**DATES:** This rule becomes effective on April 9, 2010.

**ADDRESSES:** This final rule, the economic analysis, comments and materials received, as well as supporting documentation we used in preparing this final rule, are available for viewing at <http://regulations.gov> at Docket No. FWS-R1-ES-2009-0010 and, by appointment, during normal business hours, at the U.S. Fish and Wildlife Service, Oregon Fish and Wildlife Office, 2600 SE 98<sup>th</sup> Ave., Portland, OR 97266; telephone 503-231-6179; facsimile 503-231-6195.

**FOR FURTHER INFORMATION CONTACT:** Paul Henson, State Supervisor, U.S. Fish and Wildlife Service, Oregon Fish and Wildlife Office (see **ADDRESSES**). If you use a telecommunications device for the deaf (TDD), call the Federal Information Relay Service (FIRS) at 800-877-8339.

#### SUPPLEMENTARY INFORMATION:

##### Background

It is our intent to discuss only those topics directly relevant to the development and designation of critical habitat for the Oregon chub in this final rule. For a more complete discussion of the ecology and life history of this species, please see the Oregon Chub 5-year Review Summary and Evaluation completed February 11, 2008, which is available at: <http://www.fws.gov/pacific/ecoservices/endangered/recovery/Documents/Oregonchub.pdf> and the

March 10, 2009, proposed rule (74 FR 10412).

#### Description and Taxonomy

The Oregon chub (*Oregonichthys crameri*) was first described in scientific literature in 1908 (Snyder 1908, pp. 181-182), but it wasn't until 1991 that it was identified as a unique species (Markle *et al.* 1991, pp. 284-289). Oregon chub have an olive-colored back (dorsum) grading to silver on the sides and white on the belly. Scales are relatively large with fewer than 40 occurring along the lateral line; scales near the back are outlined with dark pigment (Markle *et al.* 1991, pp. 286-288). While young of the year range in length from 7 to 32 millimeters (mm) (0.3 to 1.3 inches (in)), adults can be up to 90 mm (3.5 in) in length (Pearsons 1989, p. 17). The species is distinguished from its closest relative, the Umpqua chub (*Oregonichthys kalawatseti*), by Oregon chub's longer caudal peduncle (the narrow part of a fish's body to which the tail is attached), mostly scaled breast, and more terminal mouth position (Markle *et al.* 1991, p. 290).

#### Distribution and Habitat

Oregon chub are found in slack-water, off-channel habitats with little or no flow, silty and organic substrate, and considerable aquatic vegetative cover for hiding and spawning (Pearsons 1989, p.

10; Markle *et al.* 1991, p. 288; Scheerer and Jones 1997, p. 5; Scheerer *et al.* 2007, p. 3). The species' aquatic habitat is typically at depths of less than or equal to 2 meters (m) (6.6 feet (ft)), and has a C) (61Celsius (summer subsurface water temperature exceeding 15 F)) (Scheerer and Apke 1997, p. 45; Scheerer 2002, p. 1073; ScheererFahrenheit ( and McDonald 2003, p. 69). Optimal Oregon chub habitat provides 1 square meter (11 square feet) of aquatic surface area per adult, at depths between 0.5 m (1.6 ft) to 2 m (6.6 ft) (Scheerer 2008b). Oregon chub can be relatively long-lived with males living up to 7 years and females up to 9 years, although less than 10 percent of fish in most Oregon chub populations are older than 3 years (Scheerer and McDonald 2003, p. 71). Outside of spawning season, the species is social and nonaggressive with fish of similar size classes schooling and feeding together (Pearsons 1989, pp. 16–17).

The species is endemic to the Willamette River drainage of western Oregon (Markle *et al.* 1991, p. 288) and was formerly distributed throughout the Willamette River Valley in a dynamic network of off-channel habitats such as beaver ponds, oxbows, side channels, backwater sloughs, low-gradient tributaries, and flooded marshes in the floodplain (Snyder 1908, p. 182). Records show Oregon chub were found as far downstream as Oregon City, as far upstream as Oakridge, and in various tributaries within the Willamette basin (Markle *et al.* 1991, p. 288).

Historically, Oregon chub would be dispersed and their habitat regularly altered, increased, or eliminated due to regular winter and spring flood events (Benner and Sedell 1997, pp. 27–28); this dispersal created opportunities for interbreeding between different populations. The installation of the flood control projects in the Willamette River basin altered the natural flow regime, and flooding no longer plays a positive role in creating Oregon chub habitat or providing opportunities for genetic mixing of populations. Flood events now threaten Oregon chub populations due to the dispersal of nonnative species that compete with or prey on Oregon chub. In the Santiam River basin, the two largest natural populations of Oregon chub declined substantially after nonnative fishes invaded these habitats during the 1996 floods, and no new populations of Oregon chub were discovered in habitats located downstream of existing chub populations during thorough sampling in 1997–2000. This suggests that no successful colonization occurred

as a result of the flooding event (Scheerer 2002, p. 1078).

Currently, the largest populations of Oregon chub occur in locations with the highest diversity of native fish, amphibian, reptile and plant species (Scheerer and Apke 1998, p. 11). Beaver (*Castor canadensis*) appear to be especially important in creating and maintaining habitats that support these diverse native species assemblages (Scheerer and Apke 1998, p. 45). Conversely, the establishment and expansion of nonnative species in Oregon have contributed to the decline of the Oregon chub, limiting the species' ability to expand beyond its current range (Scheerer 2007, p. 92). Many sites formerly inhabited by the Oregon chub are now occupied by nonnative species (Scheerer *et al.* 2007, p. 9; Scheerer 2007a, p. 96). Sites with high connectivity to adjacent flowing water frequently contain nonnative predatory fishes and rarely contain Oregon chub (Scheerer 2007, p. 99). The presence of centrarchids (e.g., *Micropterus* spp. (largemouth bass, smallmouth bass, bluegill) and *Pomoxis* spp. (crappies)), and bullhead catfishes (*Ameiurus* spp.) is probably preventing Oregon chub from recolonizing suitable habitats throughout the basin (Markle *et al.* 1991, p. 291).

Although surveys conducted by the Oregon Department of Fish and Wildlife (ODFW) prior to the 1993 listing of Oregon chub as endangered under the Act indicated the presence of the species at 17 different locations, the impacts of floodplain alteration and nonnative predators and competitors were clearly represented in the relatively small numbers of Oregon chub found at these sites. At the time of listing, these surveys were the best evidence of the then-current distribution of the species. Of these 17 sites, only 9 supported populations of 10 or more Oregon chub, and all but 1 of those populations were found within a 30-kilometer (km) (19-mile (mi)) reach of the Middle Fork Willamette River in the vicinity of Dexter and Lookout Point Reservoirs in Lane County, Oregon; this reach represented just 2 percent of the species' historical range (58 FR 53800). Very small numbers of the species, between 1 and 7 individuals, were found at the remaining 8 of the 17 sites at the time of listing. Currently, the distribution of Oregon chub is limited to 25 known naturally occurring populations and 11 reintroduced populations scattered throughout the Willamette Valley (Scheerer *et al.* 2007, p. 2; 2008a, p. 2).

#### Previous Federal Actions

On October 18, 1993, we listed the Oregon chub as endangered under the Endangered Species Act (Act) (58 FR 53800), and concluded that the designation of critical habitat was prudent but not determinable. A recovery plan for the Oregon chub (Recovery Plan) was completed in 1998 (USFWS 1998). The Recovery Plan established certain criteria for downlisting the species from endangered to threatened, which included establishing and managing 10 populations of at least 500 adults each that exhibit a stable or increasing trend for 5 years. The Recovery Plan states that for purposes of downlisting the species, at least three populations must be located in each of the three sub-basins of the Willamette River identified in the plan (Mainstem Willamette River, Middle Fork Willamette, and Santiam River). The Recovery Plan also established criteria for delisting the Oregon chub (i.e., removing it from the List of Endangered and Threatened Wildlife). These criteria include establishing and managing 20 populations of at least 500 adults each, which demonstrate a stable or increasing trend for 7 years. In addition, at least four populations must be located in each of the three sub-basins (Mainstem Willamette River, Middle Fork Willamette, and Santiam River). The management of these populations must be assured in perpetuity.

On June 17, 1999, we published a Safe Harbor Policy to encourage private and other non-Federal property owners to voluntarily undertake management activities on their property to enhance, restore, or maintain habitat to benefit federally listed species (62 FR 32717). Safe Harbor Agreements (SHAs) manage habitat for listed species, and provide assurances to landowners that additional land, water, and/or natural resource use restrictions will not be imposed as a result of their voluntary conservation actions to benefit covered species. In 2001 and 2007, Safe Harbor Agreements (SHAs) for the Oregon chub were established in Lane County, Oregon (66 FR 30745, June 7, 2001; 72 FR 50976, September 5, 2007). These two SHAs established new populations of Oregon chub in artificial ponds as refugia for natural populations, and contribute to the conservation of the species by reducing the risk of the complete loss of donor populations and any of their unique genetic material.

On March 8, 2007, we issued a notice that we would begin a status review of the Oregon chub (72 FR 10547). On March 9, 2007, the Institute for Wildlife

Protection (IWP) filed suit in Federal district court, alleging that the Service and the Secretary of the Interior violated their statutory duties as mandated by the Act when they failed to designate critical habitat for the Oregon chub and failed to perform a 5-year status review (*Institute for Wildlife Protection v. U.S. Fish and Wildlife Service*). We completed the Oregon chub 5-Year Review on February 11, 2008. In a settlement agreement with the Plaintiff, we agreed to submit a proposed critical habitat rule for Oregon chub to the **Federal Register** by March 1, 2009, and to submit a final critical habitat determination to the **Federal Register** by March 1, 2010.

On March 10, 2009, we published a proposed rule in the **Federal Register** to designate critical habitat for the Oregon chub (74 FR 10412), and accepted public comments for 60 days (March 10–May 10, 2009). On September 22, 2009, we announced the reopening of the public comment period for 30 days (September 22–October 22, 2009); the availability of a draft economic analysis (DEA) and amended required determinations section of the proposal; and a public hearing to be held on October 5, 2009, in Corvallis, Oregon. The public was invited to review and comment on any of the above actions associated with the proposed critical habitat designation at the scheduled public hearing or in writing (74 FR 48211). For more information on previous Federal actions concerning the Oregon chub, refer to the Determination of Endangered Status for the Oregon Chub published in the **Federal Register** on October 18, 1993 (58 FR 53800), the Recovery Plan, or the May 15, 2009, proposed rule to reclassify the Oregon chub from endangered to threatened status based on a thorough review of the best available scientific data, which indicated that the species' status has improved such that it is not currently in danger of extinction throughout all or a significant portion of its range (74 FR 22870).

### Summary of Comments and Recommendations

We requested written comments from the public on the proposed designation of critical habitat for the Oregon chub during the March 10–May 10, 2009, comment period. We also contacted appropriate Federal, State, and local agencies, scientific organizations, and other interested parties and invited them to comment on the proposed rule and the draft economic analysis. During the March 10–May 10, 2009, comment period, we received a request for a public hearing from the IWP. Section

4(b)(5)(E) of the Act requires that one public hearing be held on a proposed regulation if any person files a request for such a hearing within 45-days after the date of publication of a proposed rule. We held a public hearing in Corvallis, Oregon on October 5, 2009; however, no one attended. During the September 22–October 22, 2009, comment period, the IWP resubmitted their earlier comments and requested another public hearing, however, since we held a public hearing on October 5, 2009, a second public hearing was not required. Furthermore, given the lack of attendance at the October 5, 2009, hearing, we determined that a second hearing was not necessary.

We received six comments in response to the proposed rule. Four comment letters were received during the March 10–May 10, 2009, comment period from two peer reviewers, the Oregon Department of Fish and Wildlife (ODFW), and the IWP. Two comment letters were received during the September 22–October 22, 2009, comment period from one peer reviewer and the IWP. No comments were received regarding the DEA. All substantive comments have been either incorporated into the final determination or are addressed below.

### Peer Review

In accordance with our policy published in the **Federal Register** on July 1, 1994 (59 FR 34270), we solicited expert opinions from three knowledgeable individuals with scientific expertise that included familiarity with the species, the geographic region in which the species occurs, and conservation biology principles. We received responses from each of the peer reviewers that we contacted. The peer reviewers generally agreed we relied on the best scientific information available, accurately described the species and its habitat requirements (primary constituent elements (PCEs)), accurately characterized the reasons for the species' decline and the threats to its habitat, and concurred with our critical habitat selection criteria and the use of the Recovery Plan as a foundation for the proposed designation. The peer reviewers provided additional information, clarifications, and suggestions to improve the final critical habitat rule. Recommended editorial revisions and clarifications have been incorporated into the final rule as appropriate. We respond to all substantive comments below.

### Peer Reviewer Comments

*Comment 1:* One peer reviewer commented that there was no discussion in the Primary Constituent Elements section of connectivity corridors for the maintenance of gene flow between populations, or to allow natural recolonization of additional habitat.

*Our Response:* Connectivity corridors and periodic or seasonal connections were historically part of the Oregon chub's life history and were certainly the mechanism to provide for gene flow and natural colonization of new habitats. Now that most of the tributaries in the Willamette River basin have been impacted by dams and diversions, the Oregon chub's naturally connected habitat has been altered. Given the very serious risk of predation and competition from nonnative fish, connectivity now represents a threat to the Oregon chub in many locations. The Recovery Plan opts for a combination of approaches to recover the Oregon chub—from isolated, intensively managed ponds to more natural restored floodplain habitats. It is likely that populations will fall along this spectrum, and that Oregon chub recovery will be achieved through a variety of strategies (USFWS 1998, pp. 86–87). Establishing connectivity corridors may not be an optimal recovery strategy for many populations, given the nonnative species predation and competition threat. The species currently thrives in locations that are isolated and protected from that threat.

Endangered Species Permit TE–818627–9 authorizes the ODFW to conduct Oregon chub population estimates, distribution surveys, collect life-history data, and conduct translocations or reintroductions following the guidelines presented in the Recovery Plan. Recovery Task 2.3 in the Recovery Plan states that reintroduction stock should be taken from within the sub-basin that contains the new site, and that successive introductions within a sub-basin should come from a variety of source populations to ensure a diverse genetic makeup to the metapopulation within a sub-basin (USFWS 1998, p. 41). ODFW's authorized activities under the translocation and reintroduction guidelines are intended to address some of the concerns related to gene flow maintenance. The Recovery Plan acknowledges the need for a combination of approaches to recover Oregon chub, from isolated, intensively managed ponds to more natural restored floodplain habitats (USFWS 1998, pp. 85–86).

*Comment 2:* One peer reviewer commented that PCE 3 (late spring and summer subsurface water temperatures between 15 and 25 C) is incomplete, stating that they would have included other water quality factors such as the absence or low level of contaminants.

*Our Response:* In determining the PCEs for Oregon chub, we relied on the best scientific data available. Research has identified definitive temperature thresholds for the species for reproductive activity and other life-history needs, but has not explicitly defined characteristics of good water quality for the species beyond that attribute. We address several water quality characteristics in the Special Management Considerations or Protections section below, including protecting Oregon chub critical habitat areas from agricultural and forestry chemical runoff. Habitats that express the presence of PCE 2 (appropriate levels of aquatic vegetation that hosts abundant food for chub) would presumably be representative of habitats having good water quality characteristics.

*Comment 3:* One peer reviewer suggested that PCE 4 (no or negligible levels of nonnative aquatic predatory or competitive species) is rather unspecific and that the term 'negligible' may be difficult to characterize in practice.

*Our Response:* We are unaware of any scientific data that presents a definitive numerical threshold of competitive and predatory nonnative fish species that would be detrimental to a population of Oregon chub. We use the term 'negligible' to acknowledge the possibility that a population of Oregon chub may be able to persist in the presence of some level of nonnative competing species, which may depend on population ratios, the biology of the nonnative species involved, or other physical, biological, or hydrological factors. However, currently available scientific information indicates that Oregon chub and nonnative predators are not able to coexist at most sites, and where they do the Oregon chub populations remain at low levels.

#### *Comments from States*

We received several recommendations for minor corrections to the critical habitat unit descriptions from the ODFW, which have been incorporated into this final rule. Other substantive comments received from the ODFW are addressed below.

*Comment 4:* The context and importance of the population threshold of 500 adults was not explained in the Physical and Biological Features—Flow Velocities and Depth section of the

proposed rule. The ODFW recommended that the final rule explain that this population threshold was based on delisting criteria identified in the Recovery Plan.

*Our Response:* We have revised the section accordingly.

*Comment 5:* Several sites with abundance levels of fewer than 500 fish are capable of supporting large populations and are essential to the recovery of the species. The ODFW identified three sites that they believe contain all of the PCEs, and recommended that they be designated as critical habitat: (1) Pioneer Park backwater, Santiam sub-basin; (2) Sprick Pond, Coast Fork Willamette sub-basin; and (3) Haws Pond, Elijah Bristow South Slough and sites RM198.6 and RM199.5, Middle Fork Willamette sub-basin. The ODFW commented that several areas proposed as critical habitat for Oregon chub were at very low population levels for many years before increasing rapidly in abundance, including Unit 3J Buckhead Creek and Unit 3K Wicopee Pond.

*Our Response:* In the critical habitat selection criteria of the proposed rule, we described the rule set used to identify proposed critical habitat areas. This critical habitat designation focuses on sites where we have the most confidence that the Oregon chub populations can achieve recovery criteria, based on the best available scientific information. The 2007 survey results for the Pioneer Park backwater site documented 420 fish; Sprick Pond is a new site that had 19 Oregon chub introduced in 2008; and Oregon chub surveys in Hawes Pond documented 382 fish in 2007 and 277 in 2008. Each of the sites being designated as critical habitat in this final rule has been surveyed annually over several years, with the initial survey data for some critical habitat units conducted in the early 1990s (e.g., Shady Dell Pond (Unit 3I), Elijah Bristow State Park, Berry Slough (Unit 3B)) (Sheerer 2007a, p. 2). However, there is insufficient annual survey data to demonstrate whether the population trend is stable or increasing in any of the additional locations suggested by the ODFW. We have no survey data from the Elijah Bristow South Slough and RM 196.8 and 199.5 sites, and are uncertain as to their specific location. However, based on the Recovery Plan, we have determined that designating critical habitat in 25 sites will be sufficient to meet recovery goals (see below discussion). Although the additional sites suggested by the ODFW may have an important role in Oregon chub conservation, they are not essential to the conservation of the

species. Each of the sites designated in this final rule meet the definition of critical habitat under section 3(5)(a) of the Act, and is consistent with the criteria described in the Criteria Used to Identify Critical Habitat section below. Although the Recovery Plan calls for establishing and maintaining a minimum of 20 populations, we are designating critical habitat for 25 populations, to mitigate the potential that some units may become unable to support the species or primary constituent elements over time because of predation issues or other factors. Importantly, the designation of critical habitat does not imply that lands outside of critical habitat do not play an important role in the conservation of the Oregon chub. Federal activities undertaken in areas outside of critical habitat are subject to review under section 7 of the Act to ensure that they are not likely to jeopardize the continued existence of the Oregon chub. The prohibitions of section 9 against the take of listed species also apply, regardless of critical habitat designation.

*Comment 6:* The ODFW suggested more unoccupied off-channel habitat in the Jasper to Dexter reach of the Middle Fork Willamette sub-basin should be designated as critical habitat. The ODFW commented that these habitats are essential for the conservation of the species and present the best opportunities to establish additional Oregon chub populations in connected habitats. They advised that habitats in this reach currently support several stable and abundant Oregon chub populations with minimal numbers of nonnative fishes, and that these habitats are necessary to recover the species.

*Our Response:* The critical habitat selection criteria in the proposed rule identified sites that currently support at least 500 adult Oregon chub, or those that currently express sufficient PCEs to support at least 500 adult Oregon chub and have done so in the past. We were not aware of the unoccupied off-channel habitat areas being suggested by ODFW when we developed the proposed rule, and did not have survey data for those locations. The ODFW has since clarified that the RM 196.8 and 199.5 sites and the Elijah Bristow South Slough sites referenced in their comments are within the Jasper to Dexter reach of the Middle Fork Willamette sub-basin. Although initially thought to be unoccupied, ODFW surveys conducted in 2008 documented one Oregon chub each in the RM 196.8 and RM 199.5 localities. Since the sites suggested are either unoccupied or currently support few Oregon chub, they would not satisfy the 500 adult fish or 5-year stability

thresholds identified in the critical habitat selection criteria. However, although these sites are inconsistent with the selection criteria, they may represent habitat that has potential conservation value. The fact that a particular area is not designated as critical habitat does not imply that it does not have an important role in the conservation of the Oregon chub.

*Comment 7:* Runoff of forestry chemicals is a threat to several sites, which should be acknowledged in the Special Management Considerations or Protections section discussion.

*Our Response:* The Special Management Considerations or Protections section has been revised accordingly.

*Comment 8:* The ODFW identified additional Special Management Considerations or Protections needs for several of the units, including: (1) Units 3G East Fork Minnow Creek Pond and 3K Wicopee Pond, which require special management to prevent the introduction or further introduction of nonnative fishes; (2) Unit 3A Fall Creek Spillway Ponds, which require special management to prevent or set back vegetative succession; and (3) Units 1A Santiam I-5 Side Channels, 2B(5) Finley Gray Creek Swamp and 3G East Fork Minnow Creek Road, which require special management to maintain water quality and reduce the incursion of potentially hazardous agricultural and forestry chemicals into Oregon chub critical habitat areas.

*Our Response:* We have revised the Special Management Considerations or Protections discussion accordingly.

#### Public Comments

*Comment 9:* Relying on absolute population size rather than effective population size to establish the criteria for selecting critical habitat is inadequate; relying on the Recovery Plan to develop the critical habitat selection criteria is invalid for the same reason.

*Our Response:* We agree that using effective population size would be an optimal approach for monitoring the status of Oregon chub populations in the designated critical habitat units. Effective population size (the average number of individuals in a population that are assumed to contribute genes equally to the next generation) is a genetic concept used in conservation planning, and is generally a smaller number than the total number of individuals in the population. The sampling protocol used to count and estimate Oregon chub population size employs an adult fish mark-recapture approach using seines, baited minnow

traps, dip nets, or gill net panels depending on specific habitat conditions. Sampling is conducted over a percentage of the surface area at each site and within each of the habitat types present (Sheerer 2002, p. 1071). However, based on the best scientific and commercial data available, we are unable to determine the effective population size for any of the Oregon chub populations for which we are designating critical habitat in this final rule.

Each area designated as critical habitat in this final rule:

- (1) Is based on the best scientific information available;
  - (2) has been informed by more than 20 years of research (including population monitoring);
  - (3) contains the essential physical and biological features essential to the conservation of the species;
  - (4) is consistent with the Recovery Plan, which was peer reviewed and developed with help from knowledgeable individuals with scientific expertise and familiarity with the species; and
  - (5) is consistent with the methodology used to identify critical habitat units.
- Using the Recovery Plan as the standard against which to measure Oregon chub recovery is appropriate and consistent with the best scientific data available standard we are required to apply under section 4(b)(2) of the Act.

*Comment 10:* Global warming and climate change are certain to significantly degrade Oregon chub habitat in the future, but the proposal provided no analysis in this regard.

*Our Response:* We agree that predicted global climate change appears likely to pose additional threats to the Oregon chub. In the proposed rule, we acknowledged that the designation of critical habitat may not include all areas that we may eventually determine are necessary for Oregon chub recovery. However, we currently do not have scientific data specific to the Oregon chub or its habitat that suggest what, if any, additional areas may be essential to the conservation of the species in light of climate change. The units being designated as critical habitat occur over a range of elevations and encompass large sites that provide for habitat heterogeneity and redundancy. We believe that this approach provides a buffer against environmental effects that may result from changing climate conditions in the Willamette Basin. Critical habitat designations are made on the basis of the best available information at the time of designation, and do not control the direction and substance of future recovery efforts if

new information becomes available. If new scientific information related to climate change and its relation to sensitive habitats in the Willamette Valley becomes available in the future, we will fully consider that information in our recovery efforts. In addition, section 4(B)(2) of the Act provides for making revisions to critical habitat, based on the best scientific data available if a revision is appropriate.

*Comment 11:* Several Clean Air Act nonattainment areas lie within or near the range of this species; the susceptibility of certain organisms such as lichens to acid precipitation is quite high; the susceptibility of oaks and ponderosa pine should be considered by the Service; use of herbicides, pesticides, and other chemical agents is known to have damaged animal populations, even though the phenomenon has been little studied; a variety of chemical herbicides have been used in habitat areas; pesticides have been used to kill various insects occurring in habitat areas; endocrine disrupters have been demonstrated in numerous species and are known to produce transgenerational effects.

*Our Response:* Based on the general nature of the comment, we were unable to establish any particular relevance to the proposed designation of critical habitat for the Oregon chub. See the response to comment 2 for a discussion of water quality considerations.

*Comment 12:* The critical habitat being designated is not adequate for recovery of the species.

*Our Response:* We disagree. The proposed designation is consistent with the delisting criteria identified in the Recovery Plan, which was peer reviewed and developed with help from knowledgeable individuals with scientific expertise and familiarity with the species. Moreover, the commenter did not identify any additional areas that might be essential for the recovery of the species.

*Comment 13:* The **Federal Register** notice failed to adequately inform the public by not providing information on: (1) occupied habitat that was not proposed as critical habitat; (2) unoccupied but suitable habitat that was not proposed as critical habitat; (3) previously occupied or likely to have been occupied habitat that is currently unoccupied and not proposed as critical habitat; (4) whether the amount or quality of occupied habitat is increased by the designation of critical habitat; and (5), whether occupied habitat that has been adversely affected was not proposed as critical habitat for that reason.

*Our Response:* We disagree that the above information was required to be included in the proposed rule. However, in the proposed rule we identified a point of contact for additional information in the **FOR FURTHER INFORMATION CONTACT** section. We also provided an opportunity for interested parties to obtain additional information during the informal session before the public hearing that was held in Corvallis, Oregon on October 5, 2009. In the Criteria Used to Identify Critical Habitat section of the proposed rule, we described the rule set we used to identify proposed critical habitat areas. Each of the sites designated in this final rule meets the definition of critical habitat under section 3(5)(a) of the Act, after applying the criterion described in the Criteria used to Identify Critical Habitat section below. The final designation does not increase the quantity or quality of any occupied habitat, but does specify those areas that are essential for the conservation of the species.

#### Summary of Changes from the Proposed Rule

1. In response to a comment from the ODFW, we clarified the context and importance of the population threshold of 500 adults as discussed in the Recovery Plan in the Physical and Biological Features–Space for Individual and Population Growth and Normal Behavior, and in the Criteria Used to Identify Critical Habitat sections of the final rule.

2. In response to a comment from the ODFW, we added forestry chemicals to the discussion of the threat of agricultural chemical runoff in the Special Management Considerations or Protections section of the final rule.

3. In response to a comment from the ODFW, we revised the Special Management Considerations or Protections section of the final rule by adding the following information:

- Units 3G East Fork Minnow Creek Pond and 3K Wicopee Pond require special management to prevent the introduction or further introduction of nonnative fishes.
- Unit 3A Fall Creek Spillway Ponds requires special management to prevent or set back vegetative succession.
- Units 1A Santiam I–5 Side Channels, 2B(5) Finley Gray Creek Swamp, and 3G East Fork Minnow Creek Road require special management to reduce the incursion of potentially hazardous agricultural and forestry chemicals into Oregon chub habitats and to maintain water quality.

4. We made the following revisions to the Critical Habitat Designation section:

- In Unit 3E Dexter Reservoir RV Alcove (DEX 3) we clarified that the connection to Dexter Reservoir is through a culvert.
- In Unit 3H Hospital Pond we clarified that the site is spring fed, rather than fed by Hospital Creek.
- In Unit 3K Wicopee Pond we clarified that although the site currently has no nonnative predatory or competitive species, a potential threat from the introduction of nonnative species exists.

#### Critical Habitat

##### Background

Critical habitat is defined in section 3 of the Act as:

1. The specific areas within the geographical area occupied by the species, at the time it is listed in accordance with the Act, on which are found those physical or biological features

a. Essential to the conservation of the species, and

b. Which may require special management considerations or protection; and

2. Specific areas outside the geographical area occupied by the species at the time it is listed, upon a determination that such areas are essential for the conservation of the species.

Conservation, as defined under section 3 of the Act, means the use of all methods and procedures that are necessary to bring any endangered species or threatened species to the point at which the measures provided under the Act are no longer necessary. Such methods and procedures include, but are not limited to, all activities associated with scientific resources management such as research, census, law enforcement, habitat acquisition and maintenance, propagation, live trapping, and transplantation, and, in the extraordinary case where population pressures within a given ecosystem cannot be otherwise relieved, may include regulated taking.

Critical habitat receives protection under section 7 of the Act through the prohibition against Federal agencies carrying out, funding, or authorizing the destruction or adverse modification of critical habitat. Section 7(a)(2) of the Act requires consultation on Federal actions that may affect critical habitat. The designation of critical habitat does not affect land ownership or establish a refuge, wilderness, reserve, preserve, or other conservation area. Such designation does not allow the

government or public to access private lands. Such designation does not require implementation of restoration, recovery, or enhancement measures by non-Federal landowners. Where a landowner seeks or requests Federal agency funding or authorization for an action that may affect a listed species or critical habitat, the consultation requirements of section 7(a)(2) of the Act would apply, but even in the event of a destruction or adverse modification finding, Federal action agency's and the applicant's obligation is not to restore or recover the species, but to implement reasonable and prudent alternatives to avoid destruction or adverse modification of critical habitat.

For inclusion in a critical habitat designation, the habitat within the geographical area occupied by the species at the time it was listed must contain the physical and biological features essential to the conservation of the species, and may be included only if those features may require special management considerations or protection. Critical habitat designations identify, to the extent known using the best scientific and commercial data available, habitat areas that provide essential life-cycle needs of the species (areas on which are found the physical and biological features laid out in the appropriate quantity and spatial arrangement for the conservation of the species). Under the Act and regulations at 50 CFR 424.12, we can designate critical habitat in areas outside the geographical area occupied by the species at the time it is listed only when we determine that those areas are essential for the conservation of the species and that designation limited to those areas occupied at the time of listing would be inadequate to ensure the conservation of the species. When the best available scientific data do not demonstrate that the conservation needs of the species require such additional areas, we will not designate critical habitat in areas outside the geographical area occupied by the species at the time of listing. An area currently occupied by the species but that was not occupied at the time of listing may, however, be essential to the conservation of the species and may be included in the critical habitat designation.

Section 4 of the Act requires that we designate critical habitat on the basis of the best scientific and commercial data available. Further, our Policy on Information Standards Under the Endangered Species Act (published in the **Federal Register** on July 1, 1994 (59 FR 34271)), the Information Quality Act (section 515 of the Treasury and General Government Appropriations Act for

Fiscal Year 2001 (Pub. L. 106-554; H.R. 5658)), and our associated Information Quality Guidelines provide criteria, establish procedures, and provide guidance to ensure that our decisions are based on the best scientific data available. They require our biologists, to the extent consistent with the Act and with the use of the best scientific data available, to use primary and original sources of information as the basis for recommendations to designate critical habitat.

When we are determining which areas should be designated as critical habitat, our primary source of information is generally the information developed during the listing process for the species. Additional information sources may include the recovery plan for the species, articles in peer-reviewed journals, conservation plans developed by States and counties, scientific status surveys and studies, biological assessments, or other unpublished materials and expert opinion or personal knowledge. Substantive comments received in response to proposed critical habitat designations are also considered.

Habitat is often dynamic, and species may move from one area to another over time. Furthermore, we recognize that critical habitat designated at a particular point in time may not include all of the habitat areas that we may later determine are necessary for the recovery of the species. For these reasons, a critical habitat designation does not signal that habitat outside the designated area is unimportant or may not be required for recovery of the species.

Areas that support populations, but are outside the critical habitat designation, may continue to be subject to conservation actions we implement under section 7(a)(1) of the Act. Areas that support populations are also subject to the regulatory protections afforded by the section 7(a)(2) jeopardy standard, as determined on the basis of the best available scientific information at the time of the agency action. Federally funded or permitted projects affecting listed species outside their designated critical habitat areas may still result in jeopardy findings in some cases. Similarly, critical habitat designations made on the basis of the best available information at the time of designation will not control the direction and substance of future recovery plans, habitat conservation plans (HCPs), or other species conservation planning efforts if new information available at the time of these planning efforts calls for a different outcome.

### Methods

As required by section 4(b)(2) of the Act, we used the best scientific data available in determining areas that contain the features that are essential to the conservation of the Oregon chub. Data sources include research published in peer-reviewed articles; previous Service documents on the species, including the final listing determination (58 FR 53800; October 18, 1993), the Recovery Plan (USFWS 1998), and annual surveys conducted by the ODFW from 1992 through 2008 (summarized in Scheerer *et al.* 2007 and Scheerer 2008a). Additionally we utilized regional Geographic Information System (GIS) shape files for area calculations and mapping.

### Physical and Biological Features

In accordance with section 3(5)(A)(i) of the Act and regulations at 50 CFR 424.12(b), in determining which areas occupied at the time of listing to propose as critical habitat, we considered the physical and biological features that are essential to the conservation of the species and that may require special management considerations or protection. These features are the primary constituent elements (PCEs) laid out in the appropriate quantity and spatial arrangement essential for the conservation of the species. These include, but are not limited to:

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, and rearing (or development) of offspring; and
5. Habitats that are protected from disturbance or are representative of the historical geographical and ecological distributions of a species.

We derived the specific PCEs required for the Oregon chub from the biological needs of the species as described in the Background section of this rule and the following information:

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

Oregon chub habitats are typically slack-water off-channel water bodies with little or no flow, such as beaver ponds, oxbows, side channels, backwater sloughs, low-gradient tributaries (less than 2.5 percent gradient) and flooded marshes (Pearsons 1989, pp. 30–31; Markle *et al.* 1991, pp. 288–289; Scheerer *et al.* 2007, p. 3;

Scheerer 2008e). The species' swimming ability has been described as poor, and it is believed that no- or low-flow velocity water optimizes the energy expenditure of these slow-moving fish (Pearsons 1989, pp. 30–31). Although Oregon chub habitat may contain water of somewhat greater depth, the species mainly occupies water depths between approximately 0.5–2.0 m (1.6–6.6 ft). In order for a habitat to provide enough space to allow normal behavior for a population of 500 or more individuals, the water body needs to include approximately 500 square meters (0.12 ac) or more of aquatic surface area between 0.5–2.0 m (1.6–6.6 ft) deep (Scheerer 2008b). Adequate aquatic surface area for 500 or more individuals is significant because the Recovery Plan identifies populations at or above the 500 adult threshold as one of the delisting criteria for the species (USFWS 1998, p. 28).

#### Food, Water, Air, Light, Minerals, or Other Requirements

Known as obligatory sight feeders (Davis and Miller 1967, p. 32), Oregon chub feed throughout the day and stop feeding after dusk (Pearsons 1989, p. 23). The fish feed mostly on water column fauna, especially invertebrates that live in dense aquatic vegetation. Markle *et al.* (1991, p. 288) found that the diet of Oregon chub adults consisted primarily of minute crustaceans including copepods, cladocerans, and chironomid larvae. The diet of juveniles also consists of minute organisms such as rotifers, copepods, and cladocerans (Pearsons 1989, pp. 41–42).

With respect to water quality, the temperature regime at a site may determine the productivity of Oregon chub at that location. Spawning activity for the species has been observed from May through early August when F°C (61 F) or 16 C (59 subsurface water temperatures exceed 15 (Scheerer and Apke 1997, p. 22; Markle *et al.* 1991, p. 288; Scheerer and MacDonald 2003, p. 78). The species will display normal life-history behavior at F°C (59 and 77 temperatures between approximately 15 and 25 The upper lethal temperature for the fish F) in laboratory studies (Scheerer and ApkeC (88 was determined to be 31 1997, p. 22).

Optimal Oregon chub habitat contains water with dissolved oxygen levels greater than 3 parts per million (ppm) and an absence of contaminants such as copper, arsenic, mercury, and cadmium; human and animal waste products; pesticides; nitrogen and phosphorous fertilizers; and gasoline or diesel fuels. However, the species habitat is also characterized by high primary



productivity and frequent algal blooms that might cause natural variability in water quality, especially dissolved oxygen levels (Scheerer and Apke 1997, p. 15). Optimal Oregon chub habitat includes water dominated by fine substrates, but protected from excessive sedimentation. When excessive sediment is deposited, surface area can be lost as the sediment begins to displace open water. The resulting succession of open water habitat to wet meadow is detrimental to Oregon chub populations (Scheerer 2008c).

The water quality in the habitats of many known Oregon chub populations is threatened due to their proximity to areas of human activity. Many of the known populations occur near rail, highway, and power transmission corridors and within public park and campground facilities. These populations may be threatened by chemical spills from overturned truck or rail tankers; runoff or accidental spills of herbicides; overflow from chemical toilets in campgrounds; sedimentation of shallow habitats from construction activities; and changes in water level or flow conditions from construction, diversions, or natural desiccation. Oregon chub populations near agricultural areas are subject to poor water quality as a result of runoff laden with sediment, pesticides, and nutrients. Logging in the watershed can result in increased sedimentation and herbicide runoff (USFWS 1998, p. 14).

#### Cover or Shelter

The species' habitat preference varies depending on lifestage and season, but all Oregon chub require considerable aquatic vegetation for hiding and spawning activities (Pearsons 1989, p. 22; Markle *et al.* 1991, p. 290; Scheerer and Jones 1997, p. 5; Scheerer *et al.* 2007, p. 3). Oregon chub in similar size classes school together. A minimum of 250 square meters (0.06 ac) (or between approximately 25 and 100 percent of the total surface area of the habitat) covered with aquatic vegetation is needed to provide for the life-history requirements for a population of 500 Oregon chub (Scheerer 2008e). Aquatic plant communities within Oregon chub habitat include, but are not limited to, both native and nonnative species, including:

1. Emergent vegetation: *Carex* spp. (sedge), *Eleocharis* spp. (spikerush), *Scirpus* spp. (bulrush), *Juncus* spp. (rush), *Alisma* spp. (water plantain), *Polygonum* spp. (knotweed), *Ludwigia* spp. (primrose-willow), *Salix* spp. (willow), *Sparganium* spp. (bur-reed), and *Typha* spp. (cattail).

2. Partly submerged/emergent vegetation: *Ranunculus* spp. (buttercup).

3. Floating/submerged vegetation: *Azolla* spp. (mosquitofern), *Callitriche* sp. (water-starwort), *Ceratophyllum* sp. (hornwort), *Elodea* spp. (water weed), *Fontinalis* spp. (fontinalis moss), *Lemna* spp. (duckweed), *Myriophyllum* spp. (parrot feather), *Nuphar* spp. (pondlily), and *Potamogeton* spp. (pondweed) (Scheerer 2008c).

Larval Oregon chub congregate in the upper layers of the water column, especially in shallow, near-shore areas. Juvenile Oregon chub venture farther from shore into deeper areas of the water column. Adult Oregon chub seek dense vegetation for cover and frequently travel in the mid-water column in beaver channels or along the margins of aquatic plant beds. In the early spring, Oregon chub are most active in the warmer, shallow areas of the ponds (Pearsons 1989, pp. 16–17; USFWS 1998, p. 10). Because Oregon chub habitat is characterized by little or no water flow, resulting substrates are typically composed of silty and organic material. In winter months, Oregon chub of various life stages can be found buried in the detritus or concealed in aquatic vegetation (Pearsons 1989, p. 16).

#### Sites for Breeding, Reproduction, and Rearing (or Development) of Offspring

Although most mature Oregon chub are found to be greater than or equal to 2 years old, maturity appears to be mainly size- rather than age-dependent (Scheerer and McDonald 2003, p. 78). Males over 35 mm (1.4 in) have been observed exhibiting spawning behavior. Oregon C (59chub spawn from April through September, when temperatures exceed 15 F), with peak activity in July. Approximately 150 to 650 eggs will be released per spawning event, hatching within 10 to 14 days. Females prefer a highly organic, vegetative substrate for spawning and will lay their adhesive eggs directly on the submerged vegetation (Pearsons 1989, pp. 17, 23; Markle *et al.* 1992, p. 290; Scheerer 2007b, p. 494). Larvae and juveniles seek dense cover in shallow, warmer regions of off-channel habitats (Pearsons 1989, p. 17; Scheerer 2007b, p. 494).

Habitats (Those protected from anthropogenic disturbance or that are representative of the historical and ecological distribution of a species.)

Many species of nonnative fish that compete with or prey upon Oregon chub have been introduced and are common throughout the Willamette Valley, including largemouth bass (*Micropterus*

*salmoides*), smallmouth bass (*Micropterus dolomieu*), crappie (*Pomoxis* sp.), bluegill (*Lepomis macrochirus*), and western mosquitofish (*Gambusia affinis*). Of the 747 Willamette Valley sites sampled for Oregon chub by ODFW since the beginning of annual survey efforts by the agency in 1991, 42 percent contained nonnative fish. Most of the surveyed habitats that supported large populations of Oregon chub had no evidence of nonnative fish presence (Scheerer 2002, p. 1078; Scheerer 2007a, p. 96; Scheerer *et al.* 2007, p. 14). The presence of nonnative fish in the Willamette Valley, especially centrarchids (e.g., basses and crappie) and ictalurids (catfishes) is suspected to be a major factor in the decline of Oregon chub and the biggest threat to the species' recovery (Markle *et al.* 1991, p. 291; Scheerer 2002, p. 1078; Scheerer *et al.* 2007, p. 18).

Specific interactions responsible for the exclusion of Oregon chub from habitats dominated by nonnative fish are not clear in all cases. While information confirming the presence of Oregon chub in stomach contents of predatory fish is lacking, many nonnative fish, particularly adult centrarchids and ictalurids, are documented piscivores (fish eaters) (Moyle 2002, pp. 397, 399, 403; Wydoski and Whitney 2003, pp. 125, 128, 130; Li *et al.* 1987, pp. 198–201). These fish are frequently the dominant inhabitants of ponds and sloughs within the Willamette River drainage and may constitute a major obstacle to Oregon chub recolonization efforts. Nonnative fish may also serve as sources of parasites and diseases; however, disease and parasite problems have not been studied in the Oregon chub.

Observed feeding strategies and diet of introduced fish, particularly juvenile centrarchids and adult mosquitofish (Li *et al.* 1987, pp. 198–201), often overlap with diet and feeding strategies described for Oregon chub (Pearsons 1989, pp. 34–35). This suggests that direct competition for food between Oregon chub and introduced species may further impede species survival as well as recovery efforts. The rarity of finding Oregon chub in waters also inhabited by mosquitofish may reflect many negative interactions, including but not limited to food-based competition, aggressive spatial exclusion, and predation on eggs and larvae (Meffe 1983, pp. 316, 319; Meffe 1984, pp. 1,530–1,531). Because many remaining population sites are easily accessible, there continues to be a potential for unauthorized introductions of nonnative fish, particularly



mosquitofish and game fish such as bass and walleye (*Stizostedion vitreum*).

The bullfrog (*Rana catesbeiana*), a nonnative amphibian, also occurs in the valley and breeds in habitats preferred by the Oregon chub (Bury and Whelan 1984, pp. 2–3; Scheerer 1999, p. 7). Adult bullfrogs prefer habitat similar in characteristics (i.e., little to no water velocity, abundant aquatic and emergent vegetation) to the preferred habitat for Oregon chub, and are known to consume small fish as part of their diet (Cohen and Howard 1958, p. 225; Bury and Whelan 1984, p. 3), but it is unclear if they have a negative impact on Oregon chub populations, as several sites that have large numbers of bullfrogs also maintain robust Oregon chub populations (Scheerer 2008d).

#### Flood Control

Major alteration of the Willamette River for flood control and navigation improvements has eliminated most of the river's historical floodplain, impairing or eliminating the environmental conditions in which the Oregon chub evolved. The decline of Oregon chub has been correlated with the construction of these projects based on the date of last capture at a site (58 FR 53801; October 18, 1993). Pearsons (1989, pp. 32–33) estimated that the most severe decline occurred during the 1950s and 1960s when 8 of 11 flood control projects in the Willamette River drainage were completed (USACE 1970, pp. 219–237). Other structural changes along the Willamette River corridor such as revetment and channelization, dike construction and drainage, and the removal of floodplain vegetation have eliminated or altered the slack water habitats of the Oregon chub (Willamette Basin Task Force 1969, pp. 19, II22–II24; Hjort *et al.* 1984, pp. 67–68, 73; Sedell and Froggatt 1984, pp. 1,832–1,833; Li *et al.* 1987, p. 201). Management of water bodies (such as reservoirs) adjacent to occupied Oregon chub habitat continues to impact the species by causing fluctuations in the water levels of their habitat such that it may exceed or drop below optimal water depths.

#### Primary Constituent Elements (PCEs) for the Oregon Chub

Pursuant to our regulations, we are required to identify the known physical and biological features essential to the conservation of the Oregon chub and which may require special management considerations or protection. These features are the primary constituent elements (PCEs) laid out in the appropriate quantity and spatial arrangement essential for the

conservation of the species. The PCEs are listed below. All areas designated as critical habitat for Oregon chub are either occupied or within the species' historical geographic range.

Based on the above needs and our current knowledge of the life history, biology, and ecology of the species and the characteristics of the habitat necessary to sustain the essential life-history functions of the species, we have identified four PCEs for Oregon chub critical habitat:

1. Off-channel water bodies such as beaver ponds, oxbows, side-channels, stable backwater sloughs, low-gradient tributaries, and flooded marshes, including at least 500 continuous square meters (0.12 ac) of aquatic surface area at depths between approximately 0.5 and 2.0 m (1.6 and 6.6 ft).

2. Aquatic vegetation covering a minimum of 250 square meters (0.06 ac) (or between approximately 25 and 100 percent) of the total surface area of the habitat. This vegetation is primarily submergent for purposes of spawning, but also includes emergent and floating vegetation and algae, which are important for cover throughout the year. Areas with sufficient vegetation are likely to also have the following characteristics:

- Gradient less than 2.5 percent;
- No or very low water velocity in late spring and summer;
- Silty, organic substrate; and
- Abundant minute organisms such as rotifers, copepods, cladocerans, and chironomid larvae.

3. Late spring and summer subsurface water F), with natural diurnal and C (59 and 78 temperatures between 15 and 25 seasonal variation.

4. No or negligible levels of nonnative aquatic predatory or competitive species. Negligible is defined for the purpose of this rule as a minimal level of nonnative species that will still allow the Oregon chub to continue to survive and recover.

The need for space for individual and population growth and normal behavior is met by PCE (1); areas for reproduction, shelter, food, and habitat for prey are provided by PCE (2); optimal physiological processes for spawning and survival are ensured by PCE (3); habitat free from disturbance and, therefore, sufficient reproduction and survival opportunities are provided by PCE (4).

This final critical habitat designation is designed for the conservation of PCEs necessary to support the life-history functions that were the basis for the proposal. Each of the areas designated in this rule has been determined to contain sufficient PCEs to provide for

one or more of the life-history functions of the Oregon chub. Specifically, these areas fall into two groups: areas occupied at time of listing containing PCEs sufficient for one or more life-history functions, and areas not occupied at time of listing but essential to the conservation of the species and that also contain PCEs for one or more life-history functions.

#### Criteria Used To Identify Critical Habitat

As required by section 4(b)(1)(A) of the Act, we used the best scientific data available in determining areas that contain the features that are essential to the conservation of the Oregon chub. We only designated areas outside the geographical area occupied by the species when a designation limited to its present range would be inadequate to ensure the conservation of the species (50 CFR 424.12(e)). The steps we followed in identifying critical habitat were:

1. Our initial step in identifying critical habitat was to determine, in accordance with section 3(5)(A)(i) of the Act and regulations at 50 CFR 424.12, the physical and biological habitat features (PCEs) that are essential to the conservation of the species as explained in the previous section.

2. We then identified areas occupied by the Oregon chub at the time of listing. Of the 5 occupied sites known at the time of the 1993 listing (58 FR 53801), and the 12 additional sites confirmed by post-listing survey data to be occupied with one or more Oregon chub at the time of listing, 10 still support Oregon chub (Scheerer *et al.* 2007, p. 2; Scheerer 2008a, p. 2) and contain at least one PCE.

3. Because we found that areas occupied at time of listing were not sufficient to conserve the species, we then identified any additional sites that were not occupied at the time of listing but are currently occupied and contain PCEs, and which may be essential for the conservation of the species. Surveys conducted in 2007 and 2008 indicate that 15 additional sites are currently occupied with one or more Oregon chub (Scheerer *et al.* 2007, p. 2; Scheerer 2008a, p. 2).

4. Next we identified sites that support introduced populations of Oregon chub that also contain the PCEs, and which may be essential for the conservation of the species, which resulted in 11 additional sites being identified (Scheerer *et al.* 2007, p. 2; Scheerer 2008a, p. 2). Collectively, the above efforts resulted in the identification of 36 occupied sites.

5. Our final step was to evaluate the 36 occupied sites within the context of the Recovery Plan, to determine which areas contained the physical and biological features in the amount and spatial configuration essential to the conservation of the species. This step involved the application of the following selection criteria:

A. Sites that support large, stable populations.

From the list of occupied sites that contain PCEs, we selected sites that support populations meeting the delisting population criteria outlined in the 1998 Recovery Plan (i.e., establishing 20 populations of at least 500 adults with a stable or increasing trend over 7 years (USFWS 1998, p. 28)), and also sites that were likely to meet the delisting criteria in the near future. Eighteen sites had at least 500 adults and were likely to have a stable or increasing trend over 7 years in the near future. Of the 18 sites meeting this selection criterion, 9 sites were occupied at the time of listing:

- Unit 2B(5), Finley Gray Creek Swamp
- Unit 3B, Elijah Bristow State Park—Berry Slough
- Unit 3E, Dexter Reservoir RV Alcove—DEX3
- Unit 3F, Dexter Reservoir Alcove PIT 1
- Unit 3G, East Fork Minnow Creek Pond Unit
- Unit 3H, Hospital Pond
- Unit 3I, Shady Dell Pond
- Unit 3J, Buckhead Creek, and
- Unit 3K, Wicopee Pond.

Three other sites supported naturally occurring populations but were not occupied at the time of listing:

- Unit 1B(1), Geren Island North Channel
- Unit 1B(4), Gray Slough, and
- Unit 3D, Elijah Bristow State Park Island Pond.

In addition, six sites supported introduced populations:

- Unit 1C, Foster Pullout Pond
- Unit 2A(1), Russell Pond
- Unit 2B(1), Ankeny Willow Marsh
- Unit 2B(2), Dunn Wetland
- Unit 2B(4), Finley Cheadle Pond, and
- Unit 3A, Fall Creek Spillway Ponds.

B. Sites that are capable of supporting large populations.

Because the Recovery Plan calls for establishing and maintaining a minimum of 20 populations that meet the recovery criteria, we identified seven currently occupied sites that did not meet the first criterion (above) but have the greatest potential to contribute to the long-term conservation and recovery of the species. Sites meeting this selection criterion include five sites that support naturally occurring populations:

- Unit 1A, Santiam I–5 Side Channels
- Unit 1B(2), Stayton Public Works Pond
- Unit 2A(2), Shetzline Pond
- Unit 2A(3), Big Island, and
- Unit 3C, Elijah Bristow State Park Northeast Slough.

In addition two sites that support introduced populations met this criterion:

- Unit 1B(3), South Stayton Pond, and
- Unit 2B(3), Finley Display Pond.

Each of these sites either currently, or in the past, has supported populations of over 500 adults.

C. Sites representative of the geographic distribution of Oregon chub.

The delisting criteria outlined in the Recovery Plan require that at least four populations be located in each of three sub-basins. We determined that the 25 sites selected under the preceding critical habitat criteria also met this objective (USFWS 1998, p. 28). Six units are being designated as critical habitat in the Santiam River watershed, 8 sites are being designated as critical habitat in the Mainstem Willamette River watershed, and 11 sites are being designated as critical habitat in the Middle Fork Willamette River watershed. By protecting a variety of habitats throughout the species' historical range, we increase the probability that the species can adjust in the future to various limiting factors that may affect the population, such as predators, disease, and flood events exceeding annual high water levels. Based on this analysis, we are designating 25 units as critical habitat. Although the Recovery Plan calls for establishing and maintaining a minimum of 20 populations, we believe that establishing additional populations will allow the Service to mitigate the potential that some units may become unable to support the species or primary constituent elements over time because of predation pressures or other factors.

After applying the above criteria, we mapped the critical habitat unit boundaries at each of the 25 sites. Mapping was completed using GIS shape files, which involved several steps. Critical habitat unit boundaries were delineated to encompass the extent of habitat containing the physical and biological features essential to the conservation of the species that may require special management considerations or protection. Polygon vertices (points where two lines meet) were collected along the annual high-water mark at least every 30 m (98 ft) around the perimeter of the site, and at a greater frequency in areas of complexity or where higher resolution was necessary. The full extent of each pond or slough was mapped; islands

were mapped with the same method as the perimeter of the site. At sites where tributaries or channels entered or exited a site, only the extent of suitable Oregon chub habitat was mapped. The extent of Oregon chub use in open systems was defined by habitat features and by previous experience sampling in those areas. Habitat features that defined the limit of Oregon chub use in a channel included increased gradient, the absence of aquatic vegetation, and areas where gravel, cobble, or other large substrate was present. We combined the polygon data with information from aerial photos to determine the designated critical habitat unit boundaries of each site.

#### *Special Management Considerations or Protections*

The term critical habitat is defined in section 3(5)(A) of the Act, in part, as geographic areas on which are found those physical or biological features essential to the conservation of the species and “which may require special management considerations or protections.” Accordingly, in identifying critical habitat in occupied areas, we assess whether the primary constituent elements within the areas determined to be occupied at the time of listing may require any special management considerations or protections. Although the determination that special management may be required is not a prerequisite to designating critical habitat in areas essential to the conservation of the species that were unoccupied at the time of listing, all areas being designated as critical habitat require some level of management to address current and future threats to the Oregon chub, to maintain or enhance the physical and biological features essential to its conservation, and to ensure the recovery and survival of the species.

The primary threats impacting the physical and biological features essential to the conservation of the Oregon chub that may require special management considerations within the designated critical habitat units include: competition and predation by nonnative fish; the potential for initial or further introduction of nonnative fish; vegetative succession of shallow aquatic habitats; possible agricultural or forestry chemical runoff; possible excessive siltation from logging in the watershed; other threats to water quality (including threat of toxic spills, low dissolved oxygen); and fluctuations in water level due to regulated flow management at flood control dams, as well as low summer water levels.

Some additional threats to the continued survival and recovery of the Oregon chub, such as the potential for reduced genetic diversity due to the low level of mixing between populations, will likely be addressed by direct management of populations (e.g., translocation of individuals) rather than by management of the physical and biological features of the habitat. Such threats, therefore, are not addressed in this section specific to the special management required of the physical and biological features of the designated critical habitat areas.

Special management considerations or protections are needed in most of the units to address the impacts of competition and predation by nonnative fishes in Oregon chub habitat or to avoid the potential introduction of nonnative fishes into areas occupied by Oregon chub. Predatory nonnative fishes are considered the greatest current threat to the recovery of the Oregon chub. Management for the Oregon chub has focused on establishing secure, isolated habitats free of nonnative fishes. Nonnative fishes are abundant and ubiquitous in the Willamette River Basin. Monitoring and management are required to remove nonnative fishes from Oregon chub habitat when possible and to protect Oregon chub populations that have not yet been affected by nonnative fishes from invasion. Table 1 identifies units that may require special management to reduce or eradicate the threat posed by nonnative fishes already present and units that may require special management to prevent the introduction of nonnative fish.

Although Oregon chub require a mixture of submergent, emergent, and floating aquatic vegetation (including algae) for cover and spawning (see PCE 2), some areas of Oregon chub habitat are threatened by succession to wet meadow systems due to a lack of natural disturbance (such as floods) or excessive siltation. If vegetation completely fills in the open water areas of Oregon chub habitat, these areas are no longer suitable for the Oregon chub. Table 1 identifies units that may require special management to prevent or set back vegetative succession before that habitat is no longer suitable for Oregon chub.

Some units require special management to avoid the degradation of water quality in Oregon chub habitats due to agricultural and forestry chemical runoff, and their close proximity to roads and railroads. Elevated levels of nutrients and pesticides have been found in some Oregon chub habitats (Materna and Buck 2007, p. 67). The source of the contamination is likely agricultural runoff from adjacent farm fields (Materna and Buck 2007, p. 68). Table 1 identifies units that may require special management to reduce the incursion of potentially hazardous agricultural and forestry chemicals into Oregon chub habitats and to maintain water quality.

Although Oregon chub utilize fine silty substrates, excessive siltation resulting from activities such as logging poses a threat to Oregon chub habitat by filling in the shallow aquatic areas utilized by the species. Excessive sedimentation can also lead to the succession of open water habitats to wet meadow, as has been discussed above. Table 1 identifies units that may require special management to alleviate the threat posed by excess watershed siltation due to logging and other activities.

Special management is required in several of the designated critical habitat units to maintain the water quality required by Oregon chub and protect against the impacts of several potential water quality threats. Many Oregon chub populations occur near rail, highway, and power transmission corridors, agricultural fields, and within public park and campground facilities, and there is concern that these populations could be threatened by chemical spills, runoff, or changes in water level or flow conditions caused by construction, diversions, or natural desiccation (58 FR 53800; USFWS 1998, p. 14). Water quality investigations at sites in the Middle Fork and mainstem Willamette sub-basins have found some adverse effects to Oregon chub habitats caused by changes in nutrient levels. Elevated nutrient levels at some Oregon chub locations, particularly increased nitrogen and phosphorus, may result in eutrophication and associated anoxic (absence of oxygen) conditions unsuitable for chub, or increased plant

and algal growth that severely reduce habitat availability because of succession. Table 1 identifies units that may require monitoring and special management to ameliorate the effects of excessive nutrient levels in Oregon chub habitats, and to provide protection against accidental sources of contamination.

Although the Oregon chub evolved in a dynamic environment in which frequent flooding continually created and reconnected habitat for the species, currently most populations of Oregon chub are isolated from each other due to the reduced frequency and magnitude of flood events and the presence of migration barriers such as impassable culverts and beaver dams (Scheerer *et al.* 2007, p. 9). Historically, regulated flow management of flood control dams eliminated many of the slough and side channel habitats utilized by Oregon chub by reducing the magnitude, extent, and frequency of flood events in the Willamette River Basin. Currently, flow management activities impact Oregon chub in many of their remaining habitats by inadvertently raising or lowering the depth of water bodies to levels above or below the optimum for the species. Water depths in the summer may be reduced to levels that threaten the survival of Oregon chub due to flow management in adjacent reservoirs or rivers, or from natural drought cycles. Table 1 identifies units that may require special management to ameliorate the effects of fluctuating or reduced water levels for the Oregon chub.

In summary, we find that each of the areas we are designating as critical habitat contains features essential to the conservation of the Oregon chub, and that these features may require special management considerations or protection. These special management considerations and protections are required to eliminate, or reduce to a negligible level, the threats affecting each unit and to preserve and maintain the essential features that the designated critical habitat units provide to the Oregon chub. A more comprehensive discussion of threats facing individual sites is in the individual unit descriptions.

*Table 1—Special management needs or considerations in critical habitat units for the Oregon chub.*

Unit	Manage to Reduce or Eradicate Nonnative Fish	Manage to Prevent Nonnative Fish Introduction	Manage to Prevent Excessive Sedimentation	Manage to Maintain Water Quality	Manage to Maintain Appropriate Water Levels
1A Santiam I-5 Side Channels	X	X		X	X

Table 1—Special management needs or considerations in critical habitat units for the Oregon chub.—Continued

Unit	Manage to Reduce or Eradicate Nonnative Fish	Manage to Prevent Nonnative Fish Introduction	Manage to Prevent Excessive Sedimentation	Manage to Maintain Water Quality	Manage to Maintain Appropriate Water Levels
1B(1) Geren Island North Channel	X		X		X
1B(2) Stayton Public Works Pond	X	X			X
1B(3) South Stayton Pond		X			
1B(4) Gray Slough	X	X			X
1C Foster Pullout Pond		X			
2A(1) Russell Pond			X		
2A(2) Shetzline Pond		X			
2A(3) Big Island		X			X
2B(1) Ankeny Willow Marsh		X			
2B(2) Dunn Wetland				X	
2B(3) Finley Display Pond		X			
2B(4) Finley Cheadle Pond		X			
2B(5) Finley Gray Creek Swamp		X	X	X	X
3A Fall Creek Spillway Ponds		X	X		X
3B Elijah Bristow SP Barry Slough		X			
3C Elijah Bristow SP Northeast Slough	X	X			X
3D Elijah Bristow SP Island Pond	X	X			X
3E Dexter Reservoir RV Alcove (DEX 3)		X		X	X
3F Dexter Reservoir Alcove (PIT 1)	X	X		X	X
3G East Fork Minnow Creek Pond		X	X	X	
3H Hospital Pond		X		X	X
3I Shady Dell Pond		X		X	
3J Buckhead Creek		X	X	X	
3K Wicopee Pond		X	X		

The designation of critical habitat does not imply that lands outside of critical habitat do not play an important role in the conservation of the Oregon chub. Federal activities that may affect those unprotected areas outside of critical habitat are still subject to review under section 7 of the Act if they may affect Oregon chub. The prohibitions of section 9 against the take of listed species also continue to apply both

inside and outside of designated critical habitat. Take is broadly defined in the Act as to harass, harm, wound, kill, trap, capture, or collect a listed species, or to attempt to engage in any such conduct.

#### Final Critical Habitat Designation

We are designating 25 units totaling approximately 53 ha (132 acres), including land under State, Federal, other government, and private

ownership. The areas we describe below constitute our best assessment at this time of areas that meet the definition of critical habitat for the Oregon chub. The units are those areas most likely to substantially contribute to conservation of the Oregon chub, and when combined with future management of certain habitats suitable for restoration efforts, will contribute to the long-term survival and recovery of the species.

Table 2 shows the occupied unit, land ownership, and approximate area.

*Table 2—Critical habitat units designated for the Oregon chub (Totals in table and in unit descriptions may not sum due to rounding; area estimates reflect all land within critical habitat unit boundaries.).*

Critical Habitat Unit	Land Ownership	Hectares	Acres
1A	State of Oregon, ODOT	1.4	3.3
1B(1)	City of Salem	0.8	1.9
1B(2)	City of Stayton	0.4	1.0
1B(3)	State Of Oregon, ODFW	0.1	0.2
1B(4)	Private	2.5	6.2
1C	USACE	0.4	1.0
2A(1)	Private	0.1	0.1
2A(2)	Private	0.1	0.3
2A(3)	Private	3.3	8.2
2B(1)	USFWS	14.0	34.5
2B(2)	Private	6.1	15.2
2B(3)	USFWS	1.0	2.4
2B(4)	USFWS	0.9	2.3
2B(5)	USFWS & Private	3.0	7.4
3A	USACE	1.5	3.8
3B	State of Oregon, OPRD	5.2	12.7
3C	State of Oregon, OPRD	2.2	5.4
3D	State of Oregon, OPRD	2.1	5.2
3E	USACE	0.4	0.9
3F	USACE	0.1	0.3
3G	State of Oregon, ODOT	1.3	3.3
3H	USACE	0.5	1.1
3I	USFS	1.1	2.8
3J	USFS	3.8	9.3
3K	USFS	1.4	3.3
Total		53.5	132.1

Each of the critical habitat units below takes into account the results of population abundance estimates reported in the Oregon Department of Fish and Wildlife (ODFW) Oregon Chub Investigations Progress Reports (Sheerer 2007 a, p. 2; 2008a). The ODFW initiated Oregon chub population abundance surveys in the early 1990's, and each of the units being designated has abundance and trend data reflecting capability of achieving the recovery criteria in the Recovery Plan. We present a brief description of each unit,

and reasons why it meets the definition of critical habitat for the Oregon chub, below:

Area 1: Santiam River Basin—Linn and Marion Counties, Oregon

A. Mainstem Santiam River

*Unit 1A, the Santiam I-5 Side Channels:* This site consists of three ponds totaling 1.4 ha (3.3 ac), located on a 27 ha (66 ac) property on the south side of the Santiam River upstream of the Interstate Highway 5 bridge crossing

in Linn County, Oregon. The areas containing Oregon chub include a small backwater pool, a gravel pit, and a side channel pond. This unit is owned by the Oregon Department of Transportation (ODOT) and Oregon chub were first observed here in 1997. Although only 22 Oregon chub were counted at the site in 2007, the habitat contains 3 of the 4 PCEs and has exhibited capability of supporting a substantial population of the species based on past survey population estimates of over 500 individuals. The substrate is composed

of 80 percent silt and organic material, and there is a variety of emergent and submergent vegetation covering 65 percent of the surface area. The maximum water depth is approximately 3 m (9.8 ft), averaging 1.5 m (4.9 ft), and the temperature was recorded at F) on July 30, 2008.C (60 and 67 between 19.5 and 21 Beaver have been observed at this location. This site is at risk of vegetative cover reaching levels detrimental to Oregon chub habitat through succession. The site is periodically connected to the Santiam River, and its water levels can be affected by hydrologic changes in the river, particularly the low summer levels common in the drainage. Competing and predatory nonnative species have been observed; nonnative predators are suspected to be a major factor in the drop in Oregon chub population estimates at this site between the 2006 and 2007 surveys (Scheerer 2008d).

#### B. North Santiam River

*Unit 1B(1), Geren Island North Channel:* This site totals approximately 0.8 ha (1.9 ac) and is located on the grounds of a water treatment facility owned by the City of Salem in Marion County, Oregon. The species was first observed at this site in 1996. Although only 207 Oregon chub were counted at the site in 2008, the habitat contains 3 of the 4 PCEs and has exhibited capability of supporting a substantial population of the species based on past survey population estimates of over 500 individuals. The substrate is composed of 90 percent silt and organic material, and there is a variety of emergent and submergent vegetation covering 65 percent of the surface area. The maximum water depth is 2.2 m (7.2 Cft), averaging 1.8 m (5.9 ft), and the temperature was recorded at 26 F) on July 10, 2008.(79 Beaver have been observed at this location. The site is screened and isolated from other water bodies, but water levels are influenced through water releases at Detroit and Big Cliff Dams. Competing and predatory nonnative species have been observed at the site. There is also a risk of excessive sedimentation due to logging in the watershed.

*Unit 1B(2), Stayton Public Works Pond:* This site totals approximately 0.4 ha (1.0 ac) and is located in and owned by the City of Stayton, in Marion County, Oregon. The species was first observed at this location in 1998. Although only 68 Oregon chub were counted at the site in 2008, the habitat contains 3 of the 4 PCEs and has exhibited capability of supporting a substantial population of the species

based on past survey population estimates of over 500 individuals. The substrate is composed of 90 percent silt and organic material, and there is a variety of emergent and submergent vegetation covering 100 percent of the surface area. The maximum water depth is 2 m (6.6 ft) deep, C (77.9 averaging 1.2 m (3.9 ft), and the temperature was recorded at 25.5 F) on July 9, 2008. Beaver have also been observed at this location. The site is periodically connected to the North Santiam River and is therefore at risk of low summer water levels and nonnative fish introduction. Competing and predatory nonnative species have been observed at this site.

*Unit 1B(3), South Stayton Pond:* This site totals approximately 0.1 ha (0.2 ac), is located in Linn County, Oregon, and is owned by the Oregon Department of Fish and Wildlife (ODFW). This site was the location of a 2006 introduction of 54 Oregon chub and a supplemental 2007 introduction of 67 additional individuals. The population is currently estimated at 1,700 individuals and appears to be stable or increasing. The habitat contains all of the PCEs. The substrate is composed of 90 percent silt and organic material, and there is a variety of emergent and submergent vegetation covering 100 percent of the surface area. The maximum water depth is 1.6 m (5.3 C (76.1ft), averaging 0.9 m (3 ft), and the temperature was recorded at 24.5 F) on July 9, 2008. The site is isolated from other water bodies and currently has no competing or predatory nonnative species. Because of the easy public access to the site, it may be at risk of illegal introduction of nonnative fish.

*Unit 1B(4), Gray Slough:* This privately owned site totals approximately 2.5 ha (6.2 ac) and is in Marion County, Oregon. The species was first observed at this site in 1995. The population is currently estimated at 655 individuals, has been stable for 5 years, and the habitat contains 3 of the 4 PCEs. The substrate is composed of 100 percent silt and organic material, and there is a variety of emergent and submergent vegetation covering 55 percent of the surface area. The maximum water depth is 2.5 m (8.2 ft), averaging 1.2 m (3.9 ft), and the F) on July 31, 2008.C (74.3 temperature was recorded at 23.5 Beaver, and also competing or predatory nonnative fish species, have been observed at this location. The site is periodically connected to the North Santiam River and is therefore at risk of low summer water levels and additional nonnative fish invasion. The site's location on a

property with agricultural activity places it at risk of chemical runoff.

#### C. South Santiam River

*Unit 1C, Foster Pullout Pond:* This site totals 0.4 ha (1.0 ac), and is owned by the United States Army Corps of Engineers (USACE). The pond is located in Linn County, Oregon, on the north shore of Foster Reservoir in the South Santiam River drainage. The pond is perched several meters above the reservoir full pool level, is spring-fed, and the water level is maintained by a beaver dam at the outflow. This site was the location of a 1999 introduction of 85 Oregon chub, and the population is currently estimated at 2,600 individuals. The population has been stable for 5 years, and the habitat contains all of the PCEs. The substrate is composed of 100 percent silt and organic material, and there is a variety of emergent and submergent vegetation covering 100 percent of the surface area. The maximum water depth is 2.0 m (6.6 ft), averaging 1.2 m (3.9 ft), and the F) on July 23, 2008.C (70 temperature was recorded at 21 Beaver have been observed at this location. The site is isolated from other water bodies and has no competing or predatory nonnative species, but the site's accessibility to the public raises the risk of illegal introduction of nonnative fish.

Area 2: Mainstem Willamette River Basin—Benton, Lane and Marion Counties, Oregon

#### A. McKenzie River

*Unit 2A(1), Russell Pond:* This privately owned site totals approximately 0.1 ha (0.1 ac) and is located in the Mohawk River drainage, Lane County, Oregon. In 2001, 350 Oregon chub were introduced into the pond, followed by an additional introduction of 150 individuals in 2002 as part of a Safe Harbor Agreement with the Service. The population is currently estimated at 651 individuals, has been stable for 5 years, and the habitat contains all of the PCEs. The substrate is composed of 100 percent silt and organic material, and there is a variety of emergent and submergent aquatic vegetation covering 40 percent of the surface area. The maximum water depth is 2 m (6.6 ft), averaging 1.5 m (4.9 ft), and the temperature was recorded F) on July 23, 2008.C (65.3 at 18.5 The site is isolated from other water bodies, and has no competing or predatory nonnative species. Threats to the site include possible excessive sedimentation resulting from logging in the watershed.

*Unit 2A(2), Shetzline Pond:* This privately owned site totals approximately 0.1 ha (0.3 ac), and is in the Mohawk River drainage, Lane County, Oregon. The species was first observed at this site in 2002. The site originally consisted of three manmade ponds, one of which (the south pond) contained Oregon chub. A restoration project was conducted in 2006 in the north and middle ponds to connect the ponds and create a more natural wetland. Nonnative fish in these ponds were removed with a rotenone treatment. To date the restored wetland has not been connected to the Oregon chub pond, although the site has a small inflow channel connecting it to Drury Creek (a tributary of the Mohawk River). Although only 130 Oregon chub were counted at the site in 2008, the habitat contains all of the PCEs and has exhibited capability of supporting a substantial population of the species, based on past survey population estimates of over 500 individuals. The substrate is composed of 100 percent silt and organic material, and there is a variety of emergent, submergent, and floating aquatic vegetation covering 100 percent of the surface area. The maximum water depth is 2.5 m (8.2 F)C (68 ft), averaging 2 m (6.6 ft), and the temperature was recorded at 20 on July 23, 2008. The site currently has no competing or predatory nonnative species but, because of previous fishing for nonnative species that was allowed in the ponds, the site is at risk of illegal introduction of nonnative fish.

*Unit 2A(3), Big Island:* This site totals 3.3 ha (8.2 ac), is owned by the McKenzie River Trust, and is located along the McKenzie River in Lane County, Oregon. The species was first observed at this location in 2002. Although only 200 Oregon chub were counted at the site in 2008, the habitat contains all of the PCEs and has exhibited capability of supporting a substantial population of Oregon chub based on past survey population estimates of over 500 individuals. The substrate is composed of 90 percent silt and organic material, and there is a variety of emergent, submergent, and floating aquatic vegetation covering 72 percent of the surface area. The maximum depth is 1.5 m (4.9 ft) deep, F)C (66 averaging 0.6 m (2.0 ft), and the temperature was recorded at 19 on July 23, 2008. Beaver have been observed at this location. Because the site has annual connectivity to the McKenzie River, its water levels can be affected by hydrologic changes in the river and it is at risk of the introduction of nonnative fish. No competing or predatory

nonnative species have been observed to date.

#### B. Willamette River Mainstem

*Unit 2B(1), Ankeny Willow Marsh:* This site totals 14.0 ha (34.5 ac), and is located in Marion County, Oregon, at the Ankeny National Wildlife Refuge where an introduction of 500 Oregon chub took place in 2004. The population is currently estimated at 36,500 individuals and has been increasing. The habitat also contains all of the PCEs. The substrate is composed of 100 percent silt and organic material, and there is a variety of aquatic vegetation including emergent, submergent, floating and algae covering 100 percent of the surface area. The maximum depth is 2 m (6.6 ft), averaging 0.7 m (2.3 ft), and the temperature at the site was recorded at 25 F) on July 8, 2008.C (77 Beaver and turtles have been observed at this location. Water is supplied to the pond from Sidney Ditch, which contains nonnative fish. The pump is screened, and the site currently has no competing or predatory nonnative species, although a high-water event could facilitate the introduction of nonnative fish.

*Unit 2B(2), Dunn Wetland:* This privately owned site in Benton County, Oregon, totals 6.1 ha (15.2 ac). In 1997, 200 Oregon chub were introduced to the site, followed by the introduction of 373 additional individuals in 1998 as part of a Safe Harbor Agreement with the Service. The owners restored the wetland in 1994 when a permanent (year-round) spring-fed pond was constructed. Two additional permanent ponds were constructed in 1997 and 1999. The entire wetland floods during the winter, and the ponds are interconnected. The population is currently estimated at 34,500 individuals and has been stable for 5 years. The habitat contains all of the PCEs. The substrate is composed of 100 percent silt and organic material, and there is a variety of emergent and submergent aquatic vegetation covering 100 percent of the surface area. The maximum depth is 1 m (3.3 ft), F)C (73 averaging 0.6 m (2.0 ft), and the temperature was recorded at 23 on July 28, 2008. Beaver have been observed at this location. The site is isolated from other water bodies and has no competing or predatory nonnative species, but it is at risk of chemical runoff from agricultural activities.

*Unit 2B(3), Finley Display Pond:* This site totals 1.0 ha (2.4 ac) and is located in Benton County, Oregon, on the William L. Finley National Wildlife Refuge. This unit was the subject of several introductions of Oregon chub:

60 in 1998, 45 in 1999, 49 in 2001, and 75 in 2007. The current population estimate of 832 individuals along with past survey population estimates of over 500 individuals establish the site's capability of supporting a substantial population of the species. The habitat contains all of the PCEs. The substrate is composed of 100 percent silt and organic material, and there is a variety of emergent and submergent aquatic vegetation covering 75 percent of the surface area. The maximum depth is 2.5 m (8.2 ft), averaging 1.5 m (4.9 ft), and the temperature was recorded F) on June 20, 2008.C (66 at 19 While this pond currently has no competing or predatory nonnative species, easy public access makes it vulnerable to illegal introductions of nonnative fish. Beaver have been observed at this location.

*Unit 2B(4), Finley Cheadle Pond:* This site totals 0.9 ha (2.3 ac) and is located in Benton County, Oregon, on the William L. Finley National Wildlife Refuge. In 2002, 50 Oregon chub were introduced to this unit, followed by the introduction of 53 additional individuals in 2007. The population is currently estimated at 3,519 individuals, has been stable or increasing for 5 years, and the habitat contains all of the PCEs. The substrate is composed of 100 percent silt and organic material, and there is a variety of emergent and submergent aquatic vegetation covering 86 percent of the surface area. The maximum depth is 3.3 m (10.8 ft), averaging 1.5 m (4.9 ft), and F) on June 20, 2008.C (65.3 the temperature was recorded at 18.5 The site is isolated from other water bodies and has no competing or predatory nonnative species. Beaver have been observed at this location. The pond's proximity to agricultural areas puts it at risk of chemical runoff and easy public access makes it vulnerable to illegal introductions of nonnative fish.

*Unit 2B(5), Finley Gray Creek Swamp:* This site totals 3.0 ha (7.4 ac) and is located in Benton County, Oregon. Most of the unit is located on the southwest corner of the William L. Finley National Wildlife Refuge, however, a small portion of the unit is located on private property. The site was occupied by Oregon chub at the time of listing and the population is currently estimated at 2,141 individuals and has been stable for 5 years. The habitat contains 3 of the 4 PCEs. The substrate is composed of 100 percent silt and organic material, and there is a variety of emergent and submergent aquatic vegetation covering 100 percent of the surface area. The maximum depth is 2.2 m (7.2 ft), F)C (72 averaging 1 m (3.3 ft), and the temperature was recorded at 22 on July



28, 2008. Beaver have also been observed at this location.

The site is periodically connected to other water bodies, and competing and predatory nonnative species have been observed. Gray Creek originates on the slopes west of Bellfountain Road, an area owned by private timber companies. The creek flows under Bellfountain Road onto Finley NWR where three dikes have been constructed to form Beaver Pond, Cattail Pond, and Cabell Marsh. The waters of Gray Creek empty into Muddy Creek, which drains into the Willamette River south of Corvallis. Extensive damming by beavers occurs between Bellfountain Road and the first dike at Beaver Pond, creating a narrow band of marsh habitat less than 1 mile in length, with a silty, detritus-laden substrate. The refuge boundary in this area is irregular, and portions of the marsh are within the refuge boundary while other portions are located on private land. Steep, forested slopes rise up on either side of the marsh; the north slope is refuge land, while a large portion of the southern slope is private land. The creek's location put the habitat at risk of excess sedimentation from logging activities and other water quality issues, including threat of spills and low dissolved oxygen.

**Area 3: Middle Fork Willamette River Basin—Lane County, Oregon**

*Unit 3A, Fall Creek Spillway Ponds:* This site totals 1.5 ha (3.8 ac), is owned by the USACE, and is the location of a 1996 introduction of 500 Oregon chub. The ponds, located in the overflow channel below Fall Creek Dam, were formed by beaver dams that blocked the spillway overflow channel. The current Oregon chub population estimate of 3,052 individuals along with past survey population estimates of over 500 individuals establish the site's capability of supporting a substantial population of the species. The habitat contains all of the PCEs. The substrate is composed of 100 percent silt and organic material, and there is a variety of emergent and submergent aquatic vegetation covering 89 percent of the surface area. The maximum water depth is 1.8 m (5.9 Cft), averaging 0.7 m (2.3 ft), and the temperature was recorded at 23.5 F on July 2, 2008.(74.3 Because the site is supplied with water from seepage out of Fall Creek Reservoir spillway and flows into Fall Creek, it is at risk of impacts from flow management for flood control and low summer water levels. Although the site currently has no competing or predatory nonnative species, it is at risk of nonnative fish introduction if flood control measures at

the Dam cause reservoir water to infiltrate the ponds.

*Unit 3B, Elijah Bristow State Park Berry Slough:* This site totals 5.2 ha (12.7 ac) measured at the annual high-water elevation, is owned by the Oregon Parks and Recreation Department (OPRD), and was occupied by Oregon chub at the time of listing. Berry Slough appears to be an abandoned river channel consisting of a chain of shallow ponds connected by a spring-fed flow of several cubic feet per second, entering the Middle Fork Willamette River about 4.0 kilometers (km) (2.5 mi) below Dexter Dam. Almost the entire 1.6-km (1mi) length of the slough lies within Elijah Bristow State Park. The population is currently estimated at 5,459 individuals, and has been stable for 5 years, and the habitat contains all of the PCEs. The substrate is composed of 100 percent silt and organic material, and there is a variety of emergent and submergent aquatic vegetation covering 100 percent of the surface area. The maximum water depth is 2.5 m (8.2 ft), averaging 1.2 m (3.9 ft), and the temperature was recorded at between F) on July 16, 17, and 29, 2008.C (68 and 77 20 and 25 The upper portion (beaver pond) at the site is isolated from other water bodies during most high-water events by a beaver dam and has no competing or predatory nonnative species. The site's connection to the Middle Fork Willamette River creates the risk of nonnative fish introduction and fluctuations in the site's water level due to hydrologic changes in the river.

*Unit 3C, Elijah Bristow State Park Northeast Slough:* This site totals 2.2 ha (5.4 ac), is owned by the OPRD, and Oregon chub were first observed here in 1999. Although only 230 Oregon chub were counted at the site in 2008, the habitat contains 3 of the 4 PCEs and has exhibited capability of supporting a substantial population of the species based on past survey population estimates of over 500 individuals. The substrate is composed of 10 percent silt and organic material, and there is a variety of emergent, submergent, and floating aquatic vegetation covering 100 percent of the surface area. The maximum depth is 2 m (6.6 ft), averaging F) on JulyC (72 0.8 m (2.6 ft), and the temperature was recorded at 22 22, 2008. Beaver have also been observed at this location. Competing and predatory nonnative species have also been observed. Because of its connection to the Middle Fork Willamette River, the water levels at this site can be affected by hydrologic changes in the river and the site is at risk of infiltration by additional nonnative fish.

*Unit 3D, Elijah Bristow State Park Island Pond:* This site totals 2.1 ha (5.2 ac), is owned by the OPRD, and Oregon chub were first observed here in 2003. The population is currently estimated at 1,619 individuals and has been stable for 5 years. The habitat contains 3 of the 4 PCEs. The substrate is composed of 96 percent silt and organic material, and there is a variety of emergent and submergent aquatic vegetation covering 92 percent of the surface area. The maximum depth is 2 m (6.6 ft), averaging 1.2 m (3.9 ft), and the temperature was F) at various locations within theC (64 and 77 recorded at 18 and 25 site on July 17, 2008. Competing and predatory nonnative species have been observed at this location. Because of its connection to the Middle Fork Willamette River, the water levels at this site can be affected by hydrologic changes in the river and the site is at risk of infiltration by additional nonnative fish.

*Unit 3E, Dexter Reservoir RV Alcove (DEX 3):* This site totals 0.4 ha (0.9 ac) and is owned by the USACE. The site is located on the south side of Highway 58 off Dexter Reservoir next to a recreational vehicle (RV) park, and was occupied by Oregon chub at the time of listing. The population is currently estimated at 4,024 individuals, and has been stable for 5 years, and the habitat contains 3 of the 4 PCEs. The substrate is composed of 100 percent silt and organic material, and there is a variety of emergent, submergent and floating aquatic vegetation covering 87 percent of the surface area. The maximum depth is 1 m (3.3 ft), averaging 0.7 m (2.3 ft), and the temperature was recorded F) on July 1, 2008.C (72.5 at 22.5 Competing and predatory nonnative species have been observed at this location. The site is connected to Dexter Reservoir via a culvert and is therefore subject to impacts from regulated flow management, as well as low summer water levels, and the risk of infiltration by additional nonnative fish. Because of the site's close proximity to both the RV park and the highway, the water quality is at risk of contamination by spills and garbage.

*Unit 3F, Dexter Reservoir Alcove (PIT1):* This site totals 0.1 ha (0.3 ac) measured at the annual high-water elevation and is owned by the USACE. The site is located on the south side of Highway 58 off Dexter Reservoir, and was occupied by Oregon chub at the time of listing. PIT1 is an embayment adjacent to the south shoulder of State Hwy 58 and connected by culvert beneath the highway to Dexter Reservoir. The area is owned by the State of Oregon but under USACE

jurisdiction via a flowage easement. The site has gradually sloping banks, woody debris, and supports shrubs, emergent and submergent vegetation. There is also a large boulder riprap revetment on the highway side. A small, intermittent stream enters from the south. The population is currently estimated at 684 individuals and has been stable for 5 years. The habitat contains 3 of the 4 PCEs. The substrate is composed of 100 percent silt and organic material, and there is a variety of aquatic vegetation including emergent, submergent, and algae covering 100 percent of the surface area. The maximum water depth is 1 m (3.3 ft), averaging 0.5 m (1.6 ft), and the temperature was F) on July 2, 2008.C (64 recorded at 18 Competing and predatory nonnative species have been observed at this location. Because of its connection to Dexter Reservoir, the site is subject to impacts from regulated flow management, as well as low summer water levels, and the risk of infiltration by additional nonnative fish. Because of the site's close proximity to the highway, the water quality is at risk of contamination by spills.

*Unit 3G, East Fork Minnow Creek Pond:* This site totals 1.3 ha (3.3 ac), is owned by the ODOT, and was occupied by Oregon chub at the time of listing. East Minnow Creek Pond is a large beaver pond on a small tributary to Minnow Creek that drains into Lookout Point Reservoir. The pond enters Minnow Creek just south of Highway 58, after which the creek flows under the highway through a large box culvert. The population is currently estimated at 2,156 individuals and has been stable for 5 years. The habitat contains all of the PCEs. The substrate is composed of 100 percent silt and organic material, and there is a variety of emergent, submergent, and floating aquatic vegetation covering 100 percent of the surface area. The maximum depth is 1.2 m (3.9 ft), F)C (66 averaging 0.5 m (1.6 ft), and the temperature was recorded at 19 on July 2, 2008. The site is isolated from other water bodies and has no competing or predatory nonnative species but is vulnerable to excessive sedimentation resulting from timber harvest in the watershed, resultant vegetative succession of open water habitat, and contamination-related water quality threats due to the site's proximity to the highway. The ODOT is in the process of implementing a conservation bank for Oregon chub at this site; the bank includes the restoration, construction, and enhancement of Oregon chub habitat and other regionally significant habitats.

*Unit 3H, Hospital Pond:* This site totals 0.5 ha (1.1 ac), is owned by the

USACE, and was occupied by Oregon chub at the time of listing. The pond is located on the north side of the gravel road on the north shore of Lookout Point Reservoir and fed by a spring that flows into the east end of the pond. The population is currently estimated at 3,682 individuals and has been stable for 5 years. The habitat contains all of the PCEs. The substrate is composed of 100 percent silt and organic material, and there is a variety of emergent, submergent, and floating aquatic vegetation covering 100 percent of the surface area. The maximum water depth is 3 m (9.8 ft), averaging 2 m (6.6 ft), and the temperature on the flooded terrace was F) on July 1, 2008.C (59 recorded at 15 Although the site currently has no competing or predatory nonnative species, its connection to the reservoir puts it at risk of nonnative fish introduction. Beaver activity is evident in the pond. A culvert and gate at the outflow culvert maintains the high water level of the pond, but water levels in the pond can fluctuate due to its connection with the reservoir. Contamination-related water quality issues are also of concern due to the site's close proximity to the road.

*Unit 3I, Shady Dell Pond:* This site totals 1.1 ha (2.8 ac), is owned by the United States Forest Service (USFS), and was occupied by Oregon chub at the time of listing. Shady Dell Pond is located in the far southeast end of Lookout Point Reservoir along the south side of State Highway 58 in a USFS campground. The pond was a former slough that was partially isolated from the Middle Fork Willamette River during highway construction. The site has gradually sloping banks, slightly turbid water, moderately abundant aquatic vegetation, and a substrate mix of detritus, silt, and boulders. The pond was fed only by rainfall and seepage, with no obvious outlet, but the USFS installed a diversion pipe from Dell Creek to Shady Dell Pond to maintain adequate summer water levels and counteract the surface area shrinkage caused by evaporation, leakage, or both. The population is currently estimated at 7,249 individuals, has been stable for 5 years, and the habitat contains all of the PCEs. The substrate is 100 percent silt and organic material, and there is a variety of emergent, submergent, and floating aquatic vegetation covering 82 percent of the surface area. The maximum depth is 1.1 m (3.6 ft), averaging 0.5 m (1.6 ft), and the temperature F) on July 22, 2008.C (70 was recorded at 21 The site is isolated from other water bodies and has no competing or predatory nonnative

species. Beaver have been observed at this location. Because of its proximity to the campground and its connection to Dell Creek, the site is at risk from nonnative fish introduction and contamination-related water quality issues.

*Unit 3J, Buckhead Creek:* This site totals 3.8 ha (9.3 ac), is owned by the USFS, and was occupied by Oregon chub at the time of listing. Buckhead Creek is a tributary flowing into the Middle Fork Willamette River at the northeast end of Lookout Point Reservoir. Access to the site is via a Lane County gravel road and USFS Road 5821 that skirts the east side of the river. The channel varies from a few to over 16 m (50 ft) wide with both sloping and undercut banks, a bottom composed of silt, boulders, gravel and detritus, with some woody debris and aquatic vegetation. The lower 2.4 km (1.5 mi) of the creek flows through a slough-like, abandoned channel of the Middle Fork Willamette River and is wide, shallow, slightly turbid and low gradient, with marshy habitat. The population is currently estimated at 1,258 individuals and has been stable for 5 years. The habitat contains all of the PCEs. The substrate is composed of 98 percent silt and organic material, and there is a variety of emergent, submergent, and floating aquatic vegetation covering 80 percent of the surface area. The maximum depth is 1.5 m (4.9 ft), averaging 0.8 m (2.6 ft), and the temperature was recorded at between 18 F) on July 15 and July 21, 2008.C (64 and 75 and 24 Beaver frequent the area and Oregon chub are often found in beaver ponds on the lower 2.4 km (1.5 mi) of the creek. Although the site currently has no competing or predatory nonnative species, its connection to the river puts it at risk of nonnative fish introduction. Other threats include excessive sedimentation from logging in the watershed as well as contamination-related water quality issues due to the site's close proximity to the railroad.

*Unit 3K, Wicopee Pond:* This site totals 1.4 ha (3.3 ac), is owned by the USFS, and was occupied at the time of listing as a result of a 1988 introduction of 50 Oregon chub. The pond, a former borrow pit adjacent to Salt Creek in the upper Middle Fork Willamette River drainage, was created when a bridge crossing was constructed on a small logging road that crosses Salt Creek, along Highway 58. The population is currently estimated at 5,431 individuals and has been stable for 5 years. The habitat contains all of the PCEs. The substrate is 100 percent silt and organic material, and there is a variety of emergent, submergent, and floating

aquatic vegetation and algae covering 100 percent of the surface area. The maximum depth is 2 m (6.6 ft), averaging 1.2 m (3.9 ft), and the temperature F) on June 30, 2008.C (63 was recorded at 17 Beaver have been observed at this location and the site has no competing or predatory nonnative species, although the site remains at risk of the introduction of nonnative fishes. The site is at risk of excessive sedimentation resulting from logging in the watershed.

### Effects of Critical Habitat Designation

#### Section 7 Consultation

Section 7(a)(2) of the Act requires Federal agencies, including the Service, to ensure that actions they fund, authorize, or carry out are not likely to destroy or adversely modify critical habitat. Decisions by the Fifth and Ninth Circuits Court of Appeals have invalidated our definition of destruction or adverse modification (50 CFR 402.02) (see *Gifford Pinchot Task Force v. U.S. Fish and Wildlife Service*, 378 F.3d 1059 (9th Cir. 2004) and *Sierra Club v. U.S. Fish and Wildlife Service et al.*, 245 F.3d 434, 442 (5th Cir. 2001)), and we do not rely on this regulatory definition when analyzing whether an action is likely to destroy or adversely modify critical habitat. Under the statutory provisions of the Act, we determine destruction or adverse modification on the basis of whether, with implementation of the proposed Federal action, the affected critical habitat would remain functional (or retain those physical and biological features that relate to the ability of the area to periodically support the species) to serve its intended conservation role for the species.

If a species is listed or critical habitat is designated, section 7(a)(2) of the Act requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of the species or to destroy or adversely modify its critical habitat. If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency (action agency) must enter into consultation with us. As a result of this consultation, we document compliance with the requirements of section 7(a)(2) through our issuance of:

1. A concurrence letter for Federal actions that may affect, but are not likely to adversely affect, listed species or critical habitat; or
2. A biological opinion for Federal actions that may affect, and are likely to adversely affect, listed species or critical habitat.

When we issue a biological opinion concluding that a project is likely to jeopardize the continued existence of a listed species or destroy or adversely modify critical habitat, we also provide reasonable and prudent alternatives to the project, if any are identifiable. We define reasonable and prudent alternatives at 50 CFR 402.02 as alternative actions identified during consultation that:

1. Can be implemented in a manner consistent with the intended purpose of the action;
2. Can be implemented consistent with the scope of the Federal agency's legal authority and jurisdiction;
3. Are economically and technologically feasible; and
4. Would, in the Director's opinion, avoid jeopardizing the continued existence of the listed species or destroying or adversely modifying critical habitat.

Reasonable and prudent alternatives can vary from slight project modifications to extensive redesign or relocation of the project. Costs associated with implementing a reasonable and prudent alternative are similarly variable.

Regulations at 50 CFR 402.16 require Federal agencies to reinstate consultation on previously reviewed actions in instances where we have listed a new species or subsequently designated critical habitat that may be affected and the Federal agency has retained discretionary involvement or control over the action (or the agency's discretionary involvement or control is authorized by law). Consequently, Federal agencies may sometimes need to request reinitiation of consultation with us on actions for which formal consultation has been completed, if those actions with discretionary involvement or control may affect subsequently listed species or designated critical habitat.

Federal activities that may affect the Oregon chub or its designated critical habitat require section 7 consultation under the Act. Activities on State, Tribal, local, or private lands requiring a Federal permit (such as a permit from the USACE under section 404 of the Clean Water Act (33 U.S.C. 1251 *et seq.*) or a permit from us under section 10 of the Act) or involving some other Federal action (such as funding from the Federal Highway Administration, Federal Aviation Administration, or the Federal Emergency Management Agency) are subject to the section 7 consultation process. Federal actions not affecting listed species or critical habitat, and actions on State, Tribal, local, or private lands that are not Federally funded,

authorized, or permitted, do not require section 7 consultations.

### Application of the Jeopardy and Adverse Modification Standards

#### Jeopardy Standard

Currently, the Service applies an analytical framework for Oregon chub jeopardy analyses that relies heavily on the importance of known populations to the species' survival and recovery. The analysis required by section 7(a)(2) of the Act is focused not only on these populations but also on the habitat conditions necessary to support them.

The jeopardy analysis usually expresses the survival and recovery needs of the Oregon chub in a qualitative fashion without making distinctions between what is necessary for survival and what is necessary for recovery. Generally, the jeopardy analysis focuses on the range-wide status of the Oregon chub, the factors responsible for that condition, and what is necessary for this species to survive and recover. An emphasis is also placed on characterizing the condition of the Oregon chub in the area affected by the proposed Federal action and the role of affected populations in the survival and recovery of the Oregon chub. That context is then used to determine the significance of adverse and beneficial effects of the proposed Federal action and any cumulative effects for purposes of making the jeopardy determination.

#### Adverse Modification Standard

The key factor related to the adverse modification determination is whether, with implementation of the proposed Federal action, the affected critical habitat would continue to serve its intended conservation role for the species, or retain those PCEs that relate to the ability of the area to periodically support the species. Activities that may destroy or adversely modify critical habitat are those that alter the PCEs to an extent that appreciably reduces the conservation value of critical habitat for the Oregon chub. As discussed above, the role of critical habitat is to support the life-history needs of the species and provide for the conservation of the species.

Section 4(b)(8) of the Act requires us to briefly evaluate and describe, in any proposed or final regulation that designates critical habitat, activities involving a Federal action that may destroy or adversely modify such habitat, or that may be affected by such designation. Activities that, when carried out, funded, or authorized by a Federal agency, may affect critical habitat and therefore result in

consultation for the Oregon chub include, but are not limited to:

1. Actions that would adversely affect the Oregon chub's space for individual and population growth and normal behavior. These include altering the flow, gradient, or depth of the water channel by way of activities such as channelization, impoundment, road and bridge construction, mining, dredging, and destruction of riparian vegetation. These activities may lead to changes in water flows and levels that would degrade, reduce, or eliminate the habitat necessary for the growth and reproduction of Oregon chub.

2. Actions that would significantly alter areas for reproduction, shelter, and food (habitat for prey). These include:

- Reducing or eliminating vegetative cover of the water column by activities such as release of contaminants into the surface water or connected groundwater at a point source or by dispersed release (non-point source). These activities can result in loss of the vegetative cover that is vital to the Oregon chub's ability to spawn and hide from predators.
- Altering the substrate within the critical habitat unit through sediment deposition from livestock grazing, road construction, channel alteration, timber harvest, off-road vehicle use, and other watershed and floodplain disturbances. When these activities increase the sediment deposition to levels that begin to change open-water habitat to emergent wetland, the habitat necessary for the growth and reproduction of these fish is reduced or eliminated.
- Significantly decreasing the populations of minute organisms in the water channel that make up the food base of the Oregon chub through activities that negatively affect flows, water temperature, water quality, or other requirements.

3. Actions that would significantly alter water temperature, thereby negatively affecting the Oregon chub's physiological processes for normal spawning and survival. Such activities could include, but are not limited to, release of chemicals, biological pollutants, or heated effluents into the surface water or connected groundwater at a point source or by dispersed release (non-point source). These activities could alter water quality to conditions that are beyond the tolerances of Oregon chub and result in direct or cumulative adverse effects to these individuals and their life cycles.

4. Actions that would disturb the habitat of Oregon chub by introducing, spreading, or augmenting nonnative competitive or predatory aquatic species into any of the designated units. Such activities may include, but are not limited to, stocking for sport, aesthetics, biological control, or other purposes; the illegal use of live bait fish, aquaculture, or dumping of aquarium fish or other species; and connection of a designated critical habitat unit to another water body known to contain nonnative aquatic species. These activities could cause Oregon chub fatalities, displace Oregon chub from their habitat, and/or cause Oregon chub to spend a disproportionate amount of time hiding at the expense of foraging.

We consider all of the units designated as critical habitat to contain features essential to the conservation of the Oregon chub and which require special management. All of the units are within the geographic range of the species, and they are currently occupied. To ensure that their actions do not jeopardize the continued existence of the Oregon chub, Federal agencies already consult with us on activities in areas currently occupied by the Oregon chub, or in unoccupied areas if the species may be affected by the action.

#### Exemptions

##### *Application of Section 4(a)(3) of the Act*

The Sikes Act Improvement Act of 1997 (Sikes Act) (16 U.S.C. 670a) required each military installation that includes land and water suitable for the conservation and management of natural resources to complete an integrated natural resource management plan (INRMP) by November 17, 2001. An INRMP integrates implementation of the military mission of the installation with stewardship of the natural resources found on the base. Each INRMP includes:

- An assessment of the ecological needs on the installation, including the need to provide for the conservation of listed species;
- A statement of goals and priorities;
- A detailed description of management actions to be implemented to provide for these ecological needs; and
- A monitoring and adaptive management plan.

Among other things, each INRMP must, to the extent appropriate and applicable, provide for fish and wildlife management; fish and wildlife habitat enhancement or modification; wetland protection, enhancement, and restoration where necessary to support

fish and wildlife; and enforcement of applicable natural resource laws.

The National Defense Authorization Act for Fiscal Year 2004 (Pub. L. 108-136) amended the Act to limit areas eligible for designation as critical habitat. Specifically, section 4(a)(3)(B)(i) of the Act (16 U.S.C. 1533(a)(3)(B)(i)) now provides: "The Secretary shall not designate as critical habitat any lands or other geographical areas owned or controlled by the Department of Defense, or designated for its use, that are subject to an integrated natural resources management plan prepared under section 101 of the Sikes Act (16 U.S.C. 670a), if the Secretary determines in writing that such plan provides a benefit to the species for which critical habitat is proposed for designation."

There are no Department of Defense lands with a completed INRMP within the proposed critical habitat designation. Therefore, we are not exempting lands from this final designation of critical habitat for the Oregon chub pursuant to section 4(a)(3)(B)(i) of the Act.

#### Exclusions

##### *Application of Section 4(b)(2) of the Act*

Section 4(b)(2) of the Act states that the Secretary must designate and revise critical habitat on the basis of the best available scientific data after taking into consideration the economic impact, national security impact, and any other relevant impact of specifying any particular area as critical habitat. The Secretary may exclude an area from critical habitat if he determines that the benefits of such exclusion outweigh the benefits of specifying such area as part of the critical habitat, unless he determines, based on the best scientific data available, that the failure to designate such area as critical habitat will result in the extinction of the species. In making that determination, the statute on its face, as well as the legislative history, are clear that the Secretary has broad discretion regarding which factor(s) to use and how much weight to give to any factor.

Under section 4(b)(2) of the Act, we may exclude an area from designated critical habitat based on economic impacts, impacts on national security, or any other relevant impacts. In considering whether to exclude a particular area from the designation, we must identify the benefits of including the area in the designation, identify the benefits of excluding the area from the designation, and determine whether the benefits of exclusion outweigh the benefits of inclusion. If based on this analysis, we make this determination,

we can exclude the area only if such exclusion would not result in the extinction of the species.

#### Exclusions Based on Economic Impacts

Under section 4(b)(2) of the Act, we consider the economic impacts of specifying any particular area as critical habitat. In order to consider economic impacts, we prepared a draft economic analysis (DEA), which we made available for public review on September 22, 2009 (74 FR 48211), based on the March 10, 2009, proposed rule (74 FR 10412). We opened a comment period on the DEA until October 22, 2009; however, we received no comments. Following the close of the comment period, a final analysis of the potential economic effects of the designation was developed, taking into consideration any new information.

The intent of the final economic analysis (FEA) is to quantify the economic impacts of all potential conservation efforts for the Oregon chub. Some of these costs will likely be incurred regardless of whether we designate critical habitat (baseline). The economic impact of the final critical habitat designation is analyzed by comparing scenarios both “with critical habitat” and “without critical habitat.” The “without critical habitat” scenario represents the baseline for the analysis, considering protections already in place for the species (e.g., under the Federal listing and other Federal, State, and local regulations). The baseline, therefore, represents the costs incurred regardless of whether critical habitat is designated. The “with critical habitat” scenario describes the incremental impacts associated specifically with the designation of critical habitat for the species. The incremental conservation efforts and associated impacts are those not expected to occur absent the designation of critical habitat for the species. In other words, the incremental costs are those attributable solely to the designation of critical habitat above and beyond the baseline costs; these are the costs we consider in the final designation of critical habitat. The analysis looks retrospectively at baseline impacts incurred since the species was listed, and forecasts both baseline and incremental impacts likely to occur with the designation of critical habitat.

The FEA also addresses how potential economic impacts are likely to be distributed, including an assessment of any local or regional impacts of habitat conservation and the potential effects of conservation activities on government agencies, private businesses, and individuals. The FEA measures lost

economic efficiency associated with residential and commercial development and public projects and activities, such as economic impacts on water management and transportation projects, Federal lands, small entities, and the energy industry. Decision-makers can use this information to assess whether the effects of the designation might unduly burden a particular group or economic sector. Finally, the FEA looks retrospectively at costs that have been incurred since 1993, when the Oregon chub was listed under the Act (58 FR 53800), and considers those costs that may occur in the 20 years following the designation of critical habitat, which was determined to be the appropriate period for analysis because limited planning information was available for most activities to forecast activity levels for projects beyond a 20-year timeframe. The FEA quantifies economic impacts of Oregon chub conservation efforts associated with the following categories of activity: water management, activities that impact water quality, dredging activities and other impacts (e.g., bridge replacement, management plans, and natural gas pipelines).

Total baseline impacts are estimated to be \$3.33 million to \$13.2 million, and incremental impacts are estimated to be \$108,000 between 2010 and 2029, assuming a 7 percent discount rate. The majority of estimated baseline costs arise from anticipated mitigation for future transportation projects, impacts to recreational activities and hydropower generation resulting from changes in flows, and ongoing habitat management efforts, which account for over 95 percent of the high-end costs estimated in the analysis. Incremental impacts are forecast to be entirely administrative costs of section 7 consultations.

Our economic analysis did not identify any disproportionate costs that are likely to result from the designation. Consequently, the Secretary has determined not to exert his discretion to exclude any areas from this designation of critical habitat for the Oregon chub based on economic impacts. A copy of the FEA with supporting documents may be obtained by contacting the Oregon Fish and Wildlife Field Office (see **ADDRESSES**) or for downloading from the Internet at <http://www.regulations.gov>.

#### Exclusions Based on National Security Impacts

Under section 4(b)(2) of the Act, we consider whether there are lands owned or managed by the Department of Defense (DOD) where the designation of

critical habitat might present an impact to national security. In preparing this final rule, we have determined that the lands within the designation of critical habitat for the Oregon chub are not owned or managed by the DOD, and, therefore, we anticipate no impact to national security. The Secretary has determined not to exert his discretion to exclude any areas from this final designation based on impacts on national security.

#### Exclusions Based on Other Relevant Impacts

Under section 4(b)(2) of the Act, we consider other relevant impacts, in addition to economic impacts and impacts on national security. We consider a number of factors, including whether landowners have developed any habitat conservation plans (HCPs) or other resource management plans for the areas proposed for designation, or whether there are conservation partnerships that would be encouraged by designation of, or exclusion from, critical habitat. In addition, we look at any Tribal issues, and consider the government-to-government relationship of the United States with Tribal entities. We also consider any social impacts that might occur because of the designation.

In preparing this final rule, we have determined that there are currently no HCPs for the Oregon chub. In 2001 and 2007, two Safe Harbor Agreements (SHAs) for the Oregon chub were finalized in Lane County, Oregon, to establish new populations of Oregon chub in artificial ponds as refugia for natural populations. These SHAs will contribute to the conservation of the species by reducing the risk of the complete loss of donor populations and any of their unique genetic material. We are unaware of any relevant impacts that would result from designating critical habitat in the areas subject to the SHAs and are including them in the final designation. The final designation does not include any Tribal lands or trust resources. Accordingly, the Secretary has determined not to exercise his discretion to exclude any areas under section 4(B)(2) of the Act based on other relevant impacts.

#### Required Determinations

##### *Regulatory Planning and Review—Executive Order 12866*

The Office of Management and Budget (OMB) has determined that this rule is not significant and has not reviewed this rule under Executive Order 12866 (E.O. 12866). OMB bases its determination upon the following four criteria:

1. Whether the rule will have an annual effect of \$100 million or more on the economy or adversely affect an economic sector, productivity, jobs, the environment, or other units of the government.

2. Whether the rule will create inconsistencies with other Federal agencies' actions.

3. Whether the rule will materially affect entitlements, grants, user fees, loan programs or the rights and obligations of their recipients.

4. Whether the rule raises novel legal or policy issues.

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

Under the Regulatory Flexibility Act (RFA; 5 U.S.C. 601 *et seq.*), as amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA) of 1996 (5 U.S.C. 801 *et seq.*), whenever an agency must publish a notice of rulemaking for any proposed or final rule, it must prepare and make available for public comment a regulatory flexibility analysis that describes the effects of the rule on small entities (small businesses, small organizations, and small government jurisdictions). However, no regulatory flexibility analysis is required if the head of an agency certifies the rule will not have a significant economic impact on a substantial number of small entities. The SBREFA amended the RFA to require Federal agencies to provide a certification statement of the factual basis for certifying that the rule will not have a significant economic impact on a substantial number of small entities. In this final rule, we are certifying that the critical habitat designation for the Oregon chub will not have a significant economic impact on a substantial number of small entities. The following discussion explains our rationale.

According to the Small Business Administration, small entities include small organizations, such as independent nonprofit organizations; small governmental jurisdictions, including school boards and city and town governments that serve fewer than 50,000 residents; as well as small businesses. Small businesses include manufacturing and mining concerns with fewer than 500 employees, wholesale trade entities with fewer than 100 employees, retail and service businesses with less than \$5 million in annual sales, general and heavy construction businesses with less than \$27.5 million in annual business, special trade contractors doing less than \$11.5 million in annual business, and agricultural businesses with annual sales less than \$750,000. To determine

if potential economic impacts to these small entities are significant, we consider the types of activities that might trigger regulatory impacts under this rule, as well as the types of project modifications that may result. In general, the term significant economic impact is meant to apply to a typical small business firm's business operations.

To determine if the rule could significantly affect a substantial number of small entities, we consider the number of small entities affected within particular types of economic activities (e.g., water management, water quality, dredging, and other activities). We apply the substantial number test individually to each industry to determine if certification is appropriate. However, the SBREFA does not explicitly define substantial number or significant economic impact. Consequently, to assess whether a substantial number of small entities is affected by this designation, this analysis considers the relative number of small entities likely to be impacted in an area. In some circumstances, especially with critical habitat designations of limited extent, we may aggregate across all industries and consider whether the total number of small entities affected is substantial. In estimating the number of small entities potentially affected, we also consider whether their activities have any Federal involvement.

Designation of critical habitat only affects activities authorized, funded, or carried out by Federal agencies. Some kinds of activities are unlikely to have any Federal involvement and so will not be affected by critical habitat designation. In areas where the species is present, Federal agencies already are required to consult with us under section 7 of the Act on activities they authorize, fund, or carry out that may affect the Oregon chub. Federal agencies also must consult with us if their activities may affect critical habitat. Designation of critical habitat, therefore, could result in an additional economic impact on small entities due to the requirement to reinstate consultation for ongoing Federal activities (see *Application of the Adverse Modification Standard* section).

In our final economic analysis of the critical habitat designation, we evaluated the potential economic effects on small business entities resulting from implementation of conservation actions related to the proposed designation of critical habitat for the Oregon chub. The analysis is based on the estimated impacts associated with the rulemaking as described in sections 3 through 7 of

the analysis, and evaluated the potential for economic impacts related to activity categories including water management, agriculture, forestry, transportation, and habitat management.

As discussed in Appendix A of the economic analysis, of the activities addressed in the analysis, only forestry activities are expected to experience incremental, administrative consultation costs that may be borne by small businesses. These costs may arise when the U.S. Forest Service consults on Federal timber sales, with small logging and timber tract companies as third parties. In Lane and Benton Counties, there are 178 logging operations and 98 timber tract operations that are considered small, representing between 98 and 100 percent of all businesses in the affected industry sector within these two counties. Conservatively, assuming a single business is associated with all of the forecasted impacts to forestry activities, the present value, 20-year impact of \$1,440 to a single small business is approximately 0.02 percent of annual sales. The annualized impacts to timber tract operations is estimated at \$136, or approximately 0.002 percent of annual sales. Therefore, while assuming that each small business has annual sales just under its SBA industry small business threshold (\$7.0 million in annual revenues for timber tract operations; 500 employees for logging operations) may underestimate impacts as a percentage of annual sales, forecast impacts still are likely to be relatively small in comparison to annual revenues. Please refer to our economic analysis of the critical habitat designation for a more detailed discussion of potential economic impacts.

In summary, we have considered whether the designation would result in a significant economic impact on a substantial number of small entities. Based on the above reasoning and currently available information, we concluded that this rule will not have a significant economic impact on a substantial number of small business entities. Therefore, we are certifying that the designation of critical habitat for the Oregon chub will not have a significant economic impact on a substantial number of small entities, and a regulatory flexibility analysis is not required.

#### *Energy Supply, Distribution, or Use—Executive Order 13211*

Under Executive Order 13211 (E.O. 13211, Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use), Federal agencies must prepare Statements of Energy

Effects when undertaking certain actions. OMB has provided guidance for implementing this Executive Order that outlines nine outcomes that may constitute a significant adverse effect when compared to not taking the regulatory action under consideration. The economic analysis finds that none of these criteria are relevant to this analysis. Thus, based on information in the economic analysis, energy-related impacts associated with the Oregon chub conservation activities within critical habitat are not expected. As such, the designation of critical habitat is not expected to significantly affect energy supplies, distribution, or use. Therefore, this action is not a significant energy action, and no Statement of Energy Effects is required.

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

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

1. This rule will not produce a Federal mandate. In general, a Federal mandate is a provision in legislation, statute, or regulation that would impose an enforceable duty upon State, local, or Tribal governments, or the private sector, and includes both “Federal intergovernmental mandates” and “Federal private sector mandates.” These terms are defined in 2 U.S.C. 658(5)–(7). “Federal intergovernmental mandate” includes a regulation that “would impose an enforceable duty upon State, local, or [T]ribal governments,” with two exceptions. It excludes “a condition of Federal assistance.” It also excludes “a duty arising from participation in a voluntary Federal program,” unless the regulation “relates to a then-existing Federal program under which \$500,000,000 or more is provided annually to State, local, and Tribal governments under entitlement authority,” if the provision would “increase the stringency of conditions of assistance” or “place caps upon, or otherwise decrease, the Federal Government’s responsibility to provide funding,” and the State, local, or Tribal governments “lack authority” to adjust accordingly. At the time of enactment, these entitlement programs were: Medicaid; Aid to Families with Dependent Children work programs; Child Nutrition; Food Stamps; Social Services Block Grants; Vocational Rehabilitation State Grants; Foster Care, Adoption Assistance, and Independent Living; Family Support Welfare Services; and Child Support Enforcement. “Federal private sector mandate” includes a regulation that “would impose an enforceable duty

upon the private sector, except (i) a condition of Federal assistance, or (ii) a duty arising from participation in a voluntary Federal program.”

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

2. We do not believe that this rule will significantly or uniquely affect small governments, because it will not produce a Federal mandate of \$100 million or greater in any year; that is, it is not a significant regulatory action under the Unfunded Mandates Reform Act. The designation of critical habitat imposes no obligations on State or local governments. By definition, Federal agencies are not considered small entities, although the activities they fund or permit may be proposed or carried out by small entities. As such, a Small Government Agency Plan is not required.

*Takings—Executive Order 12630*

In accordance with E.O. 12630 (Government Actions and Interference with Constitutionally Protected Private Property Rights), we have analyzed the potential takings implications of designating critical habitat for the Oregon chub in a takings implications assessment. Critical habitat designation does not affect landowner actions that do not require Federal funding or permits, nor does it preclude development of habitat conservation programs or issuance of incidental take permits to permit actions that do require Federal funding or permits to go forward. The takings implications assessment concludes that this designation of critical habitat for the Oregon chub does not pose significant

takings implications for lands within or affected by the designation.

*Federalism—Executive Order 13132*

In accordance with E.O. 13132 (Federalism), this rule does not have significant Federalism effects. A Federalism assessment is not required. In keeping with Department of the Interior and Department of Commerce policy, we requested information from, and coordinated development of this critical habitat designation with, appropriate State resource agencies in Oregon. We received comments from the State of Oregon and the Oregon Department of Fish and Wildlife, which have been addressed in the Summary of Comments and Recommendations section of the rule. The designation of critical habitat in areas currently occupied by the Oregon chub may impose nominal additional regulatory restrictions to those currently in place and, therefore, may have little incremental impact on State and local governments and their activities. The designation may have some benefit to these governments, in that the areas that contain the physical and biological features essential to the conservation of the species are more clearly defined, and the PCEs of the habitat necessary to the conservation of the species are specifically identified. This information does not alter where and what federally sponsored activities may occur. However, it may assist local governments in long-range planning (rather than having them wait for case-by-case section 7 consultations to occur).

*Civil Justice Reform—Executive Order 12988*

In accordance with E.O. 12988 (Civil Justice Reform), the regulation meets the applicable standards set forth in sections 3(a) and 3(b)(2) of the Order. We are designating critical habitat in accordance with the provisions of the Act. This final rule uses standard property descriptions and identifies the physical and biological features essential to the conservation of the subspecies within the designated areas to assist the public in understanding the habitat needs of the Oregon chub.

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

This rule does not contain any new collections of information that require approval by OMB under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.). This rule will not impose recordkeeping or reporting requirements on State or local governments, individuals, businesses, or



organizations. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

*National Environmental Policy Act (42 U.S.C. 4321 et seq.)*

It is our position that, outside the jurisdiction of the U.S. Court of Appeals for the Tenth Circuit, we do not need to prepare environmental analyses as defined by NEPA (42 U.S.C. 4321 *et seq.*) in connection with designating critical habitat under the Act. We published a notice outlining our reasons for this determination in the **Federal Register** on October 25, 1983 (48 FR 49244). This position was upheld by the U.S. Court of Appeals for the Ninth Circuit (*Douglas County v. Babbitt*, 48 F.3d 1495 (9th Cir. 1995), *cert. denied* 516 U.S. 1042 (1996)).

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

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

communicate meaningfully with recognized Federal Tribes on a government-to-government basis. In accordance with Secretarial Order 3206 of June 5, 1997, American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act, we readily acknowledge our responsibilities to work directly with Tribes in developing programs for healthy ecosystems, to acknowledge that Tribal lands are not subject to the same controls as Federal public lands, to remain sensitive to Indian culture, and to make information available to Tribes. We determined that there are no Tribal lands occupied at the time of listing that contain the features essential for the conservation of the Oregon chub, and no unoccupied Tribal lands that are essential for the conservation of the Oregon chub. Therefore, we are not designating critical habitat for the Oregon chub on Tribal lands.

#### References Cited

A complete list of all references cited is available upon request from the Oregon Fish and Wildlife Field Office (see **FOR FURTHER INFORMATION CONTACT**).

#### Author(s)

The primary authors of this package are the staff members of the Oregon Fish and Wildlife Field Office.

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

Endangered and threatened species, Exports, Imports, Reporting and recordkeeping requirements, Transportation.

#### Regulation Promulgation

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

#### PART 17—[AMENDED]

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

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

■ 2. Amend § 17.11(h) by revising the entry for “Chub, Oregon” under “Fishes” in the List of Endangered and Threatened Wildlife to read as follows:

#### § 17.11 Endangered and threatened wildlife.

\* \* \* \* \*

(h) \* \* \*

Species		Historic range	Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rules
Common name	Scientific name						
*	*	*	*	*	*	*	*
FISHES							
*	*	*	*	*	*	*	*
Chub, Oregon	<i>Oregonichthys crameri</i>	U.S.A. (OR)	Entire	E	520	\$17.95(e)	NA
*	*	*	*	*	*	*	*

■ 3. In § 17.95, amend paragraph (e) by adding an entry for “Oregon Chub (*Oregonichthys crameri*)” in the same order that the species appears in the table at § 17.11(h), to read as follows:

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

\* \* \* \* \*

(e) *Fishes*.

\* \* \* \* \*

#### Oregon Chub (*Oregonichthys crameri*)

(1) Critical habitat units are depicted for Benton, Lane, Linn, and Marion Counties, Oregon, on the maps below.

(2) The primary constituent elements of critical habitat for the Oregon chub are the habitat components that provide:

(i) Off-channel water bodies such as beaver ponds, oxbows, side-channels, stable backwater sloughs, low-gradient tributaries, and flooded marshes, including at least 500 continuous square meters (0.12 ac) of aquatic surface area at depths between approximately 0.5–2.0 m (1.6–6.6 ft).

(ii) Aquatic vegetation covering a minimum of 250 square meters (.06 ac) (or between approximately 25 and 100 percent of the total surface area of the habitat). This vegetation is primarily submergent for purposes of spawning, but also includes emergent and floating vegetation and algae, which are important for cover throughout the year.

Areas with sufficient vegetation are likely to also have the following characteristics:

(A) Gradient less than 2.5 percent;  
 (B) No or very low water velocity in late spring and summer;  
 (C) Silty, organic substrate; and  
 (D) Abundant minute organisms such as rotifers, copepods, cladocerans, and chironomid larvae.

(iii) Late spring and summer F), with C (59 and 78 subsurface water temperatures between 15 and 25 natural diurnal and seasonal variation.

(iv) No or negligible levels of nonnative aquatic predatory or competitive species. Negligible is defined for the purpose of this rule as

a minimal level of nonnative species that will still allow the Oregon chub to continue to survive and recover.

(3) Critical habitat does not include manmade structures (including, but not limited to, docks, seawalls, pipelines, runways, or other structures or paved areas) and the land or waterway on which they are located that exist within

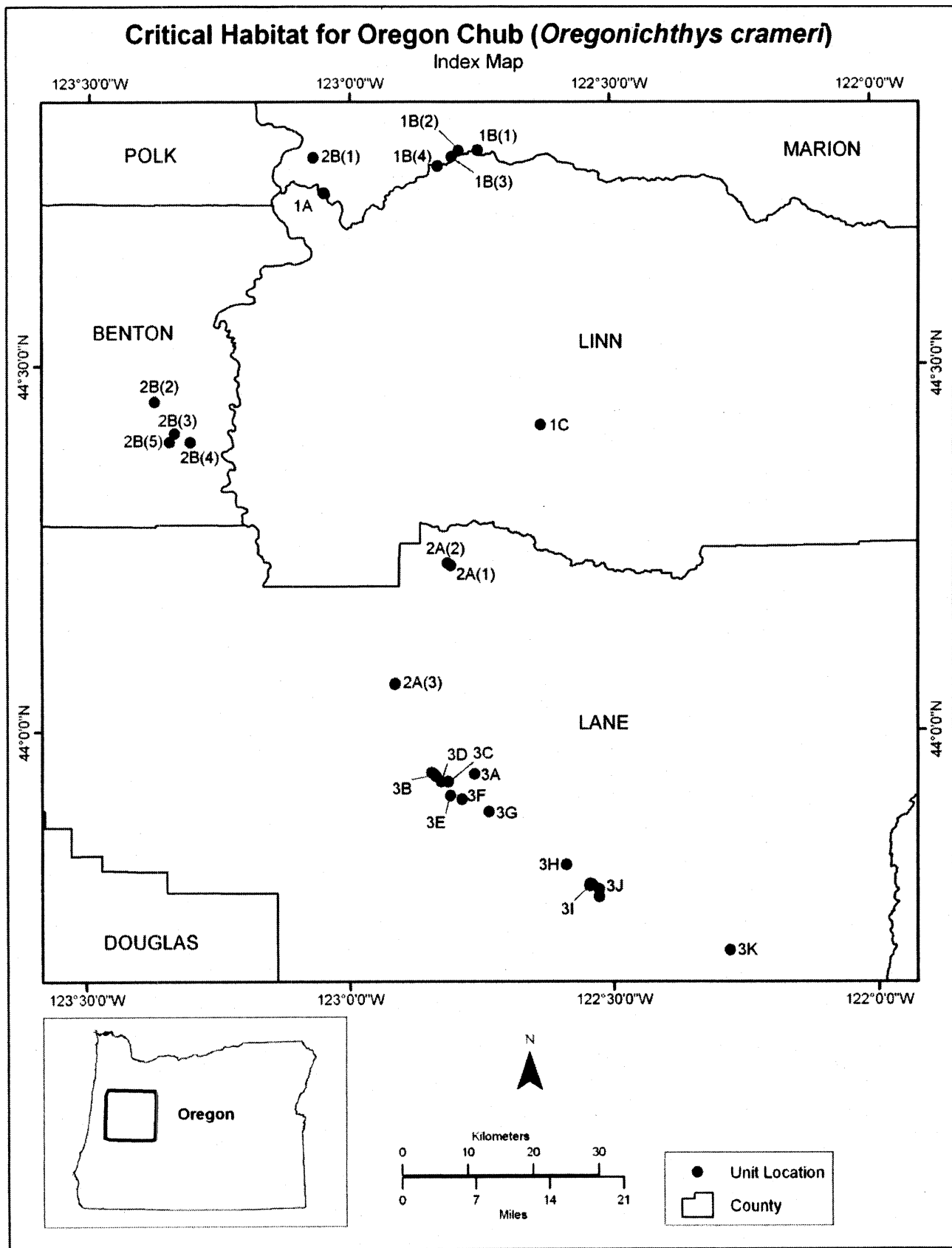
the legal boundaries on the effective date of this rule.

(4) Critical Habitat Map Units. The data layer defining critical habitat was created using a Trimble GeoXT GPS unit. These critical habitat units were mapped using Universal Transverse Mercator, Zone 10, North American Datum 1983 (UTM NAD 83)

coordinates. These coordinates establish the vertices and endpoints of the boundaries of the units. From USGS 1:24,000 scale quadrangle Albany.

(5) *Note:* Index map for critical habitat for the Oregon chub (*Oregonichthys crameri*) follows:

**BILLING CODE 4310-55-S**



(6) Unit 1A: Santiam I–5 Side Channels, Linn County, Oregon.

(i) This unit consists of three ponds totaling 1.4 ha (3.3 ac), located on a 27-ha (66-ac) property on the south side of the Santiam River, upstream of the Interstate Highway 5 bridge crossing in Linn County, Oregon.

(ii) Land bounded by the following UTM Zone 10, NAD83 coordinates (E,N): 495981, 4953649; 495990, 4953647; 496000, 4953645; 496010, 4953645; 496012, 4953644; 496012, 4953642; 496010, 4953640; 496001, 4953639; 495992, 4953638; 495980, 4953640; 495975, 4953641; 495966, 4953644; 495959, 4953647; 495954, 4953648; 495941, 4953649; 495933, 4953648; 495926, 4953649; 495907, 4953654; 495897, 4953656; 495888, 4953658; 495879, 4953660; 495862, 4953661; 495864, 4953676; 495876, 4953675; 495889, 4953673; 495900, 4953671; 495912, 4953667; 495922, 4953664; 495930, 4953660; 495941, 4953660; 495945, 4953659; 495955, 4953658; 495962, 4953656; 495973, 4953653; 495981, 4953649;

Land bounded by the following UTM Zone 10, NAD83 coordinates (E,N): 496146, 4953619; 496158, 4953612; 496173, 4953605; 496182, 4953598; 496191, 4953592; 496202, 4953587;

496212, 4953583; 496220, 4953581; 496225, 4953579; 496229, 4953582; 496232, 4953576; 496229, 4953573; 496231, 4953570; 496238, 4953564; 496242, 4953559; 496247, 4953555; 496249, 4953550; 496246, 4953547; 496243, 4953547; 496237, 4953552; 496230, 4953556; 496225, 4953562; 496221, 4953567; 496216, 4953569; 496214, 4953571; 496209, 4953568; 496202, 4953570; 496196, 4953573; 496186, 4953578; 496182, 4953575; 496190, 4953567; 496199, 4953563; 496206, 4953558; 496205, 4953547; 496193, 4953540; 496179, 4953540; 496168, 4953539; 496161, 4953529; 496147, 4953530; 496139, 4953538; 496131, 4953549; 496120, 4953561; 496114, 4953571; 496109, 4953580; 496108, 4953587; 496106, 4953594; 496098, 4953604; 496090, 4953611; 496082, 4953619; 496084, 4953627; 496077, 4953635; 496068, 4953641; 496056, 4953649; 496045, 4953656; 496030, 4953662; 496017, 4953668; 496002, 4953671; 495979, 4953676; 495969, 4953678; 495957, 4953681; 495947, 4953683; 495935, 4953687; 495925, 4953688; 495917, 4953692; 495917, 4953699; 495925, 4953705; 495932, 4953707; 495947, 4953708; 495960, 4953708; 495978, 4953710; 495993, 4953707; 496009, 4953700;

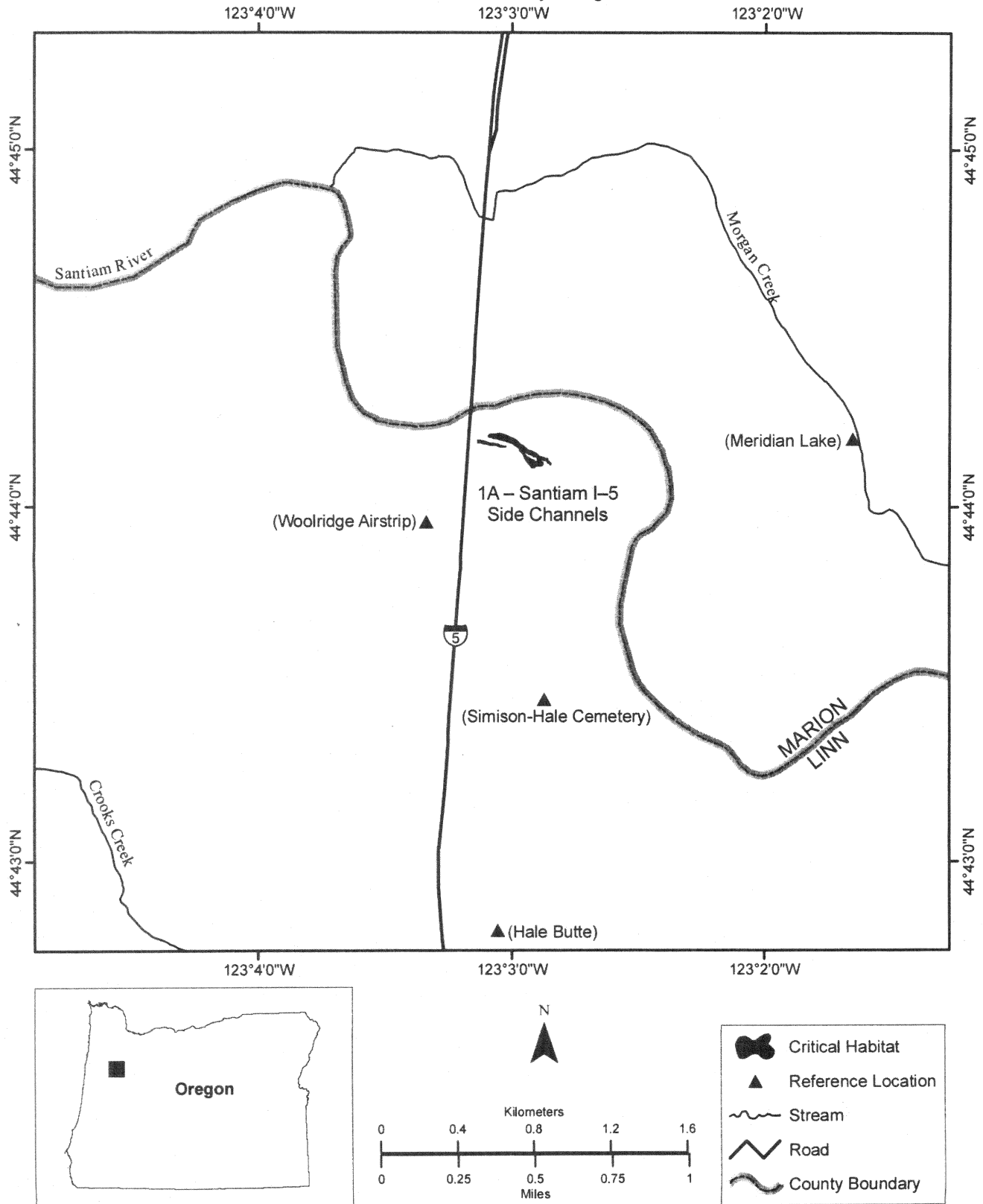
496024, 4953694; 496038, 4953690; 496051, 4953685; 496061, 4953678; 496070, 4953672; 496078, 4953665; 496089, 4953655; 496100, 4953646; 496117, 4953634; 496126, 4953627; 496136, 4953624; 496146, 4953619; and excluding land bound by 496163, 4953570; 496160, 4953566; 496153, 4953567; 496151, 4953564; 496151, 4953561; 496156, 4953559; 496162, 4953562; 496167, 4953565; 496172, 4953564; 496176, 4953564; 496181, 4953566; 496176, 4953573; 496173, 4953582; 496167, 4953587; 496161, 4953586; 496156, 4953588; 496153, 4953592; 496146, 4953596; 496137, 4953599; 496131, 4953601; 496123, 4953606; 496115, 4953611; 496109, 4953615; 496104, 4953619; 496109, 4953611; 496110, 4953603; 496117, 4953598; 496121, 4953592; 496129, 4953587; 496136, 4953580; 496143, 4953577; 496150, 4953576; 496163, 4953570; and excluding land bound by 496137, 4953566; 496135, 4953569; 496131, 4953569; 496131, 4953565; 496134, 4953562; 496136, 4953564; 496137, 4953566;

(iii) Map of Unit 1A of critical habitat for the Oregon chub (*Oregonichthys crameri*) follows:

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**Critical Habitat for Oregon Chub (*Oregonichthys crameri*)**

Unit: 1A, Linn County, Oregon



(7) Unit 1B(1): Geren Island North Channel, Marion County, Oregon.

(i) This unit totals approximately 0.8 ha (1.9 ac) and is located on the grounds of a water treatment facility owned by the City of Salem in Marion County, Oregon.

(ii) Land bound by the following coordinates (EN): 519305, 4960118; 519312, 4960112; 519322, 4960112; 519338, 4960110; 519360, 4960109; 519367, 4960111; 519380, 4960106; 519387, 4960105; 519405, 4960103; 519427, 4960100; 519439, 4960098;

519446, 4960097; 519461, 4960094; 519468, 4960092; 519490, 4960089; 519511, 4960081; 519526, 4960079; 519540, 4960073; 519553, 4960069; 519560, 4960068; 519564, 4960067; 519576, 4960062; 519593, 4960056; 519616, 4960047; 519628, 4960039; 519633, 4960033; 519634, 4960019; 519627, 4960014; 519615, 4960018; 519606, 4960023; 519595, 4960031; 519590, 4960035; 519581, 4960040; 519568, 4960045; 519547, 4960053; 519533, 4960057; 519520, 4960062; 519497, 4960065; 519474, 4960073;

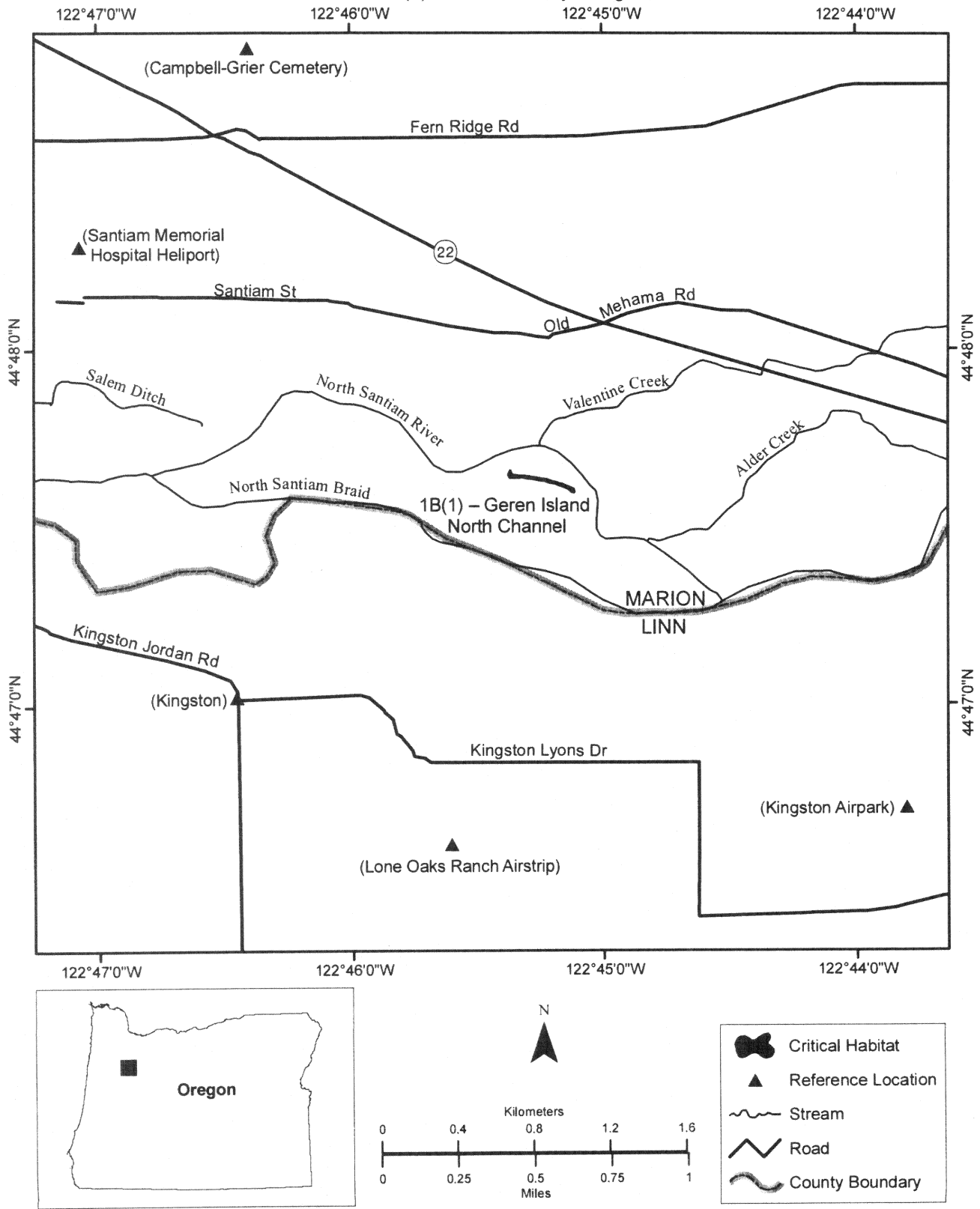
519464, 4960074; 519442, 4960077; 519413, 4960083; 519381, 4960088; 519366, 4960091; 519355, 4960093; 519340, 4960091; 519322, 4960089; 519311, 4960089; 519298, 4960090; 519290, 4960091; 519281, 4960105; 519278, 4960114; 519289, 4960131; 519293, 4960137; 519299, 4960134; 519301, 4960124; 519305, 4960118;

(iii) Map of Unit 1B(1) of critical habitat for the Oregon chub (*Oregonichthys crameri*) follows:

**BILLING CODE 4310-55-S**

**Critical Habitat for Oregon Chub (*Oregonichthys crameri*)**

Unit: 1B(1), Marion County, Oregon





(8) Unit 1B(2): Stayton Public Works Pond, Marion County, Oregon.

(i) This unit totals approximately 0.4 ha (1.0 ac) and is located in and owned by the City of Stayton, in Marion County, Oregon.

(ii) Land bounded by the following UTM Zone 10, NAD83 coordinates (E,N): 516606, 4960109; 516603, 4960102; 516607, 4960099; 516611, 4960101; 516614, 4960101; 516622, 4960100; 516623, 4960098; 516622, 4960095; 516614, 4960093; 516608, 4960091; 516606, 4960088; 516603, 4960084; 516605, 4960079; 516607, 4960077; 516610, 4960080; 516614, 4960084; 516616, 4960085; 516618, 4960083; 516616, 4960078; 516613, 4960074; 516610, 4960074; 516608, 4960073; 516605, 4960072; 516605, 4960067; 516604, 4960064; 516603, 4960058; 516600, 4960051; 516593, 4960046; 516592, 4960043; 516595, 4960040; 516598, 4960033; 516594, 4960027; 516590, 4960023; 516583, 4960023; 516574, 4960020; 516568, 4960017; 516560, 4960012; 516555, 4960010; 516549, 4960011; 516546, 4960011; 516543, 4960013; 516540, 4960018; 516535, 4960020; 516534, 4960021; 516533, 4960028; 516535, 4960038; 516540, 4960043; 516544, 4960055; 516547, 4960061; 516547, 4960066; 516547, 4960077; 516550, 4960087; 516552, 4960092; 516552, 4960100; 516552, 4960101; 516554, 4960100; 516555, 4960097; 516554, 4960092; 516553, 4960082; 516550, 4960071; 516551, 4960067; 516554, 4960067; 516559, 4960070; 516563, 4960072; 516568, 4960070; 516569, 4960071; 516572, 4960071; 516575, 4960068; 516578, 4960064; 516583, 4960064; 516589, 4960066; 516589, 4960068; 516590, 4960072; 516590, 4960080; 516588, 4960086; 516587, 4960086; 516585, 4960088; 516583, 4960092; 516584, 4960095; 516589, 4960096; 516594, 4960099; 516598, 4960102; 516599, 4960104; 516602, 4960104; 516604, 4960110; 516604, 4960114; 516607, 4960114; 516606, 4960109; and excluding land bound by 516585, 4960037; 516586, 4960036; 516587, 4960038; 516586, 4960040; 516585, 4960041; 516583, 4960040; 516584, 4960039; 516585, 4960037; and excluding land bound by 516558, 4960022; 516561, 4960022; 516562, 4960023; 516562, 4960025; 516559,

4960025; 516557, 4960024; 516558, 4960022;

(iii) See paragraph (10)(iii) for a map showing critical habitat unit 1B(2).

(9) Unit 1B(3): South Stayton Pond, Linn County, Oregon.

(i) This unit totals approximately 0.1 ha (0.2 ac), is located in Linn County, Oregon, and is owned by the Oregon Department of Fish and Wildlife (ODFW).

(ii) Land bounded by the following UTM Zone 10, NAD83 coordinates (E,N): 515540, 4959144; 515536, 4959144; 515529, 4959146; 515522, 4959149; 515513, 4959153; 515509, 4959158; 515507, 4959161; 515511, 4959166; 515515, 4959169; 515522, 4959173; 515530, 4959177; 515536, 4959180; 515540, 4959182; 515545, 4959180; 515546, 4959173; 515544, 4959162; 515543, 4959153; 515543, 4959149; 515542, 4959147; 515540, 4959144;

(iii) See paragraph (10)(iii) for a map showing critical habitat unit 1B(3).

(10) Unit 1B(4): Gray Slough, Marion County, Oregon.

(i) This unit totals approximately 2.5 ha (6.2 ac), is privately owned, and is located in Marion County, Oregon.

(ii) Land bounded by the following UTM Zone 10, NAD83 coordinates (E,N): 513857, 4957787; 513859, 4957785; 513856, 4957783; 513839, 4957783; 513822, 4957784; 513807, 4957784; 513791, 4957786; 513775, 4957786; 513772, 4957784; 513764, 4957785; 513748, 4957780; 513731, 4957773; 513711, 4957767; 513689, 4957761; 513654, 4957755; 513630, 4957749; 513605, 4957746; 513585, 4957742; 513558, 4957736; 513532, 4957730; 513503, 4957727; 513480, 4957723; 513473, 4957717; 513468, 4957712; 513460, 4957708; 513455, 4957707; 513443, 4957708; 513435, 4957711; 513424, 4957713; 513415, 4957713; 513406, 4957709; 513397, 4957703; 513378, 4957700; 513362, 4957696; 513353, 4957691; 513342, 4957684; 513333, 4957683; 513324, 4957680; 513312, 4957678; 513300, 4957674; 513286, 4957674; 513279, 4957671; 513270, 4957666; 513264, 4957660; 513255, 4957658; 513247, 4957663; 513241, 4957662; 513237, 4957651; 513229, 4957650; 513214, 4957648; 513202, 4957645; 513195, 4957644; 513188, 4957644; 513181, 4957643; 513172, 4957640; 513161, 4957637; 513152, 4957634; 513141,

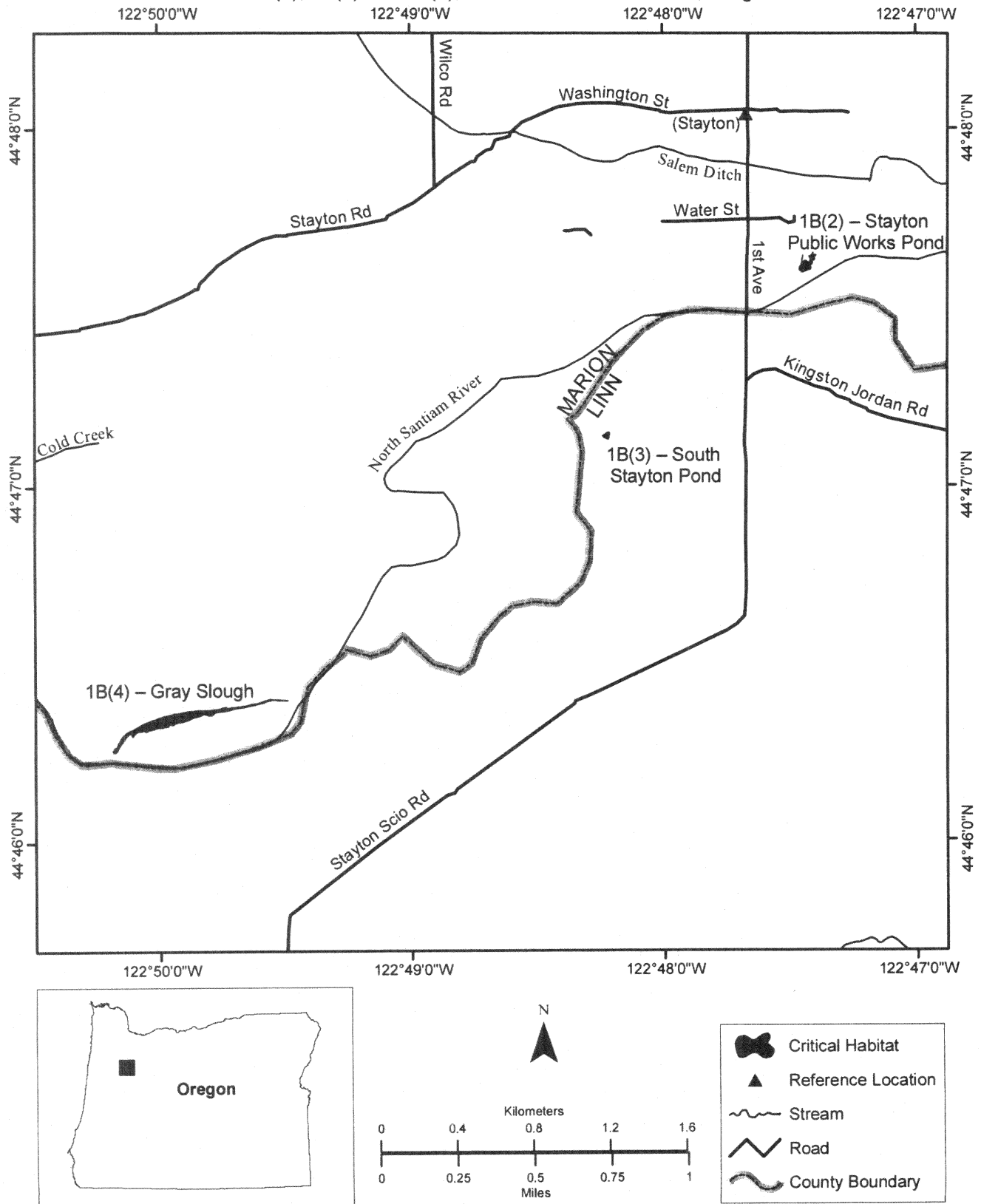
4957631; 513132, 4957630; 513127, 4957626; 513119, 4957623; 513111, 4957629; 513102, 4957630; 513094, 4957626; 513084, 4957625; 513074, 4957622; 513066, 4957621; 513062, 4957613; 513059, 4957610; 513053, 4957605; 513048, 4957598; 513044, 4957601; 513043, 4957608; 513039, 4957613; 513035, 4957613; 513029, 4957613; 513025, 4957609; 513021, 4957603; 513016, 4957599; 513011, 4957591; 513004, 4957580; 512996, 4957571; 512989, 4957558; 512980, 4957550; 512976, 4957539; 512972, 4957529; 512962, 4957517; 512955, 4957514; 512948, 4957516; 512944, 4957524; 512948, 4957533; 512954, 4957540; 512966, 4957547; 512969, 4957553; 512972, 4957564; 512977, 4957573; 512980, 4957580; 512983, 4957587; 512991, 4957598; 513002, 4957608; 513011, 4957616; 513022, 4957624; 513036, 4957633; 513045, 4957636; 513052, 4957639; 513059, 4957645; 513067, 4957648; 513081, 4957655; 513097, 4957664; 513108, 4957669; 513118, 4957673; 513133, 4957679; 513148, 4957685; 513161, 4957690; 513178, 4957697; 513184, 4957699; 513197, 4957703; 513214, 4957707; 513220, 4957709; 513233, 4957712; 513247, 4957714; 513259, 4957717; 513268, 4957719; 513282, 4957722; 513298, 4957725; 513310, 4957727; 513319, 4957727; 513332, 4957730; 513350, 4957734; 513366, 4957734; 513379, 4957735; 513389, 4957735; 513400, 4957735; 513418, 4957736; 513436, 4957737; 513449, 4957738; 513461, 4957739; 513468, 4957739; 513497, 4957743; 513519, 4957748; 513531, 4957752; 513539, 4957753; 513541, 4957752; 513540, 4957750; 513533, 4957749; 513524, 4957746; 513508, 4957742; 513503, 4957741; 513501, 4957738; 513505, 4957738; 513513, 4957740; 513522, 4957742; 513531, 4957744; 513544, 4957748; 513556, 4957750; 513569, 4957751; 513585, 4957754; 513599, 4957757; 513611, 4957757; 513627, 4957759; 513639, 4957760; 513668, 4957768; 513700, 4957773; 513727, 4957780; 513747, 4957787; 513769, 4957793; 513788, 4957791; 513801, 4957791; 513814, 4957789; 513839, 4957788; 513857, 4957787;

(iii) Map of Units 1B(2), 1B(3), and 1B(4) of critical habitat for the Oregon chub (*Oregonichthys crameri*) follows:

BILLING CODE 4310-55-S

**Critical Habitat for Oregon Chub (*Oregonichthys crameri*)**

Unit: 1B(2), 1B(3) and 1B(4), Linn and Marion Counties, Oregon



(11) Unit 1C: Foster Pullout Pond, Linn County, Oregon.

(i) This unit totals 0.4 ha (1.0 ac), and is owned by the United States Army Corps of Engineers (USACE). The pond is located in Linn County, Oregon, on the north shore of Foster Reservoir in the South Santiam River drainage.

(ii) Land bounded by the following UTM Zone 10, NAD83 coordinates (E,N): 529130, 4918726; 529115, 4918723; 529101, 4918725; 529089, 4918735; 529094, 4918745; 529106, 4918755; 529122, 4918771; 529142, 4918788; 529159, 4918805; 529175, 4918821; 529175, 4918820; 529179, 4918819; 529180, 4918805; 529177,

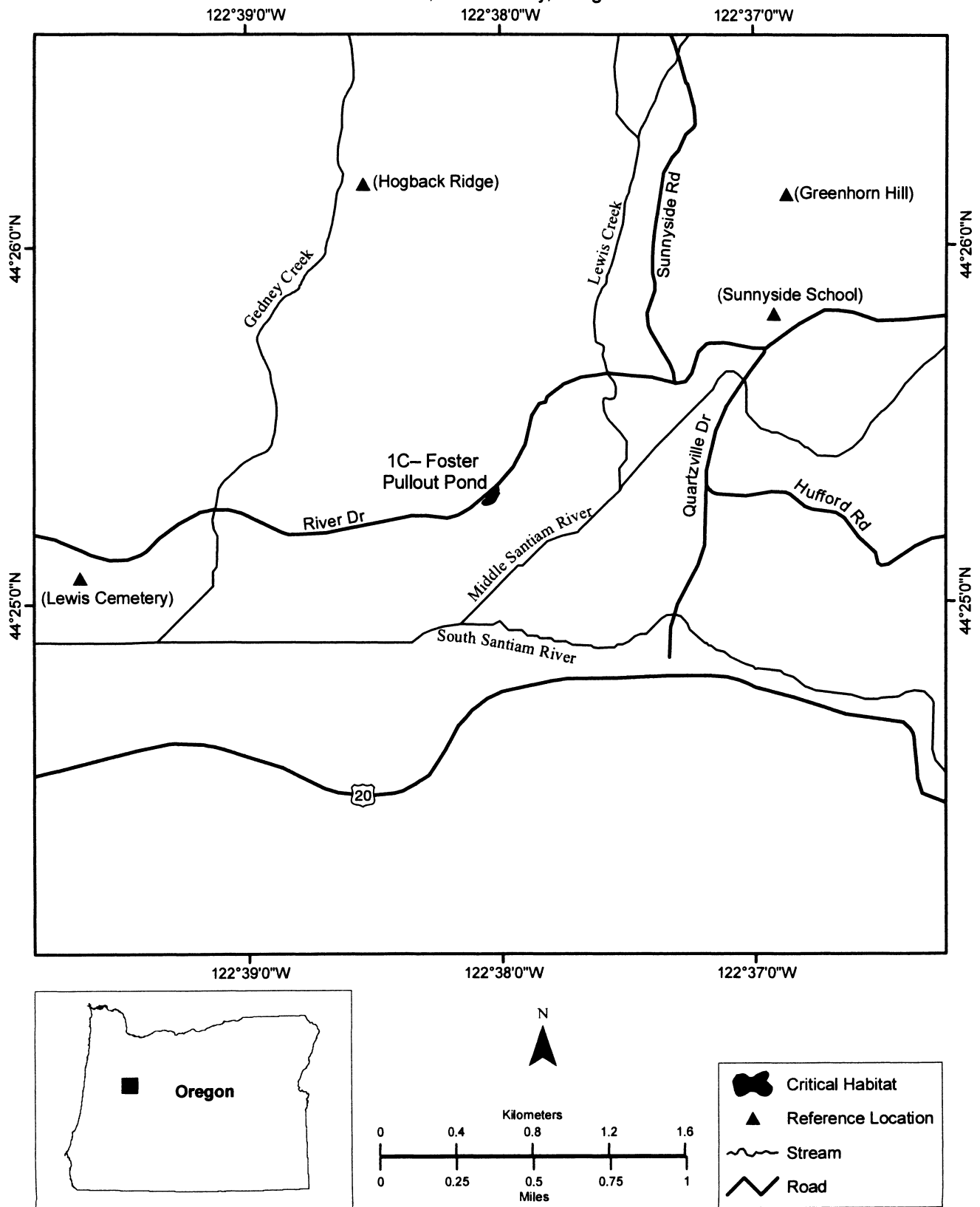
4918789; 529183, 4918787; 529183, 4918784; 529177, 4918778; 529172, 4918767; 529168, 4918759; 529162, 4918746; 529153, 4918738; 529145, 4918734; 529130, 4918726;

(iii) Map of Unit 1C of critical habitat for the Oregon chub (*Oregonichthys crameri*) follows:

**BILLING CODE 4310-55-S**

**Critical Habitat for Oregon Chub (*Oregonichthys crameri*)**

Unit: 1C, Linn County, Oregon



(12) Unit 2A(1): Russell Pond, Lane County, Oregon.

(i) This unit totals approximately 0.1 ha (0.1 ac), is privately owned, and is located in the Mohawk River drainage, Lane County, Oregon.

(ii) Land bounded by the following UTM Zone 10, NAD83 coordinates (E,N): 514905, 4897668; 514916, 4897667; 514929, 4897668; 514939, 4897667; 514952, 4897667; 514956, 4897667; 514959, 4897666; 514961, 4897662; 514964, 4897661; 514969, 4897661; 514975, 4897662; 514976, 4897659; 514970, 4897657; 514963, 4897656; 514960, 4897654; 514960, 4897651; 514955, 4897650; 514945,

4897650; 514932, 4897650; 514917, 4897650; 514908, 4897651; 514900, 4897651; 514898, 4897651; 514897, 4897653; 514896, 4897656; 514895, 4897663; 514891, 4897663; 514884, 4897662; 514878, 4897659; 514877, 4897660; 514883, 4897664; 514891, 4897665; 514895, 4897666; 514897, 4897666; 514905, 4897668;

(iii) See paragraph (13)(iii) for a map showing critical habitat unit 2A(1).

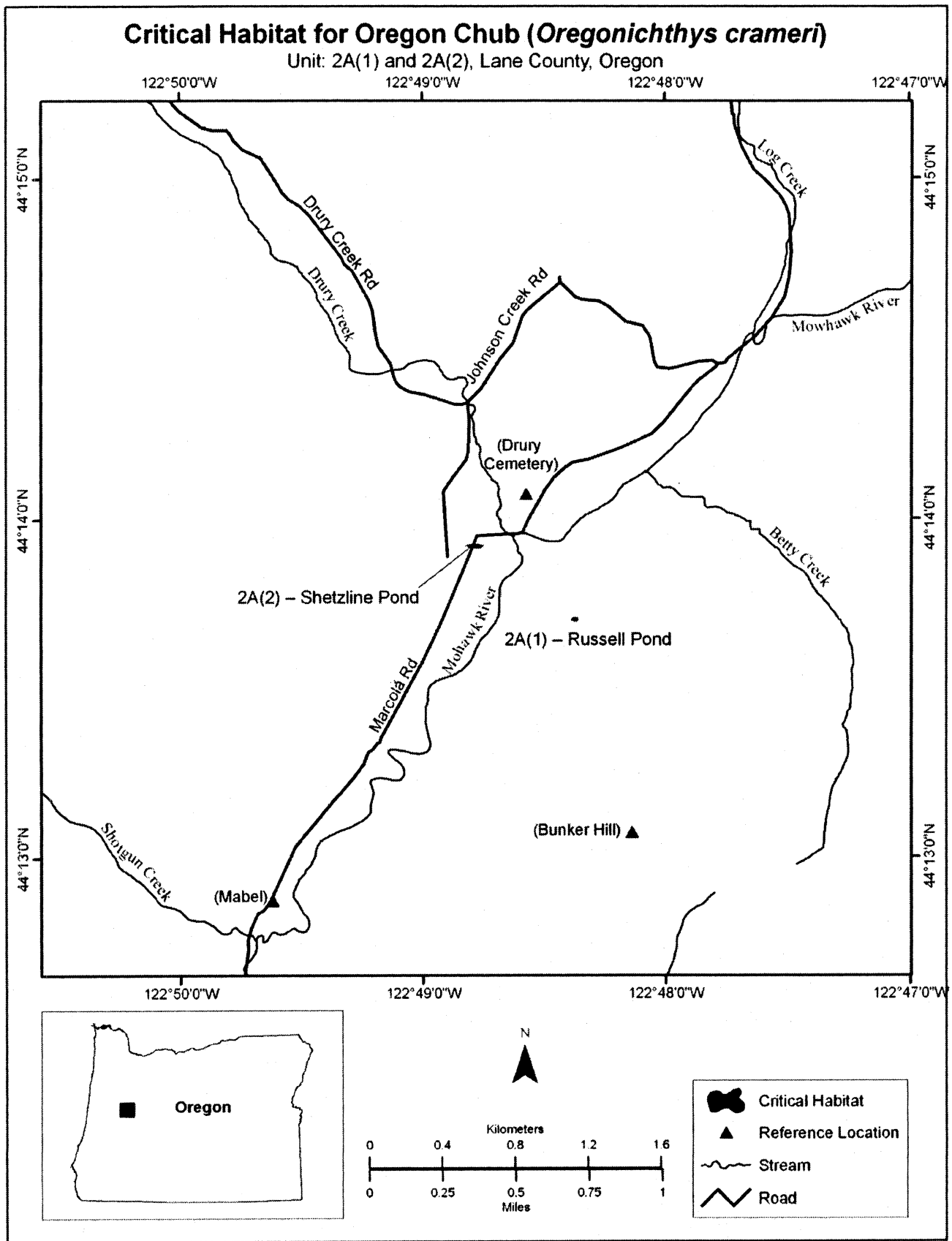
(13) Unit 2A(2): Shetzline Pond, Lane County, Oregon.

(i) This unit totals approximately 0.1 ha (0.3 ac), is privately owned, and is located in the Mohawk River drainage, Lane County, Oregon.

(ii) Land bounded by the following UTM Zone 10, NAD83 coordinates (E,N): 515484, 4897250; 515477, 4897249; 515469, 4897250; 515464, 4897252; 515461, 4897254; 515460, 4897259; 515462, 4897263; 515466, 4897266; 515476, 4897267; 515485, 4897266; 515489, 4897265; 515493, 4897262; 515494, 4897258; 515492, 4897254; 515489, 4897251; 515484, 4897250;

(iii) Map of Units 2A(1) and 2A(2) of critical habitat for the Oregon chub (*Oregonichthys crameri*) follows:

**BILLING CODE 4310-55-S**



(14) Unit 2A(3): Big Island, Lane County, Oregon.

(i) This unit totals 3.3 ha (8.2 ac), is owned by the McKenzie River Trust, and is located along the McKenzie River in Lane County, Oregon.

(ii) Land bounded by the following

UTM Zone 10, NAD83 coordinates (E,N): 507093, 4879404; 507095,

4879401; 507097, 4879400; 507099,

4879398; 507099, 4879396; 507096,

4879397; 507091, 4879401; 507089,

4879403; 507079, 4879395; 507071,

4879390; 507077, 4879388; 507081,

4879386; 507085, 4879384; 507091,

4879381; 507097, 4879378; 507099,

4879376; 507104, 4879373; 507107,

4879371; 507112, 4879369; 507116,

4879368; 507121, 4879365; 507127,

4879363; 507131, 4879360; 507136,

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4879353; 507120, 4879356; 507115,

4879358; 507110, 4879360; 507103,

4879362; 507098, 4879366; 507092,

4879370; 507087, 4879373; 507082,

4879375; 507078, 4879377; 507073,

4879380; 507069, 4879381; 507064,

4879383; 507047, 4879368; 507030,

4879355; 507010, 4879343; 507001,

4879338; 506986, 4879326; 506974,

4879317; 506961, 4879310; 506960,

4879307; 506963, 4879303; 506970,

4879300; 506974, 4879297; 506971,

4879293; 506965, 4879296; 506955,

4879303; 506946, 4879298; 506943,

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4879258; 506913, 4879255; 506902,

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4879236; 506891, 4879226; 506906,

4879239; 506922, 4879240; 506930,

4879245; 506944, 4879252; 506955,

4879254; 506966, 4879261; 506973,

4879275; 506982, 4879280; 506990,

4879284; 506999, 4879289; 507009,

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4879291; 507061, 4879296; 507076,

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4879259; 506998, 4879253; 507007,

4879251; 507015, 4879247; 507031,

4879250; 507046, 4879252; 507062,

4879251; 507070, 4879259; 507078,

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4879231; 507184, 4879222; 507190,

4879215; 507202, 4879194; 507202,

4879185; 507208, 4879174; 507209,

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4879127; 507211, 4879118; 507206,

4879125; 507206, 4879135; 507203,

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4879172; 507189, 4879166; 507186,

4879148; 507181, 4879137; 507171,

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4879157; 507173, 4879166; 507173,

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4879173; 506781, 4879177; 506780,

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4879430; 507122, 4879430; 507121,

4879412; 507119, 4879411; 507111,

4879411; 507102, 4879409; 507093,

4879406; 507093, 4879404; and

excluding land bound by 506890,

4879274; 506883, 4879269; 506872,

4879263; 506861, 4879256; 506859,

4879253; 506869, 4879254; 506879,

4879260; 506890, 4879266; 506902,

4879272; 506907, 4879278; 506907,

4879278; 506900, 4879277; 506890,

4879274;

Land bounded by the following UTM Zone 10, NAD83 coordinates (E,N):

507017, 4879310; 507023, 4879306;

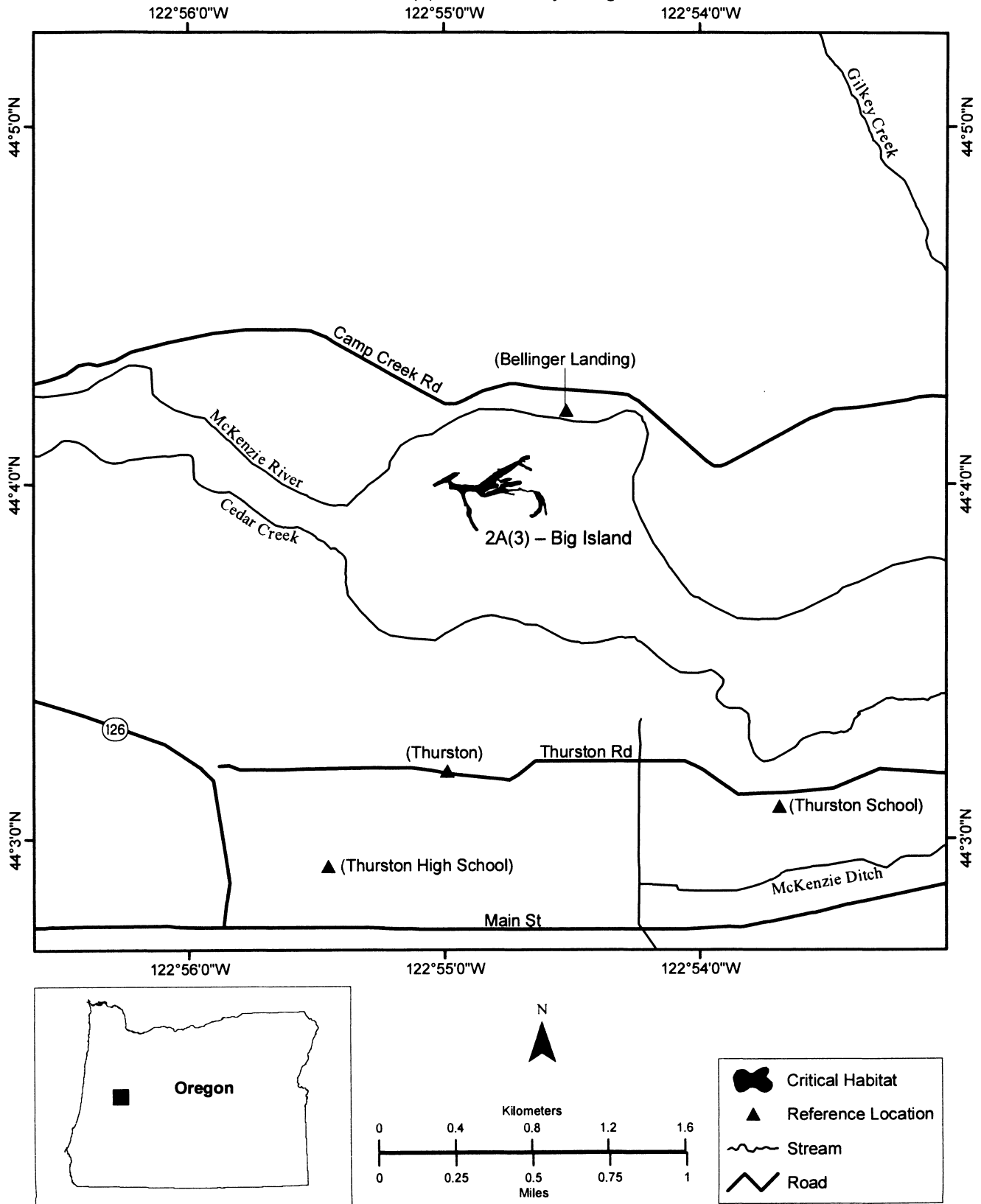
507028, 4879308; 507030, 4879307;

50702



**Critical Habitat for Oregon Chub (*Oregonichthys crameri*)**

Unit: 2A(3), Lane County, Oregon



(15) Unit 2B(1): Ankeny Willow Marsh, Marion County, Oregon.

(i) This unit totals 14.0 ha (34.5 ac), and is located in Marion County, Oregon, at the Ankeny National Wildlife Refuge.

(ii) Land bounded by the following UTM Zone 10, NAD83 coordinates (E,N): 494301, 4959127; 494318, 4959124; 494328, 4959126; 494338, 4959131; 494348, 4959134; 494359, 4959134; 494373, 4959127; 494386, 4959104; 494396, 4959076; 494413, 4959050; 494434, 4959017; 494451, 4958983; 494466, 4958953; 494479, 4958932; 494498, 4958911; 494512, 4958896; 494530, 4958884; 494528, 4958885; 494551, 4958869; 494585, 4958866; 494603, 4958867; 494618, 4958861; 494628, 4958854; 494642, 4958838; 494675, 4958818; 494703,

4958792; 494711, 4958776; 494719, 4958752; 494713, 4958732; 494698, 4958720; 494693, 4958709; 494693, 4958703; 494698, 4958689; 494705, 4958673; 494716, 4958660; 494718, 4958654; 494714, 4958642; 494711, 4958623; 494710, 4958612; 494711, 4958605; 494720, 4958591; 494718, 4958581; 494726, 4958576; 494732, 4958564; 494720, 4958547; 494708, 4958530; 494696, 4958519; 494684, 4958527; 494670, 4958544; 494652, 4958566; 494634, 4958589; 494619, 4958606; 494592, 4958636; 494565, 4958665; 494541, 4958693; 494518, 4958718; 494498, 4958738; 494465, 4958772; 494447, 4958788; 494420, 4958812; 494397, 4958835; 494377, 4958859; 494360, 4958882; 494347, 4958900; 494326, 4958927; 494310,

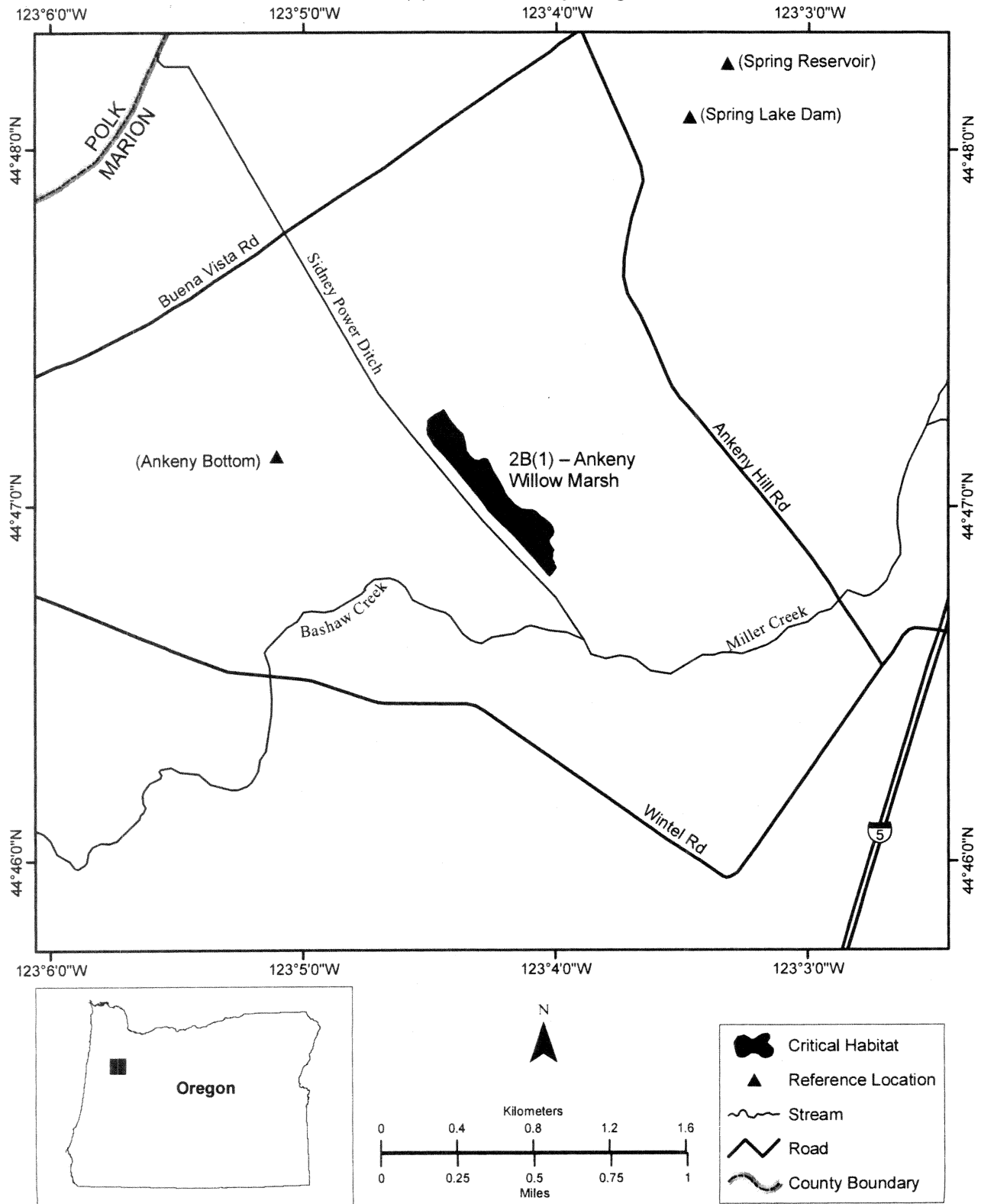
4958946; 494271, 4958996; 494234, 4959040; 494212, 4959066; 494168, 4959117; 494144, 4959145; 494127, 4959161; 494091, 4959202; 494073, 4959226; 494064, 4959244; 494056, 4959257; 494051, 4959284; 494056, 4959320; 494056, 4959331; 494066, 4959344; 494080, 4959353; 494094, 4959362; 494112, 4959373; 494123, 4959380; 494137, 4959388; 494144, 4959387; 494153, 4959369; 494169, 4959341; 494182, 4959326; 494200, 4959303; 494208, 4959293; 494242, 4959260; 494255, 4959217; 494262, 4959174; 494278, 4959150; 494283, 4959143; 494301, 4959127;

(iii) Map of Unit 2B(1) of critical habitat for the Oregon chub (*Oregonichthys crameri*) follows:

**BILLING CODE 4310-55-S**

**Critical Habitat for Oregon Chub (*Oregonichthys crameri*)**

Unit: 2B(1), Marion County, Oregon



(16) Unit 2B(2): Dunn Wetland, Benton County, Oregon.

(i) This unit totals 6.1 ha (15.2 ac), is privately owned, and is located in Benton County, Oregon.

(ii) Land bounded by the following UTM Zone 10, NAD83 coordinates (E,N): 470225, 4922333; 470235, 4922324; 470236, 4922329; 470238, 4922344; 470241, 4922357; 470250, 4922355; 470246, 4922340; 470247, 4922320; 470247, 4922297; 470249, 4922269; 470238, 4922250; 470261, 4922225; 470284, 4922196; 470294, 4922183; 470307, 4922160; 470331, 4922148; 470348, 4922122; 470353, 4922112; 470369, 4922092; 470366,

4922064; 470362, 4922042; 470372, 4922042; 470382, 4922035; 470385, 4922023; 470379, 4922013; 470370, 4922010; 470364, 4922017; 470358, 4922021; 470350, 4922017; 470349, 4921978; 470346, 4921960; 470347, 4921943; 470345, 4921932; 470341, 4921931; 470335, 4921934; 470297, 4921958; 470272, 4921977; 470247, 4921994; 470230, 4922005; 470217, 4922012; 470202, 4922022; 470188, 4922033; 470179, 4922048; 470170, 4922062; 470170, 4922073; 470171, 4922088; 470171, 4922100; 470164, 4922104; 470159, 4922102; 470145, 4922085; 470137, 4922078; 470132, 4922078; 470129, 4922081; 470125,

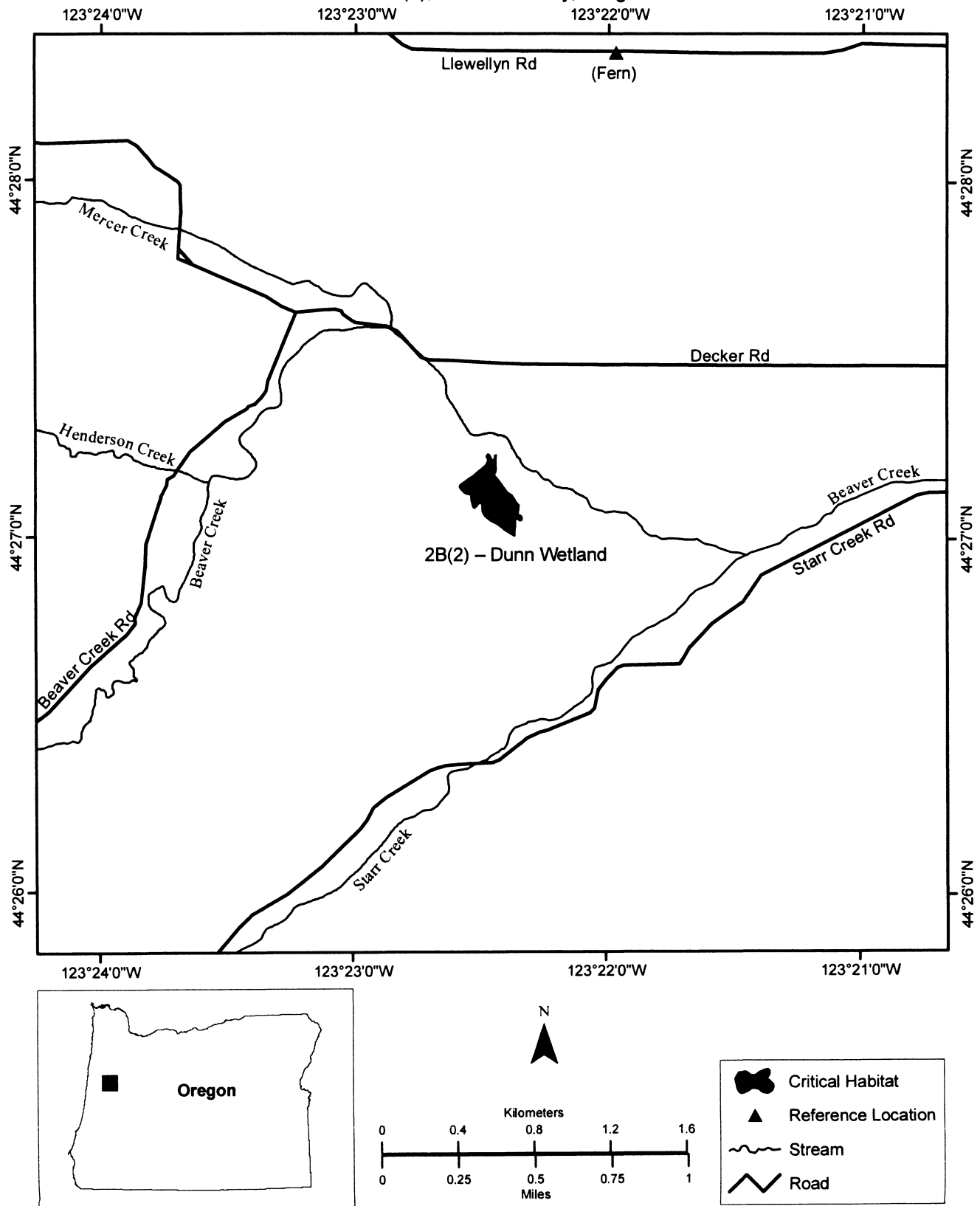
4922088; 470122, 4922098; 470115, 4922121; 470113, 4922135; 470115, 4922143; 470110, 4922148; 470095, 4922149; 470078, 4922157; 470065, 4922171; 470054, 4922186; 470056, 4922199; 470063, 4922207; 470082, 4922221; 470099, 4922232; 470123, 4922248; 470154, 4922273; 470166, 4922283; 470190, 4922305; 470205, 4922329; 470194, 4922349; 470204, 4922362; 470212, 4922360; 470225, 4922333;

(iii) Map of Unit 2B(2) of critical habitat for the Oregon chub (*Oregonichthys crameri*) follows:

**BILLING CODE 4310-55-S**

**Critical Habitat for Oregon Chub (*Oregonichthys crameri*)**

Unit: 2B(2), Benton County, Oregon



(17) Unit 2B(3): Finley Display Pond, Benton County, Oregon.

(i) This unit totals 1.0 ha (2.4 ac) and is located in Benton County, Oregon, on the William L. Finley National Wildlife Refuge.

(ii) Land bounded by the following UTM Zone 10, NAD83 coordinates (E,N): 473297, 4917434; 473299, 4917431; 473303, 4917433; 473308, 4917433; 473313, 4917430; 473317, 4917425; 473322, 4917418; 473323, 4917413; 473320, 4917406; 473316, 4917390; 473310, 4917375; 473302, 4917356; 473297, 4917346; 473294, 4917333; 473287, 4917319; 473278, 4917310; 473273, 4917315; 473266, 4917321; 473262, 4917328; 473257, 4917337; 473252, 4917345; 473248, 4917354; 473244, 4917364; 473239, 4917372; 473237, 4917380; 473232, 4917389; 473228, 4917397; 473226, 4917404; 473225, 4917412; 473224, 4917424; 473223, 4917431; 473221, 4917445; 473222, 4917459; 473226, 4917469; 473234, 4917475; 473240, 4917478; 473244, 4917477; 473251, 4917474; 473260, 4917468; 473265, 4917467; 473274, 4917462; 473284, 4917451; 473291, 4917445; 473296, 4917440; 473296, 4917436; 473297, 4917434; and excluding land bound by 473238, 4917400; 473246, 4917395; 473249, 4917396; 473252, 4917394; 473255, 4917393; 473258, 4917392; 473260, 4917394; 473258, 4917397; 473258, 4917401; 473254, 4917409; 473252, 4917413; 473245, 4917423; 473245, 4917425; 473243, 4917428; 473242, 4917431; 473240, 4917433; 473238, 4917430; 473236, 4917425; 473234, 4917419; 473233, 4917413; 473234, 4917406; 473238, 4917400;

(iii) See paragraph (19)(iii) for a map showing critical habitat unit 2B(3).

(18) Unit 2B(4): Finley Cheadle Pond, Benton County, Oregon.

(i) This unit totals 0.9 ha (2.3 ac) and is located in Benton County, Oregon, on the William L. Finley National Wildlife Refuge.

(ii) Land bounded by the following UTM Zone 10, NAD83 coordinates

(E,N): 475672, 4916089; 475679, 4916070; 475684, 4916056; 475685, 4916053; 475690, 4916045; 475694, 4916035; 475699, 4916025; 475706, 4916017; 475714, 4916012; 475725, 4916006; 475730, 4916004; 475735, 4916003; 475741, 4916001; 475747, 4916003; 475752, 4916002; 475760, 4916003; 475765, 4916001; 475766, 4915998; 475769, 4915995; 475768, 4915987; 475768, 4915970; 475766, 4915960; 475763, 4915956; 475762, 4915951; 475764, 4915947; 475765, 4915940; 475766, 4915931; 475766, 4915917; 475761, 4915909; 475760, 4915904; 475757, 4915902; 475751, 4915905; 475747, 4915910; 475741, 4915915; 475732, 4915925; 475721, 4915937; 475708, 4915950; 475699, 4915960; 475699, 4915963; 475681, 4915977; 475681, 4915982; 475674, 4915989; 475670, 4915996; 475669, 4916001; 475666, 4916008; 475663, 4916019; 475661, 4916030; 475660, 4916035; 475658, 4916041; 475653, 4916051; 475649, 4916056; 475642, 4916055; 475638, 4916064; 475632, 4916075; 475636, 4916078; 475643, 4916078; 475649, 4916080; 475654, 4916080; 475658, 4916080; 475657, 4916087; 475654, 4916099; 475653, 4916104; 475661, 4916105; 475672, 4916089;

(iii) See paragraph (19)(iii) for a map showing critical habitat unit 2B(4).

(19) Unit 2B(5): Finley Gray Creek Swamp, Benton County, Oregon.

(i) This unit totals 3.0 ha (7.4 ac) and is located in Benton County, Oregon. Most of the unit is located on the southwest corner of the William L. Finley National Wildlife Refuge; however, a small portion of the unit is located on private property.

(ii) Land bounded by the following UTM Zone 10, NAD83 coordinates (E,N): 472786, 4916068; 472780, 4916056; 472772, 4916045; 472756, 4916036; 472735, 4916028; 472717, 4916022; 472704, 4916028; 472697, 4916038; 472685, 4916041; 472670, 4916051; 472659, 4916056; 472650, 4916059; 472641, 4916058; 472634,

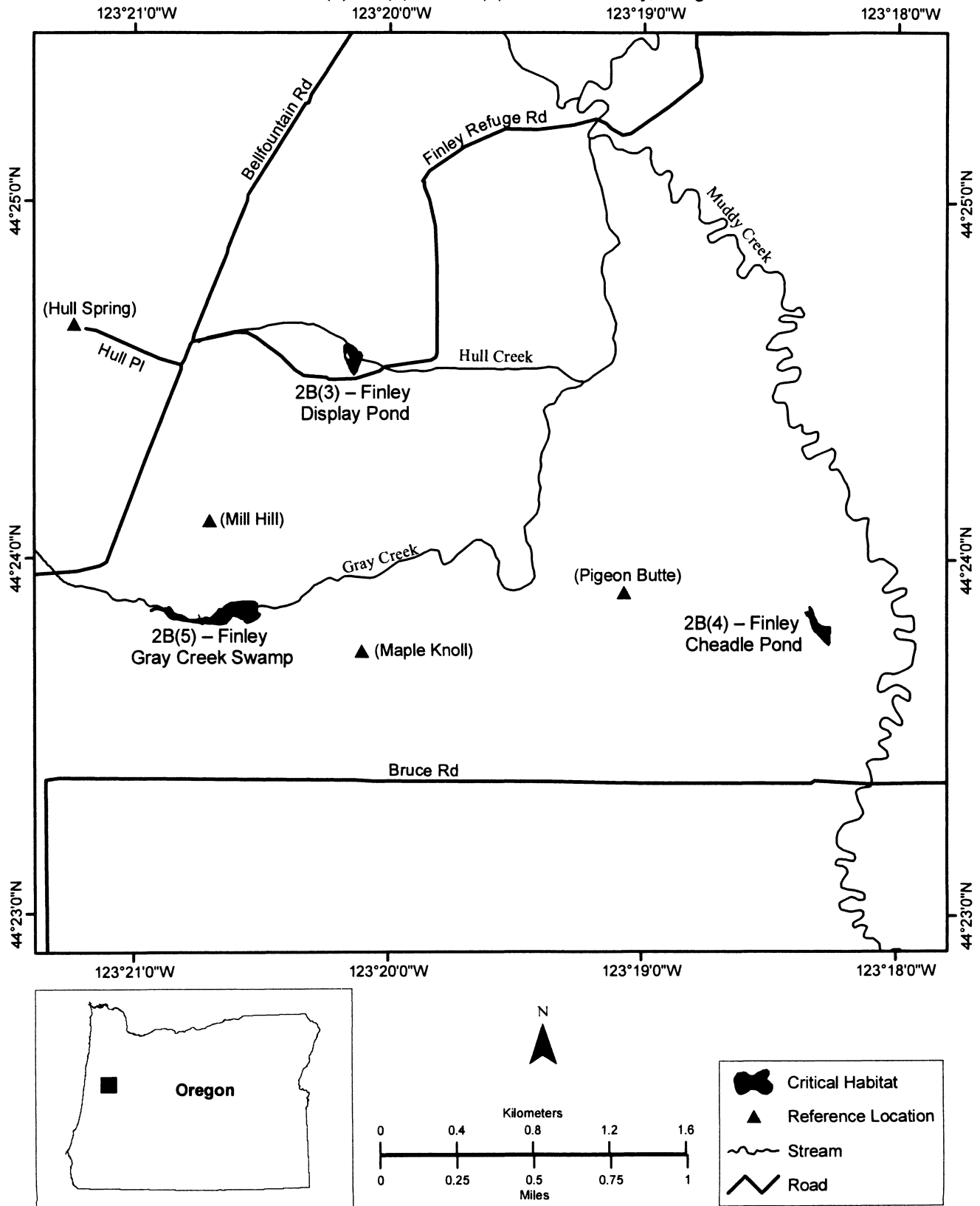
4916052; 472627, 4916042; 472618, 4916033; 472614, 4916026; 472608, 4916021; 472598, 4916017; 472581, 4916015; 472564, 4916015; 472538, 4916017; 472514, 4916018; 472494, 4916020; 472487, 4916013; 472474, 4916021; 472450, 4916023; 472428, 4916026; 472408, 4916029; 472382, 4916034; 472353, 4916038; 472333, 4916040; 472314, 4916045; 472306, 4916054; 472300, 4916065; 472293, 4916072; 472282, 4916084; 472270, 4916086; 472259, 4916092; 472246, 4916094; 472233, 4916092; 472223, 4916085; 472213, 4916085; 472212, 4916094; 472218, 4916095; 472225, 4916100; 472232, 4916102; 472240, 4916104; 472250, 4916105; 472255, 4916109; 472261, 4916109; 472266, 4916105; 472266, 4916098; 472271, 4916096; 472277, 4916094; 472282, 4916100; 472289, 4916102; 472300, 4916102; 472302, 4916104; 472307, 4916108; 472312, 4916108; 472318, 4916104; 472323, 4916096; 472329, 4916086; 472336, 4916074; 472339, 4916071; 472352, 4916068; 472377, 4916065; 472388, 4916054; 472397, 4916050; 472408, 4916046; 472420, 4916044; 472430, 4916044; 472440, 4916043; 472447, 4916044; 472460, 4916046; 472467, 4916048; 472477, 4916050; 472489, 4916050; 472500, 4916054; 472508, 4916054; 472515, 4916051; 472523, 4916052; 472536, 4916060; 472545, 4916071; 472551, 4916078; 472559, 4916083; 472566, 4916096; 472575, 4916098; 472587, 4916100; 472596, 4916113; 472611, 4916123; 472631, 4916130; 472652, 4916133; 472670, 4916134; 472694, 4916139; 472717, 4916139; 472738, 4916138; 472759, 4916136; 472763, 4916133; 472770, 4916126; 472773, 4916124; 472772, 4916112; 472771, 4916099; 472772, 4916077; 472780, 4916073; 472786, 4916068;

(iii) Map of Units 2B(3), 2B(4), and 2B(5) of critical habitat for the Oregon chub (*Oregonichthys crameri*) follows:

BILLING CODE 4310-55-S

**Critical Habitat for Oregon Chub (*Oregonichthys crameri*)**

Unit: 2B(3), 2B(4) and 2B(5), Benton County, Oregon



(20) Unit 3A: Fall Creek Spillway Ponds, Lane County, Oregon.

(i) This unit totals 1.5 ha (3.8 ac), is owned by the USACE, and is located in the overflow channel below Fall Creek Dam in Lane County, Oregon.

(ii) Land bounded by the following UTM Zone 10, NAD83 coordinates (E,N): 519284, 4865517; 519298, 4865515; 519305, 4865515; 519311, 4865508; 519313, 4865502; 519312, 4865488; 519309, 4865483; 519302, 4865482; 519288, 4865486; 519270, 4865487; 519253, 4865487; 519243,

4865488; 519236, 4865490; 519225, 4865492; 519211, 4865494; 519193, 4865495; 519166, 4865501; 519142, 4865506; 519112, 4865514; 519084, 4865520; 519069, 4865524; 519057, 4865528; 519032, 4865534; 519009, 4865541; 518998, 4865545; 518977, 4865553; 518959, 4865557; 518950, 4865560; 518928, 4865565; 518911, 4865570; 518893, 4865575; 518875, 4865582; 518858, 4865588; 518840, 4865594; 518833, 4865601; 518832, 4865607; 518834, 4865612; 518841,

4865617; 518851, 4865619; 518874, 4865614; 518889, 4865613; 518920, 4865605; 518956, 4865589; 518985, 4865579; 519034, 4865569; 519074, 4865556; 519092, 4865547; 519129, 4865540; 519151, 4865538; 519170, 4865530; 519195, 4865526; 519231, 4865523; 519243, 4865519; 519284, 4865517;

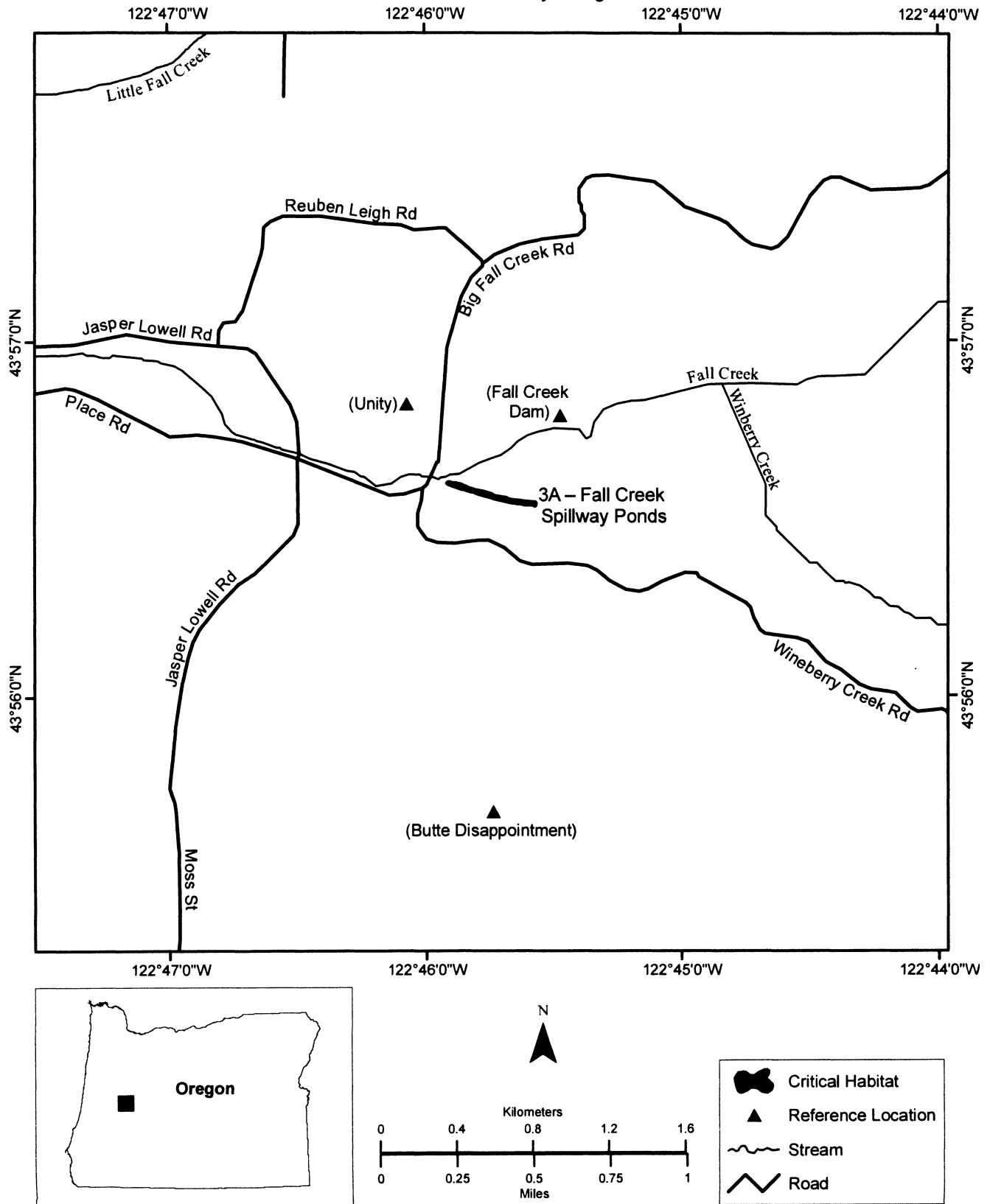
(iii) Map of Unit 3A of critical habitat for the Oregon chub (*Oregonichthys crameri*) follows:

**BILLING CODE 4310-55-S**



**Critical Habitat for Oregon Chub (*Oregonichthys crameri*)**

Unit: 3A, Lane County, Oregon



(21) Unit 3B: Elijah Bristow State Park Berry Slough, Lane County, Oregon.

(i) This unit totals 5.2 ha (12.7 ac) measured at the annual high-water elevation, is owned by the Oregon Parks and Recreation Department (OPRD), and is located in Elijah Bristow State Park in Lane County, Oregon.

(ii) Land bounded by the following UTM Zone 10, NAD83 coordinates

(E,N): 513039, 4865406; 513039, 4865403; 513044, 4865400; 513049, 4865395; 513057, 4865390; 513064, 4865385; 513074, 4865379; 513081, 4865378; 513089, 4865378; 513099, 4865380; 513104, 4865383; 513105, 4865388; 513107, 4865393; 513109, 4865396; 513113, 4865398; 513117, 4865398; 513121, 4865396; 513123, 4865391; 513122, 4865387; 513117, 4865377; 513106, 4865366; 513088, 4865355; 513080, 4865345; 513075, 4865334; 513078, 4865315; 513080, 4865307; 513088, 4865290; 513090, 4865267; 513098, 4865252; 513110, 4865242; 513123, 4865230; 513132, 4865222; 513135, 4865219; 513146, 4865215; 513155, 4865213; 513155, 4865218; 513154, 4865224; 513155, 4865226; 513158, 4865225; 513160, 4865222; 513160, 4865215; 513159, 4865210; 513170, 4865206; 513190, 4865204; 513229, 4865204; 513260, 4865194; 513281, 4865200; 513297, 4865201; 513312, 4865204; 513329, 4865207; 513351, 4865210; 513363, 4865214; 513371, 4865211; 513370, 4865207; 513365, 4865205; 513357, 4865203; 513349, 4865201; 513337, 4865200; 513325, 4865199; 513312, 4865196; 513298, 4865194; 513282, 4865188; 513261, 4865186; 513236, 4865185; 513218, 4865181; 513193, 4865183; 513181, 4865190; 513163, 4865196; 513137, 4865203; 513120, 4865211; 513113, 4865220; 513107, 4865230; 513100, 4865225; 513100, 4865221; 513102, 4865215; 513109, 4865205; 513118, 4865197; 513137, 4865183; 513160, 4865165; 513171, 4865159; 513193, 4865152; 513205, 4865141; 513206, 4865125; 513210, 4865118; 513209, 4865113; 513208, 4865095; 513206, 4865089; 513201, 4865089; 513198, 4865102; 513196, 4865113; 513189, 4865123; 513182, 4865135; 513173, 4865143; 513157, 4865151; 513143, 4865154; 513129, 4865162; 513123, 4865168; 513106, 4865182; 513095, 4865192; 513088, 4865204; 513084, 4865213; 513081, 4865223; 513073, 4865246; 513065, 4865266; 513062, 4865273; 513055, 4865273; 513057, 4865265; 513057, 4865258; 513052, 4865241; 513054, 4865232; 513057, 4865225; 513062, 4865215; 513075, 4865198; 513083, 4865187; 513090, 4865177; 513091, 4865171; 513083, 4865175; 513079,

4865180; 513072, 4865189; 513066, 4865199; 513059, 4865209; 513051, 4865220; 513044, 4865231; 513037, 4865223; 513030, 4865209; 513024, 4865198; 513016, 4865188; 513007, 4865176; 513001, 4865169; 512994, 4865152; 512993, 4865124; 512993, 4865117; 512996, 4865111; 512998, 4865104; 512998, 4865078; 513003, 4865061; 513008, 4865048; 513001, 4865046; 512997, 4865056; 512989, 4865066; 512983, 4865081; 512979, 4865105; 512979, 4865129; 512982, 4865153; 512986, 4865165; 512995, 4865184; 513008, 4865202; 513023, 4865226; 513031, 4865236; 513034, 4865248; 513035, 4865255; 513037, 4865271; 513039, 4865286; 513042, 4865297; 513045, 4865307; 513049, 4865314; 513051, 4865319; 513049, 4865330; 513040, 4865336; 513029, 4865339; 513022, 4865342; 513015, 4865354; 513009, 4865367; 513000, 4865383; 513001, 4865389; 513010, 4865399; 513023, 4865406; 513030, 4865406; 513035, 4865405; 513035, 4865406; 513036, 4865408; 513037, 4865409; 513039, 4865409; 513039, 4865408; 513039, 4865406; and excluding land bound by 513049, 4865347; 513054, 4865346; 513058, 4865348; 513058, 4865353; 513058, 4865356; 513056, 4865362; 513051, 4865366; 513043, 4865376; 513035, 4865387; 513029, 4865391; 513022, 4865391; 513019, 4865386; 513022, 4865380; 513024, 4865375; 513030, 4865369; 513035, 4865364; 513040, 4865358; 513044, 4865349; 513049, 4865347;

Land bounded by the following UTM

Zone 10, NAD83 coordinates (E,N):

512811, 4865560; 512814, 4865555; 512827, 4865553; 512827, 4865554; 512837, 4865553; 512857, 4865551; 512875, 4865548; 512890, 4865545; 512908, 4865541; 512923, 4865533; 512932, 4865529; 512945, 4865526; 512952, 4865527; 512958, 4865527; 512961, 4865529; 512963, 4865532; 512966, 4865534; 512970, 4865533; 512970, 4865530; 512968, 4865527; 512960, 4865523; 512947, 4865522; 512938, 4865523; 512926, 4865525; 512929, 4865522; 512938, 4865520; 512949, 4865517; 512963, 4865512; 512976, 4865510; 512989, 4865513; 513003, 4865515; 513019, 4865518; 513034, 4865520; 513048, 4865524; 513060, 4865526; 513079, 4865532; 513089, 4865531; 513110, 4865536; 513124, 4865542; 513125, 4865536; 513119, 4865534; 513101, 4865528; 513087, 4865523; 513073, 4865520; 513057, 4865517; 513032, 4865515; 513009, 4865511; 512993, 4865508; 512982, 4865504; 512966, 4865503; 512956, 4865506; 512946, 4865510;

512940, 4865513; 512936, 4865512; 512945, 4865505; 512958, 4865496; 512977, 4865477; 512986, 4865467; 513007, 4865442; 513015, 4865429; 513016, 4865423; 513006, 4865412; 512998, 4865404; 512995, 4865407; 512997, 4865416; 512999, 4865422; 512984, 4865439; 512976, 4865453; 512958, 4865467; 512940, 4865487; 512923, 4865500; 512905, 4865513; 512889, 4865520; 512871, 4865522; 512851, 4865523; 512835, 4865523; 512817, 4865524; 512801, 4865527; 512774, 4865532; 512756, 4865536; 512741, 4865537; 512736, 4865537; 512730, 4865534; 512726, 4865534; 512725, 4865533; 512726, 4865528; 512723, 4865528; 512723, 4865532; 512722, 4865533; 512719, 4865534; 512718, 4865539; 512719, 4865543; 512717, 4865547; 512706, 4865552; 512697, 4865559; 512702, 4865563; 512706, 4865566; 512710, 4865565; 512715, 4865562; 512723, 4865559; 512730, 4865557; 512735, 4865555; 512737, 4865557; 512737, 4865559; 512733, 4865560; 512731, 4865565; 512735, 4865570; 512750, 4865573; 512764, 4865573; 512790, 4865567; 512798, 4865565; 512811, 4865560; and excluding land bound by 512752, 4865557; 512753, 4865553; 512772, 4865551; 512786, 4865548; 512793, 4865548; 512792, 4865553; 512782, 4865556; 512769, 4865557; 512762, 4865558; 512756, 4865559; 512752, 4865557;

Land bounded by the following UTM Zone 10, NAD83 coordinates (E,N):

512517, 4866094; 512512, 4866079; 512511, 4866074; 512512, 4866071; 512513, 4866068; 512512, 4866067; 512510, 4866069; 512509, 4866072; 512506, 4866070; 512498, 4866067; 512489, 4866066; 512488, 4866055; 512495, 4866045; 512506, 4866032; 512515, 4866022; 512524, 4866009; 512534, 4865998; 512545, 4865989; 512553, 4865977; 512559, 4865964; 512562, 4865956; 512567, 4865938; 512567, 4865930; 512568, 4865921; 512572, 4865911; 512578, 4865902; 512580, 4865891; 512580, 4865878; 512580, 4865864; 512582, 4865850; 512583, 4865827; 512584, 4865806; 512593, 4865792; 512599, 4865783; 512602, 4865775; 512607, 4865764; 512610, 4865755; 512612, 4865748; 512623, 4865738; 512629, 4865727; 512635, 4865720; 512642, 4865712; 512645, 4865707; 512642, 4865701; 512635, 4865699; 512632, 4865696; 512633, 4865695; 512636, 4865696; 512641, 4865696; 512644, 4865694; 512651, 4865696; 512657, 4865703; 512667, 4865715; 512676, 4865727; 512681, 4865731; 512686, 4865732; 512683, 4865725; 512673, 4865713;

512661, 4865698; 512655, 4865689;  
 512641, 4865681; 512630, 4865677;  
 512622, 4865670; 512621, 4865666;  
 512623, 4865662; 512628, 4865661;  
 512635, 4865660; 512644, 4865658;  
 512647, 4865655; 512646, 4865652;  
 512638, 4865653; 512626, 4865655;  
 512621, 4865653; 512623, 4865645;  
 512629, 4865639; 512635, 4865630;  
 512642, 4865625; 512651, 4865619;  
 512659, 4865610; 512667, 4865602;  
 512674, 4865596; 512683, 4865590;  
 512692, 4865582; 512700, 4865574;  
 512701, 4865572; 512698, 4865570;  
 512693, 4865565; 512689, 4865568;  
 512678, 4865576; 512662, 4865586;  
 512653, 4865595; 512642, 4865606;  
 512636, 4865610; 512626, 4865616;  
 512618, 4865623; 512609, 4865635;  
 512600, 4865647; 512584, 4865649;  
 512571, 4865658; 512570, 4865673;  
 512580, 4865682; 512579, 4865690;  
 512572, 4865706; 512555, 4865727;  
 512543, 4865737; 512526, 4865749;  
 512512, 4865758; 512501, 4865768;  
 512500, 4865773; 512504, 4865772;  
 512515, 4865764; 512525, 4865756;  
 512539, 4865747; 512549, 4865739;  
 512550, 4865739; 512563, 4865733;  
 512579, 4865724; 512589, 4865721;  
 512594, 4865726; 512592, 4865735;  
 512589, 4865741; 512586, 4865748;  
 512579, 4865754; 512572, 4865760;  
 512565, 4865770; 512557, 4865784;  
 512553, 4865793; 512549, 4865816;  
 512550, 4865834; 512549, 4865851;  
 512550, 4865873; 512552, 4865895;  
 512554, 4865899; 512555, 4865907;  
 512555, 4865913; 512550, 4865924;  
 512541, 4865936; 512533, 4865951;  
 512527, 4865963; 512522, 4865972;  
 512517, 4865981; 512509, 4865989;  
 512501, 4866000; 512496, 4866005;  
 512490, 4866017; 512484, 4866027;  
 512475, 4866039; 512468, 4866052;  
 512465, 4866067; 512420, 4866107;  
 512388, 4866124; 512348, 4866132;  
 512319, 4866134; 512319, 4866146;  
 512345, 4866144; 512388, 4866135;  
 512419, 4866125; 512445, 4866104;  
 512465, 4866085; 512479, 4866085;  
 512496, 4866089; 512504, 4866099;  
 512513, 4866123; 512523, 4866135;  
 512535, 4866144; 512541, 4866154;  
 512541, 4866156; 512554, 4866153;  
 512551, 4866147; 512544, 4866138;  
 512536, 4866131; 512531, 4866126;  
 512525, 4866119; 512523, 4866115;  
 512518, 4866102; 512517, 4866094;

(iii) See paragraph (23)(iii) for a map showing critical habitat unit 3B.

(22) Unit 3C; Elijah Bristow State Park Northeast Slough, Lane County Oregon.

(i) This unit totals 2.2 ha (5.4 ac), is owned by the OPRD, and is located in Elijah Bristow State Park in Lane County, Oregon.

(ii) Land bounded by the following UTM Zone 10, NAD83 coordinates

(E,N): 514970, 4864567; 514987,  
 4864557; 514999, 4864551; 515023,  
 4864537; 515036, 4864528; 515054,  
 4864524; 515069, 4864515; 515092,  
 4864496; 515116, 4864475; 515137,  
 4864447; 515154, 4864412; 515168,  
 4864385; 515179, 4864364; 515191,  
 4864344; 515202, 4864316; 515216,  
 4864293; 515229, 4864277; 515239,  
 4864261; 515245, 4864248; 515244,  
 4864243; 515235, 4864243; 515219,  
 4864260; 515202, 4864285; 515185,  
 4864311; 515175, 4864338; 515160,  
 4864364; 515147, 4864389; 515138,  
 4864411; 515124, 4864438; 515108,  
 4864461; 515095, 4864474; 515081,  
 4864487; 515063, 4864492; 515064,  
 4864482; 515066, 4864470; 515074,  
 4864465; 515081, 4864461; 515088,  
 4864451; 515080, 4864455; 515069,  
 4864461; 515057, 4864472; 515049,  
 4864483; 515044, 4864499; 515035,  
 4864514; 515015, 4864525; 515090,  
 4864540; 514971, 4864551; 514955,  
 4864559; 514947, 4864566; 514943,  
 4864559; 514947, 4864546; 514953,  
 4864520; 514962, 4864502; 514983,  
 4864484; 514988, 4864475; 514997,  
 4864459; 515007, 4864442; 515015,  
 4864432; 515025, 4864416; 515038,  
 4864404; 515054, 4864391; 515064,  
 4864373; 515070, 4864353; 515075,  
 4864332; 515079, 4864311; 515093,  
 4864315; 515105, 4864318; 515120,  
 4864321; 515123, 4864317; 515116,  
 4864316; 515106, 4864314; 515098,  
 4864311; 515088, 4864303; 515081,  
 4864299; 515085, 4864290; 515093,  
 4864270; 515102, 4864250; 515108,  
 4864241; 515113, 4864232; 515119,  
 4864213; 515125, 4864200; 515142,  
 4864194; 515156, 4864181; 515153,  
 4864175; 515136, 4864189; 515126,  
 4864191; 515126, 4864188; 515129,  
 4864174; 515136, 4864158; 515130,  
 4864155; 515126, 4864159; 515125,  
 4864167; 515120, 4864181; 515113,  
 4864195; 515107, 4864211; 515099,  
 4864235; 515093, 4864241; 515084,  
 4864263; 515074, 4864285; 515063,  
 4864295; 515056, 4864314; 515054,  
 4864334; 515052, 4864338; 515046,  
 4864354; 515044, 4864369; 515028,  
 4864384; 515012, 4864394; 515002,  
 4864409; 514992, 4864422; 514986,  
 4864433; 514977, 4864442; 514967,  
 4864461; 514956, 4864471; 514959,  
 4864474; 514944, 4864493; 514939,  
 4864507; 514934, 4864522; 514927,  
 4864546; 514921, 4864559; 514909,  
 4864572; 514902, 4864582; 514884,  
 4864597; 514879, 4864607; 514859,  
 4864619; 514851, 4864630; 514837,  
 4864636; 514821, 4864648; 514813,  
 4864656; 514799, 4864660; 514797,  
 4864675; 514809, 4864672; 514821,  
 4864668; 514834, 4864666; 514845,  
 4864665; 514857, 4864664; 514873,

4864650; 514886, 4864641; 514898,  
 4864625; 514909, 4864612; 514924,  
 4864600; 514939, 4864590; 514959,  
 4864575; 514970, 4864567;

(iii) See paragraph (23)(iii) for a map showing critical habitat unit 3C.

(23) Unit 3D: Elijah Bristow Island Pond, Lane County, Oregon.

(i) This unit totals 2.1 ha (5.2 ac), is owned by the OPRD, and is located in Elijah Bristow State Park in Lane County, Oregon.

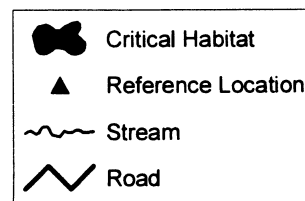
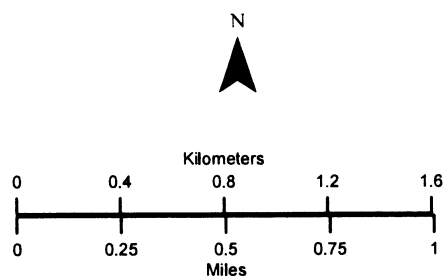
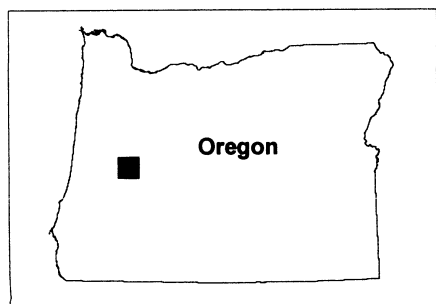
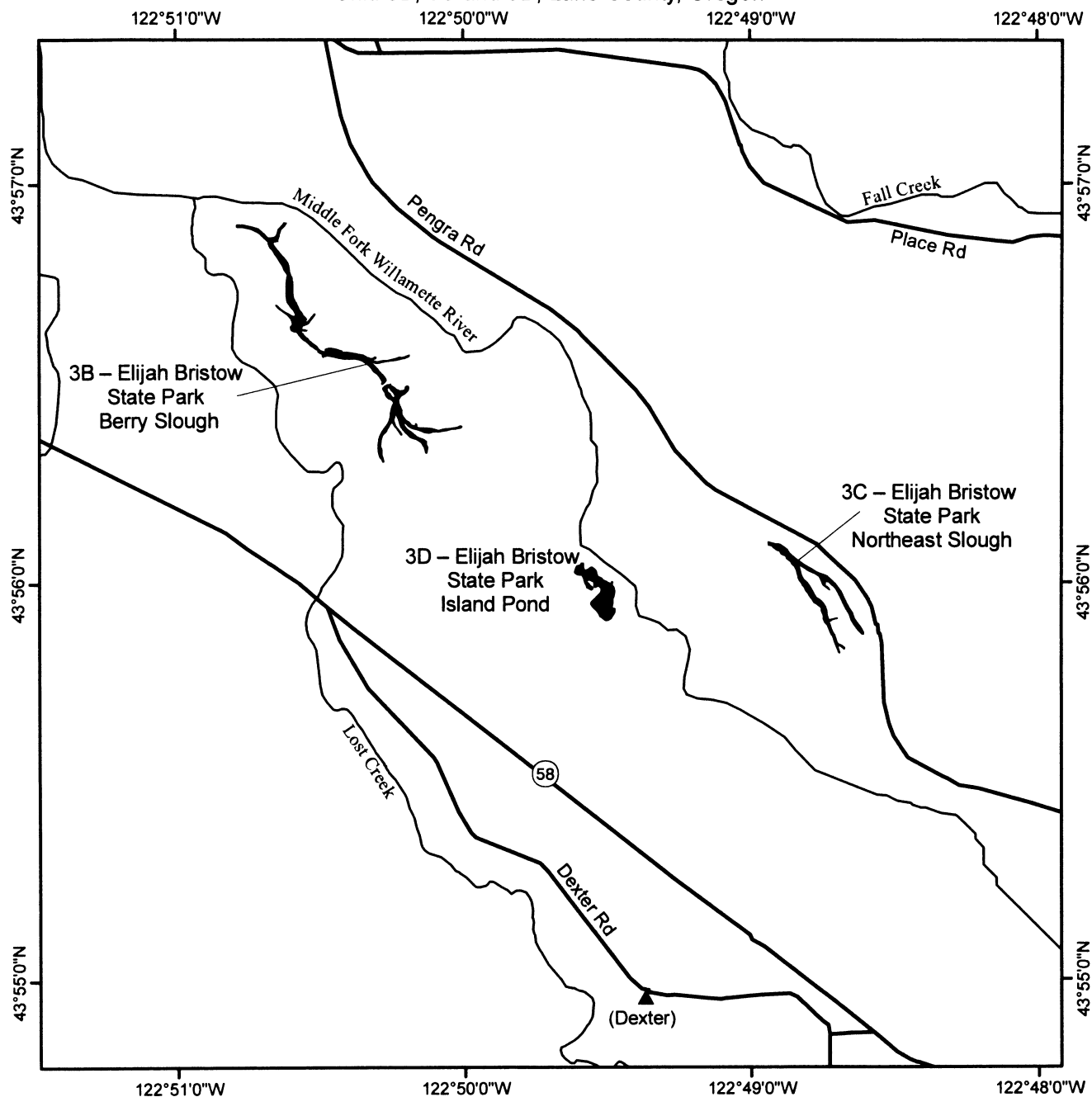
(ii) Land bounded by the following UTM Zone 10, NAD83 coordinates (E,N): 513941, 4864549; 513945,  
 4864542; 513958, 4864547; 513962,  
 4864552; 513966, 4864555; 513973,  
 4864557; 513978, 4864556; 513982,  
 4864554; 513989, 4864549; 513994,  
 4864543; 513996, 4864536; 513998,  
 4864532; 514001, 4864519; 514004,  
 4864514; 514006, 4864512; 514019,  
 4864508; 514030, 4864499; 514037,  
 4864494; 514047, 4864488; 514060,  
 4864481; 514065, 4864482; 514067,  
 4864486; 514069, 4864489; 514071,  
 4864491; 514075, 4864488; 514074,  
 4864485; 514072, 4864481; 514072,  
 4864477; 514075, 4864470; 514082,  
 4864459; 514083, 4864448; 514080,  
 4864429; 514075, 4864408; 514073,  
 4864391; 514072, 4864374; 514071,  
 4864364; 514083, 4864365; 514084,  
 4864361; 514083, 4864349; 514081,  
 4864341; 514072, 4864327; 514064,  
 4864318; 514055, 4864310; 514043,  
 4864307; 514036, 4864310; 514021,  
 4864322; 514013, 4864327; 514008,  
 4864340; 513999, 4864350; 513988,  
 4864362; 513979, 4864371; 513972,  
 4864380; 513970, 4864388; 513974,  
 4864396; 513982, 4864404; 513991,  
 4864414; 514006, 4864432; 514017,  
 4864442; 514020, 4864458; 514007,  
 4864468; 513999, 4864466; 513993,  
 4864461; 513985, 4864465; 513986,  
 4864475; 513985, 4864488; 513973,  
 4864496; 513963, 4864499; 513952,  
 4864495; 513954, 4864489; 513963,  
 4864481; 513968, 4864475; 513978,  
 4864466; 513982, 4864460; 513981,  
 4864455; 513976, 4864451; 513969,  
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 4864460; 513950, 4864466; 513950,  
 4864473; 513945, 4864483; 513942,  
 4864493; 513937, 4864504; 513932,  
 4864517; 513929, 4864519; 513920,  
 4864519; 513913, 4864518; 513904,  
 4864523; 513892, 4864533; 513898,  
 4864552; 513907, 4864564; 513921,  
 4864566; 513929, 4864576; 513936,  
 4864578; 513938, 4864556; 513941,  
 4864549;

(iii) Map of Units 3B, 3C, and 3D of critical habitat for the Oregon chub (*Oregonichthys crameri*) follows:

BILLING CODE 4310-55-S

**Critical Habitat for Oregon Chub (*Oregonichthys crameri*)**

Unit: 3B, 3C and 3D, Lane County, Oregon



(24) Unit 3E: Dexter Reservoir RV Alcove DEX3, Lane County, Oregon.

(i) This unit totals 0.4 ha (0.9 ac) and is owned by the USACE. The unit is located on the south side of Highway 58 off Dexter Reservoir next to a recreational vehicle (RV) park, in Lane County, Oregon.

(ii) Land bounded by the following UTM Zone 10, NAD83 coordinates (E,N): 515412, 4862223; 515408, 4862221; 515405, 4862216; 515404, 4862217; 515403, 4862220; 515402, 4862222; 515400, 4862223; 515392, 4862221; 515388, 4862222; 515378, 4862227; 515374, 4862237; 515364, 4862250; 515358, 4862257; 515352, 4862262; 515344, 4862272; 515334, 4862285; 515323, 4862300; 515314, 4862311; 515304, 4862315; 515297, 4862329; 515292, 4862335; 515285, 4862340; 515286, 4862342; 515293,

4862339; 515299, 4862333; 515303, 4862327; 515313, 4862322; 515320, 4862314; 515329, 4862311; 515335, 4862306; 515346, 4862295; 515353, 4862291; 515364, 4862282; 515376, 4862274; 515388, 4862267; 515399, 4862261; 515410, 4862255; 515420, 4862250; 515427, 4862248; 515434, 4862246; 515436, 4862243; 515433, 4862239; 515429, 4862235; 515425, 4862230; 515422, 4862226; 515419, 4862223; 515412, 4862223;

(iii) See paragraph (25)(iii) for a map showing critical habitat unit 3E.

(25) Unit 3F: Dexter Reservoir Alcove PIT1, Lane County, Oregon.

(i) This unit totals 0.1 ha (0.3 ac) measured at the annual high-water elevation, and is owned by the USACE. The unit is located on the south side of Highway 58 off Dexter Reservoir, in Lane County, Oregon.

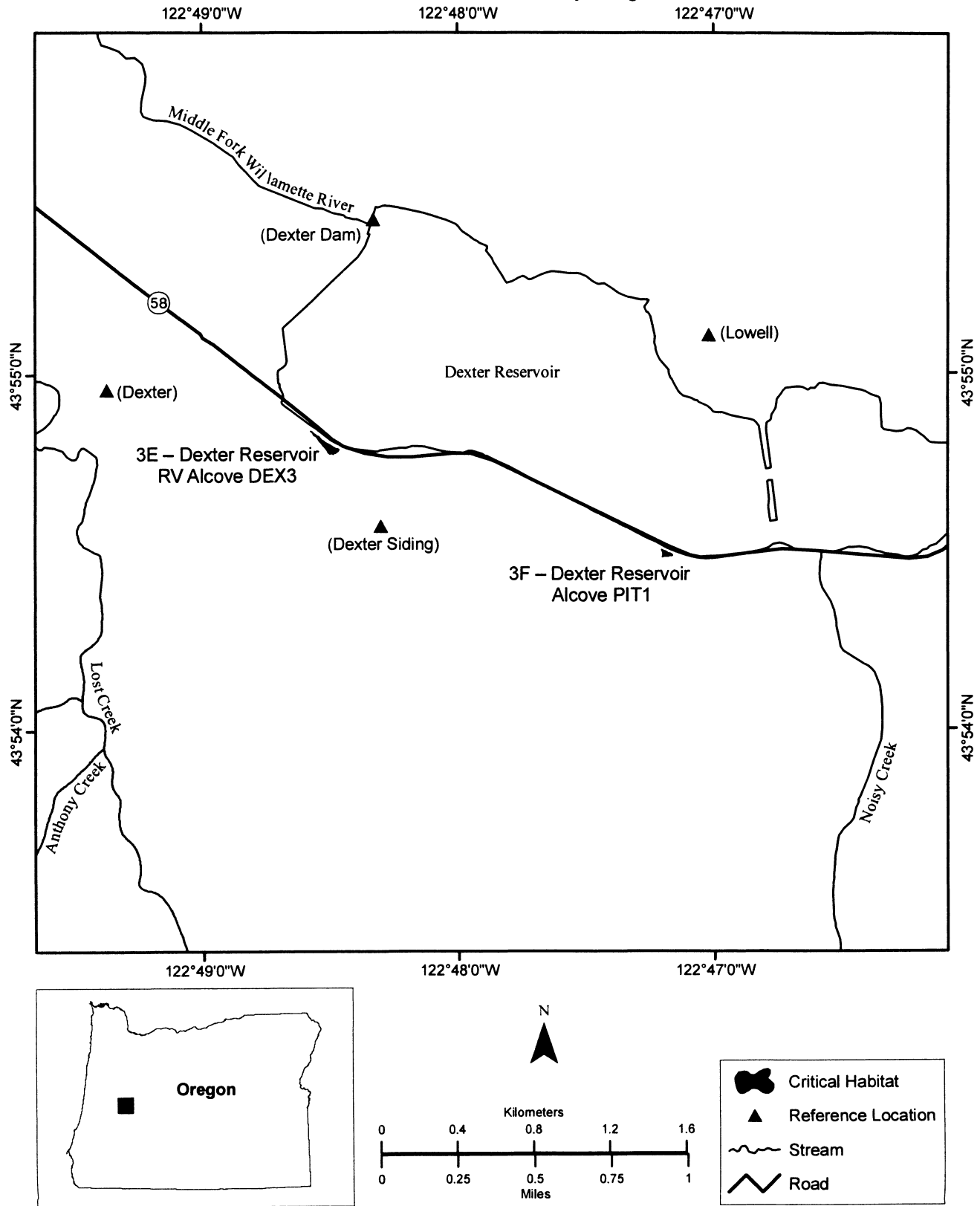
(ii) Land bounded by the following UTM Zone 10, NAD83 coordinates (E,N): 517131, 4861681; 517127, 4861680; 517127, 4861680; 517128, 4861683; 517130, 4861693; 517128, 4861699; 517128, 4861703; 517127, 4861711; 517123, 4861719; 517123, 4861722; 517123, 4861722; 517126, 4861721; 517129, 4861719; 517135, 4861717; 517145, 4861712; 517153, 4861708; 517158, 4861705; 517164, 4861702; 517173, 4861699; 517179, 4861695; 517182, 4861692; 517182, 4861689; 517181, 4861689; 517171, 4861688; 517165, 4861686; 517159, 4861685; 517154, 4861684; 517138, 4861684; 517131, 4861681;

(iii) Map of Units 3E and 3F of critical habitat for the Oregon chub (*Oregonichthys crameri*) follows:

BILLING CODE 4310-55-S

**Critical Habitat for Oregon Chub (*Oregonichthys crameri*)**

Unit: 3E and 3F, Lane County, Oregon



(26) Unit 3G: East Fork Minnow Creek Pond, Lane County, Oregon.

(i) This unit totals 1.3 ha (3.3 ac), is owned by the ODOT, and is a large beaver pond located on a small tributary to Minnow Creek that drains into Lookout Point Reservoir in Lane County, Oregon.

(ii) Land bounded by the following UTM Zone 10, NAD83 coordinates (E,N): 521267, 4859872; 521270, 4859868; 521272, 4859872; 521279, 4859877; 521283, 4859872; 521287, 4859862; 521293, 4859852; 521305, 4859841; 521312, 4859841; 521329, 4859825; 521340, 4859819; 521345,

4859817; 521350, 4859811; 521354, 4859800; 521347, 4859790; 521337, 4859797; 521330, 4859794; 521326, 4859791; 521324, 4859781; 521320, 4859757; 521303, 4859756; 521296, 4859770; 521292, 4859784; 521283, 4859789; 521262, 4859789; 521243, 4859788; 521224, 4859785; 521210, 4859776; 521193, 4859770; 521181, 4859777; 521169, 4859784; 521152, 4859792; 521134, 4859800; 521139, 4859809; 521149, 4859814; 521161, 4859812; 521165, 4859821; 521173, 4859824; 521177, 4859826; 521189, 4859838; 521197, 4859843; 521208,

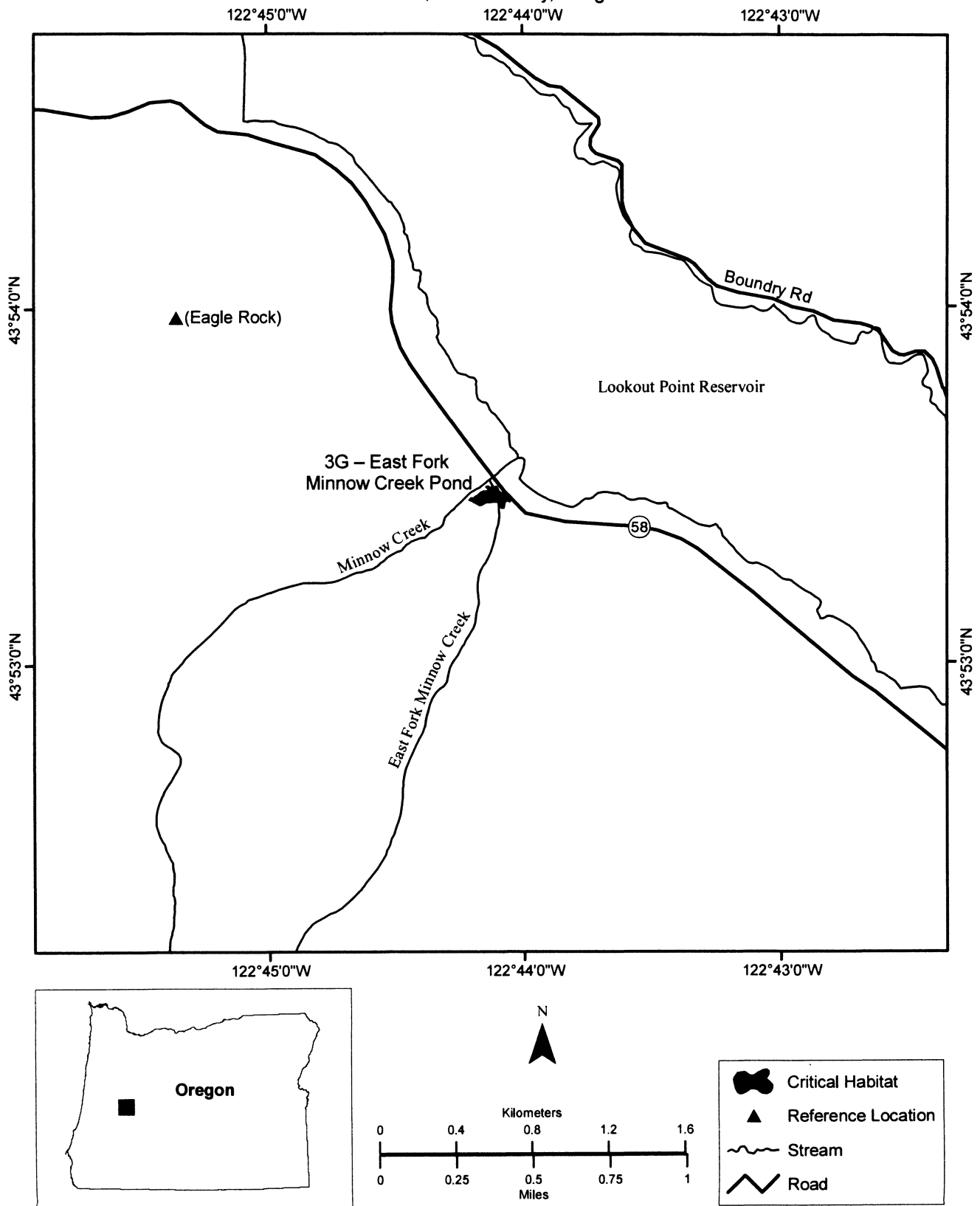
4859850; 521218, 4859851; 521225, 4859850; 521232, 4859850; 521234, 4859850; 521234, 4859855; 521231, 4859857; 521226, 4859864; 521223, 4859870; 521227, 4859875; 521237, 4859876; 521248, 4859866; 521254, 4859873; 521259, 4859874; 521253, 4859879; 521250, 4859887; 521246, 4859895; 521250, 4859899; 521254, 4859890; 521258, 4859888; 521260, 4859882; 521267, 4859872;

(iii) Map of Unit 3G of critical habitat for the Oregon chub (*Oregonichthys crameri*) follows:

BILLING CODE 4310-55-S

**Critical Habitat for Oregon Chub (*Oregonichthys crameri*)**

Unit: 3G, Lane County, Oregon





(27) Unit 3H: Hospital Pond, Lane County, Oregon.

(i) This unit totals 0.5 ha (1.1 ac), is owned by the USACE, and is located on the north side of the gravel road on the north shore of Lookout Point Reservoir in Lane County, Oregon.

(ii) Land bounded by the following UTM Zone 10, NAD83 coordinates (E,N): 533030, 4851782; 533047,

4851779; 533065, 4851779; 533078, 4851772; 533093, 4851767; 533109, 4851767; 533120, 4851766; 533135, 4851762; 533147, 4851755; 533157, 4851743; 533164, 4851732; 533169, 4851722; 533173, 4851709; 533175, 4851702; 533174, 4851698; 533167, 4851699; 533163, 4851705; 533150, 4851705; 533139, 4851715; 533130, 4851720; 533117, 4851725; 533105,

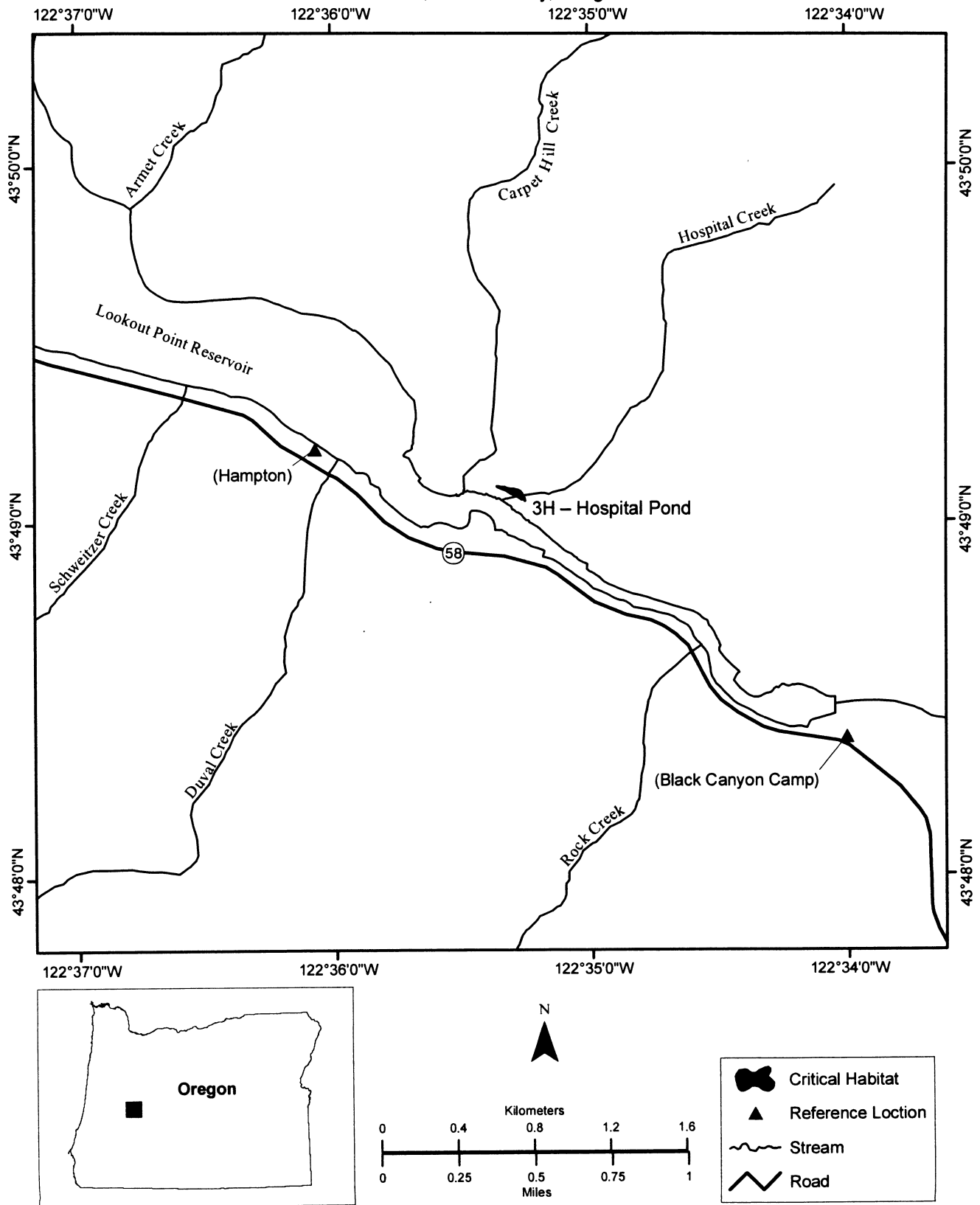
4851732; 533096, 4851735; 533079, 4851748; 533067, 4851753; 533050, 4851760; 533027, 4851769; 533017, 4851777; 533022, 4851781; 533030, 4851782;

(iii) Map of Unit 3H of critical habitat for the Oregon chub (*Oregonichthys crameri*) follows:

**BILLING CODE 4310-55-S**

**Critical Habitat for Oregon Chub (*Oregonichthys crameri*)**

Unit: 3H, Lane County, Oregon



(28) Unit 3I: Shady Dell Pond, Lane County, Oregon.

(i) This unit totals 1.1 ha (2.8 ac), is owned by the United States Forest Service (USFS), and is located in a USFS campground at the far southeast end of Lookout Point Reservoir along the south side of State Highway 58 in Lane County, Oregon.

(ii) Land bounded by the following UTM Zone 10, NAD83 coordinates (E,N): 536587, 4848720; 536593, 4848709; 536589, 4848707; 536583, 4848718; 536580, 4848713; 536581, 4848701; 536587, 4848687; 536597, 4848678; 536612, 4848659; 536628, 4848646; 536647, 4848637; 536649, 4848637; 536670, 4848619; 536685, 4848593; 536697, 4848576; 536699, 4848573; 536706, 4848563; 536716, 4848550; 536722, 4848532; 536730, 4848513; 536726, 4848496; 536727, 4848475; 536718, 4848472; 536725, 4848456; 536732, 4848443; 536746, 4848432; 536762, 4848423; 536778, 4848418; 536799, 4848397; 536797, 4848392; 536786, 4848395; 536766, 4848401; 536746, 4848410; 536732, 4848424; 536720, 4848433; 536706, 4848439; 536691, 4848455; 536687, 4848463; 536684, 4848474; 536680, 4848493; 536681, 4848515; 536684, 4848529; 536685, 4848543; 536683, 4848563; 536673, 4848570; 536653, 4848574; 536626, 4848570; 536612, 4848573; 536612, 4848580; 536618, 4848579; 536625, 4848578; 536632, 4848579; 536641, 4848580; 536638, 4848589; 536634, 4848601; 536630, 4848611; 536624, 4848619; 536607, 4848638; 536591, 4848651; 536573, 4848674; 536562, 4848694; 536560, 4848716; 536562, 4848735; 536563, 4848747; 536567, 4848753; 536572, 4848743; 536576, 4848736; 536587, 4848720; and excluding land bound by 536675, 4848580; 536681, 4848577; 536687, 4848573; 536685, 4848579; 536683, 4848582; 536679, 4848588; 536675, 4848593; 536672, 4848598; 536669, 4848602; 536666, 4848607; 536662, 4848614; 536658, 4848617; 536654, 4848622; 536650, 4848625; 536645, 4848628; 536640, 4848626; 536638, 4848623; 536640, 4848618; 536643, 4848613; 536647, 4848605; 536652, 4848596; 536655, 4848590; 536657, 4848586; 536663, 4848584; 536669, 4848582; 536675, 4848580;

(iii) See paragraph (29)(iii) for a map showing critical habitat unit 3I.

(29) Unit 3J: Buckhead Creek, Lane County, Oregon.

(i) This unit totals 3.8 ha (9.3 ac) and is owned by the USFS. Buckhead Creek is a tributary flowing into the Middle

Fork Willamette River at the northeast end of Lookout Point Reservoir in Lane County, Oregon.

(ii) Land bounded by the following UTM Zone 10, NAD83 coordinates (E,N): 538138, 4847044; 538137, 4847035; 538128, 4847039; 538122, 4847041; 538118, 4847040; 538109, 4847040; 538105, 4847038; 538106, 4847032; 538113, 4847031; 538119, 4847032; 538126, 4847029; 538129, 4847025; 538128, 4847013; 538123, 4847001; 538120, 4846985; 538113, 4846970; 538108, 4846947; 538102, 4846919; 538092, 4846888; 538081, 4846854; 538071, 4846816; 538061, 4846782; 538055, 4846782; 538052, 4846787; 538055, 4846802; 538053, 4846821; 538047, 4846811; 538041, 4846802; 538044, 4846781; 538049, 4846775; 538046, 4846764; 538037, 4846768; 538031, 4846763; 538033, 4846775; 538033, 4846793; 538033, 4846807; 538038, 4846822; 538041, 4846834; 538049, 4846855; 538056, 4846894; 538051, 4846903; 538053, 4846916; 538058, 4846927; 538065, 4846941; 538066, 4846946; 538061, 4846944; 538056, 4846942; 538048, 4846936; 538038, 4846933; 538033, 4846933; 538022, 4846937; 538016, 4846936; 538011, 4846935; 538007, 4846937; 538003, 4846941; 538004, 4846947; 538007, 4846951; 538011, 4846954; 538015, 4846953; 538022, 4846950; 538028, 4846952; 538036, 4846955; 538045, 4846958; 538053, 4846959; 538061, 4846963; 538067, 4846970; 538072, 4846980; 538077, 4846990; 538080, 4847000; 538080, 4847013; 538081, 4847018; 538082, 4847040; 538082, 4847055; 538099, 4847055; 538112, 4847055; 538120, 4847055; 538134, 4847048; 538138, 4847044;

Land bounded by the following UTM Zone 10, NAD83 coordinates (E,N): 537853, 4848143; 537863, 4848139; 537873, 4848135; 537889, 4848129; 537907, 4848123; 537925, 4848116; 537946, 4848106; 537968, 4848096; 537985, 4848085; 537996, 4848080; 538021, 4848066; 538035, 4848057; 538048, 4848049; 538058, 4848042; 538068, 4848035; 538078, 4848030; 538089, 4848023; 538102, 4848014; 538112, 4848007; 538120, 4847996; 538124, 4847987; 538133, 4847973; 538147, 4847961; 538159, 4847947; 538168, 4847928; 538179, 4847913; 538194, 4847901; 538208, 4847884; 538215, 4847877; 538237, 4847852; 538253, 4847837; 538266, 4847827; 538281, 4847806; 538297, 4847786; 538308, 4847767; 538311, 4847761; 538305, 4847754; 538281, 4847743;

538264, 4847737; 538251, 4847756; 538229, 4847789; 538198, 4847830; 538185, 4847854; 538178, 4847877; 538171, 4847890; 538160, 4847902; 538149, 4847918; 538139, 4847935; 538129, 4847948; 538118, 4847956; 538109, 4847971; 538102, 4847984; 538096, 4847990; 538083, 4848000; 538064, 4848010; 538045, 4848021; 538040, 4848031; 538032, 4848038; 538023, 4848044; 538013, 4848051; 538003, 4848048; 537985, 4848058; 537966, 4848067; 537959, 4848065; 537948, 4848069; 537936, 4848076; 537921, 4848083; 537903, 4848092; 537885, 4848098; 537872, 4848103; 537859, 4848107; 537846, 4848114; 537837, 4848120; 537827, 4848126; 537820, 4848134; 537822, 4848142; 537827, 4848146; 537833, 4848143; 537840, 4848140; 537842, 4848142; 537841, 4848146; 537837, 4848149; 537839, 4848152; 537845, 4848149; 537849, 4848147; 537853, 4848143;

Land bounded by the following UTM Zone 10, NAD83 coordinates (E,N): 537076, 4848628; 537077, 4848624; 537075, 4848621; 537064, 4848624; 537055, 4848627; 537050, 4848626; 537047, 4848623; 537041, 4848625; 537036, 4848629; 537031, 4848631; 537025, 4848638; 537030, 4848648; 537037, 4848649; 537048, 4848647; 537056, 4848643; 537063, 4848638; 537076, 4848628;

Land bounded by the following UTM Zone 10, NAD83 coordinates (E,N): 537131, 4848537; 537127, 4848528; 537121, 4848532; 537119, 4848556; 537116, 4848587; 537112, 4848619; 537111, 4848643; 537102, 4848662; 537091, 4848676; 537068, 4848696; 537045, 4848721; 537022, 4848739; 537013, 4848747; 537000, 4848763; 536993, 4848769; 536999, 4848773; 537010, 4848767; 537024, 4848761; 537067, 4848723; 537103, 4848689; 537116, 4848670; 537127, 4848647; 537128, 4848621; 537131, 4848596; 537131, 4848576; 537131, 4848537;

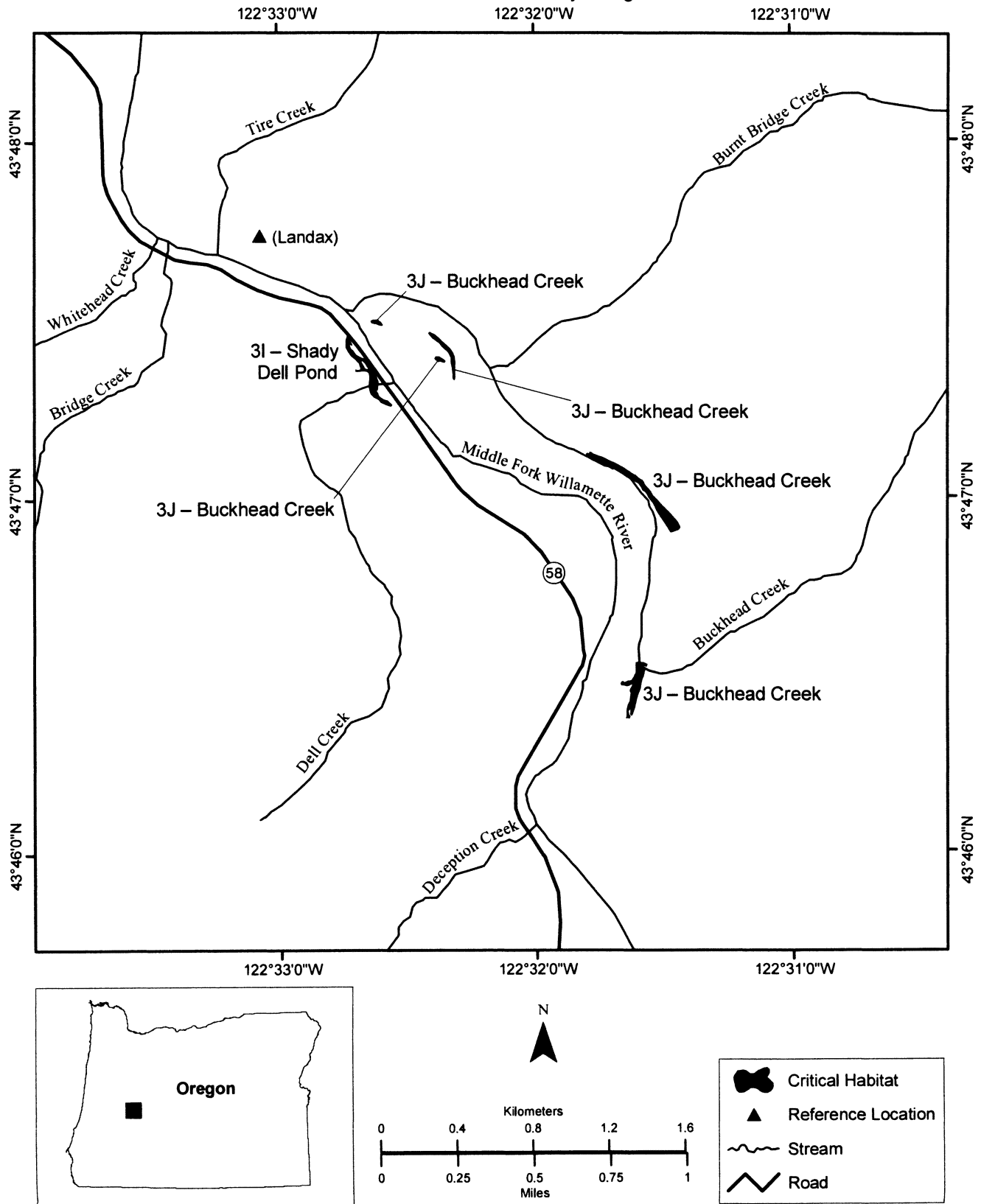
Land bounded by the following UTM Zone 10, NAD83 coordinates (E,N): 536751, 4848812; 536749, 4848809; 536747, 4848809; 536732, 4848812; 536719, 4848818; 536712, 4848820; 536695, 4848827; 536692, 4848831; 536694, 4848834; 536704, 4848839; 536714, 4848838; 536727, 4848837; 536734, 4848831; 536739, 4848830; 536747, 4848821; 536749, 4848817; 536751, 4848812;

(iii) Map of Units 3I and 3J of critical habitat for the Oregon chub (*Oregonichthys crameri*) follows:

BILLING CODE 4310-55-S

**Critical Habitat for Oregon Chub (*Oregonichthys crameri*)**

Unit: 3I and 3J, Lane County, Oregon



(30) Unit 3K: Wicopee Pond, Lane County, Oregon.

(i) This unit totals 1.4 ha (3.3 ac) and is owned by the USFS. The pond, a former borrow pit adjacent to Salt Creek in the upper Middle Fork Willamette River drainage, was created when a bridge crossing was constructed on a small logging road that crosses Salt Creek, along Highway 58 in Lane County, Oregon.

(ii) Land bounded by the following UTM Zone 10, NAD83 coordinates (E,N): 557923, 4838857; 557919, 4838854; 557919, 4838854; 557926, 4838841; 557935, 4838835; 557951, 4838829; 557948, 4838819; 557955, 4838814; 557958, 4838820; 557963, 4838824; 557971, 4838825; 557977, 4838824; 557982, 4838823; 557984, 4838817; 557978, 4838822; 557972, 4838823; 557970, 4838823; 557966, 4838816; 557963, 4838813; 557968, 4838803; 557970, 4838793; 557978, 4838789; 557977, 4838786; 557983, 4838780; 557994, 4838777; 557996, 4838772; 557997, 4838771; 558006,

4838770; 558018, 4838760; 558021, 4838741; 558026, 4838725; 558037, 4838714; 558041, 4838701; 558040, 4838682; 558058, 4838684; 558080, 4838674; 558079, 4838673; 558077, 4838674; 558068, 4838675; 558058, 4838674; 558049, 4838677; 558038, 4838677; 558037, 4838684; 558032, 4838695; 558022, 4838698; 558019, 4838705; 558006, 4838709; 558004, 4838715; 557997, 4838708; 557990, 4838708; 557986, 4838710; 557978, 4838715; 557976, 4838722; 557971, 4838727; 557965, 4838732; 557959, 4838742; 557954, 4838754; 557952, 4838763; 557956, 4838770; 557951, 4838778; 557947, 4838769; 557948, 4838766; 557935, 4838767; 557924, 4838776; 557918, 4838781; 557904, 4838782; 557898, 4838786; 557890, 4838791; 557877, 4838800; 557865, 4838811; 557859, 4838814; 557851, 4838819; 557846, 4838827; 557840, 4838832; 557834, 4838837; 557833, 4838844; 557834, 4838850; 557842, 4838858; 557854, 4838868; 557869,

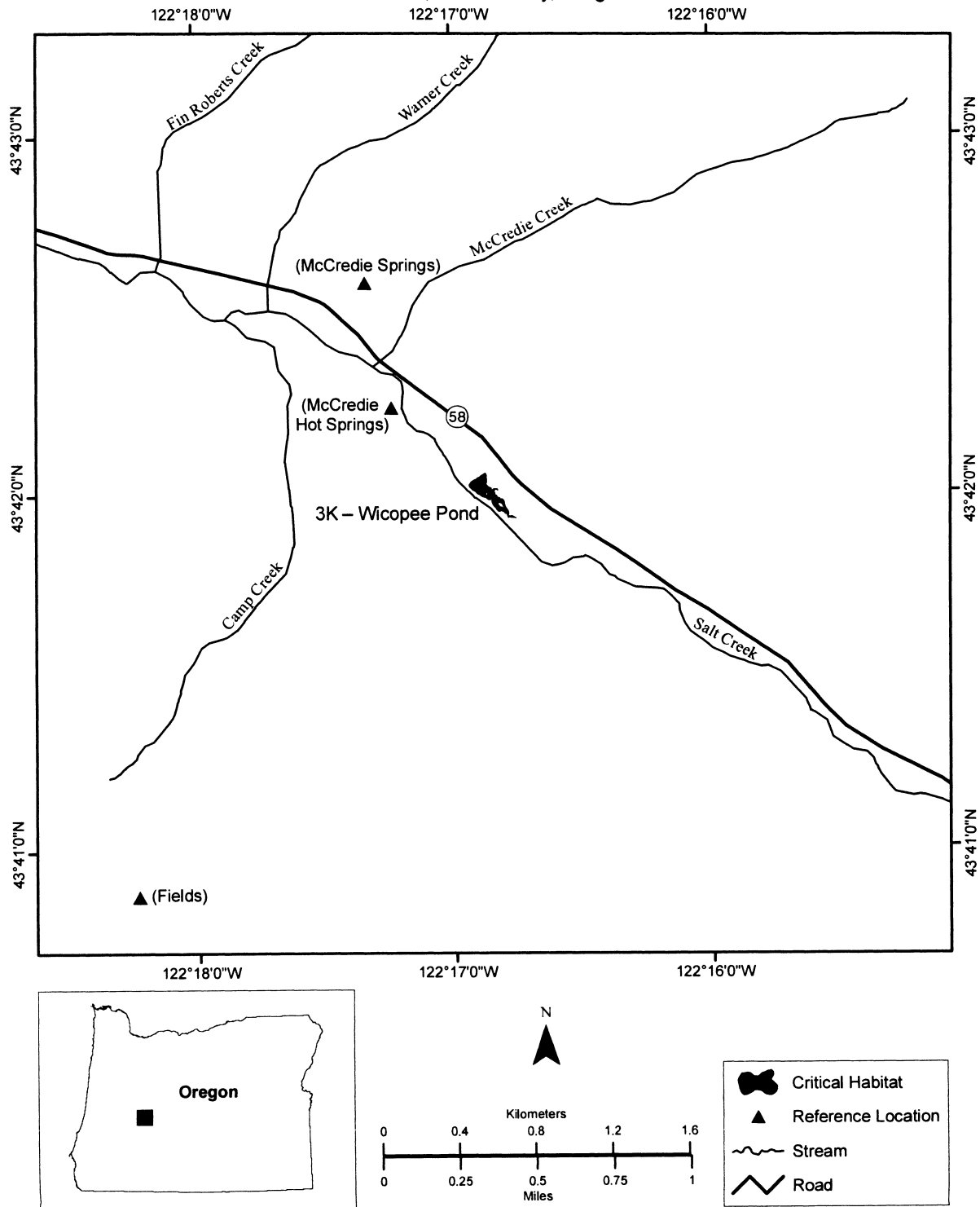
4838875; 557878, 4838880; 557887, 4838885; 557902, 4838897; 557913, 4838905; 557919, 4838906; 557922, 4838902; 557923, 4838891; 557918, 4838889; 557920, 4838884; 557926, 4838876; 557923, 4838863; 557923, 4838857; and excluding land bound by 557921, 4838792; 557923, 4838788; 557932, 4838789; 557932, 4838793; 557931, 4838796; 557933, 4838803; 557929, 4838808; 557925, 4838805; 557922, 4838800; 557922, 4838796; 557922, 4838793; 557921, 4838792; and excluding land bound by 557990, 4838734; 557995, 4838729; 558006, 4838731; 558006, 4838730; 558009, 4838724; 558014, 4838720; 558022, 4838721; 558018, 4838722; 558015, 4838728; 558012, 4838742; 558007, 4838749; 557993, 4838754; 557987, 4838754; 557984, 4838747; 557986, 4838741; 557990, 4838734;

(iii) Map of Unit 3K of critical habitat for the Oregon chub (*Oregonichthys crameri*) follows:

BILLING CODE 4310-55-P

**Critical Habitat for Oregon Chub (*Oregonichthys crameri*)**

Unit: 3K, Lane County, Oregon



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Dated: February 22, 2010.  
**Thomas L. Strickland.**  
*Assistant Secretary for Fish and Wildlife and Parks.*

[FR Doc. 2010-4654 Filed 3-9-10; 8:45 am]

BILLING CODE 4310-55-C