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DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

[Docket No. FWS–R1–ES–2009-0085]
[MO 92210-0-0009]

RIN 1018-AW88

Endangered and Threatened Wildlife and Plants; Revised Designation of Critical Habitat for Bull Trout in the Coterminous United States

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: We, the U.S. Fish and Wildlife Service, are revising critical habitat for the bull trout (*Salvelinus confluentus*) under the Endangered Species Act of 1973, as amended (Act). We are designating a total of 31,750.8 km (19,729.0 mi) of streams (which includes 1,213.2 km (754.0 mi) of marine shoreline) and are designating a total of 197,589.2 ha (488,251.7 ac) of reservoirs and lakes. The areas designated as critical habitat are located in the States of Washington, Oregon, Nevada, Idaho, and Montana.

DATES: This rule becomes effective on [*insert date 30 days after date of publication in the* **Federal Register**].

ADDRESSES: This final rule and the associated final economic analysis, as well as comments and materials received, and supporting documentation we used in preparing this final rule, are available on the internet *http://www.regulations.gov* (see Docket No. FWS–R1–ES–2009-0085; at *http://www.fws.gov/pacific/bulltrout/*; and by appointment, during normal business hours, at the U.S. Fish and Wildlife Service, Idaho Fish and Wildlife Office, 1387 S. Vinnell Way, Boise, ID 83709; telephone 208–378–5293; facsimile 208–378–5262.

FOR FURTHER INFORMATION CONTACT: Brian Kelly, State Supervisor, U.S. Fish and Wildlife Service, Idaho 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 bull trout in this final rule. For more information on bull trout biology and habitat, population abundance and trend, distribution, demographic features, habitat use and conditions, threats, and conservation measures, please refer to the Bull Trout 5-year Review Summary and Evaluation, completed April 25, 2008, available at *http://ecos.fws.gov/docs/five_year _review/doc1907.pdf*. For information on bull trout critical habitat, and information on the associated draft economic analysis for the proposed rule to designate revised critical habitat, refer to the proposed rule to designate critical habitat for the bull trout published in the **Federal Register** on January 14, 2010 (75 FR 2269).

Description, Distribution, Habitat and Recovery

Bull trout are members of the char subgroup of the family Salmonidae and are native to waters of western North America. Bull trout range throughout the Columbia River and Snake River basins, extending east to headwater streams in Montana and Idaho, into Canada, and in the Klamath River basin of south-central Oregon. Bull trout historically occurred in the Sacramento River basin, and were more widespread in general than they are now. The distribution of populations, however, is scattered and patchy (Goetz 1989, p. 4; Ziller 1992, p. 6; Rieman and McIntyre 1993, p. 3; Light *et al.* 1996, p. 44; Quigley and Arbelbide 1997, p. 1176).

Bull trout have more specific habitat requirements than most other salmonids (Rieman and McIntyre 1993, p. 4). Habitat components that particularly influence their distribution and abundance include water temperature, cover, channel form and stability, spawning and rearing substrate conditions, and migratory corridors (Fraley and Shepard 1989, p. 138; Goetz 1989, p. 19; Watson and Hillman 1997, p. 247). Large patches of these components are necessary to support robust populations. This rule identifies those physical or biological features essential to bull trout conservation.

Bull trout exhibit a variety of migratory and nonmigratory life histories. Stream-resident bull trout complete their entire life cycle in the tributary streams where they spawn and rear. Most bull trout are migratory, spawning in tributary streams where juvenile fish usually rear from 1 to 4 years before migrating to either a larger river (fluvial) or lake (adfluvial) where they spend their adult life, returning to the tributary stream to spawn (Fraley and Shepard 1989, p. 133). Resident and migratory forms may be found together, and either form can produce resident or migratory offspring (Rieman and McIntyre 1993, p. 2). Historically most bull trout populations may have included a migratory component, and any resident-only forms found today may often reflect a loss of the migratory component due to impacts such as habitat loss or migration barriers (Muhlfeld 2010, pers.comm.).

Bull trout, coastal cutthroat trout (*Oncorhynchus clarkii clarkii*), Pacific salmon (*Oncorhynchus* spp.), and other species that migrate from saltwater to freshwater to reproduce are commonly referred to as anadromous. However, bull trout, coastal cutthroat trout, and some other species that enter the marine environment are more properly termed amphidromous. Unlike strictly anadromous species, such as Pacific salmon, amphidromous species often return seasonally to fresh water as subadults, sometimes for several years, before returning to spawn (Wilson 1997, p. 5; Brenkman and Corbett, 2005, p. 1075). The amphidromous life history form of bull trout is unique to the Coastal–Puget Sound population (64 FR 58921, November 1, 1999). For additional information on the biology of this life form, see the June 25, 2004, proposed critical habitat designation for the Jarbidge River, Coastal–Puget Sound, and Saint Mary–Belly River populations of bull trout (69 FR 35767).

The decline of bull trout is primarily due to habitat degradation and fragmentation, blockage of migratory corridors, poor water quality, past fisheries management practices,

impoundments, dams, water diversions, and the introduction of nonnative species (63 FR 31647, June 10, 1998; 64 FR 17112, April 8, 1999). Climate change may exacerbate some of these impacts. The bull trout 5–year review (Service 2008, p. 45) recommended that the recovery units identified in the 2002 draft recovery plan be updated based on assemblages of bull trout core areas (metapopulations, or interacting breeding populations) that retain genetic and ecological integrity and are significant to the distribution of bull trout throughout the conterminous United States. After consulting with biologists from States, Federal agencies, and Native American Tribes, and applying the best scientific information available, we identified six draft recovery units for bull trout in the conterminous United States. Please refer to the ''Critical Habitat'' section below for additional information on this topic.

Previous Federal Actions

On November 29, 2002, we proposed to designate critical habitat for the Klamath River and Columbia River bull trout populations (67 FR 71235). On October 6, 2004, we finalized the critical habitat designation for the Klamath River and Columbia River bull trout populations (69 FR 59995). On June 25, 2004, we proposed to designate critical habitat for the Jarbidge River, Coastal–Puget Sound, and Saint Mary–Belly River bull trout populations (69 FR 35767). On September 26, 2005, we designated critical habitat for the Klamath River, Columbia River, Jarbidge River, Coastal–Puget Sound, and Saint Mary–Belly River populations of bull trout (70 FR 56212). Please refer to the above-mentioned rules for a detailed summary of previous Federal actions completed prior to publication of this final rule.

On January 5, 2006, a complaint was filed in Federal district court by the Alliance for the Wild Rockies, Inc., and Friends of the Wild Swan, alleging the U.S. Fish and Wildlife Service (Service) failed to designate adequate critical habitat, failed to rely on the best scientific and commercial data available, failed to consider the relevant factors that led to listing, and failed to properly assess the economic benefits and costs of critical habitat designation. Other allegations included inadequate analysis and unlawful use of exclusions under section 4(b)(2) of the Act. On March 23, 2009, the Service provided notice to the U.S. District Court for the District of Oregon that we would seek remand of the final critical habitat rule for bull trout based on the findings of an investigative report by the Department of the Interior's Inspector General (USDI 2008, pp. 10–38). On July 1, 2009, the Court granted our request for a voluntary remand of the 2005 final rule and directed a new proposed rule to be completed by December 31, 2009, with a final rule submitted to the **Federal Register** by September 30, 2010 (*Alliance for the Wild Rockies* v. *Allen*, 2009 U.S. Dist. LEXIS 63122 (D. Or., July 1, 2009)). On January 14, 2010, the Service published a proposed revised bull trout critical habitat rule (75 FR 2269). The comment period on the proposed rule was open for 60 days, ending March 15, 2010. On March 23, 2010, we reopened the comment period on the proposed rule for an additional 14 days, ending April 5, 2010 (75 FR 13715).

Summary of Comments and Recommendations

We requested written comments from the public on the proposed designation of critical habitat for the bull trout during two comment periods. The first comment period, associated with the publication of the proposed rule and announcement of availability of draft economic analysis (75 FR 2269, January 14, 2010), opened on January 14, 2010, and closed on March 15, 2010. We also reopened the comment period for an additional 15 days from March 23, 2010, to April 5, 2010 (75 FR 13715, March 23, 2010), to accommodate a request for a comment period extension. We also contacted appropriate Federal, State, tribal, and local agencies, scientific organizations, and other interested parties and invited them to comment on the proposed rule and the draft economic analysis. We held a public hearing in Boise, Idaho, on February 25, 2010, and held public meetings and open houses in Bend, Chiloquin, and LaGrande, Oregon; Post Falls, Idaho; Missoula, Montana; Elko, Nevada; and Wenatchee Washington. During the first comment period, we received a request for an additional public hearing from the Native Fish Society; however, section 4(b)(5)(E) of the Endangered Species Act of 1973, as amended (Act) (16 U.S.C. 1531 *et seq.*), only 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. Because of the court-ordered deadline, we were unable to hold an additional public hearing; however, we did conduct an additional open house and public information meeting in Vancouver, Washington, in response to the Native Fish Society's request.

We received several hundred comment letters and e-mails from individuals and organizations, and speaker testimony at the February 25, 2010, Boise, Idaho, public hearing. We also received comment letters from four peer reviewers, eight State agencies, several Native American Tribes, and seven Federal agencies, including the U.S. Navy.

We coordinated the proposed revision of critical habitat with federally recognized Tribes on a government-to-government basis in accordance with the President's memorandum of April 29, 1994, ''Government-to-Government Relations with Native American Tribal Governments'' (59 FR 22951); Executive Order 13175; and the relevant provision of the Departmental Manual of the Department of the Interior (512 DM 2). We contacted all Tribes potentially affected by the proposed designation and met with a number of these Tribes to discuss their ongoing or future management strategies for bull trout.

All substantive information provided during comment periods has either been incorporated directly into this final designation or addressed below. Comments we received were grouped into general issues specifically relating to the proposed critical habitat designation for the bull trout, and are addressed in the following summary and incorporated into the final rule as appropriate.

Peer Review

In accordance with our policy published in the **Federal Register** on July 1, 1994, (59 FR 34270), we solicited opinions from four 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 we contacted. We reviewed all comments we received for substantive issues and new information regarding bull trout critical habitat. We have addressed peer reviewer comments in the following summary and have incorporated them into this final rule as appropriate.

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)), and accurately characterized the reasons for the species' decline and the threats to its habitat, and the peer reviewers generally concurred with our critical habitat selection criteria. Peer reviewer comments addressed several topics,

including the importance of off-channel habitats and information on specific waterbodies, climate change, migratory corridors and connectivity, historical and contemporary range, disturbance processes, primary constituent elements, and threats.

Comments from Peer Reviewers

(1)*Comment*: The Service should discuss uncertainty in our knowledge of habitat use by bull trout and what habitat features are important to bull trout. Peer reviewers expressed concern about how new information (e.g., regarding bull trout occupancy, and habitat requirements and use) should be integrated into critical habitat protections. Because we do not know what type of disturbance will occur where, or how long those effects may last, there are uncertainties regarding future habitat viability (i.e., what is good habitat today might not be suitable in the future, and vice versa).

Some specific comments include the following. The term ''migratory corridors'' implies that fish do not occupy these areas for extended periods of time during their life history, but mainstem river habitats are critical for rearing and overwintering. Subadults stay for months and years in these areas to grow to maturity. Bull trout depend critically on large patches of suitably cold habitat; cold habitat is necessary, but it also has to be very large as well. In addition to connectivity, this is a landscape characteristic that defines the species' local occurrence. In areas where anadromous fish are extirpated or endangered, bull trout have been affected through the loss of abundant prey in the form of parr and smolts, and by a severe reduction in marine-derived nutrients that adult anadromous fish formerly annually returned to interior basins. The PCEs do not address habitat requirements for fry-parr rearing, fry-parr overwintering, adult staging, and adult overwintering. PCE 6 needs to address cobble/boulder substrates with a few fines and abundant interstitial spaces as essential for overwintering bull trout juveniles and resident bull trout. The actual range of spawning temperature is wider and often noted in field observations, but less frequently published. Studies found that fish in cold water did not move outside of cold water to other spawning areas, but there is probably more variation than indicated in the proposed rule (75 FR 2278, January 14, 2010). The implication is that a wider range of habitats may be important for spawning. Finally, it appeared to reviewers that there was an arbitrary distinction drawn between foraging, migration, and overwintering (FMO) and spawning and rearing habitat. In addition, peer reviewers provided additional bull trout life-history information.

Our Response: The Service agrees there are many uncertainties in the identification and protection of essential bull trout habitat. Uncertainties include an incomplete understanding of important features, uncertainty of future disturbance effects, a lack of data to clearly distinguish between spawning and rearing and FMO habitats, and a lack of information on how the absence of or a reduction in anadromous fish abundance affects bull trout. The PCEs in this final rule represent our best current understanding of habitat requirements for bull trout. The PCEs were developed by working with a broad array of local experts to identify both occupied habitat that contains physical or biological features essential to bull trout conservation, and unoccupied habitat that is essential to conservation. We acknowledge that potential disturbances such as wildfire or invasive species introductions are difficult to predict, but may affect bull trout habitat. To address this concern, we designated critical habitat areas we believe will be sufficient to address variability in the habitat function of individual portions of these habitats over time, based on the best available scientific information. Should it become necessary, we can revise critical habitat to address more complete or additional information (if and when such information becomes available) relative to bull trout conservation.

We have revised the PCEs based on the peer review and other comments, and believe they address all life-history components and habitat needs for bull trout, including the need for large patches of suitably cold habitat. Given the wide range of circumstances and habitats to which PCEs may apply, they necessarily lack absolute specificity and detail. The sections on **Primary Constituent Elements**, **Effects of Critical Habitat Designation**, and *Application of the Jeopardy and Adverse Modification Standards*, below, provide additional context for how the PCEs will be interpreted and implemented.

We acknowledge an imprecise understanding of the distinction between spawning and rearing habitat and FMO habitat on a general and site-specific basis. This final rule acknowledges that bull trout typically spawn over a narrow time window of a couple weeks during periods of decreasing water temperatures, but clarifies that spawning ranges from August to November depending on local conditions (Swanberg 1997, p. 735). When we discuss migratory corridors in this rule, we generally refer to FMO habitat, which includes more than just habitat for migration at limited times of year. We agree that there is considerable uncertainty regarding the role FMO habitat plays in any particular area. We anticipate the need to include spatial and temporal considerations regarding the role of FMO habitat for particular areas during section 7 consultation, and modify those consultations accordingly.

We have a limited understanding of the effects that the loss of anadromous fish had on bull trout, although bull trout appear to continue to thrive in some areas where anadromous fish have been eliminated. However, bull trout populations may have been more robust where anadromous fish were historically also present, or present in greater numbers. For the purposes of this designation, we believe identifying essential habitats regardless of the historic or current presence of anadromous fish provides an opportunity to protect those essential habitats. We anticipate evaluating more closely the role anadromous fish may play in bull trout conservation during recovery planning.

(2)*Comment*: Climate change should be identified as an existing stressor that compounds other stressors, contributing to bull trout decline. Due to the complex interaction of climatic responses and the high degree of uncertainty associated with climate projections, there needs to be some type of criteria (e.g., maximum summer temperatures) in deciding to deemphasize some habitats. One peer reviewer commented the current analysis of climate impacts does not help in thinking about localized climate impacts; it provides a big picture view that is probably a lot more apocalyptic than might actually occur (for example, air may respond a lot more strongly to climate impacts than water temperatures). Maximum air and water temperatures are not always correlated, and changes to air temperatures may not reliably indicate changes to water temperature. Lower-elevation, warmer, marginal habitats should not necessarily be excluded from critical habitat because they still may serve as important migratory corridors during certain times of the year that could link isolated populations. Not including these habitats as critical habitat could result in further habitat fragmentation, population isolation, and associated threats (e.g., reduced genetic diversity.). The Service should address the extent to which such habitats are valued and may be accounted for in recovery planning.

Our Response: We are unable to predict the site-specific effects of

climate change on bull trout habitat throughout the range of the species with certainty, but we did consider climate change as we developed the proposed rule (75 FR 2280, January 14, 2010). For areas that were marginal in terms of adequately providing PCEs for the bull trout, which we believe would be further degraded as a result of climate change, we chose not to identify those areas as critical habitat. However, this rationale was applied only in a few instances. We agree with the peer review comments that these warmer habitats can be essential to bull trout conservation because they facilitate connectivity among otherwise isolated headwater populations of bull trout. In the Klamath Basin, we are designating a larger amount of unoccupied habitat of this type specifically for this reason. In most cases, these areas can serve as migratory corridors in a few cooler months of the year with higher water flows. Also, providing cold-water habitat during low-flow summer months may never have been an important feature of this kind of habitat for bull trout.

(3)*Comment*: While the presence of nonnative invasive species is likely detrimental to bull trout in most cases, areas with nonnative species present should not necessarily be excluded from critical habitat, as seems to be suggested under PCE 9. Nonnative species can serve as an important forage base where the native fish assemblage has been fractured. The Service should address more clearly how nonnative species impact our evaluation of whether habitats are essential.

Our Response: We agree with peer reviewer's comments and have revised PCE 9 to reflect the concern. We considered the impact of invasive species to evaluate areas that may have been marginal habitat to begin with. If these areas were additionally compromised because of robust populations of invasive species that would be difficult to control, we are not designating the area as critical habitat if bull trout populations were not reasonably recoverable and the area was not needed for recovery. In some cases bull trout occur in good habitat that is primarily impacted by invasive species. If these populations are essential to recovery and special management actions can be reasonably implemented to control invasive species, we are designating the area as critical habitat. More importantly, this PCE is included here as one key bull trout habitat protection element. So, for example, a Federal action that would introduce an invasive species such as brook trout in a watershed with bull trout critical habitat would be inconsistent with the recovery needs of the species in that area.

(4)*Comment*: The Service should ensure that confining the lateral extent of the critical habitat designation in streams to the bankfull elevation addresses habitat needs. The Service should also clarify what is meant by habitat complexity under PCE 4, and develop appropriate metrics that relate to habitat complexity. In some basins, off-channel habitats may be critical for providing low-velocity habitats for rearing small fish, and the accessibility of these habitats will change with flow. Many of the constituent elements identified for bull trout depend on watersheds as a whole, and other contributing tributaries, not just the reaches that bull trout use. Consequently, it may be difficult or impossible to conserve bull trout by limiting habitat protection and restoration only to the reaches that they use.

Peer reviewer comments related to threats included observations that roads can increase the likelihood of poaching; herbicides and pesticides cause additional agricultural effects; screening of diversions may reduce the impacts of irrigation; negative impacts of flow modifications associated with hydropower and flood control operations, and summer augmentation, may occur in downstream areas; and road crossings may create barriers in addition to barriers already in place from dams.

Our Response: Activities above the ordinary high water mark can, and often do, impact bull trout critical habitat. Off-channel habitats may be seasonally important for bull trout, and upland management practices such as road construction, use, and maintenance or timber harvest can affect aquatic habitat. Actions that occur upstream in a watershed above bull trout occurrence reaches can also adversely affect designated habitat if not properly conducted. We will implement this rule consistent with our understanding of these effects, and work closely and cooperatively with Federal agencies to ensure any such actions do not adversely modify designated critical habitat.

When we discuss bull trout habitat complexity, we refer to a diversity of pool, riffle, and run habitats in streams, and gravel, cobble, and boulder stream substrates with open interstitial spaces. We also refer to stream channels and their associated riparian habitat areas that collectively function to provide important features such as undercut stream banks, shade, overhanging cover, and large woody debris in streams and other waterbodies. Any Federal actions that would adversely modify these features would be inconsistent with this rule. Examples of these actions could include activities that introduce sediment into streams that clog interstitial spaces, discharge dredged or fill material into stream pool habitat, degrade stream banks, and reduce or remove large woody debris. Because of this habitat complexity across the range of the species, we determined and quantified the habitat needs of the bull trout and defined the PCEs to include the needs of the species across all types of waterbodies within the full range of the bull trout. We have presented additional information for Federal agencies in the sections on **Primary Constituent Elements** and *Section 7 Consultation*, below, to help them consider their future actions and ongoing actions where they have continuing discretionary involvement with regard to conserving the PCEs. With regard to the comment that it may be difficult or impossible to conserve bull trout by limiting habitat protection and restoration only to the reaches that they use, we do not limit the critical habitat designation to occupied habitat. We are designating approximately 1,323.7 km (822.5 mi) of streams and 6,758.8 ha (16,701.3 ac) of unoccupied habitat to address bull trout conservation needs in specific geographic areas.

(5)*Comment*: It is unclear where occupied habitats that are not proposed for designation are located, or where historical populations of bull trout once occurred. It is reasonably arguable that some critical habitat is more critical to the conservation needs of the species than other critical habitat.

Our Response: Section 3(5)(A) of the Act defines critical habitat, in part, as the specific areas within the geographical area occupied by the species at the time it is listed, on which are found those physical or biological features essential to the conservation of the species which may require special management considerations or protection. Based on this definition, the proposed rule identified a large majority of habitat that was known to be occupied by bull trout at the time of listing. It is uncertain how much habitat may have been historically occupied but is no longer occupied. We used the best scientific information available to include occupied habitat with the features essential to the conservation of the species, as well as unoccupied areas also essential to the conservation of the bull trout. All areas designated as critical habitat in this final rule are

essential to the conservation of the species, based on the best available information.

(6)*Comment*: Peer reviewers questioned whether restoration activities in areas that are not designated as critical habitat could be counted as progress in terms of recovery, and whether all areas designated as critical habitat would have to be recovered before declaring overall bull trout recovery. One peer reviewer recommended that the final rule address how bull trout will be protected in reintroduction sites, such as the Clackamas River in Oregon, and how these areas may or may not be linked to the persistence of populations.

Our Response: These comments will be fully considered as we engage in the recovery planning process. Please see the *Relationship of Critical Habitat to Recovery Planning* section of this rule for more information regarding this effort.

(7)*Comment*: One peer reviewer stated that it wasn't clear whether areas outside of critical habitat are essential to conservation of bull trout, and that if not, biological consultations and recovery planning and implementation should incorporate these considerations.

Our Response: This rule designates as critical habitat areas that we have determined to meet the definition of critical habitat under section 3(5)(A) of the Act, except for those areas we have identified and expressly excluded under section 4(b)(2) of the Act. 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, and are subject to the regulatory protections afforded by the section 7(a)(2) jeopardy standard. Please see the **Effects of Critical Habitat Designation** section in the rule for further information.

(8)*Comment*: The Service should explain what has changed from 2005 to 2010 that enabled a determination that unoccupied habitats were essential for the conservation of bull trout in certain areas.

Our Response: As stated in the proposed rule (75 FR 2273, January 14, 2010), in the 2005 final rule we did not designate any unoccupied critical habitat because the Secretary concluded that it was not possible to make a determination that such lands were essential to the conservation of the species. In the proposed rule and this rule, we were able to identify several habitats not occupied at the time of listing that we believe are essential for restoring functioning migratory bull trout populations based on currently available scientific information. These areas often include lower main stem river environments that can provide seasonally important migration habitat for bull trout. This type of habitat is essential in areas where bull trout habitat and population loss over time necessitates reestablishing bull trout in currently unoccupied habitat areas to achieve recovery.

(9)*Comment*: More detailed and recent literature should be reviewed to support the habitat needs discussion. Updated citations and references that list research and other new information obtained since the original listing should be incorporated into the critical habitat rule.

Our Response: We agree, and have done so in this final rule.

Comments from States

Section 4(i) of the Act states, ''the Secretary shall submit to the State agency a written justification for his failure to adopt regulations consistent with the agency's comments or petition.'' Comments we received from States regarding the proposal to designate revised critical habitat for the bull trout are addressed below. We received comments from the Nevada Division of Wildlife, Montana Fish Wildlife and Parks, Oregon Department of Fish and Wildlife, Washington Department of Fish and Wildlife, Washington Department of Natural Resources (WDNR), Idaho Department of Lands, Idaho Office of Species Conservation, and Idaho Department of Fish and Game related to biological information for specific waterbodies, critical habitat exclusions, and economics. These agencies provided additional information and made recommendations for revisions to the final critical habitat designation in several specific areas. Two agencies expressed specific support for the Service's approach to designating critical habitat.

(1)*Comment*: We received several comments from State resource agencies presenting site-specific biological information on areas that should or should not be considered essential habitat, and the underlying rationale for those recommendations.

Our Response: The information received from our State resource agency partners was very helpful, and enabled us to refine our understanding of habitat essential to the conservation of the species, and in the case of occupied habitat, habitat that contains physical or biological features that may require special management considerations or protections. We based the proposed rule on the best available information at that time; we requested technical input from a variety of partners, including the States, to help us refine the final critical habitat designation. The final rule has been adjusted, accordingly, including modifying boundaries of critical habitat units, based on our partners' site-specific biological expertise with the species.

(2)*Comment*: We received comments from some State agencies identifying concerns with the draft economic analysis, which included failure to consider costs related to bull trout recovery, failure to request economic information from the State prior to publication of the proposed rule, and costs to forest land management.

Our Response: These comments have been addressed below in the section of the final rule that responds to all comments we received on the draft economic analysis.

(3)*Comment*: Some commenters recommended that we exclude lands subject to State conservation planning efforts, or that we rely on existing habitat protections, such as State forest practice rules, rather than designating critical habitat in those areas.

Our Response: We disagree. It would be inappropriate to rely on other protections such as state forest practice rules or similar large-scale programs that have not been subject to review under the Act as an alternative to critical habitat designation, based on the uncertainty of protections that would be afforded to the physical or biological features essential to bull trout conservation. Uncertainty regarding future funding, and revisions and implementation of those plans is also a concern. However, some State conservation planning efforts related to finalized habitat conservation plans (HCPs) have resulted in our exclusion of areas from critical habitat designation under section 4(b)(2) of the Act. Please see the **Exclusions** section below for additional information.

(4)*Comment*: One State agency commented that the Service proposed a vast and over-reaching critical habitat designation without first acquiring the requisite site-specific information required by the Act. The State agency also commented that, without future refinement, the designation would lead to unnecessary regulation on otherwise lawful activities. The agency also expressed concern that the Service ignored information regarding the agency's position when forming the

basis for the revised critical habitat designation.

Our Response: As required by section 4(b)(2) of the Act, we used the best scientific data available in determining areas that contain the features essential to the conservation of bull trout for the proposed rule. Data sources included research published in peer-reviewed journals and previous Service documents, including the final listing determination (64 FR 58909, November 1, 1999), the bull trout draft recovery plan (Service 2002), and the bull trout 5–year review (Service 2008). In the proposed rule, we requested comments or information from the public, other concerned government agencies, the scientific community, industry, and other interested parties, which included a specific request for information regarding areas essential to the conservation of the species. Because of the court-ordered deadline for delivery of a proposed rule to the **Federal Register**, our strategy was to work closely with our resource management partners after publication of the proposed rule, and use their biological expertise to help us refine the final critical habitat designation. This final rule incorporates that information, as appropriate.

(5)*Comment*: One State agency commented that the designation of critical habitat for bull trout invites the potential for additional regulatory burdens to be placed on landowners, persons holding public land permits, and industries. The agency also commented that while the Service is already consulting on projects with a Federal nexus under section 7 of the Act, the bar is now arguably raised as reinitiation of consultation will be required to ensure permitted activities do not adversely modify critical habitat.

Our Response: The Service believes any additional regulatory burdens resulting from the designation of critical habitat in occupied areas will be minimal. The rationale for this determination is that the species was listed under the Act because of threats to habitat, and section 7 consultations are already required to address any habitat-related impacts associated with Federal actions. Although it is theoretically possible, we have been unable to identify any specific type of Federal action that could adversely modify critical habitat in occupied areas that would not also result in a jeopardy finding for the same action. Accordingly, we do not believe the regulatory bar has been raised in occupied areas. Designating critical habitat adds educational value in these areas by identifying habitats that should be prioritized for recovery actions as opportunities arise. While critical habitat may result in additional conservation requirements for Federal actions in unoccupied areas, we do not believe this would be a significant impact because these areas constitute only 4 percent of the total critical habitat area being designated in this final rule. Federal agencies will need to consider the adverse modification of critical habitat in future section 7 consultations, and may need to reinitiate consultation on existing actions where they have continued discretionary involvement or control if the activity may affect designated critical habitat. However, we anticipate the overall result of reinitiation will be minor because of the similarity between measures needed to avoid the destruction or adverse modification of critical habitat and measures needed to avoid jeopardizing the species. In addition, consultation tools such as streamlining and programmatic consultations are commonly implemented to minimize the administrative costs associated with consultation within the range of bull trout.

(6)*Comment*: Concern was expressed that if all unoccupied critical habitat had to be recolonized and recovered before bull trout could be delisted, the uncertainties and potential costs associated with this requirement would be high.

Our Response: One of the greatest conservation benefits of critical habitat is the designation of unoccupied habitat that is essential to the conservation of a listed species. For bull trout, unoccupied habitat plays an important role in restoring connectivity between currently isolated headwater populations via lower mainstem river habitats. The Service does not believe all designated unoccupied habitat would necessarily need to be recolonized and restored to declare recovery, and we would take into consideration the status of adjacent populations (e.g., their robustness in relation to threats). For example, nearby occupied habitats could currently be in an imperiled status, but by restoring bull trout in adjacent unoccupied habitat, the overall recovery potential in that area could be improved. We anticipate that the bull trout recovery planning process and our continued progress towards achieving recovery goals will provide more precision with regard to identifying the restoration needs of specific habitat areas.

(7)*Comment*: Two State agencies expressed support for the Service's approach to designating critical habitat, stating that: (1) The approach generally provides the breadth of habitat necessary to support bull trout in a fully recovered state and includes significant portions of aquatic habitat that are currently not occupied or disconnected due to anthropogenic (i.e., human-caused) factors; and (2) the approach contains those areas essential for the conservation of the bull trout.

Our Response: We appreciate this support from our partners, and the helpful site-specific information they presented in response to the request for information in the proposed rule.

(8)*Comment*: The Washington Department of Natural Resources presented information supportive of excluding lands covered under the final State HCP and the final Forest Practices HCPs. The Montana Department of Natural Resources presented information supportive of excluding streams and rivers intersecting forested Montana State Trust lands that would be covered under a draft HCP from the final bull trout critical habitat rule.

Our Response: Please refer to the discussion of the Forest Practices HCPs in our responses to Public Comments below and in the *Application of Section 4(b)(2) of the Act* section under **Exclusions** in this final rule. The WDNR State lands HCP is discussed under the *Application of Section 4(b)(2) of the Act* in this rule.

When considering HCPs, draft land-management plans, and draft conservation agreements, the Service can consider the certainty of implementation or the lack thereof, especially if there are no established procedures to ensure that the final instrument will produce the anticipated benefits. The Service believes that, in general, it is inappropriate exclude areas that are covered by draft conservation programs or plans, because their proposed conservation measures are subject to change. Without a high degree of assurance that conservation measures will be implemented and effective for a particular species and its habitat, we cannot complete a meaningful analysis under section 4(b)(2) of the Act.

Federal Agency Comments

Bureau of Land Management

(1)*Comment*: The Service should exclude Bureau of Land Management (BLM)-administered lands from critical habitat designation.

Our Response: The Secretary of the Interior may exclude an area from critical habitat designation under section 4(b)(2) of the Act after taking into consideration the economic impact, the impact on national security, and any

other relevant impact if he determines the benefits of exclusion outweigh the benefits of specifying such area, unless he determines the exclusion would result in the extinction of the species concerned. The primary benefit of including an area within critical habitat designation is the protection provided by section 7(a)(2) of the Act that directs Federal agencies to ensure that their actions do not result in the destruction or adverse modification of critical habitat. The benefit of designating critical habitat is limited if the areas under consideration occur on private lands for which there may not be a Federal nexus to invoke the protections of section 7(a)(2) of the Act. Federal lands by default have a Federal nexus, and the intent of section 7 of the Act is to require Federal agencies to consult on any action authorized, funded, or carried out by such agency to ensure that the action will not jeopardize a listed species or destroy or adversely modify its critical habitat. In addition, section 7(a)(1) of the Act states, in part, ''Federal agencies shall, in consultation with and with the assistance of the Secretary, utilize their authorities in furtherance of the purposes of this Act by carrying out programs for the conservation of endangered and threatened species.'' Therefore, the benefits of inclusion of these areas are greater because they are Federal lands.

We requested specific information from the BLM describing: (1)Activities being conducted and planned that conserve bull trout or the physical or biological features identified in the proposed critical habitat rule; (2) the status of management plans, including the geographic area covered, date finalized, date implementation was initiated, timeline for future revisions, and the amount of critical habitat affected by the plan; (3) specific management measures that conserve the physical or biological features in the plan area; (4) conservation benefits associated with the plan; (5) information on plan implementation, including the level of certainty and uncertainty that exists with regard to conservation commitments and funding assurances continuing into the future; and (6) the plan's effectiveness related to biological goals and objectives, implementation progress, monitoring, adaptive management provisions, and schedule. We also requested specific examples of completed projects that have improved the status of bull trout within a particular plan area.

Although specific information was not presented, we did receive some information from the BLM on Areas of Critical Environment Concern (ACEC) Plans, the Wild and Scenic River Management (WSR) Plans for the Deschutes and Lower Crooked Rivers in Oregon, and the Willamette Basin Water Quality Restoration Plan (WBWQ) to support their request for the exclusion of BLM-administered lands from critical habitat designation. The BLM also resubmitted comments that were prepared for the Service's consideration for the 2005 bull trout final critical habitat rule; those comments summarize several management plans and guidance documents, such as agency memorandums, BLM Manual chapters, Land Health Standards, Pacific Anadromous Fish Strategy (PACFISH), Inland Fish Strategy (INFISH), National Fire Plan, Healthy Forests Restoration Act of 2003 (16 U.S.C. 6501 *et seq.*), Wilderness Study Areas, Interior Columbia River Basin Ecosystem Management Project, Road Density and Land Management recommendations, and Regional Executive/Line Manager Oversight/Communication roles. We have reviewed the information that was submitted in light of the October 3, 2008, Memorandum Opinion from the Department of the Interior's Office of the Solicitor ''The Secretary's Authority to Exclude Areas from a Critical Habitat Designation under section 4(b)(2) of the Endangered Species Act'' (DOI 2008), and the best available information. We were unable to confirm that the BLM's management plans and guidance documents provide a conservation benefit for bull trout comparable to critical habitat designation, or that designation of critical habitat on BLM lands would present a disproportionate economic or other relevant impact. The Secretary has elected not to exercise his discretion under section 4(b)(2) of the Act to exclude BLM-administered lands from this revised critical habitat designation. However, we are committed to working efficiently and proactively with the BLM to address their program administration needs, in light of the conservation needs of bull trout.

(2)*Comment*: The BLM commented, ''The BLM does not agree and the guidance issued in the October 3, 2008, Solicitors Opinion does not support the conclusion that if something meets the Federal agency obligation under section 7(a)(1) it should automatically be precluded from exclusions under section 4(b)(2).''

Our Response: The proposed rule does not state that actions taken to comply with section 7(a)(1) of the Act preclude consideration of those actions for purposes of section 4(b)(2) of the Act; however, it does state that Federal land management plans, in and of themselves, are generally not an appropriate basis for excluding essential habitat. Federal agencies have an independent responsibility under section 7(a)(1) of the Act to use their programs in furtherance of the Act and to utilize their authorities to carry out programs for the conservation of endangered and threatened species. In areas where Federal land management agencies actively manage for bull trout and its habitat, conduct specific conservation actions for the species at a level comparable to critical habitat designation, provide assurances that a plan will remain in effect for a relevant period of time, and show that a disproportionate impact would result from the designation, exclusion under section 4(b)(2) of the Act may be appropriately considered by the Secretary.

(3)*Comment*: Conservation measures within the Northwest Forest Plan (NWFP), Aquatic Conservation Strategy (ACS), and PACFISH/INFISH are currently still in place and continue to be adequate to provide for the conservation of bull trout.

Our Response: We recognize the extensive planning and development that has been invested in these efforts, and commend the BLM's efforts to conserve federally listed species on their lands. However, as stated in the proposed rule (75 FR 2273), large-scale Federal land management plans such as the NWFP and its aquatic component (the ACS), and other plans such as PACFISH/INFISH, are in and of themselves generally not an appropriate basis for excluding essential habitat. These plans typically guide agency activities, and provide some level of conservation benefit in occupied bull trout habitat areas, but are fluid documents that may or may not be revised, based on resource availability, management emphasis, and changes in management direction to respond to changing agency priorities.

(4)*Comment*: The designation of critical habitat would not offer any additional protections to bull trout beyond those currently provided.

Our Response: We acknowledge in the proposed rule that since the primary threat to bull trout is habitat loss or degradation, the jeopardy analysis under section 7 of the Act for a project with a Federal nexus will most likely evaluate the effects of the action on the conservation or functionality of the habitat for bull trout. We also stated that, in many cases, the analysis of a project to address designated critical habitat would be comparable to the jeopardy analysis, and for many circumstances the outcome of the

consultation to address critical habitat would not result in any significant additional project modifications or conservation measures (75 FR 2291, January 14, 2010). A possibility exists that a section 7(a)(2) consultation on a future BLM project would result in a determination that an action would result in the destruction or adverse modification of bull trout critical habitat. In accordance with our current policy, in cases where the Secretary determines the benefits of inclusion (designation) are equal to or outweigh the benefits of exclusion, he may not make an exclusion (USDOI 2008, p. 24).

(5)*Comment*: The designation of critical habitat would impose additional regulatory burdens that would increase the process and administrative costs, and this money would be more appropriately directed at implementing protection measures on the ground.

Our Response: The analyses that result from the consultation provisions under section 7(a)(2) of the Act constitute a regulatory benefit of critical habitat, and Federal agencies must consult with the Service on discretionary actions that may affect listed species. Federal agencies must also analyze the effects of an action on critical habitat, which is a separate and different analysis from that of the effects to the species. We anticipate that, in some cases, this consultation would translate to the implementation of on-the-ground bull trout conservation measures. Avoiding the costs associated with the designation of critical habitat would be the principal benefit of excluding an area under section 4(b)(2) of the Act. We appreciate the BLM's concern that the designation of critical habitat may impose additional regulatory burdens and increase administrative costs; however, the BLM did not present any information characterizing the magnitude of that impact. In order to make a section 4(b)(2) exclusion or critical habitat designation determination, the Secretary must gather the available information about the economic and other relevant impacts that would result from his decision (DOI 2008, p. 15). We have no information available that would indicate that the regulatory and administrative burden that may result from the designation of critical habitat on BLM lands presents a disproportionate impact to the agency that outweighs the regulatory benefit of designating critical habitat on those lands.

(6)*Comment*: The conservation benefit of designating critical habitat would only be realized when the Service determines the action would destroy or adversely modify critical habitat and reasonable and prudent alternatives are issued, which is rare.

Our Response: We agree that adverse modification determinations are rare, because in the majority of section 7 consultations the Service is able to work in partnership with Federal agencies to identify ways to accomplish agency management objectives, comply with the Act, and conserve species and their habitats on managed lands. However, in some cases, we may determine a proposed Federal action would alter the physical or biological features of critical habitat to an extent that appreciably reduces its conservation function for bull trout. Under these circumstances, an adverse modification finding for the proposed action would be warranted. There may be additional conservation benefits to consultation on adverse effects that is not limited to adverse modification situations, because an agency may modify an action in advance to avoid any effects to critical habitat and avoid the need for consultation.

(7)*Comment*: Because any conservation benefits realized through the section 7(a)(2) process would already be occurring in areas occupied by bull trout, additional conservation benefit would only occur in areas designated as critical habitat where the species is not present.

Our Response: As stated in the proposed rule, when consulting under section 7(a)(2) of the Act, independent analyses are conducted for jeopardy to the species and adverse modification of critical habitat (75 FR 2291, January 14, 2010). In occupied bull trout habitat, any adverse modification determination would likely also result in a jeopardy determination for the same action. As such, project modifications that may be needed to minimize impacts to the species would coincidentally minimize impacts to critical habitat. Accordingly, in occupied critical habitat, it is unlikely, although possible, that an analysis would identify a difference between measures needed to avoid the destruction or adverse modification of critical habitat from measures needed to avoid jeopardizing the species. Alternatively, in unoccupied critical habitat, we would not conduct a jeopardy analysis. However, measures to avoid the destruction or adverse modification of critical habitat may be necessary to ensure that the affected critical habitat area can continue to serve its intended conservation role for the species, or retain the physical or biological features related to the ability of the area to periodically support the species (75 FR 2291, January 14, 2010).

U.S. Forest Service

(1)*Comment*: The U.S. Forest Service (USFS) believes excluding Federal lands continues to be a valid procedure. They recommended that we exclude from critical habitat designation all occupied bull trout habitat on all USFS-managed lands, as well as unoccupied habitat in the Northwest Forest Plan area, but the USFS acknowledged other factors are used by the Service to decide which lands and waters meet the criteria for critical habitat designation or exclusion.

Our Response: We have reviewed USFS request in light of the October 3, 2008, Memorandum Opinion from the Department of the Interior's Office of the Solicitor ''The Secretary's Authority to Exclude Areas from a Critical Habitat Designation under section 4(b)(2) of the Endangered Species Act'' (DOI 2008), and the best available information. We are unable to confirm that the USFS' management activities under the NWFP or other management plans provide a conservation benefit for bull trout comparable to critical habitat designation, or that designation of critical habitat on USFS lands would present a disproportionate economic or other relevant impact. In light of the foregoing, the Secretary has elected not to exercise his discretion under section 4(b)(2) of the Act to exclude USFS-managed lands from this revised critical habitat designation. However, we are committed to working efficiently and proactively with the USFS to address their program administration needs, in light of the conservation needs of bull trout.

(2)*Comment*: The guidance issued in the 2008 Solicitor M-Opinion does not support a conclusion that if something meets the Federal agency obligation under section 7(a)(1), it should automatically be precluded from exclusions under sections 4(b)(2) of the Act.

Our Response: See response to BLM comment (2) above.

(3)*Comment*: Conservation measures within the Northwest Forest Plan, Aquatic Conservation Strategy, and PACFISH/INFISH are currently still in place and continue to be adequate to provide for the conservation of bull trout.

Our Response: See response to BLM comment (3) above.

(4)*Comment*: Because any conservation benefits realized through actions that used the section 7(a)(2) process would already be occurring in areas occupied by bull trout, The USFS believes the additional conservation benefits of designation would occur only in areas designated as critical

habitat that are not actually occupied by bull trout.

Our Response: See response to BLM comment (4) above.

(5)*Comment*: After the final rule, the USFS will need time to reinitiate and conclude interagency cooperation on many ongoing Federal actions involving critical habitat, and to initiate and conclude new consultations for actions in the process of being developed in occupied and unoccupied critical habitat areas. To facilitate this consultation workload, the USFS requested that the effective date of the final rule be delayed for 120 days (similar to the National Marine Fisheries Service's (NMFS) final rule designating critical habitat for listed anadromous fish populations).

Our Response: Although we appreciate the concern, we have no authorization under the court's remand order to delay the effective date of the rule. However, the Service is committed to working closely and efficiently with our Federal agency partners to meet both their management needs and the conservation needs of bull trout in designated critical habitat areas affected by their actions.

(6)*Comment*: Because critical habitat, by definition, includes those habitats essential to the conservation, and ultimately restoration, of the species, the USFS believes streams on Federal lands that meet critical habitat criteria should be explicitly designated by rule, rather than relying on other planning processes to ''de-facto'' cover these essential conditions. This helps clarify priority areas, internally and with partners, for habitat conservation and improvement-related efforts that will support recovery planning and implementation. The USFS expressed support for designation of critical habitat on National Forest System lands where bull trout can logically be expected to recover. The agency also supported the designation of critical habitat for all areas that are known to have existing populations of bull trout and the designation of tributaries that drain into known spawning habitats.

Our Response: We appreciate the comment, and are designating critical habitat on certain National Forest System lands.

(7)*Comment*: The six new recovery units seem too large to measure recovery should it take place, or be a reachable goal. The old set of 27 smaller recovery units made sense because they were at a scale that is realistic to manage and evaluate the effects of recovery actions.

Our Response: This comment is beyond the scope of the final rule. However, there may be a need to revise the existing draft recovery plan or consider alternative recovery unit boundaries to effectively manage and evaluate the effects of recovery actions in each critical habitat unit. We are conducting preliminary work to develop a revised draft recovery plan, with the goal of developing a final bull trout recovery plan in the future.

Bureau of Reclamation

(1)*Comment*: For existing dams, it is unclear how the current condition of the habitat with the dam in place can threaten the physical or biological features of the specific areas being designated as those areas, if occupied, can only be designated if the physical or biological features essential to the conservation of the species are found under the existing conditions (i.e., with the dams in place). The Bureau of Reclamation (BOR) recommended the following language for inclusion in the final rule: ''While critical habitat is designated in streams and reservoirs where flows and volumes fluctuate due to water management activities, these are existing conditions that were found at the time of listing. The lateral extent described for those streams and reservoirs influenced by water management activities is considered the upper limit of the critical habitat designation and changes in flows and volumes are acceptable.''

Our Response: To qualify as critical habitat, an occupied area need not contain all PCEs; one is sufficient. We acknowledge that the adverse modification standard would not require an action agency to create PCEs in occupied areas where such PCEs were wholly absent at the time the areas were designated as critical habitat. Moreover, not all adverse effects on PCEs that are present would rise to the level of adverse modification. We must be cautious, however, not to imply that fluctuating conditions would never constitute an adverse modification of designated habitat for the reason that ''these are existing conditions that were found at the time of listing.'' This would be a flawed approach, for two reasons:

(1) The fact that an existing Federal project is not presently adversely modifying critical habitat does not mean that the same operations would not result in adverse modification under future circumstances. As the section 7 regulations make clear, analysis for jeopardy and adverse modification is heavily dependent on context, and relies on consideration, not only of the effects of the Federal action itself, but also the current baseline, the effects of interrelated and interdependent actions, and the cumulative effects of future non-Federal activities (50 C.F.R. §402.02). Thus, a stream that has adequate flows now, despite Federal diversions, might not have adequate flows in the future as a result of drought or non-Federal diversions. Even if the amount of the Federal diversion does not change, its effect on the PCEs could be more substantial if the context changes. Context plays a critical role in the adverse modification analysis, and it would be improper to prejudge the outcome of future consultations.

(2)Such an approach might lead to the erroneous conclusion that, if a designated area contains essential features, those features are already in a condition that is ideal for bull trout, and therefore any Federal action that maintains the status quo would not cause adverse modification. It is possible for an area to be less than ideal for bull trout, yet contain features that are essential to the species' conservation, because there is no better habitat available to serve an essential function such as migrating, spawning or rearing. An area designated for spawning habitat, for example, might have sufficient clean gravel to provide for some spawning, yet still be suffering some degradation as a result of sedimentation from roads. Depending on the context, a Federal action that causes such sedimentation to continue could constitute adverse modification.

Specifically, the lateral extent of critical habitat in lakes and reservoirs is defined by the perimeter of the waterbody as mapped on standard 1:24,000 scale topographic maps, and the Service assumes in many cases this is full pool level. Defining the lateral limits in reservoirs and lakes in this manner is consistent with the approach taken for streams. Within streams, the critical habitat designation includes the stream channels within the designated stream reaches with the lateral extent defined by the bankfull elevation on one bank to the bankfull elevation on the opposite bank. In cases where the bankfull elevation is not evident on either bank, the ordinary high-water line determines the lateral extent of critical habitat. Conditions at some lakes or reservoirs allow a range of flows to occur. However, a full range for one reservoir may operate from full pool to run-of-river (zero pool) annually, while another reservoir may operate from full pool with a built-in minimum

conservation pool to address specific water quality requirements. Reservoir operational requirements related to bull trout critical habitat would be evaluated during the section 7 consultation process on a specific lake or reservoir basis. Accordingly, we are unable to include the statement in the final rule that was requested by the BOR, because the section 7 consultation process has not been concluded.

(2)*Comment*: Lake Cascade and Phillips Reservoir should not be designated as either occupied or unoccupied critical habitat, because they would at best minimally provide two or three PCEs on a seasonal basis and the abundance and spatial arrangement of the minimal PCEs provided would not rise to the level of providing the physical or biological features essential for conservation.

Our Response: We are designating stream segments and lakes or reservoirs that contain habitat seasonally to connect and to promote bull trout migratory life-history expression. Maintaining connectivity between bull trout local populations through the restoration and protection of main stem rivers is a major emphasis for bull trout recovery. The designation of critical habitat in occupied habitat is based on whether lakes or reservoir contain one or more PCEs either seasonally or year-round. We identified two major habitat types (spawning and rearing, and FMO); both of these reservoirs were identified as FMO habitat in the proposed rule. We have determined that Phillips Reservoir is essential for the conservation of the species, because it provides FMO habitat seasonally, during the fall, winter and spring.

In a comment letter we received from the Oregon Department of Fish and Wildlife (ODFW) (March 10, 2010), they specifically recommended inclusion of Phillips Reservoir: ''ODFW recommends extending critical habitat designations downstream to the confluence with the Snake River. Specifically we recommend including the mainstem Powder River from Phillips Reservoir downstream to the mouth including Phillips and Thief Valley Reservoirs. This designation would provide the opportunity for connectivity among local populations and full life history expression and to provide consistency with application of the seven guiding principles for bull trout conservation, as well as consistency with other designations in the state.'' We agree with their assessment. Inclusion of Phillips Reservoir is key to restoring connectivity between local bull trout populations, which is essential to maintaining a viable bull trout population in the Powder River core area.

However, based on the best available scientific information (including new site-specific biological information provided by the BOR), we are not designating Lake Cascade as critical habitat. We agree with the BOR that Lake Cascade lacks several of the essential habitat features, is not confirmed to be occupied by bull trout, and poses too many obstacles to be useful in bull trout conservation. Habitat connections essential for metapopulation dynamics and genetic interchange, which are important to maintaining a viable bull trout population, are lacking. Exotic species have also extensively colonized Lake Cascade, further complicating bull trout recovery (BOR 2010, pers. comm.).

(3)*Comment*: The BOR provided site-specific biological information on bull trout use in the Powder River, Malheur River, and Southwest Idaho River Basins Units, and made several recommendations for clarifications and revisions in the final rule.

Our Response: The Service received numerous comments from various Federal agencies including the BOR. The Service reviewed all site-specific comments, and we have revised the final critical habitat designation based on information contained in our files and new information received during the comment period, as appropriate. The final critical designation for the Powder River, Malheur River, and Southwest Idaho River Basins fully considered the information presented by the BOR.

Department of Energy, Bonneville Power Administration

(1)*Comment*: The Federal Columbia Power System (FCRPS) hydropower dams operating under the Service's and the National Oceanic and Atmospheric Administration's (NOAA) Biological Opinions for the FCRPS and Willamette River and within congressionally authorized operating ranges are part of the environmental baseline. Given the extensive management of operations of the FCRPS reservoirs consistent with bull trout and salmonid Biological Opinions, the Service should clarify that the FCRPS reservoirs are managed in a manner that is sufficiently protective to achieve the biological features essential to the conservation of bull trout.

Our Response: The Service will assess whether the current management of the FCRPS is sufficient to conserve bull trout with regard to the action described in the biological assessment after we participate in section 7 analyses with the appropriate action agencies involved. The purpose of critical habitat is to identify specific geographic areas that contain the physical or biological features essential for the conservation of an endangered or threatened species and that may require special management considerations or protection. Biological opinions are not conservation plans and do not have specific measures that address the long-term conservation needs of bull trout with regard to PCEs, but rather, they evaluate the effects of particular projects on listed species or its critical habitat. Biological opinions are the formal basis for disclosing NOAA's or the Service's opinion on whether the Federal action will result in jeopardy of a species or adverse modification of critical habitat, and are specific to a particular proposed Federal action. See *Section 7 Consultation*, below, for additional information.

(2)*Comment*: The Bonneville Power Administration (BPA) requested that the Service identify any likely instances where the current FCRPS operations under the Biological Opinions might be detrimental to bull trout critical habitat, and address any potential conflict between two or more listed species and the requirements of two regulatory agencies. The BPA also requested that the Service address whether the current FCRPS or Willamette operations may have to be substantially altered from operations that would otherwise be required under the relevant Biological Opinions. If alterations are identified, the Service should describe how those alterations have been considered in the economic analysis of the impacts of designation.

Our Response: It is possible that some future operational alterations may be undertaken as a result of bull trout critical habitat designation, although the specific extent to which project modification costs for the FCRPS or Willamette Project will increase as a result of this designation is unclear. We did not receive any specific data from BPA that would facilitate additional analysis; however, this potential concern is particularly complex because most of the proposed area on the Upper Willamettte River was designated as critical habitat in 2005. The Final Economic Analysis (FEA) applied the best available information and methods to estimate potential incremental impacts. Although section 4 of the Act establishes requirements for listing species and designating critical habitat, it does not address Federal agency requirements under section 7 of the Act, which addresses the need for Federal agencies to consult on the effects of their actions on listed species. Potential

FCRPS operations will be analyzed for their effects on bull trout critical habitat once section 7 consultation is reinitiated.

(3)*Comment*: The bankfull width for streams and perimeter of the water as mapped on standard 1:24,000 scale topographic map definitions for the lateral boundaries of critical habitat could imply that any drawdown or lowering of those levels would adversely affect the designated critical habitat. Lake and reservoir drawdown is within the authorized range of FCRPS and other hydro projects and is required to meet Federal project purposes such as flood control, irrigation, power production, and at times to meet requirements under FCRPS biological opinions. These activities do not necessarily negatively affect bull trout, and in some circumstances, may actually benefit bull trout.

Our Response: Section 7 of Act requires that Federal agencies confer or consult with the Service on their actions; it is during such conference or consultation that the effects of the action on critical habitat will be analyzed. This designation does not result in modifications of current biological opinions, but may result in the need for reinitiation of consultation in some cases. A determination regarding the beneficial, neutral, or detrimental nature of effects of a particular Federal action would be made during section 7 consultation for that specific activity.

U.S. Small Business Administration, Office of Advocacy

(1)*Comment*: The U.S. Small Business Administration's Office of Advocacy encouraged the Service to conduct outreach to county governments and other small municipal bodies to further examine the economic impact of the critical habitat designation to determine whether any reasonable alternatives exist that would accomplish conservation goals while providing needed regulatory relief to small entities. The Office indicated that, through these discussions, the Service may determine to exclude particular areas from critical habitat designation under section 4(b)(2) of the Act.

Our Response: As noted as in the final economic analysis (FEA), there are numerous baseline regulations in place for several fish species whose ranges overlap bull trout, including conservation protections for salmon and steelhead, that provide coincident protections for bull trout and its critical habitat. These protections apply to most of the lands currently occupied by bull trout (96 percent). Annualized incremental impacts to small entities considered represent 51 percent of total incremental impacts estimated in the rest of the FEA, and less than 0.6 percent of annual revenues for all activities. Given the history of regulation and baseline protections already in place, we do not believe county governments or small municipal bodies will experience any appreciable incremental economic impacts from this designation. Accordingly, no areas are being excluded from critical habitat designation based on economic impacts. Please refer to the section below that addresses comment responses to the economic analysis for further information in this regard.

Department of the Navy

(1)*Comment*: The U.S. Department of the Navy commented that national security impacts would occur if critical habit were to be designated in the Dabob Bay Range Complex (DBRC), Quinault Underwater Tracking Range (QUTR), and Crescent Harbor. The additional regulatory requirements imposed by the designation may delay, restrict, or prohibit the implementation of required training and testing in these areas. The Navy requested that the Service exclude the existing training areas and the proposed extensions of the DBRC and QUTR areas currently being evaluated in their Environmental Impact Statement from designation as critical habitat under section 4(b)(2) of the Act.

Our Response: Under section 4(b)(2) of the Act, we are required to consider whether there are lands owned or managed by the Department of Defense where a national security impact might exist if such areas are designated as critical habitat. Please see the *Application of Section 4(b)(2) of the Act* section below for more information regarding the analysis of the above Navy facilities.

National Park Service

(1)*Comment*: Crater Lake National Park, a unit of the National Park Service, indicated that designation of critical habitat in Annie Creek is appropriate based on historic records and the connectivity of Annie Creek with other stream networks known to contain bull trout. The Park supported returning the lower Sun Creek irrigation canal to a more natural alignment to increase connectivity and benefit recovery of the Sun Creek population. The Park noted that designation of critical habitat within the irrigation system should not preclude efforts to restore the natural Sun Creek channel.

Our Response: The Service has been working with Federal, State, and local partners to develop a plan for reconnecting Sun Creek with its historic (i.e., natural) connection with the Wood River. This connection would allow movement of bull trout between Sun Creek, the Wood River, and Annie Creek. These unoccupied areas that were identified in the proposed rule are essential for the conservation of bull trout in the Upper Klamath Lake critical habitat subunit, and are being designated as critical habitat.

Comments from Native American Tribes

(1)*Comment*: In response to the tribal coordination identified in the **Summary of Comments and Recommendations** section above, we received comments from several Tribes, including the Confederated Tribes of the Umatilla Indian Reservation, Puyallup Tribe of Nations, Confederated Tribes and Bands of the Yakama Nation, Jamestown S'Klallam Tribe, Quinault Indian Nation, Upper Skagit Indian Tribe, Lower Elwha Klallam Tribe, Shoshone-Paiute Tribes of the Duck Valley Indian Reservation, Confederated Tribes of the Warm Springs Reservation of Oregon, Swinomish Indian Tribal Community, Nisqually Indian Tribe, Coeur d'Alene Tribe, Nez Perce Tribe, Kalispel Tribe of Indians, Blackfeet Tribe, Muckleshoot Indian Tribe, and Burns Paiute Tribe. We also received a comment letter from the Northwest Indian Fisheries Commission. Most Tribes requested exclusion from critical habitat designation based on: (1) Secretarial Order 3206, which states, in part, that critical habitat shall not be designated in areas that may impact tribal trust resources, tribally-owned fee lands, or the exercise of tribal rights unless it is determined essential to conserve a listed species; (2) section 4(b)(2) of the Act; and (3) existing tribal resource management plans that are protective of bull trout. Other Tribes expressed support for the proposed critical habitat revision and did not request exclusion of their lands. One Tribe requested exclusion of their lands, except for the portion of tribal land that shares a boundary with nontribal interests.

Our Response: Federal agencies are obligated to consult with Tribes based on their unique relationship with the Federal government. We have evaluated the Tribes' past and ongoing efforts to conserve bull trout and have weighed the benefits of including or excluding tribal lands in the designation under section 4(b)(2) of the Act. We have also taken into consideration the requirements under Secretarial Order 3206; however, any exclusions have been considered only under section 4(b)(2) of the Act, as that is the only

statutory authority that provides the Secretary the discretion to exclude areas from critical habitat designation. Please see the *Application of Section 4(b)(2) of the Act* section below for more information regarding this analysis.

Public Comments

(1)*Comment*: We received several comments comparing the 2010 proposed rule to the 2005 final rule. Most pointed out the irregularities in the rulemaking process identified in a December 2008 Interior Department Inspector General's report, and felt that science played a more prominent and effective role in the 2010 proposed rule. Other commenters indicated the more restricted designation in the 2005 final rule was more appropriate.

Our Response: This final rule fully considers the findings in the 2008 Inspector General's report, the language in the court's remand order, and comments we received from peer reviewers and others. This final critical habitat designation for bull trout is based on the best scientific information available, as required by section 4(b)(2) of the Act.

(2)*Comment*: We received many comments that presented biological information relevant to the designation of critical habitat, and site-specific information regarding particular waterbodies. Comments also addressed rangewide issues such as information on biological needs in general, PCEs, and the effects of specific types of actions on bull trout. Issues raised included the threats that contributed to listing bull trout under the Act.

Our Response: We appreciate the information submitted and issues raised. We will address specific issues, including information regarding particular waterbodies and specific threats, in our responses below. In general, past efforts to eradicate bull trout contributed to their decline and led to their protection under the Act. Since the bull trout is now protected under the Act, those eradication efforts can no longer legally occur, and habitat threats are currently the most serious threats. However, we address habitat threats in this final rule.

(3)*Comment*: We received comments on the threat of fine sediment impacts to bull trout stream habitat.

Our Response: Taking measures to limit the introduction of fine sediment in bull trout critical habitat is important. A PCE has been developed to address this specific concern, and there is a continuing need to evaluate and assess site-specific information to determine the effects of any particular Federal action on sediment delivery and bull trout critical habitat, using the best scientific information available.

(4)*Comment*: We received comments and information regarding the cold water requirements of bull trout.

Our Response: Bull trout require among the coldest water temperatures of any native salmonid in the Pacific Northwest, and we have developed a PCE to address this specific need.

(5)*Comment*: We received comments on reservoir operations and their effects on bull trout.

Our Response: In our proposed rule (75 FR 2291, January 14, 2010), we did not mean to imply that reservoir operations would have to be consistently at full pool to avoid adverse modification of critical habitat. Project-specific analyses would be the best tool to identify bull trout critical habitat protection needs with regard to the relevant PCEs in a particular area. We have included clarifying language in this rule to address the issue. See the response to Bureau of Reclamation comment (1) and the *Adverse Modification Standard* section below for additional information with regard to section 7 consultation considerations for bull trout critical habitat.

(6)*Comment*: We received a number of comments recommending the designation of the upper Clark River in Montana between Flint Creek and Warm Springs Creek, based on ongoing restoration efforts directed toward re-establishing a migratory corridor for bull trout and restoring adequate stream flow and temperature regimes. The restoration is anticipated to re-establish a migratory corridor and essential foraging and overwintering habitat for bull trout, and provide additional genetic diversity for bull trout populations that have been fragmented by the construction of Milltown dam for nearly a century.

Our Response: Bull trout are present in the upper reaches of Warm Springs Creek and Flint Creek, tributaries at the upstream extent of this section of the upper Clark Fork River. The likelihood of migratory bull trout occupancy in the upper Clark Fork River has increased as a result of the 2008 removal of Milltown dam. The condition of the physical or biological features essential to the conservation of the species has improved as a result of the dam removal and will continue to improve with the ongoing restoration activities in the Clark Fork River. This area provides an important migratory corridor and will provide for increased genetic exchange between migratory bull trout populations in the Clark Fork River, meets the definition of critical habitat, and meets the selection criteria for inclusion in critical habitat. Consequently, we agree with the commenters that this reach of the Clark Fork River is essential for the conservation of bull trout. The inclusion of this 100.8 km (62.7 mi) reach of the upper Clark Fork River increases the critical habitat designation for the Clark Fork River basin by less than 2 percent. We have long recognized the importance of this reach of the upper Clark Fork River as an historical migratory corridor for bull trout, which we have considered potentially occupied but undocumented bull trout habitat. This area was proposed as critical habitat in the November 29, 2002, proposed rule (67 FR 71331), and identified as Unit 2, Clark Fork River Basin, Subunit iv – Upper Clark Fork River. We did not include this area in the September 26, 2005, final critical habitat designation (70 FR 56212), because at that time we did not find the PCEs present and therefore this area did not meet our selection criteria. No unoccupied habitat was designated in the 2005 final rule. In preparing the January 14, 2010, reproposal (75 FR 2269), we re-examined the record, including the State of Montana's MFISH database, and found that hard documentation of bull trout occupancy of this reach over the last 20 years was lacking. However, the sampling was not comprehensive and we acknowledge that low levels of undocumented bull trout occupancy likely occur in this lengthy stream reach. The determination not to include this reach in the 2010 proposed rule was a difficult choice, based on a decision to not propose any critical habitat in Montana where occupation by bull trout could not be documented with fish survey records or other hard documentation. Due to the known presence of bull trout in the upper reaches of Warm Springs Creek at the upstream extent of this section of the upper Clark Fork River, at least a portion of which are thought potentially represent the migratory life history form, there is further circumstantial evidence that migratory bull trout may temporarily or seasonally occur in this reach of the upper Clark Fork River. Accordingly, section 7 consultation is conducted on Federal actions that may affect bull trout. The likelihood of bull trout occupancy has also increased since 2008, as a result of the removal of Milltown Dam, which removes a barrier to bull trout migration in this reach. Because of the removal of Milltown Dam and the ongoing and planned habitat restoration actions, we no longer believe that the PCEs in this reach of the Clark Fork River are limiting to

occupancy by migratory bull trout, on at least a seasonal basis. Based on comments and data we received in response to our request for information in the January 14, 2010, reproposal (75 FR 2269), we now find PCEs present in this area and determine that this area does meet the selection criteria and is essential for the conservation of the species. Therefore, we are including it in our final designation.

(7)*Comment*: We received many comments from a variety of sources suggesting we consider designating critical habitat upstream of Big Falls on the mainstem Deschutes River in Oregon.

Our Response: Under section 3(5)(A) of the Act, specific areas outside the geographical area occupied by the species at the time it is listed in accordance with the provisions under section 4 of the Act can be designated as critical habitat, if such areas are essential to the conservation of the species. We are not designating bull trout critical habitat in the Deschutes River basin upstream of Big Falls on the mainstem Deschutes River. The lower Deschutes River bull trout populations are some of the healthiest and most stable populations in Oregon, and the designation of unoccupied habitat in this area is not essential to the conservation of the species. However, we have initiated a feasibility assessment to evaluate the capability of the upper Deschutes River to support bull trout, and support recovery of bull trout populations in the upper basin to the extent practicable.

(8)*Comment*: We received several comments related to climate change. Most said that it is an important issue and bull trout may be disproportionately affected because they have the coldest water temperature requirements of any native salmonid in the Pacific Northwest. Some commenters deny that climate change is occurring, question the underlying science, and reject its consideration in this rule.

Our Response: The earth's climate has changed throughout history, and an overwhelming proportion of climate scientists worldwide agree change is continuing today. We acknowledge this is a complex issue, and there may be some uncertainty over all the causes and precise manifestations of change. Given these uncertainties, one objective of this final rule was to identify and protect those habitats that we believe will provide resiliency for bull trout use in the face of climate change. We will undoubtedly have to adapt management approaches as we learn more. We agree that bull trout management actions should stem the impacts of climate change where opportunities to do so exist. Bull trout may be among the species most sensitive to the effects of climate change, and protection of bull trout cold-water habitat would help protect the ecosystems upon which they and other species depend. Some of the least disturbed watersheds may serve this purpose.

(9)*Comment*: We received two requests for an additional public hearing near Portland, Oregon, to supplement the hearing that was conducted in Boise, Idaho, on February 25, 2010. We also received four requests for an extension of the comment period.

Our Response: Because of time constraints related to our court-ordered deadline for submittal of a final rule to the **Federal Register**, we were unable to conduct an additional public hearing. However, we did hold a public meeting near Portland, Oregon, during the public comment period, and reopened the comment period from March 23 through April 5, 2010, to provide additional opportunity for interested parties to provide information to the Service.

(10) *Comment*: We received several comments regarding connectivity of bull trout habitats to provide for migration between key habitat types. The comments either emphasized the need for connectivity to recover bull trout, or expressed concern that in some cases, connectivity could harm bull trout by allowing introgression of invasive species or disease.

Our Response: Bull trout are highly migratory, and connectivity among patches of occupied habitat is essential to their conservation. Accordingly, we are designating critical habitat to facilitate connectivity in this final rule. However, connectivity may be limited in scope and degree in areas where FMO habitat provides the necessary PCEs for only a few months of the year, and perhaps only in higher water flow years. Limited or sporadic historical connectivity is likely reflected in the high degree of genetic distinctness among bull trout populations in relatively close proximity to one another, which is greater than expected when compared to other species, such as salmon and steelhead. However, some degree of connectivity over time may allow refounding of populations that are either at risk of becoming extirpated or that have become extirpated. We agree that in some cases, restoring connectivity might be detrimental to bull trout, if it introduces nonnative predatory or competitive species into those habitats. We will evaluate these areas on a case-by-case basis using the best scientific information available, to ensure we maximize bull trout conservation potential.

(11) *Comment*: We received several comments regarding the extent of critical habitat, specific waterbodies that may or may not be essential, or areas that may or may not have the physical or biological features essential to bull trout conservation.

Our Response: As required by section 4(b)(2) of the Act, we used the best scientific data available in determining areas that contain the features essential to the conservation of bull trout. In occupied habitat, each of the areas we are designating either contains those physical or biological features essential to the conservation of the species, which may require special management considerations or protection, or in the case of unoccupied habitat, has been determined to be essential for the conservation of the species. This final rule applies the best scientific information available to identify those areas, including the extent of critical habitat needed to conserve the species.

(12) *Comment*: We received comments concerning the need for numerical ranges or standards for PCEs, and PCE interpretation.

Our Response: Due to the range of habitat required for bull trout across all types of waterbodies and across the range of the species, we have not identified narrow-range, specific-to-one-area PCEs for the bull trout, but rather have identified broader, more general PCEs that are required for all life-history needs and stages of the bull trout, and which apply throughout the range of the bull trout. Moreover, water quality and quantity and other habitat needs are often influenced by the type of habitat used by bull trout (e.g., spawning and rearing) and season of use (e.g., May or June migratory habitat). Additionally, wet or dry water years may significantly influence the quality of habitat potentially available to bull trout. We have included language in the **Primary Constituent Elements** section of this final rule that identifies the physical, hydrological, and biological conditions the PCEs have been designed to protect, to provide context for PCE interpretation and application.

(13) *Comment*: We received comments related to the role of critical habitat in recovery.

Our Response: Critical habitat designation can contribute to the overall recovery strategy for a species. However, it does not, by itself, achieve all recovery plan goals. In developing this final rule, we considered the conservation relationship between critical habitat and recovery planning.

The designation of critical habitat can help prioritize recovery tasks and focus recovery efforts in areas essential for conservation. Habitat restoration actions may compete more successfully for Federal funding if they occur in areas designated as critical habitat for species listed under the Act. Please see the section below on *Relationship of Critical Habitat to Recovery Planning* for additional information.

(14) *Comment*: We received comments related to critical habitat and section 7 consultation requirements.

Our Response: Please see the section below on the **Effects of Critical Habitat Designation** for information related to section 7 consultation requirements.

(15) *Comment*: We received comments regarding the effects of specific actions on bull trout related to stream hydrograph, stream flow, and stream temperature requirements. There was also a concern that maintaining a naturally functioning hydrograph conflicts with protecting spring flows.

Our Response: PCE 7 is designed to address hydrologic functions that conserve bull trout by identifying the importance of peak, high, low, and base flows that fall within historic and seasonal ranges, or if controlled, minimize flow departures from a natural hydrograph. However, we do not believe maintaining a naturally functioning hydrograph conflicts with protecting natural spring flows. To the contrary, the flexible and inclusive language of PCE 7 can encompass protecting the natural hydrograph associated with these discharges. Since some streams flood annually and others do not, different special management prescriptions may be appropriate, depending on particular circumstances. These special management needs would appropriately be considered during section 7 consultation, as discussed later in this final rule.

(16) *Comment*: We received several comments on the exclusion of specific areas from this designation, with some arguing for exclusion of specific habitats or broader categories of habitats, while others argued against the same.

Our Response: Please refer to the **Exclusions** section below for a detailed discussion of this issue.

(17) *Comment*: Some commenters specifically opposed the exclusion of the lands covered by the Washington State Forest Practices Habitat Conservation Plan (FPHCP) from critical habitat designation. One commenter and the State of Washington supported the exclusion of the FPHCP. Opponents of exclusion commented that the needs of anadromous salmon and steelhead, not bull trout, largely dictated the final forest practice rule set in the FPHCP, and that the forest practice rules are not sufficiently protective of headwater streams and near-surface ground waters, springs, and seeps in headwater catchments. They also stated that Washington's forest land is being converted to other uses at an alarming rate, and that failure to designate critical habitat on lands currently covered by the FPHCP would deprive habitats essential for bull trout recovery from protection. One commenter stated HCPs are not required to provide a net benefit to the species. One commenter stated the FPHCP does not protect bull trout from activities that cause or contribute to global warming and global climate change, and stated the HCP does not protect bull trout or its habitat from the widespread application of pesticides and herbicides that occur on forestlands. They were also concerned the implementation of the HCP is not advancing at an adequate level, and that the lack of progress has been the focal point of attention at the highest levels of the State agencies charged with overseeing its implementation. One commenter stated current economic conditions related to Washington State's budget and reduced Federal funding have resulted in future funding of the adaptive management plan being severely reduced or even unlikely, and that crucial monitoring and adaptive management studies have already been postponed or cancelled by the State.

Other commenters stated critical habitat designation does not provide any greater protection or enhancement of bull trout habitat for forest management activities on private and State lands in Washington beyond what is already provided by the FPHCP, and designating critical habitat would discourage similar partnerships and weaken stakeholder support for the existing plan. They also stated that the Service should concentrate resources on participation and technical support for the FPHCP adaptive management program, rather than expending them on administrative requirements.

Our Response: HCPs are considered one of the tools available that can help effect recovery. In order to obtain a permit under section 10 of the Act, an applicant must meet the issuance criteria identified at 50 CFR 17.32, which include minimizing and mitigating any incidental take of listed species to the maximum extent practicable while conducting their covered activities. One of the commenters noted that HCPs are not required to provide a net benefit; however many HCPs do provide a net benefit compared to the alternative of no HCP and no incidental take permit. The FPHCP rules and program as a whole require the maintenance and restoration of aquatic and riparian habitat. Among the multiple goals of the FPHCP is the goal to restore and maintain riparian habitat on non-Federal forest lands to support a harvestable supply of fish. The FPHCP was developed with an emphasis on salmonids, including bull trout, and focuses on providing needed flows, temperature, substrate, habitat, and connectivity by addressing habitat protection and natural processes and regimes, which benefits bull trout and other native species. The role of adaptive management in HCPs is often poorly understood. In some cases, adaptive management may specify the direction of change either through requiring additional measures or reducing measures. While the Service may at times rely on adaptive management in evaluating an HCP, in the FPHCP, we evaluated conservation measures that were already dictated by the forest practice rules enacted by the State of Washington and by the assurances that the conservation measures would occur. We have reviewed the funding budgeted by the State for adaptive management studies under the FPHCP, and believe that it is adequate for purposes of bull trout conservation. The Service anticipated some delays and implementation issues as a program this large is applied over time, and we continue to monitor the progress of this adaptive program. See the **Exclusions** section in this final rule for additional discussion and evaluation of the benefits of the FPHCP.

(18) *Comment*: We received several comments on the role of Federal lands, most of which requested that we include Federal lands in this designation rather than excluding them as was done in the 2005 final rule. One commenter suggested that designating critical habitat on Federal lands could empower third parties to litigate more effectively.

Our Response: Exclusion of Federal lands from the 2005 final rule was one of the primary reasons for litigation, and one of the primary inconsistencies found by the Inspector General in his 2008 report. As previously discussed, the Service agrees Federal lands should not be excluded from critical habitat designation based solely on large-scale land management plans. In addition, the Service believes by collectively implementing a proactive and collaborative approach to addressing the recovery needs of bull trout, the risk of litigation should be minimized.

(19) *Comment*: We received some comments expressing concern about the

effects of wildfire on bull trout and the landscape, and that this designation may impact the ability to manage landscapes susceptible to fire.

Our Response: The Service will continue to facilitate implementation of ongoing or preventative fuel reduction projects through the Act's section 7 consultation requirements, and we have been doing so since bull trout was listed in 1998, and since critical habitat was designated in 2005. These cooperative efforts include annual meetings with action agencies and meetings conducted on a project specific basis.

(20) *Comment*: We received several comments from individual citizens, Native American tribes, States, environmental groups, and groups representing interests such as ranching, logging, and agriculture, which supported protection of bull trout habitat, and doing so in a manner sensitive to the needs of local residents and resource users.

Our Response: The Service agrees that protecting bull trout critical habitat will have multiple, wide-ranging benefits, and commits to working with all interested parties to protect habitat in a way that respects the interests and needs of local residents and resource users.

(21) *Comment*: We received several comments discussing the relationship between bull trout and other species, including other anadromous fish; the impacts of bull trout on other species; and the impacts of other species on bull trout.

Our Response: Protecting ecosystems upon which bull trout depend may also conserve other native species that share those ecosystems. We believe efforts to conserve bull trout will generally be complementary to efforts to conserve other native species that coevolved with bull trout, including salmon, steelhead, and Klamath Basin suckers, because each species would have developed traits and behaviors allowing them to coexist. Anadromous fish likely provided a significant input of energy into the ecosystems upon which bull trout depend, but we do not fully understand how their reduction or loss affects bull trout populations. However, we believe the restoration of ecosystem components and the implementation of salmon recovery actions will also help recover bull trout populations.

(22) *Comment*: We received comments on threats posed by invasive species and concerns that further spread of invasive species may affect some bull trout populations. Commenters also stated that restoring each of the habitat components that favor bull trout may reduce the competitive effects in bull trout habitat where invasive species are already present.

Our Response: Invasive species include potential competitors such as brook trout and brown trout, which represent a threat to bull trout populations. In some cases, currently isolated populations could be threatened if restoring connectivity allows invasive species to access currently isolated habitats. The Service will consider and encourage management of bull trout populations to address this concern, and is working with Federal partners to better understand why bull trout and invasive competitors are able to coexist in certain areas and not in others. The results of this research will help to inform recovery actions with respect to the removal of nonnative species and bull trout recovery.

(23) *Comment*: Some commenters stated that the effects of livestock grazing can negatively impact bull trout habitat quality. Alternatively, other commenters believe grazing and habitat conservation can co-occur.

Our Response: The bull trout listing rule for the Klamath River and Columbia River Distinct Population Segment (63 FR 31647, June 10, 1998), and the Jarbidge River Distinct Population Segment (64 FR 17110, April 8, 1999) acknowledge that livestock grazing contributed to the decline in bull trout abundance and distribution. Depending on how it is managed, grazing in riparian areas can reduce cover, reduce streambank stability, increase stream temperatures, reduce fish prey, and change stream geometry by making channels wider and shallower. We do not believe livestock grazing and fish and fish habitat conservation are mutually exclusive in all cases, provided appropriate special management needs for particular areas are implemented.

(24) *Comment*: We received comments expressing concern about the potential effects of timber harvest and mining on bull trout habitat, and effects of critical habitat designation on those activities.

Our Response: The Service agrees that forestry and mining practices can impact bull trout habitat. We will continue to work cooperatively with land managers and operators to implement bull trout conservation measures in a manner consistent with the operators' needs to the maximum extent practicable.

(25) *Comment*: We received several comments regarding the public participation process for this rule. Some commenters expressed concern over the opportunity to comment, some expressed concern with the quality of maps provided in the proposed rule, some expressed frustration with having to navigate the Federal website to submit their comments, and others stated that compliance with the National Environmental Policy Act (NEPA) (42 U.S.C. 4321 *et seq.*) was required.

Our Response: Service outreach efforts began in late 2009 and continued in early 2010. We issued press releases, published legal notices in local newspapers, contacted and coordinated with Native American Tribes, met with State officials, and communicated through a variety of means to individuals with interest in commenting on the rule. The initial comment period was extended to accommodate further input from interested private individuals, State and Federal agencies, or others. One public hearing was conducted in Boise, Idaho, and several public meetings were conducted at centralized locations within areas affected by the critical habitat designation. With regard to NEPA, outside the jurisdiction of the U.S. Court of Appeals for the Tenth Circuit, we do not prepare environmental analyses as defined by NEPA in connection with designating critical habitat under the Act. We published a notice outlining our reasons for this determination in the **Federal Register** on October 25, 1983 (48 FR 49244). This position was upheld by the U.S. Court of Appeals for the Ninth Circuit (*Douglas County* v. *Babbitt*, 48 F.3d 1495 (Ninth Cir. 1995), cert. denied 516 U.S. 1042 (1966)). As suggested by commenters, the Service has published simplified maps in the **Federal Register** with this final rule, and has made more detailed maps available on its web site, *http://www.fws.gov/pacific/bulltrout/*, or by request from the Oregon Fish and Wildlife Field Office, 2600 S.E. 98th Ave, Suite 100, Portland, OR 97266, telephone 503-231-6179.

(26) *Comment*: We received several specific comments on road impacts to bull trout habitat.

Our Response: Roads and other activities above the ordinary high water mark or bankfull elevation of streams, and upstream in watersheds can directly or indirectly impact bull trout habitat in streams. The construction, use, and maintenance of roads may impact bull trout habitat in several ways; for example, roads can act as vectors for introducing sediment to streams and road culverts can block fish passage. To protect bull trout habitat, the Service will continue to evaluate impacts on a site-specific basis and develop appropriate avoidance, minimization,

and mitigation measures during section 7 consultation on Federal actions.

(27) *Comment*: We received comments supporting the more prominent role science played in this designation when compared to the 2005 designation, and comments expressing concern over how science was used to identify essential habitat and PCEs. Concerns were also expressed regarding the differences between the 2005 designation and this designation, and the amount of critical habitat proposed in some areas.

Our Response: We believe the information we relied on to develop this final rule is consistent with accepted scientific standards. The rationale behind the differences between the 2005 final rule and the 2010 proposed rule are explained in the *Summary of Changes from the Previously Designated Critical Habitat* of the proposed rule (75 FR 2273, January 14, 2010), and are primarily associated with fewer section 4(b)(2) exclusions in this rule compared to the 2005 rule. Additional scientific information from peer reviewers, State fish and wildlife agencies, and Federal agency biologists was used to identify areas with the physical or biological features essential to the conservation of bull trout and additional unoccupied areas essential to the conservation of bull trout in each of the critical habitat units.

(28) *Comment*: We received several comments regarding special management needs for bull trout, most of which addressed concerns over what may be required and how we would regulate management activities to conserve bull trout. We also received comments related to the impact of critical habitat designation on private lands.

Our Response: In occupied critical habitat areas, special management considerations or protection are required. In some cases, (e.g., Congressionally-designated Wilderness Areas), continued implementation of wilderness designation management measures may be necessary to ensure adequate protection of key spawning and rearing streams, but in other cases avoiding creation of fish passage impediments may be required. Broad prohibitions of any specific actions across the range of bull trout would be inappropriate because the effects of actions can vary widely throughout the range of the species, and the special management needs in those areas may vary accordingly. Although special management considerations and protections are not implicitly required in unoccupied critical habitat areas, we will work collaboratively with Federal agencies to identify ways to ensure unoccupied critical habitat can continue to serve its intended conservation purposes, in light of agency actions that may be proposed in those areas.

Designating critical habitat will help inform private landowners more specifically of the needs and opportunities for bull trout conservation. Private landowners can protect fish and wildlife habitat quickly and efficiently, and they often choose to do so, sometimes in cooperation with and with support from the Service and other government agencies. We agree with the need to work cooperatively with landowners to conserve bull trout.

(29) *Comment*: We received several comments advocating for and against designating unoccupied critical habitat, and comments questioning the regulatory effects of unoccupied habitat designation on Federal agency actions.

Our Response: The Service believes it is essential to designate unoccupied habitat in order to achieve bull trout recovery. In most cases, this includes lower elevation main stem river FMO habitats important for seasonal connectivity among existing upstream populations. We anticipate that many of these FMO habitats may only be important during certain times of year to support bull trout migration. With regard to the regulatory effect of designating unoccupied habitat, when consulting under section 7(a)(2) of the Act in designated critical habitat, independent analyses are conducted for jeopardy to the species and adverse modification of critical habitat (75 FR 2291, January 14, 2010). In unoccupied critical habitat, Federal agencies may need to implement measures to avoid the destruction or adverse modification of critical habitat to ensure the affected critical habitat area can continue to serve its intended conservation role for the species. Any management needs would be addressed on a case-by-case basis, relative to the specific Federal action under consultation.

(30) *Comment*: We received several comments suggesting that rather than designating critical habitat, we should rely on other protective measures to meet the need for bull trout conservation. Examples included measures that protect critical habitat designated for salmon and steelhead species, State forest practice rules, Federal land management protections, and other commitments to conserve fish habitat within the range of bull trout.

Our Response: The Service is aware that several other regulatory protections are currently in place in many parts of the range of bull trout, and we appreciate those efforts. We evaluated many of the protective measures suggested by commenters within the context of section 4(b)(2) of the Act, and do not believe any significant new regulatory requirements will result from designating bull trout critical habitat. Nonetheless, under section 7(a)(2) of the Act, Federal agencies are required to ensure that actions they fund, authorize, or carry out are not likely to destroy or adversely modify critical habitat. There may also be educational benefits associated with informing the public of those areas that are most important to bull trout conservation.

(31) *Comment*: We received several comments on the effects of water use on bull trout, and the regulatory effect the designation of critical habitat could have on water use. Most commenters were concerned that their ability to use water for irrigated agriculture might be impacted by this designation, and recommended that we carefully evaluate effects of water use on a site-specific basis, and work closely with irrigators and State agencies.

Our Response: Any water use effects to designated critical habitat from Federal actions will be addressed on a case-by-case basis through consultation with Federal agencies under section 7 of the Act. The Service intends to work cooperatively with Federal agencies, irrigators, and State agencies to ensure bull trout conservation needs are compatible with their program needs and interests to the maximum extent practicable. In our experience, working collaboratively to address bull trout stream flow requirements provides significant conservation benefits to bull trout. Special management needs in bull trout critical habitat areas would be addressed on a case-by-case basis, but are generally expected to be similar to existing measures that provide protection for this species.

(32) *Comment*: One commenter stated that, in the 2005 rule, the Service excluded a segment of the Clark Fork River in Montana from critical habitat because that segment was in a designated Superfund site, subject to cleanup under the Superfund statute, but the mainstem Coeur d'Alene River was proposed as critical habitat in this rule, even though it, like the Clark Fork, is a listed Superfund site. The commenter stated that the Service has never explained its inconsistent treatment of the Clark Fork River and the Coeur d'Alene River Superfund sites.

Our Response: We disagree that the 2005 final critical habitat rule excluded a segment of the Clark Fork River because the segment was in a Superfund site, subject to cleanup under the

Superfund statute (42 U.S.C. 103, §§ 9601–9628). The 2005 final critical habitat rule states that the segment of the Clark Fork River in question was excluded because it did not have sufficient PCEs to support at least one of the species' essential biological activities, not because it was a Superfund site. In contrast, the mainstem Coeur d'Alene River is identified as a migratory corridor and provides the PCEs necessary for seasonal use (primarily spring and late fall) by migrating bull trout.

Comments on the Draft Economic Analysis

The Service published a draft economic analysis (DEA) concurrent with the proposed rule (75 FR 2269, January 14, 2010). Of the 1,111 public comments we received, 128 were on the DEA. We initially grouped these comments into two main categories: comments on the economic analysis, and comments on economic costs and benefits of critical habitat. We then performed a separate analysis of all these comments, and further broke down subject matter into 34 separate responses. Comments from each of the 34 economic-related categories are summarized, below, with the Service's responses.

(1)*Comment*: One commenter was concerned that the baseline approach to the economic analysis has been rejected by courts.

Our Response: As stated in Chapter 2 of the final economic analysis (FEA), the U.S. Tenth Circuit Court of Appeals instructed the Service in 2001 to conduct a full analysis of all of the economic impacts of proposed critical habitat, regardless of whether those impacts are attributable co-extensively to other causes. Since that decision, however, courts in other cases have held that an incremental analysis of impacts stemming solely from the critical habitat rulemaking is proper. For example, in the March 2006 ruling that the August 2004 critical habitat rule for the Peirson's milk-vetch (*Astragalus magdalenae* var. *peirsonii*) (69 FR 47329, August 4, 2004) was arbitrary and capricious, the United States District Court for the Northern District of California stated, ''That case also involved a challenge to the Service's baseline approach and the court held that the baseline approach was both consistent with the language and purpose of the Act and that it was a reasonable method for assessing the actual costs of a particular critical habitat designation. . . 'To find the true cost of a designation, the world with the designation must be compared to the world without it.''' More recently, in *Arizona Cattle Growers' Association* v. *Salazar*, No. 08-15810 (9th Cir. 2010) (Mexican spotted owl 2004 critical habitat designation), the Court of Appeals upheld the Service's use of the baseline approach in preparing the economic analysis and making the ultimate section 4(b)(2) decision. The Ninth Circuit disagreed with the Tenth Circuit's opinion requiring a co-extensive analysis. The Ninth Circuit thought it was more logical to use the impacts resulting from listing the species as a baseline and to limit consideration of areas for exclusion to those where there were impacts above those imposed by listing. It noted that considering costs imposed by the listing of the species made no sense because those listing costs would still be present if the area in question were excluded from critical habitat. Also, on May 27, 2010, the U.S. District Court ruling in *Otay Mesa Property* v. *USDOI* – CV 08-383(RMC)(D.D.C.) stated in part that ''FWS has explained its preference for the baseline method and fully explained the analyses that underlie the critical habitat designation for the San Diego fairy shrimp. It need do no more.''

In order to address the divergent opinions of the courts and provide the most complete information to decision-makers, the final economic analysis reports both (a) the baseline impacts of bull trout conservation from protections afforded the species absent critical habitat designation; and (b) the estimated incremental impacts precipitated specifically by the designation of critical habitat for the species. However, the data used in determining our regulatory flexibility analysis reflects only the incremental costs which may be attributable to the designation of critical habitat for the bull trout.

(2)*Comment*: One commenter stated that the economic analysis did not consider the potential for the curtailment of mining production and employment on the main stem and North Fork Coeur d'Alene River, or the upstream tributaries. The commenter also noted the potential for impacts to waste water treatment plants, storm water requirements, other point and nonpoint source discharges, and potential impacts to plans for a Superfund cleanup site located in the Coeur d'Alene basin, which include plans for bank stabilization, channel realignment, and dredging projects.

Our Response: The mainstem Coeur d'Alene River and North Fork Coeur d'Alene Rivers have been designated as critical habitat for bull trout since September 26, 2005 (70 FR 56212). This critical habitat revision extends the designation into several tributaries of the North Fork Coeur d'Alene and St. Joe Rivers, but does not revise existing critical habitat on the mainstem or North Fork. The commenter did not present any substantive economic information regarding potential impacts of extending the designation, and we have no data indicating that designating critical habitat in the tributaries would have any impacts on mining or other activities beyond those attributable to listing.

(3)*Comment*: Several commenters stated that the economic analysis should incorporate the recent ruling in the Ninth Circuit Court of Appeals, *Gifford Pinchot Task Force* v. *U.S. Fish and Wildlife Service,* 378 F.3d 1059 (9th Cir. 2004), amended by 387 F.3d 968 (9th Cir. 2004). Specifically, commenters point out that the court decided ''the jeopardy standard should be applied with reference to whether the proposed action appreciably diminishes the likelihood of both the survival and recovery of a species. By contrast, the prohibition against destruction or adverse modification of critical habitat is triggered at a lower threshold—when sufficient critical habitat is lost so as to threaten a species' recovery even if there remains sufficient critical habitat for the species' survival.'' Commenters state much of the analysis is predicated on the idea that a project that would likely jeopardize bull trout would also likely adversely modify its critical habitat and vice versa. Commenters stated that because the jeopardy standard and the adverse modification standard are not synonymous, the DEA should not rely on the assumption that there will be few incremental costs in occupied areas.

Our Response: As stated in Chapter 2 of the FEA, incremental effects of critical habitat designation are determined using the Service's December 9, 2004, interim guidance on ''Application of the 'Destruction or Adverse Modification' Standard Under section 7(a)(2) of the Endangered Species Act'' and information from the Service regarding what potential consultations and project modifications may be imposed as a result of critical habitat designation over and above those associated with the listing of bull trout (Appendix E of the final economic analysis). Specifically, in *Gifford Pinchot Task Force* v. *United States Fish and Wildlife Service*, the Ninth Circuit invalidated the Service's regulation defining destruction or adverse modification of critical habitat, and the Service no longer relies on this regulatory definition when analyzing whether an action is likely to destroy or

adversely modify critical habitat. In occupied critical habitat, it is unlikely that a section 7 consultation would identify a difference between measures needed to avoid the destruction or adverse modification of bull trout critical habitat from measures required to avoid jeopardizing the species. This conclusion is based on numerous regulatory protections and associated conservation activities that are already occurring in those areas for listed salmon and steelhead, as discussed in the FEA. Alternatively, in unoccupied critical habitat, a jeopardy analysis would not be conducted during section 7 consultation. However, measures to avoid destruction or adverse modification may be necessary to ensure unoccupied areas can continue to serve their intended conservation role for the species.

(4)*Comment*: Several Tribes submitted comments expressing concern about the potential economic impact of the designation on tribal lands. One Tribe requested the economic analysis specifically address the economic impacts on the Tribe, the Reservation, and tribal trust resources, taking into account ''the unique nature of Reservation economies,'' and stated ''in particular, the analysis must fully analyze the Tribe's ability to use its water, including potential future uses and the effective reallocation of water rights priorities that may be caused by the designation and the cost to the Tribe of such.''

Our Response: Under Secretarial Order 3206, we consult with affected Indian Tribes when considering the designation of critical habitat in an area that may impact tribal trust resources, tribally-owned fee lands, or the exercise of tribal rights. The Secretarial Order states that critical habitat shall not be designated in such areas unless it is determined essential to conserve a listed species, and that in designating critical habitat, the Services shall evaluate and document the extent to which the conservation needs of the listed species can be achieved by limiting the designation to other lands. To estimate the incremental costs of conservation efforts, the economic analysis focuses on activities in areas considered to be unoccupied by bull trout. Incremental costs are those efforts above and beyond the costs undertaken due to existing required or voluntary conservation efforts being undertaken due to other Federal, State, and local regulations or guidelines. In particular the analysis focuses on those areas that do not overlap with salmon critical habitat, since the primary constituent elements identified for salmon are similar to those identified for bull trout, and additional conservation measures in those areas would unlikely be necessary.

To the extent possible, potential impacts to tribal areas are considered in the FEA as part of the unit in which the tribal lands are located. For example, section 7 consultations that may have been undertaken with tribal entities have been included in calculations of administrative costs for applicable units. Information provided in public comments related to particular tribal concerns has been incorporated into Chapters 3 and 4 of the FEA.

(5)*Comment*: Several commenters stated the economic analysis fails to recognize the benefits that might derive from critical habitat designation. Other commenters state it is unclear why benefits have not been quantified. Several comments indicated the Service should have presented a cost-effectiveness analysis or a cost/benefit analysis. A few comment letters also state that by analyzing only the costs associated with the designation, the Service cannot meet the requirements of the Act, and that without analyzing benefits it is arbitrary for the Service to exclude areas from critical habitat designation on the basis of economic impacts.

Our Response: There are no areas proposed as critical habitat that are being excluded from designation on the basis of economic impacts. Chapter 6 of the DEA discusses the types of benefits that could result from designation of critical habitat for bull trout and explains methods that could be used to estimate benefits and the data that would be required to calculate such estimates. As discussed in Chapter 6 of the DEA, data are not currently available to estimate the incremental economic benefits that could result from designation of critical habitat for bull trout. The primary intended benefit of critical habitat is to support the conservation of endangered and threatened species. Thus, attempts to develop monetary estimates of the benefits of the bull trout critical habitat designation would focus on the public's willingness to pay to achieve the conservation benefits to the bull trout resulting from this designation. Quantification and monetization of species conservation benefits requires information on the incremental change in the probability of bull trout conservation that is expected to result from the designation. No readily available models or studies exist that provide such information. Even if this information existed, the published valuation literature does not support monetization of incremental changes in conservation probability for this species. Similarly, none of the alternative methods suggested (e.g., methods to evaluate losses from fish kills, the Service's Habitat Evaluation Procedures Model, fish market or restaurant value, and replacement cost) would overcome the fact that information is not available to predict the extent and timing of bull trout recovery that could result from designation of critical habitat. The Office of Management and Budget has acknowledged that it may not be feasible to monetize or quantify benefits because there may be a lack of credible, relevant studies, or because the agency faces resource constraints that would make benefit estimation infeasible (U.S. OMB, ''Circular A-4,'' September 17, 2003, available at *http://www.whitehouse.gov/sites/default/files/omb/assets/omb/circulars/a004/a-4.pdf*).

(6)*Comment*: Several commenters suggested that economic benefits of a restored bull trout fishery have been estimated to be $215 million, based on an economic benefits section that was removed from the previous draft 2004 economic analysis.

Our Response: The Service removed the benefits analysis from the 2004 DEA because of concerns from the Office of Management and Budget (OMB) and the Department over the contingent valuation and benefits transfer methods used. A contingent valuation involves asking someone how much they would pay to continue a specific activity that is threatened by pollution or other factors. For example, one might ask an angler how much he or she would spend to continue fishing for bull trout in clean rivers. Some economists doubt the accuracy of such analyses because of their hypothetical nature and because respondents do not have to follow up their answers with actual payments. Therefore, they may tend to over-value the benefit. The 2004 DEA's discussion of the value of bull trout recreational fishing was a benefits-transfer analysis. A benefits-transfer analysis uses research conducted for one species or purpose to extrapolate results for another species or purpose. OMB's guidelines on the use of benefits transfer state that although benefit-transfer can provide a quick, low-cost approach for obtaining desired monetary values, the methods are often associated with uncertainties and potential biases of unknown magnitude. It should therefore be treated as a last resort option and not used without explicit justification (OMB Circular A-4). As such, these estimates are not included in the FEA. Chapter 6 of the DEA discusses the types of

benefits that could result from designation of critical habitat for bull trout and explains methods that could be used to estimate benefits and the data that would be required to calculate such estimates. As discussed in Chapter 6 of the DEA, the Service believes that sufficient data are not currently available to enable us to estimate the incremental benefits that could result from designation of critical habitat for bull trout. Specifically, information is not available to predict the extent and timing of bull trout recovery that could result from designation of critical habitat.

General Comments on Economic Analysis

(1)*Comment*: Several commenters believed the DEA failed to consider the full extent of potential impacts that may occur as a result of the designation of critical habitat. Some commenters stated the DEA only addresses impacts to Federal agencies, and does not consider other impacts to private landowners or the costs of recovery. Other commenters stated that the DEA did not consider additional impacts to activities such as flood control, including the increased risk of catastrophic flood; and fire management.

Our Response: Chapter 5 of the FEA estimates the costs associated with section 7 consultation for the bull trout, while Chapter 4 discusses potential incremental impacts (i.e., impacts that are not expected to occur absent critical habitat). The FEA quantifies potential impacts to private landowners, including timber companies, cattle ranchers, crop farmers, and mining companies, that may be affected by the designation. Exhibit 4-4 of the FEA outlines potential conservation measures, affected action agencies, and affected third parties.

The FEA considers impacts that are probable and reasonably foreseeable. While the FEA does not estimate impacts associated with damage resulting from catastrophic flood or fire events, this type of catastrophic event is largely unpredictable. Moreover, the analysis assumes the relevant agencies actively manage to prevent these events, and that these management actions will not be precluded by the designation. The analysis quantifies the potential costs to these agencies of implementing project modifications as well as undergoing section 7 consultation.

Specifically, administrative costs associated with considering possible impacts to fuels reduction and other fire management activities are considered in Chapter 5 of the FEA. As noted in Exhibits D-2 through D-4, more than 21 formal section 7 consultations, 38 informal consultations, and 12 technical assistance efforts are forecast annually related to forest management activities. In addition, forest management costs as quantified in Chapters 3 and 4 of the FEA include project modifications associated with fuel reduction projects, including biologist monitoring time for work occurring within buffer zones.

Administrative costs associated with flood control, bank stabilization, and other instream construction work, are included under ''other activities'' in Chapter 5 of the FEA. As noted in Appendix D, more than 325 section 7 actions are forecast for ''other activities.'' Potential incremental project modifications associated with flood control activities are summarized in section 4.1 of the FEA.

(2)*Comment*: A number of commenters noted the proposed designation is likely to have a significant economic impact, citing a potential for $1 billion in impacts. Given the current state of the economy, other commenters expressed concern about impacts related to bull trout conservation placing additional stress on already economically vulnerable industries and areas. Several commenters stated that funds spent on bull trout protection efforts would be better used for other purposes.

Our Response: The Service acknowledges that the current economic situation creates conditions in which local and regional economies may be less able to absorb any additional regulatory burden. However, this analysis examines a 20–year timeframe, with expected impacts distributed across the entirety of this time period. Moreover, incremental impacts are expected to be relatively small, at approximately $5 to $7 million a year, distributed across 87 counties and four States. Finally, the bulk of these incremental impacts are likely to be borne by Federal and State agencies rather than private landowners. While the analysis also forecasts the potential for approximately $100 million in annualized baseline costs, these impacts are expected to occur regardless of critical habitat designation for bull trout.

(3)*Comment*: One comment suggested the DEA overstated incremental conservation costs associated with the proposed critical habitat and provided various examples to illustrate this. The comment states the range of annualized incremental costs should have been narrower, and that certain costs are inappropriately included as incremental conservation costs. The commenter further states mitigation costs for sediment controls should not be considered incremental since they would be incurred due to forest management practices already in place. Also, the comment states incremental costs above Condit Dam should not be included since this dam is scheduled for removal.

Our Response: As described in section 4 of the FEA, the analysis of incremental costs focuses on identifying costs that would be associated with unoccupied critical habitat designated in areas that do not overlap with salmon habitat. The range of incremental costs is due to various uncertainties underlying the expected types and costs of conservation measures. Where reliable information was available to narrow this range it was incorporated in the analysis. However, as discussed in the 2004 final economic analysis for the final Columbia and Klamath DPS critical habitat designation (69 FR 59995, October 6, 2004), in the case of costs associated with potential changes to irrigation withdrawals, the likelihood of these costs occurring is not known, leading us to estimate a wide range of impacts. Similarly, we estimated a range of incremental costs associated with forest management projects because the exact scope and type of projects were uncertain. Due to these uncertainties, the high-end scenario may overstate incremental impacts. While there is uncertainty in the estimates of incremental conservation costs presented in the DEA, the Service believes these estimates to be based on the best information currently available, and has made corrections as appropriate based on information provided in public comments.

As discussed in Chapter 3 of the FEA, forest management conservation costs associated with baseline regulations include the Idaho, Washington, and Oregon Forest Practices Acts, and many other Federal regulations. The methodology applied in the analysis was designed to separate out as incremental those costs that would not be incurred but for the critical habitat designation. Thus, based on historical consultation efforts and discussions with the U.S. Forest Service, forecast incremental forest management conservation costs are those costs associated with section 7 consultations that would not occur but for the designation of bull trout critical habitat in unoccupied areas.

We agree with the commenter that once the Condit Dam has been removed, there will not be incremental impacts associated with the area above the dam. As discussed in the FEA (section 4.2.2), incremental impacts in the Lower

Columbia River Basin unit are expected to minimal. Once the Condit Dam is removed, projects will need to consider impacts to listed salmon species as well as bull trout.

(4)*Comment*: Several commenters indicated the DEA should not rely on the 2004 and 2005 economic analyses because the information is out of date and because national and regional economies have changed drastically since these analyses were published. Another commenter stated the DEA does not account for the drastic economic downturn in the Northwest, and provided information regarding how the timber industry has changed in the recent past. Also, this commenter indicates the use of the GDP deflator is not appropriate and the DEA should use a more up-to-date regional factor to convert costs to 2010.

Our Response: In developing the DEA, research was conducted to ensure that the conservation costs forecast in the earlier 2004 and 2005 economic analyses were applicable. Where more recent relevant information was available, this was incorporated, as appropriate. The 2004 final economic analysis of the Columbia and Klamath populations critical habitat designation was reviewed by three independent technical advisors: Dr. Joel Hamilton, Emeritus Professor of Agricultural Economics and Statistics, University of Idaho; Dr. Lon Peters, president of Northwest Economic Research, Inc., a Portland-based firm that provides economic consulting services to electric utilities; and Dr. Roger Sedjo, senior fellow and the director of Resources for the Future's forest economics and policy program. Similarly, the 2005 economic analysis of the Coastal-Puget Sound, Jarbidge River, and Saint Mary-Belly River populations final critical habitat designation was peer reviewed by Dr. Peters and Dr. Hamilton, as well as by Dr. Bruce Lippke, Professor Emeritus School of Forest Resources, University of Washington. Feedback from these reviewers was incorporated into the 2004 and 2005 final economic analyses as appropriate. The information provided by the commenter regarding changes in the timber industry consisted of articles published in 1999 and 2000, prior to 2004 and 2005 when the original research for this FEA was conducted, and as such, we did not use this information to update the report.

No specific information was provided regarding how the economic downturn in the Northwest is different than the economic conditions in the rest of the country, or how this downturn should be factored in differently in the DEA for the bull trout. The commenter did not provide any regional conversion factor, as suggested, which we could evaluate. Given the large geographic scale of this designation and the types of potential impacts, we determined that the national GDP deflator was the most appropriate figure for use in inflating the conservation costs. We believe we have taken the correct approach by updating costs to current dollars since the previous reports by using the GDP deflator, which takes into account the current state of the national economy.

(5)*Comment*: Several comments indicated confusion about what conservation costs were included as baseline costs. In particular, one commenter is concerned that the DEA did not assess potential economic impacts stemming from State laws that limit activities in designated critical habitat areas. A comment indicated that the DEA did not take into account land and resource management plans (i.e., Land and Resource Management Plans (LRMP) and Resource Management Plans (RMP)) as part of the baseline regulatory conditions. While one commenter is concerned that the DEA did not take into account baseline impacts that could result from reinitiated consultation on the Washington Forest Practices Habitat Conservation Plan (FPHCP), another commenter indicated that costs associated with HCPs should not be included in the analysis. Another commenter notes that it is unclear whether costs associated with the bull trout critical habitat finalized in 2005 are included in the baseline. Various other commenters provided details on baseline conservation costs that were not included in the DEA. In particular, one commenter notes that they have incurred significant expenses providing protection to bull trout under the Idaho Forest Practices Act since 2004, which should have been included in baseline impacts.

Our Response: The State laws that may limit activities in designated critical habitat are discussed in section 3 of the FEA. The analysis considers State laws, LRMPs, and RMPs as part of the baseline regulatory environment. LRMPs and RMPs are generally developed under the Federal Land Policy and Management Act (43 U.S.C. 1701 *et seq.*) listed in Exhibit 3-4. As discussed in section 5.2.2, incremental administrative costs quantified in the FEA include administrative costs associated with reinitiated consultations, such as reinitiation of consultation on the FPHCP. However, incremental conservation costs associated with reinitiation of consultation for the FPHCP are not anticipated, and therefore none are quantified. As discussed in section 2.3.2 of the FEA, no specific plans to prepare new HCPs in response to this critical habitat designation were identified; therefore, no conservation costs associated with HCPs are included in FEA.

Text has been added to section 2 of the FEA to clarify that the analysis considers and estimates the impacts of the rule as proposed and as if the existing 2005 critical habitat designation did not exist. In other words, this analysis considers and estimates the impacts associated with designating areas as critical habitat versus not designating these areas. This analysis is intended to assist the Secretary in determining whether the benefits of excluding particular areas from the designation outweigh the benefits of including those areas in the designation. These particular areas also include those already designated as critical habitat under the 2005 designation and which are subject to re-examination by the Secretary.

The commenter is correct that the analysis does not fully account for nor include all baseline costs. Section 2.3 of the FEA discusses the Service's approach to conducting the economic analysis and notes that due to extensive overlap between the current proposed designation and the past bull trout critical habitat proposals, and due to the existence of two detailed economic analyses of those past proposals, the FEA focuses on incremental impacts expected to occur after we finalize this designation of critical habitat. Because baseline costs are not solely attributable to the proposed designation, they are considered in the FEA primarily for purposes of providing context, while the incremental impacts are considered to be of primary importance for decision-making purposes. As discussed in section 3.3.1 of the FEA, costs associated with not-before-analyzed occupied areas as well as unoccupied habitat that overlaps with salmon habitat are included in the baseline, but were not expressly quantified in the current FEA. Nonetheless, where additional relevant information on baseline costs not captured in the report was provided in the public comments, it has been added to the FEA.

(6)*Comment*: Several commenters were concerned about potential costs to property owners that could result from the uncertain nature of future regulation. One commenter was concerned that critical habitat designation will result in decreased property values. In particular this commenter states that with the Act's

regulation in the background it is reasonable to expect reduced property values of $100 per acre or more. This commenter states that a loss of $100 per acre could reduce their property values by $80 million in Idaho. On the other hand, another commenter states that impacts related to stigma and regulatory uncertainty are unlikely. This commenter further suggests that critical habitat could increase property values, for example by increasing the likelihood of Federal or State subsidies for conservation projects, or by increasing interest in the property for purchase for conservation easements.

Our Response: Stigma and uncertainty impacts are discussed in section 2.3.2 of the FEA. While there is potential for uncertainty impacts associated with the designation of critical habitat for bull trout, as discussed in the FEA, information is not available to quantify these impacts. Thus, impacts related to uncertainty are not calculated in the FEA. The FEA does not predict or quantify any impacts related to stigma that could result from the designation of critical habitat for the bull trout. As discussed in the FEA, public attitudes about the limits or restrictions that critical habitat may impose can cause real economic effects to property owners, regardless of whether such limits are actually imposed. However, as the public becomes aware of the true regulatory burden imposed by critical habitat, the impact of the designation on property values may decrease. The analysis considers the implications of public perceptions related to critical habitat on private property values within the proposed designation.

The FEA finds that the bull trout critical habitat designation is unlikely to cause property value losses because much of the property proposed for designation is already being managed in ways consistent with what would be required if adjacent streams were designated bull trout critical habitat. For example, as noted as in the FEA, there are numerous baseline regulations in place that provide protections for bull trout and its critical habitat including conservation protections for salmon and steelhead. In addition, most of the lands are currently occupied by bull trout (96 percent), and 87 percent of the proposed critical habitat was included in previous critical habitat proposals. Thus, given the history of regulation and baseline protections already in place, property value impacts resulting from this critical habitat designation are not considered reasonably foreseeable. The commenter did not provide supporting information for the estimate that critical habitat results in reduced property values of $100 per acre; thus the validity of this estimate cannot be evaluated.

(7)*Comment*: Several commenters noted the DEA did not provide estimates of impacts at a detailed geographic level. As a result, the commenters could not determine how the designation may affect specific stream segments and geographic areas (e.g., individual counties).

Our Response: The FEA presents impacts based on the 32 units outlined by the Service in the proposed rule. Because the analysis covered almost 37,000 river kilometers (km) (23,000 miles (mi)) and more than 200,000 hectares (ha) (500,000 acres (ac)), and followed a 20–year time horizon, project forecasts and other data were not available at a sufficiently specific level to project impacts by individual stream mile. To the extent possible, the FEA identifies costs to specific areas when information was available. Where potentially affected projects or sites were identified, the FEA attributes impacts associated with these projects to the relevant unit. For example, project modifications associated with facilities that form part of the Federal Columbia River Power System are attributed to the relevant units. Other impacts that are expected to fall on specific types of lands (e.g., lands managed by the U.S. Forest Service) are distributed across the designation based on river mile.

(8)*Comment*: Several commenters stated the DEA failed to consider impacts on economic activities occurring upstream or downstream of critical habitat areas.

Our Response: The DEA considers potential impacts to activities that may threaten the bull trout as identified by the Service. As discussed in section 2.3.2, the analysis considers indirect impacts to the extent it is possible to identify these types of impacts. Additional detail has been added to Chapters 3 and 4 of the FEA qualitatively discussing potential impacts on upstream and downstream activities. Since 96 percent of designated habitat is occupied by bull trout, any incremental effect of this regulation protecting bull trout habitat would likely be small. However, given data limitations and geographic scope, the DEA analysis does not answer the question of whether impacts to mining or other upstream operations are likely (i.e., the probability of such impacts), or define the expected magnitude of these impacts in any one area.

(9)*Comment*: A commenter states that the numbers in the 2009 report cannot be replicated from the results in the 2004 report.

Our Response: There are several important reasons why the results of the previous economic analyses are not directly transferable to the current FEA. In particular, to update conservation costs forecast in previous reports, we had to account for three major differences between the current and previous reports. First, the geographic distribution of the proposed designation and unit definitions are different. Second, the framework underlying the economic analysis has changed. Previous reports included co-extensive costs, whereas the current FEA distinguishes between baseline and incremental costs. Third, the timeframe covered by the current analysis has been expanded to 20 years. In order to assist readers in understanding how the previous results are allocated to the new critical habitat units, we have added an appendix to the FEA providing additional information on the connections between previous reports and the current one. With the addition of this appendix, we believe all of the relevant assumptions and information used to predict the baseline and incremental costs are available in the 2010 FEA and the 2004 and the 2005 final economic analyses of bull trout critical habitat.

(10) *Comment*: A commenter notes the source of the 3 and 7 percent discount rates applied in the previous economic analyses is not explained.

Our Response: Information has been added to Chapter 2 of the FEA to explain the source of the 3 and 7 percent discount rates applied in the analysis. To discount and annualize costs, guidance provided by the Office of Management and Budget (OMB) specifies the use of a real rate of 7 percent. In addition, OMB recommends conducting a sensitivity analysis using other discount rates such as 3 percent.

Economic Benefits Comments

(1)*Comment*: A commenter suggested the Service should have hired a renowned natural resource economist, such as Dr. John Loomis, to calculate the existence values of bull trout. This commenter also suggested the Service should have undertaken a willingness-to-pay study to quantify the benefits of recreational fishing.

Our Response: As discussed in section 6.1 of the FEA, the existing economics literature does not provide the data necessary to quantify the value the public would place on actions taken to enhance the probability of recovery of bull trout. The estimation of the existence value of bull trout would require primary research involving formal approval from the Office of

Management and Budget under the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*), more than a year to conduct a survey and analyze the results, and significant resources in excess of those allocated to the preparation of the FEA. Similar efforts would be required to conduct a willingness-to-pay study to quantify the benefits of recreational fishing. Such primary research is beyond the scope of this economic analysis. Furthermore, biological models estimating the change in the likelihood of recovery that would result from the designation of critical habitat and information necessary for a credible estimate of willingness to pay are also not readily available. Thus, existing data do not allow for the quantification or monetization of the conservation value that is incremental to the designation of critical habitat.

(2)*Comment*: Commenters suggest that water originating from streams that may be designated as bull trout critical habitat has a value of at least $1.4 to $1.5 billion based on a report by the U.S. Forest Service.

Our Response: This U.S. Forest Service report estimates the total volume of water available for use on all Forest Service lands, and applies marginal values for instream and offstream water uses. In order to utilize this information for the purposes of quantifying the benefits of the critical habitat designation for bull trout, additional information would be necessary. Specifically, to apply a marginal value of water to estimate benefits of critical habitat designation we would need quantified estimates of incremental changes in the amount and quality of clear cold water resulting from the designation. The impact of the designated bull trout critical habitat on water quality and quantity has not been modeled.

(3)*Comment*: Various commenters provided information about specific benefits that should have been included in the DEA. In particular, commenters suggested that the analysis should have included benefits such as the value of bull trout as subsistence for tribal members, the reduction in likelihood that other aquatic species will be added to the endangered species list, benefits from closing Forest Service roads, and benefits of mitigating for climate change impacts through efforts to protect bull trout critical habitat. Another commenter suggests the DEA should capture potential benefits such as lower costs to upgrade to municipal water treatment facilities to meet water quality standards. This commenter also indicated that the cost-savings associated with improved productivity, less absenteeism, and reduced public and private health care costs resulting from improved water quality should be predicted.

Our Response: Chapter 6 of the FEA describes the categories of economic benefit that may derive from the conservation of affected aquatic species and habitats, and discusses the research methods that economists employ to quantify these benefits. As noted in the FEA, additional information would be required in order to quantify these benefits as they relate to designation of bull trout critical habitat. The FEA (section 6.4.3) includes discussion of the potential for benefits related to improved water quality including benefits to other species, lower costs of water treatment, and human health benefits. Similarly, the report discusses the fact that managing activities in riparian areas such as road maintenance could lead to benefits associated with improved water quality. Finally, the FEA has been modified to include discussion of the potential for benefits such as improved subsistence fishing opportunities and mitigation for climate change.

(4)*Comment*: Several commenters indicate the DEA should have included estimates of benefits resulting from increased recreational fishing opportunities. In particular, a commenter states that a recovered bull trout fishery would result in 218,000 to 295,500 bull trout angling days per year within the Columbia River basin and 3,000 to 4,000 days per year in the Klamath River basin. The commenter also estimates potential recreational fishing benefits for Montana. Based on anglers spending $44 per day fishing and fishing 11.7 days per year, the commenter suggests benefits could total $9.8 million to $12.1 million in direct income, and $18 to $22 million after applying an economic multiplier.

In addition, various commenters provided information on the economic value of recreational fishing in the proposed critical habitat area. One comment provided an estimate of $69.8 million of travel-generated expenditures for fishing, hunting, and wildlife viewing in Deschutes County, Oregon (2009). Another commenter supplied information on the economic value of recreational fishing in the five States containing proposed bull trout critical habitat, which totals $2 billion based on the Service's 2006 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation. Several commenters stated that recreational fishing in the State of Idaho results in economic benefits of $283 million.

Our Response: It appears that the estimates of angling days in the Columbia and Klamath river basins that would result from a recovered bull trout fishery cited in one comment may be based on a 2007 Defenders of Wildlife study titled, ''Conservation Pays: How Protecting Endangered and Threatened Species Makes Good Business Sense.'' However, the source cited does not appear to support the estimated angler days. Therefore, we have not included information from this study in the FEA. Further, the Service determined that data needed to reasonably estimate the increase in the number of angling days that would result from the critical habitat designation are not available. There is insufficient biophysical information to support such an analysis for the areas proposed for critical habitat designation. The timing and extent to which the bull trout population would be expected to recover is unknown, both in total and at the critical habitat unit level. Further, the relationship of the designation of critical habitat to the recovery of the species is unknown.

As discussed in Chapter 6 of the FEA, additional information would be required to quantify benefits from increased recreational fishing opportunities, including: (1) Detailed forecasts of the timing and extent of expected bull trout population increases resulting from critical habitat designation; (2) any associated expected changes in fishing regulations, and (3) the responsiveness of anglers to a new target species. These data are not currently readily available.

To the extent that conservation efforts lead to increased open space, aesthetic benefits, or improved water quality, which in turn prompt an increase in visitation to the region (e.g., for recreation such as fishing, hiking, or wildlife-viewing), the economy and employment may benefit from increased regional spending, as discussed in Chapter 6 of the FEA. However, general estimates of travel-generated expenditures for fishing, hunting, and wildlife viewing are not applicable for estimating benefits that could result from designation of critical habitat for bull trout. In particular, these types of estimates are not specific to rivers or lakes included in the proposed critical habitat, nor are they specific to fishing for bull trout. As such, we have not incorporated these values provided by commenters into the FEA.

(5)*Comment*: Two comments suggested that a study of the tailwater fishery on the San Juan River in New Mexico could be used to estimate benefits on the Upper Deschutes River.

Our Response: These two comments refer to potential benefits associated with the Upper Deschutes River, which was not included in the proposed critical habitat, and as such was not considered in the economic analysis. Thus, we did not incorporate this information in the FEA.

(6)*Comment*: A commenter stated that recreational fishing opportunities are not dependent on changes to fishing regulations; thus, the analysis should be able to quantify benefits associated with recreational fishing. The commenter further noted fishing opportunities evaluated should not be limited to lethal harvest. This commenter also noted an error in the reported percentage of trout fishing days in Montana in 2006.

Our Response: Potential benefits related to increased bull trout fishing opportunities are discussed in section 6.3 of the FEA. As noted in the FEA, increased recreational fishing opportunities would most likely occur in the form of catch-and-release fishing, given the status of the species; however, the analysis notes that current management approaches could be altered at some point to allow some anglers in some areas to harvest bull trout.

Additional information would be required to quantify these benefits, including: (1) Detailed forecasts of the timing and extent of expected bull trout population increases resulting from critical habitat designation; (2) any associated expected changes in fishing regulations; and (3) the responsiveness of anglers to a new target species. At this time, the Service is not able to forecast how critical habitat designation may affect the future population of bull trout in critical habitat areas. Further, specific changes, including timing, to fishing regulations are uncertain. Given the dearth of available information, the Service chose not to quantify the potential benefits associated with the increased recreational fishing.

Information on how fishing regulations might change (e.g., the likelihood that States would allow fishing for bull trout, as well as where and when) is considered an important factor in forecasting angler days that could result from a recovered bull trout fishery. Without this information, it would be difficult to predict how much recreational fishing would be allowed in critical habitat areas. For example, if fishing regulations were very restrictive, the increase in recreational fishing due to critical habitat could be very small.

The commenter is correct in noting that the reported percentage of trout fishing days in Montana in 2006 was a typographical error. This percentage has been revised in the FEA.

(7)*Comment*: Several commenters indicated the DEA should have included estimates of benefits resulting from increases in jobs that could result from implementation of restoration activities such as road reconstruction, culvert replacement, and fence building. Commenters state the analysis fails to recognize economic benefits that healthy native fisheries and increased spending at local businesses by the recreational fishing public can provide to regional economies. One commenter suggested that Federal expenditures to protect bull trout habitat contribute to the economy of northeastern Nevada.

Our Response: We agree some level of regional economic benefits could result from conservation efforts resulting from bull trout critical habitat designation, as discussed in section 6.3 of the FEA. To the extent conservation efforts lead to increased open space, aesthetic benefits, or improved water quality, which in turn prompt an increase in visitation to the region (e.g., for recreation such as fishing, hiking, or wildlife-viewing), the economy and employment may benefit from increased regional spending. However, based on the assessment of incremental costs related to the proposed rule, any incremental benefits related to the rule would be expected to be limited (i.e., with few incremental project modifications resulting from the designation, the scale of economic benefit is expected to be modest). As discussed in Chapter 6 of the FEA, the Service determined the data needed to reasonably estimate benefits resulting from a potential increase in recreational fishing that would result from the critical habitat designation are not available.

(8)*Comment*: Several commenters noted that the incremental impacts projected are relatively small in comparison to the potential benefits of the designation. The commenters pointed to potential benefits that may result from the designation such as improvements in water quality and revitalized fisheries.

Our Response: The Service agrees that incremental impacts (i.e., impacts that would not occur absent critical habitat) are expected to be relatively minor. As noted in Exhibit ES-2 of the FEA, potential incremental impacts are estimated at $56.3 to $80.9 million over the next 20 years (discounted at 7 percent). On an annualized basis, incremental impacts are estimated at approximately $5 to $7 million. These impacts are discussed in greater detail in Chapter 4 of the FEA.

The FEA acknowledges potential benefits may occur as the result of the designation; Chapter 6 discusses these benefits qualitatively. As discussed in section 2.3.3, the Service believes that the direct benefits of the proposed rule are best expressed in biological terms that can be weighed against the expected cost impacts of the rulemaking. A direct comparison of incremental impacts to potential benefits in dollar terms is not possible because of a lack of detailed understanding of the change in the probability of bull trout recovery likely to result from the designation.

Administrative Costs

(1)*Comment*: Several commenters provided additional information related to the number of forecast section 7 consultations and associated costs. One commenter stated the number of forecast consultations was too high because of changes in the Northwest economy and because regional and programmatic consultations covering multiple projects may be used. In addition, the commenter believes forecast consultations in unoccupied areas are ''theoretical.'' A second commenter noted that they complete between 10 and 15 consultations a year, and that this number would increase if unoccupied areas were designated. Two commenters noted that costs of participating in section 7 consultation as a third party were greater than the estimates used in the DEA, while another commenter stated that the DEA's estimated costs of addressing adverse modification in a consultation were too high.

Our Response: The comments providing information related to the number and costs of consultation for specific entities were incorporated into the report in Chapter 5 of the FEA. In general, the DEA used a range of administrative costs developed from hours estimates based on a review of consultation records from several Service field offices. The portion of administrative costs attributed to considering critical habitat were based on the Service's estimate that, for every three hours spent considering jeopardy, an additional hour is spent considering adverse modification. This represents the best available information on relative proportion of time spent considering adverse modification in section 7 consultations.

To develop forecasts of future consultations, this analysis relies on section 7 consultation records provided by the Service. This record includes more than 4,000 section 7 consultations conducted for bull trout over the past 7

years. In many cases, the location of future projects, the type of section 7 consultation (i.e., programmatic, formal, informal, or technical assistance), and the associated level of administrative effort needed is not known. The historical rate of consultation is assumed to be a reasonable proxy for the frequency and type of future consultations because it is likely that similar types of projects and entities will occur in the future as in the past. While one commenter notes that shrinkage of the timber industry should reduce the number of forest management consultations, the number of forest management consultations actually increased over the last 4 years. Forest management consultations, in fact, consider a broad suite of activities, including recreation, road maintenance and transportation, and fire management, among other activities.

It is unclear how critical habitat would likely increase the rate of future programmatic consultations. Programmatic consultations are frequently used as a tool to reduce consultation workload, and are part of the consultation records providing the basis for forecasts of future consultation activity in this analysis.

As noted in Exhibit 5-5 of the FEA, some units in occupied areas have estimated incremental administrative costs because of the incremental effort associated with considering adverse modification in consultations that would already be expected to occur. The distribution of costs between baseline and incremental is outlined in section 5 of the FEA.

Impacts to Small Entities

(1)*Comment*: One commenter expressed concerns about certain assumptions underlying the Initial Regulatory Flexibility Analysis (IRFA). In particular, the commenter noted that some consultations may involve more than one small entity (e.g., for consultations on grazing activities); that administrative costs are often not passed on to small entities by Federal and State agencies and may otherwise be subsidized; that the Small Business Administration (SBA) thresholds used are inflated; and that location of small entities participating in activities such as grazing and mining may not correlate with population as assumed in the DEA. Another commenter encouraged outreach with small entities that submitted comments during the public comment period, including addressing these comments in the Final Regulatory Flexibility Analysis (FRFA) prepared for the final rule.

Our Response: The Initial Regulatory Flexibility Analysis (IRFA) has been revised to a Final Regulatory Flexibility Analysis (FRFA). In addition to the information previously provided in the IRFA, the FRFA provides a summary of comments submitted by small entities in response to the proposed rule and DEA. The purpose of the FRFA is to assist the Service in determining the extent to which incremental impacts resulting from critical habitat designation may be borne by a substantial number of small entities. As discussed in section A.1, the FRFA developed two potential estimates of small entities that may be affected depending on the pattern of future consultations and the extent to which impacts are passed on to small entities. Given the breadth of the proposed designation, the number of counties potentially affected, and the more than 70,800 small businesses falling within these counties, primary data collection efforts on the location of each of these businesses and their individual revenues were not feasible and outside the scope of this analysis.

Scenario 1 is based on the estimated number of small entities falling within the designation. To derive this estimate, Appendix A of the FEA uses best available data on such factors as the size and annual sales of businesses in the area, as collected by Dun & Bradstreet. These data are available on a county-wide basis. Because counties may include areas that are not part of the critical habitat designation, the number of small entities within the county is scaled by the percentage of the county's population living within the proposed critical habitat boundaries. The commenter correctly points out that some industries may not correspond to population patterns. For example, agricultural, grazing, and mining operations may be located in more rural and less populated areas. Exhibit A-3 in the FEA provides a summary of all small entities located in the relevant counties, including 416 mining operations, 14,402 agricultural operations, and 1,468 grazing operations. If potential incremental impacts were benchmarked against all of these businesses, the estimated impact per small entity would be less than $700 per entity, representing less than 0.01 percent of revenues. Scenario 2 is based on the forecast number of consultations, assuming one small entity per consultation except in the case of agricultural operations. As the commenter points out, grazing consultations also may involve more than one small entity. This comment has been addressed in Exhibit A-1 of the FEA.

As stated in section A.1.1 and Exhibit A-1, the portion of administrative costs expected to be borne by Federal and State agencies is excluded from impacts considered in this section as well as any project modification costs likely to be borne by Federal agencies. For example, as noted in Exhibit A-1 of the FEA, impacts associated with Federal dam projects are excluded. In total, annualized incremental impacts to small entities considered in Appendix A are only 51 percent of total incremental impacts estimated in the rest of the report. While the commenter believes that the impacts are overstated, they still represent less than 0.6 percent of annual revenues under both scenarios and for all activities.

Finally, the small business size standards noted in Exhibit A-2 in the FEA are taken directly from the US Small Business Administration website (*http://www.sba.gov/idc/groups/public/documents/sba_homepage/serv_sstd_tablepdf.pdf*). The size standards are used to determine the number of businesses that may qualify as small entities under the RFA (see, for example, the ''regulated small entities in county'' column in Exhibit A-3 of the FEA). The Service recognizes that many small businesses may have revenues that fall well below this size standard. Therefore, Appendix A uses estimates based on revenue data provided by Risk Management Association to refine its revenue estimates (see Row [B] in Exhibit A-1 of the FEA).

Water Use

(1)*Comment*: Various comment letters expressed concern the designation could result in flow management changes which could impact agricultural operations. For example, several commenters state the DEA fails to take into account negative impacts that could result from changes in reservoir operations on the Boise, Payette, and Weiser Rivers, which could affect agriculture in this section of Idaho. Another commenter expressed concern about the economic impacts associated with a loss of irrigation water in Adams County, Idaho. One commenter states the DEA should analyze potential future reallocation of water rights priorities that may be caused by the designation, and any associated costs to the Blackfeet Tribe. On the other hand, a commenter states reductions in instream flows are unlikely and there is no reason to believe that this will occur on public and private lands.

Our Response: As discussed in section 4.1, the FEA forecasts potential incremental impacts resulting from modifications to irrigation diversions across the proposed critical habitat designation. As discussed in the 2004 final economic analysis for the Columbia and Klamath River DPS final critical habitat designation, the Service, USFS, and BLM have indicated that reductions in irrigation to protect bull trout critical habitat are unlikely. To date, there have not been any section 7 consultations with USFS or BLM where irrigation diversions have been altered to benefit bull trout or its critical habitat. Because of the large degree of uncertainty as to whether consultations regarding irrigation diversions would occur, what volume of water might be reallocated to instream flows, and what the primary use of the diverted water would be (e.g., crops or pasture irrigation), the FEA estimates a range of outcomes. The low end scenario assumes the Service would not recommend any changes to irrigation withdrawals, while the high end scenario assumes there could be project modification costs associated with 10 irrigation diversion projects over the 20–year timeframe of the analysis. This estimated range recognizes such consultation outcomes are unlikely, but that if a limited number were to occur, the impacts on individual operators could be substantial.

(2)*Comment*: One commenter questioned the assumption that alternative water supplies would be available to replace irrigation water that could be reallocated as a result of bull trout critical habitat designation. The commenter further suggested it would be better to apply a value for lost farm income, assuming that replacement water would not be available. The commenter suggested lost farm income should be estimated using a value of $100 to $400 per acre depending on the type of crops being grown. Also, storage for irrigation could be curtailed under the worst case scenario, which could result in a direct economic impact of $50 million at $100 per acre, based on the more than 500,000 acre feet of water stored for diversions in the Boise and Payette river systems. Similarly, another commenter stated the DEA should estimate the impacts of withdrawn lands taken out of agricultural production. One commenter stated there is no extra water to attempt any change in the customary operations of their area. Finally, a commenter stated Idaho does not have instream flow rights laws under their State water law administration.

Our Response: As discussed in the 2004 final economic analysis for the Columbia and Klamath River DPS critical habitat designation, the high end scenario forecasted potential changes to instream flows that could result from bull trout critical habitat designation. The analysis estimated average annual loss in irrigation withdrawals of 2,656 acre-feet per year per consultation based on three biological opinions completed by NOAA Fisheries where instream flows in Washington were specified primarily to protect anadromous species. The analysis applied an upper-end estimate of water lease values from the Washington State Department of Ecology of $127 per acre-foot. Because of uncertainty about timing and location, the high end scenario assumed the consultations would all occur in the first year of the analysis and the costs are spread over all USFS lands within the proposed critical habitat. The portion of costs that are incremental was then calculated based on the portion of critical habitat unit that is considered unoccupied.

As discussed above, the $127 per acre foot is based on actual observed sales of water rights. While these values are based in part on purchases, they are reflective of the opportunity cost of foregone water use (e.g., the value of crop losses) and are consistent with other approaches to valuing water, such as a production function or farm budget approach. Accordingly, their use in the analysis is consistent with the case where the irrigator loses the use of the usual source of water and is unable to purchase water elsewhere (the irrigation-related increment to production is lost). The agriculture irrigation-related sections of the 2004 final economic analysis were reviewed by a technical advisor on agriculture and water resource economics, Dr. Joel Hamilton, Emeritus Professor of Agricultural Economics and Statistics at the University of Idaho. Dr. Hamilton reviewed the analytical methodology and the validity of the results, and opined that the value of $127 per acre-foot likely overestimates the impacts. Further, we note the use of this figure is consistent with the suggested range of $100 to $400 per acre for lost farm income, given that in the Pacific Northwest in 2008 roughly 2 acre-feet of water are applied to each acre irrigated based on the 2007 Census of Agriculture.

In addition, we note that in areas within the proposed critical habitat, water transactions to benefit endangered species have occurred. The report titled ''Economics of Water Acquisition Projects'' referenced by one of the commenters indicates that Oregon and Washington water trusts have recently brokered a number of annual water leases for the purpose of augmenting instream flows, and includes examples in the Deschutes River Basin. As discussed in this report ''Agencies, politicians and current right holders seem to concur that if water is needed it should be purchased from willing sellers, rather than rely on government regulatory powers or taking provisions.'' This report also confirms that Oregon, Idaho, and Washington all allow water rights to be changed from irrigation to instream flow use.

Forecast impacts to irrigation do not include curtailing water storage in the Boise and Payette river systems. This is not considered a reasonably foreseeable outcome of the critical habitat designation. Given that there is no basis for assuming the 50,000 acre feet of stored water would be affected by the critical habitat designation, we determine the suggested direct economic impact of $50 million is not applicable.

(3)*Comment*: Several commenters were concerned about potential loss in tax revenues as well as ripple effects that could result from impacts of the designation on agricultural activities. Several comment letters suggested regional economic impacts could occur if irrigation for agriculture is affected by the critical habitat designation. In addition, numerous commenters provided information about the value of irrigated agriculture. One commenter indicated any reallocation of irrigation diversions would negatively impact the economy in Canyon County (Boise City and Treasure Valley), Idaho, and provided information on the value of agricultural receipts as $325 million in Canyon County. One commenter indicates the total value of irrigated agriculture is nearly $1 billion in Kittias, Yakima, and Benton Counties (WA). Another commenter was concerned 1 to 10 percent of the $1.261 billion direct income to farmers and ranchers in Yakima and Klickitat Counties of Washington State will be affected by this designation. Another commenter provided data on the estimated gross crop revenue of about $12 million within the boundaries of the Middle Valley Ditch Corp. in Idaho. One comment stated Black Canyon Irrigation District contributed about $60 million dollars from agriculture in Gem, Payette, and Canyon Counties in Idaho. Another commenter expressed concern that agriculture and related industries will be affected, which represent 30 percent of Payette County economy.

Our Response: Irrigated agriculture is an important industry in the vicinity of some bull trout critical habitat units. Chapter 1 of the FEA has been expanded to include some discussion of the socioeconomic background of the critical habitat areas, including the contribution of irrigated agriculture. As stated in section 2.3 of the FEA, the analysis focuses on incremental impacts expected to occur after the designation of critical habitat is finalized. The basis for assuming the entire value of irrigated agriculture in counties that contain critical habitat are at risk from the proposed designation of critical habitat does not appear to be warranted given the history of bull trout management. Similarly, commenters do not provide any justification for assuming that 1 percent or 10 percent of these values are at risk due to critical habitat.

Because of the large degree of uncertainty as to whether consultations regarding irrigation diversions may occur, what volume of water might be reallocated to instream flows, and what the primary use of the diverted water would be (e.g., crops or pasture irrigation), the FEA estimates a range of outcomes. The low end scenario assumes the Service would not recommend any changes to irrigation withdrawals, while the high end scenario assumes there could be project modification costs associated with 10 irrigation diversion projects over the 20–year timeframe of the analysis. This estimated range recognizes that such consultation outcomes are unlikely, but that if a limited number were to occur, the impacts on individual operators could be substantial. Because of the large region across which these impacts are spread, however, significant regional impacts of these consultations are not anticipated even under the high end scenario. The analysis does not model the potential regional economic impacts associated with other baseline conservation efforts that may be undertaken, which may be much larger in scale. Because baseline costs are not solely attributable to the proposed designation, they are considered in the FEA primarily for purposes of providing context, while the incremental impacts are considered to be of primary importance for decision-making purposes.

(4)*Comment*: A commenter stated that costs for mitigation of projects in the Upper Willamette River Basin should not be considered incremental as these costs would be incurred whether or not bull trout critical habitat is designated in this area. The commenter further disagreed with the assumption in the DEA that one-third of the costs of project modifications undertaken by the Bonneville Power Administration (BPA) at the Upper Willamette project are related to bull trout.

Our Response: Estimated incremental costs in the Upper Willamette River Basin unit are dominated by project modification costs associated with the Willamette River Basin Flood Control Project, including fish passage (trap and haul operations and construction of a fish ladder), temperature control projects, and bull trout studies. The FEA includes discussion of the uncertainties underlying the estimation of incremental impacts in the Upper Willamette River critical habitat unit, recognizing that some or all of these actions are likely to occur even without critical habitat designation. The specific extent to which project modification costs for the Willamette Project will increase as a result of this designation is unclear; this distinction is particularly complex because most of the proposed area on the Upper Willamettte was designated as critical habitat in 2005. It is feasible that some of the planned future actions would not have been undertaken but for bull trout critical habitat designation. As such, section 4 of the analysis uses the best available information and methods to estimate potential incremental impacts.

(5)*Comment*: Several comment letters expressed concern the DEA does not appear to consider impacts to hydroelectric projects. In particular, one commenter expressed concern about impacts to the Flint Creek Hydroelectric project, which is in the final stages of licensing with the Federal Energy Regulatory Commission (FERC). This commenter stated the DEA does not mention impacts to the Flint Creek hydroelectric project, which the commenter maintained would be greater than the incremental annualized costs for the entire Clark Fork CHU. Other commenters expressed concern the critical habitat designation could increase the costs to hydropower users and their customers. One commenter stated the Energy Impact Analysis does not adequately address the impacts of the rule on energy production, distribution, or marketing.

Our Response: The FEA considers whether the proposed critical habitat would impact hydropower projects. As stated in Chapter 4 of the FEA, incremental conservation costs associated with hydropower projects are estimated to be $2.12 to $2.52 million (annualized at 7 percent). Detailed information regarding the potential impacts to these projects are provided in section 4.2.6 of the 2004 final economic analysis of the Columbia and Klamath DPS final critical habitat designations as well as section 3.4.1 of the 2005 final economic analysis of the Coastal-Puget Sound, Jarbidge River, and Saint Mary-Belly DPS final critical habitat designation. As appropriate, these impacts have been allocated to the new proposed critical habitat units. As noted in the FEA, substantial impacts to hydropower production are anticipated under the baseline for this analysis. The commenter is correct that the economic analysis does not forecast any incremental conservation costs associated with the Flint Creek Hydroelectric Project. In a letter dated March 26, 2010, from the Service to FERC, the Service concurred with the determination that the project is not likely to adversely affect bull trout or modify its proposed critical habitat. Additional conservation efforts are not expected to be undertaken as a result of bull trout critical habitat. Therefore, the only incremental impacts related to this project are administrative costs which have been accounted for in the forecast consultation efforts discussed in Chapter 5 of the FEA. The Energy Impact Analysis has been revised to more clearly identify incremental impacts of critical habitat designation for bull trout on energy production, distribution, and marketing. In addition, the Energy Impact Analysis now also recognizes the more substantial potential impacts on hydropower production expected under the baseline.

(6)*Comment*: Several comment letters expressed concern that the DEA does not appear to consider impacts to municipal water systems and users. In particular, a commenter expressed concern that the designation of Buck Creek will have significant cost impacts for the City of White Salmon municipal water system and its residents and small businesses. Another commenter was concerned about potential negative impacts on the potential loss of water to cities and industrial users from changes to reservoir operations on the Boise, Payette, and Weiser Rivers.

Our Response: In developing the DEA, we considered whether impacts to municipal water systems are likely to result from critical habitat designation for bull trout. Specifically, section 3.4 of the 2004 final economic analysis for the Columbia and Klamath DPS final critical habitat designation included discussion of the potential for consultations for bull trout involving water system improvements. Based on the section 7 consultation history, there have not been project modifications or formal consultations for this type of activity. As such, the 2004 economic analysis forecasted only informal

consultations for water treatment system improvement, and no project modifications associated with bull trout or bull trout critical habitat were expected. Based on the findings of this previous analysis, and current research regarding newly proposed critical habitat areas, we determined incremental impacts to municipal water systems were not reasonably foreseeable; thus, conservation costs associated with this type of activity were not forecast in the FEA.

(7)*Comment*: One commenter was concerned that any changes to BOR's Klamath Project would have significant economic impacts, which was not addressed in the DEA.

Our Response: As discussed in responses to comments on the earlier economic analysis published in the **Federal Register** on September 26, 2005 (70 FR 56222), BOR staff were contacted and consulted on the likelihood of projects requiring section 7 consultation, as described in section 4.2.4 in the final economic analysis of the Columbia and Klamath DPS final critical habitat designation. When contacted, BOR staff in Klamath Falls stated no significant consultation activity concerning bull trout was anticipated. As a result, the analysis assumes impacts resulting from designation of bull trout critical habitat are not reasonably foreseeable for a BOR project on Agency Lake Ranch. Further, as stated in the 2010 final economic analysis, because Unit 9 (Klamath River) is included in proposed critical habitat for the Lost River sucker and shortnose sucker, action agencies have been conferencing with the Service on federally funded activities in this area for the past 15 years. In most instances we do not anticipate we would ask for or require any modifications above or beyond those measures already in place for the protection of the two sucker species. We therefore do not expect any changes other than increased administrative costs to address bull trout critical habitat in that unit.

Other Economics-Related Comments

(1)*Comment*: Several commenters were concerned the critical habitat designation may limit the availability of grazing lands. For example, one commenter noted that, if timing restrictions were imposed on when allotments could be grazed, it could negatively impact the viability of their grazing lands. Other commenters stated the DEA failed to consider the potential costs of fencing grazing allotments, noting that fencing on permitted allotments would cost $4,000 per acre with additional costs related to weed control, fence repairs, livestock water installations, and maintenance costs.

Our Response: The FEA considers potential impacts to grazing activities on lands managed by the BLM and the USFS. Specifically, it estimates the potential costs of monitoring, fencing, and off-stream watering requirements, and then forecasts the number of grazing projects per year that are likely to be asked to undertake these requirements, both under the baseline and incrementally due to critical habitat. For BLM lands, the analysis forecasts that three grazing projects per year will undertake these project modifications across the designation. For USFS lands, the analysis forecasts that two grazing projects per year will undertake project modifications. Estimated costs per grazing consultation are based on a review of the suggested project modifications in past bull trout section 7 consultations, and on information obtained from BLM and USFS representatives on the likelihood that future consultations will be similar in scope and cost.

We recognize that restricting the timing of grazing activities would effectively reduce the allowable grazing levels on Federal lands, and have the potential to impact associated private land values. However, in most cases the FEA does not anticipate timing restrictions on grazing activities or limits on allowable grazing levels as a result of critical habitat for bull trout.

(2)*Comment*: One commenter stated the project modification costs associated with the Blue Bridge pipeline project are overstated because they assume pipeline crossings will be through streams rather than employing directional boring to avoid conservation costs associated with critical habitat.

Our Response: As discussed section 4.2.2 of the FEA, the Blue Bridge pipeline is expected to cross several streams in the proposed critical habitat; however, specific future project modifications associated with that project are currently unknown. The FEA incorporates assumptions from the 2005 final economic analysis for the Coastal-Puget Sound, Jarbidge River, and Saint Mary-Belly DPS final critical habitat designation that conservation activities associated with pipelines include techniques to avoid or minimize impacts to water quality, including directional drilling.

Summary of Changes from the 2005 Rule

This final rule differs from the September 26, 2005, final critical habitat designation for bull trout (70 FR 56212) in the following ways:

(1) In the 2005 final rule, we designated approximately 6,161 km (3,828 mi) of streams and 57,9578 ha (143,218 ac) of lakes in Idaho, Montana, Oregon, and Washington; and 1,585 km (985 mi) of shoreline paralleling marine habitat in Washington as critical habitat (70 FR 56212). No critical habitat was designated in the Jarbidge River basin (70 FR 56249-56251). In this rule, we are designating 31,750.8 km (19,729.0 mi) of streams (which includes 1,213.2 km (754.0 mi) of marine shoreline in the Olympic Peninsula and Puget Sound, and which includes 245.2 km (152.4 mi) of streams in the Jarbidge River basin), and are designating a total of 197,589.2 ha (488,251.7 ac) of reservoirs and lakes.

(2) In the 2005 final rule, we did not designate any unoccupied critical habitat because the Secretary concluded that it was not possible to make a determination that such lands were essential to the conservation of the species (70 FR 56232, September 26, 2005). In this rule, we are designating 1,323.7 km (822.5 mi) of streams and 6,758.8 ha (16,701.3 ac) of reservoirs and lakes (4.2 percent of the total designation) that are outside the geographical area occupied by the species at the time it was listed that have been determined to be essential for the conservation of the species.

(3)A small proportion of critical habitat designated in the 2005 final rule is not designated as critical habitat in this revision. These areas include streams and lakes determined either not to include bull trout or any of their PCEs, or not to be essential to their conservation. For example, Sycan Marsh in the Klamath River basin no longer holds enough water to support bull trout, so we are designating the stream channels through the marsh as critical habitat, allowing connectivity among populations, instead of the entire marsh. Critical habitat included in this rule that was not designated in the 2005 final rule include streams and lakes since determined to be occupied by bull trout, and areas that provide one or more PCEs and are essential to bull trout conservation. For example, the mainstem Columbia River and the lower portions of connecting tributaries such as the John Day River have been found to be more important for FMO habitat for bull trout than was previously

understood. All areas known to contain the most important bull trout habitat and PCEs, or that may be unoccupied but essential to their conservation, are designated in this rule.

(4) In the 2005 rule, a variety of areas were exempted from critical habitat designation under section 4(a)(3) of the Act or excluded from designation as critical habitat under section 4(b)(2) of the Act (70 FR 56232). These areas included lands subject to Federal management plans (such as PACFISH, INFISH, Northwest Forest Plan, and Federal Columbia River Power System). Federal agencies have an independent responsibility under section 7(a)(1) of the Act to use their programs in furtherance of the Act and to utilize their authorities to carry out programs for the conservation of endangered and threatened species. We consider the development and implementation of land management plans by Federal agencies to be consistent with this statutory obligation under section 7(a)(1) of the Act. Owners of non-Federal lands, by contrast, are not obliged to undertake such conservation programs, so to the extent that excluding such lands under section 4(b)(2) provides an incentive to conserve listed species, exclusion may benefit the species to a degree that exclusion of Federal lands would not. Therefore, Federal land management plans, in and of themselves, are generally not an appropriate basis for excluding essential habitat. In areas where Federal land management agencies actively manage for bull trout and its habitat, conduct specific conservation actions for the species at a level comparable to critical habitat designation, provide assurances that a plan will remain in effect for a relevant period of time, and show that a disproportionate impact would result from the designation, exclusion under section 4(b)(2) of the Act may be appropriately considered by the Secretary. In the 2010 proposed rule (75 FR 2269, January 14, 2010), we requested comments and specific information regarding any conservation actions that Federal land management agencies have or are currently implementing on their lands, and we took this information into account when conducting our exclusion analysis. (Please see in particular *Federal Agency Comments*, Bureau of Land Management and U.S. Forest Service comment 1, above.)
The primary benefit of including an area within critical habitat designation is the protection provided by section 7(a)(2) of the Act that directs Federal agencies to ensure that their actions do not result in the destruction or adverse modification of critical habitat. The benefit of designating critical habitat is limited if the areas under consideration occur on private lands for which there may not be a Federal nexus to invoke the protections of section 7(a)(2) of the Act. However, Federal lands, by default, have a Federal nexus, and the intent of section 7 of the Act is to require Federal agencies to consult on any action authorized, funded, or carried out by such agency to ensure that the action will not jeopardize a listed species or destroy or adversely modify its critical habitat. In addition, section 7(a)(1) of the Act states, in part, ''Federal agencies shall, in consultation with and with the assistance of the Secretary, utilize their authorities in furtherance of the purposes of this Act by carrying out programs for the conservation of endangered and threatened species.'' Therefore, the benefits of inclusion of these areas are greater because they are Federal lands.
We were unable to determine that the Federal management plans and guidance documents provide a conservation benefit for bull trout comparable to critical habitat designation, or that designation of critical habitat on Federal lands would present a disproportionate economic or other relevant impact. These plans typically guide agency activities, and provide some level of conservation benefit in occupied bull trout habitat areas, but are fluid documents that may or may not be revised, based on resource availability, management emphasis, and changes in management direction to respond to changing agency priorities. The Secretary has elected not to exercise his discretion under section 4(b)(2) of the Act to exclude Federal lands from this revised critical habitat designation. However, we are committed to working efficiently and proactively with our federal partners to address their program administration needs, in light of the conservation needs of bull trout.

(5) Two economic analyses related to previous bull trout critical habitat proposed rules were prepared in 2004 and 2005, which followed a co-extensive analytical approach, consistent with recent court rulings. Those analyses considered conservation and protection activities for bull trout, without distinguishing between impacts associated with listing the species and those associated with the designation of critical habitat. The economic analysis prepared for this rule does not follow the coextensive analytical approach, and differentiates between baseline and incremental economic impacts. Under this approach, because of the conservation measures already in place for salmon, steelhead, the Klamath suckers, and other protected fish species, our analysis indicates that the incremental economic impact in areas occupied by bull trout will be small, and the most significant incremental effect will be in those areas not currently occupied (less than four percent of the areas being proposed as critical habitat). The majority of forecast incremental costs are associated with unoccupied critical habitat in the Upper Willamette River Basin and are associated with conservation efforts undertaken at flood control facilities. The discussion under *Exclusions Based on Economic Impacts* (below) provides additional information in this regard.

Copies of the previous proposed and final bull trout critical habitat rules and a map showing the relationship of the 2005 final rule and this final rule are available on the Idaho Fish and Wildlife Office web site at *http://www.fws.gov/pacific/bulltrout*.

Summary of Changes from the Proposed Rule

We are designating a total of 31,750.8 km (19,729.0 mi) of streams (which includes 1,213.2 km (754.0 mi) of marine shoreline. We are also designating a total of 197,589.2 ha (488,251.7 ac) of reservoirs and lakes. We received many site-specific comments related to essential habitat areas, completed our analysis of habitats to be excluded under section 4(b)(2) of the Act, applied our criteria for identifying critical habitat across the range of the bull trout to refine the designation in this final rule, and completed the final economic analysis (FEA). These changes from the proposed rule are identified below:

(1)We refined our understanding of which areas contain the physical or

biological features essential to the conservation of the species based on comments from peer reviewers, States, Tribes, Federal agencies, and the public. This improved information is reflected in this final designation, and is characterized as many small adjustments to waterbody segments based on site-specific information received during the public comment period. In some cases, proposed critical habitat areas were expanded and in other cases, proposed critical habitat areas were reduced, based on comments and information received in response to the proposed rule, and our evaluation of this new information, which led us to refine our designation. In some cases we extended the designation upstream into some tributary streams that we determined were essential for the conservation of the bull trout, because they contained the PCEs and meet our selection criteria for inclusion in critical habitat. Each of the areas affected by a critical habitat boundary expansion is essential to the conservation of the species and consistent with the criteria outlined in the **Critical Habitat** *Methods* section below. In other cases, we did not designate some streams that were proposed as critical habitat, based on site specific biological information that these areas did not contain the PCEs and did not meet the selection criteria for inclusion in critical habitat. Our response to *Public Comment* (6) provides an example of one such area. Documentation reflecting the outcome of that analysis for each area is available at *http://www.fws.gov/pacific/bulltrout/*.

(2)We finalized our exclusion analysis under section 4(b)(2) of the Act. Approximately 3,094.9 km (1,923.1 mi) of streams, which includes 348 km (216.3 mi) of marine shoreline, and 7,849.3 ha (19,395.8 ac) of reservoirs and lakes were excluded from the final critical habitat designation based on this analysis. This represents approximately 13 percent of streams and 8.5 percent of reservoirs and lakes that are being excluded from what was proposed. See the **Exclusions** section, below, for more information.

(3)We revised certain language, including the PCEs, to respond to peer review comments and to clarify our intent.

(4)We updated the references cited in light of new information received in response to the proposed rule.

(5)We finalized our economic analysis based on comments received in response to the proposed rule. The Secretary did not exert his discretion under section 4(b)(2) of the Act to exclude any particular areas from the designation on the basis of economic impacts.

(6)During the mapping process, there was an inadvertent error made in Unit 20 (Powder River), in which one of the GIS layers was omitted from the map for that unit. As a result, Phillips Reservoir was not shown on the map published in the proposed revision to bull trout critical habitat (75 FR 2270, January 14, 2010). However, the impounded streams within the reservoir boundary were shown, and the proposed rule stated that ''the lateral extent of critical habitat in lakes is defined by the perimeter of the waterbody as mapped on standard 1:24,000 scale topographic maps'' (75 FR 2283). We also received several comment letters recommending that the reservoir be either excluded or designated as critical habitat, including comments from the Bureau of Reclamation that requested a better definition of the ''bank of Phillips Reservoir''. These comments drew our attention to the mapping error, but affirm the assumption that commenters understood the reservoir was intended to be proposed as critical habitat. We are correcting this mapping error and omission in this final rule, and designating Phillips Reservoir as critical habitat.

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 such areas are essential for the conservation of the species.

Conservation, as defined under section 3 of the Act, means to use and the use of all methods and procedures that are necessary to bring an endangered or threatened species to the point at which the measures provided pursuant to 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. In this rule, critical habitat is defined as the bed and banks of waterbodies, but actions that may destroy critical habitat could occur on lands adjacent to waterbodies, and, therefore, would be subject to regulation under this rule. 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, the 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 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 or 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 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 habitat outside the designated area is unimportant or may not be required for recovery of the species.

Relationship of Critical Habitat to Recovery Planning

Areas that are important to the conservation of the species, but are outside the critical habitat designation, will 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, HCPs, or other species conservation planning efforts if new information available at the time of these planning efforts calls for a different outcome.

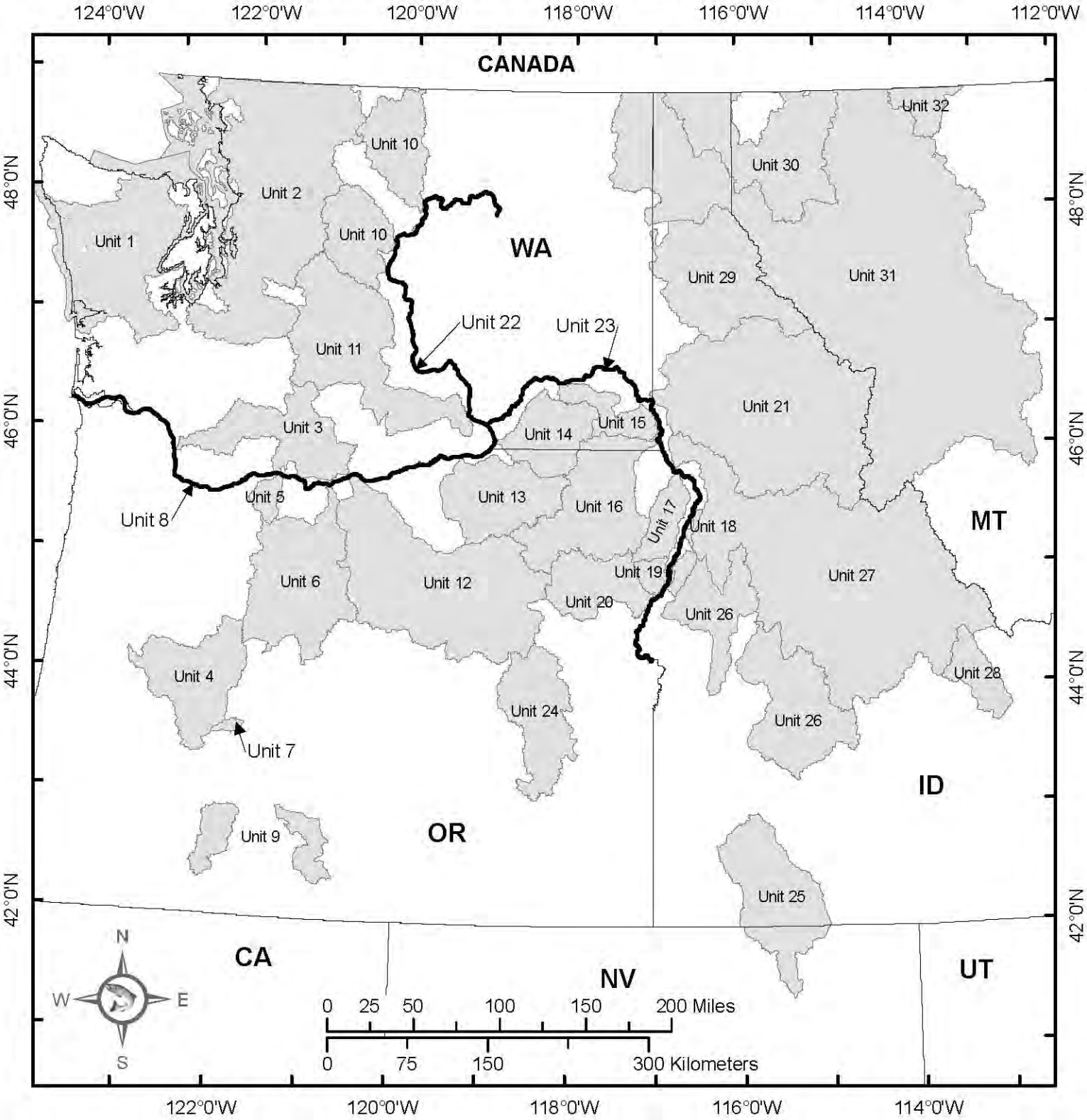
In developing this final rule, we considered the conservation relationship between critical habitat and recovery planning. Although recovery plans formulate the recovery strategy for a species, they are not regulatory documents, and there are no specific protections, prohibitions, or requirements afforded a species based solely on a recovery plan. Furthermore, although critical habitat designation can contribute to the overall recovery strategy for a species, it does not, by itself, achieve recovery plan goals.

In its 5–year review (Service 2008, p. 45), the Service recommended, in part, that recovery units from the 2002 draft recovery plan be updated for bull trout throughout their range (Service 2002), based on assemblages of bull trout core areas (metapopulations or interacting breeding populations) that retain genetic and ecological integrity and are significant to the distribution of bull trout throughout the coterminous United States. To complete the recovery unit update, we consulted with biologists from States, Federal agencies, and Native American Tribes, using the best scientific information available. Factors considered in determining the geographic arrangement of the updated recovery units included ensuring (1) resiliency of the species by protecting large areas of high quality habitat; (2) redundancy by protecting multiple populations; and (3) representation by protecting diverse genetic and life-history aspects of bull trout populations distributed throughout the range of the listed entity (Tear *et al.* 2005, p. 841).

Bull trout are listed under the Act as threatened throughout the coterminous United States, primarily due to habitat threats. The Service concluded in its 5–year review (Service 2008, p. 9) that the number of distinct population segments (DPSs) should be reevaluated, and that consideration should be given to reclassifying bull trout into separate DPSs. Six draft recovery units (RUs) were subsequently identified. Each of the six RUs was evaluated, and confirmed to be needed to ensure a resilient, redundant, and representative distribution of bull trout populations throughout the range of the listed entity. To accomplish these goals, protection of large areas of high-quality habitat, multiple populations, and diverse genetic and life-history aspects will be required.

The six draft RUs identified for bull trout in the coterminous United States include: Mid-Columbia recovery unit; Saint Mary recovery unit; Columbia Headwaters recovery unit; Coastal recovery unit; Klamath recovery unit; and Upper Snake recovery unit (Figure 1). Conserving each RU is essential to conserving the listed entity as a whole. These six new biologically based RUs will be proposed to replace the 27 recovery units previously identified in the bull trout draft recovery plan (Service 2002, Chapter 1, p. 3), and comments will be solicited once the draft recovery plan is ready for public participation and comment.

Index Map: Critical Habitat Units



1	Olympic Peninsula	11	Yakima River	22	Mainstem Upper Columbia River
2	Puget Sound	12	John Day River	23	Mainstem Snake River
3	Lower Columbia River Basins	13	Umatilla River	24	Malheur River Basin
4	Upper Willamette River	14	Walla Walla River Basin	25	Jarbidge River
5	Hood River	15	Lower Snake River Basins	26	Southwest Idaho River Basins
6	Lower Deschutes River	16	Grande Ronde River	27	Salmon River Basin
7	Odell Lake	17	Imnaha River	28	Little Lost River
8	Mainstem Lower Columbia River	18	Sheep / Granite Creeks	29	Coeur d'Alene River Basin
9	Klamath River Basin	19	Hells Canyon Complex	30	Kootenai River Basin
10	Upper Columbia River Basins	20	Powder River Basin	31	Clark Fork River Basin
		21	Clearwater River	32	Saint Mary River Basin

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 essential to the conservation of the bull trout. Data sources included research published in peer-reviewed articles and previous Service documents on the species. Additionally, we utilized regional Geographic Information System (GIS) shape files for area calculations and mapping.

Primary Constituent Elements

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 consider the physical or biological features essential to the conservation of the species and that may require special management considerations or protection. These features are the PCEs laid out in the appropriate quantity and spatial arrangement for 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, or 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.

A detailed discussion of each of these five life-history needs of the bull trout follows.

Space for Individual and Population Growth and for Normal Behavior

Bull trout exhibit a number of life-history strategies. Stream-resident bull trout complete their entire life cycle in the tributary streams where they spawn and rear. Migratory bull trout spawn in tributary streams. Juvenile fish from migratory populations usually rear from 1 to 4 years in natal streams before migrating (typically downstream) to either a larger river (fluvial form) or lake (adfluvial form) where they spend their adult life, returning to the tributary stream to spawn (Fraley and Shepard 1989, p. 133). These migratory forms occur in areas where conditions allow for movement from upper watershed spawning streams to larger waters that contain greater foraging opportunities (Dunham and Rieman 1999, p. 646). Resident and migratory forms may be found together, and either form can produce resident or migratory offspring (Rieman and McIntyre 1993, p. 2). Where ocean environments are accessible, bull trout may also migrate to and from salt water (amphidromy).

The ability to migrate is important to the persistence of bull trout local populations (Rieman and McIntyre 1993, p. 2; Gilpin 1997, p. 4; Rieman and Clayton 1997, p. 6; Rieman *et al.* 1997, p. 1121). Bull trout of a variety of life stages rely on foraging, migration, and overwintering (FMO) habitat to complete extensive and important parts of their life cycle (Homel and Budy 2008, p. 875; Monnot *et al.* 2008, pp. 235-237). Juvenile and adult resident bull trout inhabit the spawning and rearing areas year round. Some adult migratory forms inhabit spawning and rearing habitat after spawning into the early winter and can arrive in early summer to hold prior to spawning (Mulhfeld *et al* 2005, p. 801; Kellyringel and DeLaVergne 2010, p. 16), and subadults or alternate year migratory spawning adults may inhabit mid to lower river migratory corridors year round. Habitat complexity including deep pools and cover appear to be important habitat components in areas of both spawning and rearing and migration (Monnet *et al.* 2008, pp. 235-237; Al-Chokhachy *et al.* 2010, pp. 469–472).

Migratory bull trout become much larger than resident fish, benefiting from the more productive waters of larger streams, lakes, and marine habitats, consequently leading to increased reproductive potential. Stream-resident populations are associated with headwater streams in mountainous regions where year-round cold water and velocity or other movement barriers are common. Typically, these streams are smaller and have higher gradients than those occupied by adfluvial and fluvial populations. In these headwater streams, resident bull trout are associated with deep pools and instream cover, and stream-resident individuals are typically small (McPhail and Baxter 1996, p. 12; Mullan *et al.* 1992, p. K-413). The use of migration habitat by bull trout can also increase potential for dispersion, facilitating gene flow among local populations (interbreeding groups) when individuals from different local populations interbreed, stray, or return to nonnatal streams. Importantly, local populations that have been extirpated by catastrophic events may become reestablished because of movements by bull trout through migration habitat (Rieman and McIntyre 1993, p. 7; MBTSG 1998, p. 45).

Lakes and reservoirs also figure prominently in meeting the life-cycle requirements of bull trout. For adfluvial (migrating between lakes and rivers or streams) bull trout populations, lakes and reservoirs provide an important component of the core FMO habitat and are integral to maintaining the adfluvial life-history strategy that is commonly exhibited by bull trout. When juvenile bull trout emigrate to a lake or reservoir from spawning and rearing streams, they enter a more productive lentic (still or slow-moving water) environment that allows them to achieve rapid growth and energy storage.

Some reservoirs may have adversely affected bull trout, while others have provided benefits, and some may cause both benefits and impacts. For example, the basin of Hungry Horse Reservoir has functioned adequately for 50 years as a surrogate home for stranded Flathead Lake bull trout trapped upstream of the dam when it was completed. While this is an artificial impoundment, the habitat the reservoir provides and the presence of an enhanced prey base of native minnows, suckers, and whitefish within the reservoir sustain a large adfluvial bull trout population. Additionally, while barriers to migration are often viewed as a negative consequence of dams, the connectivity barrier at Hungry Horse Dam has served an important, albeit unintended, function in restricting the proliferation of nonnative *Salvelinus* species (including brook trout (*Salvelinus fontinalis*) and lake trout (*Salvelinus namaycush*)) upstream above the dam. Reservoir fluctuations may or may not harm bull trout populations at Hungry Horse Reservoir; site-specific information would best inform a determination of such effects. Instream flow analyses downstream of Hungry Horse Reservoir, which have used site-specific habitat suitability criteria, have shown that amount and duration of important bull trout habitats were greatly reduced following the installation of Hungry Horse Dam in 1952 (Miller *et al.* 2003, p. 60; Muhlfeld *et al.* 2010, p. 40).

Marine nearshore habitats have similar importance for the amphidromous (migrating between marine waters and river or streams) bull trout populations. These marine habitats and the associated nonnatal river systems used by amphidromous bull trout are integral to maintaining this life-history strategy. Similar to lakes and reservoirs, these areas provide highly productive foraging habitat as well as stable overwintering habitat.

Food, Water, Air, Light, Minerals, or Other Nutritional or Physiological Requirements

Bull trout are opportunistic feeders that prey upon other organisms. Prey selection is primarily a function of size and life-history strategy. Resident and juvenile migratory bull trout prey on terrestrial and aquatic insects, macro-zooplankton, and small fish (Donald and Alger 1993, p. 244; McPhail and Baxter 1996, p. 15). Adult migratory bull trout feed almost exclusively on other fish (Rieman and McIntyre 1993, p. 3). Habitat must provide the necessary aquatic and adjacent terrestrial conditions to harbor and maintain prey species in sufficient quantity and diversity to meet the physiological requirements necessary to maintain bull trout populations. Therefore, an abundant food base, including a broad array of terrestrial organisms of riparian origin, aquatic macroinvertebrates, and/or forage fish, supports individual and population growth and allows for normal bull trout behavior.

Cover or Shelter

At all life stages, bull trout require complex forms of cover, including large woody debris, undercut banks, boulders, and pools (Fraley and Shepard 1989, pp. 137–138; Watson and Hillman 1997, p. 249). Many of these habitat features are dependent on watershed conditions as a whole (Howell 2010, pers.com). Juveniles and adults frequently inhabit side channels, stream margins, and pools with suitable cover (Sexauer and James 1997, p. 368). McPhail and Baxter (1996, p. 11) reported newly emerged fry are secretive and hide in gravel along stream edges and side channels. They also reported juveniles are found mainly in pools but also in riffles and runs, maintain focal sites near the bottom, and are strongly associated with instream cover, particularly overhead cover such as woody debris or riparian vegetation. Undercut banks and coarse substrates provide cover and overwinter habitat for juvenile bull trout (peer review comments, R. Thurow 2010, p. 1). All life-history stages of bull trout have been observed overwintering in deep beaver ponds or pools containing large woody debris (Jakober 1995, p. 90). Adult bull trout migrating to spawning areas have been recorded as staying 2 to 4 weeks at the mouths of spawning tributaries in deeper holes or near logs or cover debris (Fraley and Shepard 1989, p. 137). Bull trout may also use lotic (swift-flowing water) and in some cases saltwater environments seasonally for reasons that include use as cover. In conclusion, riparian vegetation; large wood; variable stream channel morphology including deep pools, side-channels, undercut banks and substrates; and in some cases access to downstream environments provide cover and shelter, which support individual and population growth and allow for normal bull trout behavior.

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

Bull trout have more specific habitat requirements than most other salmonids (Rieman and McIntyre 1993, p. 4). Habitat components that particularly influence their distribution and abundance include water temperature, cover, channel form, spawning and rearing substrate conditions, and migration habitat (Fraley and Shepard 1989, p. 138; Goetz 1989, p. 19; Watson and Hillman 1997, p. 247).

Relatively cold water temperatures are characteristic of bull trout habitat. Water temperatures above 15 °Celsius (C) (59 °Fahrenheit (F)), while not lethal, are believed to limit bull trout juvenile distribution (Fraley and Shepard 1989, p. 138). Although adults have been observed in large rivers throughout the Columbia River basin in water temperatures up to 20 °C (68 °F), steady and substantial declines in abundance have been documented in stream reaches where water temperature ranged from 15 to 20 °C (59 to 68 °F) Gamett (2002, pp. 30–32) .

Watson and Hillman (1997, p. 248) concluded watersheds must have specific physical characteristics to provide the necessary habitat requirements for bull trout spawning and rearing, and that these characteristics are not ubiquitous throughout the watersheds in which bull trout occur. The preferred spawning habitat of bull trout consists of low-gradient stream reaches with loose, clean gravel (Fraley and Shepard 1989, p. 133). Bull trout typically spawn in a narrow time window of a couple weeks during periods of decreasing water temperatures, but spawning ranges from August to November depending on local conditions (Swanberg 1997, p. 735). However, migratory forms are known to begin spawning migrations as early as April and to move upstream as much as 250 km (155 mi) to spawning areas (Fraley and Shepard 1989 p. 138; Swanberg 1997, p. 735).

Fraley and Shepard (1989, p. 137) reported the initiation of spawning by bull trout in the Flathead River system appeared to be related to water temperature, with spawning generally initiated when water temperatures dropped below 10 °C (50 °F). Goetz (1989, pp. 22–32) reported a spawning temperature range from 4 to 10 °C (39 to 50 °F), but the range could be wider in some areas (Howell *et al.* 2010, p. 102). Selection of spawning habitat by bull trout is also influenced across multiple spatial scales by hyporheic flow (Baxter and Hauer 2000, p. 1476), defined as a mixing of shallow groundwater and surface water beneath and lateral to a stream bed. Hyporheic flow is influenced by geomorphic complexity of the streambed and recognized to be important for surface water/groundwater interaction. Spawning areas are often associated with cold-water springs, glacial and snow melt, or groundwater upwelling (Rieman *et al.* 1997, p. 1121; Baxter *et al.* 1999, p. 137). Fraley and Shepard (1989, p. 137) also found groundwater influence and proximity to cover are important factors influencing spawning site selection. They reported the combination of relatively specific requirements resulted in a restricted spawning distribution in relation to available stream habitat. While bull trout are critically dependent on large, cold-water habitats, individuals can range widely through stream networks and use habitat that may have limited amounts of cold-water refuge (Dunham 2010, pers.com).

Depending on water temperature, egg incubation is normally 100 to 145 days (Pratt 1992, p. 5). Water temperatures of 1.2 to 5.4 °C (34.2 to 41.7 °F) have been reported for incubation, with an optimum (best embryo survivorship) temperature reported to be from 2 to 4 °C (36 to 39 °F) (Fraley and Shepard 1989, p. 138; McPhail and Baxter 1996, p. 10). Juveniles remain in the substrate after hatching. The time from egg deposition to emergence of fry can exceed 200 days. During the relatively long incubation period in the gravel, bull trout eggs and embryos are especially vulnerable to fine sediments (i.e., fine silt to coarse sand) and water quality degradation (Fraley and Shepard 1989, p. 141). Increases in fine sediment appear to reduce egg survival and emergence (Pratt 1992, p. 6) by restricting intragravel circulation and/or causing entombment of newly hatched alevins (young salmon that have the yolk sac still attached). Juveniles are likely also affected by reduced interstitial habitat and cover. High juvenile densities have been reported in areas characterized by a diverse cobble substrate and a low percentage of fine sediments (Shepard *et al.* 1984, p. 6). Habitats with cold water temperature and appropriately-sized stream substrate

with a low level of fine sediments are necessary factors for successful egg incubation and juvenile rearing that supports individual and population growth (Watson and Hillman 1997, pp. 238–246; WFPB 1997, pp. 98, F-25). Because the size and amounts of fines acceptable to bull trout will likely vary from system to system, providing specific examples of local criteria as we did in the proposed rule may be misleading; therefore, for this final rule we have removed the examples we provided in the proposed rule.

Habitats Protected from Disturbance or Representative of the Historical, Geographical, and Ecological Distributions of the Species

Other threats to water quality in bull trout critical habitat include suspended sediment and environmental contaminants. Suspended sediment, made up of the smallest fine materials, may vary in size depending on stream flow and channel type (MacDonald and Wissmar 1991, pp. 98–99). Suspended sediments and the resulting turbidity of the water can impact salmonids (including bull trout) and their prey (e.g., macro invertebrates or other fish). High levels of suspended sediments can affect swimming, feeding, or gill function by reducing visibility and ability to pursue prey, and by interrupting proper physiological gill function.

Water diversion and reservoir development can reduce stream flow, reduce the amount of water available in a stream channel, change water quality, and alter groundwater regimes. These changes may collectively impact habitat and passage for bull trout, and can cause increases in water temperatures.

Alterations to natural habitat conditions may also increase nonnative species predation and competition, which can significantly affect bull trout populations. Nonnative species have been introduced in many watersheds currently occupied by bull trout. Depending on local conditions, bull trout recovery may be either reduced or precluded by the presence of nonnative (and competitive) species. Some nonnative fish species that prey on bull trout include lake trout, walleye (*Sander vitreum*), northern pike (*Esox lucius*), smallmouth bass (*Micropterus dolomieu*), and brown trout (*Salmo trutta*). Brown trout or other introduced salmonids, such as rainbow trout (*Onchorynchus mykiss*), as well as smallmouth bass, northern pike, walleye, and other species, also compete with bull trout for limited resources. Brook trout commonly hybridize with bull trout and are better adapted to compete with bull trout when they occur together, particularly in degraded habitat (Ratliff and Howell 1992, p. 16; Leary *et al.* 1993, p. 857). Brook trout and bull trout hybrids are not uncommon where they are sympatric, and it usually is a cross of a female bull trout and a male brook trout, which is more costly, genetically speaking, to the bull trout population (DeHaan *et al.* 2009, p. 6; Kanda *et al.* 2002, p. 776). Presence of brook trout and lake trout frequently lead to declines in abundance and distribution of bull trout (MBTSG 1998, pp.46–47; Donald and Alger 1993, p. 245; Fredenberg 2002, p. 150).

The stability of stream channels and stream flows may be important habitat characteristics for bull trout (Rieman and McIntyre 1993, p. 5). Bull trout may select spawning locations to reduce risk of scour especially in rain dominated areas with higher probability of peak flows during incubation. Complex channel types including presence of side channels, stream margins, and cover near spawning sites, including pools are important to maintain in these types of spawning reaches (Shellberg 2002, p. 80). Side channels, stream margins, and pools with suitable cover for bull trout are sensitive to activities that directly or indirectly affect stream channel stability and alter natural flow patterns. For example, altered stream flow in the fall may disrupt bull trout during the spawning period, and channel instability may decrease survival of eggs and young juveniles in the gravel during winter through spring (Fraley and Shepard 1989, p. 141; Pratt 1992, p. 6; Pratt and Huston 1993, p. 70). In areas west of the Cascade Range, it is common to have peak flows from rainstorms during the incubation period in the fall (Shellberg 2002, p. 36). East of the Cascade Range, it is not as common to have peak flows until spring snows melt. Also, bull trout use all parts of a waterbody at various times, including foraging in shallow water areas at night; unstable stream flows from impoundments, for example, may impact these behaviors (peer review comments, C. Muhlfeld 2010, attachment p. 22). Streams with a natural hydrograph (those with normal discharge variations over time as a response to seasonal precipitation), permanent water, and an absence of nonnative species are representative of the highest quality habitat of the species.

We are designating bull trout critical habitat of two primary use types: (1) Spawning and rearing, and (2) foraging, migration, and overwintering (FMO). Each area being designated as occupied critical habitat contains one or more of those physical or biological features essential to the conservation of the species, which may require special management considerations or protection, which are the PCEs for the bull trout. Each area being designated as unoccupied habitat has been determined to be essential for the conservation of the species. The justification document developed to support the proposed rule identifies all waterbody segments as either SR or FMO habitat. This document is available at our website at *http://www.fws.gov/pacific/bulltrout*, or upon request from the Idaho Fish and Wildlife Office (see **ADDRESSES** above). Due to a lack of sufficiently detailed data and uncertainty over precise dividing lines between these two habitat types, we do not identify the specific PCEs present for each waterbody segment. Factors such as time of year, seasonal precipitation, drought conditions, and other phenomena can influence the essential physical or biological features present at any particular location at any particular time given the variability of habitats used by bull trout. In addition, attributes such as stream flow and substrate size and composition are influenced by stream order and gradient. Accordingly, we are unable to define a conclusive upper and lower range of conditions for specific PCEs, given this complexity. However, future section 7(a)(2) consultations on specific Federal actions will help identify the PCEs relevant to a specific waterbody, and provide information to Federal agencies regarding special management considerations or protections that may be appropriate at that location.

Based on the above biological needs of the species, and keeping in mind the need to identify PCEs with sufficient generality to apply to the wide range of bull trout and diversity of its habitat, we derived nine specific PCEs required for bull trout from the biological needs of the species as described or referred to in the *Background* section of this final rule and the following information. The nine PCEs relate to: (1) Water quality; (2) migration habitat; (3) food availability; (4) instream habitat; (5) water temperature; (6) substrate characteristics; (7) stream flow; (8) water quantity; and (9) nonnative species.

Primary Constituent Elements for Bull Trout

Based on the needs described above 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

bull trout life-history functions, we have determined that the following PCEs are essential for the conservation of bull trout and may require special management considerations or protection.

(1) Springs, seeps, groundwater sources, and subsurface water connectivity (hyporheic flows) to contribute to water quality and quantity and provide thermal refugia.

(2) Migration habitats with minimal physical, biological, or water quality impediments between spawning, rearing, overwintering, and freshwater and marine foraging habitats, including but not limited to permanent, partial, intermittent, or seasonal barriers.

(3) An abundant food base, including terrestrial organisms of riparian origin, aquatic macroinvertebrates, and forage fish.

(4) Complex river, stream, lake, reservoir, and marine shoreline aquatic environments, and processes that establish and maintain these aquatic environments, with features such as large wood, side channels, pools, undercut banks and unembedded substrates, to provide a variety of depths, gradients, velocities, and structure.

(5) Water temperatures ranging from 2 to 15 °C (36 to 59 °F), with adequate thermal refugia available for temperatures that exceed the upper end of this range. Specific temperatures within this range will depend on bull trout life-history stage and form; geography; elevation; diurnal and seasonal variation; shading, such as that provided by riparian habitat; streamflow; and local groundwater influence.

(6) In spawning and rearing areas, substrate of sufficient amount, size, and composition to ensure success of egg and embryo overwinter survival, fry emergence, and young-of-the-year and juvenile survival. A minimal amount of fine sediment, generally ranging in size from silt to coarse sand, embedded in larger substrates, is characteristic of these conditions. The size and amounts of fine sediment suitable to bull trout will likely vary from system to system.

(7) A natural hydrograph, including peak, high, low, and base flows within historic and seasonal ranges or, if flows are controlled, minimal flow departure from a natural hydrograph.

(8) Sufficient water quality and quantity such that normal reproduction, growth, and survival are not inhibited.

(9) Sufficiently low levels of occurrence of nonnnative predatory (e.g., lake trout, walleye, northern pike, smallmouth bass); interbreeding (e.g., brook trout); or competing (e.g., brown trout) species that, if present, are adequately temporally and spatially isolated from bull trout.

Criteria Used To Identify Critical Habitat

As required by section 4(b) of the Act, we used the best scientific and commercial data available in determining areas that contain the physical or biological features essential to the conservation of bull trout that may require special management considerations or protection, and areas outside of the geographical area occupied at the time of listing that are essential for bull trout conservation (see *Previous Federal Actions* section). The steps we followed in identifying critical habitat were:

(1) We determined in accordance with section 3(5)(A)(i) of the Act and regulations at 50 CFR 424.12, the physical or biological habitat features essential to the conservation of the species, as explained in the previous section. We reviewed the best available scientific information pertaining to the habitat requirements of this species, including consulting with biologists from partner agencies and entities including Federal, State, tribal, and private biologists, as well as experts from other scientific disciplines such as hydrology and forestry, resource users, and other stakeholders with an interest in bull trout and the habitats they depend on for survival. We also reviewed available information concerning bull trout habitat use and preferences; habitat conditions; threats; limiting factors; population demographics; and known locations, distribution, and abundance of bull trout.

(2) We then identified the geographical areas occupied by bull trout at the time of listing and areas not occupied that may be essential for the conservation of bull trout. We used information gathered during the bull trout recovery planning process and the bull trout draft recovery plan (Service 2002), and supplemented that information with recent information developed by State agencies, Tribes, the USFS, and other entities. This information was used to update bull trout status and distribution information for purposes of the proposed critical habitat designation. For areas where we had data gaps, we solicited expert opinions from knowledgeable fisheries biologists in the local area. Material reviewed included data in reports submitted during section 7 consultations, reports from biologists holding section 10(a)(1)(A) recovery permits, research published in peer-reviewed scientific journals, academic theses, State and Federal government agency reports, and regional GIS overlays.

(3) We identified specific areas within each of the six new draft recovery units described above that contain the physical or biological features essential to bull trout conservation, considering distribution, abundance, trend, and connectivity needs. The objective was to ensure the areas proposed for designation as critical habitat would effectively achieve the principles we believe are important for recovery: (a) Conserve the opportunity for diverse life-history expression; (b) conserve the opportunity for genetic diversity; (c) ensure bull trout are distributed across representative habitats; (d) ensure sufficient connectivity among populations; (e) ensure sufficient habitat to support population viability (e.g., abundance, trend indices); (f) address threats (see *Special Management Considerations or Protection* below), including climate change (described later in this section); and (g) ensure sufficient redundancy in conserving population units. These recovery principles take into account the threats and physical or biological needs of the species throughout its range, and focus on the rangewide recovery needs.

Some areas that contained the physical or biological features did not meet one or more of the seven recovery principles because they did not contain the physical or biological features in an appropriate quantity and spatial arrangement. Accordingly, the areas with such features were determined not to be essential to bull trout conservation. For example, some areas may have contained spawning habitat (PCEs 5 and 6), but were disconnected from known populations and were not known to support viable bull trout populations. A few areas (e.g., the entire Lucky Peak core area in the lower Boise River drainage in southwest Idaho) were not included because of limited habitat quantity, marginal habitat quality, low bull trout density, or only sporadic presence of bull trout recorded.

Global climate change threatens bull trout throughout its range in the coterminous United States. Downscaled regional climate models for the Columbia River basin predict a general air temperature warming of 1.0 to 2.5 °C (1.8 to 4.5 °F) or more by 2050 (Reiman *et al.* 2007, p. 1552). This predicted temperature trend may have important effects on the regional distribution and local extent of habitats available to salmonids (Rieman *et al.* 2007, p. 1552), although the relationship between changes in air temperature and water

temperature are not well understood. The optimal temperatures for bull trout appear to be substantially lower than those for other salmonids (Selong and McMahon 2001), p. 1031; Rieman *et al.* 2007, p. 1553). Coldwater fish do not physically adapt well to thermal increases (McCullough *et al.* 2009, pp. 96–101). Instead, they are more likely to change their behavior, alter the timing of certain behaviors, experience increased physical and biochemical stress, and exhibit reduced growth and survival (McCullough *et al.* 2009, pp. 98–100). Bull trout spawning and initial rearing areas are currently largely constrained by low fall and winter water temperatures, and define the spatial structuring of local populations or habitat patches across larger river basins; habitat patches represent networks of thermally suitable habitat that may lie in adjacent watersheds and are disconnected (or fragmented) by intervening stream segments of seasonally unsuitable habitat or by actual physical barriers (Rieman *et al.* 2007, p. 1553). With a warming climate, thermally suitable bull trout spawning and rearing areas are predicted to shrink during warm seasons, in some cases very dramatically, becoming even more isolated from one another under moderate climate change scenarios (Rieman *et al.* 2007, pp. 1558–1562; Porter and Nelitz 2009, pp. 5–7).

Climate change will likely interact with other stressors, such as habitat loss and fragmentation (Rieman *et al.* 2007, pp. 1558–1560; Porter and Nelitz 2009, p. 3); invasions of nonnative fish (Rahel *et al.* 2008, pp. 552–553); diseases and parasites (McCullough *et al.* 2009, p. 104); predators and competitors (McMahon *et al.* 2007, pp. 1313–1323; Rahel *et al.* 2008, pp. 552–553); and flow alteration (McCullough *et al.* 2009, pp. 106–108), rendering some current spawning, rearing, and migratory habitats marginal or wholly unsuitable. For example, introduced congeneric populations of brook trout are widely distributed throughout the range of bull trout. McMahon *et al.* (2007, p. 1320) demonstrated the presence of brook trout has a marked negative effect on bull trout, an effect that is magnified at higher water temperatures (16–20 °C (60–68 °F)). Changes and complex interactions are difficult to predict at a spatial scale relevant to bull trout conservation efforts, and key gaps exist in our understanding of whether bull trout (and other coldwater fishes) can behaviorally adapt to climate change.

We considered effects of climate change on bull trout by first applying best professional judgment to screen core areas to assess those that might be most vulnerable to climate change effects. These were highlighted in our 2008 update of status and threats information in the core area template documents (Service 2008, p. 15). For example, in many locations we prioritized cold water spring habitats for conservation because they may be among the most resistant habitats to climate change effects. In other locations we deemphasized protection of some already low-elevation, warmer, marginal bull trout habitats, anticipating that they would become even less valuable for the future conservation of bull trout. Over a period of decades, climate change may directly threaten the integrity of the essential physical or biological features described in PCEs 1, 2, 3, 5, 7, 8 and 9. Protecting bull trout strongholds and cold water refugia from disturbance and ensuring connectivity among populations were important considerations in addressing this potential impact.

Over 30 years of research into wildlife population sizes required for long-term viability (avoiding extinction) suggests that a minimum number of 5,000 individuals (rather than 50 or 500) may be needed in light of rapidly changing environmental conditions, such as accelerated climate change (Traill *et al.* 2009, p. 3). Although the minimum number of individuals may vary depending on the species involved, for bull trout, we have included additional unoccupied habitats in those areas where occupied habitats currently support far less than this number of individuals, so there are adequate PCEs for those small populations to recover.

Each of the areas being designated as occupied critical habitat (a) satisfies the above recovery principles; (b) is within the geographic range occupied by the species at the time of listing, or was unoccupied at the time of listing, but we have determined to be essential to the conservation of the species; and (c) contains the physical or biological features essential to the conservation of the species that may require special management considerations or protection.

(4) In selecting areas to designate as critical habitat, we considered factors specific to each river system, such as size (i.e., stream order), gradient, channel morphology, connectivity to other aquatic habitats, and habitat complexity and diversity, as well as rangewide recovery considerations. We took into account the fact that bull trout habitat preference ranges from small headwater streams used largely for spawning and rearing, to downstream mainstem portions of river networks used for rearing, foraging, migration, or overwintering.

To help determine which specific areas contained the physical or biological features essential to bull trout conservation, we considered the species' status in each recovery unit by evaluating whether: (a) Bull trout are rare and exposed to threats, such that recovery needs include removing threats from essentially all existing occurrences and restoring bull trout to portions of their historic range; or (b) bull trout are declining and exposed to threats, such that recovery needs include stopping the decline and eliminating threats across key portions of their range, such as currently occupied strongholds.

NatureServe is a nonprofit conservation organization whose mission is to provide science-based recommendations for conservation actions. NatureServe has identified a suite of factors related to rarity, trends, and threats to assess the extinction or extirpation risk of species and ecosystems, and has developed a computer spread-sheet tool that allows 10 conservation status factors to be entered and then ranked for different populations. The protocol for assigning a conservation status rank is based on scoring an element against these 10 conservation status factors, which are grouped into three categories based on the characteristic of the factor: rarity (six factors), trends (two factors), and threats (two factors) (Master *et al.* 2007, pp. 6–11). We have concluded that the NatureServe protocol provides a rational framework for assessing bull trout status and threats. By applying the NatureServe status assessment ranking tool, which considers factors such as population size, amount of habitat, and type and degree of threat using data through 2007, we were able to estimate the relative status and threats within each of the 118 bull trout core areas or watersheds and each of the 6 draft recovery units.

This critical habitat designation focuses on areas containing the physical or biological features essential to the conservation of local populations and spawning and rearing streams of highest conservation value. Factors taken into account at the smaller, local population scale included the largest areas or populations, most highly connected populations, and areas with the highest conservation potential (i.e., the quantity and quality of physical or biological features present). At the larger core area scale, the designation also focuses on areas having the highest conservation value by applying the factors that were applied at the local population scale. At both the local population and core area

scales, the designation emphasizes essential FMO habitats of highest conservation value, such as habitats that connect local populations and core areas and provide required space for life-history functions. In some areas, we have determined that specific areas outside the geographical area occupied by bull trout at the time of listing are essential for the conservation of the species, and we are designating them as critical habitat. In those areas, bull trout habitat and population loss over time necessitates reestablishing bull trout in currently unoccupied habitat areas to achieve recovery.

Based on the considerations described above, we designate a greater proportion of occupied habitat, as well as additional unoccupied habitat, for protection in areas where bull trout demonstrate less resiliency, redundancy, and representation, and less critical habitat elsewhere. For example, in the Klamath Basin Recovery Unit where threats to bull trout are greatest, we are designating all habitat known to be occupied at the time of listing that contains the physical or biological features essential to the conservation of the species and that may require special management considerations or protection, and we are also designating a substantial proportion of unoccupied habitat outside of the geographical area occupied by the species at the time of listing that has been determined to be essential for bull trout conservation. Our primary consideration for designating critical habitat for occupied areas was to protect species strongholds for spawning and rearing and FMO habitats. Our primary consideration for designating most of unoccupied areas we are including in this designation was to restore connectivity among populations by protecting FMO habitats.

We are designating habitat in 32 critical habitat units (CHUs) within the geographical area occupied by the species at the time of listing. These units have an appropriate quantity and spatial arrangement of physical or biological features present that supports bull trout metapopulations, life processes, and overall species conservation. Twenty-nine of the units contain all of the physical or biological features identified in this final rule and support multiple life-history requirements. Three of the mainstem river units in the Columbia and Snake River basins contain most of the physical or biological features necessary to support the bull trout's particular use of that habitat, other than those associated with PCEs 5 and 6, which relate to breeding habitat. Lakes and reservoirs within these units also contain most of the physical or biological features necessary to support bull trout, other than those associated with PCEs 1, 4, and 6. Marine nearshore habitats within the Olympic Peninsula and Puget Sound critical habitat units contain only a subset of the identified physical or biological features for bull trout (PCEs 2, 3, 5, and 8). However, these habitats are important to conserving a diverse life-history expression and representative habitats.

When determining critical habitat boundaries within this final rule, we made every effort to avoid including developed areas such as lands covered by buildings, pavement, and other structures because such lands lack physical or biological features for bull trout. The scale of the maps we prepared under the parameters for publication within the Code of Federal Regulations may not reflect the exclusion of such developed lands. Any such lands inadvertently left inside critical habitat boundaries shown on the maps of this final rule have been excluded by text in the rule and are not designated as critical habitat. Therefore, a Federal action involving these lands would not trigger section 7 consultation with respect to critical habitat and the requirement of no adverse modification unless the specific action would affect the physical and biological features in the adjacent critical habitat.

Special Management Considerations or Protection

When designating critical habitat, we assess whether the specific areas within the geographic area occupied by the species at the time of listing contain the features that are essential to the conservation of the species and may require special management needs or protection. Accordingly, in identifying critical habitat in occupied areas, we assess whether the PCEs within the areas determined to be occupied at the time of listing may require any special management considerations or protection. 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 we are designating as critical habitat require some level of management to address current and future threats to bull trout, to maintain or enhance the physical or biological features essential to its conservation, and to ensure the recovery of the species.

The primary land and water management activities impacting the physical or biological features essential to the conservation of bull trout that may require special management considerations within the critical habitat units include timber harvest and road building (forest management practices), agriculture and agricultural diversions, livestock grazing, dams, mining, and nonnative species (Beschta *et al.* 1987, p. 194; Chamberlin *et al.* 1991, p. 194; Furniss *et al.* 1991, p. 297; Meehan 1991, pp. 6–10; Nehlsen *et al.* 1991, p. 4; Sedell and Everest 1991, p. 6; Craig and Wissmar 1993, p. 18; Frissell 1993, p. 350; Henjum *et al.* 1994, p. 6; McIntosh *et al.* 1994, p. 37; Wissmar *et al.* 1994, p. 28; MBTSG 1995a, p. i; MBTSG 1994b, p. i; MBTSG 1995c, p. i; MBTSG 1995d, p. 1; MBTSG 1995e, p. 1; USDA and USDI 1995, p. 8; 1997, pp. 132–144; Light *et al.* 1996, p. 6; MBTSG 1996a, p. ii; MBTSG 1996b, p. 1; MBTSG 1996c, p. i; MBTSG 1996d, p. i; MBTSG 1996e, p. i; MBTSG 1996f, p. 1; MBTSG 1996g, p. 7; MBTSG 1996h, p. 7). Urbanization and residential development may also impact the physical or biological features and require special management considerations or protection.

Timber harvest and road building in or close to riparian areas can immediately reduce stream shading and cover, channel stability, and large woody debris recruitment and increase sedimentation and peak stream flows (Chamberlin *et al.* 1991, p. 180; Ripley *et al.* 2005, p. 2436). These activities can, in turn, lead to increased stream temperatures, bank erosion, and decreased long-term stream productivity. The effects of road construction and associated maintenance account for a majority of sediment loads to streams in forested areas; in addition, stream crossings also can impede fish passage (Shepard *et al.* 1984, p. 1; Cederholm and Reid 1987, p. 392; Furniss *et al.* 1991, p. 301). Sedimentation affects streams by reducing pool depth, altering substrate composition, reducing interstitial space, and causing braiding of channels (Rieman and McIntyre 1993, p. 6), which reduce carrying capacity. Sedimentation negatively affects bull trout embryo survival and juvenile bull trout rearing densities (Shepard *et al.* 1984, p. 6; Pratt 1992, p. 6). An assessment of the interior Columbia Basin ecosystem revealed that increasing road densities were associated with declines in four nonanadromous salmonid species (bull trout, Yellowstone cutthroat trout (*Oncorhyncus clarkii bouvieri*), westslope cutthroat trout (*O. c. lewisi*),

and redband trout (*O. mykiss* spp.)) within the Columbia River basin, likely through a variety of factors associated with roads. Bull trout were less likely to use highly roaded basins for spawning and rearing and, if present in such areas, were likely to be at lower population levels (Quigley and Arbelbide 1997, p. 1183). These activities can directly and immediately threaten the integrity of the essential physical or biological features described in PCEs 1 through 6. Special management considerations or protection that may be needed include the implementation of best management practices specifically designed to reduce these impacts in streams with bull trout, particularly in spawning and rearing habitat. Such best management practices could require measures to ensure that road stream crossings do not impede fish migration or occur in or near spawning/rearing areas, or increase road surface drainage into streams.

Agricultural practices and associated activities adjacent to streams and in upland portions of watersheds also can affect the physical or biological features essential to bull trout conservation. Irrigation withdrawals, including diversions, can dewater spawning and rearing streams, impede fish passage and migration, and cause entrainment. Discharging pollutants such as nutrients, agricultural chemicals, animal waste, and sediment into spawning and rearing waters is also detrimental (Spence *et al.* 1996, p. 128). Agricultural practices regularly include stream channelization and diking, large woody debris and riparian vegetation removal, and bank armoring (Spence *et al.* 1996, p. 127). Improper livestock grazing can promote streambank erosion and sedimentation and limit the growth of riparian vegetation important for temperature control, streambank stability, fish cover, and detrital input (Platts 1991, pp. 397–399). In addition, grazing often results in increased organic nutrient input in streams (Platts 1991, p. 423). These activities can directly and immediately threaten the integrity of the essential physical or biological features described in PCEs 1 through 8. Special management could include best management practices specifically designed to reduce these types of impacts in streams with bull trout, such as fencing livestock from stream sides, moving animal feeding operations away from surface waters, using riparian buffer strips near crop fields, minimizing water withdrawal from streams, avoiding stream channel and spring head alteration, and avoiding stream dewatering.

Dams constructed without fish passage or with poorly designed fish passage features create barriers to migratory bull trout, precluding access to suitable spawning, rearing, and migration habitats. Dams disrupt the connectivity within and between watersheds essential for maintaining aquatic ecosystem function (Naiman *et al.* 1992, p. 127; Spence *et al.* 1996, p. 141) and bull trout subpopulation interaction (Rieman and McIntyre 1993, p. 15). Natural recolonization of historically occupied sites can be precluded by migration barriers (e.g., McCloud Dam in California, or impassable culverts under roads). Also, fluctuation of reservoir levels may affect bull trout populations, although these effects are best determined on a case-specific basis. These activities can directly and immediately threaten the integrity of the essential physical or biological features described in PCEs 2 through 7 and 9. Special management considerations that may be needed include the implementation of best management practices, such as providing fish passage, specifically designed to reduce these impacts in streams with bull trout.

Mining can degrade aquatic systems by generating sediment and heavy metals pollution, altering water pH levels, and changing stream channels and flow (Martin and Platts 1981, p. 2). These activities can directly and immediately threaten the integrity of the essential physical or biological features described in PCEs 1, 6, 7, and 8, even if they occur some distance upstream from critical habitat. Special management could require best management practices specifically designed to reduce these impacts in streams with bull trout, such as avoiding surface water impacts from mining activities and neutralizing toxic materials.

Introductions of nonnative invasive species by the Federal government, State fish and game departments, and unauthorized private parties across the range of bull trout have resulted in predation, declines in abundance, local extirpations, and hybridization of bull trout (Bond 1992, p. 3; Howell and Buchanan 1992, p. viii; Donald and Alger 1993, p. 245; Leary *et al.* 1993, p. 857; Pratt and Huston 1993, p. 75; MBTSG 1995b, p. 10; MBTSG 1995d, p. 21; Platts *et al.* 1995, p. 9; MBTSG 1996g, p. 7; Palmisano and Kaczynski, in litt.1997, p. 29). Nonnative species may exacerbate stresses on bull trout from habitat degradation, fragmentation, isolation, and species interactions (Rieman and McIntyre 1993, p. 3). These activities can over time directly threaten the integrity of the essential physical or biological features described in PCE 9. Special management needs and considerations could require the implementation of best management practices specifically designed to reduce these impacts in streams with bull trout, such as avoiding future introductions, eradicating or controlling introduced species, and managing habitat to favor bull trout over other species.

Urbanization and residential development in watersheds has led to decreased habitat complexity (uniform stream channels and simple nonfunctional riparian areas); impediments and blockages to fish passage; increased surface runoff (more frequent and severe flooding); and decreased water quality and quantity (Spence *et al.* 1996, pp. 130–134). In nearshore marine areas, urbanization and residential development has led to significant loss or physical alteration of intertidal and shoreline habitats, as well as to the contamination of many estuarine and nearshore areas (PSWQAT 2000, p. 47; BMSL *et al.* 2001, ch. 10, pp. 1–27 ; Fresh *et al.* 2004, p. 1). Activities associated with urbanization and residential development can incrementally threaten the integrity of the essential physical or biological features described in PCEs 1 through 5, 7, and 8. Special management could require best management practices specifically designed to reduce these impacts in streams with bull trout, such as setting back developments from riparian areas; minimizing water runoff from urban areas directly to streams; minimizing hard surfaces such as pavement; and minimizing impacts related to fertilizer application.

Final Critical Habitat Designation

We are designating 32 critical habitat units (CHUs) in 6 recovery units as critical habitat for bull trout. Each CHU is comprised of a number of specific streams or reservoir/lake areas, which are identified as subunits in this final rule.

In freshwater areas, critical habitat includes the stream channels within the designated stream reaches and a lateral extent as defined by the bankfull elevation on one bank to the bankfull elevation on the opposite bank. If bankfull elevation is not evident on either bank, the ordinary high-water line determines the lateral extent of critical habitat. The lateral extent of critical habitat in lakes may initially be defined by the perimeter of the waterbody as mapped on standard 1:24,000 scale topographic maps. In marine nearshore areas, the inshore extent of critical habitat is the mean higher high-water (MHHW) line, including the uppermost reach of the saltwater wedge within

tidally influenced, freshwater heads of estuaries. Critical habitat extends offshore to the depth of 10 meters (m) (33 feet (ft)) relative to the mean low low-water (MLLW) line. The Service expects the effects of this rule designating bull trout critical habitat to also extend to any action that may adversely affect the habitat, potentially including activities on lands adjacent to or upstream of designated stream bed and banks, as discussed elsewhere in this rule.

The critical habitat areas we describe below constitute our best assessment at this time of areas that meet the definition of critical habitat for bull trout.

The 32 units we designate as critical habitat are:

A. Coastal Recovery Unit
(1) Olympic Peninsula
(2) Puget Sound
(3) Lower Columbia River Basins
(4) Upper Willamette River
(5) Hood River
(6) Lower Deschutes River
(7) Odell Lake
(8) Mainstem Lower Columbia River
B. Klamath Recovery Unit
(9) Klamath River Basin
C. Mid-Columbia Recovery Unit
(10) Upper Columbia River Basins
(11) Yakima River
(12) John Day River
(13) Umatilla River
(14) Walla Walla River Basin
(15) Lower Snake River Basins
(16) Grande Ronde River
(17) Imnaha River
(18) Sheep and Granite Creeks
(19) Hells Canyon Complex
(20) Powder River Basin
(21) Clearwater River
(22) Mainstem Upper Columbia River
(23) Mainstem Snake River
D. Upper Snake Recovery Unit
(24) Malheur River Basin
(25) Jarbidge River
(26) Southwest Idaho River Basins
(27) Salmon River Basin
(28) Little Lost River
E. Columbia Headwaters Recovery Unit
(29) Coeur d'Alene River Basin
(30) Kootenai River Basin
(31) Clark Fork River Basin
F. Saint Mary Recovery Unit
(32) Saint Mary River Basin

A total of 31,750.8 km (19,729.0 mi) of stream (including 1,213.2 km (754.0 mi) of marine shoreline) (Table 1), and 197,589.3 ha (488,251.7 ac) of reservoirs and lakes (Table 2) are designated as bull trout critical habitat. A total of 1,323.7 km (822.5 mi; 4.2 percent) of streams, reservoirs, and lakes were unoccupied at the time of listing, with the remainder occupied. A total of 15,281.1 4 km (9,495.2 mi; 48.1 percent) of stream and marine shoreline habitat is used for spawning and rearing (all in streams), with the remainder—plus all reservoirs and lakes—used for FMO. Tables 3 and 4 present total stream shoreline length and reservoirs and lakes designated in each State. Table 5 presents the ownership for all stream shoreline designated as critical habitat.

TABLE 1.—STREAM/SHORELINE DISTANCE DESIGNATED AS BULL TROUT CRITICAL HABITAT BY CRITICAL HABITAT UNIT

Critical habitat unit	Kilometers	Miles
1. Olympic Peninsula	748.7	465.2
1. Olympic Peninsula (Marine)	529.2	328.8
2. Puget Sound	1,840.2	1,143.5
2. Puget Sound (Marine)	684.0	425.0
3. Lower Columbia River Basins	119.3	74.2
4. Upper Willamette River	312.4	194.1
5. Hood River	128.1	79.6
6. Lower Deschutes River	232.8	144.7
7. Odell Lake	27.4	17.0
8. Mainstem Lower Columbia River	340.4	211.5
9. Klamath River Basin	445.2	276.6
10. Upper Columbia River Basins	931.8	579.0
11. Yakima River	896.9	557.3
12. John Day River	1,089.6	677.0
13. Umatilla River	163.0	101.3
14. Walla Walla River Basin	383.7	238.4
15. Lower Snake River Basins	270.8	168.3
16. Grande Ronde River	1,057.9	657.4
17. Imnaha River	285.7	177.5
18. Sheep and Granite Creeks	47.9	29.7
19. Hells Canyon Complex	377.5	234.6
20. Powder River Basin	296.5	184.2
21. Clearwater River	2,702.1	1,679.0
22. Mainstem Upper Columbia River	520.1	323.2
23. Mainstem Snake River	451.7	280.6
24. Malheur River Basin	272.3	169.2
25. Jarbidge River	245.2	152.4
26. Southwest Idaho River Basins	2,150.0	1,335.9
27. Salmon River Basin	7,376.5	4,583.5
28. Little Lost River	89.2	55.4
29. Coeur d'Alene River Basin	821.5	510.5
30. Kootenai River Basin	522.5	324.7
31. Clark Fork River Basin	5,356.0	3,328.1
32. Saint Mary River Basin	34.7	21.6
Total	31,750	19,729

TABLE 2.—AREA OF RESERVOIRS OR LAKES DESIGNATED AS BULL TROUT CRITICAL HABITAT BY CRITICAL HABITAT UNIT

Critical habitat unit	Hectares	Acres
1. Olympic Peninsula	3,064.2	7,571.8

TABLE 2.—AREA OF RESERVOIRS OR LAKES DESIGNATED AS BULL TROUT CRITICAL HABITAT BY CRITICAL HABITAT UNIT—Continued

Critical habitat unit	Hectares	Acres
2. Puget Sound	16,260.9	40,181.5
3. Lower Columbia River Basins	0.0	0.0
4. Upper Willamette River	3,601.5	8,899.5
5. Hood River	36.9	91.1
6. Lower Deschutes River	1,224.9	3,026.8
7. Odell Lake	1,387.1	3,427.6
9. Klamath River Basin	3,775.5	9,329.4
10. Upper Columbia River Basins	1,033.2	2,553.1
11. Yakima River	6,285.2	15,530.9
16. Grande Ronde River	605.2	1,495.5
20. Power River Basin	897.0	2,216.5
21. Clearwater River	6,721.9	16,610.1
24. Malheur River Basin	715.9	1,768.9
26. Southwest Idaho River Basins	4,310.5	10,651.5
27. Salmon River Basin	1,683.8	4,160.6
29. Coeur d'Alene River Basin	12,606.9	31,152.1
30. Kootenai River Basin	12,089.2	29,873.0
31. Clark Fork River Basin	119,620.1	295,586.6
32. Saint Mary River Basin	1,669.3	4,125.0
Total	197,589.2	488,251.7

TABLE 3.—STREAM/SHORELINE DISTANCE DESIGNATED AS BULL TROUT CRITICAL HABITAT BY STATE

State	Kilometers	Miles
Idaho	14,116.5	8,771.6
Montana	4,918.9	3,056.5
Nevada	115.6	71.8
Oregon	4,563.9	2,835.9
Oregon/Idaho	173.3	107.7
Washington	6,104.8	3,793.3
Washington Marine	1,213.2	753.8
Washington/Idaho	59.9	37.2
Washington/Oregon	484.8	301.3
Total	31,750.8	19,729.0

TABLE 4.—AREA OF RESERVOIRS OR LAKES DESIGNATED AS BULL TROUT CRITICAL HABITAT BY STATE

State	Hectares	Acres
Idaho	68,884.9	170,217.5
Montana	89,626.4	221,470.7
Oregon	12,244.0	30,255.5
Washington	26,834.0	66,308.1
Total	197,589.2	488,251.7

TABLE 5.—STREAM/SHORELINE DISTANCE DESIGNATED AS BULL TROUT CRITICAL HABITAT BY OWNERSHIP

Ownership	Kilometers	Miles
Federal	20,217.3	12,562.4
Federal/Private	176.0	109.4
Federal/State	4.4	2.8
State	556.5	345.8
State/Private	0.4	0.2
Tribal	226.0	140.4
Tribal/Private	28.1	17.4
Private	10,542.1	6,550.5
Total	31,750.8	19,729.0

We present a description of all critical habitat designated in each of 32 units below, organized by recovery unit. The areas being designated as critical habitat satisfy each of the above *Criteria Used to Identify Critical Habitat* considerations, and will conserve the opportunity for diverse life-history expression and genetic diversity; ensure that bull trout are distributed across representative habitats; ensure sufficient connectivity among populations; ensure sufficient habitat to support population viability; address threats; and ensure sufficient redundancy in conserving

population units. The characteristics of each critical habitat unit, subunit, and, in some cases, waterbody segment that establish why a specific area is essential to the conservation of bull trout are identified in the justification document (Service 2010). Examples of attributes that were considered include habitat use (FMO, spawning and rearing), occupancy data, geographic limits, accessibility, PCE presence, presence or absence of barriers, genetic analysis (used in metapopulation context), population data, habitat condition, and presence of other anadromous salmonids. Maps depicting the units and subunits appear in the **Regulation Promulgation** section below. For a more detailed textual and graphic description of all units and subunits, please see our website at *http://www.fws.gov/pacific/bulltrout*, or contact the Idaho Fish and Wildlife Office (see **ADDRESSES** above).

Coastal Recovery Unit

Unit 1: Olympic Peninsula Unit

The Olympic Peninsula CHU is located in northwestern Washington. Bull trout populations inhabiting the Olympic Peninsula comprise the coastal component of the Coastal–Puget Sound population. The unit includes approximately 748.7 km (465.2 mi) of stream, 3,064.2 ha (7,571.8 ac) of lake surface area, and 529.2 km (328.8 mi) of marine shoreline designated as critical habitat. This CHU is bordered by Hood Canal to the east, Strait of Juan de Fuca to the north, the Pacific Ocean to the west, and the Lower Columbia River Basins and Puget Sound CHUs to the south. It extends across portions of Grays Harbor, Clallam, Mason, Pacific, and Jefferson Counties. All of the major river basins initiate from the Olympic Mountains. The Olympic Peninsula CHU is divided into 10 critical habitat subunits. Although delta areas and small islands are difficult to map and may not be specifically identified by name, included within the critical habitat proposal are delta areas where streams form sloughs and braids and the nearshore of small islands found within the designated marine areas. The State of Washington has assigned most streams a stream catalog number. Typically, if an unnamed stream or stream with no official U.S. Geological Survey name is designated as critical habitat, the stream catalog number is provided for reference. In those cases where tributary streams do not have a catalog number, they are referred to as ''unnamed'' or a locally accepted name is used. The subunits within this unit provide spawning, rearing, foraging, migratory, and overwintering habitat. For a detailed description of this unit and subunits, for justification of why this CHU, included CHSUs, or in some cases individual waterbodies are designated as critical habitat, and for documentation of occupancy by bull trout, see Service (2010), or *http://www.fws.gov/pacific/bulltrout.*

Unit 2: Puget Sound Unit

The Puget Sound CHU includes approximately 1,840.2 km (1,143.5 mi) of streams; 16,260.9 ha (40,181.5 ac) of lake surface area; and 684.0 km (442.5 mi) of marine shoreline designated as critical habitat. The CHU is bordered by the Cascade Range to the east, Puget Sound to the west, Lower Columbia River Basins and Olympic Peninsula CHUs to the south, and the U.S.–Canada border to the north. The CHU extends across Whatcom, Skagit, Snohomish, King, Pierce, Thurston, and Island Counties in Washington. The major river basins initiate from the Cascade Range and flow west, discharging into Puget Sound, with the exception of the Chilliwack River system, which flows northwest into British Columbia, discharging into the Fraser River. The Puget Sound CHU is divided into 13 CHSUs. The subunits within this unit provide spawning, rearing, foraging, migratory, connecting, and overwintering habitat. For a detailed description of this unit and subunits, for justification of why this CHU, included CHSUs, or in some cases individual waterbodies are designated as critical habitat, and for documentation of occupancy by bull trout, see Service (2010), or *http://www.fws.gov/pacific/bulltrout.*

Unit 3: Lower Columbia River Basins Unit

The Lower Columbia River Basins CHU consists of portions of the Lewis, White Salmon, and Klickitat Rivers and associated tributaries in southwestern and south-central Washington. The CHU extends across Clark, Cowlitz, Klickitat, Skamania, and Yakima Counties. Approximately 119.3 km (74.2 mi) of stream are designated as critical habitat. The subunits within this unit provide spawning, rearing, foraging, migratory, connecting, and overwintering habitat. For a detailed description of this unit and subunits, for justification of why this CHU, included CHSUs, or in some cases individual waterbodies are designated as critical habitat, and for documentation of occupancy by bull trout, see Service (2010), or *http://www.fws.gov/pacific/bulltrout.*

Unit 4: Upper Willamette River Unit

The Upper Willamette River CHU includes 312.4 km (194.1 mi) of streams and 3,601.5 ha (8,899.5 ac) of lake surface area in designated critical habitat in the McKenzie River and Middle Fork Willamette River subbasins of western Oregon. This unit is located primarily within Lane County, but also extends into Linn County.

There are three known bull trout local populations in the McKenzie River subbasin and one bull trout local population in the Middle Fork Willamette River subbasin. With the exception of a short reach of the mainstem Willamette River and the mainstem Middle Fork Willamette River (including reservoirs) below Hills Creek Dam, segments designated as critical habitat are occupied by bull trout. This unit provides spawning, rearing, foraging, migratory, connecting, and overwintering habitat. For a detailed description of this unit, for justification of why this CHU, included CHSUs, or in some cases individual waterbodies are designated as critical habitat, and for documentation of occupancy by bull trout, see Service (2010), or *http://www.fws.gov/pacific/bulltrout.*

Unit 5: Hood River Unit

The Hood River CHU includes the mainstem Hood River and three major tributaries: Clear Branch Hood River, West Fork Hood River, and East Fork Hood River. A total of 128.1 km (79.6 mi) of stream and 36.9 ha (91.1 ac) of lake surface is designated as critical habitat. Portions of the mainstem Columbia River utilized as FMO by Hood River bull trout are discussed in the Lower Mainstem Columbia River section of this document.

The Hood River CHU, located on the western slopes of the Cascades Mountains in northwest Oregon, lies entirely within Hood River County, Oregon. There are two local populations: (1) Clear Branch Hood River above Clear Branch Dam, and (2) Hood River and tributaries below Clear Branch Dam. This unit provides spawning and rearing habitat. For a detailed description of this unit, for justification of why this CHU, included CHSUs, or in some cases individual waterbodies are designated as critical habitat, and for documentation of occupancy by bull trout, see Service (2010), or *http://www.fws.gov/pacific/bulltrout.*

Unit 6: Lower Deschutes River Unit

The Lower Deschutes River CHU is located in Wasco, Sherman, Jefferson, Deschutes, and Crook Counties in

central Oregon. There are five known local population in the lower Deschutes River basin: (1) Warm Springs River; (2) Shitike Creek; (3) Whitewater River; (4) Jefferson Creek–Candle Creek Complex; and (5) Jack Creek–Canyon Creek–Heising Spring Complex.

Approximately 232.8 km (144.7 mi) of streams and 1,224.9 ha (3,026.8 ac) of lake and reservoir surface area in the lower Deschutes River basin are designated as critical habitat. A portion of the reaches occur on the Confederated Tribes of Warm Springs lands. This unit provides spawning, rearing, foraging, migratory, connecting, and overwintering habitat. For a detailed description of this unit, for justification of why this CHU, included CHSUs, or in some cases individual waterbodies are designated as critical habitat, and for documentation of occupancy by bull trout, see Service (2010), or *http://www.fws.gov/pacific/bulltrout.*

Unit 7: Odell Lake Unit

The Odell Lake CHU lies entirely within the Deschutes National Forest in Deschutes and Klamath Counties, Oregon. Total critical habitat in this unit includes 27.4 km (17.0 mi) of streams and 1,387.1 ha (3,427.6 ac) of lake surface area. The single Odell Lake bull trout population has been isolated from the Deschutes River population by a lava flow that impounded Odell Creek and formed Davis Lake approximately 5,500 years ago. Odell Lake is the only remaining natural adfluvial population of bull trout in Oregon. This unit provides spawning and rearing habitat. For a detailed description of this unit, for justification of why this CHU, included CHSUs, or in some cases individual waterbodies are designated as critical habitat, and for documentation of occupancy by bull trout, see Service (2010), or *http://www.fws.gov/pacific/bulltrout.*

Unit 8: Mainstem Lower Columbia River Unit

The Mainstem Lower Columbia River CHU extends from the mouth of the Columbia River to John Day Dam and is located in the States of Oregon and Washington. It includes Clatsop, Columbia, Multnomah, Hood River, Wasco, and Sherman Counties in Oregon, and Pacific, Wahkiakum, Cowlitz, Clark, Skamania, and Klickitat Counties in Washington. A total of 340.4 km (211.5 mi) of stream are being designated as critical habitat. This unit provides connecting habitat. For a detailed description of this unit, for justification of why this CHU, included CHSUs, or in some cases individual waterbodies are designated as critical habitat, and for documentation of occupancy by bull trout, see Service (2010), or *http://www.fws.gov/pacific/bulltrout.*

Klamath Recovery Unit

Unit 9: Klamath River Basin Unit

The Klamath River Basin CHU is located in south-central Oregon and includes three CHSUs: (1) Upper Klamath Lake CHSU; (2) Sycan River CHSU; and (3) Upper Sprague River CHSU. It includes portions of Klamath and Lake Counties in Oregon. Total designated critical habitat in this unit includes 445.2 km (276.6 mi) of streams and 3,775.5 ha (9,329.4 ac) of lake surface area. The subunits within this unit provide spawning, rearing, foraging, migratory, connecting, and overwintering habitat. For a detailed description of this unit and subunits, for justification of why this CHU, included CHSUs, or in some cases individual waterbodies are designated as critical habitat, and for documentation of occupancy by bull trout, see Service (2010), or *http://www.fws.gov/pacific/bulltrout.*

Mid-Columbia Recovery Unit

Unit 10: Upper Columbia River Basins Unit

The Upper Columbia River Basins CHU includes portions of the three CHSUs in central and north-central Washington on the east slopes of the Cascade Range and east of the Columbia River between Wenatchee, Washington, and the Okanogan River drainage. The CHU includes portions of Chelan and Okanogan Counties in Washington. A total of 931.8 km (579.0 mi) of streams and 1,033.2 ha (2,553.1 ac) of lake surface area in this CHU are designated as critical habitat. The subunits within this unit provide spawning, rearing, foraging, migratory, connecting, and overwintering habitat. For a detailed description of this unit and subunits, for justification of why this CHU, included CHSUs, or in some cases individual waterbodies are designated as critical habitat, and for documentation of occupancy by bull trout, see Service (2010), or *http://www.fws.gov/pacific/bulltrout.*

Unit 11: Yakima River Unit

The Yakima River CHU supports adfluvial, fluvial, and resident life-history forms of bull trout. This CHU includes the mainstem Yakima River and tributaries from its confluence with the Columbia River upstream to the uppermost point of bull trout distribution. The Yakima River CHU is located on the eastern slopes of the Cascade Range in south-central Washington and encompasses the entire Yakima River basin located between the Klickitat and Wenatchee basins. The Yakima River basin is one of the largest basins in the State of Washington; it drains southeast into the Columbia River near the town of Richland, Washington. The basin occupies most of Yakima and Kittitas Counties, about half of Benton County, and a small portion of Klickitat County. This CHU does not contain any subunits because it supports one core area. A total of 896.9 km (557.3 mi) of stream habitat and 6,285.2 ha (15,530.9 ac) of lake and reservoir surface area in this CHU are designated as critical habitat. One of the largest populations of bull trout (South Fork Tieton River population) in central Washington is located above the Tieton Dam and supports the core area. This unit provides spawning, rearing, foraging, migratory, connecting, and overwintering habitat. For a detailed description of this unit, for justification of why this CHU is designated as critical habitat, and for documentation of occupancy by bull trout, see Service (2010), or *http://www.fws.gov/pacific/bulltrout.*

Unit 12: John Day River Unit

The John Day River CHU in the John Day River basin in eastern Oregon includes portions of the mainstem John Day River, North Fork John Day River, Middle Fork John Day River, and their tributary streams within Wheeler, Grant, and Umatilla Counties in Oregon. A total of 1,089.6 km (677.0 mi) of streams are designated as critical habitat.

The subunits within this unit provide spawning, rearing, foraging, migratory, and overwintering habitat. For a detailed description of this unit and subunits, for justification of why this CHU, included CHSUs, or in some cases individual waterbodies are designated as critical habitat, and for documentation of occupancy by bull trout, see Service (2010), or *http://www.fws.gov/pacific/bulltrout.*

Unit 13: Umatilla River Unit

The Umatilla River CHU is located in northeastern Oregon in Umatilla and Union Counties. There are two local populations in this unit: one in the North Fork Umatilla River and one in North Fork Meacham Creek. Bull trout in this basin are primarily fluvial migrants that overwinter in middle and lower sections of the mainstem Umatilla River.

Approximately 163.0 km (101.3 mi) of stream are designated as critical habitat for bull trout in the Umatilla River

basin. This unit provides spawning, rearing, foraging, migratory, connecting, and overwintering habitat. For a detailed description of this unit, for justification of why this CHU, included CHSUs, or in some cases individual waterbodies are designated as critical habitat, and for documentation of occupancy by bull trout, see Service (2010), or *http://www.fws.gov/pacific/bulltrout.*

Unit 14: Walla Walla River Basin Unit

The Walla Walla River Basin CHU straddles the Oregon–Washington State line in the eastern part of both States and includes two CHSUs. The unit includes 383.7 km (238.4 mi) of stream, extending across portions of Umatilla and Wallowa Counties in Oregon and Walla Walla and Columbia Counties in Washington. There are five known bull trout local populations in this unit: two in the Walla Walla River basin and three in the Touchet River basin. The subunits within this unit provide spawning, rearing, foraging, migratory, connecting, and overwintering habitat. For a detailed description of this unit and subunits, for justification of why this CHU, included CHSUs, or in some cases individual waterbodies are designated as critical habitat, and for documentation of occupancy by bull trout, see Service (2010), or *http://www.fws.gov/pacific/bulltrout.*

Unit 15: Lower Snake River Basins Unit

The Lower Snake River Basins CHU is located in southeast Washington and contains two CHSUs: (1) Tucannon River basin CHSU located in Columbia and Garfield Counties and (2) Asotin Creek basin CHSU within Garfield and Asotin Counties. Approximately 270.8 km (168.3 mi) of stream are designated as critical habitat for bull trout within this unit. The subunits within this unit provide spawning, rearing, foraging, migratory, connecting, and overwintering habitat. For a detailed description of this unit and subunits, for justification of why this CHU, included CHSUs, or in some cases individual waterbodies are designated as critical habitat, and for documentation of occupancy by bull trout, see Service (2010), or *http://www.fws.gov/pacific/bulltrout.*

Unit 16: Grande Ronde River Unit

The Grande Ronde River CHU is located in northeast Oregon and southeast Washington and includes the Grande Ronde core area and the Little Minam core area. The Grande Ronde River CHU is located in Union, Wallowa, and Umatilla Counties in Oregon, and about one-third of Asotin County and small portions of Columbia and Garfield Counties in Washington.

This CHU includes 1,057.9 km (657.4 mi) of streams and 605.2 ha (1,495.5 ac) of lakes and reservoirs designated as critical habitat. This unit provides spawning, rearing, foraging, migratory, connecting, and overwintering habitat. For a detailed description of this unit, for justification of why this CHU, included CHSUs, or in some cases individual waterbodies are designated as critical habitat, and for documentation of occupancy by bull trout, see Service (2010), or *http://www.fws.gov/pacific/bulltrout.*

Unit 17: Imnaha River Unit

The Imnaha River CHU extends across Wallowa, Baker, and Union Counties in northeastern Oregon. The CHU contains approximately 285.7 km (177.5 mi) of river designated as critical habitat and four local populations: (1) Mainstem Imnaha River; (2) Big Sheep Creek and tributary streams (Big Sheep Creek is considered to be one local population above and below the Wallowa Valley Irrigation Canal); (3) Little Sheep Creek and tributary streams; and (4) McCully Creek, which could be considered one or two local populations depending on whether Big Sheep Creek above and below the diversion are separated. This unit provides spawning, rearing, foraging, migratory, connecting, and overwintering habitat. For a detailed description of this unit, for justification of why this CHU, included CHSUs, or in some cases individual waterbodies are designated as critical habitat, and for documentation of occupancy by bull trout, see Service (2010), or *http://www.fws.gov/pacific/bulltrout.*

Unit 18: Sheep and Granite Creeks Unit

This CHU is located within Adams and Idaho Counties in Idaho, approximately 21.0 km (13.0 mi) east of Riggins, Idaho. In the Sheep and Granite Creeks CHU, 47.9 km (29.7 mi) of streams are designated as critical habitat. This unit provides spawning, rearing, foraging, migratory, and overwintering habitat. For a detailed description of this unit, for justification of why this CHU, included CHSUs, or in some cases individual waterbodies are designated as critical habitat, and for documentation of occupancy by bull trout, see Service (2010), or *http://www.fws.gov/pacific/bulltrout.*

Unit 19: Hells Canyon Complex Unit

The Hells Canyon Complex is located in Adams County, Idaho, and Baker County, Oregon. This CHU contains 377.5 km (234.6 mi) of streams designated as critical habitat. The subunits within this unit provide spawning, rearing, foraging, migratory, connecting, and overwintering habitat. For a detailed description of this unit and subunits, for justification of why this CHU, included CHSUs, or in some cases individual waterbodies are designated as critical habitat, and for documentation of occupancy by bull trout, see Service (2010), or *http://www.fws.gov/pacific/bulltrout.*

Unit 20: Powder River Basin Unit

The Powder River Basin CHU includes approximately 296.5 km (184.2 mi) of stream designated as critical habitat and 897.0 ha (2,216.5 ac) of reservoir, and is located within Baker, Union, and Wallowa Counties in northeastern Oregon. This unit is thought to contain 10 local populations of bull trout and 1 potential local population. Several unoccupied sections of the Powder River mainstem have been included to provide connectivity and recovery opportunities for local populations. This unit provides spawning, rearing, foraging, migratory, connecting, and overwintering habitat. For a detailed description of this unit, for justification of why this CHU, included CHSUs, or in some cases individual waterbodies are designated as critical habitat, and for documentation of occupancy by bull trout, see Service (2010), or *http://www.fws.gov/pacific/bulltrout.*

Unit 21: Clearwater River Unit

The Clearwater River CHU is located east of Lewiston, Idaho, and extends from the Snake River confluence at Lewiston on the west to headwaters in the Bitterroot Mountains along the Idaho–Montana border on the east in Nez Perce, Latah, Lewis, Clearwater, Idaho, and Shoshone Counties. In the Clearwater River CHU, 2,702.1 km (1,679.0 mi) of streams and 6,721.9 ha (16,610.1 ac) of lake and reservoir surface area are designated as critical habitat. The subunits within this unit provide spawning, rearing, foraging, migratory, connecting, and overwintering habitat. For a detailed description of this unit and subunits, for justification of why this CHU, included CHSUs, or in some cases individual waterbodies are designated as critical habitat, and for documentation of occupancy by bull trout, see Service (2010), or *http://www.fws.gov/pacific/bulltrout.*

Unit 22: Mainstem Upper Columbia River Unit

The Mainstem Upper Columbia River CHU includes the Columbia River from John Day Dam upstream 520.1 km

(323.2 mi) to Chief Joseph Dam. The Mainstem Upper Columbia River CHU supports FMO habitat for fluvial bull trout; several accounts exist of bull trout in the Columbia River between the Yakima and John Day rivers. The Mainstem Upper Columbia River CHU provides connectivity to the Mainstem Lower Columbia River CHU and 13 additional CHUs (Clearwater River, Powder River Basin, Imnaha River, Grande Ronde River, Walla Walla River Basin, Umatilla River, John Day River, Yakima River, Mainstem Snake River, Lower Snake River Basins, Hells Canyon Complex, Sheep and Granite Creeks, and Upper Columbia River Basins). The Mainstem Upper Columbia River CHU is located in north-central, central, and south-central Washington and north-central and northeast Oregon. This CHU is within Klickitat, Franklin, Benton, Grant, Yakima, Kittitas, Chelan, Douglas, and Okanogan Counties in Washington and Sherman, Gilliam, Morrow, and Umatilla Counties in Oregon. For a detailed description of this unit and subunits, justification of why this CHU, included CHSUs or in some cases individual waterbodies are designated as critical habitat, and for documentation of occupancy by bull trout, see Service (2010), or *http://www.fws.gov/pacific/bulltrout.*

Unit 23: Mainstem Snake River Unit

The Mainstem Snake River CHU is located from the confluence with the Columbia River upstream to the head of Brownlee Reservoir. The Snake River is the largest tributary to the Columbia River and forms the border between Washington and Idaho from Clarkston/Lewiston upstream to Oregon. The Snake River also forms the boundary between Idaho and Oregon, and at that point upstream to the upper limit of Brownlee Reservoir forms this CHU. The Snake River is within Franklin, Walla Walla, Columbia, Whitman, and Asotin Counties in Washington; Wallowa, Whitman, Baker, and Malheur Counties in Oregon; and Nez Perce, Idaho, Adams, and Washington Counties in Idaho.

The Mainstem Snake River CHU includes 451.7 km (280.6 mi) of streams designated as critical habitat. This unit provides foraging, migratory, connecting, and overwintering habitat. For a detailed description of this unit, for justification of why this CHU, included CHSUs, or in some cases individual waterbodies are designated as critical habitat, and for documentation of occupancy by bull trout, see Service (2010), or *http://www.fws.gov/pacific/bulltrout.*

Upper Snake Recovery Unit

Unit 24: Malheur River Basin Unit

The Malheur River Basin CHU is in eastern Oregon within Grant, Baker, Harney, and Malheur Counties. A total of 272.3 km (169.2 mi) of streams and 715.9 ha (1,768.9 ac) of reservoir surface area are designated as critical habitat. This unit provides spawning, rearing, foraging, migratory, connecting, and overwintering habitat. For a detailed description of this unit, for justification of why this CHU, included CHSUs, or in some cases individual waterbodies are designated as critical habitat, and for documentation of occupancy by bull trout, see Service (2010), or *http://www.fws.gov/pacific/bulltrout.*

Unit 25: Jarbidge River Unit

The Jarbidge River CHU encompasses the Jarbidge and Bruneau River basins, which drain into the Snake River within C.J. Strike Reservoir upstream of Grand View, Idaho. The Jarbidge River CHU is located approximately 70 miles north of Elko within Owyhee County in southwestern Idaho and Elko County in northeastern Nevada.

The Jarbidge River CHU includes 245.2 km (152.4 mi) of streams designated as critical habitat. The Jarbidge River CHU contains six local populations of resident and migratory bull trout and provides spawning, rearing, foraging, migratory, connecting, and overwintering habitat. For a detailed description of this unit, for justification of why this CHU, included CHSUs, or in some cases individual waterbodies are designated as critical habitat, and for documentation of occupancy by bull trout, see Service (2010), or *http://www.fws.gov/pacific/bulltrout.*

Unit 26: Southwest Idaho River Basins Unit

The Southwest Idaho River Basins CHU is located in southwest Idaho in the following counties: Adams, Boise, Camas, Canyon, Elmore, Gem, Valley, and Washington. This unit includes eight CHSUs: Anderson Ranch, Arrowrock Reservoir, South Fork Payette River, Deadwood River, Middle Fork Payette River, North Fork Payette River, Squaw Creek, and Weiser River. The Southwest Idaho River Basins CHU includes approximately 2,150.0 km (1,335.9 mi) of streams and 4,310.5 ha (10,651.5 ac) of lake and reservoir surface area designated as critical habitat. The subunits within this unit provide spawning, rearing, foraging, migratory, connecting, and overwintering habitat. For a detailed description of this unit and subunits, for justification of why this CHU, included CHSUs, or in some cases individual waterbodies are designated as critical habitat, and for documentation of occupancy by bull trout, see Service (2010), or *http://www.fws.gov/pacific/bulltrout.*

Unit 27: Salmon River Basin Unit

The Salmon River basin extends across central Idaho from the Snake River to the Montana–Idaho border. The Salmon River Basin CHU extends across portions of Adams, Blaine, Custer, Idaho, Lemhi, Nez Perce, and Valley Counties in Idaho. There are 10 CHSUs: Little-Lower Salmon River, Opal Lake, Lake Creek, South Fork Salmon River, Middle Salmon–Panther River, Middle Fork Salmon River, Middle Salmon Chamberlain River, Upper Salmon River, Lemhi River, and Pahsimeroi River. The Salmon River Basin CHU includes 7,376.5 km (4,583.5 mi) of streams and 1,683.8 ha (4,160.6 ac) of lakes and reservoirs designated as critical habitat. The subunits within this unit provide spawning, rearing, foraging, migratory, connecting, and overwintering habitat. For a detailed description of this unit and subunits, for justification of why this CHU, included CHSUs, or in some cases individual waterbodies are designated as critical habitat, and for documentation of occupancy by bull trout, see Service (2010), or *http://www.fws.gov/pacific/bulltrout.*

Unit 28: Little Lost River Unit

Located within Butte, Custer, and Lemhi Counties in east-central Idaho, near the town of Arco, Idaho, designated critical habitat in the Little Lost River CHU includes 89.2 km (55.4 mi) of streams. This unit provides spawning, rearing, foraging, migratory, connecting, and overwintering habitat. For a detailed description of this unit, for justification of why this CHU, included CHSUs, or in some cases individual waterbodies are designated as critical habitat, and for documentation of occupancy by bull trout, see Service (2010), or *http://www.fws.gov/pacific/bulltrout.*

Columbia Headwaters Recovery Unit

Unit 29: Coeur d'Alene River Basin Unit

Located in Kootenai, Shoshone, Benewah, Bonner, and Latah Counties in Idaho, the Coeur d'Alene River Basin CHU includes the entire Coeur d'Alene Lake basin in northern Idaho. A total of 821.5 km (510.5 mi) of streams and 12,606.9 ha (31,152.1 ac) of lake surface area are designated as critical habitat. There are no subunits within the Coeur d'Alene River Basin CHU. This unit

provides spawning, rearing, foraging, migratory, connecting, and overwintering habitat. For a detailed description of this unit, for justification of why this CHU is designated as critical habitat, and for documentation of occupancy by bull trout, see Service (2010), or *http://www.fws.gov/pacific/bulltrout.*

Unit 30: Kootenai River Basin Unit

The Kootenai River Basin CHU is located in the northwestern corner of Montana and the northeastern tip of the Idaho panhandle and includes the Kootenai River watershed upstream and downstream of Libby Dam. The Kootenai River flows in a horseshoe configuration, entering the United States from British Columbia, Canada, and then traversing across northwest Montana and the northern Idaho panhandle before returning to British Columbia from Idaho where it eventually joins the upper Columbia River drainage. The Kootenai River Basin CHU includes two CHSUs: the downstream Kootenai River CHSU in Boundary County, Idaho, and Lincoln County, Montana, and the upstream Lake Koocanusa CHSU in Lincoln County, Montana. The entire Kootenai River Basin CHU includes 522.5 km (324.7 mi) of streams and 12,089.2 ha (29,873.0 ac) of lake and reservoir surface area designated as critical habitat. The subunits within this unit provide spawning, rearing, foraging, migratory, connecting, and overwintering habitat. For a detailed description of this unit and subunits, for justification of why this CHU, included CHSUs, or in some cases individual waterbodies are designated as critical habitat, and for documentation of occupancy by bull trout, see Service (2010), or *http://www.fws.gov/pacific/bulltrout.*

Unit 31: Clark Fork River Basin Unit

The Clark Fork River Basin CHU includes the northeastern corner of Washington (Pend Oreille County), the panhandle portion of northern Idaho (Boundary, Bonner, and Kootenai Counties), and most of western Montana (Lincoln, Flathead, Sanders, Lake, Mineral, Missoula, Powell, Lewis and Clark, Ravalli, Granite, and Deer Lodge Counties). This unit includes 12 CHSUs, organized primarily on the basis of major watersheds: Lake Pend Oreille, Pend Oreille River, and lower Priest River (Lake Pend Oreille); Priest Lakes and Upper Priest River (Priest Lakes); Lower Clark Fork River; Middle Clark Fork River; Upper Clark Fork River; Flathead Lake, Flathead River, and Headwater Lakes (Flathead); Swan River and Lakes (Swan); Hungry Horse Reservoir, South Fork Flathead River, and Headwater Lakes (South Fork Flathead); Bitterroot River; Blackfoot River; Clearwater River and Lakes; and Rock Creek. The Clark Fork River Basin CHU includes 5,356.0 km (3,328.1 mi) of streams and 119,620.1 ha (295,586.6 ac) of lakes and reservoirs designated as critical habitat. The subunits within this unit provide spawning, rearing, foraging, migratory, connecting, and overwintering habitat. For a detailed description of this unit and subunits, for justification of why this CHU, included CHSUs, or in some cases individual waterbodies are designated as critical habitat, and for documentation of occupancy by bull trout, see Service (2010), or *http://www.fws.gov/pacific/bulltrout.*

Saint Mary Recovery Unit

Unit 32: Saint Mary River Basin Unit

The entire U.S. portion of the Saint Mary River drainage, which forms the Saint Mary River Basin CHU, is located in Glacier County, Montana. The total stream distance designated as critical habitat is 34.7 km (21.6 mi), and the lakes have a surface area of 1,669.3 ha (4,125 ac).

This unit provides spawning, rearing, foraging, migratory, connecting, and overwintering habitat. For a detailed description of this unit, for justification of why this CHU, included CHSUs, or in some cases individual waterbodies are designated as critical habitat, and for documentation of occupancy by bull trout, see Service (2010), or *http://www.fws.gov/pacific/bulltrout.*

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 court of appeals for the Fifth and Ninth Circuits 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 or 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. As described below in the *Application of the Jeopardy and Adverse Modification Standards* section, ''likely to adversely effect'' does not have the same meaning as ''adverse modification.''

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 reinitiate 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 bull trout 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 U.S. Army Corps of Engineers 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 bull trout jeopardy analyses that relies heavily on the importance of known core area 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 bull trout 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 rangewide status of the bull trout, 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 bull trout in the area affected by the proposed Federal action and the role of affected populations in the survival and recovery of the bull trout. 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. Core areas form the building blocks that provide for conservation of the bull trout's evolutionary legacy as represented by major genetic groups. The jeopardy analysis also considers any conservation measures that may be proposed by a Federal action agency to minimize or compensate for adverse project effects to the bull trout or to promote its recovery. If a proposed Federal action is incompatible with the viability of the affected core area population(s), inclusive of associated habitat conditions, a jeopardy finding may be warranted, because of the relationship of each core area population to the survival and recovery of the species as a whole.

Adverse Modification Standard

The analytical framework described in the Director's December 9, 2004, memorandum is used to complete section 7(a)(2) analysis for Federal actions affecting bull trout critical habitat. 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 bull trout. As discussed above, the role of critical habitat is to support the life-history needs of the species and provide for its conservation. Generally, the conservation role of bull trout critical habitat units is to support viable core area populations.

Since the primary threat to bull trout is habitat loss or degradation, the jeopardy analysis under section 7 of the Act for a project with a Federal nexus will most likely evaluate the effects of the action on the conservation or functionality of the habitat for the bull trout. Because of this, we believe that in many cases the analysis of the project to address designated critical habitat will be comparable. As such, we do not anticipate, for many circumstances, that the outcome of the consultation to address critical habitat will result in any significant additional project modifications or measures.

When consulting under section 7(a)(2) in designated critical habitat, independent analyses are conducted for jeopardy to the species and adverse modification of critical habitat. In occupied bull trout habitat, any adverse modification determination would likely also result in a jeopardy determination for the same action. As such, project modifications that may be needed to minimize impacts to the species would coincidentally minimize impacts to critical habitat. Accordingly, in occupied critical habitat it is unlikely that an analysis would identify a difference between measures needed to avoid the destruction or adverse modification of critical habitat from measures needed to avoid jeopardizing the species. Alternatively, in unoccupied critical habitat, we would not conduct a jeopardy analysis; however, measures to avoid the destruction or adverse modification may be necessary to ensure that the affected critical habitat area can continue to serve its intended conservation role for the species, or retain the physical and biological features related to the ability of the area to support the species.

The adverse modification analysis focuses on the rangewide status of critical habitat, the factors responsible for that condition, and what is necessary for critical habitat to provide the necessary conservation value to the bull trout. An emphasis is placed on characterizing the functional condition of critical habitat PCEs in the area affected by the proposed Federal action. This analysis then addresses how the critical habitat PCEs will be affected, and in turn, how this will influence the conservation role of critical habitat units in support of viable core area populations. 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 adverse modification determination at the rangewide scale. If a proposed Federal action would alter the physical or biological features of critical habitat to an extent that appreciably reduces the conservation function of one or more critical habitat units for the bull trout, a finding of adverse modification of the entire designated critical habitat for the proposed action may be warranted. The intended purpose of critical habitat to support viable core areas establishes a sensitive scale for relating effects of an action on CHUs or subunits to the conservation function of the entire designated critical habitat.

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 PCEs and therefore result in consultation for the bull trout include, but are not limited to:

(1) Detrimental alteration of the minimum flow or the natural flow regime of any of the designated stream segments and water bodies. Possible actions would include construction, operations, and maintenance of groundwater pumping, water impoundment, water diversion, hydropower generation facilities and structures, and operational changes in flow and reservoir pool elevation that increase water temperature, reduce flow, increase predation, or alter migration habitat. We note that such flow alterations resulting from actions affecting tributaries of the designated stream reaches or water bodies may also destroy or adversely modify critical habitat.

(2) Alterations to the designated stream segments and water bodies, as well as alterations to non-designated areas that could directly or indirectly cause significant and detrimental effects to bull trout critical habitat. Possible actions include vegetation manipulation, timber harvest, road construction and maintenance, construction and operations of impoundments, prescribed fire, livestock grazing, off-road vehicle use, power line or pipeline construction and repair, mining, and development. Riparian vegetation profoundly influences instream habitat conditions by providing shade, organic matter, root strength, bank stability, and large woody debris inputs to streams. These characteristics influence water temperature, structure and physical attributes (useable habitat space, depth, width, channel roughness, cover complexity), migration habitat, and food supply.

(3) Detrimental altering of the channel morphology of any of the designated stream segments. Possible actions would include channelization, impoundment, road and bridge construction and maintenance, deprivation of substrate source, destruction and alteration of aquatic or riparian vegetation, reduction of available floodplain, removal of gravel or floodplain terrace materials, excessive sedimentation from mining, livestock grazing, road construction, timber harvest, off-road vehicle use, and other watershed and floodplain disturbances. We note that such actions in the upper watershed (beyond the riparian area) may also destroy or adversely modify critical habitat. For example, timber harvest activities and associated road construction in upland areas can lead to changes in channel morphology by altering sediment production, debris loading, and peak flows.

(4) Detrimental alterations to the water chemistry in any of the designated stream segments. Possible actions would include release of chemical or biological pollutants into the surface water or connected groundwater at a point source or by dispersed release (nonpoint).

(5) Proposed activities that are likely to result in the introduction, spread, or augmentation of nonnative species in any of the designated stream segments. Possible actions would include fish stocking, use of live bait fish, aquaculture, improper construction and operation of canals, inter-basin water transfers, and dam and reservoir management that favors nonnative fish.

(6) Proposed activities that are likely to create significant instream barriers to bull trout movement. Possible actions would include water diversions, water impoundments, and hydropower generation where effective fish passage facilities, mechanisms, or procedures are not provided.

We consider all 32 CHUs to contain features or areas essential to the conservation of the bull trout. All units are within the geographic range of the species, and portions of all units were occupied by the species at the time of listing (based on observations made within the last 20 years), and are likely to be used by the bull trout for foraging, migrating, overwintering, spawning, or rearing. Federal agencies (such as USFS, BLM, and BOR) already consult with us on activities in areas currently occupied by the bull trout, if the species may be affected by the action, to ensure their actions do not jeopardize the continued existence of the bull trout. These agencies may need to request reinitiation on some of their ongoing or previously planned activities if the agency has continued discretionary involvement or control over any part of the activity, and if the activity may affect designated critical habitat. The need to reinitiate consultation will be determined by the action agency, informed by the criteria outlined in 50 CFR 402.16. This determination will be made by the action agency, in cooperation with the Service, on a unit-by-unit basis. The process to reinitiate consultation is described in ''Consultation Handbook: Procedures for Conducting Consultation and Conference Activities under Section 7 of the Endangered Species Act.'' (Service, 1998). However, we anticipate the burden of reinitiation, if needed, will be minor because of the aforementioned similarity between measures needed to avoid the destruction or adverse modification of critical habitat and measures needed to avoid jeopardizing the species. Further, we do not anticipate the action agencies will often need to amend their ongoing or previously planned projects or plans for projects because of the similarity between the measures taken to avoid adverse modification of critical habitat and the measures taken to avoid jeopardizing the species. If substantive changes are determined to be needed, the action agencies will amend their projects or existing plans for projects. However, after consultation is reinitiated, per section 7(d) of the Act, the action agencies will not make any irreversible or irretrievable commitment of resources that would have the effect of foreclosing the formulation or implementation of any reasonable and prudent alternative measures that would not violate section 7(a)(2). New plans and major revisions to existing plans will reflect the new critical habitat designations contained within this rule. In addition, consultation streamlining tools such as programmatic consultations are commonly implemented to minimize the administrative costs associated with consultation within the range of the bull trout. We expect these tools will continue be used for any reinitiations of consultation for bull trout critical habitat, thereby minimizing any additional administrative costs associated with designating the critical habitat.

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 resources 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.''

We consult with the military on the development and implementation of INRMPs for installations with federally listed species. INRMPs developed by military installations located within the proposed critical habitat areas were analyzed for exemption under the authority of section 4(a)(3)(B) of the Act. Each of the Department of Defense (DOD) installations identified below has been conducting surveys and habitat management to benefit the bull trout, and reporting the results of their efforts to the Service. Cooperation between the DOD installations and the Service on specific conservation measures is ongoing.

Approved Integrated Natural Resources Management Plans

We have examined the INRMPs for each of these military installations to determine whether they provide benefits to bull trout.

Bayview Acoustic Research Detachment Naval Surface Warfare Center

The Bayview Acoustic Research Detachment (ARD) Naval Surface Warfare Center, Bayview, Idaho, has an approved INRMP. This property includes approximately 9.0 ha (22.0 ac) of developed land on the shore of Lake Pend Oreille and 7.0 ha (17.3 ac) of lake area. There are no tributary streams within this area utilized by bull trout for spawning or early life rearing, but the lake area does contain important FMO habitat for bull trout.

Bayview ARD's INRMP outlines protection and management strategies for natural resources on the center, including fish species and their habitats. The plan benefits bull trout through the protection of spawning habitat for kokanee salmon, a primary food source for bull trout. The Bayview ARD property in Scenic Bay hosts from 40 to 70 percent of the kokanee spawning activity in Lake Pend Oreille, depending on the year. The INRMP includes measures to minimize impacts to kokanee habitat by limiting facility boat traffic during spawning periods (November and December) and implementing sediment control measures. Furthermore, interpretive signs have been placed throughout the property to educate employees and the public regarding various aspects of the regions natural resources, endangered or threatened species (including bull trout), and geological history. The INRMP requires the natural resources manager to provide ARD INRMP awareness training to facilitate INRMP implementation.

Based on the above considerations and in accordance with section 4(a)(3)(B)(i) of the Act, we have determined that the identified lands are subject to the approved Bayview ARD INRMP and that conservation efforts identified in the INRMP will provide a benefit to bull trout occurring in habitats within or adjacent to Bayview ARD. Therefore, lands within this installation are exempt from critical habitat designation under section 4(a)(3) of the Act. We are not including approximately 7.0 ha (17.3 ac) of habitat in this final critical habitat designation because of this exemption.

Naval Radio Station Jim Creek

Naval Radio Station Jim Creek in western Washington has an approved INRMP. The Naval Radio Station Jim Creek occurs in the Jim Creek watershed. This installation includes approximately 1 km (0.7 mi) of stream habitat. The lower reaches of Jim Creek provide foraging habitat for subadult and adult bull trout. The Naval Radio Station Jim Creek INRMP provides benefits to bull trout through the (1) restoration of riparian buffers along Jim Creek, (2) protection of Jim Creek from erosion and sedimentation, and (3) protection of Jim Creek from entry of contaminants and herbicides during antenna field vegetation management. We will continue to work cooperatively with the Department of the Navy to assist Naval Radio Station Jim Creek in implementing and refining the programmatic recommendations contained in this plan that provide benefits to bull trout.

Based on the above considerations and in accordance with section 4(a)(3)(B)(i) of the Act, we have determined that the identified lands are subject to the Naval Radio Station Jim Creek INRMP and that conservation efforts identified in the INRMP will provide a benefit to bull trout occurring in habitats within or adjacent to Naval Radio Station Jim Creek. Therefore, lands within this installation are exempt from critical habitat designation under section 4(a)(3) of the Act. We are not including approximately 1 km (0.7 mi) of habitat in this final critical habitat designation because of this exemption.

Naval Station Everett

Naval Station Everett in western Washington has an approved INRMP. The Naval Station Everett property includes land on or near the shores of Puget Sound that contain important foraging and migration habitat for amphidromous bull trout. This installation includes approximately 8 km (5 mi) of marine nearshore habitat. The Naval Station Everett's INRMP benefits bull trout by providing (1) protection of nearshore marine waters adjacent to the station from oil spills around the berthing naval vessels; (2) bioswales to prevent the release of toxins, contaminants, and oils generated on station from reaching the water column through storm drains; and (3) timing restrictions on all proposed routine construction or repair activities that will take place below the mean higher high water line; and (4) the restoration of riparian habitat on Navy lands located along the Middle Fork Quilceda Creek.

Based on the above considerations and in accordance with section 4(a)(3)(B)(i) of the Act, we have determined that the identified lands are subject to the Naval Station Everett INRMP and that conservation efforts identified in the INRMP will provide a benefit to bull trout occurring in habitats within or adjacent to Naval Station Everett. Therefore, lands within this installation are exempt from critical habitat designation under section 4(a)(3) of the Act. We are not including approximately 8 km (5 mi) of habitat in this final critical habitat designation because of this exemption.

Naval Air Station Whidbey Island

Naval Air Station Whidbey Island in western Washington has an approved INRMP. The Naval Station Whidbey Island property includes land on or near the shores of Puget Sound that contain

important foraging and migration habitat for amphidromous bull trout. This installation includes approximately 16 km (10 mi) of marine nearshore habitat. Naval Aviation Station Whidbey Island's INRMP benefits bull trout through (1) monitoring and managing livestock grazing to avoid or minimize impacts to nearshore habitat used by bull trout, (2) managing road building and maintenance to prevent erosion and sedimentation of nearshore habitat used by bull trout , (3) assuring proper disposal of hazardous materials, and (4) implementation of its Integrated Pest Management Plan's best management practices to protect aquatic habitats used by bull trout.

Based on the above considerations and in accordance with section 4(a)(3)(B)(i) of the Act, we have determined that the identified lands are subject to the Naval Air Station Whidbey Island INRMP and that conservation efforts identified in the INRMP will provide a benefit to bull trout occurring in habitats within or adjacent to Naval Air Station Whidbey Island. Therefore, lands within this installation are exempt from critical habitat designation under section 4(a)(3) of the Act. We are not including approximately 16 km (10 mi) of habitat in this final critical habitat designation because of this exemption.

U.S. Army Fort Lewis Installation

The U.S. Army Fort Lewis Installation (Fort Lewis) located in western Washington has an approved INRMP. Fort Lewis borders the Nisqually River and Puget Sound, where the mainstem Nisqually River and Puget Sound nearshore bordering this property contain important foraging and migration habitat for amphidromous bull trout. This installation includes approximately 24 km (15 mi) of stream and 3.5 km (2 mi) of marine nearshore habitat. The INRMP for Fort Lewis identifies two key objectives for bull trout and salmon: (1) Protect key habitat characteristics, and (2) Enhance riparian and in-stream habitat. Strategies to achieve these benefits to bull trout include (1) protecting and enhancing wetlands and other aquatic habitats–all wetlands are protected with 90 meter (300 foot) wide riparian buffers to maintain cold water temperatures, to prevent sediment from entering the streams, and to provide for woody debris which creates habitat complexity; (2) controlling invasive plant species that often diminish water quality and impact native plants and animals; (3) restoring riparian habitat in-stream habitats and controlling non-native and invasive vegetation to improve bull trout foraging habitat; (4) reconnecting side channels and floodplains to maintain areas for refugia and juvenile rearing and to supplement adult holding capacity; and (5) decommissioning roads to minimize erosion and sediment delivery and replacing undersized culverts to eliminate fish passage barriers.

Based on the above considerations and in accordance with section 4(a)(3)(B)(i) of the Act, we have determined that the identified lands are subject to the Fort Lewis INRMP and that conservation efforts identified in the INRMP will provide a benefit to bull trout occurring in habitats within or adjacent to Fort Lewis. Therefore, lands within this installation are exempt from critical habitat designation under section 4(a)(3) of the Act. We are not including approximately 27.5 km (17 mi) of habitat in this final critical habitat designation because of this exemption.

Summary

Habitat features essential to bull trout conservation are present within or immediately adjacent to each of these DOD installations, and each installation has an approved INRMP. Activities occurring on these installations are being conducted in a manner that provides a benefit to bull trout.

Based on the above considerations, and in accordance with section 4(a)(3)(B)(i) of the Act, we have determined that the identified lands are subject to the Bayview Acoustic Research Detachment Naval Surface Warfare Center, Naval Radio Station Jim Creek, Naval Air Station Whidbey Island, Naval Station Everett, and Fort Lewis INRMPs, and that conservation efforts identified in the INRMPs will provide a benefit to bull trout occurring in habitats within or adjacent to these facilities. Therefore, lands within these installations are exempt from critical habitat designation under section 4(a)(3) of the Act. As a result, we are not including a total of approximately 7.0 ha (17.3 ac) and 52.5 km (32.7 mi) of habitat in these DOD installations in this final critical habitat designation because of these exemptions.

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 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 legislative history is 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, the Secretary makes this determination, then he can exercise his discretion to exclude the area only if such exclusion would not result in the extinction of the species.

When considering the benefits of inclusion for an area, we consider the additional regulatory benefits under section 7 of the Act that area would receive from the protection from adverse modification or destruction as a result of actions with a Federal nexus, the educational benefits of mapping essential habitat for recovery of the listed species, and any benefits that may result from a designation due to State or Federal laws that may apply to critical habitat.

When considering the benefits of exclusion, we consider, among other things, whether exclusion of a specific area is likely to result in conservation; the continuation, strengthening, or encouragement of partnerships; or implementation of a management plan that provides equal to or more conservation that a critical habitat designation would provide.

In the case of bull trout, the benefits of critical habitat include public awareness of bull trout presence and the importance of habitat protection, and in cases where a Federal nexus exists, increased habitat protection for bull trout due to the protection from adverse modification or destruction of critical habitat.

In evaluating the existence of a conservation plan when considering the benefits of exclusion, we consider a variety of factors, including but not

limited to, whether the plan is finalized; how it provides for the conservation of the essential physical and biological features; whether there is a reasonable expectation that the conservation management strategies and actions contained in a management plan will be implemented into the future; whether the conservation strategies in the plan are likely to be effective; and whether the plan contains a monitoring program or adaptive management to ensure that the conservation measures are effective and can be adapted in the future in response to new information.

After evaluating the benefits of inclusion and the benefits of exclusion, the two sides are carefully weighed to determine whether the benefits of exclusion outweigh those of inclusion. If they do, we then determine whether exclusion of the particular area would result in extinction of the species. If exclusion of an area from critical habitat will result in extinction, it will not be excluded from the designation.

Based on the information provided by entities seeking exclusion, as well as any additional public comments we received, we evaluated whether certain lands in the proposed critical habitat were appropriate for exclusion from this final designation. We considered the areas discussed below for exclusion under section 4(b)(2) of the Act, and present our detailed analysis below. For those areas in which the Secretary has exercised his discretion to exclude, we believe that:

(1) Their value for conservation will be preserved for the foreseeable future by existing protective actions, or

(2) The benefits of excluding the particular area outweigh the benefits of their inclusion, based on the ''other relevant factor'' provisions of section 4(b)(2) of the Act.

A total of 3,094.9 km (1,923.1 mi) of streams and marine shoreline (8.5 percent of the area proposed as critical habitat) and 7,849.3 ha (19,395.8 ac) of reservoirs and lakes (3.6 percent of the area proposed as critical habitat) have been excluded from designation as critical habitat. Of the total length of stream habitat excluded, 348 km (216.3 mi) is marine shoreline. Tables 8 and 9 reflect the total stream shoreline and reservoir and lake surface areas excluded in each State, and Tables 10 and 11 presents the ownership or other plan information for these areas. Maps showing excluded habitats are available upon request by contacting the Idaho Fish and Wildlife Office; see the **ADDRESSES** section.

TABLE 6.—STREAM/SHORELINE DISTANCE EXCLUDED FROM BULL TROUT CRITICAL HABITAT BY CRITICAL HABITAT UNIT

Critical habitat unit	Kilometers	Miles
1. Olympic Peninsula	553.5	343.9
1. Olympic Peninsula (Marine)	144.6	89.9
2. Puget Sound	876.9	544.9
2. Puget Sound (Marine)	203.4	126.4
3. Lower Columbia River Basins	155.6	96.7
6. Lower Deschutes River	230.4	143.2
8. Mainstem Lower Columbia River	1.7	1.1
10. Upper Columbia River Basins	119.7	74.4
11. Yakima River	288.7	179.4
12. John Day River	28.5	17.7
13. Umatilla River	48.7	30.3
14. Walla Walla River Basin	69.0	42.9
15. Lower Snake River Basins	13.4	8.3
16. Grande Ronde River	1.0	0.6
22. Mainstem Upper Columbia River	2.5	1.6
30. Kootenai River Basin	66.2	41.1
31. Clark Fork River Basin	209.0	129.9
32. Saint Mary River Basin	82.1	51.0
Total	3,094.9	1,923.1

TABLE 7.—AREA OF RESERVOIRS OR LAKES EXCLUDED FROM BULL TROUT CRITICAL HABITAT BY CRITICAL HABITAT UNIT

Critical habitat unit	Hectares	Acres
2. Puget Sound	1,629.5	4,026.6
3. Lower Columbia River Basins	4,856.1	11,999.7
6. Lower Deschutes River	445.3	1,100.4
31. Clark Fork River Basin	32.2	79.7
32. Saint Mary River Basin	886.1	2,189.5
Total	7,849.3	19,395.8

TABLE 8.—STREAM/SHORELINE DISTANCE EXCLUDED FROM BULL TROUT CRITICAL HABITAT BY STATE

State	Kilometers	Miles
Montana	271.4	168.6
Oregon	307.6	191.1
Washington	2,163.7	1,344.5
Washington Marine	348.0	216.2
Washington/Oregon	4.2	2.6
Total	3,094.9	1,923.1

TABLE 9.—AREA OF RESERVOIRS OR LAKES EXCLUDED FROM BULL TROUT CRITICAL HABITAT BY STATE

State	Hectares	Acres
Montana	918.3	2,269.2
Oregon	445.3	1,100.4
Washington	6,485.6	16,026.3
Total	7,849.3	19,395.8

TABLE 10.—STREAM/SHORELINE DISTANCE EXCLUDED FROM BULL TROUT CRITICAL HABITAT BASED ON TRIBAL OWNERSHIP OR OTHER PLAN

Ownership	Kilometers	Miles
Lewis River Hydro Conservation Easements.	7.0	4.3
DOD – Dabob Bay Naval	23.9	14.8
HCP – Cedar River (City of Seattle)	25.8	16.0
HCP – WA Forest Practices Lands	1,608.3	999.4
HCP – Green Diamond (Simpson)	104.2	64.7
HCP – Plum Creek Central Cascades (WA)	15.8	9.8
HCP – Plum Creek Native Fish (MT)	181.6	112.8
HCP–Stimson	7.7	4.8
HCP – WDNR Lands	230.9	149.5
Tribal – Blackfeet	82.1	51.0
Tribal – Hoh	4.0	2.5
Tribal – Jamestown S'Klallam	2.0	1.2
Tribal – Lower Elwha	4.6	2.8
Tribal – Lummi	56.7	35.3
Tribal – Muckleshoot	9.3	5.8
Tribal – Nooksack	8.3	5.1
Tribal – Puyallup	33.0	20.5
Tribal – Quileute	4.0	2.5
Tribal – Quinault	153.7	95.5
Tribal – Skokomish	26.2	16.3
Tribal – Stillaguamish	1.8	1.1
Tribal – Swinomish	45.2	28.1
Tribal – Tulalip	27.8	17.3
Tribal – Umatilla	62.6	38.9
Tribal – Warm Springs	260.5	161.9
Tribal – Yakama	107.9	67.1
Total	3,094.9	1,923.1

TABLE 11.—AREA OF RESERVOIRS OR LAKES EXCLUDED FROM BULL TROUT CRITICAL HABITAT BY TRIBAL OWNERSHIP OR OTHER PLAN

Ownership	Hectares	Acres
HCP – Cedar River (City of Seattle)	796.5	1,968.2
HCP – WA Forest Practices Lands	5,689.1	14,058.1
HCP – Plum Creek Native Fish	32.2	79.7
Tribal – Blackfeet	886.1	2,189.5
Tribal – Warm Springs	445.3	1,100.4
Total	7,849.3	19,395.8

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 where a national security impact might exist. The Navy conducts essential open water training and testing within the marine waters of Hood Canal fiord within: (1) the Dabob Bay Range Complex (DBRC) (which includes (a) the Dabob Bay Military Operating Area, (b) DBRC Connecting Waters, and (c) DBRC Southern Extension), and (2) the marine waters of the Washington Coast within the Quinault Underwater Tracking Range (QUTR) and its proposed surf zone corridors. These areas encompass important marine nearshore habitat used by amphidromous bull trout for foraging and migration.

The DBRC and QUTR are part of the Navy's larger Keyport Range Complex (NUWC), and are primarily used for providing test and evaluation services critical to undersea warfare. NUWC Keyport testing and training activities to support military readiness requires precision underwater tracking capabilities, underwater range sites offering diverse environments, and varied water depths to meet the Navy's mission of test and evaluation of underwater systems. Because these activities are conducted in open marine waters rather than on DOD installations, they are not included in the Navy's INRMP, and thus may not be exempted from critical habitat designation. The Navy has requested exclusion from critical habitat designation of these areas in the current revision of critical habitat for the bull trout. Previously, portions of these ranges have been designated as critical habitat for the bull trout and other species, by both NOAA Fisheries and the Service. Biological

assessments evaluating the operational effects on endangered species have been reviewed and approved by NOAA Fisheries and the Service. These biological assessments, and associated environmental assessments, addressed bull trout and their interactions with military range operations.

Of particular concern to the Service are the proposed surf zone access corridors in the DBRC and QUTR, which lead to the open water parts of these testing ranges, and which are areas that we proposed as critical habitat for bull trout. Accordingly, the proposed surf zone corridors were the focus of our section 4(b)(2) analysis in the DBRC Southern Extension and QUTR. The analysis for these surf zone corridors follows.

(1) Benefits of Inclusion

Habitat containing features essential to bull trout conservation occurs within or immediately adjacent to these marine water training and testing grounds. The primary benefit of designating critical habitat in each of the areas of interest to the Navy would be that Federal agencies would need to consult with us under section 7 of the Act to ensure that any proposed action would not destroy or adversely modify critical habitat. An additional benefit of including lands in critical habitat is that designation of critical habitat serves to educate landowners, State and local governments, and the public regarding the potential conservation value of an area. This helps focus and promote conservation efforts by other parties by clearly delineating areas of high conservation value for bull trout. Because the critical habitat process includes multiple public comment periods, opportunities for public hearings, and announcements through local venues, the designation of critical habitat provides numerous occasions for public education and involvement. Through these outreach opportunities, landowners, State agencies, and local governments can become more aware of the plight of listed species and conservation actions needed to aid in species recovery. Through the critical habitat process, State agencies and local governments may become more aware of areas that could be conserved under State law, local ordinances, or specific management plans.

Additionally, bull trout critical habitat was designated in the DBRC Southern Extension area in the 2005 critical habitat rule, and the Navy has already consulted with us on their proposed actions in this area. The anadromous life history form of bull trout is now rare in Hood Canal, which is part of the access to this testing range and is important in order to address potential impacts to nearshore habitat to ensure future recovery. Shoreline areas provide subadult rearing and adult foraging habitat. Including this area in the critical habitat designation will ensure that proposed Federal actions by the Navy and other entities (such as activities permitted by the U.S. Army Corps of Engineers or Federally funded State park projects) would not result in the destruction or adverse modification of critical habitat. Since we have already consulted with the Navy on the DBRC Southern Extension, we know that designation of critical habitat has had minimal, if any, impact to their operations in that area.

The Navy has also consulted with us on one of the three proposed surf zone corridors associated with the QUTR, and it was determined that effects of their actions were not likely to adversely affect bull trout critical habitat. We would anticipate similar determinations for the other two proposed surf zone corridors, based on the temporary nature of surf zone operations. In addition, the Navy informed us that although a preferred alternative has been identified, a final decision on the selection of one of three alternative sites for the surf zone portion of the QUTR will not be confirmed until later this year. The Navy expressed concern regarding the possible need to conduct emergency cable maintenance in the preferred surf zone corridor area. If the selected area overlaps critical habitat and adverse effects may occur, the Service can conduct emergency consultation under section 7 of the Act.

By retaining these areas as critical habitat, the designation may educate the public regarding their potential conservation value, and contribute to conservation efforts by other parties. Each of the three surf zone corridor locations in the QUTR was designated as critical habitat for the southern distinct population segment of the North American green sturgeon (*Acipenser medirostris*) on October 9, 2009 (74 FR 52300) by NOAA Fisheries. Also, the DBRC Southern Extension was designated as critical habitat for the Hood Canal summer run chum salmon and Chinook salmon by NOAA Fisheries (70 FR 37160, June 28, 2005). This means that the Navy would need to consult on those species in any case, so the retention of bull trout critical habitat in the same area should have little, if any, additional impact. If we were to exclude this area for national security reasons, that would be inconsistent with the NOAA Fisheries designation of critical habitat for the green sturgeon, chum salmon, and Chinook salmon in these areas. Critical habitat designation is needed so we can evaluate potential impacts of all Federal actions in these nearshore areas, which are essential for recovery. Exclusion of the area for the Navy would preclude our ability to do so.

(2) Benefits of Exclusion

The Navy states that analysis of past and present NUWC Keyport activities have not shown impacts to water quality, water quantity, or food availability, but believe that designation of critical habitat for bull trout may unnecessarily restrict or prohibit their activities. Restrictions on the access, use, or enhancement of capabilities and capacities of these ranges would limit or curtail both testing and mission-critical Fleet Support functions performed by NUWC Keyport for undersea warfare. Designating critical habitat on these open water training and testing areas may impact their role in supporting ongoing military exercises and operations that occur at these locations. The military activities occurring at these sites are currently being conducted in a manner that minimizes impacts to bull trout habitat. In addition, nearshore areas adjacent to Navy installations and those areas designated as marine security areas or restricted zones provide some additional conservation benefits, as recreational and commercial vessels are prohibited from entering, mooring, anchoring, or fishing in these areas. The Navy already consults with us on their actions occurring in the open water training and testing areas that may have potential impacts to bull trout and its habitat under section 7 requirements.

(3) Determination of Whether Benefits of Exclusion Outweigh the Benefits of Inclusion

Dabob Bay Military Operating Area and Connecting Waters

The benefits of designating critical habitat in the Dabob Bay Military Operating Area and Connecting Waters appear to be limited. In contrast, these areas are important to Navy operations and support national security by ensuring the Navy can maintain a high level of military readiness. Accordingly, we have determined that the national security benefit of excluding areas within or adjacent to the open water training and testing areas of the Military Operating Area and Connecting Waters of the DBRC outweighs the benefit of designating these areas as critical habitat. In addition, because these marine waters are occupied by bull trout, the Navy has a statutory duty

under section 7 of the Act to ensure that its activities do not jeopardize the continued existence of the bull trout. In accordance with section 4(b)(2) of the Act, we have also determined that the exclusion of these marine waters will not lead to the extinction of the bull trout.

Dabob Bay Range Complex Southern Extension and Quinault Underwater Tracking Range

We have determined the benefits of exclusion do not outweigh the benefits of inclusion of nearshore habitat within or adjacent to the DBRC Southern Extension and QUTR surf zone corridors. Shoreline areas provide important subadult rearing and adult foraging habitat, are essential habitat for the anadromous life history form of bull trout, and thus they are essential to the recovery of the bull trout. We have already consulted with the Navy on both the DBRC Southern Extension and the preferred action area in the QUTR surf zone, as a result of the 2005 critical habitat designation for bull trout. The designation has had minimal impact to their operations in those areas. On the other hand, there is a benefit to retaining these areas in the critical habitat designation, so that the Navy will continue to consult with us on proposed actions in these areas, to ensure that such actions would not result in the destruction or adverse modification of critical habitat. The inclusion of areas encompassing the proposed surf zone corridors will ensure continued cooperation and consultation between the Navy and the Service in those areas associated with the DBRC Southern Extension and the QUTR.

In addition, there are other possible Federal actions conducted by other entities that may occur within or adjacent to the DBRC Southern Extension that could impact important bull trout habitat. Therefore, we find that the benefits of excluding the DBRC Southern Extension and QUTR surf zones do not outweigh the benefits of inclusion, and these areas are not excluded from critical habitat designation. Critical habitat designation is needed so we can evaluate potential impacts of all Federal actions in these nearshore areas, which are essential for recovery. Exclusion of these areas for the Navy would preclude our ability to do so.

Exclusions Based on Other Relevant Factors

Under section 4(b)(2) of the Act, we consider any other relevant impacts, in addition to economic impacts and impacts to national security. We consider a number of factors including whether the landowners have developed any HCPs or other management plans for the area, 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.

Habitat Conservation Plans

We consider a current plan (HCPs as well as other types) to provide adequate management or protection for bull trout and its habitat if it meets the following criteria:

(1) The plan is complete and provides the same or better level of protection from adverse modification or destruction than that provided through a consultation under section 7 of the Act;

(2) There is a reasonable expectation that the conservation management strategies and actions will be implemented for the foreseeable future and effective, based on past practices, written guidance, or regulations; and

(3) The plan provides adaptive management and conservation strategies and measures consistent with currently accepted principles of conservation biology.

Section 10(a)(1)(B) of the Act authorizes us to issue to non-Federal entities a permit for the incidental take of endangered and threatened species. This permit allows a non-Federal landowner to proceed with an activity that is legal in all other respects, but that results in the incidental taking of a listed species (i.e., take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity). The Act specifies that an application for an incidental take permit must be accompanied by a habitat conservation plan (HCP), and specifies the content of such a plan. The purpose of conservation agreements is to describe and ensure that the effects of the permitted action on covered species are adequately minimized and mitigated, and that the action does not appreciably reduce the survival and recovery of the species. In our assessment of conservation agreements associated with this final rulemaking, the analysis required for these types of exclusions involves careful consideration of the benefits of designation versus the benefits of exclusion. The benefits of designation typically arise from additional section 7 protections, as well as enhanced public awareness once specific areas are identified as critical habitat. The benefits of exclusion generally relate to relieving regulatory burdens on existing conservation partners, maintaining good working relationships with them, and encouraging the development of new partnerships.

During the comment period, we received comments from five landowners or managers with HCPs that include bull trout as covered species. These HCPs include the Washington Department of Natural Resources (WDNR), Green Diamond Resources Company, City of Seattle Cedar River Watershed, Plum Creek/Stimson Lumber Company Native Fish, Plum Creek Central Cascades, and Washington State Forest Practices HCPs. These permittees commented that they perceive the designation of critical habitat as imposing a regulatory burden. They also view the exclusion from critical habitat designation as removing that burden and strengthening the ongoing relationship with the Service. All six permittees indicated they would consider exclusion as a benefit to our ongoing relationship. Our summary analysis of the benefits of designation versus the benefits of exclusion for these six HCPs is provided below. The specific section 4(b)(2) analysis for each of the HCPs is described in detail in the ''*Compilation of HCP Exclusion Analyses for the Designation of Bull Trout Critical Habitat (Including Exclusion Analysis for Certain Areas Managed Under the Lewis River Hydroelectric Projects*),'' available at *http://www.fws.gov/pacific/bulltrout/.*

The Chelan County Washington Public Utility District also requested exclusion from bull trout critical habitat designation for their Mid-Columbia HCP. However, since bull trout was not a covered species in this HCP, and the actions conducted under the HCP did not address the PCEs for bull trout, we determined that the HCP did not meet the basic criteria for consideration for exclusion.

WDNR HCP

The WDNR HCP, was permitted under section 10(a)(1)(B) of the Act in 1997, and covers about 650,000 ha (1,600,000 ac) of State forest trust lands within the range of the northern spotted owl in the State of Washington. The majority of the HCP (approximately 530,000 ha (1,300,000 ac)) occurs west of the Cascade Crest and includes the Olympic Peninsula and Southwest Washington. The remainder of the HCP occurs on the east side of the Cascade Mountains within the range of the northern spotted owl. The HCP covers activities primarily

associated with commercial forest management. It is an ''all-species'' HCP west of the Cascade Crest, and includes bull trout and other salmonids as covered species. The aquatic conservation strategy for the west side planning units has two objectives: (1) To maintain or restore salmonid freshwater habitat on WDNR managed lands; and (2) to contribute to the conservation of other aquatic and riparian obligate species. The HCP Implementation Procedures for the Riparian Forest Restoration Strategy detail site-specific methods for riparian management to address the appropriate volume and density of instream large woody debris, a high degree of stream shading, the ability to intercept harmful sediments, stream bank stability, reduction of excessive windthrow, and the ability to contribute detrital nutrients. Timber harvest is avoided that could increase the frequency or severity of slope failure or would alter the natural input of large woody debris, gravel, or fine sediment to streams. Comprehensive road management provides for fish passage, minimizes hydrologic disruption, and reduces delivery of fine sediments, while allowing large woody debris to be transported downstream.

The WDNR HCP is providing conservation benefits to bull trout that contribute to recovery, based on its landscape conservation strategy specifically designed for multiple species. Although the primary benefits to bull trout occur from the riparian strategy, the other aspects of the landscape conservation strategy provide contributions to bull trout as well. The spotted owl and marbled murrelet strategies, in conjunction with the range of forest types across the landscape, contribute to bull trout habitat primarily through improved watershed conditions. Other provisions of the HCP also contribute to recovery of bull trout, including protecting unstable hillslopes, properly managing forest roads, managing forests to minimize rain-on-snow floods, and protecting wetlands.

The HCP protects surface and subsurface water connectivity through a variety of diverse mechanisms. Mineral springs receive specific protection to address band-tailed pigeons, but these same protections would benefit bull trout. Other springs or seeps that result in perennial or intermittent channels or wetlands may be addressed through those conservation provisions. The HCP addresses wetlands and hydrological integrity and connectivity, which includes provisions for both forested and nonforested wetlands. Wetland prescriptions throughout the HCP area are designed to protect water quality and hydrologic integrity and connectivity, including hyporheic flow (flow involving a mixing of shallow groundwater and surface water). Roads are designed to avoid disrupting surface and ground-water flows by minimizing ground-water interception and returning water to the forest floor immediately through proper construction standards, thus minimizing infrastructure impacts on basin hydrology. Road management is designed to disconnect ditches and road intercepts from the stream system to reduce delivery of sediment, but also to slow the delivery of storm-related run-off and reduce the contribution to peak flows.

Standards are also in place to ensure water quality and quantity adequate to provide for a barrier-free environment for bull trout, and roads are managed in a manner to avoid creating migratory barriers. In addition, any existing road barriers will be addressed through remediation. The HCP maintains the natural hydrology and riparian functions of large wood input, shade, bank stability, detrital inputs, and the natural functions of flood plains and unstable slopes. The HCP addresses the need for complex habitat by prescribing riparian buffers along streams and wetlands that contribute to large woody debris recruitment and maintain stream bank integrity. It addresses sediment by ensuring that the stream system is not disrupted by the road network, and that ditch and road run-off is disconnected from the stream system.

Fish-bearing streams receive site-potential (100–year index) buffers that generally average 46 to 49 m (150 to 160 ft), and non-fish-bearing streams wider than 0.6 m (2 ft) receive 30 m (100 ft) buffers. Small headwater streams (less than 0.6 m (2 ft) in width) are often addressed through unstable slopes and features identification, or alternatively through the development of a strategy focused on these stream types. Although the stream-buffering prescriptions are based on slightly different features within the Olympic Experimental State Forest, they generally resemble the west side prescriptions, which are designed to provide equivalent protection of instream habitat for bull trout, by supporting large wood and other riparian functional processes.

The HCP includes provisions to manage forest cover in the rain-on-snow subbasins to reduce the frequency of major storm flows that are capable of shifting instream habitat structure. The HCP has also been designed to substantially reduce the amount of coarse and fine sediments transported downstream that could further simplify and degrade habitat conditions. The WDNR recognized stream temperature increases can be related to and caused by interruption of hydrology, riparian removal, increased sedimentation, and simplification of habitat; the HCP addressed this concern. The riparian buffers on streams and wetlands are designed to provide natural levels of shade to avoid increasing sunlight that could result in stream warming. In addition, road and wetland prescriptions are designed to maintain natural hydrological regime so that streams are not abnormally dry during periods of the year when this could exacerbate warming problems. Stream buffers and road standards also address sediment delivery, which will in turn avoid artificial filling of pools that could lead to increased stream warming.

Reducing road-generated fine sediment is a major focus of the HCP, and considerable focus is placed on road maintenance, repair, and improved construction standards. In addition, road remediation of existing road-related problems is a major component. The WDNR has already decommissioned many stream-side roads and addressed a number of road segments with a high-level of concern regarding aquatic impacts. The HCP is designed to keep slope failures at natural levels, which serves to reduce the delivery of fine sediments, but recognizes the contribution of these processes to supplying gravel needed for aquatic substrates. Once material has been delivered to the stream, large woody debris and other channel features sort substrate by particle size. Therefore, the HCP addresses bank stability and large wood recruitment that should help store fine sediment and provide for suitable substrates for bull trout spawning. The HCP is also designed to maintain floodplains and wetlands in a manner that retains the functions of the hyporheic zone and off-channel habitats, and protect water quality and quantity, which should assist native fish in maintaining a competitive advantage over nonnative species.

Green Diamond HCP

In October 2000, Simpson Timber Company (now Green Diamond) completed an HCP (formerly referred to as the Simpson Timber HCP and currently referred to as the Green Diamond HCP), and the Service issued an incidental take permit for forestry operations on over 105,625 ha (261,000 ac) of the company's Washington timberlands located on or adjacent to the Olympic Peninsula in Mason, Thurston, and Grays Harbor Counties. The HCP covers the land owned by

Green Diamond along the lower reaches of the North Fork and South Fork Skokomish Rivers, the upper South Fork Skokomish River, West Fork Satsop River, and Canyon River. The plan addresses five species listed under the Act, including bull trout, and 46 other non-listed species.

The HCP is designed to conserve riparian forests, improve water quality, prevent management-related hill-slope instability, and address hydrological maturity of small sub-basins. The HCP prescriptions for riparian and wetland areas focus on the following functions: recruitment of woody debris to streams and the forest floor, shade and control of stream-side air temperature, stream-bank stability, detrital inputs, capture and storage of sediment and organic matter on the floodplain, maintenance and augmentation of nutrient dynamics and processing, groundwater discharge, base-flow support in streams, and flood amelioration. HCP actions are also expected to maintain the thermal regime of streams within the range of normal variation and contribute to the maintenance of complex stream channels, appropriate substrates, a natural hydrologic regime, ground-water sources and subsurface connectivity, migratory corridors, and an abundant food base.

The HCP road program is addressing legacy, current, and future roads. Prescriptions and standards address the chronic production and movement of fine sediment, and the catastrophic failure of road fills and sidecast that generate and propagate hillslope and channel failures. Unstable slope prescriptions require identification of these areas and avoidance of management activities that could trigger mass-wasting processes (slope failure). Road prescriptions are intended to avoid disrupting surface and ground-water flows, and specific road remediation is being directed at restoring wetlands. Roads are also being managed so they do not contribute to the formation of barriers, and existing road-related barriers are being corrected. Road management is designed to disconnect ditches (and ground water intercepted by roads) from the stream system to reduce delivery of sediment, and also to slow the delivery of storm-related run-off and reduce the contribution to peak flows. Ditch water and road run-off is delivered in a diffuse manner to the forest floor.

In subbasins within the rain-on-snow zone, prescriptions address the maintenance of sufficient mature forest canopy to reduce the frequency of major storm flows that are capable of shifting instream habitat structure. Road-related prescriptions also address diffusing water to reduce the potential for roads to accelerate the delivery of water and exacerbate peak flow problems.

The HCP protects surface and subsurface water connectivity through a variety of diverse mechanisms. Springs and seeps that form perennial or intermittent channels are addressed through conservation provisions, and all perennial streams are protected with riparian buffers. Intermittent streams also receive protection in a manner that optimizes their functional needs. The HCP addresses wetlands and hydrological integrity, and connectivity for both forested and nonforested wetlands. In addition, all riverine unstable-slope-associated wetlands are buffered, and protection is provided for depressional wetlands, stable-slope wetlands, and wetlands on flat terrain. Wetland prescriptions (and prescriptions for management of wetland complexes) throughout the HCP area are designed to protect water quality and hydrologic integrity and connectivity.

The Green Diamond HCP includes measures to ensure that water quality and quantity conditions in the water column maintain a barrier-free environment for bull trout. The HCP maintains the natural hydrology and riparian functions of large wood input, shade, bank stability, and detrital inputs by providing buffers along streams and wetlands. The HCP is also designed to substantially reduce the amount of coarse and fine sediments transported downstream that could further simplify and degrade habitat conditions.

Stream temperature is being addressed in a number of ways, including establishing buffers to provide shade, implementing road-management practices that avoid sedimentation, and maintaining natural hydrologic regimes that contribute cool water to streams. Stream and wetland buffers are designed to provide natural levels of shade, and to avoid increasing sunlight, which could result in stream warming. Road and wetland prescriptions are designed to maintain natural hydrological regime to ensure streams are not abnormally dry during periods of the year when warming problems could be exacerbated. Stream buffers and road standards also address sediment delivery, which in turn will avoid artificial filling of pools, which could lead to increased stream warming.

The HCP addresses the need for natural substrates in a wide variety of ways. As described above, reducing road-generated, fine sediment is a major focus, and considerable attention is placed on road maintenance, repair, and improved construction standards. In addition, road remediation of existing road-related problems is a major component. The HCP addresses bank stability and large wood recruitment, which will help store fine sediment and provide for suitable substrates for bull trout spawning. The HCP's provisions to manage forest cover in the rain-on-snow subbasins will reduce the frequency of major storm flows that are capable of shifting instream habitat structure that contributes to sorting and development of suitable substrates, and it also is expected to substantially reduce the amount of coarse and fine sediments transported downstream. The HCP is designed to protect the natural hydrograph, address sediment and stream temperature, and maintain floodplains and wetlands in a manner that retains the functions of the hyporheic zone and off-channel habitats. HCP prescriptions that protect the natural environment will assist native fish in maintaining a competitive advantage over nonnative species.

Some examples of conservation actions conducted under the Green Diamond HCP include the placement of large woody debris in streams to increase habitat complexity, and the abandonment of 154 km (96 mi) of legacy logging roads that do not meet current construction standards. Road abandonment included restoring pre-construction hydrology, thereby decreasing the opportunity for sediment delivery to adjacent streams. Silvicultural treatments have also been applied over 486 ha (1,200 ac) of riparian forest to improve aquatic habitat in adjacent streams.

City of Seattle Cedar River Watershed HCP

In April 2000, the Cedar River Watershed HCP was completed and an incidental take permit was issued to the City of Seattle for water withdrawal and water supply activities affecting flows in the lower Cedar River and reservoir levels in Chester Morse Lake. The plan provides for forestry restoration activities including riparian thinning, road abandonment, and timber stand improvement on over 36,872 ha (91,000 ac) in the upper Cedar River Watershed in King County. The HCP is designed to provide adequate flows in the lower Cedar River for fish spawning and rearing, to manage water levels in Chester Morse Lake and Masonry Dam Reservoir to benefit instream flows in the lower river and maintain bull trout spawning access to lake tributaries, and to manage the upper Cedar River as an ecological reserve.

The HCP's watershed mitigation management and conservation strategies provide comprehensive long-term protection for the watershed ecosystem, and include commitments not to harvest timber for commercial purposes; placement of forest outside limited development areas in a reserve status; measures to protect and restore stream, riparian, and upland forest habitats; removal of a large part (approximately 40 percent) of the existing road network; protective guidelines for watershed operations designed to minimize and mitigate impacts of those operations; and specific measures to protect species of greatest concern and their habitats, including bull trout. Several research actions are directed at understanding how all life stages of bull trout use Chester Morse Lake and Masonry Pool and how adult bull trout use tributaries to the lake for spawning. The HCP covers 83 species of fish and wildlife, including bull trout and six other species listed under the Act.

The HCP covers over 36,872 ha (91,000 ac) of City of Seattle-owned land in the upper Cedar River Watershed and the City's water withdrawal activities on the lower Cedar River. Seattle owns over 99 percent of the lands in the upper Cedar River watershed, which are managed as an ecological reserve to protect water quality and preserve the remaining old growth timber. Other timber lands in the watershed are actively managed to accelerate the development of old growth characteristics, mainly though riparian and upland thinning. Roads are being decommissioned (removed) at the rate of approximately 16 km (10 mi) per year to reduce erosion rates into the lake and its tributaries and to minimize disturbance and fragmentation in the upper watershed. This activity will maintain a natural hydrological regime so that streams are not abnormally dry during periods of the year when this could exacerbate warming. Twenty culverts that block fish passage are being replaced in the upper watershed.

The HCP includes provisions to manage almost the entire watershed as an ecological reserve, maintaining forest cover where it currently exists and allowing for only ecological thinning to occur in selected locations in the watershed. This ''no commercial harvest'' approach ensures that all springs, seeps, surface waters, groundwater sources, and subsurface waters function in a natural state that maintains water connectivity and contributes to water quality and quantity. This prescription is also expected to protect shade levels to avoid increasing sunlight, which can result in stream warming. Because only limited ecological thinning will occur, no loss of riparian shading is expected under the HCP other than that resulting from natural causes (wind throw, fire, etc.). All fish blockages identified on HCP lands have been or will be corrected, ensuring migratory corridors with minimal physical, biological, or water quality impediments between spawning, rearing, overwintering, and foraging habitats. Removal of fish blockages will also provide for more naturally maintained stream characteristics, including bedload movement, sediment transport, and passage of moderately-sized woody debris. The ecological reserve created under the HCP maintains the natural hydrology and riparian functions of large wood input, shade, bank stability, and detrital inputs, as well as natural functions of flood plains and unstable slopes.

The HCP addresses the need for complex habitat by eliminating commercial timber harvest in the watershed; outside of selected ecological thinning in some riparian areas and upland forest, no harvest of trees is allowed under the HCP. Ecological thinning in some riparian areas has the advantage of accelerating the growth of the remaining riparian trees and increasing the amount of large woody debris in the stream. Because only limited ecological thinning will occur, no loss of riparian shading is expected under the HCP other than that resulting from natural causes (wind throw, fire, etc.). Stream temperature will be maintained through a number of measures, including no commercial harvest in the watershed, road-management practices that avoid sedimentation, and maintenance of natural hydrologic regimes that contribute cool water to streams.

Reducing the influences and scope of roads in the upper Cedar River Watershed is a major focus of the HCP, since most harmful sediments that impact aquatic habitats are due to poor road construction and maintenance. Logging roads in the watershed have impaired bull trout habitat by contributing coarse and fine sediments to the stream network, so considerable focus has been placed on road maintenance, road repair, improved road construction standards, fish barrier removal, and road abandonment. Twenty identified fish passage barriers are being replaced, or are scheduled to be replaced, which will restore fish access to additional habitat, and provide for more naturally maintained stream characteristics, including bedload movement, sediment transport, and passage of moderately-sized woody debris. Road management is designed to disconnect ditches (and ground water intercepted by roads) from the stream system to reduce delivery of sediment, and also to slow the delivery of storm-related run-off and reduce the contribution to peak flows. Road abandonment is designed to put-to-bed many roads that would otherwise contribute sediment to streams via runoff or mass failure. Approximately 378 km (236 mi) of roads, or 38 percent of the watershed road network, will be decommissioned at a rate of approximately 16 km (10 mi) of roads per year. Approximately 200 km (125 mi) of road have been decommissioned within the Cedar River Municipal Watershed since 1989 (*http://www.seattle.gov/util/About_SPU/Water_System/Habitat_Conservation_Plan/ManagingtheWatershed/RoadImprovementsDecommissioning/Metrics/SPU02_015774.asp*).

The streams in the upper Cedar River watershed are free-flowing water courses that currently provide high-quality habitat for bull trout. The goal is to protect the quality and quantity of this habitat and take steps to improve and restore other habitat. The HCP includes provisions to manage almost the entire watershed as an ecological reserve maintaining forest cover where it currently exists and allowing for only ecological thinning to occur in selected locations in the watershed. The HCP is expected to maintain floodplains and wetlands in a manner that retains the functions of the hyporheic zone and off-channel habitats. Conservation measures in the HCP should result in more naturally maintained stream hydraulics, including bedload movement, sediment transport, and passage of small and large woody debris.

Water quality and quantity are addressed through a variety of mechanisms. In addition to protecting the natural hydrograph and addressing sediment and temperature, no chemical applications in the watershed are allowed in order to maintain the quality of the public drinking water supply. Provisions of the HCP that protect the natural environment should assist native fish in maintaining a competitive advantage when that is possible. The fact that this is a closed watershed, not open to the public, and will remain so under the HCP, will help considerably to ensure nonnative species are not introduced into the site.

Plum Creek/Stimson Lumber Company Native Fish HCPs

Plum Creek Timber Company initiated an effort in 1997 to develop a conservation strategy for native salmonids (including bull trout), occurring on 647,511 ha (1.6 million ac) of Plum Creek's Timberlands in Montana, Idaho, and Washington. The stated purpose of the Plum Creek Native Fish Habitat Conservation Plan (NFHCP) was to help conserve native salmonids and their ecosystems, while allowing Plum Creek to continue to conduct commercial timber harvest within a framework of long-term regulatory certainty and flexibility. The Stimson Lumber NFHCP was created when the Stimson Lumber Company acquired certain lands previously owned by Plum Creek and assumed all of the Plum Creek NFHCP commitments. The Plum Creek NFHCP covers approximately 566,572 ha (1.4 million ac) within the range of the Columbia River basin. The Stimpson portion of what was originally the Plum Creek NFHCP covers approximately 11,487 ha (28,535 ac). Because of similarities in their conservation measures, the HCPs are being analyzed together for purposes of our section 4(b)(2) analysis. Both HCPs are designed to maintain the thermal regime of streams within the range of normal variation, maintain a high level of water quality, and contribute to the maintenance of complex stream channels, appropriate substrates, a natural hydrologic regime, ground-water sources and subsurface connectivity, migratory corridors, and an abundant food base. The HCPs are is designed to benefit the aquatic environment by providing a gradual improvement in the cold and clean water as well as complex and connected habitat necessary for protection and restoration of bull trout.

The HCPs protect surface and subsurface water connectivity through a variety of diverse mechanisms. Springs and seeps that form perennial or intermittent channels are addressed through conservation provisions; all perennial streams are protected with riparian buffers, and intermittent streams receive protection to optimize their functional needs. The HCPs address wetlands and hydrological integrity and connectivity, including forested and nonforested wetlands. Wetland prescriptions (and prescriptions for management of wetland complexes) throughout the HCP areas protect water quality and hydrologic integrity and connectivity. Roads are designed to avoid disrupting surface and ground-water flows, and road remediation is specifically directed at wetlands. Reducing road-generated, fine sediment is a major focus of the HCPs, and considerable focus is placed on road maintenance, repair, and improved construction standards. In addition, road remediation of existing road-related problems is a major component. Road management is designed to disconnect ditches (and ground water intercepted by roads) from the stream system to reduce delivery of sediment, and to slow the delivery of storm-related run-off, thereby reducing road contributions to peak flows.

The HCPs include measures to ensure that water quality and quantity conditions in the water column do not present a barrier to bull trout, and maintain the natural hydrology and riparian functions of large wood input, shade, bank stability, detrital inputs, as well as natural functions of flood plains and unstable slopes. They address the need for complex habitat by providing buffers along streams and wetlands; these buffers are expected to contribute to large woody debris recruitment and maintain stream bank integrity. They also address sediment, which has the potential to simplify and degrade instream habitat conditions by focusing on addressing mass-wasting and erosional processes. Both HCPs include provisions to manage forest cover to reduce the frequency of major storm flows, to substantially reduce the amount of coarse and fine sediments transported downstream that could further simplify (remove necessary elements) and degrade habitat conditions.

Stream temperature is addressed through a number of avenues including buffers that provide shade, road-management practices that avoid sedimentation, riparian and grazing management, and maintenance of natural hydrologic regimes that contribute cool water to streams. The buffers on streams and wetlands are expected to provide natural levels of shade to avoid increasing sunlight, which could result in stream warming. Further, road and wetland prescriptions are expected to maintain the natural hydrological regime so that streams are not abnormally dry during periods of the year when this could exacerbate warming problems. Stream buffers and road standards also address sediment delivery, which will in turn avoid artificial filling of pools, which could lead to increased stream warming. The HCPs are designed to maintain floodplains and wetlands in a manner that retains the functions of the hyporheic zone and off-channel habitats. Water quality and quantity are addressed through a variety of mechanisms, including protecting the natural hydrograph and addressing sediment and temperature. Provisions of the HCPs that protect the natural environment should assist native fish in maintaining a competitive advantage when that is possible.

The NFHCPs impose more stringent harvest requirements in riparian areas than prescribed under State law. They also provides for a greater number of drainage features on roads, particularly near stream crossings (which reduces sediment delivery to streams), and require increased road abandonment to offset the construction of new roads. The Thompson River restoration project is evaluating alternatives for removing reed canary grass and reestablishing riparian forest to provide shade and improve water temperature. The NFHCPs include site-specific management plans to protect native fish assemblages, and include long-term adaptive management studies to address road best management practices effectiveness, large woody debris recruitment, stream temperature, and grazing. These adaptive management studies are currently underway.

Plum Creek Timber Central Cascades HCP

In June of 1996, the Service issued an incidental take permit to Plum Creek Timber Company in association with the Central Cascades HCP. This HCP addressed vertebrate species on over 68,798 ha (170,000 ac) of forest land in the Central Cascades, much of it located in what is generally known as the I-90 corridor. The HCP spans the Cascade crest, and covered lands occur in both King and Kittitas Counties. Currently, the HCP addresses fewer than 36,423 ha (90,000 ac) as a result of land exchanges and conservation sales. The HCP addresses multiple species through a combination of landscape-level forest commitments, special-site protections, and other conservation measures. Bull trout is one of the covered species and is addressed through a combination of riparian and wetland buffers; management restrictions; watershed analysis; protection of inner gorges, springs, and seeps; avoidance of unstable slopes; and road management. It includes lands within the Green River Watershed as well as lands within the upper Yakima and Naches drainages.

The HCP protects surface and subsurface water connectivity through a variety of diverse mechanisms. Springs and seeps that form perennial or intermittent channels are addressed through conservation provisions, and all perennial streams are protected with riparian buffers. Intermittent streams

may also be buffered through provisions associated with inner gorge prescriptions or as a result of watershed analysis. The HCP addresses wetlands and hydrological integrity and connectivity, including both forested and nonforested wetlands, and wetland, seep, and spring prescriptions protect water quality, hydrologic integrity, and connectivity. The HCP includes measures to ensure that water quality and quantity conditions in the water column do not present a barrier to bull trout. Considerable focus is placed on road maintenance, repair, and improved construction standards, and remediation of existing road-related problems is a major component of the HCP. Roads are located to avoid disrupting surface and ground-water flows, and equipment exclusions around wetlands help protect hydrology. Road management is designed to disconnect ditches (and ground water intercepted by roads) from the stream system to reduce delivery of sediment, and to slow the delivery of storm-related run-off and reduce the contribution to peak flows.

The HCP maintains the natural hydrology and riparian functions of large wood input, shade, bank stability, detrital inputs, as well as natural functions of flood plains and unstable slopes. It addresses the need for complex habitat by providing buffers along streams and wetlands that contribute to large woody debris recruitment and maintain stream bank integrity. Adequate stream temperatures are addressed in a number of ways, including the use of buffers that provide shade, road-management practices that avoid sedimentation, and maintenance of natural hydrologic regimes that contribute cool water to streams.

The buffers on streams and wetlands are designed to provide adequate shade and to avoid increasing sunlight exposure, which could result in stream warming. Stream buffers and road standards also address sediment delivery to avoid artificial filling of pools, which could lead to increased stream warming. The HCP addresses bank stability and large wood recruitment which should help store fine sediment and provide for suitable substrates for bull trout spawning. It also includes provisions to manage forest cover in the rain-on-snow subbasins to maintain normal storm flows, and is designed to maintain floodplains and wetlands in a manner that retains the functions of the hyporheic zone and off-channel habitats. Water quality and quantity are addressed through a variety of mechanisms, including protecting the natural hydrograph and addressing sediment and temperature needs. HCP provisions that protect the natural environment should assist native fish in maintaining a competitive advantage over nonnative species.

Washington Forest Practices HCP

In 2001, the Washington Forest Practices Board adopted new permanent forest practice rules to address impacts to aquatic species, including bull trout, on all private forest lands not covered under an existing HCP, and WDNR State lands east of the Cascade Crest. These rules became effective in 2001, and cover a wide variety of forest practices, including: (1) A new, more functional, classification of rivers and streams on non-Federal and non-tribal forestland; (2) improved plans for properly designing, maintaining, and upgrading existing and new forest roads; (3) additional protections for unstable slopes; and (4) greater protections for riparian areas intended to restore or maintain properly functioning aquatic and riparian habitat conditions. The Washington State Legislature and U.S. Congress supported the collaboration with significant funding for the research, monitoring, and adaptive management needs identified in the Forests and Fish Report (WDNR 1999). In 2006, an incidental take permit was issued under section 10(a)(1)(B) of the Act based on the Washington Forest Practices Rules (Rules), which established requirements under the Washington Forest Practices HCP.

The Rules contain prescriptions designed to improve and maintain properly functioning aquatic and riparian habitat on non-Federal, non-tribal forest lands throughout the State. The Rules allow for a substitution of its prescriptions with those of another habitat conservation plan. The 3.7 million ha (9.1 million ac) regulated by the Washington Forest Practices HCP include a mixture of large industrial ownerships and small nonindustrial ownerships. These lands are most prevalent at lower elevations, while Federal forest lands are more prevalent at higher elevations. Nonindustrial forest lands are common along the urban-growth margin.

The Rules protect surface and subsurface water connectivity important for bull trout habitat through the requirements to provide no harvest buffers around sensitive sites (springs, seeps, and tributary junctions of streams without fish), and to limit harvest in other areas. These prescriptions contribute to maintaining surface and subsurface water sources and connectivity important for water quality and quantity. The requirements in the Rules to replace or upgrade all fish-blocking culverts and sub-standard roads by 2016 are designed to ensure that migratory corridors are accessible to bull trout. As of December 1, 2008, approximately 44 percent of known fish passage barriers (2,871 of 6,505) have been corrected under the HCP, opening 2,317 km (1,448 mi) of fish habitat (*http://www.dnr.wa.gov/Publications/fp_hcp_annrep09_ch09.pdf*). The riparian-buffer requirements protect the quality of these migratory corridors by maintaining stream temperatures and other stream functions important for bull trout foraging, migration, overwintering, and spawning habitat.

Through the requirements for riparian management buffers, sensitive-site protections, and road and culverts improvements, the Rules protect the other aquatic and riparian habitats and organisms that occur in these areas. Since the Rules are designed to benefit bull trout, salmon, and virtually all other native fish species associated with stream and river habitats, they will also protect the bull trout food base.

Timber harvest is limited within the bankfull width or channel migration zone of perennial waters, to maintain stream geomorphology, as well as stream-adjacent large wood, side channels, pools, and undercut banks. In addition, the riparian management strategies mentioned above will maintain intact, complex stream channels important for bull trout. The riparian buffers are designed to maintain cool stream temperatures, canopy cover, recruitment of large wood, bank stability, nutrient cycling, detritus inputs, and to provide sediment filtering. No-harvest buffers are generally applied along fish-bearing streams and, at a minimum, half of the non-fish-bearing, perennial streams. Adjacent to these buffers, timber harvest is limited within riparian areas, depending on site conditions. Sensitive sites, such as seeps and springs, are also protected with buffers. In western Washington, the riparian strategy is designed to move riparian areas towards conditions equivalent to the stand conditions of mature 140 year-old riparian forests. In eastern Washington, riparian management is intended to provide stand conditions that vary over time within a range that meets functional conditions and maintains general forest health.

The Rules address the need for natural substrates in a wide variety of ways; reduced road-generated fine sediment, road maintenance, road repair, and improved construction standards are major focus areas. Unstable slopes are identified and

harvesting and road building are restricted on areas with a potential for mass-wasting. These requirements protect against management-caused debris flows that would otherwise increase sediment loading into streams. Road maintenance, repair, and improved construction standards are designed to minimize or divert road-induced sediment and artificial water flows away from streams. The Rules also include provisions to minimize the negative effects of timber harvest in rain-on-snow areas by limiting clear-cut harvest sizes. Other protections are associated with ''green-up requirements'' in which young stands must reach a certain size before adjacent stands of timber can be harvested.

Water quality and quantity are addressed through a variety of protective requirements. In addition to protecting the natural hydrograph, stream temperatures, and other riparian and aquatic habitat elements, the requirements for roads and culverts minimize sediment delivery to streams, thereby minimizing effects to water quality. The Rules address forestry activities over a substantial amount of relatively contiguous ownership, and are expected to protect the relevant bull trout PCEs in all of the streams subject to their requirements.

Weighing and Balancing Exclusions Under Section 4(b)(2) of the Act

Based on the best available information, we have determined that each HCP permittee is in compliance with the terms and conditions of their respective incidental take permit issued under section 10(a)(1)(B) of the Act. Specific information on HCP implementation and the progress made with regard to bull trout conservation is available at *http://www.fws.gov/pacific/bulltrout/*. We have combined the section 4(b)(2) balancing analysis for the above HCPs, given the similarities in scope of covered activities, partnerships, and benefits. More detailed section 4(b)(2) analyses of each excluded HCP are part of the decisional record, see the ''*Compilation of HCP Exclusion Analyses for the Designation of Bull Trout Critical Habitat (Including Exclusion Analysis for Certain Areas Managed Under the Lewis River Hydroelectric Projects*)'', posted at *http://www.fws.gov/pacific/bulltrout/*.

(1) Benefits of Inclusion of the WDNR, Green Diamond, City of Seattle Cedar River Watershed, Plum Creek/Stimson Lumber Company Native Fish, Plum Creek Central Cascades, and Washington State Forest Practices HCPs.

Regulatory Benefits

The consultation provisions under section 7(a) (2) of the Act constitute the regulatory benefits of critical habitat. As discussed above, Federal agencies must consult with us on actions that may affect critical habitat and must avoid destroying or adversely modifying critical habitat. Prior to our designation of critical habitat, Federal agencies consult with us on actions that may affect a listed species and must refrain from undertaking actions that are likely to jeopardize the continued existence of the species. Thus, the analysis of effects to critical habitat is a separate and different analysis from that of the effects to the species. The difference in outcomes of these two analyses represents the regulatory benefit of critical habitat. For some species, and in some locations, the outcome of these analyses will be similar, because effects on habitat will often result in effects on the species. However, the regulatory standard is different: the jeopardy analysis looks at the action's impact on survival and recovery of the species, while the adverse modification analysis looks at the action's effects on the designated habitat's contribution to the species' conservation. This will, in some instances, lead to different results and different regulatory requirements.

Once an agency determines that consultation under section 7 of the Act is necessary, the process may conclude informally when we concur in writing that the proposed Federal action is not likely to adversely affect critical habitat. However, if we determine through informal consultation that adverse effects are likely to occur, then we would initiate formal consultation, which would conclude when we issue a biological opinion on whether the proposed Federal action is likely to result in destruction or adverse modification of critical habitat. A biological opinion that concludes in a determination of no destruction or adverse modification may contain discretionary conservation recommendations to minimize adverse effects to critical habitat, but it would not contain any mandatory reasonable and prudent measures or terms and conditions. In addition, we suggest reasonable and prudent alternatives to the proposed Federal action only when our biological opinion results in a destruction or adverse modification conclusion.

In providing the framework for the consultation process, the previous section applies to all the following discussions of benefits of inclusion or exclusion of critical habitat. The process of designating critical habitat as described in the Act requires, in part, that the Service identify those lands on which are found the physical and biological features essential to the conservation of the species which may require special management considerations or protection. In identifying those lands, the Service must consider the recovery needs of the species. Furthermore, once critical habitat has been designated, Federal agencies must consult with the Service under section 7(a)(2) of the Act to ensure that their actions will not adversely modify designated critical habitat or jeopardize the continued existence of the species. As noted in the Ninth Circuit's Gifford Pinchot decision (referenced earlier), the Court ruled that the jeopardy and adverse modification standards are distinct, and that adverse modification evaluations require consideration of impacts to the recovery of species. Thus, through the section 7(a)(2) consultation process, critical habitat designations provide recovery benefits to species by ensuring that Federal actions will not destroy or adversely modify designated critical habitat.

For example, if a federally-funded road project or hydroelectric project were to be proposed for development on HCP lands that contained designated critical habitat, a consultation would need to be conducted to ensure the designated critical habitat was not destroyed or adversely modified to the point of appreciably diminishing its habitat features essential to bull trout recovery. Designation of critical habitat may facilitate regulatory agencies taking additional protective measures where critical habitat is designated (for example, revising operations at hydroelectric projects). For example, Washington State law requires consideration of additional rules and areas for protection upon designation of critical habitat.

The identification of habitat necessary for the conservation of the species is beneficial because it can assist in the recovery planning for a species. However, the designation of critical habitat does not require that any management or recovery actions take place on the lands included in the designation. Even in cases where consultation has been initiated under section 7(a)(2) of the Act, the end result

of consultation is to avoid jeopardy to the species and adverse modification of its critical habitat, but not specifically to manage remaining lands or institute recovery actions on remaining lands. Conversely, management plans institute intentional, proactive actions over the lands they encompass to remove or reduce known threats to a species or its habitat and, therefore, implement recovery actions.

We believe that in some cases, the conservation benefits to a species and its habitat that may be achieved through the designation of critical habitat are less than those that could be achieved through the implementation of a management plan that includes specific provisions based on enhancement or recovery as the management standard. Consequently, the implementation of any HCP or management plan that considers enhancement or recovery as the management standard will often provide as much or more benefit than a section 7(a)(2) consultation under the Act using the standards required by the Ninth Circuit in the Gifford Pinchot decision. There may be some regulatory benefit that results from designating critical habitat in the areas covered by the above HCPs because of section 7 consultation requirements, or potentially protections under other State or local laws that may be triggered because of the designation. However, we believe the management goals of the above HCPs go beyond any protections that would be provided through section 7 consultation or other State or local regulatory requirements.

Educational Benefits

One benefit of including lands in critical habitat is that the designation of critical habitat serves to educate landowners, State and local governments, and the public regarding the potential conservation value of an area. This helps focus and promote conservation efforts by other parties by identifying areas of high conservation value for bull trout. Because the rulemaking process associated with critical habitat designation includes several opportunities for public comment, it also provides for public education. Through these outreach opportunities, land owners, State agencies, and local governments can become more aware of the status of and threats to listed species, and the conservation actions needed for recovery. Designation of critical habitat would inform State agencies and local governments about areas that could be conserved under State laws or local ordinances, such as the Washington State Growth Management Act or Washington State Shoreline Management Act, which encourage the protection of ''critical areas'' including fish and wildlife habitat conservation areas.

(2) Benefits of Exclusion of the WDNR, Green Diamond, City of Seattle Cedar River Watershed, Plum Creek/Stimson Lumber Company Native Fish, Plum Creek Central Cascades, and Washington State Forest Practices HCPs.

Maintaining and Establishing Conservation Partnerships

Non-Federal landowners are motivated to work with the Service collaboratively to develop voluntary HCPs because of the regulatory certainty provided by an incidental take permit under section 10(a)(1)(B) of the Act, including assurances under the No Surprises Policy (63 FR 8859; February 23, 1998). The No Surprises Policy sets forth a clear commitment to incidental take permittees that, to the extent consistent with the Act and other Federal laws, the government will honor its agreements under an approved HCP where the permittee is implementing the HCP's terms and conditions in good faith. Although the HCP process can be complex and time-consuming, the perceived benefit to landowners in undertaking this extensive process is the resulting regulatory certainty, which translates into real savings for private landowners in terms of opportunity costs, as well as direct savings and avoided costs. A failure to exclude HCP lands where the species under consideration for critical habitat is a covered species could be viewed as the Service retreating from its previous position on the adequacy of the conservation measures in the HCP, undermining the Service's credibility in future interactions with potential partners. Designation of critical habitat within the boundaries of already approved HCPs may also be viewed as a disincentive by other entities currently developing HCPs or contemplating them in the future, because it implies potential additional regulation after agreement on conservation measures needed for the species has been made. In discussions with the Service, HCP permittees have indicated they view critical habitat designation as an unnecessary additional intrusion on their property, and an erosion of the regulatory certainty provided by their incidental take permit and the No Surprises Policy. The No Surprises Policy sets forth a clear commitment by the Service, that to the extent consistent with the requirements of the Act and other Federal laws, the government will honor its agreements under an approved HCP for which the permittee is in good faith implementing the HCP's terms and conditions. Because the Service would be required to reinitiate section 7 consultation with itself if critical habitat is designated on our action of issuing a section 10(a)(1)(B) permit, the permittees are concerned that the Service could use this as an excuse to request new conservation measures for the bull trout, even though we have existing agreements already in place.

Although parties whose actions may take listed species may still desire incidental take permits to avoid liability under section 9 of the Act, failure to exclude HCP lands from critical habitat could reduce the conservation value of the HCP program in several ways. First, parties may be less willing to participate in large, regional HCPs, preferring instead to address any possible take on a project-by-project basis. Second, in any given HCP, applicants may reduce the amount of protection to which they are willing to agree, in effect holding some additional protective measures ''in reserve'' for use in any future discussions to address critical habitat. Third, without the incentive of exclusion from critical habitat, some potential applicants, particularly (1) those whose actions may, but are not certain, to take listed species, and (2) those against whom enforcement for any take that does occur may be difficult, may decide not to seek an incidental take permit at all. The failure to exclude qualified HCP lands from critical habitat designations could decrease the program's efficacy and have profound effects on our ability to establish and maintain important conservation partnerships with stakeholders.

Excluding qualified HCP lands from critical habitat provides permittees with the greatest possible certainty, thereby helping foster the cooperation necessary to allow the HCP program to achieve the greatest possible conservation benefit. Thus, excluding the lands covered by the above HCPs improves the Service's ability to enter into new partnerships. Permittees who trust and benefit from the HCP process discuss the benefits with others who may become future HCP participants, such as States, counties, local jurisdictions, conservation organizations, and private landowners. New HCPs will result in implementation of conservation actions that we would be unable to accomplish otherwise.

Avoidance of Administrative Costs

To the extent designation would provide any additional protection of bull trout habitat, the costs associated

with that protection would be avoided by exclusion. Excluding waterbodies covered under these large-scale HCPs from the critical habitat designation relieves landowners, communities, and counties from any additional regulatory burden and costs associated with the preparation of section 7 documents related to critical habitat. While the costs of providing these additional documents to the Service is minor, there may be resulting delays that generate perceived or very real costs to private landowners in the form of opportunity costs, as well as direct costs.

Conservation Planning Efficiencies

Large-scale HCPs can address habitat conservation on a very broad scale, addressing entire ecosystems and a wide variety of the species in them, whether listed or not. In our experience, large-scale HCPs provide more comprehensive, and therefore more effective, protection to listed species as well as to species that might otherwise require listing in the future. Large-scale HCPs in effect become regional conservation plans consistent with the recovery objectives for listed species that are covered within the plan area.

The above HCPs provide substantial measures to protect or improve the current state of the ecosystem as a whole, which may contribute to the conservation of a number of species, including bull trout. These HCPs also include streams and habitats outside of the critical habitat designation that contribute to bull trout recovery, including habitats potentially suitable for future occupancy by bull trout and other species.

Meeting Science Needs for Recovery Purposes

HCPs can provide other important conservation benefits, including the development of important biological information needed to guide conservation efforts and assist in species conservation outside the HCP planning area. Each of the above HCPs have some component of adaptive management to address uncertainties in achieving their agreed-upon conservation objectives for aquatic habitats, including uncertainties that may be associated with climate change. The adaptive management strategy helps to ensure management will continue to be consistent with agreed-upon bull trout conservation objectives. In addition, in the cases of the City of Seattle Cedar River Watershed HCP and the Washington State Forest Practices HCP, there are specific research elements directed towards bull trout and its habitat. Although the designation will not affect this research, it is highly unlikely this research would have been achieved through a critical habitat designation.

(3) Benefits of Exclusion Outweigh the Benefits of Inclusion for the WDNR, Green Diamond, City of Seattle Cedar River Watershed, Plum Creek/Stimson Lumber Company Native Fish, Plum Creek Central Cascades, and Washington State Forest Practices HCPs

Based on the above considerations, and consistent with the direction provided in section 4(b)(2) of the Act, the Service and, subsequently, the Secretary, have concluded that the benefits of excluding streams and waterbodies associated with the WDNR, Green Diamond, City of Seattle Cedar River Watershed, Plum Creek/Stimson Lumber Company Native Fish, Plum Creek Central Cascades, and Washington State Forest Practices HCPs as critical habitat for the bull trout outweigh the benefits of including these streams and waterbodies as critical habitat. This conclusion is based on the following:

It is probable that any Federal action that would be likely to destroy or adversely modify critical habitat within an area covered by the above HCPs would also jeopardize the continued existence of the species, because of the specific way in which jeopardy and adverse modification are analyzed for bull trout. Since the primary threat to bull trout is habitat loss or degradation, the jeopardy analysis under section 7 of the Act for a project with a Federal nexus will most likely evaluate the effects of the action on the conservation or functionality of the habitat for the bull trout. Because of this, we believe that in many cases the analysis of the project to address designated critical habitat will be comparable. As such, we do not anticipate, for many circumstances, that the outcome of the consultation to address critical habitat will result in any significant additional project modifications or measures. Thus, potentially detrimental actions would be avoided as a result of a jeopardy analysis resulting from the bull trout's status as threatened under the Act, and not solely or specifically because of critical habitat designation. The benefit of informing the public of the importance of these areas to bull trout conservation would for the most part be redundant with the outreach conducted during the NEPA process for the subject HCPs. Therefore, we assign relatively little weight to the benefits of designating these HCP areas as critical habitat.

In contrast, the benefits of encouraging continued and future participation in HCPs, and fostering cooperative conservation through HCP participation are crucial to the long-term effectiveness of the endangered species program. Therefore, for the above HCPs, we assign greater weight to these benefits of exclusion. To the extent there are regulatory benefits of including these areas, there would also be associated costs that could be avoided through exclusion. However, since we expect the regulatory benefits to be low, we are giving greater weight to the avoidance of those associated costs.

Based on the above analysis, we have determined that the benefits of designating critical habitat in streams and other waterbodies covered by these HCPs are relatively small, compared to the benefits of exclusion. The benefits of exclusion therefore outweigh the benefits of inclusion. Because we anticipate little if any conservation benefit to the bull trout will be foregone as a result of excluding these lands, the exclusion of these HCPs will not result in the extinction of the bull trout. The Secretary therefore exercises his discretion under section 4(b)(2) of the Act to exclude these areas from the designation. The specific section 4(b)(2) analysis for each of the above HCPs is described in further detail in the ''*Compilation of HCP Exclusion Analyses for the Designation of Bull Trout Critical Habitat (Including Exclusion Analysis for Certain Areas Managed Under the Lewis River Hydroelectric Projects*).'' This document is available at *http://www.fws.gov/pacific/bulltrout/*.

Other Managed Areas Considered for Exclusion

We have also determined that specific waterbodies associated with the Lewis River Hydroelectric Projects also warrant exclusion based on our section 4(b)(2) analysis below. These include several waterbodies protected or managed under the Settlement Agreement for the Federal Energy Regulatory Commission (FERC) relicensing of the Yale, Merwin, Swift No. 1 and Swift No. 2 hydroelectric projects, which was signed on November 30, 2004. This final rule provides a summary of the information considered with regard to this section 4(b)(2) analysis. A more detailed analysis is provided in the ''*Compilation of HCP Exclusion Analyses for the Designation of Bull Trout Critical Habitat (Including Exclusion Analysis for Certain Areas Managed Under the Lewis River Hydroelectric Projects*)'' document, which is available on the bull trout

website at *http://www.fws.gov/pacific/bulltrout.*

Lewis River Hydroelectric Projects Conservation Easements and Swift Bypass Reach

There are four projects and three dams that impound over 48.3 km (30 mi) of river habitat on the Lewis River in Washington, located in portions of Clark, Cowlitz, and Skamania Counties. Bull trout are present in all of the reservoirs; the upper two reservoirs have the most significant populations and also support spawning populations. A settlement agreement (Agreement) for the relicensing of the Yale, Merwin, Swift No. 1, and Swift No. 2 hydroelectric projects was signed on November 30, 2004, and FERC issued a license (License) on June 26, 2008. The Agreement and License incorporate conservation measures to minimize or compensate for the effects of the projects on listed species, including bull trout. Conservation measures for bull trout include: (1) Two perpetual conservation covenants, one on lands controlled by PacifiCorp utilities, in the Cougar/Panamaker Creek area, and another on PacifiCorp's and Cowlitz County Public Utility District's (PUD) lands along the Swift Creek arm of Swift Creek Reservoir; (2) upstream and downstream fish passage improvements at all reservoirs; (3) increased flows and salmon spawning enhancements in the bypass reach; (4) limiting factors analysis for bull trout to determine additional enhancement measures; (5) public information program to protect bull trout; and (6) monitoring and evaluation efforts for bull trout conservation measures. This agreement will also restore anadromous salmon to the upper Lewis River system, including the bypass reach, restoring a significant part of the historic forage base for bull trout.

The Agreement protects surface and subsurface water connectivity through a variety of diverse mechanisms. Springs and seeps that result in perennial or intermittent channels and all perennial streams are protected with riparian buffers. The terrestrial wildlife management plan places special emphasis on stream side riparian zones. The goal is to exceed the standards in the Washington State Forest Practices. The Agreement addresses all wetlands and hydrological integrity and connectivity within the project boundaries and provides for protection of any wetlands that are acquired. Wetland protections (and water level management) are designed to follow the Washington Department of Fish and Wildlife Guidelines. Road prescriptions are designed to avoid disrupting surface and ground-water flows, and there are several specific road remediation efforts directed at existing wetlands within the project boundaries. The Agreement contains measures to improve bull trout access to aquatic habitat, but will not provide a barrier-free environment without human intervention in the near term. The enhanced flows under the license in the Swift bypass reach allow bull trout to access important FMO habitat, and may play an important future role in the collection and transport of adult bull trout to areas upstream of Swift Dam. In addition, roads covered by the Settlement Agreement will be managed in a manner that does not contribute to the formation of barriers, while remediation will address existing barriers.

The Agreement maintains the natural hydrology and riparian functions of large woody input, shade, bank stability, and detritus inputs, as well as natural functions of flood plains and unstable slopes on the streams that are tributary to the reservoirs. The reservoirs themselves do not include riparian origin material to any significant degree, but the development of a self-sustaining kokanee population in the two upper reservoirs has probably increased the available prey base for bull trout. The reintroduction of anadromous salmonids into the basin above Merwin Dam will provide a much larger and broader food base for bull trout, and is expected to increase the aquatic productivity in the tributary streams by reestablishing natural, marine-derived nutrient components. In the Swift bypass reach, the recent construction of spawning channels for reintroduced salmon will also increase the potential forage base for bull trout.

The Agreement and conservation easements address the need for complex habitat by providing buffers and protecting Cougar Creek. Annual surveys are conducted to ensure there are no negative impacts to habitat, and to provide for habitat restoration if negative impacts are found. The Agreement also addresses sediment introduction, which has the potential to simplify and degrade instream habitat conditions by closing and removing culverts, and addresses road surface erosion in the Cougar and Panamaker Creek drainages. Stream temperature is addressed through a number of avenues including a 300-meter (1,000-foot) no-touch buffer along Cougar Creek and a 130-meter (400-foot) no-touch buffer along Panamaker Creek. Higher standard buffers along other streams and wetlands are designed to provide natural levels of shade to avoid increasing sunlight, which could result in stream warming within the project boundaries. Instream temperature regulation is feasible with hydroelectric projects through the use of turbine intakes with features that allow for water intake below the thermocline. The Merwin project has a deep intake, and as a result, the Lewis River downstream of the project typically runs much cooler than it would as an unregulated stream. Yale and Swift are also fairly deep intakes, although the water discharging from the tailrace of the Yale project may be warmer than the receiving water, and may be a challenge with regard to capturing bull trout to assist with their upstream and downstream movement. This problem has not been fully analyzed, and will be one factor addressed during testing of alternative bull trout passage facilities at the Yale and Swift projects.

In addition, the bypass reach between Swift No.1 and the head of Yale Reservoir will gain a permanent instream flow of up to 100 cubic feet per second as part of the Agreement. This should decrease the temperature of the bypass water during the summer months, but may increase the temperature during the fall and early winter over the background temperature.

The Agreement addresses the need for natural substrates by reducing road-generated, fine sediment on project-owned roads. Additionally, it provides for gravel augmentation to mitigate for the blockage of natural bedload movement by the project dams and reservoirs, and addresses bank stability and large wood recruitment, which should help store fine sediment and provide for suitable substrates for bull trout spawning by providing a fund for enhancement and protection measure.

In the Swift bypass reach, flows have been significantly increased under the licensee's 401 Certification issued by the Washington State Department of Ecology to enhance bull trout use in this FMO habitat. Provisions of the Agreement that protect the natural environment should assist bull trout in maintaining a competitive advantage over nonnative species. The reintroduction of the historic assemblage of salmon may create competition for spawning space between bull trout and coho salmon; however, in natural environments, the two species have been observed spawning in the same areas, but generally tend to use habitat with slightly different parameters such as water temperature, gradient, substrate, and cover.

(1) Benefits of Inclusion

Designation of critical habitat for bull trout on lands managed under Lewis River Hydroelectric Projects Conservation Easements would provide protection from the destruction or adverse modification of designated critical habitat under section 7 of the Act. However, without designation, a certain amount of habitat protection would be provided through the jeopardy standard. Based on our review of previous section 7(a)(2) consultations for bull trout using this standard, there is little to indicate that critical habitat designation would generate additional habitat protections beyond those already provided. Under section 7(b)(3) of the Act, the Secretary suggests reasonable and prudent alternatives to proposed Federal actions only in cases where the action would destroy or adversely modify critical habitat. Determinations of destruction or adverse modification of critical habitat would be rare, since they are made within the context of an entire critical habitat designation.

Designating critical habitat can educate the public and management agencies about the distribution of areas containing the physical or biological features essential to the conservation of a species. In areas lacking a bull trout-specific management plan, designation can guide projects to avoid impacts to listed species and can help focus recovery efforts. However, we believe little additional informational benefit will be gained by including Swift and Cougar Creeks and the Swift bypass reach in designated critical habitat for bull trout. PacifiCorp is implementing conservation recommendations that were provided in our 2002 biological opinion, which includes posting interpretive signs to educate anglers on identifying and conserving native char, and techniques for catch and release to minimize incidental hooking mortality of bull trout. Although educational benefits associated with critical habitat designation can be an important component for the conservation of bull trout, we believe it is redundant with what is already being achieved through the implementation of measures under PacifiCorp's conservation easement.

(2) Benefits of Exclusion

The complex process of negotiating relicensing for the Lewis River hydroelectric projects has been ongoing for nine years. We have established valuable working relationships with PacifiCorp, Cowlitz County Public Utilities District (PUD), and the other participants during these negotiations. By excluding lands included in the two conservation easements from designated critical habitat, we will be better able to: (1) Maintain and enhance our ability to work with PacifiCorp, Cowlitz County PUD, other relicensing applicants, and FERC; and, (2) provide encouragement to other jurisdictions, private landowners, and other entities to continue to see the benefit of working cooperatively with us. Negotiating conservation measures under conditions of mutual trust can result in greater conservation benefits to the species than would result from designating Swift and Cougar Creeks, and the bypass reach, as critical habitat.

(3) Benefits of Exclusion Outweigh the Benefits of Inclusion

Based on the above considerations and consistent with the direction provided in section 4(b)(2) of the Act, the Service has determined that the benefits of excluding the waterbodies adjacent to lands managed under Lewis River Hydroelectric Projects Conservation Easements outweigh the benefits of including them as critical habitat. This conclusion is based on the following consideration. It is possible, although unlikely, that a Federal action could be proposed that would be likely to destroy or adversely modify critical habitat within the area subject to the Lewis River Conservation Easement and bypass reach. However, if such a project were to be proposed, any action that would be likely to destroy or adversely modify critical habitat would likely also jeopardize the continued existence of the species, because of the specific way in which jeopardy and adverse modification are analyzed for bull trout. Since the primary threat to bull trout is habitat loss or degradation, the jeopardy analysis under section 7 of the Act for a project with a Federal nexus will most likely evaluate the effects of the action on the conservation or functionality of the habitat for the bull trout. Because of this, we believe that in many cases the analysis of the project to address designated critical habitat will be comparable. As such, we do not anticipate, for many circumstances, that the outcome of the consultation to address critical habitat will result in any significant additional project modifications or measures. Accordingly, potentially detrimental actions would be avoided as a result of the jeopardy analysis. In addition, for the reasons discussed above, we believe the educational benefit of informing the public of the importance of this area to bull trout conservation would be limited because of previous and ongoing efforts. Therefore, we assign relatively little weight to the benefits of designating this area as critical habitat.

In contrast, the benefits of encouraging participation in conservation partnerships and fostering cooperative conservation are crucial to the long-term effectiveness of the endangered species program. Therefore, we assign greater weight to these benefits of exclusion. To the extent that there are regulatory benefits of designating the area as critical habitat, there would be some associated costs that could be avoided by excluding the area from designation. However, as we expect the regulatory benefits to be low, we likewise give weight to avoidance of those associated costs.

Based on our analysis, we have determined that the benefits of inclusion of the areas covered by these conservation easements are outweighed by the benefits of exclusion. Because we anticipate that little if any conservation benefit to the bull trout will be foregone as a result of excluding these lands, and the exclusion will not result in the extinction of the bull trout, the Secretary exercises his discretion under section 4(b)(2) to exclude these areas from the designation.

Tribal Lands–Exclusions Under Section 4(b)(2) of the Act

In accordance with the President's memorandum of April 29, 1994, ''Government-to-Government Relations with Native American Tribal Governments'' (59 FR 22951); Executive Order 13175; and the relevant provision of the Departmental Manual of the Department of the Interior (512 DM 2), we coordinate with federally-recognized Tribes on a government-to-government basis. Further, Secretarial Order 3206, ''American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act'' (1997) states that (1) critical habitat shall not be designated in areas that may impact tribal trust resources, may impact tribally-owned fee lands, or are used to exercise tribal rights unless it is determined essential to conserve a listed species; and (2) in designating critical habitat, the Service shall evaluate and document the extent to which the conservation needs of the listed species can be achieved by limiting the designation to other lands. Habitat on tribal lands was determined to be essential to the conservation of bull trout due to its location within the matrix of habitat available for bull trout. Because the bull trout is largely a migratory species with complex migration patterns, connectivity among and within its habitats is essential for long-term persistence and recovery of

the species. Many stream reaches or nearshore habitat on or adjacent to tribal lands were determined to be an important component of migratory habitat necessary to maintain connectivity between spawning and rearing habitats and FMO habitats. In other cases, it was determined that streams or stream reaches themselves represent an important component of spawning and rearing habitat for bull trout local populations or are important in maintaining overall connectivity within local populations or both.

The longstanding and distinctive relationship between Federal and tribal governments is defined by treaties, statutes, executive orders, judicial decisions, and agreements, which differentiate tribal governments from the other entities that deal with, or are affected by, the Federal government. This relationship has given rise to a special Federal trust responsibility involving the legal responsibilities and obligations of the United States toward Indian Tribes and the application of fiduciary standards of due care with respect to Indian lands, tribal trust resources, and the exercise of tribal rights. Accordingly, we are obligated to consult with Tribes based on their unique relationship with the Federal government. In addition, we evaluate Tribes' past and ongoing efforts for species conservation and the benefits of including or excluding tribal lands in the designation under section 4(b)(2) of the Act. We contacted all Tribes potentially affected by the proposed designations and met with a number of these Tribes to discuss their ongoing or future management strategies for bull trout. We subsequently received letters describing ongoing tribal management, conservation plans, and conservation efforts.

We received written responses from the Kalispell, Nez-Perce, Coeur d'Alene, Burns-Paiute, and Shoshone-Paiute Tribes supporting the critical habitat revision and the designation of tribal lands. Based on these responses, the Secretary determined not to exercise his discretion to exclude these tribal lands from the designation. In addition, the Confederated Tribe of the Colville indicated that they did not believe that any of the designated critical habitat affected tribal lands, nor do they believe they have water suitable for bull trout on their tribal lands. We received a comment from the Nisqually Tribe requesting the exclusion of their lands; however, we determined that critical habitat was not proposed on their lands, and therefore consideration of exclusion was not necessary.

Although we did not hear from the Confederated Salish and Kootenai Tribes during the comment period for the proposed rule, we are aware of the Confederated Salish and Kootenai Tribes' resource management plan, which addresses bull trout conservation in the Jocko River watershed. Given previous meetings with the Tribes, and their support of designated critical habitat within the Jocko River watershed, we have retained critical habitat on the Confederated Salish and Kootenai tribal lands (Service 2002, pers.comm.). In total, 5 Tribes requested that their lands be designated as critical habitat, which was accommodated; 6 potentially affected Tribes were either found to not have lands associated with designated habitat or did not respond to our inquiries; and 17 Tribes requested exclusion of their lands based on management plans that conserve bull trout.

We considered exclusions under section 4(b)(2) of the Act for those tribal lands where a commitment exists to conserve bull trout or a conservation program that provides aquatic resource protection and restoration through collaborative efforts on the reservation and other trust lands, and where the Tribes indicated that inclusion would impair their relationship with the Service. Tribes meeting these criteria included the Confederated Tribes of Warm Springs (CTWS), Blackfeet Nation, Confederated Tribes of the Umatilla Indian Reservation (CTUIR), and the Confederated Tribes and Bands of the Yakama Nation. Because of the relative similarities of the conservation management of these Tribes, the weighing and balancing analysis required under section 4(b)(2) of the Act was consolidated, as summarized in the following paragraphs.

We also considered exclusions under section 4(b)(2) of the Act for the treaty Tribes of Western Washington, and Tribes that are members of the Northwest Indian Fisheries Commission that have co-management responsibility over salmon resources with Washington State. These Tribes have also had a significant role in the development of habitat conservation plans, local watershed plans, and other habitat plans, and have implemented numerous habitat restoration and research projects designed to protect or improve habitat for listed species. These Tribes include the Swinomish Tribe, Quinault Indian Nation, Muckleshoot Tribe, Jamestown S'Klallam Tribe, Hoh Tribe, Lower Elwha-Klallam, Quileute Tribe, Lummi Nation, Nooksack Tribe, Puyallup Tribe, Stillaguamish Tribe, Tulalip Tribes, and Skokomish Tribe. Because of the relative similarities of the conservation management of these Tribes, the weighing and balancing analysis required under section 4(b)(2) of the Act was also consolidated, as summarized in the following paragraphs.

Confederated Tribes of Warm Springs Reservation of Oregon (CTWS)

The CTWS has a long history of carrying out proactive conservation actions and maintaining stewardship and conservation of the species and habitats on its lands, and it is also an active co-manager of species and habitats over extensive areas outside of the Warm Springs Reservation. These proactive voluntary conservation efforts are necessary to prevent bull trout extirpation and promote the recovery of the bull trout on CTWS lands. This is especially important in areas where the bull trout has been extirpated and its recovery requires access and permission for reintroduction efforts. For example, bull trout have been extirpated from some rivers within the Coastal Recovery Unit, and repopulation is not likely without the CTWS's cooperation.

The CTWS's management plans and ordinances provide guidelines for land uses and actions that affect the CTWS resources and serve as the basis for tribal management decisions. Bull trout benefit from these voluntary management actions by CTWS. The CTWS has an existing broad regulatory framework that protects bull trout habitat through many different mechanisms. These include their integrated resource management plan and its implementing ordinances on forestlands, water quality, and aquatic resources and their streamside management plan.

We believe that the CTWS' resource management strategy is largely compatible with bull trout conservation. The CTWS has cooperated with Federal and State agencies, and private organizations, to implement voluntary proactive conservation activities on their lands that have resulted in tangible conservation benefits for bull trout. These actions include removal of the headworks dam on Shitke Creek to facilitate movement of bull trout, changes to fishing regulations (the establishment of size and bag limits and no fishing areas) to be more protective of bull trout, reduced road densities, and the fencing of kilometers (miles) of bull trout spawning and rearing habitat. In addition, the CTWS monitors over 30 km (20 mi) of bull trout spawning habitat annually and completes habitat restoration projects throughout both their tribal and individual lands located within the boundaries of the Warm

Springs Indian Reservation, off-reservation lands owned in fee, and off-reservation lands held in trust by the Tribe.

The CTWS has a record of action and commitment that will continue regarding the conservation of bull trout and the habitats upon which they depend. We expect this cooperation and bull trout conservation to continue.

Confederated Tribes of the Umatilla Indian Reservation (CTUIR)

The CTUIR has a long history of carrying out proactive conservation actions on their lands, including work towards restoring flows in the Umatilla River. These proactive voluntary conservation efforts are necessary to prevent bull trout extirpation and promote recovery of bull trout on the CTUIR lands. This is especially important in the Umatilla River basin where bull trout are at very low numbers and recovery depends on the CTUIR's cooperation. The CTUIR approved a Forest Management Plan in March 2010, that regulates forestry activities on allotted trust, tribal trust, and tribal fee forest lands on the reservation and identifies protective measures for listed species. A management plan has also been developed by the CTUIR for the Rainwater Wildlife Area. Both plans provide a conservation benefit to bull trout and provide assurances that they will be implemented and that the conservation effort will be effective.

The CTUIR has an existing broad regulatory framework that protects bull trout habitat through many different mechanisms. These include the March 2010 Forest Management Plan and statutes under the CTUIR's Fish and Wildlife Code, Land Development Code and Water Code.

Finally, the CTUIR has a long-track record of engaging in resource management, partnerships with resource agencies, and specific actions benefiting bull trout and other fish species. They are actively involved in many fish passage, instream, riparian, upland, and flow restoration projects in the Umatilla and Walla Walla river basins. In addition, the CTUIR conducts monitoring, evaluation, and research on stream habitats and aquatic species. Their efforts include being a core partnership member in the development of the Umatilla and Willow and Walla Walla subbasin plans, restoring 27 km (17 mi) of habitat in Meacham creek for spawning and rearing habitat, and being an implementing partner for the Columbia River Anadromous Fish Restoration Plan of the Umatilla, Nez Perce, Warm Springs, and Yakama Tribes. This plan emphasizes strategies and principles that rely on natural production and healthy river systems, subbasin-level return goals for salmon, and the watershed restoration actions that must be undertaken to achieve them.

Tribal lands are currently being managed on a voluntary basis in cooperation with the Service and others to conserve bull trout and achieve important conservation goals. CTUIR cooperation is especially necessary because recovery of bull trout in the Umatilla and Touchet river basins depends on the cooperation of the CTUIR. The Tribe has a record of action and commitment that will continue regarding the conservation of bull trout and the habitats upon which they depend. The CTUIR, through their forest Management Plan and their Tribal Codes, and by affirmative bull trout and watershed protection and restoration projects, has a comprehensive scheme in place protecting and enhancing fish habitat. We expect this cooperation and bull trout conservation to continue. We believe that the bull trout benefits from the CTUIR's voluntary management actions.

The Confederated Tribes and Bands of the Yakama Nation (Yakama Nation)

The current Yakama Nation Tribal Forest Management Plan (FMP) describes best management practices (BMPs) including measures for road building and riparian management intended to minimize sediment delivery, preserve riparian shading, and maintain cool stream temperatures. The FMP provides similar conservation benefit to salmonids (including bull trout) through these BMPs as the Washington State Forest Practice Rules, which are implemented as part of a Statewide HCP (discussed earlier). Compliance with FMP measures is enforced through technical review of proposed timber sales or other activity by a Tribal Inter-Disciplinary Team.

Tribal Fisheries Program staff are currently working with Tribal Wildlife staff to produce a supplement to the FMP that provides specific additional BMPs for protection of spotted owls, bull trout, and other listed or sensitive species. Tribal staff have committed to ongoing coordination with the Service in the development of the final supplements and their inclusion into final recovery planning. The supplemental BMPs will enhance the effectiveness of protection and conservation efforts for bull trout, in a manner similar to a species management plan.

Lastly, the Yakama Nation is implementing fish habitat protection and restoration actions in the Klickitat and Yakima (including Ahtanum Creek basins), and on other nonreservation lands in the Wenatchee, Entiat, and Methow basins. These actions, while not specific to bull trout, will have beneficial effects for bull trout. Although restoration actions generally do not affect bull trout habitat in spawning and rearing areas, they could improve the migration corridor in the mainstems of these rivers for sub-adult rearing and adult migration.

The Yakama Nation does not support an exclusion of reservation boundary waters that are not wholly within the management jurisdiction and authority of the Yakama Nation. Specifically, the Tribe believes that maintaining the bull trout critical habitat designation in lower Ahtanum Creek and the Yakima River where it borders the reservation would increase the likelihood that water and land use practices on the far bank or upstream of the reservation would be compatible with bull trout protection. Consistent with the Tribe's preferences, and because these areas are not wholly within the management jurisdiction and authority of the Yakama Nation, these areas have not been excluded.

The Yakama Nation, CTUIR, CTWS and the Columbia River Inter-Tribal Fish Commission

In 2005, the Northwest Power and Conservation Council (Council) completed one of the largest, locally-led watershed planning efforts of its kind in the United States, an effort that resulted in separate plans for 58 tributary watersheds or mainstem segments of the Columbia River. These subbasin plans were developed collaboratively by State and Federal fish and wildlife agencies, Indian Tribes (through the Columbia River Inter-Tribal Fish Commission), local planning groups, fish recovery boards, and Canadian entities where the plans address transboundary rivers. The planning effort was guided by the Council and funded by the Bonneville Power Administration. The Columbia River Inter-Tribal Fish Commission (CRITFC) is the fishery coordinating agency of four Columbia River treaty Tribes: the Nez Perce Tribe, the Confederated Tribes of the Warm Springs Reservation, the Confederated Tribes of the Umatilla Indian Reservation, and the Confederated Tribes and Bands of the Yakama Indian Nation. The four Columbia River treaty Tribes that make up CRIFTC are co-managers of the Columbia River basin fishery, in the States of Oregon, Washington, and Idaho, and have

responsibilities for conservation and management of habitat, and harvest and hatchery decisions. As a result of their involvement, the Tribes play a significant role in sub-basin planning and implementation.

Sub-basin plans identify priority restoration and protection strategies for habitat and fish and wildlife populations in U.S. portion of the Columbia River system. Many of the subbasin plans identify bull trout as a focal species with specific conservation measures. The plans guide the future implementation of the Council's Columbia River Basin Fish and Wildlife Program, which directs more than $140 million per year of Bonneville Power Administration (BPA) electricity revenues to protect, mitigate, and enhance fish and wildlife affected by hydropower dams. Sub-basin plans provide this guidance by providing the context in which proposed projects are reviewed for funding through the Council's program.

Sub-basin plans also integrate strategies and actions funded by others, thus ensuring that each plan serves the Council's purposes under the Northwest Power Act and also accounts for Endangered Species Act and Clean Water Act requirements, and other laws governing natural resource management, as fully as possible. These plans can be found at the following website: *http://www.nwcouncil.org/fw/subbasinplanning/Default.htm.*

Blackfeet Nation

The Blackfeet Nation has worked closely and cooperatively with the Service on bull trout issues with the goal of developing and implementing the Blackfeet Nation Bull Trout Management Plan. A draft plan was completed in November 2007, and was recently finalized and adopted by the Blackfeet Tribal Business Council by Resolution No. 111-2010.

Through this Bull Trout Management Plan, the Blackfeet Nation has demonstrated a commitment to conservation, protection, and enhancement of the fishery resource on the Blackfeet Reservation. In addition, the Blackfeet Nation has supported and participated in Service studies to gather data for assessing effects of the Milk River Irrigation System on bull trout within the Saint Mary River drainage. The Nation changed angling regulations on their Reservation to maximize bull trout protection soon after the species was listed. The Nation gradually eliminated permits for a tribal gill net fishery in Saint Mary Lake that was affecting bull trout. The Blackfeet Nation has also supported the bull trout recovery planning process. In order to further implement recovery planning on tribal lands, they were recently awarded a Tribal Wildlife Grant and hired their first Tribal fisheries biologist.

In addition to its cooperation with the Service, the Blackfeet Nation has actively taken other steps to protect bull trout habitat including enacting an Aquatic Lands Protection Ordinance in 1993, which is intended to protect Reservation streambeds and riparian habitat. The policy of the Blackfeet Nation as stated in Section 2 of the Aquatic Lands Protection Ordinance is that all waters and aquatic lands on the Reservation are to be protected and preserved, and that the degradation of Reservation waters and aquatic lands be prevented or minimized through the reasonable regulation of such resources. Permits are required for any construction activities within any aquatic lands or areas affecting aquatic or riparian lands, and such construction is strictly regulated through such permits. The Blackfeet Nation has also established water quality standards for all Reservation streams, including the relevant bull trout streams, under authority of the Clean Water Act (CWA). The Blackfeet Nation's application for status or treatment as a State under section 518 of the CWA, which is a prerequisite to implementation of the water quality standards, is currently pending before the Environmental Protection Agency.

Blackfeet lands are being managed in cooperation with the Service and others to conserve bull trout and achieve important conservation goals. The Tribe has a record of action and commitment that will continue through their Management Plan and their Tribal Codes and Ordinances, and by affirmative bull trout and watershed protection and restoration projects. The Blackfeet Nation has demonstrated a commitment to conservation, protection, and enhancement of the bull trout resource on the Blackfeet Reservation and the habitats upon which they depend. We expect this cooperation and bull trout conservation to continue. We believe that the bull trout benefits from the Blackfeet Nation's management actions.

(1) Benefits of Inclusion

Habitat essential to bull trout conservation exists within the previously identified tribal lands. The principal benefit of any designated critical habitat is that Federal activities will require section 7 consultations to ensure that adequate protection is provided to avoid adverse modification or destruction of critical habitat. This would provide an additional benefit beyond that provided under the jeopardy standard. In evaluating project effects on critical habitat, the Service must be satisfied that the PCEs and, therefore, the essential features of the critical habitat likely will not be altered or destroyed by proposed activities to the extent that the conservation of the affected species would be appreciably reduced. If critical habitat were designated in areas of unoccupied habitat or currently occupied areas subsequently become unoccupied, different outcomes or requirements are also likely because effects to unoccupied areas of critical habitat are not likely to trigger the need for a jeopardy analysis.

In Sierra Club v. Fish and Wildlife Service, 245 F.3d 434 (5th Cir. 2001), the Fifth Circuit Court of Appeals stated that the identification of habitat essential to the conservation of the species can provide informational benefits to the public, State and local governments, scientific organizations, and Federal agencies. The court also noted that critical habitat designation may focus and heighten public awareness of the plight of listed species and their habitats. Designation of critical habitat may contribute to conservation efforts by other parties by delineating areas of high conservation value for the bull trout. While we believe this educational outcome is important for bull trout conservation, we believe it has already been achieved to some extent through the existing management, education, and public outreach efforts carried out by the Tribes. A final designation of critical habitat on the aforementioned tribal lands would simply affirm the recognized conservation value of these lands, which is already widely accepted by conservationists, public agencies, and most of the public.

We believe that a critical habitat designation for the bull trout on previously identified tribal lands would provide a relatively low level of additional benefit. Any regulatory conservation benefits would accrue through the benefit associated with additional section 7 consultation associated with critical habitat. Based on a review of past consultations and consideration of the likely future activities in this specific area, minimal Federal activity is expected to occur on previously identified tribal lands that would trigger section 7 consultations.

(2) Benefits of Exclusion

Proactive voluntary conservation efforts are necessary to prevent bull trout extirpation and promote the

recovery of the bull trout on lands of the CTWS, Blackfeet Nation, CTUIR, and the Yakama Nation. This is especially important in areas where the bull trout has been extirpated and its recovery requires access and permission for reintroduction efforts. For example, bull trout have been extirpated from some rivers in the Coastal Recovery Unit, and repopulation is not likely without the CTWS' cooperation. The aforementioned Tribes have a long history of carrying out proactive conservation actions on their lands. Their management plans provide guidelines for land uses that affect tribal resources and serve as the basis for tribal management decisions. We believe that the bull trout will benefit from the Tribes' voluntary management actions due to their long-standing and broad application to tribal management decisions. Additional benefits of excluding Indian lands from designation include: (1) The maintenance of effective, long-term working relationships to promote the conservation of bull trout while streamlining the consultation process; (2) the allowance for continued, meaningful collaboration and cooperation in scientific work to learn more about the life history, habitat requirements, and conservation needs of the species; (3) to the extent designation would provide any additional protection and conservation of bull trout and its habitat that might otherwise not accrue to bull trout that depend on tribal streams, the costs associated with that protection would be avoided; and (4) exclusion would reduce administrative costs of section 7 consultation (as discussed previously, these costs are unlikely to lead to additional actual protection for bull trout habitat). We believe that fish, wildlife, and other natural resources on tribal lands may be better managed under tribal authorities, policies, and programs than through Federal regulation where tribal management addresses the conservation needs of listed species. Based on this philosophy, we believe that, in many cases, designation of tribal lands as critical habitat may provide little additional benefit to bull trout. In addition, such designation may be viewed by Tribes as unwarranted and an unwanted intrusion into tribal self-governance, thus compromising the government-to government relationship essential to achieving our mutual goals of managing for healthy ecosystems upon which the viability of endangered and threatened species populations depend.

The Tribes have cooperated with us to implement proactive conservation measures. They have cooperated with Federal and State agencies, and private organizations, to implement voluntary conservation activities on their lands and in their respective river basins, which have resulted in tangible conservation benefits. Where consistent with the discretion provided by the Act, we believe it is necessary to implement policies that provide positive incentives to voluntarily conserve natural resources and that remove or reduce disincentives to conservation. Thus, we believe it is essential for the recovery of bull trout to build on continued conservation activities with these Tribes, to provide positive incentives implementing voluntary conservation activities, and to respect tribal concerns about incurring incidental regulatory or economic impacts.

We believe that excluding these tribal lands from critical habitat will help maintain and improve our relationship by recognizing their positive contribution to bull trout conservation. It will also reduce the cost and logistical burden of regulatory oversight. We believe this recognition will provide other landowners with a positive incentive to undertake voluntary conservation activities on their lands, especially where there is no regulatory requirement to implement such actions. Few additional benefits would be provided by including these tribal lands in this critical habitat designation beyond what will be achieved through the implementation of their existing conservation plans.

(3) Benefits of Exclusion Outweigh Benefits of Inclusion

Based on the above considerations and consistent with the direction provided in section 4(b)(2) of the Act, the Service has determined that the benefits of excluding the above tribal lands outweigh the benefits of including them as critical habitat. This conclusion is based on the following factors. It is possible, although unlikely, that Federal actions will be proposed that would be likely to destroy or adversely modify the habitat proposed as critical within the area governed by the above Tribes. If such a project were proposed, due to the specific way in which jeopardy and adverse modification are analyzed for bull trout, discussed in detail earlier in this document, it would likely also jeopardize the continued existence of the species. Few additional benefits are provided by including these tribal lands in this critical habitat designation beyond what will be achieved through the implementation of the existing tribal management or conservation plans. In addition, we expect that the benefit of informing the public of the importance of this area to bull trout conservation would be low.

We do not believe that inclusion of tribal lands and waters will significantly improve habitat protections for bull trout beyond what is already provided for in the Tribes' own protective policies and practices, discussed below.

In response to the proposed rule (75 FR 2270; January 14, 2010), the Tribes have provided information detailing how they are already working to address the habitat needs of bull trout on their lands as well as in the larger ecosystem through conservation plans and that they are fully aware of the conservation value of their lands. There are several benefits to excluding tribal lands. The longstanding and distinctive relationship between the Federal and tribal governments is defined by treaties, statutes, executive orders, judicial decisions, and agreements, which differentiate tribal governments from the other entities that deal with, or are affected by, the Federal government. This relationship has given rise to a special Federal trust responsibility involving the legal responsibilities and obligations of the United States toward Indian Tribes and the application of fiduciary standards of due care with respect to Indian lands, tribal trust resources, and the exercise of tribal rights. Under these authorities, Indian lands are recognized as unique and have been retained by Indian Tribes or have been set aside for tribal use. These lands are managed by Indian Tribes in accordance with tribal goals and objectives within the framework of applicable treaties and laws.

The Tribes have stated in letters and meetings that designation of Indian lands as critical habitat will undermine long-term working relationships and reduce the capacity of Tribes to participate at current levels in the many and varied forums across four States addressing ecosystem management and conservation of fisheries resources. The benefits of excluding Indian lands from designation include the combination of: (1) The maintenance of effective, long-term working relationships to promote species conservation on an ecosystem-wide basis; (2) continued meaningful collaboration and cooperation in scientific work to learn more about the conservation needs of the species on an ecosystem-wide basis; and (3) recognition and continuation of the conservation benefits to bull trout from the Tribes' existing conservation programs.

Tribal lands are currently being managed on a voluntary basis in cooperation with the Service and others to conserve bull trout and achieve important conservation goals. We believe the bull trout benefits from the Tribes' voluntary management actions due to their long-standing and broad application to tribal management decisions. Tribal cooperation and support is required to continue cooperative scientific efforts, to promote the recovery of bull trout, and to implement proactive conservation actions. This need for the tribal cooperation is especially acute because, in some cases, populations exist only on areas of tribal management or only on tribal lands. Future conservation efforts in these areas require the continued cooperation and support of the Tribes. Exclusion of tribal lands from the critical habitat designation will help us maintain and improve our partnership with these Tribes by formally recognizing their positive contributions to bull trout recovery, and by streamlining or reducing unnecessary regulatory oversight.

Given the cooperative relationship between these Tribes and the Service, and all of the conservation benefits taken together, we believe the additional regulatory and educational benefits of including the tribal lands as critical habitat are relatively small. The designation of critical habitat can serve to educate the public regarding the potential conservation value of an area, but this goal is already being accomplished through the identification of these areas in the tribal management plans and through their outreach efforts.

Because of the ongoing relationship between the Service and the Tribes through a variety of forums, we find the benefits of these coordination efforts to be greater than the benefits of applying the Act's section 7 consultations for critical habitat to Federal activities on tribal lands. Based upon our consultations with the Tribes identified above, we believe that designation of Indian lands as critical habitat would adversely impact our working relationship and the benefits resulting from this relationship.

In contrast, although the benefits of encouraging participation in tribal management plans, and, more broadly, helping to foster cooperative conservation are indirect, enthusiastic tribal participation and an atmosphere of cooperation are crucial to the long-term effectiveness of the endangered species program. Also, we have concluded that the Tribes' voluntary conservation efforts will provide tangible conservation benefits that will reduce the likelihood of extinction and increase the likelihood for bull trout recovery. Therefore, we assign great weight to these benefits of exclusion. To the extent that there are regulatory benefits of including tribal lands in critical habitat, there would be associated costs that could be avoided by excluding the area from designation. As we expect the regulatory benefits to be low, we likewise give weight to avoidance of those associated costs, as well as the additional transaction costs related to section 7 compliance.

Therefore, we have determined that the benefits of inclusion for the Tribes mentioned above are small, while the benefits of exclusion are more significant. Consequently, we conclude the benefits of exclusion outweigh the benefits of inclusion. We have reviewed the overall effect of the exclusion of the CTWS, Blackfeet Nation, CTUIR, and Yakama tribal lands for bull trout and their essential habitat. We have determined that the benefits of excluding these areas outweigh the benefits of including them in this critical habitat designation. Designation of critical habitat in these areas would most likely have a negative effect on the recovery and conservation of bull trout. Because we anticipate that little if any conservation benefit to the bull trout will be foregone as a result of the removal of these tribal streams from critical habitat designation, these exclusions will not lead to the species' extinction. Therefore, on the basis of our weighing and balancing above, the Secretary is exercising his discretion under section 4(b)(2) of the Act to exclude tribal lands (identified in Table 10) from critical habitat designation for bull trout. This decision is also consistent with the June 5, 1997, Secretarial Order ''In accordance with the President's *Federal - Tribal Trust Responsibilities, and the Endangered Species Act*'' (Secretarial Order 3206), and the November 6, 2000, Executive Order ''*Consultation and Coordination With Indian Tribal Governments*'' (Executive Order 13175).

The areas under management by the above Tribes that we are excluding from critical habitat are those waterbodies within reservation boundaries, and waterbodies that are adjacent to: (1) Lands held in trust by the United States for the benefit of any Indian Tribe; (2) lands held in trust by the United States for any Indian Tribe or individual subject to restrictions by the United States against alienation; (3) fee lands, either within or outside the reservation boundaries, owned by the tribal government; and (4) fee lands within the reservation boundaries owned by individual Indians. We have determined that these exclusions, together with the other exclusions described in this rule, will not result in extinction of the species.

Affected Treaty Tribes in Western Washington

The Treaty Tribes in Western Washington have a long-standing commitment to the protection and restoration of the fisheries resources throughout the Tribe's usual and accustomed fishing areas. Tribes affected by the bull trout critical habitat designation include: the Swinomish Tribe, Quinault Indian Nation, Muckleshoot Tribe, Jamestown S'Klallam Tribe, Hoh Tribe, Lower Elwha-Klallam, Quileute Tribe, Lummi Nation, Nooksack Tribe, Puyallup Tribe, Stillaguamish Tribe, Tulalip Tribes, and Skokomish Tribe Reservations and tribal lands within the Puget Sound–Coastal population.

The ruling in *U.S.* v. *Washington*, 384 F. Supp. 312 (W.D. Wash. 1974)), (the Boldt Decision) re-affirmed the rights reserved by the Tribes in the original treaties and established the Tribes as co-managers of the salmon resource with the State. Subsequent Federal court rulings have upheld tribal shellfish harvest rights and the tribal environmental right to protection and restoration of salmon habitat. The identified Tribes have been involved co-managers of salmonid fisheries prior to the Boldt decision and were recognized as self-regulatory by Washington State in 1998. They have aggressively pursued aquatic habitat restoration grants throughout their watersheds and independent streams and have been a key player in developing restoration, management and recovery plans for all salmonid species, including the bull trout. The State relies on tribal information and effort to keep salmonid information up to date. Most of the Tribes have a strong marine program, as well. They are active in several State and Federal committees regarding salmonid protection and management, as well as water quality.

The western Washington Indian Tribes have treaty-reserved fishing rights in the marine waters within Puget Sound and off the Washington Coast. Tribal governments share co-management authority and responsibility for marine resources in their usual and accustomed fishing areas with the State of Washington or the Federal government, depending on the specific resource and area identified. Conservation goals and standards for fishery resources management are established through government-to-

government consultations between the co-managers and with the other State or Federal agencies as appropriate. The salmon and steelhead fisheries are managed cooperatively in a unique government-to-government relationship between the State of Washington and the Tribes. While their co-management activities do not currently involve bull trout directly, actions undertaken on behalf of this partnership do in fact benefit bull trout. As such, this co-management process provides specific protection to tribal trust resources and bull trout.

The State and Tribes in 1992 produced the Salmon Stock Inventory (SaSI), a critical document for wild fish recovery. The SaSI definitively identified the status of each wild stock, including bull trout, in categories ranging from extinct to healthy, and provided a system to monitor their status. As habitat recovery efforts by the State, Tribes and citizen groups shift into implementation, the SaSI, currently being updated, will help ensure restoration efforts are working. The State and Tribes also worked collaboratively with NOAA Fisheries and the Service to develop the Puget Sound Shared Strategy. The Puget Sound Shared Strategy focuses on the Puget Sound basin, including its marine waters and individual watersheds. It also focuses on groups of Puget Sound fish that have genetic, ecological, and life histories that distinguish them from other groups within their species. Puget Sound Tribes are co-managers of Puget Sound Basin fisheries in Washington, and share responsibilities for habitat, harvest, and hatchery decisions with Washington Department of Fish and Wildlife, and with NOAA Fisheries for listed species.

Puget Sound Tribes played a significant role in the development of the Puget Sound Salmon Recovery Plan for listed salmonids, including bull trout. The development of this plan was guided by the regional recovery strategy, called the Shared Strategy for Puget Sound. Individual Tribes played a critical role in the development of the individual watershed chapters of the recovery plan, and continue to play a critical role within local watershed planning groups in the implementation of these individual watershed plans. These plans assist in targeting salmonid habitats in greatest need of restoration or protection within the individual watersheds. These plans can be found at the following website: *http://www.sharedsalmonstrategy.org/plan/index.htm.*

The initial goal-setting process of the Shared Strategy focused on Puget Sound species listed under the Act: Puget Sound Chinook salmon, Hood Canal summer chum, and bull trout. The Shared Strategy not only works to promote the recovery of these species, it will also promote and protect the continued health of thriving stocks to avoid further listings under the Act. As these examples demonstrate, co-management is an ongoing, evolving process. Its guiding principle is that much more can be done to strengthen, preserve, and restore salmonid and steelhead resources by working together in a cooperative manner.

The Treaty Tribes of Western Washington have a long history of working with their partners to carryout proactive conservation and to maintain stewardship and conserve species. In addition, the following discussion identifies specific types of actions and conservation management that many of the Western Washington Treaty Tribes have undertaken.

Swinomish Tribe

The Swinomish Tribe has a management plan that addresses surface water resources of the Swinomish Reservation, including marine tidelands, an artificial marine channel, estuarine wetlands, small streams, and freshwater wetlands. The management plan is based on existing knowledge and ongoing studies, active conservation practices, ordinances, and current management plans. It will be updated with new information obtained from ongoing surveys, habitat assessments, and other planning processes. The plan consists of regulation and implementation of updated tribal laws to protect habitat, control development, reduce pollution within the boundaries of the Reservation, restore habitat, and remove fish passage barriers to contribute proactively to species recovery.

Quinalt Nation

The Quinault Indian Nation and the Bureau of Indian Affairs (BIA) developed a forest management plan (FMP) for the entire Quinault Indian Reservation. The FMP covers all forestland (about 70,000 ha (173,000 ac)) under tribal and BIA timber management, including individual Indian-owned trust and tribally owned land. Included in the area of the FMP are the lower Quinault River, the tributaries of the lower Quinault River, the lower Queets River, the Salmon River (including the Middle and South Fork Salmon Rivers), portions of the Raft River, and portions of the Moclips River. The FMP is a 10–year plan covering the period from October 2002 through September 2012. The FMP is being implemented by the Quinault Department of Natural Resources and the BIA Taholah Field Office. Although some adverse effects to the bull trout are expected during implementation of the plan, it is expected to provide for long-term bull trout conservation needs.

Skokomish Tribe

The Skokomish Tribe has provided aquatic resource protection and restoration through a number of collaborative efforts on their reservation and other trust lands. The Tribe has been working regularly with landowners, local governments, and others to implement and fund voluntary efforts that provide conservation benefits to salmonids, including bull trout. These cooperative efforts include a variety of investigative assessments, restoration and enhancement projects, property acquisitions, and floodplain and river reach analysis.

Muckleshoot Tribe

The Muckleshoot Tribe has demonstrated a commitment to conservation, protection, and enhancement of fish resources both on and off the Muckleshoot Reservation. For example, the Tribe has designated all areas of the White River within its reservation, from ''bluff to bluff,'' as a conservation zone. The Tribe has also been a leading participant in gathering data for Lake Washington and preparing a Lake Washington Recovery Plan.

Jamestown S'Klallam Tribe

The Jamestown S'Klallam Tribe has a record and reputation as a participant and leader in the planning and implementation of salmonid habitat protection and restoration efforts. The Tribe is dedicated to coordinating with NOAA Fisheries, the Service, and the State of Washington in the spirit of co-management, and is also involved in active consultation and in multiple programs to protect listed salmonid species.

Hoh Tribe

The Hoh Tribe has a forest management plan that demonstrates a commitment to protect bull trout habitat on or adjacent to its reservation. This plan designates major portions of the floodplain and riparian zones adjacent to streams on the current reservation landscape for conservancy, and is filed with the BIA.

(1) Benefits of Inclusion

The principal benefit of any designated critical habitat is that Federal activities will require section 7

consultations to ensure that adequate protection is provided to avoid adverse modification or destruction of critical habitat. This would provide an additional benefit beyond that provided under the jeopardy standard. In evaluating project effects on critical habitat, the Service must be satisfied that the PCEs and, therefore, the essential features of the critical habitat likely will not be altered or destroyed by proposed activities to the extent that the conservation of the affected species would be appreciably reduced. If critical habitat were designated in areas of unoccupied habitat or currently occupied areas subsequently become unoccupied, different outcomes or requirements are also likely since effects to unoccupied areas of critical habitat are not likely to trigger the need for a jeopardy analysis.

In *Sierra Club v. Fish and Wildlife Service*, 245 F.3d 434 (5th Cir. 2001), the Fifth Circuit Court of Appeals stated that the identification of habitat essential to the conservation of the species can provide informational benefits to the public, State and local governments, scientific organizations, and Federal agencies. The court also noted that critical habitat designation may focus and heighten public awareness of the plight of listed species and their habitats. Designation of critical habitat may contribute to conservation efforts by other parties by delineating areas of high conservation value for the bull trout.

(2) Benefits of Exclusion

The benefits of excluding Indian lands from designation include: (1) The maintenance of effective, long-term working relationships to promote the conservation of bull trout while streamlining the consultation process; (2) the allowance for continued meaningful collaboration and cooperation in scientific work to learn more about the life history, habitat requirements, and conservation needs of the species; (3) to the extent designation would provide any additional protection and conservation of bull trout and its habitat that might otherwise not accrue to bull trout that depend on tribal streams, the costs associated with that protection would be avoided; and (4) exclusion would reduce administrative costs of section 7 consultation (as discussed previously, these costs are unlikely to lead to additional actual protection for bull trout habitat). We believe that fish, wildlife, and other natural resources on tribal lands may be better managed under tribal authorities, policies, and programs than through Federal regulation where tribal management addresses the conservation needs of listed species. Based on this philosophy, we believe that, in many cases, designation of tribal lands as critical habitat may provide little additional benefit to threatened and endangered species. In addition, such designation may be viewed by Tribes as unwarranted and an unwanted intrusion into tribal self-governance, thus compromising the government-to-government relationship essential to achieving our mutual goals of managing for healthy ecosystems upon which the viability of endangered and threatened species populations depend.

We believe that excluding these tribal lands from critical habitat will help maintain and improve our partnership relationship by recognizing the Tribes' positive contribution to bull trout conservation. It will also reduce the cost and logistical burden of regulatory oversight. We believe this recognition will provide other landowners with a positive incentive to undertake voluntary conservation activities on their lands, especially where there is no regulatory requirement to implement such actions. Tribal cooperation and support is required to prevent extirpations and extinction and promote the recovery of the bull trout due to the need to implement proactive conservation actions. Future conservation efforts will require the cooperation of these Tribes. Exclusion of their lands from this critical habitat designation will help us maintain and improve our partnership with them by formally recognizing the positive contributions these Tribes have made to bull trout recovery, and by streamlining or reducing unnecessary regulatory oversight. The Tribes have cooperated with us to implement proactive conservation measures. They have cooperated with Federal and State agencies, and private organizations, to implement voluntary conservation activities on their lands that have resulted in tangible conservation benefits. Where consistent with the discretion provided by the Act, we believe it is necessary to implement policies that provide positive incentives to voluntarily conserve natural resources and that remove or reduce disincentives to conservation. Thus, we believe it is essential for the recovery of bull trout to build on continued conservation activities with these Tribes, to provide positive incentives implementing voluntary conservation activities, and to respect tribal concerns about incurring incidental regulatory or economic impacts.

(3) Benefits of Exclusion Outweigh benefits of Inclusion

Based on the above considerations and consistent with the direction provided in section 4(b)(2) of the Act, the Service has determined that the benefits of excluding the above tribal lands outweigh the benefits of including them as critical habitat. This conclusion is based on the following factors. It is possible, although unlikely, that a Federal action could be proposed that was likely to destroy or adversely modify critical habitat within areas subject to tribal management. If such a project were to be proposed, any action that would be likely to destroy or adversely modify critical habitat would likely also jeopardize the continued existence of the species because of the specific way in which jeopardy and adverse modification are analyzed for bull trout. In addition, for the reasons discussed above, we believe the educational benefit of informing the public of the importance of this area to bull trout conservation would be limited because of previous and ongoing efforts. Therefore, we assign relatively little weight to the benefits of designating this area as critical habitat.

Because of the very small size of most of the Treaty Tribes of Western Washington reservation lands, we do not believe that inclusion of tribal lands and waters will significantly improve habitat protections for bull trout beyond what is already provided for in the Tribes' own protective policies and practices, discussed below.

In response to the proposed rule (75 FR 2270; January 14, 2010), the Tribes have demonstrated how they are already working to address the habitat needs of the species on these lands as well as in the larger ecosystem through conservation plans, and that they are fully aware of the conservation value of their lands. There are several benefits to excluding tribal lands. The longstanding and distinctive relationship between the Federal and tribal governments is defined by treaties, statutes, executive orders, judicial decisions, and agreements, which differentiate tribal governments from the other entities that deal with, or are affected by, the Federal government. This relationship has given rise to a special Federal trust responsibility involving the legal responsibilities and obligations of the United States toward Indian Tribes and the application of fiduciary standards of due care with respect to Indian lands, tribal trust resources, and the exercise of tribal rights. Under these authorities, Indian lands are recognized as unique and have been retained by Indian Tribes

or have been set aside for tribal use. These lands are managed by Indian Tribes in accordance with tribal goals and objectives within the framework of applicable treaties and laws. In addition to the distinctive trust relationship, for the area that overlaps salmon and steelhead in the Northwest, there is a unique partnership between the Federal government and Indian Tribes regarding salmon management. The Treaty Tribes of Western Washington are regarded as ''co-managers'' of the salmon resource, along with Federal and State managers. This co-management relationship evolved as a result of numerous court decisions clarifying the Tribes' treaty right to take fish in their usual and accustomed places. While their co-management activities do not currently involve bull trout directly, actions undertaken on behalf of this partnership do in fact benefit bull trout. As such, this co-management process provides specific protection to tribal trust resources and bull trout.

Tribes have played a significant role in the development of habitat conservation plans, local watershed plans, or other habitat plans and have conducted numerous habitat restoration and research projects designed to protect or improve habitat for listed species. Additionally, the Tribes have stated in letters and at meetings that designation of Indian lands as critical habitat will undermine long-term, working relationships and reduce the capacity of Tribes to participate at current levels in the many and varied forums across four States addressing ecosystem management and conservation of fisheries resources. The benefits of excluding Indian lands from designation include the combination of: (1) The furtherance of established national policies, our Federal trust obligations, and our deference to the Tribes in management of natural resources on their lands; (2) the maintenance of effective, long-term working relationships to promote species conservation on an ecosystem-wide basis; (3) the allowance for continued meaningful collaboration and cooperation in scientific work to learn more about the conservation needs of the species on an ecosystem-wide basis; (4) recognition and continuation of, the conservation benefits to bull trout from the Tribes' existing conservation programs; and (5) respect for tribal sovereignty over management of natural resources on Indian lands through established tribal natural resource programs.

We believe that the current co-manager process, along with the individual Tribe's efforts to conserve and manage bull trout habitat, is beneficial for the conservation of the bull trout and its critical habitat. Because these processes provide for coordinated, ongoing, focused action through a variety of forums, we find the benefits of this process to be greater than the benefits of applying the Act's section 7 consultation for critical habitat to Federal activities on Indian lands. We also believe that maintenance of our current relationship consistent with existing policies is an important benefit to continuation of our tribal trust responsibilities and relationship. Based upon our consultation with the Tribes identified above, we believe that designation of Indian lands as critical habitat would adversely impact our working relationship and the benefits resulting from this relationship.

In contrast, although the benefits of encouraging participation in tribal management plans, and, more broadly, helping to foster cooperative conservation are indirect, enthusiastic tribal participation and an atmosphere of cooperation are crucial to the long-term effectiveness of the endangered species program. Also, we have concluded that the Tribes' voluntary conservation efforts will provide tangible conservation benefits that will reduce the likelihood of extinction and increase the likelihood for bull trout recovery. Therefore, we assign great weight to these benefits of exclusion. To the extent that there are regulatory benefits of including tribal lands in critical habitat, there would be associated costs that could be avoided by excluding the area from designation. As we expect the regulatory benefits to be low, we likewise give weight to avoidance of those associated costs, as well as the additional transaction costs related to section 7 compliance.

Therefore, we have determined that the benefits of inclusion for the Tribes mentioned above are small, while the benefits of exclusion are more significant. Consequently, we conclude the benefits of exclusion outweigh the benefits of inclusion. We have reviewed the overall effect of the exclusion of the above-mentioned tribal lands for bull trout and their essential habitat. We have determined that the benefits of excluding these areas outweigh the benefits of including them in this critical habitat designation. Designation of critical habitat in these areas would most likely have a negative effect on the recovery and conservation of bull trout. Because we anticipate little if any conservation benefit to the bull trout will be foregone as a result of the removal of these tribal streams from critical habitat designation, these exclusions will not lead to the species' extinction. Therefore, on the basis of our weighing and balancing above, the Secretary is exercising his discretion under section 4(b)(2) of the Act to exclude tribal lands (identified in Table 12) from critical habitat designation for bull trout. This decision is also consistent with the June 5, 1997, Secretarial Order ''*American Indian Tribal Rights, Federal - Tribal Trust Responsibilities and the Endangered Species Act*''(Secretarial Order 3206), and the November 6, 2000, Executive Order ''*Consultation and Coordination With Indian Tribal Governments*'', (Executive Order 13175).

The areas under management by the above Tribes that we are excluding from critical habitat are those waterbodies within reservation boundaries, and waterbodies that are adjacent to: (1) Lands held in trust by the United States for the benefit of any Indian Tribe; (2) lands held in trust by the United States for any Indian Tribe or individual subject to restrictions by the United States against alienation; (3) fee lands, either within or outside the reservation boundaries, owned by the tribal government; and (4) fee lands within the reservation boundaries owned by individual Indians. We have determined that these exclusions, together with the other exclusions described in this rule, will not result in extinction of the species.

TABLE 12.—TRIBAL NATION, CRITICAL HABITAT UNIT, AND STREAM/WATERBODY AFFECTED BY SECTION 4(B)(2) OF THE ACT EXCLUSION

Tribal Nation	Critical Habitat Unit	Stream/waterbody name
Confederated Tribes of Warm Springs	Deschutes River Basin, Lower Mainstem Columbia and John Day River Basin	Deschutes River, Shitike Creek, Jefferson Creek, Warm Springs River, Whitewater River, Metolius River (and small tributaries), John Day River, portion of Lake Billy Chinook, Upper Mainstem John Day River, Middle Fork John Day River, Columbia River
Blackfeet Nation	Saint Mary River Basin	Saint Mary River
Yakama Nation	Yakama and Lower Columbia River Basins	Yakima River, Ahtanum Creek, South Fork Ahtanum Creek, West Fork Klikitat River, Little Muddy Creek, Crawford Creek, Clearwater Creek, Trappers Creek, Fish Lake Stream, Unnamed tributary that meets Fish Lake Stream, and Two Lakes Stream
Hoh Tribe	Olympic Peninsula	Hoh River and Pacific Coast nearshore
Jamestown S'Klallam Tribe	Olympic Peninsula	Dungeness River
Lower Elwha Klallam Tribe	Olympic Peninsula	Elwha River and Strait of Juan De Fuca nearshore
Quileute Tribe	Olympic Peninsula	Pacific Coast nearshore
Skokomish Tribe	Olympic Peninsula	Skokomish River, Nalley Slough, Skobob Creek, and Hood Canal nearshore
Lummi Nation	Puget Sound	Nooksack River and Puget Sound nearshore
Muckleshoot Tribe	Puget Sound	White River
Nooksack Tribe	Puget Sound	Nooksack River, Fishtrap Creek, Anderson Creek, and Smith Creek
Puyallup Tribe	Puget Sound	Puyallup River and Puget Sound nearshore
Stillaguamish Tribe	Puget Sound	Stillaguamish River and Pilchuck Creek
Swinomish Tribe	Puget Sound	Swinomish Channel and Puget Sound nearshore
Tulalip Tribes	Puget Sound	Puget Sound nearshore
Quinault Tribe	Olympic Peninsula	Quinault River, lower Quinault River tributaries, Lower Queets River, the Salmon River (including the Middle and South Fork Salmon Rivers), portions of the Raft River, and portions of the Moclips River.
Confederated Tribes of the Umatilla	Umatilla River, Walla Walla Basin, Columbia Mainstem	Umatilla River Basin, Walla Walla Basin, Columbia Mainstem

Identification of Specific Geographic Areas Excluded Under Section 4(b)(2) of the Act

Publishing the geospatial coordinates for each portion of a particular waterbody excluded under section 4(b)(2) of the Act would be cost-prohibitive, given the wide range of the species and the number of waterbodies affected. However, each area excluded is described by narrative in the *Application of Section 4(b)(2) of the Act* section. We have also correlated each applicable exclusion with its relevant critical habitat unit map in this final rule. Information to aid in identifying the geographic extent of each waterbody excluded under section 4(b)(2) of the Act is available at *http://www.fws.gov/pacific/bulltrout/.*

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 concurrent with the proposed rule on January 14, 2010 (75 FR 2270). We accepted comments on the DEA until March 15, 2010. We then reopened the comments period on the proposal from March 23, 2010, to April 5, 2010 (75 FR 13715, March 23, 2010). Following the close of the comment period, a final analysis of the potential economic effects of the designation was developed taking into consideration the public comments and any new information.

The intent of the final economic analysis (FEA) is to quantify the economic impacts of all potential conservation efforts for the bull trout. 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. Decisionmakers 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 1998, when we listed the bull trout as threatened under the Act, 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 bull trout 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). We have considered whether this designation would result in a disproportionate or significant economic effect to any potentially affected entities. Based on our FEA, we have determined that the incremental economic effects associated with the revised designation of critical habitat for the bull trout will not have a significant effect, and therefore, we are not excluding any areas based on economic impacts. A copy of the FEA with supporting documents may be obtained by contacting the Idaho Fish and Wildlife Field Office (see **ADDRESSES**) or for downloading from the Internet at *http://www.regulations.gov.*

Required Determinations

Regulatory Planning and Review—Executive Order 12866

Executive Order 12866 requires Federal agencies to submit proposed and final significant rules to the Office of Management and Budget (OMB) prior to publication in the FR. The Executive Order defines a rule as significant if it meets one of 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) Whetherthe 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.

If the rule meets criteria (1) above it is called an ''economically significant'' rule and additional requirements apply. It has been determined that this rule is ''significant'' but not ''economically significant.'' It was submitted to OMB for review prior to promulgation.

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 bull trout 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 revised critical habitat designation for bull trout would significantly affect a substantial number of small entities, we considered the number of small entities affected within particular types of economic activities (e.g., dams, agriculture and agricultural diversions, grazing, development, forest management, roads, and mining). 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.

Under the Act, 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 bull trout. 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 reinitiate consultation for ongoing Federal activities (see *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 designation of critical habitat for the bull trout. This analysis estimated prospective economic impacts due to the implementation of bull trout conservation efforts in eight categories (dams, agriculture and agricultural diversions, grazing, development, forest management, roads, mining, and ''other''). The following is a summary of information contained in the final economic analysis.

To estimate the number of businesses, the economic analysis presumes business locations are distributed geographically in the same pattern that the human population is distributed (i.e., more densely populated areas will contain proportionally more business than less populated areas). To derive an estimate of the number of small entities falling within the designation, data on factors such as the size and annual sales of businesses in the area as collected by Dun & Bradstreet were reviewed. These data are available on a county-wide basis. Because counties may include areas that are not part of the critical habitat designation, the number of small entities within the county was scaled by the percentage of the county's population living within the critical habitat boundaries. Of the potentially affected entities, 97 percent are classified as likely to be ''small.''

The number of potentially affected small entities was considered under two different scenarios to provide for uncertainty regarding the number of small entities affected. Under Scenario 1, the estimated number of small entities within areas affected by the designation (N=23,800) assumes that incremental impacts are distributed evenly across all entities in each affected industry. Under this scenario, a small entity may bear costs up to $4,050, representing between <0.01 and 0.03 percent of average revenues, depending on the industry. Scenario 2 assumed costs of each anticipated future consultation are borne by a distinct small business within areas affected by the designation (N=728). Under this scenario, each small entity may bear costs of between $455 and $17,000, representing between 0.01 and 0.56 percent of average annual revenues, depending on the industry. Total annualized impacts to small entities are estimated to be $3.6 million, or approximately 51 percent of the total incremental impacts anticipated as a result of this rule.

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 bull trout will not have a significant economic impact on a substantial number of small entities.

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 bull trout 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 of the Act. 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 revised critical habitat for the bull trout 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 bull trout 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 bull trout 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 or 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 or biological features essential to the conservation of the subspecies within the designated areas to assist the public in understanding the habitat needs of the bull trout.

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. There are tribal lands that were occupied by the species at the time of listing, and remain occupied by the species, that contain the features essential for the conservation of bull trout. However, as discussed in the Tribal Lands–Exclusions Under Section 4(b)(2) of the Act section, we have determined that maintaining our important conservation partnership with the Tribes toward the continued implementation of their tribal management and conservation plans provides greater conservation benefit than would the designation of critical habitat on waters within or adjacent to tribal lands. Table 12 identifies the waters within or adjacent to tribal lands that were excluded from critical habitat designation under section 4(b)(2) of the Act.

References Cited

A complete list of all references cited is available on the Internet at *http://www.regulations.gov* and upon request from the Idaho Fish and Wildlife Office (see **ADDRESSES**).

Authors

The primary authors of this rulemaking are the staff members of the Idaho Fish and Wildlife 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 § 17.95(e) by revising critical habitat for ''Bull Trout (*Salvelinus confluentus*)'' to read as follows:

§ 17.95 Critical habitat—fish and wildlife.

* * * * *

(e) Fishes.

* * * * *

Bull Trout (*Salvelinus confluentus*)

(1) *Locations of critical habitat.* Critical habitat units are depicted in the following States and counties on the maps and as described below:

State	Counties
(i) Idaho	Adams, Benewah, Blaine, Boise, Bonner, Boundary, Butte, Camas, Custer, Elmore, Gem, Idaho, Kootenai, Lemhi, Lewis, Nez Perce, Owyhee, Shoshone, Valley, Washington
(ii) Montana	Deer Lodge, Flathead, Glacier, Granite, Lake, Lewis and Clark, Lincoln, Mineral, Missoula, Powell, Ravalli, Sanders
(iii) Nevada	Elko
(iv) Oregon	Baker, Clatsop, Columbia, Deschutes, Gilliam, Grant, Harney, Hood River, Jefferson, Klamath, Lake, Lane, Linn, Malheur, Morrow, Multnomah, Sherman, Umatilla, Union, Wallowa, Wasco, Wheeler
(v) Washington	Asotin, Benton, Chelan, Clallam, Clark, Columbia, Cowlitz, Garfield, Grant, Grays Harbor, Island, Jefferson, King, Kittitas, Klickitat, Mason, Okanogan, Pend Oreille, Pierce, Skagit, Skamania, Snohomish, Stevens, Thurston, Wahkiakum, Walla Walla, Whatcom, Whitman, Yakima

(2) *Topographic features included in the critical habitat designation.* Critical habitat includes the stream channels within the designated stream reaches; designated lakes and reservoirs; and inshore portions of marine nearshore areas, including tidally influenced freshwater heads of estuaries indicated on the maps beginning with paragraph (e)(7) of this entry.

(i) Critical habitat includes the stream channels within the designated stream reaches and a lateral extent as defined by the bankfull elevation on one bank to the bankfull elevation on the opposite bank. Bankfull elevation is the level at which water begins to leave the channel and move into the floodplain and is reached at a discharge that generally has a recurrence interval of 1 to 2 years on the annual flood series. If bankfull elevation is not evident on either bank, the ordinary high-water line must be used to determine the lateral extent of critical habitat. The lateral extent of designated lakes is defined by the perimeter of the waterbody as mapped on standard 1:24,000 scale topographic maps.

(ii) Critical habitat includes the inshore extent of critical habitat for marine nearshore areas (the mean higher high-water (MHHW) line), including the uppermost reach of the saltwater wedge within tidally influenced freshwater heads of estuaries. The MHHW line refers to the average of all the higher high-water heights of the two daily tidal levels. Adjacent shoreline riparian areas, bluffs, and uplands are not designated as critical habitat. However, it should be recognized that the quality of marine habitat along shorelines is intrinsically related to the character of these adjacent features, and human activities that occur outside of the MHHW line can have major effects on the physical and biological features of the marine environment. The offshore extent of critical habitat for marine nearshore areas is based on the extent of the photic zone, which is the layer of water in which organisms are exposed to light. Critical habitat extends offshore to the depth of 10 meters (m) (33 feet (ft)) relative to the mean low low-water (MLLW) line (average of all the lower low-water heights of the two daily tidal levels). This equates to the average depth of the photic zone and is consistent with the offshore extent of the nearshore habitat identified by the national Oceanic and Atmospheric Administration in the National Tidal Datum 1983 through 2001. This area between the MHHW line and minus 10 m MLLW line is considered the habitat most consistently used by bull trout in marine waters based on known use, forage fish availability, and ongoing migration studies and captures geological and ecological processes important to maintaining these habitats. This area contains essential foraging habitat and migration corridors such as estuaries, bays, inlets, shallow subtidal areas, and intertidal flats.

(3) *The primary constituent elements (PCEs) of critical habitat.* Within the critical habitat, the PCEs for bull trout are those habitat components that are essential for the primary biological needs of foraging, reproducing, rearing of young, dispersal, genetic exchange, or sheltering. The PCEs are as follows:

(i) Springs, seeps, groundwater sources, and subsurface water connectivity (hyporheic flows) to contribute to water quality and quantity and provide thermal refugia.

(ii) Migration habitats with minimal physical, biological, or water quality impediments between spawning, rearing, overwintering, and freshwater and marine foraging habitats, including but not limited to permanent, partial, intermittent, or seasonal barriers.

(iii) An abundant food base, including terrestrial organisms of riparian origin, aquatic macroinvertebrates, and forage fish.

(iv) Complex river, stream, lake, reservoir, and marine shoreline aquatic environments, and processes that establish and maintain these aquatic environments, with features such as large wood, side channels, pools, undercut banks and unembedded substrates, to provide a variety of depths, gradients, velocities, and structure.

(v) Water temperatures ranging from 2 to 15 degrees Celsius (°C) (36 to 59 degrees Fahrenheit (°F)), with adequate thermal refugia available for temperatures that exceed the upper end of this range. Specific temperatures within this range will depend on bull trout life-history stage and form; geography; elevation; diurnal and seasonal variation; shading, such as that provided by riparian habitat; streamflow; and local groundwater influence.

(vi) In spawning and rearing areas, substrate of sufficient amount, size, and composition to ensure success of egg and embryo overwinter survival, fry emergence, and young-of-the-year and juvenile survival. A minimal amount of fine sediment, generally ranging in size from silt to coarse sand, embedded in larger substrates, is characteristic of these conditions. The size and amounts

of fine sediment suitable to bull trout will likely vary from system to system.

(vii) A natural hydrograph, including peak, high, low, and base flows within historic and seasonal ranges or, if flows are controlled, minimal flow departure from a natural hydrograph.

(viii) Sufficient water quality and quantity such that normal reproduction, growth, and survival are not inhibited.

(ix) Sufficiently low levels of occurrence of nonnative predatory (e.g., lake trout, walleye, northern pike, smallmouth bass); interbreeding (e.g., brook trout); or competing (e.g., brown trout) species that, if present, are adequately temporally and spatially isolated from bull trout.

(4) Critical habitat does not include manmade structures (including, but not limited to, buildings, aqueducts, docks, seawalls, pipelines, roads, 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.

(5) *Exclusions*. Each excluded area is identified in the relevant Critical Habitat Unit text below, as identified in paragraphs (e)(8) through (e)(41) of this entry. Critical habitat does not include:

(i) Waters adjacent to non-Federal lands covered by the following legally operative incidental take permits for habitat conservation plans (HCPs) issued under section 10(a)(1)(B) of the Endangered Species Act of 1973, as amended (Act), in which bull trout is a covered species on or before the publication of this final rule: Cedar River Watershed HCP, Green Diamond HCP, Washington Department of Natural Resources HCP, Washington Forest Practices HCP, Plum Creek Central Cascades HCP, Plum Creek Native Fish HCP, and Stimpson Native Fish HCP;

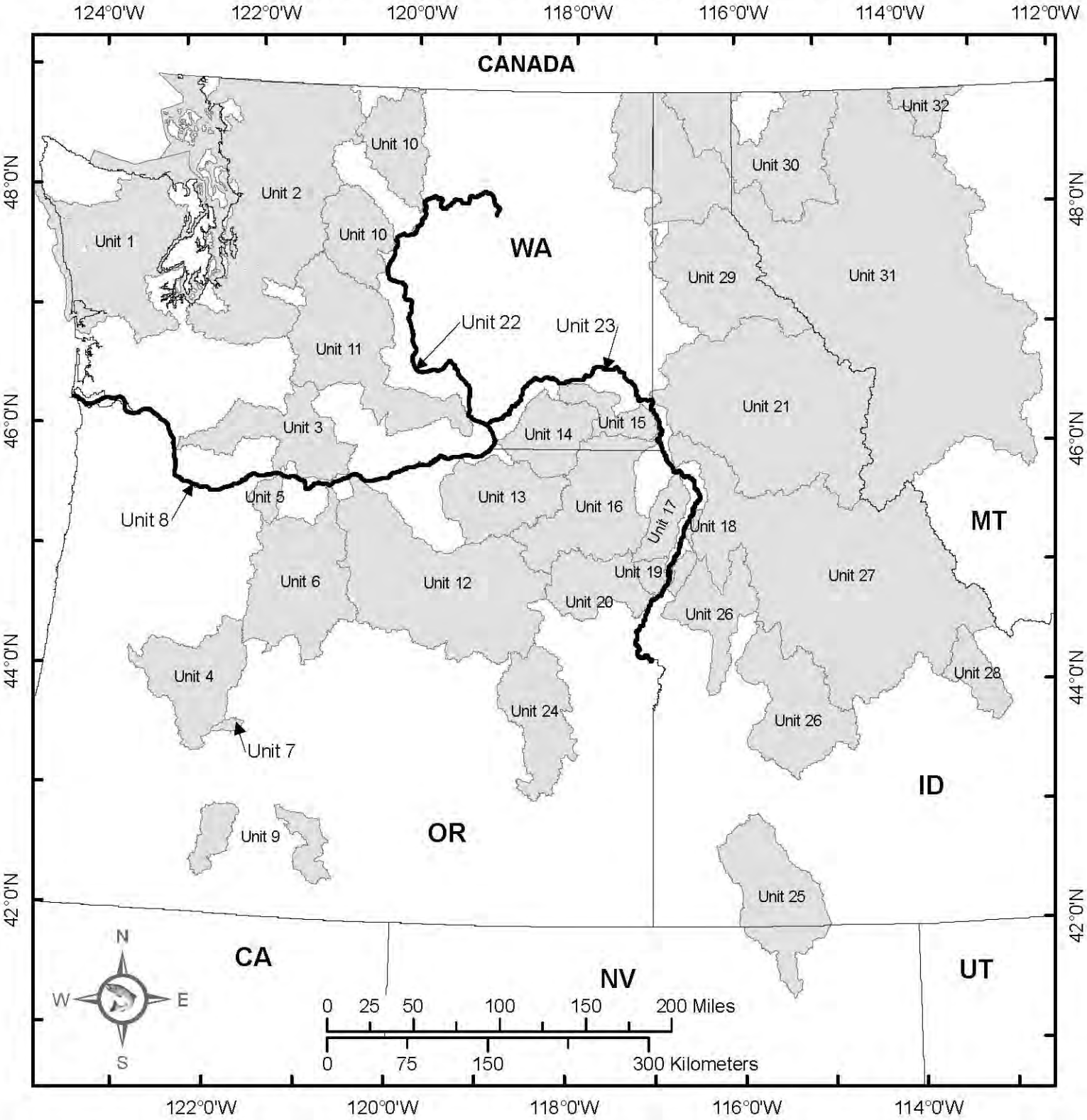
(ii) Waters within or adjacent to lands subject to certain tribal management plans; or

(iii) Waters where impacts to national security have been identified.

(6) *Critical habitat map units*. Data layers defining map units were created using U.S. Geological Survey (USGS) Hydrologic Unit Code map (HUCs) at a scale of 1:250,000 down to the 4th level cataloging unit. In some cases, 5th and 6th level HUCs were also used and some finer scale watersheds developed using USGS 10-meter Digital Elevation Model and 1:24,000 scale hydrography layers. The marine boundaries for the Puget Sound and Olympic Peninsula critical habitat unit were based on Washington Department of Natural Resources 1:24,000 scale county boundaries and HUCs.

(7) *Note:* Index map for critical habitat units for the bull trout follows:

Index Map: Critical Habitat Units



1	Olympic Peninsula	11	Yakima River	22	Mainstem Upper Columbia River
2	Puget Sound	12	John Day River	23	Mainstem Snake River
3	Lower Columbia River Basins	13	Umatilla River	24	Malheur River Basin
4	Upper Willamette River	14	Walla Walla River Basin	25	Jarbidge River
5	Hood River	15	Lower Snake River Basins	26	Southwest Idaho River Basins
6	Lower Deschutes River	16	Grande Ronde River	27	Salmon River Basin
7	Odell Lake	17	Imnaha River	28	Little Lost River
8	Mainstem Lower Columbia River	18	Sheep / Granite Creeks	29	Coeur d'Alene River Basin
9	Klamath River Basin	19	Hells Canyon Complex	30	Kootenai River Basin
10	Upper Columbia River Basins	20	Powder River Basin	31	Clark Fork River Basin
		21	Clearwater River	32	Saint Mary River Basin

(8) Unit 1: Olympic Peninsula

(i) This unit consists of 748.7 km (465.2 mi) of streams, 529.2 km (328.8 mi) of marine shoreline, and 3,064 ha (7,572 ac) of lakes and reservoirs. The unit is located in northwestern Washington.

(ii) Individual waterbodies in the unit are bounded by the following coordinates:

Waterbody Name	Stream Begin Point or Lake Center Latitude	Stream Begin Point or Lake Center Longitude	Stream End Point Latitude	Stream End Point Longitude
Alta Creek	47.685	-123.737	47.698	-123.756
Big Creek	47.566	-123.681	47.518	-123.774
Bob Creek	47.696	-123.853	47.689	-123.856
Boulder Creek	47.979	-123.613	47.983	-123.601
Brown Creek	47.455	-123.260	47.411	-123.319
Buckinghorse Creek	47.739	-123.485	47.746	-123.483
Cameron Creek	47.916	-123.243	47.912	-123.255
Canyon Creek	47.954	-123.247	48.025	-123.137
Cat Creek	47.946	-123.644	47.973	-123.593
Cedar Creek	47.440	-123.405	47.443	-123.403
Cedar Creek	47.717	-124.336	47.712	-124.416
Chehalis River	46.819	-123.253	46.966	-123.547
Church Creek	47.460	-123.457	47.461	-123.451
Clearwater River	47.628	-124.276	47.628	-124.276
Clide Creek	47.888	-123.799	47.871	-123.798
Cook Creek	47.358	-123.997	47.368	-124.032
Copalis River	47.137	-124.159	47.138	-124.154
Cougar Creek	47.862	-123.860	47.867	-123.854
Delabarre Creek	47.726	-123.529	47.735	-123.527
Dungeness River	47.941	-123.093	48.152	-123.128
East Twin Creek	47.841	-123.988	47.833	-123.991
Elk Creek	47.510	-123.345	47.515	-123.331
Elwha River	47.771	-123.582	48.147	-123.566
Ennis Creek	48.053	-123.412	48.117	-123.405
Fire Creek	47.601	-123.523	47.598	-123.526
Fitzhenry Creek	47.964	-123.589	47.967	-123.589
Godkin Creek	47.752	-123.452	47.760	-123.465
Gold Creek	47.941	-123.083	47.941	-123.093
Goldie River	47.760	-123.522	47.840	-123.470
Goodman Creek	47.834	-124.339	47.825	-124.513
Graves Creek	47.569	-123.563	47.574	-123.572
Gray Wolf River	47.916	-123.243	47.977	-123.112
Grays Harbor Marine	46.926	-124.180	46.906	-124.139
Griff Creek	48.016	-123.593	48.023	-123.595
Haggerty Creek	47.952	-123.575	47.956	-123.576
Harlow Creek	47.700	-123.877	47.685	-123.889
Hayes River	47.803	-123.430	47.808	-123.454
Hee Haw Creek	47.701	-123.663	47.737	-123.691
Hee Hee Creek	47.709	-123.734	47.712	-123.739
Hoh Creek	47.883	-123.751	47.877	-123.754
Hoh River	47.737	-124.366	47.880	-123.729
Hood Canal Marine	47.434	-122.842	47.684	-122.802
Hughes Creek	48.026	-123.599	48.025	-123.595
Humptulips River	47.048	-124.046	47.231	-123.977
Hurd Creek	48.124	-123.144	48.118	-123.143
Hurricane Creek	47.976	-123.587	47.975	-123.594
Idaho Creek	47.947	-123.538	47.945	-123.544
Ignar Creek	47.637	-123.430	47.639	-123.433
Irely Creek	47.565	-123.677	47.565	-123.680
Irely Lake	47.565	-123.674		
Joe Creek	47.217	-124.154	47.206	-124.204
Kalaloch Creek	47.637	-124.361	47.607	-124.375
Lake Cushman	47.470	-123.255		
Lebar Creek	47.427	-123.320	47.417	-123.330
Leitha Creek	47.762	-123.452	47.769	-123.460
Lillian River	47.944	-123.500	47.931	-123.528
Little River	48.061	-123.519	48.063	-123.578
Long Creek	47.926	-123.558	47.951	-123.561
Lost River	47.859	-123.458	47.862	-123.468
Madison Creek	48.044	-123.580	48.042	-123.591
Matheny Creek	47.543	-123.837	47.576	-124.115
Matriotti Creek	48.133	-123.161	48.136	-123.141
McCartney Creek	47.879	-123.466	47.878	-123.471
McTaggert Creek	47.409	-123.240	47.363	-123.235
Moclips River	47.260	-124.124	47.248	-124.220

Waterbody Name	Stream Begin Point or Lake Center Latitude	Stream Begin Point or Lake Center Longitude	Stream End Point Latitude	Stream End Point Longitude
Morse Creek	48.063	-123.347	48.117	-123.351
Mosquito Creek	47.786	-124.383	47.798	-124.482
Mount Tom Creek	47.819	-123.821	47.868	-123.888
Nalley Slough	47.334	-123.132	47.328	-123.131
Nolan Creek	47.743	-124.202	47.751	-124.344
Noname Creek	47.629	-123.456	47.626	-123.452
North Fork Quinault River	47.582	-123.645	47.638	-123.646
North Fork Skokomish River	47.355	-123.235	47.506	-123.318
OGS Creek	47.879	-123.768	47.878	-123.769
O'Neil Creek	47.610	-123.464	47.616	-123.472
Owl Creek	47.780	-124.039	47.805	-124.079
Pacific Coast Marine	48.003	-124.680	46.926	-124.180
Paradise Creek	47.699	-123.801	47.694	-123.813
Pine Creek	47.442	-123.430	47.446	-123.417
Prescott Creek	47.904	-123.487	47.903	-123.491
Purdy Creek	47.302	-123.182	47.307	-123.161
Pyrites Creek	47.644	-123.436	47.639	-123.433
Queets River	47.541	-124.335	47.735	-123.696
Quinault Lake	47.475	-123.869		
Quinault River	47.391	-124.045	47.533	-123.744
Raft River	47.449	-124.220	47.458	-124.326
Richert Spring	47.321	-123.219	47.320	-123.225
Rustler Creek	47.629	-123.569	47.617	-123.617
Salmon River	47.524	-124.041	47.556	-124.220
Sams River	47.604	-123.853	47.624	-124.013
Satsop River	47.015	-123.510	47.023	-123.509
Sege Creek	47.988	-123.597	47.987	-123.604
Siebert Creek	48.049	-123.293	48.121	-123.290
Skobob Creek	47.327	-123.175	47.328	-123.132
Skokomish River	47.315	-123.238	47.315	-123.229
Slate Creek	47.529	-123.320	47.521	-123.336
Slate Creek	47.749	-123.498	47.744	-123.491
Slide Creek	47.883	-123.736	47.875	-123.748
Snider Creek	47.846	-123.971	47.842	-123.968
South Fork Hoh River	47.764	-123.786	47.777	-123.908
South Fork Skokomish River	47.315	-123.247	47.425	-123.354
Steamboat Creek	47.688	-124.350	47.678	-124.404
Stony Creek	47.871	-123.464	47.871	-123.469
Strait of Juan de Fuca Marine	48.103	-122.885	48.217	-124.102
Taft Creek	47.866	-123.967	47.858	-123.942
Tshletshy Creek	47.606	-123.741	47.666	-123.925
Twin Creek	47.832	-123.995	47.831	-123.988
Unnamed trib. (#0100)	47.340	-123.246	47.335	-123.242
Unnamed trib. (#0509)	47.844	-123.939	47.830	-123.982
Unnamed trib. (#0527)	47.874	-123.821	47.868	-123.817
Unnamed trib. (#0542)	47.887	-123.719	47.883	-123.719
Valley Creek	48.123	-123.438	48.107	-123.452
Vance Creek	47.327	-123.299	47.327	-123.299
Vance Creek Remenant Channel	47.315	-123.257	47.315	-123.238
West Fork Satsop River	47.360	-123.566	47.035	-123.526
Windfall Creek	47.914	-123.492	47.912	-123.495
Winfield Creek	47.783	-124.144	47.810	-124.233
Wishkah River	47.257	-123.715	47.257	-123.715
Wolf Creek	47.974	-123.586	47.974	-123.593
Wynoochee River	47.160	-123.650	47.360	-123.637

(iii) Waterbodies associated with the following tribal lands, habitat conservation plans (HCPs), or U.S. Navy training areas totaling 553.9 km (343.9 mi) of streams and 144.6 km (89.9 mi) of marine shoreline have been excluded from critical habitat designation under section 4(b)(2) of the Act in this unit:

(A) Waterbodies within or adjacent to the open water training and testing areas of the Dabob Bay Military Operating Area and areas within the Connecting Waters of the Dabob Bay Range Complex, including marine habitats associated with the Hood Canal Critical Habitat Subunit (CHSU);

(B) Waterbodies within the geographic area covered by the Washington State Forest Practices Habitat Conservation Plan (HCP), including portions of the Chehalis River/Grays Harbor, Dungeness River, Elwha River, Hoh River, Queets River, Quinualt River, Skokomish River Pacific Coast, Strait of Juan De Fuca, and Hood Canal Marine CHSUs;

(C) Waterbodies within the geographic area covered by the Green Diamond HCP, including portions of the Chehalis River/Grays Harbor and Skokomish CHSUs;

(D) Waterbodies within the geographic area covered by the Washington Department of Natural

Resources HCP, including portions of Chehalis River/Grays Harbor, Dungeness River, Elwha River, Hoh River, Queets River, Skokomish River, Pacific Coast, Strait of Juan De Fuca, and Hood Canal Marine CHSUs; and

(E) Waterbodies within the areas under management by the Hoh Tribe, including portions of Hoh River and Pacific Coast CHSUs; Jamestown S'Klallam Tribe, including portions of Dungeness River CHSU; Lower Elwha Tribe, including portions of Elwha River and Strait of Juan de Fuca CHSUs; Quileute Tribe, including portions of Pacific Coast CHSU; Quinault Tribe, including portions of Quinault River, Queets River, and Pacific Coast CHSUs; and Skokomish Tribe, including portions of Skokomish River and Hood Canal Marine CHSUs, within reservation boundaries, and waterbodies that are adjacent to:

(*1*) Lands held in trust by the United States for their benefit;

(*2*) Lands held in trust by the United States for any Indian Tribe or individual subject to restrictions by the United States against alienation;

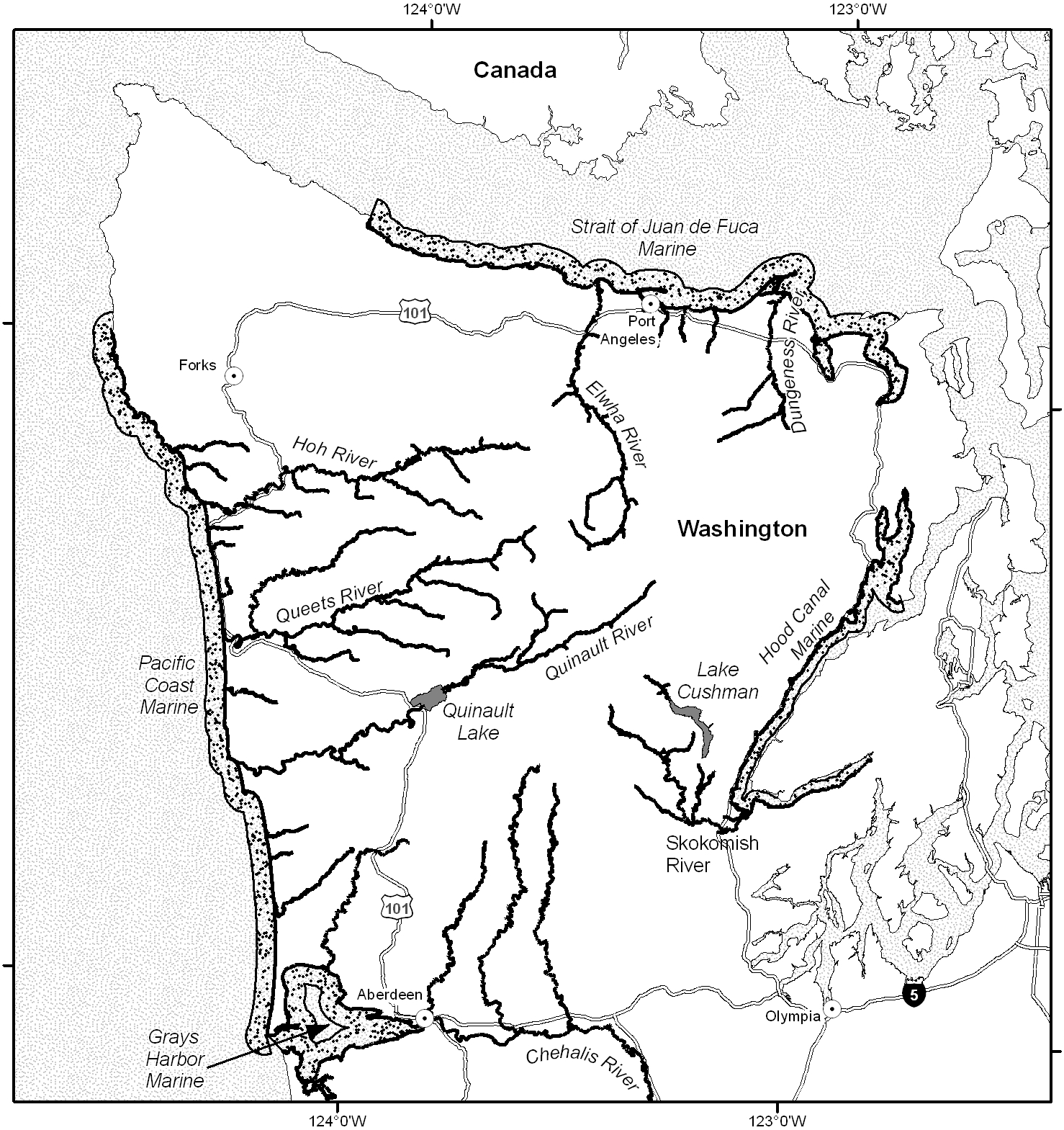
(*3*) Fee lands, either within or outside the reservation boundaries, owned by the tribal government; and

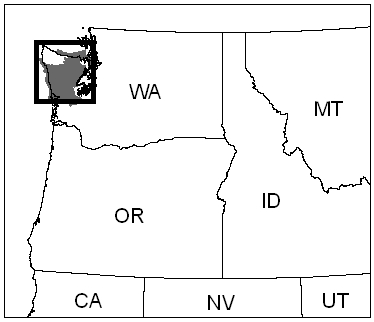
(*4*) Fee lands within the reservation boundaries owned by individual Indians.

(iv) Map of Unit 1, Olympic Peninsula follows:

Critical Habitat for Bull Trout *(Salvelinus confluentus)*

Unit: 1, Olympic Peninsula





N

0 10 20 Miles

0 15 30 Kilometers

For excluded lands in this CHU refer to the section on exclusions in the rule

- CH Streams
- CH Lakes
- CH Marine
- City
- Road

(9) Unit 2: Puget Sound

(i) This unit consists of 1,840.2 km (1,143.5 mi) of streams, 684.0 km (425.0 mi) of marine shoreline, and 16,260.9 ha (40,181.5 ac) of lakes and reservoirs. The unit is located in northwestern Washington.

(ii) Individual waterbodies in the unit are bounded by the following coordinates:

Waterbody Name	Stream Begin Point or Lake Center Latitude	Stream Begin Point or Lake Center Longitude	Stream End Point Latitude	Stream End Point Longitude
Alder Creek	48.549	-121.955	48.519	-121.956
Aldrich Creek (#0423)	48.916	-122.042	48.921	-122.051
Alma Creek	48.590	-121.356	48.600	-121.363
Anderson Creek	48.797	-122.325	48.869	-122.318
Arrow Creek	48.407	-121.390	48.423	-121.396
Bacon Creek	48.681	-121.464	48.585	-121.395
Baker Lake	48.708	-121.642		
Baker River	48.548	-121.741	48.741	-121.563
Bald Eagle Creek	48.796	-121.449	48.800	-121.465
Bear Creek	48.966	-121.383	48.965	-121.388
Bear Creek	48.898	-122.105	48.893	-122.145
Bear Creek (#0353)	48.788	-122.123	48.783	-122.140
Bear Lake Outlet (#0317)	48.610	-121.912	48.607	-121.912
Beaver Creek	48.086	-121.516	48.077	-121.527
Beckler River	47.865	-121.311	47.715	-121.340
Bedal Creek	48.047	-121.351	48.080	-121.395
Bell Creek	48.684	-121.899	48.681	-121.900
Bender Creek	48.063	-121.591	48.071	-121.590
Bertrand Creek	48.999	-122.521	48.912	-122.535
Big Beaver Creek	48.841	-121.211	48.775	-121.066
Big Creek	48.343	-121.440	48.345	-121.451
Big Four Creek	48.071	-121.524	48.070	-121.512
Bitter Creek	47.841	-121.503	47.840	-121.508
Black Creek	48.247	-121.414	48.259	-121.402
Black Oak Creek	48.185	-121.454	48.177	-121.450
Blackjack Creek	48.051	-121.626	48.062	-121.631
Boardman Creek	48.040	-121.675	48.070	-121.681
Boulder Creek	48.512	-121.364	48.518	-121.364
Boulder Creek	47.354	-121.707	47.371	-121.688
Boulder Creek	48.937	-122.021	48.925	-122.037
Boulder River	48.245	-121.828	48.282	-121.787
Boyd Creek	48.903	-121.863	48.897	-121.866
Brooks Creek	48.289	-121.908	48.277	-121.911
Brush Creek	48.909	-121.423	48.913	-121.424
Buck Creek	48.353	-121.268	48.265	-121.340
Buck Creek	48.047	-121.472	48.045	-121.481
Buck Creek	47.023	-121.557	47.029	-121.555
Cabin Creek	47.363	-121.695	47.367	-121.684
Camp Creek	48.150	-121.280	48.159	-121.292
Canyon Creek	48.775	-120.778	48.707	-120.918
Canyon Creek	48.220	-121.081	48.211	-121.088
Canyon Creek	48.158	-121.817	48.097	-121.970
Canyon Creek	48.932	-121.951	48.906	-121.989
Canyon Creek (Canyon Lake Creek)	48.840	-122.111	48.832	-122.144
Carbon River	46.960	-121.793	47.130	-122.233
Cascade Creek	48.903	-121.839	48.904	-121.839
Cascade River	48.463	-121.164	48.524	-121.430
Cavanaugh Creek	48.645	-122.110	48.647	-122.121
Cedar River	47.313	-121.521	47.409	-121.723
Chainup Creek	48.905	-121.843	48.908	-121.840
Chenuis Creek	46.994	-121.842	46.992	-121.843
Chester Morse Lake	47.389	-121.694		
Chilliwack River	48.878	-121.487	49.000	-121.411
Chocwick Creek	48.055	-121.384	48.074	-121.400
Cinnamon Creek	48.867	-120.887	48.891	-120.916
Clearwater Creek	48.805	-121.989	48.771	-122.047
Clearwater River	47.079	-121.782	47.146	-121.834
Coal Creek	48.096	-121.535	48.085	-121.541
Coal Creek	48.892	-122.164	48.881	-122.153
Coal Creek (Upper)	48.838	-121.903	48.838	-121.906
Cook Slough	48.198	-122.218	48.198	-122.234
Corkindale Creek	48.518	-121.483	48.505	-121.486
Cornell Creek	48.886	-121.960	48.899	-121.969
Cripple Creek	47.048	-121.693	47.040	-121.701
Crystal Creek	48.183	-121.361	48.181	-121.364

Waterbody Name	Stream Begin Point or Lake Center Latitude	Stream Begin Point or Lake Center Longitude	Stream End Point Latitude	Stream End Point Longitude
Crystal Creek	48.791	-121.510	48.787	-121.503
Crystal Creek	46.925	-121.540	46.928	-121.538
Cumberland Creek	48.505	-121.985	48.518	-121.994
Dan Creek	48.265	-121.540	48.298	-121.551
Davis Creek	48.879	-121.931	48.882	-121.931
Day Creek	48.444	-122.007	48.519	-122.067
Deadhorse Creek	48.900	-121.836	48.904	-121.838
Deep Creek	48.868	-121.911	48.869	-121.908
Deer Creek	48.718	-121.116	48.721	-121.105
Deer Creek	48.096	-121.558	48.084	-121.556
Deer Creek	48.365	-121.795	48.268	-121.933
Deer Creek	46.836	-121.965	46.873	-121.974
Deer Creek	48.602	-122.093	48.610	-122.095
Deerhorn Creek	48.906	-121.857	48.903	-121.858
Depot Creek	48.986	-121.293	48.997	-121.324
Devils Creek	48.819	-121.002	48.824	-121.032
Diablo Lake	48.708	-121.105		
Diobsud Creek	48.576	-121.433	48.559	-121.412
Discovery Creek	46.900	-121.571	46.896	-121.580
Ditch Creek	48.903	-121.851	48.902	-121.849
Doe Creek	47.011	-121.547	47.028	-121.553
Downey Creek	48.330	-121.149	48.258	-121.225
Dusty Creek	48.139	-121.040	48.177	-121.019
Duwamish River	47.474	-122.252	47.514	-122.304
Duwamish Waterway	47.514	-122.304	47.585	-122.360
East Duwamish Waterway	47.590	-122.344	47.567	-122.347
East Fork Bacon Creek	48.713	-121.417	48.661	-121.434
East Fork Foss River	47.649	-121.277	47.653	-121.294
Eastern Shoreline Guemes Island	48.529	-122.573	48.589	-122.646
Eastern Shoreline Puget Sound (North)	48.511	-122.606	48.561	-122.493
Eastern Shoreline Puget Sound (South)	47.970	-122.232	48.449	-122.551
Eastern Shoreline Whidbey Island	47.905	-122.388	48.369	-122.666
Eastern Shorline Lummi Island	48.717	-122.719	48.640	-122.609
Easy Creek	48.881	-121.456	48.889	-121.459
Ebey Slough	47.941	-122.170	48.042	-122.215
Edfro Creek	48.663	-122.117	48.661	-122.127
Elbow Creek / Lake Doreen Outlet (#0331)	48.707	-121.915	48.685	-121.911
Elliott Creek	48.027	-121.367	48.057	-121.416
Elwell Creek	47.809	-121.849	47.838	-121.853
Excelsior Creek	47.870	-121.487	47.864	-121.492
Falls Creek	48.137	-121.432	48.148	-121.437
Falls Creek	46.992	-121.874	46.999	-121.889
Falls Creek	48.824	-121.906	48.834	-121.902
Finney Creek	48.465	-121.688	48.524	-121.847
Fire Creek	48.154	-121.232	48.153	-121.245
Fisher Creek	48.563	-120.912	48.603	-121.050
Fishtrap Creek	48.999	-122.411	48.912	-122.523
Fobes Creek	48.622	-122.119	48.622	-122.112
Foss River	47.653	-121.294	47.705	-121.307
Fossil Creek	48.904	-121.850	48.908	-121.850
Fourteenmile Creek	48.126	-121.229	48.140	-121.222
Freezeout Creek	48.950	-120.932	48.956	-120.970
French Creek	48.255	-121.783	48.282	-121.757
Fryingpan Creek	46.873	-121.623	46.895	-121.592
Galbraith Creek	48.755	-122.021	48.759	-122.019
Gallop Creek	48.882	-121.947	48.894	-121.944
Gedney Island	48.005	-122.305	48.005	-122.305
Gilligan Creek	48.473	-122.126	48.488	-122.140
Glacier Creek	48.131	-121.168	48.130	-121.204
Glacier Creek	47.987	-121.369	47.986	-121.393
Glacier Creek	48.812	-121.890	48.892	-121.939
Goat Creek	48.334	-121.161	48.328	-121.157
Goat Island	48.360	-122.531	48.360	-122.531
Goblin Creek	47.923	-121.312	47.919	-121.309
Goodell Creek	48.711	-121.291	48.726	-121.305
Gordon Creek	48.088	-121.657	48.071	-121.673
Gorge Lake	48.706	-121.175		
Grandy Creek	48.562	-121.811	48.518	-121.881
Granite Creek	48.648	-120.857	48.707	-120.918
Green Creek	48.732	-121.936	48.738	-121.938

Waterbody Name	Stream Begin Point or Lake Center Latitude	Stream Begin Point or Lake Center Longitude	Stream End Point Latitude	Stream End Point Longitude
Green River	47.275	-122.108	47.474	-122.252
Greenwater River	47.093	-121.458	47.158	-121.660
Hat Slough	48.197	-122.362	48.208	-122.323
Hazzard Creek	47.081	-121.690	47.078	-121.681
Hedrick Creek	48.890	-121.981	48.899	-121.971
Higgins Creek	48.318	-121.755	48.362	-121.807
Hope Island	48.399	-122.561	48.399	-122.561
Horse Creek	48.322	-121.258	48.313	-121.286
Howard Creek	48.619	-121.966	48.609	-121.966
Huckleberry Creek	46.989	-121.624	47.079	-121.586
Hutchinson Creek	48.732	-122.103	48.707	-122.179
Ika Island	48.363	-122.499	48.363	-122.499
Illabot Creek	48.389	-121.319	48.496	-121.531
Index Creek	47.760	-121.497	47.766	-121.481
Indian Creek	48.935	-121.395	48.947	-121.398
Ipsut Creek	46.972	-121.831	46.979	-121.833
Jackman Creek	48.529	-121.697	48.523	-121.722
Jim Creek	48.223	-121.950	48.185	-122.078
Jones Creek	48.542	-122.051	48.524	-122.053
Jordan Creek	48.515	-121.419	48.522	-121.422
June Creek	46.995	-121.905	46.995	-121.917
Kapowsin Creek	46.991	-122.195	47.032	-122.205
Kendall Creek	48.922	-122.145	48.887	-122.149
Kindy Creek	48.432	-121.208	48.463	-121.208
Klickitat Creek	46.906	-121.551	46.908	-121.550
Lake Creek	48.769	-121.550	48.762	-121.546
Lake Shannon	48.587	-121.723		
Lake Union	47.642	-122.331		
Lake Washington	47.619	-122.245		
Lewis Creek	47.820	-121.509	47.824	-121.525
Lightning Creek	48.907	-120.983	48.933	-120.986
Lime Creek	48.218	-121.278	48.252	-121.293
Lindsay Creek	47.347	-121.660	47.351	-121.661
Little Beaver Creek	48.878	-121.323	48.914	-121.075
Little Chilliwack River	48.962	-121.478	48.992	-121.409
Little Creek	48.876	-121.937	48.884	-121.934
Little Deer Creek	48.439	-121.950	48.387	-121.870
Little Fork Little Chilliwack River	48.954	-121.442	48.980	-121.428
Lodi Creek	46.948	-121.699	46.960	-121.706
Long Creek	48.080	-121.686	48.074	-121.691
Loomis Creek	48.670	-121.827	48.661	-121.814
Mallardy Creek	48.055	-121.656	48.070	-121.655
Maple Creek	48.926	-122.077	48.912	-122.079
Marble Creek	48.542	-121.252	48.531	-121.282
Martin Creek	48.092	-121.403	48.101	-121.396
Masonry Pool	47.410	-121.737		
McAllister Creek	48.587	-121.156	48.623	-121.057
McCoy Creek	47.831	-121.827	47.848	-121.825
McDonald Creek (#0435)	48.911	-122.019	48.921	-122.016
McGinnis Creek	48.613	-121.961	48.610	-121.960
McMillan Creek	48.810	-121.212	48.815	-121.193
Merry Brook Creek	48.087	-121.388	48.089	-121.392
Middle Fork Nooksack River	48.725	-121.899	48.834	-122.155
Milk Creek	48.178	-121.152	48.221	-121.163
Mill Creek	48.496	-121.870	48.512	-121.888
Miller River	47.675	-121.389	47.719	-121.394
Miners Creek	48.190	-121.023	48.187	-121.031
Money Creek	47.707	-121.443	47.729	-121.426
Monument Creek (#0324)	48.647	-121.828	48.652	-121.835
Moose Creek	48.255	-121.710	48.277	-121.700
Mowich River	46.911	-121.996	46.925	-121.950
Newhalem Creek	48.663	-121.253	48.671	-121.255
Niesson Creek	46.884	-122.031	46.912	-122.046
Nisqually River	46.834	-122.324	47.101	-122.692
Nookachamps Creek	48.348	-122.203	48.471	-122.297
Nooksack River	48.778	-122.583	48.939	-122.420
Nooksack River (Slater Slough)	48.784	-122.588	48.789	-122.604
North Fork Canyon Creek	48.774	-120.798	48.768	-120.793
North Fork Canyon Creek	48.165	-121.818	48.158	-121.817
North Fork Cedar River	47.316	-121.507	47.313	-121.521

Waterbody Name	Stream Begin Point or Lake Center Latitude	Stream Begin Point or Lake Center Longitude	Stream End Point Latitude	Stream End Point Longitude
North Fork Nooksack River	48.835	-122.154	48.920	-122.055
North Fork Sauk River	48.096	-121.370	48.097	-121.389
North Fork Skagit River	48.387	-122.367	48.364	-122.473
North Fork Skykomish River	47.823	-121.530	47.887	-121.448
North Fork Stillaguamish River	48.279	-121.817	48.283	-121.770
North Fork Tolt River	47.718	-121.779	47.696	-121.821
North Mowich River	46.916	-121.878	46.915	-121.895
North Puyallup River	46.845	-121.878	46.864	-121.951
O'Toole Creek	48.498	-121.915	48.514	-121.917
Otter Creek	48.424	-121.374	48.420	-121.374
Owl Creek	48.161	-121.288	48.163	-121.301
Palmer Creek	48.043	-121.469	48.045	-121.483
Panther Creek	48.631	-120.978	48.708	-120.976
Parallel Creek	46.911	-121.549	46.909	-121.560
Park Creek	48.740	-121.682	48.727	-121.659
Pass Creek	48.815	-121.463	48.811	-121.458
Peat Bog Creek (#0352)	48.780	-122.118	48.790	-122.122
Perry Creek	48.075	-121.488	48.063	-121.515
Pierce Creek	48.766	-121.073	48.772	-121.066
Pilchuck Creek	48.303	-122.158	48.208	-122.226
Pilchuck River	47.995	-121.746	47.904	-122.091
Plumbago Creek	48.606	-122.101	48.612	-122.097
Poch Creek	46.987	-121.955	46.991	-121.954
Portage Island	48.694	-122.614	48.694	-122.614
Porter Creek	48.795	-122.115	48.799	-122.127
Powerhouse Creek	48.908	-121.815	48.911	-121.818
Pressentin Creek	48.504	-121.844	48.518	-121.852
Proctor Creek	47.821	-121.648	47.835	-121.646
Pugh Creek	48.165	-121.333	48.172	-121.339
Pumice Creek	48.141	-121.150	48.148	-121.236
Puyallup River	46.864	-121.951	47.268	-122.426
Racehorse Creek	48.884	-122.130	48.888	-122.146
Rack Creek	47.388	-121.731	47.392	-121.722
Ranger Creek	46.988	-121.849	46.995	-121.854
Rankin Creek	48.733	-121.908	48.733	-121.920
Rapid River	47.821	-121.233	47.803	-121.293
Rex River	47.347	-121.645	47.371	-121.688
Ridley Creek	48.720	-121.865	48.725	-121.899
Rocky Creek	48.510	-121.502	48.500	-121.495
Rocky Creek	48.819	-121.996	48.809	-121.997
Roland Creek	48.770	-120.998	48.769	-121.024
Rollins Creek	48.293	-121.852	48.281	-121.836
Ross Lake	48.869	-121.054		
Ruby Creek	48.718	-121.001	48.707	-120.918
Salmon Creek	47.911	-121.482	47.888	-121.453
Samish River	48.548	-122.457	48.548	-122.457
Sauk River	48.095	-121.390	48.482	-121.605
Saxson Creek	48.689	-122.156	48.689	-122.163
Schweitzer Creek	48.065	-121.688	48.074	-121.699
Segelsen Creek	48.299	-121.707	48.280	-121.715
Seventysix Gulch	47.974	-121.384	47.986	-121.393
Seymour Creek	48.755	-122.009	48.758	-122.010
Shaw Creek	46.901	-121.568	46.893	-121.580
Ship Canal (Chittendon Locks)	47.660	-122.379		
Shotgun Creek	47.380	-121.708	47.384	-121.706
Sibley Creek	48.511	-121.255	48.511	-121.262
Silesia Creek	48.910	-121.485	48.999	-121.613
Silver Creek	48.981	-121.190	48.970	-121.104
Silver Creek	47.938	-121.439	47.897	-121.436
Silver Creek	47.000	-121.530	46.997	-121.524
Silver Gulch	48.075	-121.564	48.078	-121.570
Silver Springs	46.994	-121.533	46.997	-121.533
Sister Creek	48.746	-121.974	48.755	-121.988
Skagit River	48.471	-121.608	48.712	-121.138
Skookum Creek	48.686	-122.106	48.670	-122.142
Skykomish River	47.813	-121.579	47.855	-121.954
Slate Creek	48.752	-120.786	48.756	-120.796
Small Creek	48.158	-120.978	48.162	-121.006
Smith Creek	48.841	-122.262	48.859	-122.309
Snohomish River	47.830	-122.046	48.016	-122.151

Waterbody Name	Stream Begin Point or Lake Center Latitude	Stream Begin Point or Lake Center Longitude	Stream End Point Latitude	Stream End Point Longitude
Snoqualmie River	47.541	-121.837	47.830	-122.046
Snowslide Gulch	47.858	-121.509	47.858	-121.503
Son of Gallop	48.889	-121.943	48.884	-121.940
Sonny Boy Creek	48.427	-121.172	48.462	-121.197
South Fork Canyon Creek	48.154	-121.785	48.158	-121.817
South Fork Cascade River	48.391	-121.109	48.463	-121.164
South Fork Cedar River	47.305	-121.513	47.313	-121.521
South Fork Nooksack River	48.616	-122.103	48.809	-122.203
South Fork Salmon Creek	47.903	-121.486	47.906	-121.476
South Fork Sauk River	47.986	-121.393	48.097	-121.389
South Fork Skagit River	48.296	-122.364	48.367	-122.358
South Fork Skagit River (Brandstedt Slough)	48.311	-122.357	48.311	-122.357
South Fork Skagit River (Crooked Slough)	48.306	-122.369	48.307	-122.373
South Fork Skagit River (Deepwater Slough)	48.327	-122.355	48.306	-122.383
South Fork Skagit River (Freshwater Slough)	48.338	-122.349	48.321	-122.377
South Fork Skagit River (Old River)	48.308	-122.365	48.308	-122.365
South Fork Skagit River (Steamboat Slough)	48.324	-122.348	48.296	-122.364
South Fork Skagit River (Tom Moore Slough)	48.296	-122.364	48.324	-122.348
South Fork Skagit River (Unnamed off Deepwater Slough)	48.317	-122.369	48.307	-122.389
South Fork Skykomish River	47.705	-121.307	47.813	-121.579
South Fork Stillaguamish River	48.030	-121.483	48.204	-122.127
South Fork Tolt River	47.693	-121.694	47.696	-121.821
South Mowich River	46.877	-121.855	46.915	-121.895
South Pass	48.225	-122.386	48.238	-122.378
South Prairie Creek	47.093	-121.952	47.098	-122.156
South Puyallup River	46.808	-121.892	46.864	-121.951
South Slough	48.193	-122.256	48.194	-122.254
Southeastern Shoreline Vashon Island	47.331	-122.493	47.348	-122.451
Squire Creek	48.194	-121.638	48.279	-121.685
St.Andrews Creek	46.834	-121.918	46.837	-121.921
Steamboat Slough	47.984	-122.169	48.033	-122.204
Stetattle Creek	48.727	-121.155	48.717	-121.150
Stillaguamish River	48.193	-122.167	48.238	-122.378
Straight Creek	48.254	-121.398	48.272	-121.398
Suiattle River	48.162	-121.006	48.306	-121.428
Sulphide Creek	48.789	-121.553	48.777	-121.533
Sulphur Creek	48.279	-121.086	48.247	-121.193
Sulphur Creek	48.659	-121.711	48.648	-121.699
Sultan River	47.870	-121.829	47.872	-121.826
Sunrise Creek	46.967	-121.540	46.971	-121.540
Swift Creek	48.747	-121.659	48.734	-121.659
Swift Creek	46.873	-121.954	46.870	-121.964
Swinomish Channel	48.440	-122.499	48.441	-122.504
Tenas Creek	48.335	-121.422	48.324	-121.440
Thompson Creek	48.891	-121.880	48.879	-121.915
Three Fools Creek	48.897	-120.849	48.890	-120.974
Three Lakes Outlet (#0319)	48.626	-121.888	48.625	-121.884
Thunder Creek	48.563	-121.027	48.678	-121.078
Tolmie Creek	46.984	-121.944	46.990	-121.944
Tolt River	47.696	-121.821	47.640	-121.927
Troublesome Creek	47.925	-121.363	47.897	-121.404
Trout Creek	47.833	-121.434	47.864	-121.488
Tye River	47.717	-121.229	47.705	-121.307
Union Slough	47.984	-122.167	48.034	-122.191
Unnamed trib. (#0194)	47.073	-121.693	47.072	-121.683
Unnamed trib. (#0217)	46.992	-121.705	46.992	-121.708
Unnamed trib. (#0219)	46.990	-121.706	46.987	-121.704
Unnamed trib. (#0226)	46.962	-121.711	46.961	-121.713
Unnamed trib. (#0234)	46.961	-121.711	46.965	-121.714
Unnamed trib. (#0241)	48.293	-121.785	48.284	-121.781
Unnamed trib. (#0242)	48.294	-121.772	48.286	-121.772
Unnamed trib. (#0243)	48.295	-121.759	48.286	-121.772
Unnamed trib. (#0265)	48.746	-122.094	48.743	-122.109
Unnamed trib. (#0284)	48.650	-122.116	48.649	-122.121
Unnamed trib. (#0290)	48.633	-122.121	48.635	-122.117
Unnamed trib. (#0291)	48.630	-122.121	48.636	-122.116
Unnamed trib. (#0315)	48.606	-121.953	48.608	-121.954
Unnamed trib. (#0316)	48.608	-121.930	48.605	-121.930
Unnamed trib. (#0320)	48.620	-121.861	48.625	-121.882
Unnamed trib. (#0321)	48.632	-121.872	48.629	-121.880

Waterbody Name	Stream Begin Point or Lake Center Latitude	Stream Begin Point or Lake Center Longitude	Stream End Point Latitude	Stream End Point Longitude
Unnamed trib. (#0323)	48.656	-121.862	48.655	-121.862
Unnamed trib. (#0332)	48.684	-121.921	48.690	-121.927
Unnamed trib. (#0336)	46.976	-121.547	46.976	-121.542
Unnamed trib. (#0347)	48.821	-122.121	48.828	-122.141
Unnamed trib. (#0349)	48.812	-122.125	48.815	-122.129
Unnamed trib. (#0364)	46.904	-121.567	46.904	-121.561
Unnamed trib. (#0364)	48.131	-121.909	48.123	-121.903
Unnamed trib. (#0365)	48.133	-121.884	48.124	-121.889
Unnamed trib. (#0367)	48.763	-122.040	48.765	-122.036
Unnamed trib. (#0371)	48.755	-122.017	48.757	-122.016
Unnamed trib. (#0374)	48.761	-121.986	48.756	-121.994
Unnamed trib. (#0425)	48.934	-122.036	48.927	-122.031
Unnamed trib. (#0439)	47.325	-121.535	47.325	-121.532
Unnamed trib. (#0476)	48.845	-121.896	48.844	-121.902
Unnamed trib. (#0565)	46.960	-121.793	46.959	-121.792
Unnamed trib. (#1119)	48.185	-121.433	48.181	-121.430
Unnamed trib. (LB1) upstream of Crystal Ck	46.925	-121.544	46.923	-121.546
Unnamed trib. (LB2) upstream of Crystal Ck	46.923	-121.543	46.921	-121.546
Unnamed trib. (RB) upstream of Crystal Creek	46.920	-121.543	46.918	-121.542
Unnamed trib. downstream Boulder Ck	48.929	-122.040	48.926	-122.046
Unnamed trib. downstream Wanlick Ck	48.641	-121.878	48.640	-121.883
Unnamed trib. upstream Chenius Ck	46.992	-121.843	46.990	-121.839
Unnamed trib. upstream of (#0214)	46.997	-121.700	46.991	-121.704
Unnamed trib. upstream Wallace Ck	48.742	-121.947	48.739	-121.936
Van Horn Creek	46.977	-121.718	46.976	-121.719
Viola Creek	47.043	-121.712	47.052	-121.695
Vista Creek	48.180	-121.057	48.194	-121.047
Wallace Creek	48.748	-121.943	48.745	-121.951
Wallace River	47.874	-121.649	47.859	-121.795
Wanlick Creek	48.644	-121.877	48.663	-121.799
Warm Creek	48.761	-121.972	48.755	-121.979
Weden Creek	47.986	-121.444	48.003	-121.439
Wells Creek	48.890	-121.791	48.905	-121.809
West Cady Creek	47.898	-121.307	47.899	-121.319
West Cornell Creek	48.878	-121.969	48.888	-121.961
West Fork Foss River	47.627	-121.311	47.653	-121.294
West Fork White River	46.941	-121.708	47.125	-121.619
West Pass	48.238	-122.378	48.246	-122.394
West Slide Creek (#0422)	48.912	-122.063	48.917	-122.067
White Chuck River	48.070	-121.151	48.181	-121.424
White Creek	48.403	-121.538	48.397	-121.553
White River	46.893	-121.601	47.274	-122.217
Wildcat Creek	48.895	-122.006	48.909	-122.001
Wiseman Creek	48.516	-122.130	48.506	-122.135
Wright Creek	46.878	-121.615	46.877	-121.615
Wrong Creek	47.024	-121.710	47.049	-121.694

(iii) Waterbodies associated with the following tribal lands or habitat conservation plans (HCPs) totaling 876.9 km (544.9 mi) of streams, 203.4 km (126.4 mi) of marine shoreline, and 1,629.5 ha (4,026.6 ac) of lakes and reservoirs have been excluded from critical habitat designation under section 4(b)(2) of the Act in this unit:

(A) Waterbodies within the geographic area covered by the Washington State Forest Practices Habitat Conservation Plan (HCP) , including portions of Lower Green River, Lower Nisqually, Lower Skagit River, Nooksack River, Puyallup River, Samish River, Snohomish & Skykomish Rivers, Stillaguamish River, and Puget Sound Marine CHSUs;

(B) Waterbodies within the geographic area covered by the Washington Department of Natural Resources HCP, including portions of Lower Green River, Lower Skagit River, Nooksack River, Puyallup River, Samish River, Snohomish and Skykomish Rivers, Stillaguamish River, and Puget Sound Marine CHSUs; and

(C) Waterbodies within the areas under management by the Muckleshoot Tribe, including portions of the Puyallup River CHSU; Swinomish Tribe, including portions of the Puget Sound Marine CHSU; Lummi Nation, including portions of Nooksack River and Puget Sound Marine CHSUs; Nooksack Tribe, including portions of Nooksack River CHSU; Tulalip Tribes, including portions of Puget Sound Marine CHSU; Puyallup Tribe, including portions of Puyallup River and Puget Sound Marine CHSUs; and Stillaguamish Tribe, including portions of Stillaguamish River CHSU, within reservation boundaries, and waterbodies that are adjacent to:

(*1*) Lands held in trust by the United States for their benefit;

(*2*) Lands held in trust by the United States for any Indian Tribe or individual subject to restrictions by the United States against alienation;

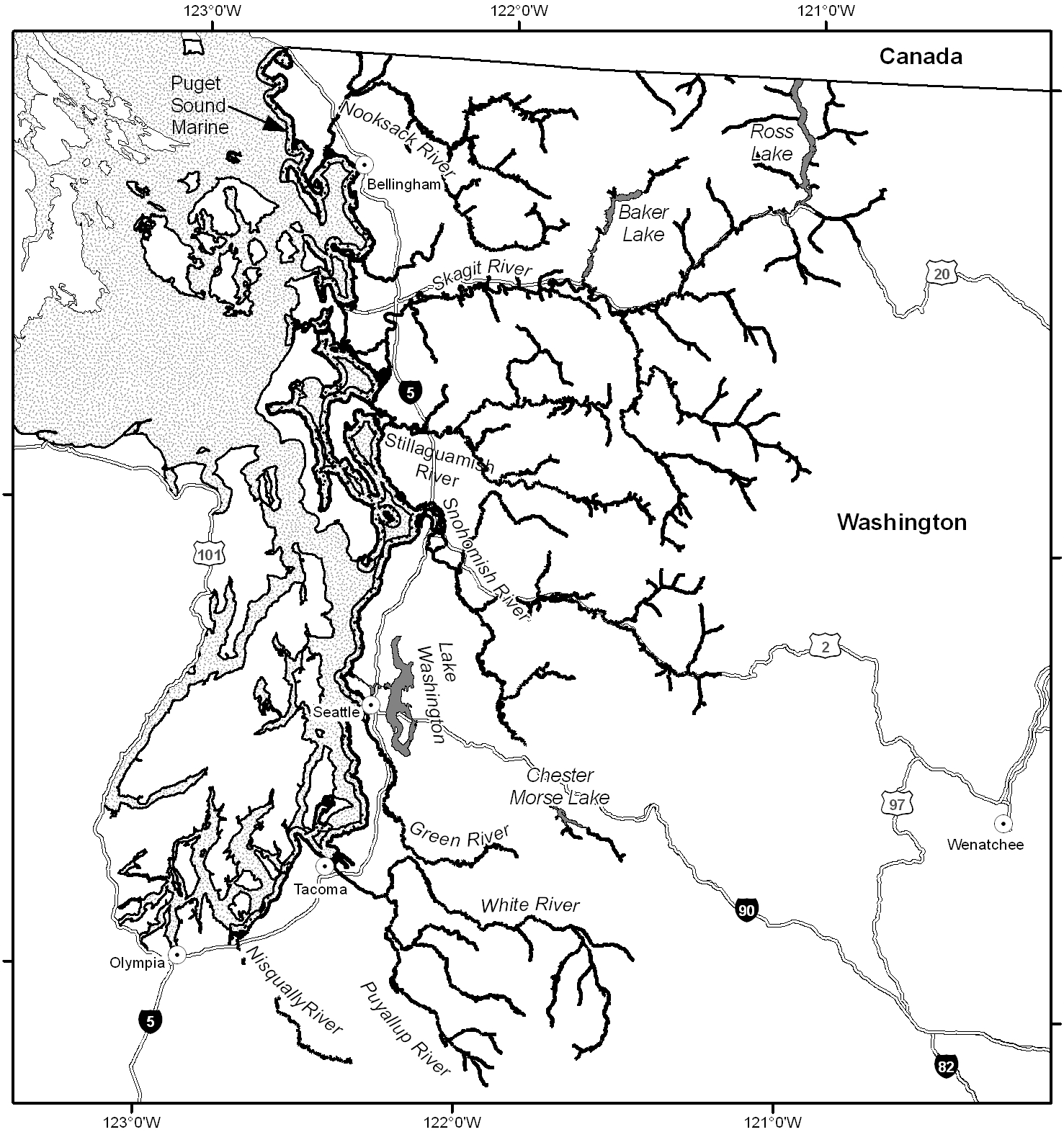
(*3*) Fee lands, either within or outside the reservation boundaries, owned by the tribal government; and

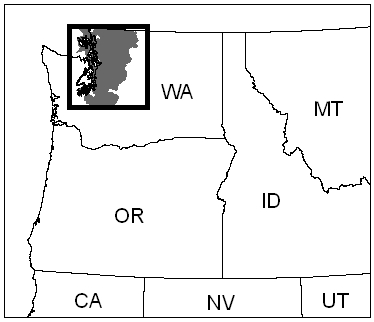
(*4*) Fee lands within the reservation boundaries owned by individual Indians.

(iv) Map of Unit 2, Puget Sound follows:

Critical Habitat for Bull Trout *(Salvelinus confluentus)*

Unit: 2, Puget Sound





N

0 15 30 Miles

0 20 40 Kilometers

For excluded lands in this CHU refer to the section on exclusions in the rule

CH Streams

CH Lakes

CH Marine

City

Road

(10) Unit 3: Lower Columbia River Basins

(i) This unit consists of 119.3 km (74.2 mi) of streams. The unit is located in southwestern Washington.

(ii) Individual waterbodies in the unit are bounded by the following coordinates:

Waterbody Name	Stream Begin Point or Lake Center Latitude	Stream Begin Point or Lake Center Longitude	Stream End Point Latitude	Stream End Point Longitude
Buck Creek	45.865	-121.579	45.781	-121.515
Clearwater Creek	46.278	-121.331	46.276	-121.328
Cougar Creek	46.071	-122.268	46.055	-122.293
Drift Creek	46.023	-122.090	46.008	-122.078
Fish Lake Stream	46.341	-121.370	46.275	-121.313
Klickitat River	46.255	-121.240	45.691	-121.295
Lake Merwin	45.977	-122.466		
Lewis River	45.957	-122.556	46.066	-122.020
Little Muddy Creek	46.278	-121.353	46.276	-121.328
Muddy River	46.069	-122.007	46.168	-122.034
Phelps Creek	45.892	-121.566	45.881	-121.518
Pine Creek	46.142	-122.096	46.071	-122.017
Rush Creek	46.055	-121.916	46.075	-121.938
Swift Creek	46.084	-122.200	46.086	-122.204
Swift Reservoir	46.056	-122.114		
Trappers Creek	46.289	-121.363	46.276	-121.336
Two Lakes Stream	46.340	-121.385	46.341	-121.370
Unnamed trib. - off Fish Lake Stream	46.323	-121.438	46.331	-121.360
Unnamed trib. ('P10')	46.123	-122.088	46.120	-122.077
Unnamed trib. ('P7')	46.099	-122.069	46.092	-122.059
Unnamed trib. ('P8')	46.104	-122.064	46.140	-122.082
West Fork Klickitat River	46.276	-121.328	46.242	-121.247
White Salmon River	45.897	-121.504	45.722	-121.523
Yale Lake	46.012	-122.312		

(iii) Waterbodies associated with the following tribal lands and habitat conservation plans (HCPs) totaling 155.6 km (96.7 mi) of streams and 4,856.1 ha (11,999.7 ac) of lakes and reservoirs have been excluded from critical habitat designation under section 4(b)(2) of the Act in this unit:

(A) Waterbodies within the geographic area covered by the Washington State Forest Practices Habitat Conservation Plan (HCP) , including portions of Klickitat River, Lewis River, and White Salmon River CHSUs;

(B) Waterbodies within the geographic area covered by the Washington Department of Natural Resources HCP, including portions of Klickitat River, Lewis River, and White Salmon River CHSUs; and

(C) Waterbodies within the geographic area covered by the PacifiCorp Lewis River Hydropower Project Conservation Easement, including portions of Lewis River CHSU.

(D) Waterbodies within the areas under management by the Yakama Nation including the Klickitat River CHSU, within reservation boundaries, and waterbodies that are adjacent to:

(*1*) Lands held in trust by the United States for their benefit;

(*2*) Lands held in trust by the United States for any Indian Tribe or individual subject to restrictions by the United States against alienation;

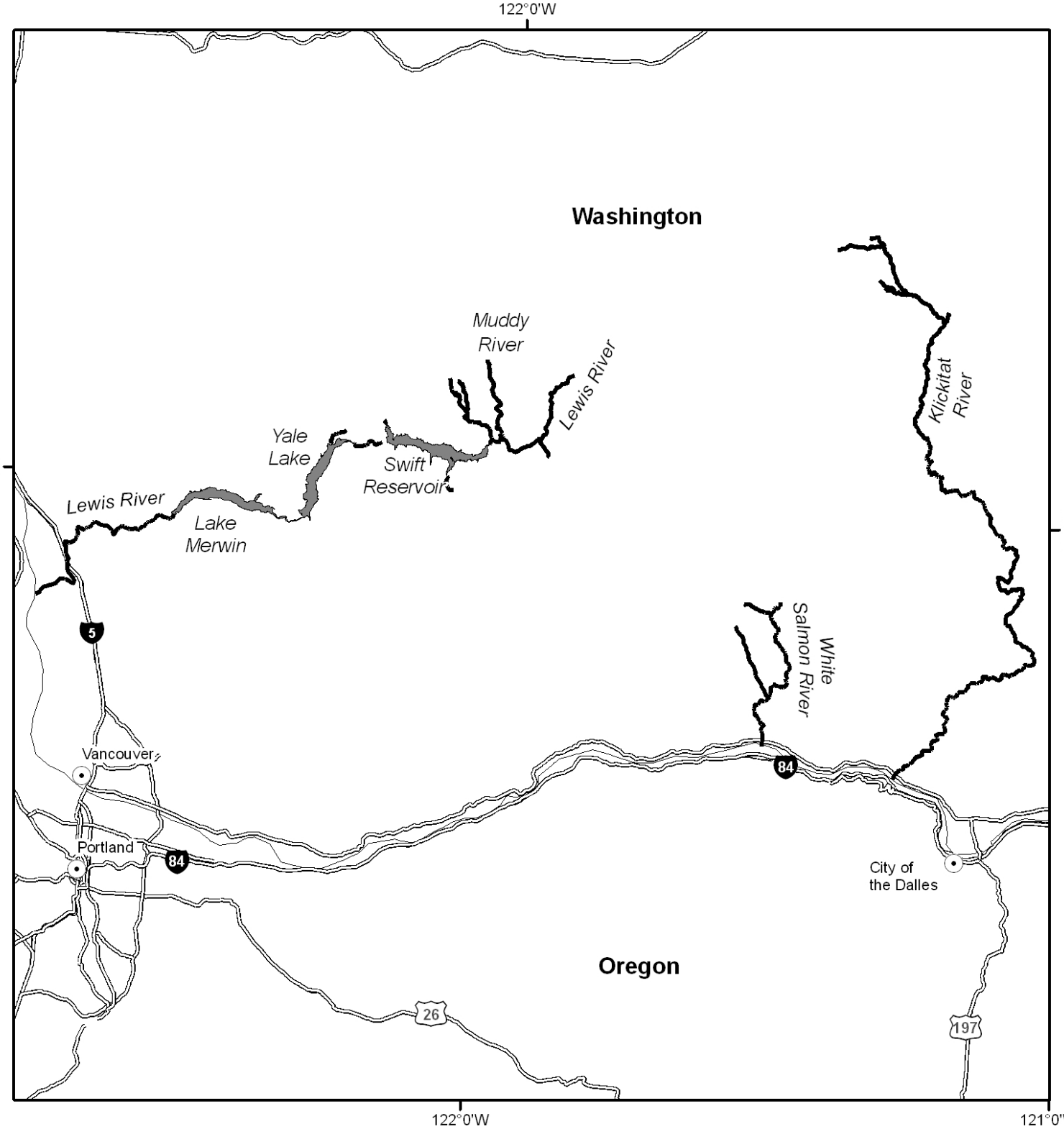
(*3*) Fee lands, either within or outside the reservation boundaries, owned by the tribal government; and

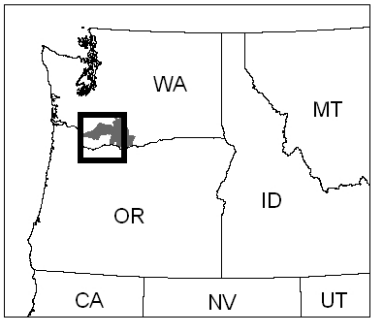
(*4*) Fee lands within the reservation boundaries owned by individual Indians.

(iv) Map of Unit 3, Lower Columbia River Basins follows:

Critical Habitat for Bull Trout *(Salvelinus confluentus)*

Unit: 3, Lower Columbia River Basins





N

0 3.5 7 Miles

0 12.5 25 Kilometers

For excluded lands in this CHU refer to the section on exclusions in the rule

CH Lakes

CH Streams

City

Road

(11) Unit 4: Upper Willamette River

(i) This unit consists of 312.4 km (194.1 mi) of streams and 3,601.5 ha (8,899.5 ac) of lakes and reservoirs. The unit is located in northwestern Oregon.

(ii) Individual waterbodies in the unit are bounded by the following coordinates:

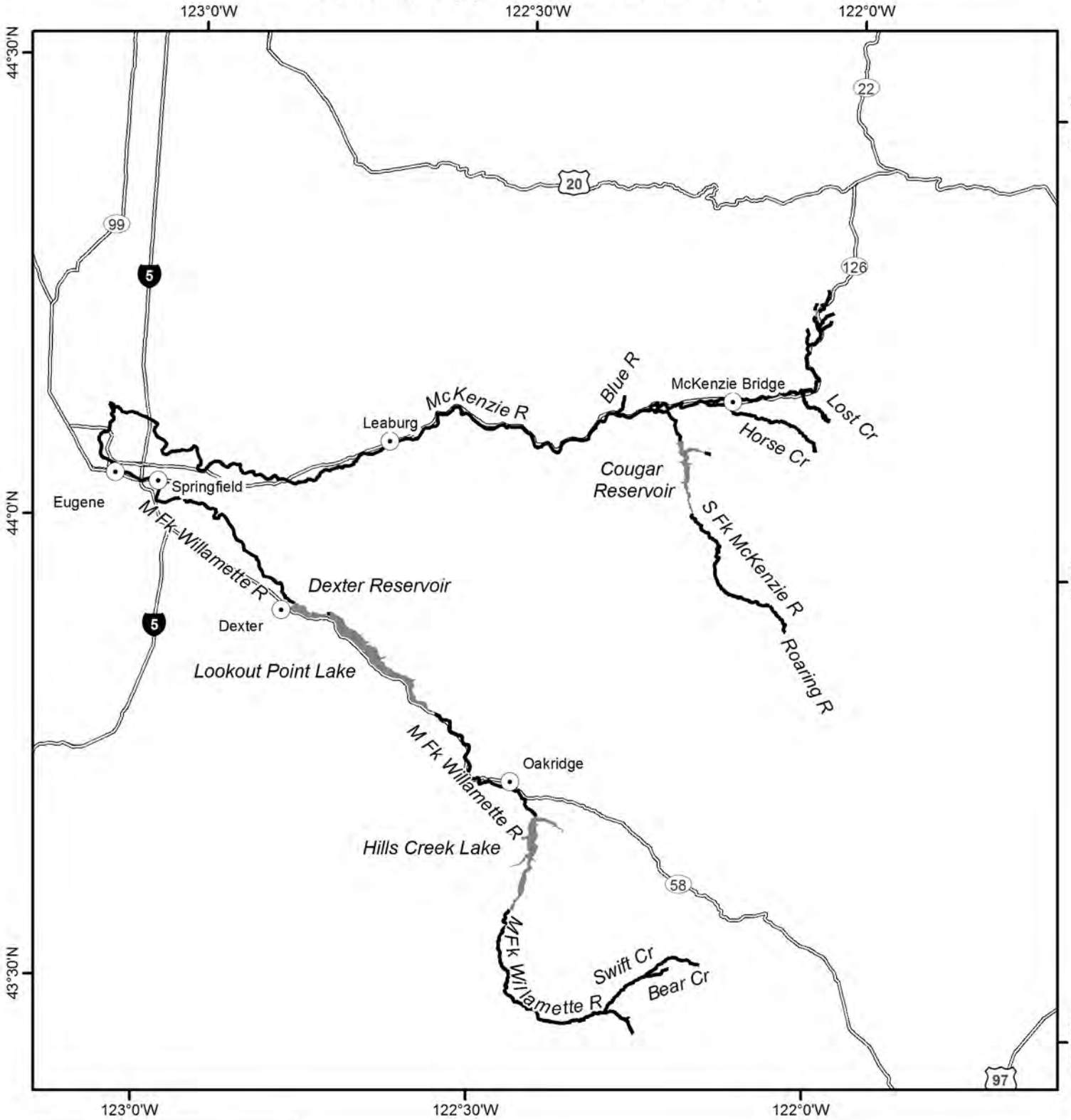
Waterbody Name	Stream Begin Point or Lake Center Latitude	Stream Begin Point or Lake Center Longitude	Stream End Point Latitude	Stream End Point Longitude
Anderson Creek	44.258	-122.043	44.278	-122.022
Bear Creek	43.554	-122.209	43.544	-122.244
Blue River	44.172	-122.329	44.153	-122.344
Carmen-Smith Spawning Channel	44.273	-122.051	44.271	-122.052
Cougar Reservoir	44.100	-122.230		
Deer Creek	44.259	-122.063	44.241	-122.058
Dexter Reservoir	43.915	-122.789		
East Fork Horse Creek	44.170	-122.175	44.176	-122.179
East Fork South Fork McKenzie River	44.117	-122.204	44.116	-122.195
Hills Creek Lake	43.671	-122.427		
Horse Creek	44.125	-122.037	44.170	-122.175
Indigo Creek	43.497	-122.262	43.495	-122.268
Lookout Point Lake	43.872	-122.682		
Lost Creek	44.161	-122.018	44.189	-122.067
McKenzie River	44.190	-122.079	44.285	-122.042
Middle Fork Willamette River	43.481	-122.255	44.022	-123.018
Olallie Creek	44.257	-122.042	44.269	-122.025
Roaring River	43.928	-122.066	43.955	-122.092
Smith River	44.279	-122.051	44.287	-122.049
South Fork McKenzie River	43.955	-122.092	44.159	-122.296
Sweetwater Creek	44.283	-122.035	44.279	-122.046
Swift Creek	43.560	-122.163	43.502	-122.300
Trail Bridge Reservoir	44.277	-122.048		
West Fork Horse Creek	44.170	-122.175	44.172	-122.207
White Branch	44.160	-122.019	44.167	-122.030
Willamette River	44.022	-123.018	44.125	-123.107

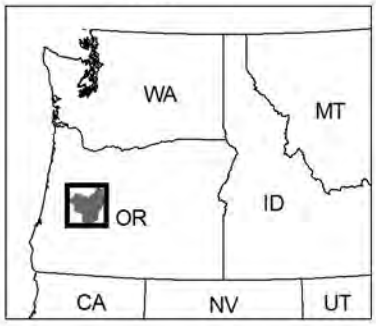
(iii) No waterbodies are excluded from critical habitat designation in this unit.

(iv) Map of Unit 4, Upper Willamette River follows:

Critical Habitat for Bull Trout *(Salvelinus confluentus)*

Unit: 4, Upper Willamette River





N

0 5 10 Miles

0 12.5 25 Kilometers

CH Lakes

CH Streams

City

Road

(12) Unit 5: Hood River Basin

(i) This unit consists of 128.1 km (79.6 mi) of streams and 36.9 ha (91.1 ac) of lakes and reservoirs. The unit is located in northcentral Oregon.

(ii) Individual waterbodies in the unit are bounded by the following coordinates:

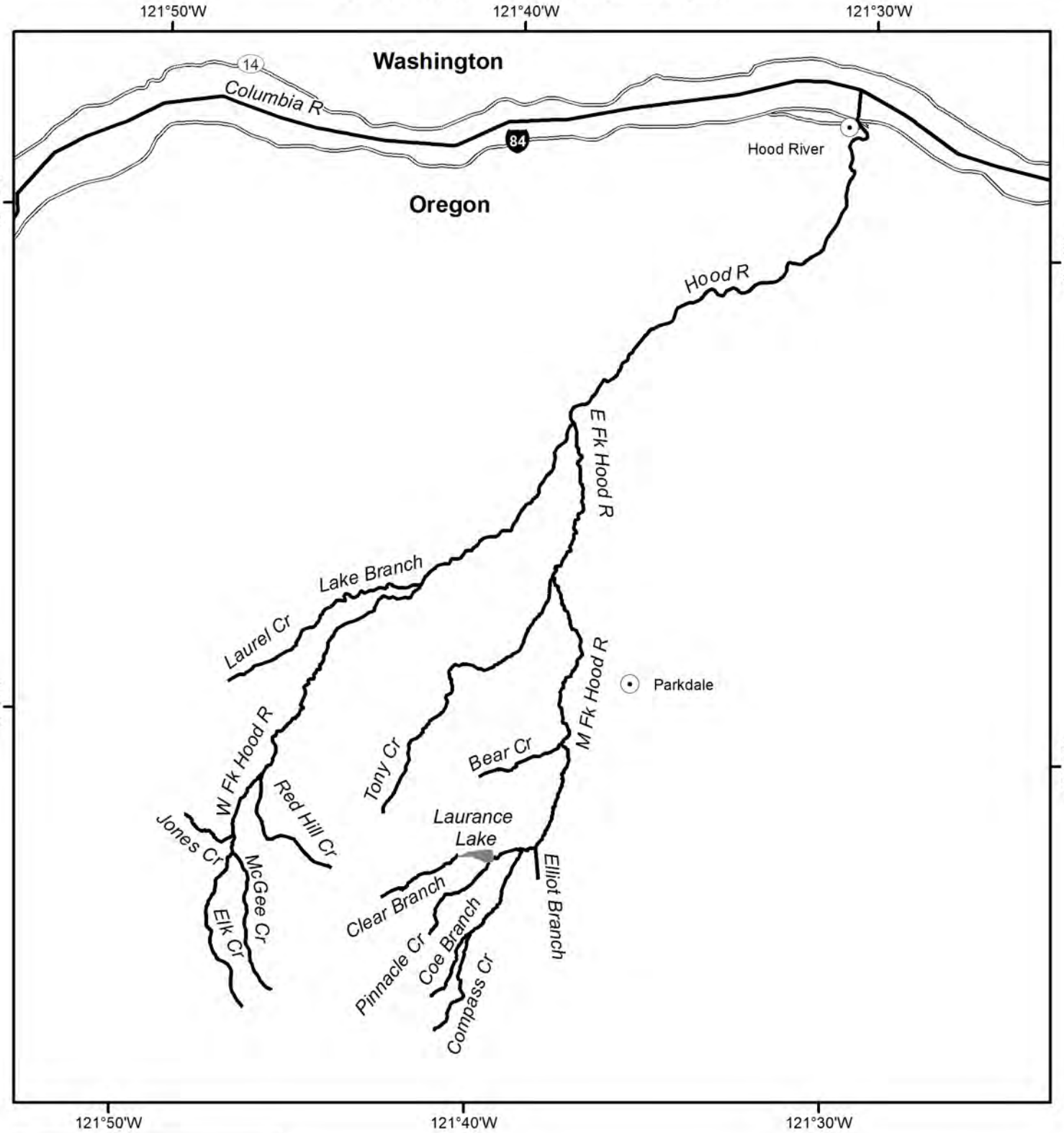
Waterbody Name	Stream Begin Point or Lake Center Latitude	Stream Begin Point or Lake Center Longitude	Stream End Point Latitude	Stream End Point Longitude
Bear Creek	45.499	-121.630	45.486	-121.668
Clear Branch	45.444	-121.711	45.463	-121.646
Coe Branch	45.413	-121.685	45.463	-121.646
Compass Creek	45.401	-121.683	45.434	-121.668
East Fork Hood River	45.575	-121.627	45.605	-121.633
Elk Creek	45.405	-121.773	45.456	-121.782
Elliot Branch	45.464	-121.640	45.453	-121.638
Hood River	45.605	-121.633	45.720	-121.507
Jones Creek	45.462	-121.782	45.468	-121.806
Lake Branch	45.539	-121.743	45.549	-121.700
Laurance Lake	45.460	-121.665		
Laurel Creek	45.513	-121.789	45.539	-121.743
McGee Creek	45.456	-121.782	45.411	-121.760
Middle Fork Hood River	45.463	-121.646	45.575	-121.627
Pinnacle Creek	45.433	-121.687	45.458	-121.661
Red Hill Creek	45.453	-121.735	45.483	-121.770
Tony Creek	45.553	-121.639	45.472	-121.712
Unnamed - Off Clear Branch	45.448	-121.701	45.447	-121.702
West Fork Hood River	45.456	-121.782	45.605	-121.633

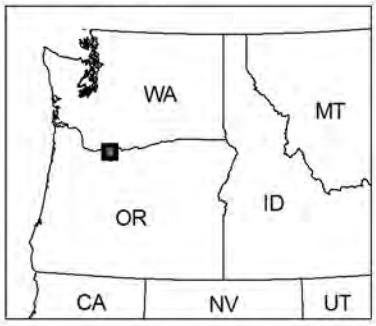
(iii) No waterbodies are excluded from critical habitat designation in this unit.

(iv) Map of Unit 5, Hood River Basin follows:

Critical Habitat for Bull Trout *(Salvelinus confluentus)*

Unit: 5, Hood River Basin





N

0 2.5 5 Miles

0 4.5 9 Kilometers

CH Lakes

CH Streams

City

Road

(13) Unit 6: Lower Deschutes River Basin

(i) This unit consists of 232.8 km (139.7 mi) of streams and 1,224.9 ha (3,026.8 ac) of lakes and reservoirs. The unit is located in northcentral Oregon.

(ii) Individual waterbodies in the unit are bounded by the following coordinates:

Waterbody Name	Stream Begin Point or Lake Center Latitude	Stream Begin Point or Lake Center Longitude	Stream End Point Latitude	Stream End Point Longitude
Abbot Creek	44.544	-121.671	44.570	-121.621
Blue Lake	44.413	-121.769		
Brush Creek	44.543	-121.707	44.504	-121.659
Bunch Grass Creek	44.993	-121.647	44.987	-121.644
Candle Creek	44.583	-121.678	44.576	-121.619
Canyon Creek	44.502	-121.742	44.501	-121.643
Crooked River	44.393	-121.193	44.501	-121.286
Deschutes River	44.373	-121.292	45.639	-120.915
Heising Spring	44.491	-121.652	44.493	-121.649
Jack Creek	44.472	-121.727	44.493	-121.648
Jefferson Creek	44.625	-121.691	44.577	-121.620
Lake Billy Chinook	44.568	-121.308		
Lake Billy Chinook	44.593	-121.370		
Lake Creek	44.426	-121.727	44.436	-121.703
Link Creek	44.415	-121.766	44.419	-121.756
Metolius River	44.434	-121.638	44.619	-121.469
Middle Fork Lake Creek	44.436	-121.703	44.453	-121.643
Roaring Creek	44.527	-121.709	44.508	-121.687
Shitike Creek	44.748	-121.682	44.762	-121.228
South Fork Lake Creek	44.435	-121.705	44.442	-121.662
Spring Creek	44.457	-121.644	44.451	-121.651
Street Creek	44.590	-121.506	44.599	-121.454
Suttle Lake	44.422	-121.741		
Trout Creek	44.803	-121.069	44.821	-121.089
Unnamed - Off Canyon Creek	44.527	-121.679	44.504	-121.658
Unnamed - Off Jack Creek	44.476	-121.725	44.476	-121.723
Unnamed - Off Jack Creek	44.477	-121.724	44.476	-121.723
Unnamed - Off Jack Creek	44.477	-121.724	44.477	-121.724
Unnamed - Off Jefferson Creek	44.634	-121.699	44.625	-121.691
Unnamed - Off Roaring Creek	44.522	-121.700	44.516	-121.700
Unnamed - Off Roaring Creek	44.522	-121.700	44.521	-121.700
Unnamed - Off Roaring Creek	44.516	-121.712	44.516	-121.700
Warm Springs River 1	44.941	-121.431	44.941	-121.431
Warm Springs River 2	44.969	-121.585	44.969	-121.585
Whitewater River	44.704	-121.728	44.670	-121.546
Whychus Creek	44.460	-121.336	44.417	-121.389

(iii) Waterbodies associated with the following tribal lands totaling 230.4 km (143.2 mi) of streams and 445.3 ha (1,100.4 ac) of lakes and reservoirs have been excluded from critical habitat designation under section 4(b)(2) of the Act in this unit. These are waterbodies within the areas under management by the Confederated Tribes of the Warm Springs Reservation within reservation boundaries, and waterbodies that are adjacent to:

(A) Lands held in trust by the United States for their benefit;

(B) Lands held in trust by the United States for any Indian Tribe or individual subject to restrictions by the United States against alienation;

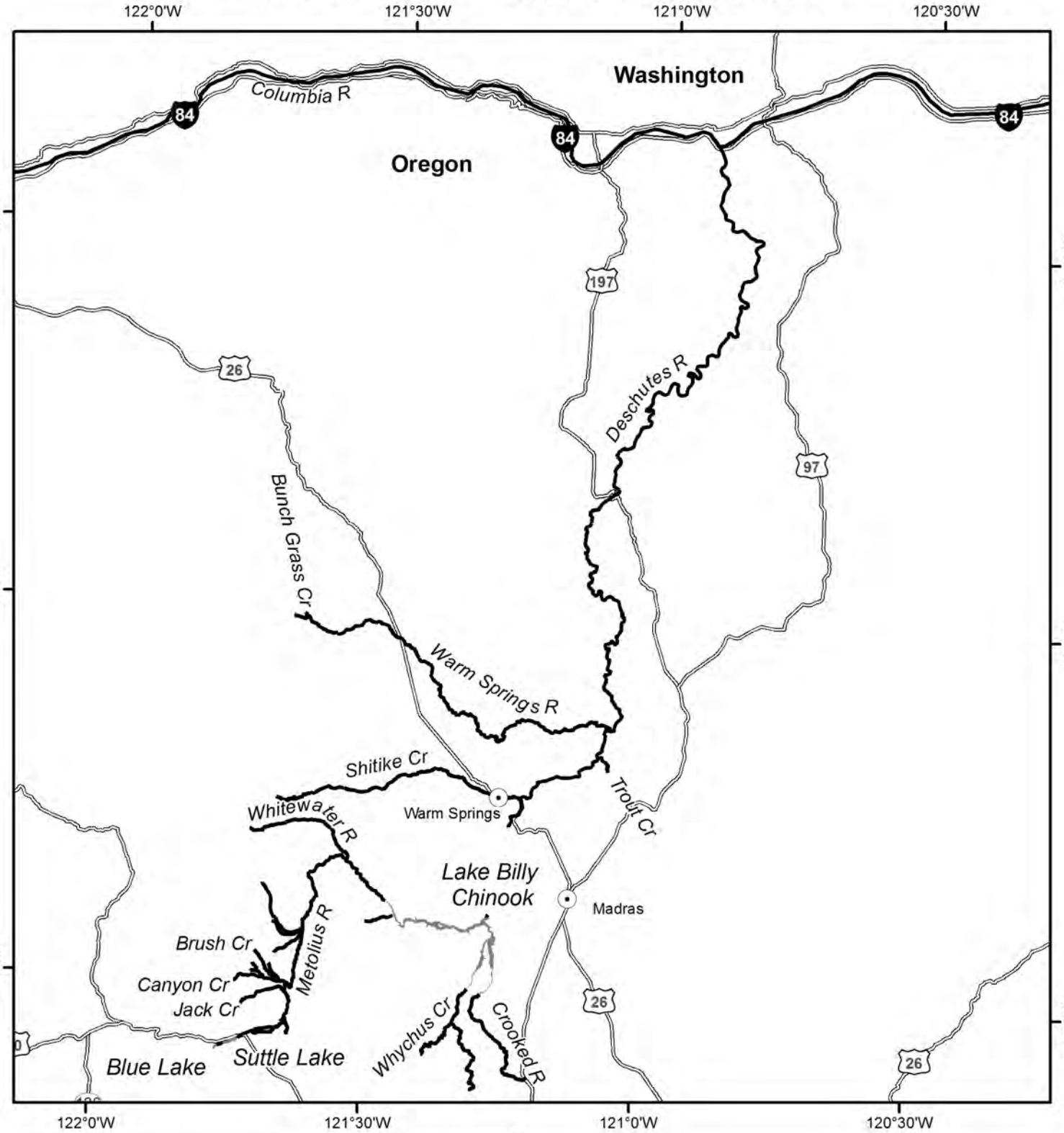
(C) Fee lands, either within or outside the reservation boundaries, owned by the tribal government; and

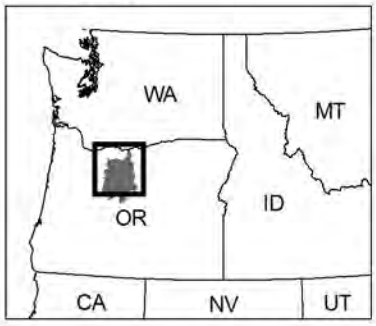
(D) Fee lands within the reservation boundaries owned by individual Indians.

(iv) Map of Unit 6, Lower Deschutes River Basin follows:

Critical Habitat for Bull Trout *(Salvelinus confluentus)*

Unit: 6, Lower Deschutes River Basin





N

0 10 20 Miles

0 15 30 Kilometers

For excluded lands in this CHU refer to the section on exclusions in the rule.

CH Lakes

CH Streams

City

Road

(14) Unit 7: Odell Lake

(i) This unit consists of 27.4 km (17.0 mi) of streams and 1,387.1 ha (3,427.6 ac) of lakes and reservoirs. The unit is located in northcentral Oregon.

(ii) Individual waterbodies in the unit are bounded by the following coordinates:

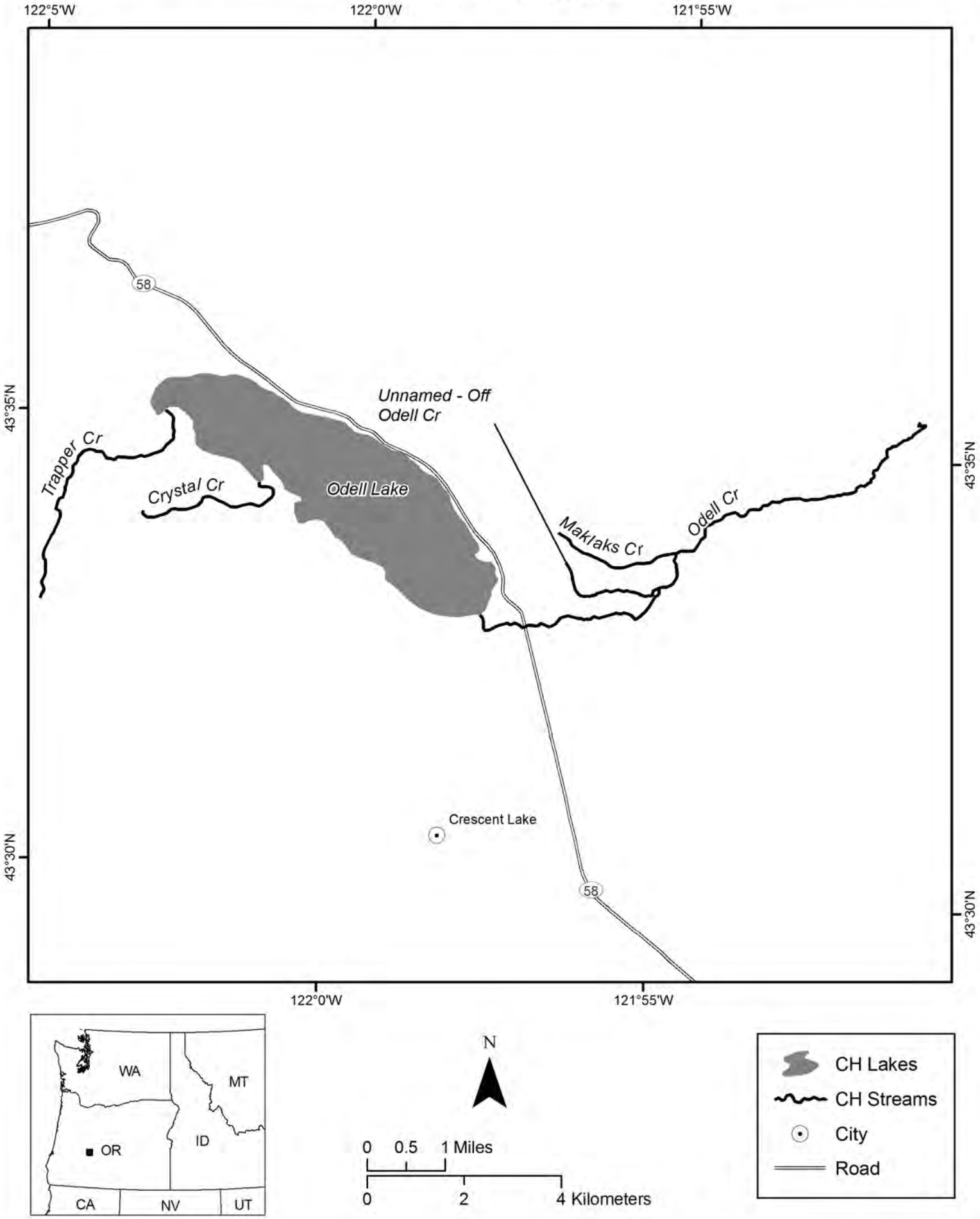
Waterbody Name	Stream Begin Point or Lake Center Latitude	Stream Begin Point or Lake Center Longitude	Stream End Point Latitude	Stream End Point Longitude
Crystal Creek	43.566	-122.052	43.572	-122.022
Maklaks Creek	43.566	-121.945	43.564	-121.915
Odell Creek	43.550	-121.964	43.591	-121.855
Odell Lake	43.572	-122.001		
Trapper Creek	43.548	-122.076	43.585	-122.048
Unnamed - Off Odell Creek	43.557	-121.919	43.561	-121.943

(iii) No waterbodies are excluded from critical habitat designation in this unit.

(iv) Map of Unit 7, Odell Lake follows:

Critical Habitat for Bull Trout *(Salvelinus confluentus)*

Unit: 7, Odell Lake



(15) Unit 8: Mainstem Lower Columbia River

(i) This unit consists of 340.4 km (211.5 mi) of streams. The unit is located along the border between Oregon and Washington.

(ii) Individual waterbodies in the unit are bounded by the following coordinates:

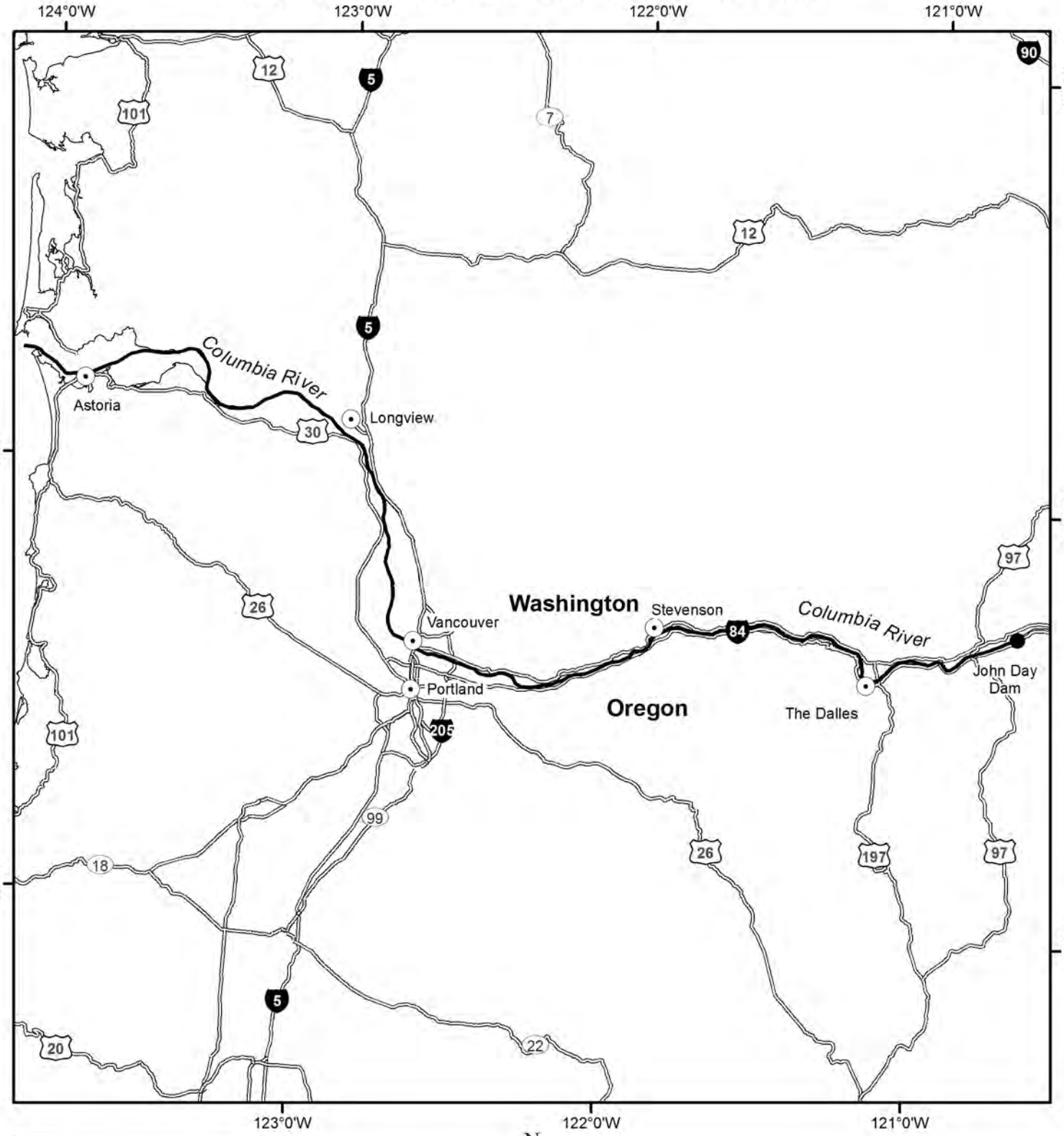
Waterbody Name	Stream Begin Point or Lake Center Latitude	Stream Begin Point or Lake Center Longitude	Stream End Point Latitude	Stream End Point Longitude
Columbia River	45.645	-121.933	45.800	-122.787

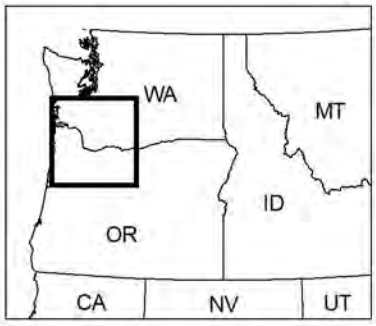
(iii) Waterbodies associated with the following habitat conservation plan (HCP) totaling 1.7 km (1.1 mi) of streams have been excluded from critical habitat designation under section 4(b)(2) of the Act in this unit. These are waterbodies within the geographic area covered by the Washington State Forest Practices Habitat Conservation Plan (HCP).

(iv) Map of Unit 8, Mainstem Lower Columbia River follows:

Critical Habitat for Bull Trout *(Salvelinus confluentus)*

Unit: 8, Mainstem Lower Columbia River





N

0 15 30 Miles

0 25 50 Kilometers

For excluded lands in this CHU refer to the section on exclusions in the rule.

CH Streams

City

Road

(16) Unit 9: Klamath River Basin

(i) This unit consists of 445.2 km (276.6 mi) of streams and 3,775.5 ha (9,329.4 ac) of lakes and reservoirs. The unit is located in southwestern Oregon.

(ii) Individual waterbodies in the unit are bounded by the following coordinates:

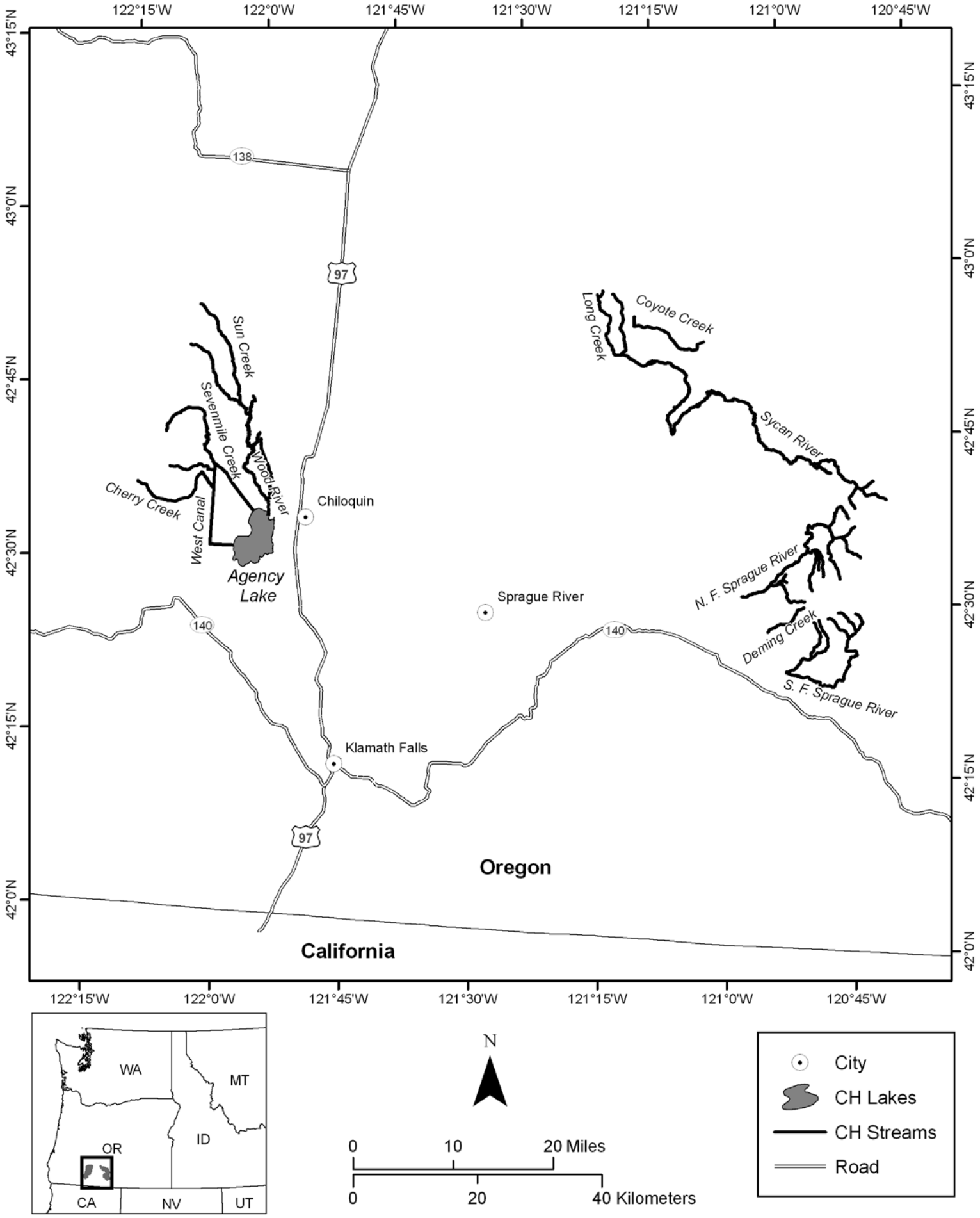
Waterbody Name	Stream Begin Point or Lake Center Latitude	Stream Begin Point or Lake Center Longitude	Stream End Point Latitude	Stream End Point Longitude
Agency Lake	42.541	-121.964		
Annie Creek	42.721	-121.990	42.817	-122.113
Boulder Creek	42.660	-120.784	42.673	-120.762
Boulder Creek	42.517	-120.952	42.494	-120.885
Brownsworth Creek	42.392	-120.914	42.469	-120.855
Calahan Creek	42.838	-121.267	42.924	-121.292
Camp Creek	42.445	-120.795	42.471	-120.838
Cherry Creek	42.615	-122.201	42.631	-122.074
Corral Creek	42.455	-120.783	42.480	-120.819
Coyote Creek	42.862	-121.109	42.893	-121.247
Crane Creek	42.638	-122.052	42.642	-122.065
Crooked Creek	42.598	-121.946	42.686	-121.965
Dead Cow Creek	42.590	-120.837	42.562	-120.781
Deming Creek	42.448	-120.954	42.486	-120.886
Dixon Creek	42.518	-120.938	42.532	-120.925
Fort Creek	42.695	-121.968	42.672	-121.980
Fourmile Creek	42.612	-122.051	42.633	-122.077
Gearhart Creek	42.566	-120.887	42.510	-120.872
Gold Creek	42.590	-120.819	42.606	-120.795
Hole Creek	42.567	-120.870	42.541	-120.861
Leonard Creek	42.413	-120.868	42.465	-120.865
Long Creek	42.726	-121.160	42.831	-121.200
North Fork Sprague River	42.497	-121.009	42.557	-120.840
Nottin Creek	42.570	-120.871	42.532	-120.851
Rifle Creek	42.694	-120.881	42.682	-120.846
School Creek	42.604	-120.847	42.618	-120.808
Sevenmile Canal	42.582	-121.971	42.646	-122.052
Sevenmile Creek	42.646	-122.052	42.690	-122.151
South Fork Sprague River	42.392	-120.914	42.481	-120.785
South Fork Sycan River	42.663	-120.794	42.633	-120.796
Sun Creek	42.734	-122.009	42.876	-122.100
Sycan River	42.647	-120.735	42.784	-121.095
Threemile Creek	42.642	-122.065	42.640	-122.139
Unnamed - Off Dixon Creek	42.523	-120.931	42.521	-120.922
Unnamed - Off Long Creek	42.873	-121.299	42.870	-121.296
West Canal	42.646	-122.052	42.531	-122.005
Wood River	42.577	-121.941	42.747	-121.985

(iii) No waterbodies are excluded from critical habitat designation in this unit.

(iv) Map of Unit 9, Klamath River Basin follows:

Critical Habitat for Bull Trout *(Salvelinus confluentus)*

Unit: 9, Klamath River Basin



(17) Unit 10: Upper Columbia River Basins

(i) This unit consists of 931.8 km (579.0 mi) of streams and 1,033.2 ha (2,553.1 ac) of lakes and reservoirs. The unit is located in northcentral Washington.

(ii) Individual waterbodies in the unit are bounded by the following coordinates:

Waterbody Name	Stream Begin Point or Lake Center Latitude	Stream Begin Point or Lake Center Longitude	Stream End Point Latitude	Stream End Point Longitude
Alder Creek	47.845	-120.666	47.919	-120.647
Alpine Creek	48.084	-120.864	48.083	-120.866
Andrews Creek	48.782	-120.108	48.787	-120.113
Beaver Creek	48.327	-120.066	48.492	-119.993
Black Lake	48.829	-120.208		
Blue Buck Creek	48.486	-120.005	48.553	-119.963
Buck Creek	48.104	-120.878	48.106	-120.886
Buttermilk Creek	48.363	-120.339	48.340	-120.303
Canyon Creek	47.907	-120.895	47.891	-120.965
Cedar Creek	48.589	-120.471	48.566	-120.475
Chelan River	47.803	-119.980	47.812	-119.985
Chewuch River	48.476	-120.183	48.844	-120.023
Chikamin Creek	47.904	-120.731	47.985	-120.718
Chiwaukum Creek	47.679	-120.728	47.715	-120.839
Chiwawa River	47.788	-120.660	48.104	-120.878
Cougar Lake	48.881	-120.466		
Crater Creek	48.214	-120.209	48.215	-120.270
Diamond Creek	48.849	-120.422	48.855	-120.416
Drake Creek	48.781	-120.396	48.787	-120.389
Early Winters Creek	48.601	-120.438	48.503	-120.625
East Fork Buttermilk Creek	48.340	-120.303	48.296	-120.308
Eightmile Creek	48.604	-120.163	48.804	-120.338
Entiat River	47.660	-120.218	47.920	-120.507
Eureka Creek	48.700	-120.492	48.709	-120.506
First Hidden Lake	48.899	-120.487		
Foggy Dew Creek	48.204	-120.190	48.161	-120.297
French Creek	47.628	-120.963	47.593	-121.042
Goat Creek	48.574	-120.379	48.730	-120.360
Gold Creek	48.188	-120.095	48.185	-120.116
Henry Creek	47.768	-120.991	47.754	-120.996
Huckleberry Creek	48.569	-120.473	48.511	-120.450
Icicle Creek	47.550	-120.679	47.558	-120.672
Ingalls Creek	47.463	-120.661	47.448	-120.859
Jack Creek	47.608	-120.900	47.529	-120.952
James Creek	48.077	-120.858	48.075	-120.861
Lake Creek	48.750	-120.137	48.848	-120.239
Lake Wenatchee	47.823	-120.778		
Leland Creek	47.662	-121.041	47.612	-121.089
Lightning Creek	48.451	-119.999	48.453	-119.996
Little Bridge Creek	48.379	-120.286	48.449	-120.432
Little Wenatchee River	47.827	-120.819	47.913	-121.094
Lost River	48.650	-120.512	48.896	-120.486
Mad River	47.736	-120.363	47.864	-120.608
Methow River	48.050	-119.894	48.651	-120.513
Middle Hidden Lake	48.908	-120.489		
Mill Creek	47.777	-121.011	47.772	-121.021
Monument Creek	48.732	-120.449	48.803	-120.495
Napeequa River	47.921	-120.897	47.931	-120.879
Nason Creek	47.809	-120.716	47.784	-121.028
Negro Creek	47.444	-120.662	47.418	-120.797
North Creek	48.454	-120.563	48.462	-120.559
North Fork Gold Creek	48.185	-120.116	48.238	-120.283
North Fork Wolf Creek	48.485	-120.347	48.530	-120.424
Panther Creek	47.941	-120.929	47.938	-120.943
Peshastin Creek	47.558	-120.574	47.444	-120.662
Phelps Creek	48.070	-120.853	48.080	-120.839
Ptarmigan Creek	48.891	-120.482	48.885	-120.483
Rainy Creek	47.852	-120.955	47.816	-121.075
Rattlesnake Creek	48.648	-120.566	48.651	-120.571
Reynolds Creek	48.406	-120.479	48.404	-120.490
Robinson Creek	48.659	-120.538	48.673	-120.539
Rock Creek	47.963	-120.796	48.037	-120.763
South Creek	48.438	-120.529	48.428	-120.568
Stormy Creek	47.822	-120.422	47.867	-120.360
Tillicum Creek	47.747	-120.394	47.723	-120.439

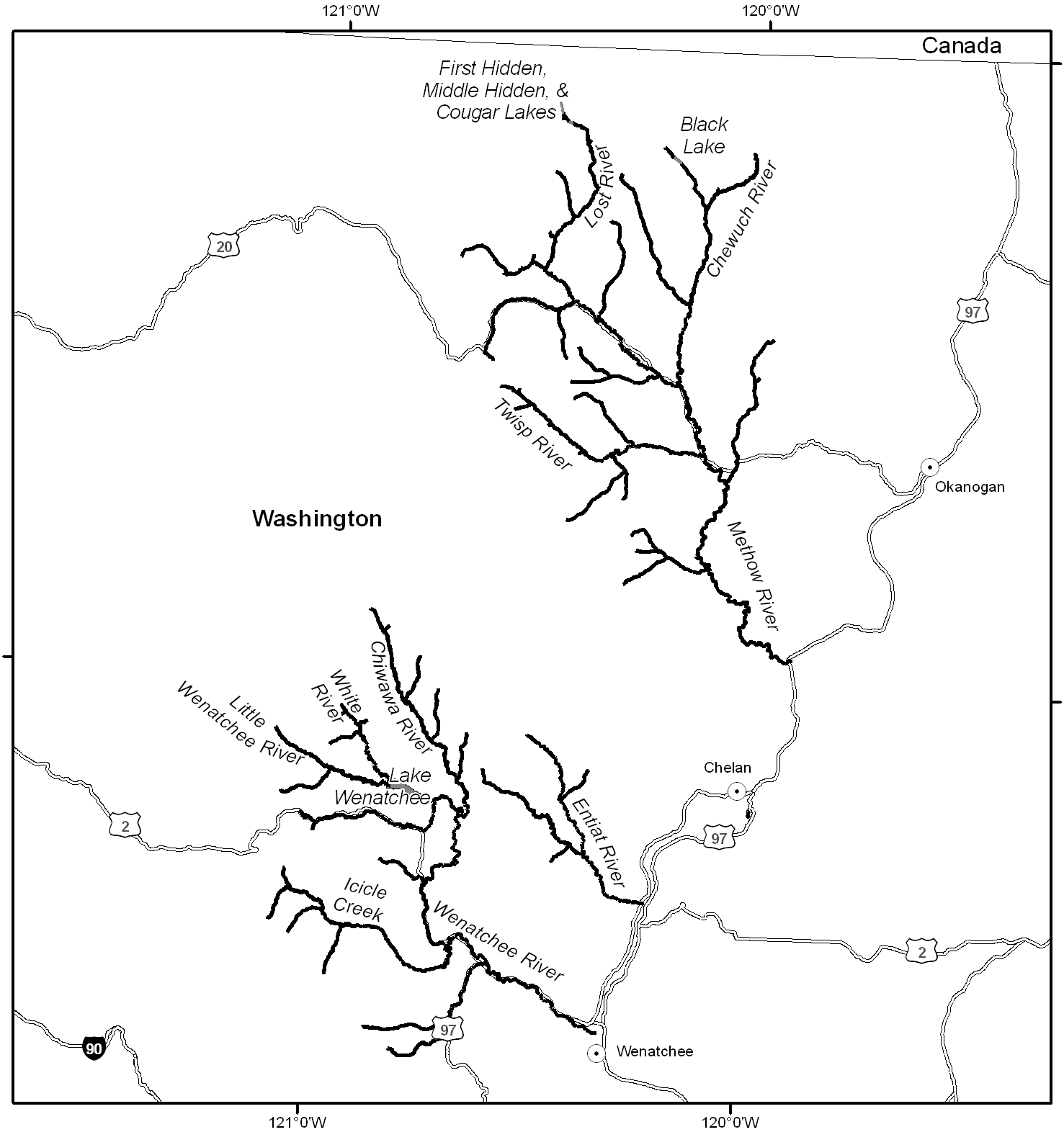
Waterbody Name	Stream Begin Point or Lake Center Latitude	Stream Begin Point or Lake Center Longitude	Stream End Point Latitude	Stream End Point Longitude
Trout Creek	48.640	-120.599	48.664	-120.711
Twisp River	48.369	-120.119	48.464	-120.606
Unnamed stream	47.592	-120.661	47.590	-120.663
Unnamed stream	47.578	-120.666	47.575	-120.670
Unnamed stream	47.834	-120.875	47.838	-120.900
Unnamed stream	47.837	-120.878	47.835	-120.885
W. Fork Buttermilk Creek	48.340	-120.303	48.259	-120.437
War Creek	48.361	-120.396	48.362	-120.411
Wenatchee River	47.456	-120.317	47.808	-120.728
West Fork Methow River	48.648	-120.512	48.641	-120.609
White River	47.834	-120.816	47.953	-120.940
Wolf Creek	48.491	-120.232	48.476	-120.441

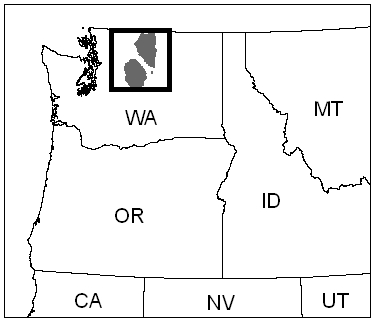
(iii) Waterbodies associated with the following habitat conservation plan (HCP) totaling 119.7 km (74.4 mi) of streams have been excluded from critical habitat designation under section 4(b)(2) of the Act in this unit. These are waterbodies within the geographic area covered by the Washington State Forest Practices Habitat Conservation Plan (HCP) , including portions of Entiat River, Methow River, and Wenatchee River CHSUs.

(iv) Map of Unit 10, Upper Columbia River Basins follows:

Critical Habitat for Bull Trout *(Salvelinus confluentus)*

Unit: 10, Upper Columbia River Basins





N

0 10 20 Miles

0 15 30 Kilometers

For excluded lands in this CHU refer to the section on exclusions in the rule

City

CH Lakes

CH Streams

Road

(18) Unit 11: Yakima River

(i) This unit consists of 896.9 km (557.3 mi) of streams and 6,285.2 ha (15,530.9 ac) of lakes and reservoirs. The unit is located in central Washington.

(ii) Individual waterbodies in the unit are bounded by the following coordinates:

Waterbody Name	Stream Begin Point or Lake Center Latitude	Stream Begin Point or Lake Center Longitude	Stream End Point Latitude	Stream End Point Longitude
Ahtanum Creek	46.529	-120.473	46.523	-120.855
American River	46.976	-121.158	46.901	-121.416
Bear Creek	46.538	-121.261	46.540	-121.282
Box Canyon Creek	47.360	-121.244	47.377	-121.259
Bumping Lake	46.851	-121.328		
Bumping River	46.831	-121.378	46.868	-121.300
Camp Creek	46.571	-121.243	46.579	-121.266
Cle Elum Lake	47.290	-121.103		
Cle Elum River	47.177	-120.991	47.589	-121.162
Clear Lake	46.629	-121.281		
Cold Creek	47.368	-121.394	47.352	-121.455
Cooper Lake	47.426	-121.176		
Cooper River	47.390	-121.099	47.455	-121.214
Cowiche Creek	46.628	-120.569	46.647	-120.682
Crow Creek	47.015	-121.134	47.017	-121.318
Deep Creek	46.844	-121.317	46.804	-121.322
DeRoux Creek	47.419	-120.941	47.442	-120.980
Dog Creek	46.787	-121.169	46.793	-121.178
Easton Lake	47.248	-121.195		
Fall Creek	46.586	-121.038	46.595	-121.060
Fortune Creek	47.477	-121.047	47.469	-120.965
Gold Creek	47.475	-121.318	47.390	-121.384
Grey Creek	46.591	-121.223	46.594	-121.226
Hindoo Creek	46.785	-121.164	46.781	-121.183
Hyas Lake	47.567	-121.121		
Indian Creek	46.696	-121.301	46.641	-121.250
Jack Creek	47.319	-120.856	47.334	-120.744
Jungle Creek	47.333	-120.856	47.333	-120.925
Kachess Lake	47.316	-121.228		
Kachess River	47.251	-121.201	47.429	-121.223
Keechelus Lake	47.349	-121.368		
Kettle Creek	46.941	-121.328	46.916	-121.342
Little Naches River	46.989	-121.095	47.089	-121.282
Little Rattlesnake Creek	46.814	-120.949	46.801	-120.948
Little Wildcat Creek	46.731	-121.236	46.687	-121.267
Middle Fork Ahtanum Creek	46.518	-121.015	46.506	-121.180
Middle Fork Teanaway River	47.257	-120.898	47.419	-120.994
Mineral Creek	47.420	-121.241	47.422	-121.246
Naches River	46.630	-120.515	46.989	-121.095
North Fork Ahtanum Creek	46.523	-120.855	46.538	-121.212
North Fork Little Naches River	47.089	-121.282	47.094	-121.392
North Fork Rattlesnake Creek	46.810	-121.068	46.841	-121.170
North Fork Taneaum Creek	47.112	-120.933	47.109	-121.145
North Fork Teanaway River	47.251	-120.878	47.454	-120.966
North Fork Tieton River	46.508	-121.436	46.628	-121.271
Oak Creek	46.724	-120.813	46.735	-120.924
Pileup Creek	47.045	-121.183	47.090	-121.124
Quartz Creek	47.017	-121.135	47.082	-121.109
Rattlesnake Creek	46.820	-120.930	46.759	-121.316
Reynolds Creek	46.619	-120.882	46.601	-121.068
Rimrock Lake	46.639	-121.180		
Rock Creek	46.585	-121.025	46.588	-121.079
Shellneck Creek	46.531	-121.159	46.515	-121.188
Short And Dirty Creek	46.617	-121.150	46.616	-121.149
South Fork Ahtanum Creek	46.523	-120.855	46.454	-121.119
South Fork Cowiche Creek	46.647	-120.682	46.566	-121.124
South Fork Little Naches River	47.066	-121.227	47.020	-121.392
South Fork Taneaum Creek	47.112	-120.933	47.091	-121.030
South Fork Tieton River	46.627	-121.133	46.496	-121.315
Spruce Creek	46.590	-121.219	46.586	-121.212
Stafford Creek	47.347	-120.849	47.398	-120.802
Swauk Creek	47.123	-120.738	47.158	-120.739
Taneaum Creek	47.092	-120.709	47.112	-120.933
Teanaway River	47.167	-120.835	47.257	-120.898
Tieton River	46.746	-120.787	46.656	-121.130
Timber Creek	46.913	-121.386	46.907	-121.382

Waterbody Name	Stream Begin Point or Lake Center Latitude	Stream Begin Point or Lake Center Longitude	Stream End Point Latitude	Stream End Point Longitude
Union Creek	46.932	-121.358	46.937	-121.362
Unnamed stream	46.545	-121.388	46.550	-121.403
Waptus Lake	47.503	-121.178		
Waptus River	47.419	-121.088	47.540	-121.241
Yakima River	46.254	-119.228	47.322	-121.340

(iii) Waterbodies associated with the following tribal lands or habitat conservation plans (HCPs) totaling 288.7 km (179.4 mi) of streams have been excluded from critical habitat designation under section 4(b)(2) of the Act in this unit:

(A) Waterbodies within the geographic area covered by the Washington State Forest Practices Habitat Conservation Plan (HCP) , including portions of the Yakima River Critical Habitat Unit (CHU);

(B) Waterbodies within the geographic area covered by the Plum Creek Central Cascades HCP, including portions of the Yakima River CHU; and

(C) Waterbodies within the areas under management by the Yakama Tribe, including portions of Yakama River CHU and Klickitat River CHSU, within reservation boundaries, and waterbodies that are adjacent to:

(*1*) Lands held in trust by the United States for their benefit;

(*2*) Lands held in trust by the United States for any Indian Tribe or individual subject to restrictions by the United States against alienation;

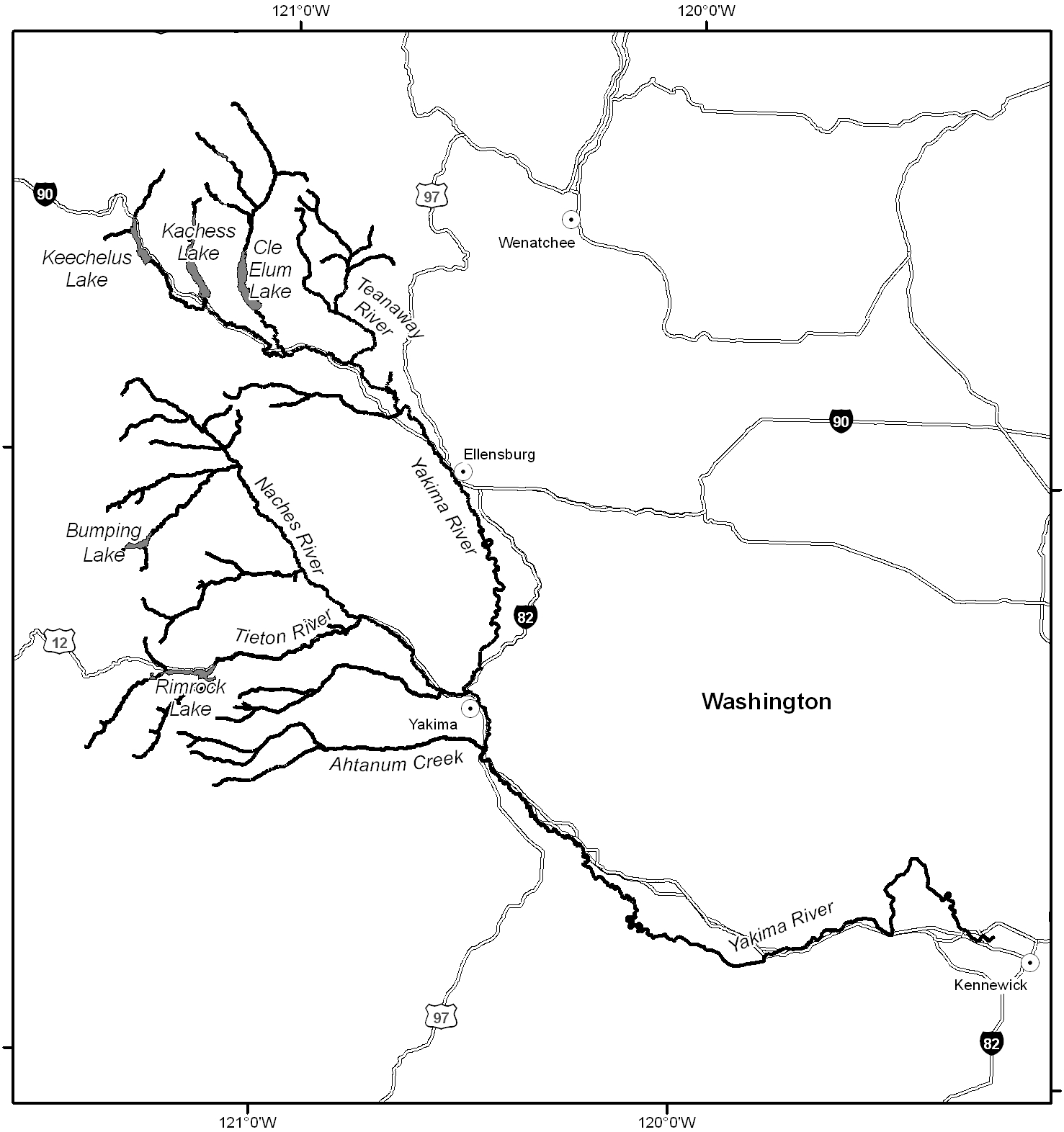
(*3*) Fee lands, either within or outside the reservation boundaries, owned by the tribal government; and

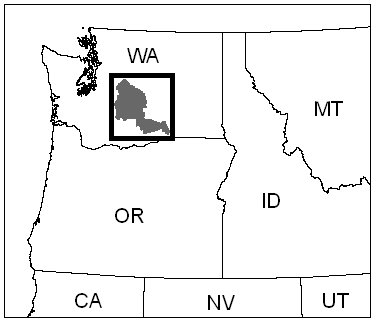
(*4*) Fee lands within the reservation boundaries owned by individual Indians.

(iv) Map of Unit 11, Yakima River follows:

Critical Habitat for Bull Trout *(Salvelinus confluentus)*

Unit: 11, Yakima River





N

0 10 20 Miles

0 15 30 Kilometers

For excluded lands in this CHU refer to the section on exclusions in the rule

CH Lakes

CH Streams

City

Road

(19) Unit 12: John Day River Basin

(i) This unit consists of 1,089.6 km (677.0 mi) of streams. The unit is located in northcentral Oregon.

(ii) Individual waterbodies in the unit are bounded by the following coordinates:

Waterbody Name	Stream Begin Point or Lake Center Latitude	Stream Begin Point or Lake Center Longitude	Stream End Point Latitude	Stream End Point Longitude
Baldy Creek	44.850	-118.305	44.910	-118.318
Big Creek	44.976	-118.651	44.960	-118.683
Big Creek	44.765	-118.686	44.766	-118.874
Boulder Creek	44.840	-118.333	44.819	-118.415
Boundary Creek	44.811	-118.343	44.787	-118.375
Bull Run Creek	44.768	-118.291	44.808	-118.425
Butte Creek	44.585	-118.644	44.642	-118.652
Call Creek	44.286	-118.507	44.320	-118.557
Clear Creek	44.749	-118.546	44.821	-118.450
Clear Creek	44.447	-118.431	44.593	-118.508
Crane Creek	44.868	-118.330	44.894	-118.478
Crawfish Creek	44.931	-118.234	44.915	-118.298
Cunningham Creek	44.911	-118.267	44.920	-118.235
Deadwood Creek	44.750	-118.719	44.768	-118.793
Deardorff Creek	44.383	-118.423	44.395	-118.577
Deep Creek	44.815	-118.306	44.780	-118.348
Desolation Creek	44.820	-118.689	44.998	-118.936
Dry Creek	44.729	-118.531	44.750	-118.500
Granite Boulder Creek	44.726	-118.611	44.647	-118.665
Granite Creek	44.857	-118.343	44.866	-118.562
Indian Creek	44.295	-118.736	44.443	-118.800
John Day River	44.250	-118.527	45.737	-120.652
Lightning Creek	44.718	-118.494	44.765	-118.497
Middle Fork John Day River	44.593	-118.508	44.917	-119.301
North Fork John Day River	44.866	-118.239	44.755	-119.639
North Reynolds Creek	44.430	-118.425	44.423	-118.517
Onion Creek	44.889	-118.339	44.913	-118.401
Rail Creek	44.297	-118.490	44.349	-118.575
Reynolds Creek	44.405	-118.440	44.414	-118.596
Roberts Creek	44.276	-118.575	44.348	-118.575
Salmon Creek	44.717	-118.542	44.725	-118.503
South Fork Desolation Creek	44.719	-118.623	44.820	-118.689
South Trail Creek	44.953	-118.274	44.937	-118.390
Trail Creek	44.937	-118.390	44.915	-118.406
Vinegar Creek	44.707	-118.550	44.601	-118.536
West Fork Clear Creek	44.733	-118.584	44.749	-118.546
West Fork Meadow Brook	44.969	-118.966	44.997	-118.945
Winom Creek	45.050	-118.611	44.976	-118.671

(iii) Waterbodies associated with the following tribal lands totaling 28.5 km (17.7 mi) of streams have been excluded from critical habitat designation under section 4(b)(2) of the Act in this unit. These are waterbodies within the areas under management by the Confederated Tribes of the Warm Springs Reservation, within reservation boundaries, and waterbodies that are adjacent to:

(A) Lands held in trust by the United States for their benefit;

(B) Lands held in trust by the United States for any Indian Tribe or individual subject to restrictions by the United States against alienation;

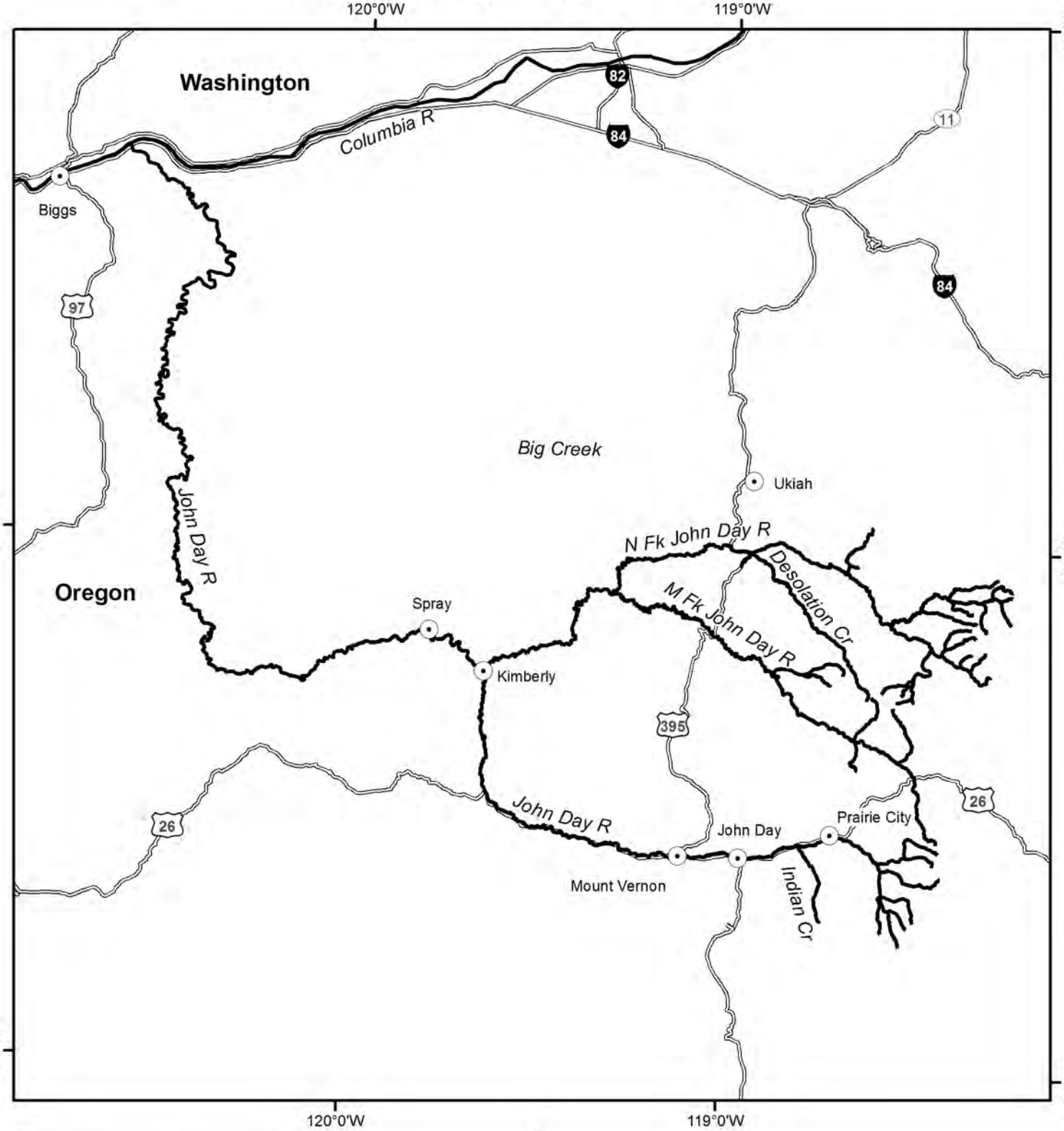
(C) Fee lands, either within or outside the reservation boundaries, owned by the tribal government; and

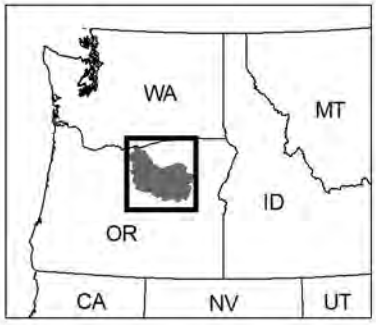
(D) Fee lands within the reservation boundaries owned by individual Indians.

(iv) Map of Unit 12, John Day River Basin follows:

Critical Habitat for Bull Trout *(Salvelinus confluentus)*

Unit: 12, John Day River Basin





N

0 20 40 Miles

0 30 60 Kilometers

For excluded lands in this CHU refer to the section on exclusions in the rule.

CH Streams

City

Road

(20) Unit 13: Umatilla River Basin

(i) This unit consists of 163.0 km (101.3 mi) of streams. The unit is located in northeastern Oregon.

(ii) Individual waterbodies in the unit are bounded by the following coordinates:

Waterbody Name	Stream Begin Point or Lake Center Latitude	Stream Begin Point or Lake Center Longitude	Stream End Point Latitude	Stream End Point Longitude
Coyote Creek	45.745	-118.137	45.732	-118.139
Meacham Creek	45.486	-118.275	45.702	-118.360
North Fork Meacham Creek	45.584	-118.164	45.527	-118.291
North Fork Umatilla River	45.705	-118.034	45.726	-118.189
Pot Creek	45.523	-118.163	45.554	-118.201
Ryan Creek	45.694	-118.309	45.723	-118.315
Umatilla River	45.726	-118.189	45.923	-119.357
Woodward Creek	45.750	-118.076	45.736	-118.080

(iii) Waterbodies associated with the following tribal lands totaling 48.7 km (30.3 mi) of streams have been excluded from critical habitat designation under section 4(b)(2) of the Act in this unit. These are waterbodies within the areas under management by the Confederated Tribes of the Umatilla, and waterbodies that are adjacent to:

(A) Lands held in trust by the United States for their benefit;

(B) Lands held in trust by the United States for any Indian Tribe or individual subject to restrictions by the United States against alienation;

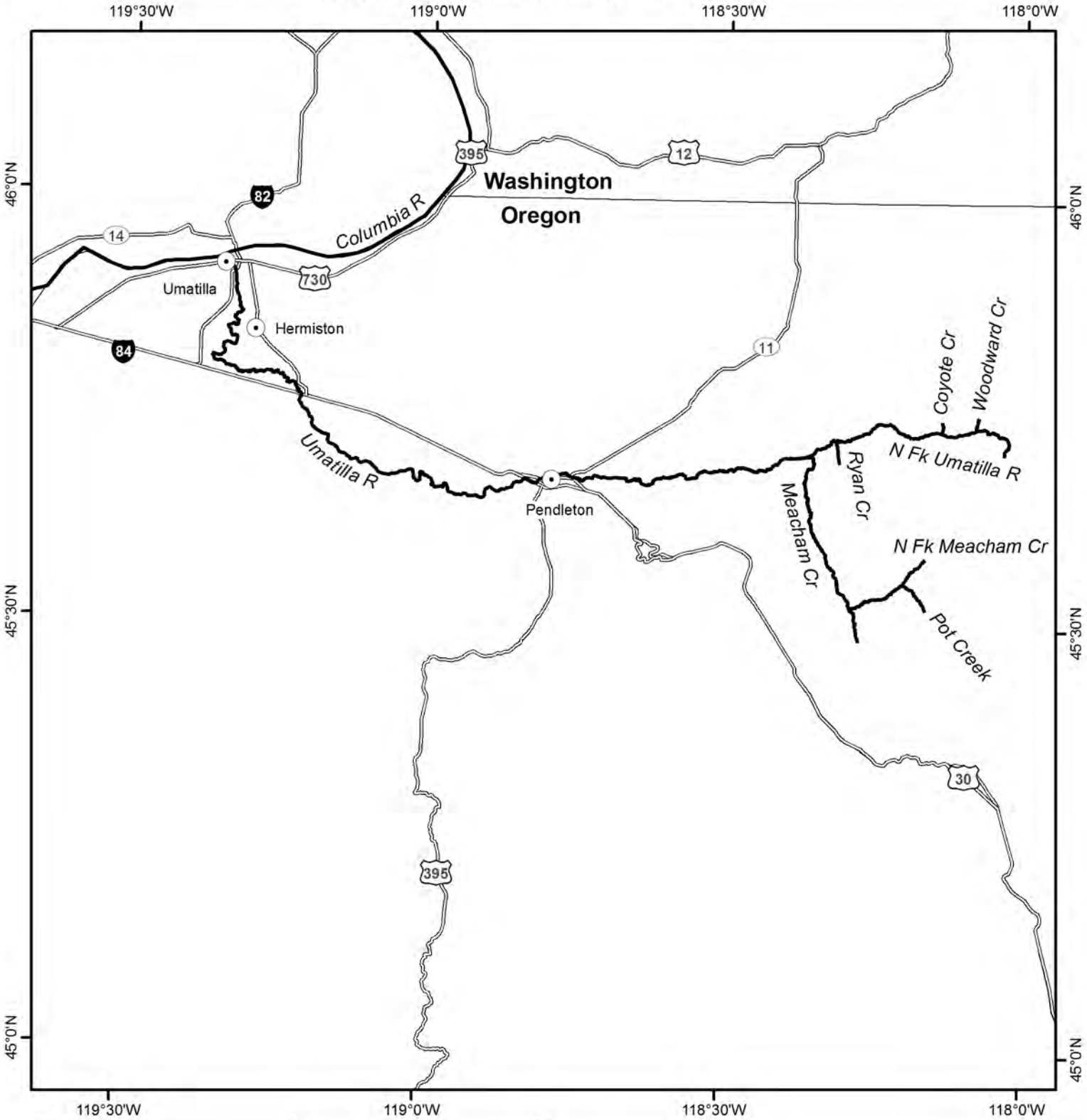
(C) Fee lands, either within or outside the reservation boundaries, owned by the tribal government; and

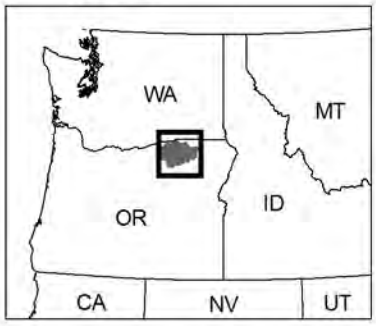
(D) Fee lands within the reservation boundaries owned by individual Indians.

(iv) Map of Unit 13, Umatilla River Basin follows:

Critical Habitat for Bull Trout *(Salvelinus confluentus)*

Unit: 13, Umatilla River Basin





N

0 10 20 Miles

0 20 40 Kilometers

For excluded lands in this CHU refer to the section on exclusions in the rule.

CH Streams

City

Road

(21) Unit 14: Walla Walla River Basin

(i) This unit consists of 383.7 km (238.4 mi) of streams. The unit is located in southwestern Washington and northeastern Oregon.

(ii) Individual waterbodies in the unit are bounded by the following coordinates:

Waterbody Name	Stream Begin Point or Lake Center Latitude	Stream Begin Point or Lake Center Longitude	Stream End Point Latitude	Stream End Point Longitude
Blue Creek	46.061	-118.155	46.063	-118.108
Bull Creek	46.027	-117.939	46.028	-117.948
Burnt Fork	46.087	-117.942	46.105	-117.986
Burnt Fork Creek	46.040	-117.946	46.032	-117.953
Corral Creek	46.093	-117.847	46.090	-117.844
Couse Creek	45.910	-118.371	45.848	-118.327
Deadman Creek	46.032	-117.956	46.049	-117.951
Green Fly Canyon	46.142	-117.876	46.142	-117.872
Green Fork Creek	46.033	-117.940	46.029	-117.949
Griffin Fork	46.117	-117.965	46.121	-117.975
Henry Canyon	45.988	-118.091	45.931	-118.078
Husky Spring Creek	45.889	-117.952	45.884	-117.978
Lewis Creek	46.156	-117.772	46.191	-117.825
Low Creek	45.973	-118.010	45.993	-118.036
Mill Creek	46.021	-117.945	46.039	-118.479
North Fork Mill Creek	46.035	-117.994	46.021	-117.997
North Fork Touchet River	46.093	-117.865	46.301	-117.960
North Fork Walla Walla River	45.889	-118.087	45.898	-118.308
Paradise Creek	46.000	-117.991	46.004	-118.018
Reser Creek	45.887	-118.001	45.876	-117.986
Skiphorton Creek	45.874	-118.027	45.852	-118.025
South Fork Touchet River	46.105	-117.986	46.301	-117.960
South Fork Walla Walla River	45.938	-117.969	45.898	-118.308
Spangler Creek	46.099	-117.803	46.149	-117.807
Touchet River	46.301	-117.960	46.034	-118.683
Walla Walla River	45.898	-118.308	46.062	-118.940
Wolf Fork Touchet River	46.075	-117.904	46.274	-117.896
Yellowhawk Creek	46.076	-118.273	46.017	-118.401

(iii) Waterbodies associated with the following tribal lands or habitat conservation plans (HCPs) totaling 69.0 km (42.0 mi) of streams have been excluded from critical habitat designation under section 4(b)(2) of the Act in this unit:

(A) Waterbodies within the geographic area covered by the Washington State Forest Practices Habitat Conservation Plan (HCP) , including portions of Touchet River and Walla Walla River CHSUs; and

(B) Waterbodies within the areas under management by the Confederated Tribes of the Umatilla, including portions of the Touchet River CHSU, within reservation boundaries, and waterbodies that are adjacent to:

(*1*) Lands held in trust by the United States for their benefit;

(*2*) Lands held in trust by the United States for any Indian Tribe or individual subject to restrictions by the United States against alienation;

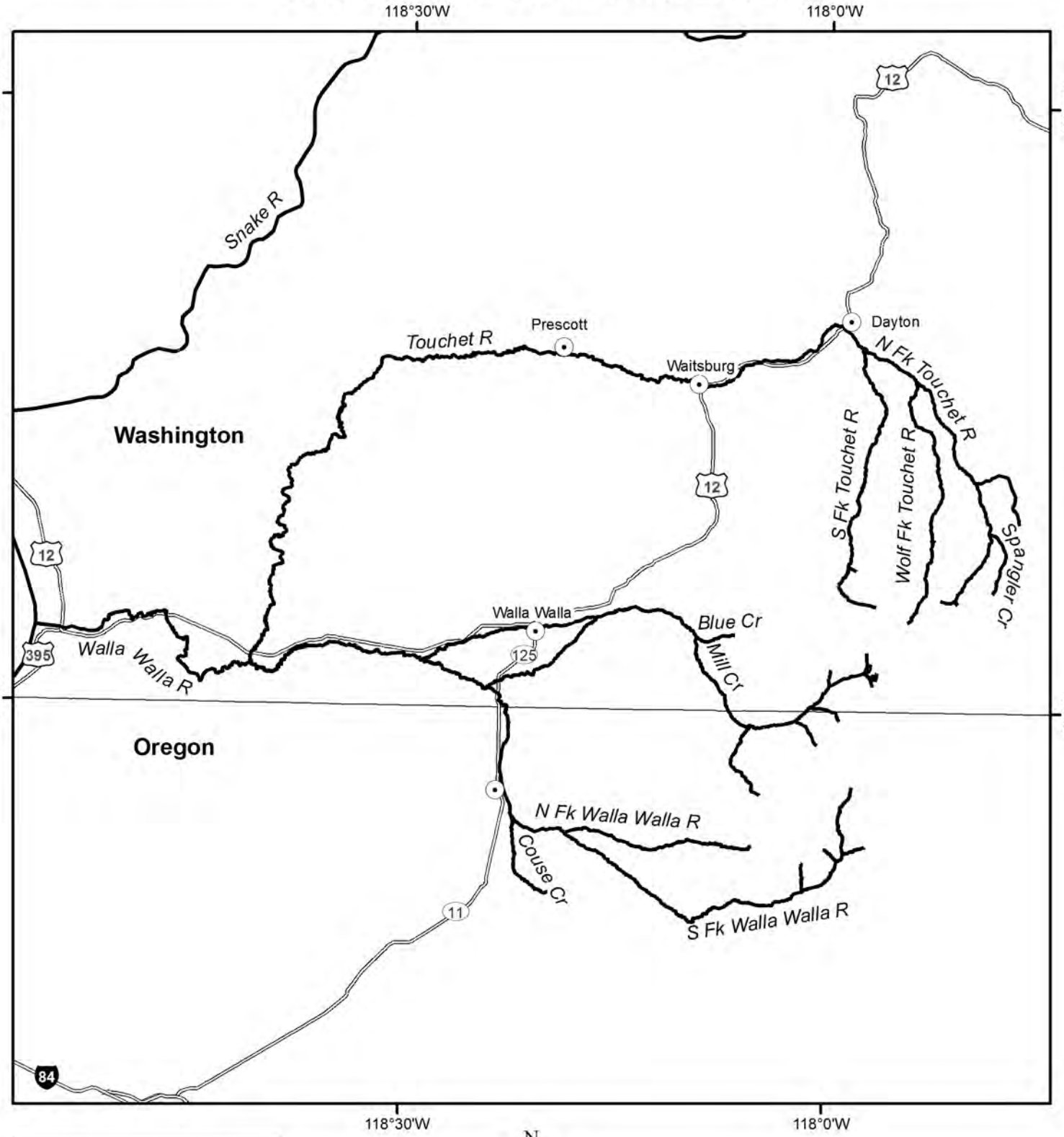
(*3*) Fee lands, either within or outside the reservation boundaries, owned by the tribal government; and

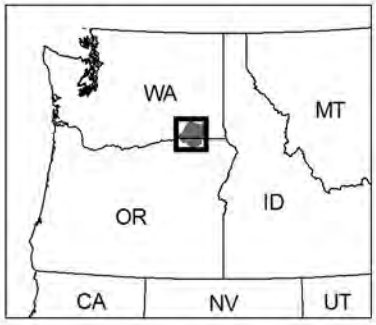
(*4*) Fee lands within the reservation boundaries owned by individual Indians.

(iv) Map of Unit 14, Walla Walla River Basin follows:

Critical Habitat for Bull Trout *(Salvelinus confluentus)*

Unit: 14, Walla Walla River Basin





N

0 3 6 Miles

0 12.5 25 Kilometers

For excluded lands in this CHU refer to the section on exclusions in the rule.

City

CH Streams

Road

(22) Unit 15: Lower Snake River Basins

(i) This unit consists of 270.8 km (168.3 mi) of streams. The unit is located in southeastern Washington.

(ii) Individual waterbodies in the unit are bounded by the following coordinates:

Waterbody Name	Stream Begin Point or Lake Center Latitude	Stream Begin Point or Lake Center Longitude	Stream End Point Latitude	Stream End Point Longitude
Asotin Creek	46.345	-117.054	46.272	-117.292
Bear Creek	46.168	-117.560	46.122	-117.546
Charley Creek	46.289	-117.279	46.279	-117.414
Cold Creek	46.191	-117.631	46.178	-117.647
Cougar Creek	46.205	-117.509	46.180	-117.519
Cummings Creek	46.333	-117.675	46.234	-117.594
George Creek	46.326	-117.106	46.117	-117.361
Hixon Creek	46.246	-117.684	46.239	-117.690
Little Tucannon River	46.228	-117.722	46.218	-117.759
Little Turkey Creek	46.155	-117.737	46.116	-117.750
Meadow Creek	46.176	-117.719	46.102	-117.786
North Fork Asotin Creek	46.272	-117.292	46.196	-117.569
Panjab Creek	46.205	-117.706	46.115	-117.683
Sheep Creek	46.188	-117.625	46.195	-117.624
South Fork Asotin Creek	46.272	-117.292	46.145	-117.431
Tucannon River	46.557	-118.175	46.139	-117.521
Turkey Creek	46.161	-117.703	46.113	-117.739

(iii) Waterbodies associated with the following habitat conservation plans (HCPs) totaling 13.4 km (8.3 mi) of streams have been excluded from critical habitat designation under section 4(b)(2) of the Act in this unit. These are waterbodies within the geographic area covered by the Washington State Forest Practices Habitat Conservation Plan (HCP), including portions of Asotin Creek and Tucannon River CHSUs.

(iv) Map of Unit 15, Lower Snake River Basins follows:

Critical Habitat for Bull Trout *(Salvelinus confluentus)*

Unit: 15, Lower Snake River Basins

118°0'W

117°30'W

46°30'N

46°0'N

Snake R

195

Starbuck

Tucannon R

12

Dayton

Asotin

Asotin Cr

Charley Cr

Cummings Cr

Little Tucannon R

Sheep Cr

N Fk Asotin Cr

Cougar Cr

S Fk Asotin Cr

George Cr

Meadow Cr

Panjab Cr

Bear Cr

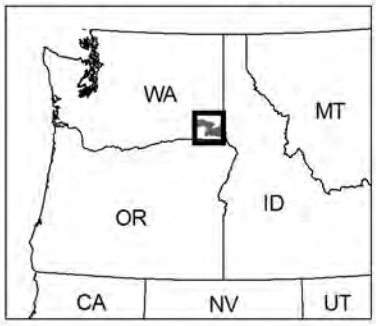
Little Turkey Cr

Turkey Cr

Cold Cr

Washington

Oregon



N

0 5 10 Miles

0 5 10 Kilometers

For excluded lands in this CHU refer to the section on exclusions in the rule.

CH Streams

City

Road

(23) Unit 16: Grande Ronde River Basin

(i) This unit consists of 1,057.9 km (657.4 mi) of streams and 605.2 ha (1,495.5 ac) of lakes and reservoirs. The unit is located in northeastern Oregon and southwestern Washington.

(ii) Individual waterbodies in the unit are bounded by the following coordinates:

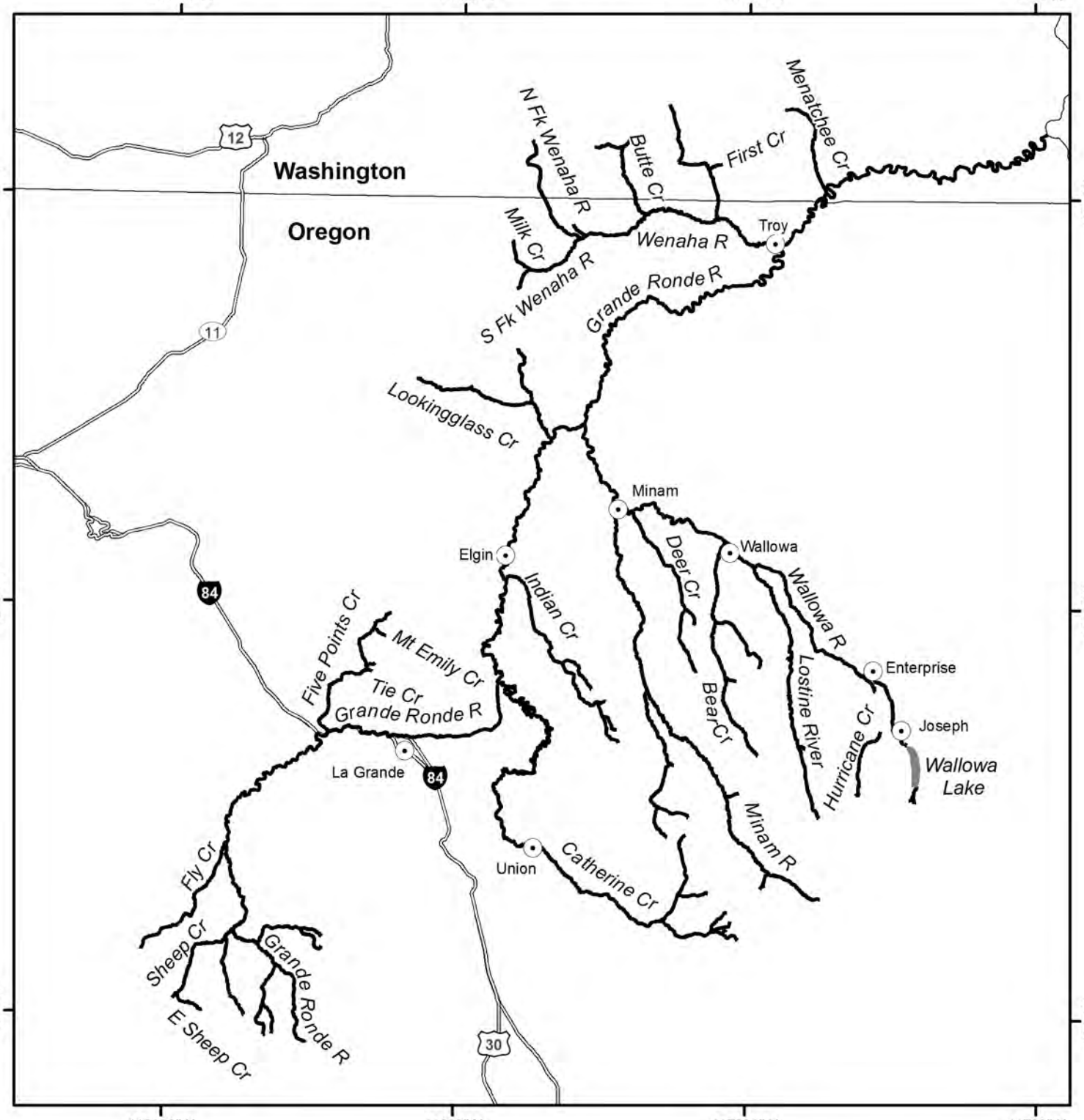
Waterbody Name	Stream Begin Point or Lake Center Latitude	Stream Begin Point or Lake Center Longitude	Stream End Point Latitude	Stream End Point Longitude
Bear Creek	45.322	-117.481	45.584	-117.541
Beaver Creek	45.968	-117.808	45.955	-117.786
Boulder Creek	45.310	-117.625	45.312	-117.633
Butte Creek	46.064	-117.723	45.982	-117.679
Camp Creek	45.387	-117.745	45.387	-117.758
Catherine Creek	45.120	-117.647	45.408	-117.931
Chicken Creek	45.024	-118.386	45.095	-118.395
Clear Creek	44.976	-118.327	45.063	-118.310
Collins Creek	45.097	-117.514	45.105	-117.543
Crooked Creek	46.046	-117.625	45.977	-117.552
Deer Creek	45.423	-117.588	45.620	-117.700
Dobbin Creek	45.221	-117.640	45.259	-117.654
East Fork Butte Creek	46.064	-117.723	46.074	-117.710
East Fork Elk Creek	45.161	-117.469	45.166	-117.470
East Fork Indian Creek	45.353	-117.725	45.368	-117.749
East Fork Wallowa River	45.265	-117.210	45.274	-117.212
East Sheep Creek	45.003	-118.435	45.026	-118.475
Elk Creek	45.160	-117.476	45.178	-117.460
Fiddlers Hell Creek	45.431	-118.144	45.428	-118.160
First Creek	46.043	-117.547	46.035	-117.571
Five Points Creek	45.481	-118.144	45.346	-118.222
Fly Creek	45.121	-118.466	45.210	-118.395
Goat Creek	45.413	-117.518	45.418	-117.538
Grande Ronde River	44.967	-118.255	46.080	-116.979
Hurricane Creek	45.274	-117.312	45.420	-117.302
Indian Creek	45.337	-117.722	45.534	-117.920
Indiana Creek	45.000	-118.362	45.024	-118.386
Lake Creek	45.331	-117.398	45.332	-117.410
Limber Jim Creek	45.085	-118.230	45.089	-118.344
Little Bear Creek	45.428	-117.480	45.485	-117.555
Little Fly Creek	45.109	-118.476	45.121	-118.466
Little Lookingglass Creek	45.817	-117.902	45.750	-117.875
Little Minam River	45.246	-117.600	45.401	-117.672
Lookingglass Creek	45.779	-118.079	45.707	-117.842
Lookout Creek	45.078	-118.541	45.109	-118.476
Lostine River	45.245	-117.375	45.552	-117.490
Marion Creek	45.097	-118.229	45.105	-118.267
Menatchee Creek	46.110	-117.439	46.007	-117.365
Middle Fork Catherine Creek	45.154	-117.565	45.152	-117.617
Middle Fork Five Points Creek	45.492	-118.116	45.481	-118.144
Milk Creek	45.948	-117.913	45.913	-117.883
Minam River	45.147	-117.372	45.621	-117.721
Mt Emily Creek	45.465	-118.125	45.473	-118.147
North Fork Catherine Creek	45.225	-117.605	45.120	-117.647
North Fork Indian Creek	45.402	-117.769	45.433	-117.820
North Fork Wenaha River	46.066	-117.878	46.066	-117.878
North Minam River	45.276	-117.512	45.273	-117.537
Pole Creek	45.131	-117.531	45.107	-117.560
Sage Creek	45.481	-117.594	45.500	-117.607
Sand Pass Creek	45.120	-117.526	45.108	-117.552
Sheep Creek	45.019	-118.485	45.105	-118.382
Silver Creek	45.394	-117.422	45.396	-117.428
South Fork Catherine Creek	45.110	-117.533	45.120	-117.647
South Fork Wenaha River	45.890	-117.906	45.951	-117.795
Summer Creek	45.771	-117.983	45.766	-117.983
Third Creek	46.089	-117.628	46.046	-117.625
Tie Creek	45.421	-118.149	45.423	-118.159
Trout Creek	46.089	-117.628	46.116	-117.641
Unnamed - Off Clear Creek	44.977	-118.314	45.013	-118.330
Wallowa Lake	45.310	-117.210		
Wallowa River	45.274	-117.212	45.726	-117.785
Wenaha River	45.951	-117.795	45.945	-117.451
West Fork Butte Creek	46.063	-117.772	46.063	-117.723
West Fork Wallowa River	45.267	-117.216	45.274	-117.212

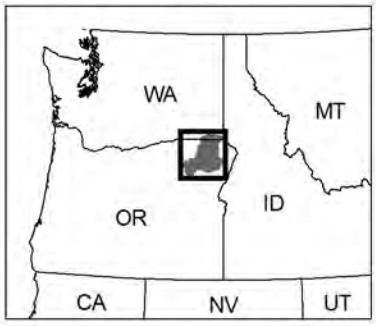
(iii) Waterbodies associated with the following habitat conservation plans (HCPs) totaling 1.0 km (0.6 mi) of streams have been excluded from critical habitat designation under section 4(b)(2) of the Act in this unit. These are waterbodies within the geographic area covered by the Washington State Forest Practices Habitat Conservation Plan (HCP), including portions of the Grand Ronde River CHSU.

(iv) Map of Unit 16, Grand Ronde River Basin follows:

Critical Habitat for Bull Trout *(Salvelinus confluentus)*

Unit: 16, Grande Ronde River Basin





N

0 5 10 Miles

0 15 30 Kilometers

For excluded lands in this CHU refer to the section on exclusions in the rule.

CH Lakes
CH Streams
City
Road

(24) Unit 17: Imnaha River Basin

(i) This unit consists of 285.7 km (177.5 mi) of streams. The unit is located in northeastern Oregon.

(ii) Individual waterbodies in the unit are bounded by the following coordinates:

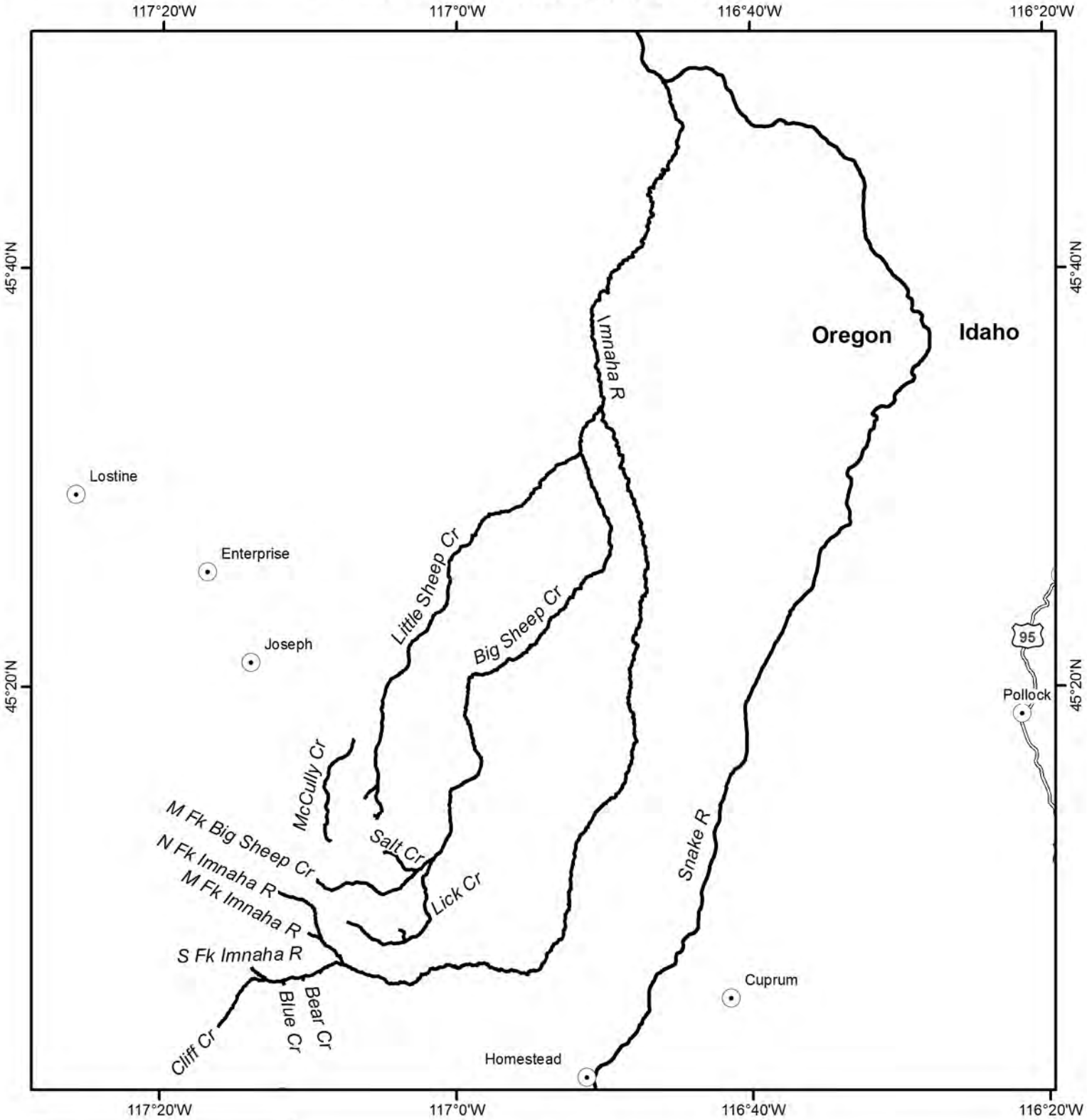
Waterbody Name	Stream Begin Point or Lake Center Latitude	Stream Begin Point or Lake Center Longitude	Stream End Point Latitude	Stream End Point Longitude
Bear Creek	45.100	-117.173	45.104	-117.172
Big Sheep Creek	45.178	-117.120	45.557	-116.835
Blue Creek	45.097	-117.194	45.101	-117.195
Cabin Creek	45.229	-117.090	45.232	-117.089
Cliff Creek	45.063	-117.269	45.102	-117.215
Imnaha River	45.113	-117.126	45.817	-116.765
Lick Creek	45.147	-117.124	45.198	-117.025
Little Sheep Creek	45.232	-117.094	45.520	-116.860
McCully Creek	45.211	-117.141	45.293	-117.116
Middle Fork Big Sheep Creek	45.181	-117.158	45.178	-117.120
Middle Fork Imnaha River	45.139	-117.167	45.133	-117.152
North Fork Imnaha River	45.171	-117.201	45.113	-117.126
Redmont Creek	45.245	-117.104	45.256	-117.089
Salt Creek	45.202	-117.083	45.188	-117.044
Soldier Creek	45.107	-117.155	45.109	-117.152
South Fork Imnaha River	45.111	-117.231	45.113	-117.126
Unnamed - Off Lick Creek	45.141	-117.065	45.133	-117.057

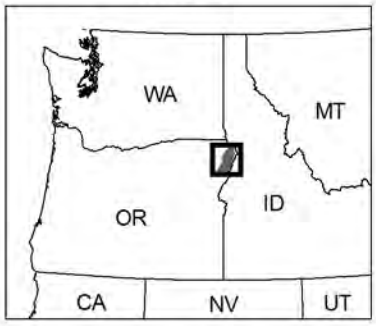
(iii) No waterbodies are excluded from critical habitat designation in this unit.

(iv) Map of Unit 17, Imnaha River Basin follows:

Critical Habitat for Bull Trout *(Salvelinus confluentus)*

Unit: 17, Imnaha River Basin





N

0 5 10 Miles

0 5 10 Kilometers

CH Streams

City

Road

(25) Unit 18: Sheep / Granite Creeks

(i) This unit consists of 47.9 km (29.7 mi) of streams. The unit is located in west-central Idaho.

(ii) Individual waterbodies in the unit are bounded by the following coordinates:

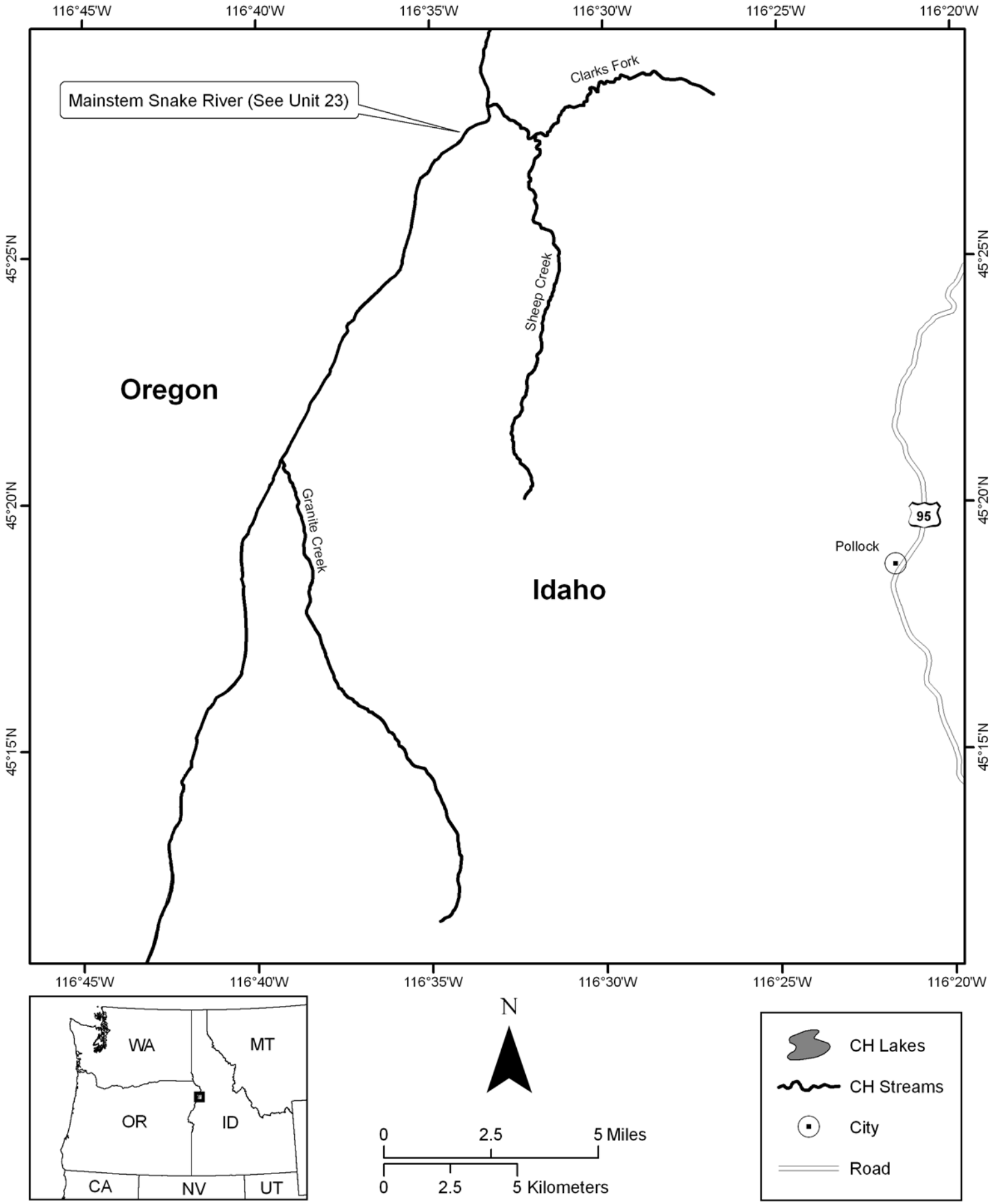
Waterbody Name	Stream Begin Point or Lake Center Latitude	Stream Begin Point or Lake Center Longitude	Stream End Point Latitude	Stream End Point Longitude
Clarks Fork	45.458	-116.533	45.471	-116.447
Granite Creek	45.192	-116.580	45.349	-116.655
Sheep Creek	45.405	-116.524	45.468	-116.555

(iii) No waterbodies are excluded from critical habitat designation in this unit.

(iv) Map of Unit 18, Sheep/Granite Creeks follows:

Critical Habitat for Bull Trout *(Salvelinus confluentus)*

Unit: 18, Sheep / Granite Creeks



(26) Unit 19: Hell's Canyon Complex

(i) This unit consists of 377.5 km (234.6 mi) of streams. The unit is located in northeastern Oregon and west-central Idaho.

(ii) Individual waterbodies in the unit are bounded by the following coordinates:

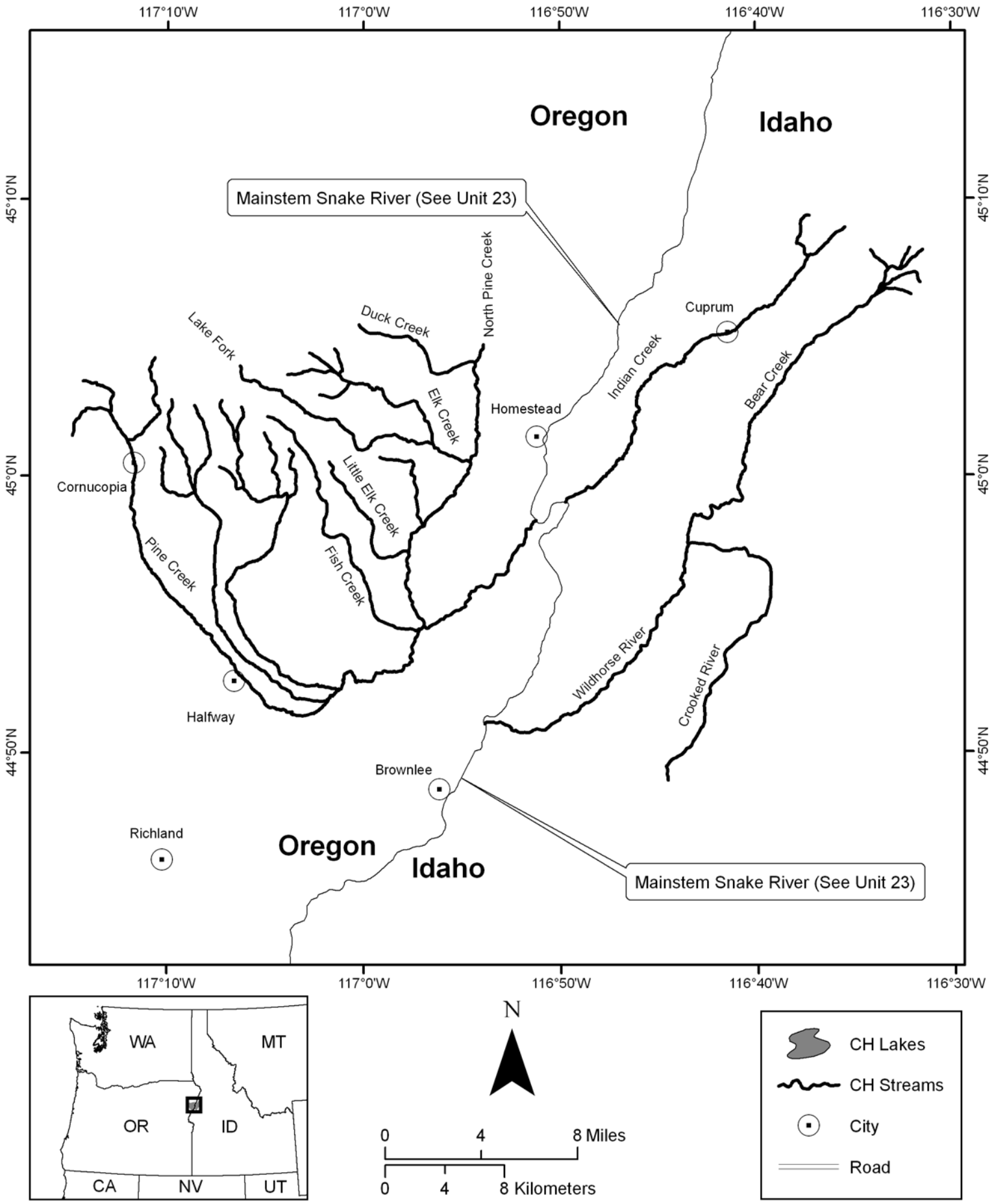
Waterbody Name	Stream Begin Point or Lake Center Latitude	Stream Begin Point or Lake Center Longitude	Stream End Point Latitude	Stream End Point Longitude
Aspen Creek	45.057	-117.012	45.049	-117.038
Bear Creek	44.959	-116.725	45.136	-116.525
Big Elk Creek	45.063	-117.024	45.061	-117.065
Cabin Creek	45.061	-117.021	45.077	-117.025
Camp Creek	45.132	-116.623	45.157	-116.621
Clear Creek	44.866	-117.030	45.043	-117.144
Crooked River	44.959	-116.725	44.817	-116.743
Duck Creek	45.069	-116.906	45.091	-117.004
East Fork Of East Pine Creek	45.021	-117.107	45.042	-117.104
East Fork Pine Creek	45.022	-117.201	45.071	-117.177
East Pine Creek	44.872	-117.021	45.046	-117.120
Elk Creek	45.009	-116.910	45.074	-117.046
Fall Creek	44.970	-116.949	45.012	-116.986
Fish Creek	44.908	-116.953	45.036	-117.082
Indian Creek	44.984	-116.829	45.150	-116.591
Lake Fork	45.020	-116.942	45.067	-117.105
Little Elk Creek	44.954	-116.962	45.009	-117.029
Meadow Creek	44.990	-117.143	45.017	-117.172
Mickey Creek	45.109	-116.565	45.109	-116.535
Middle Fork Pine Creek	45.039	-117.216	45.057	-117.238
North Pine Creek	44.910	-116.949	45.079	-116.898
Okanogan Creek	44.987	-117.065	45.017	-117.063
Pine Creek	44.973	-116.854	45.039	-117.216
Trail Creek	44.991	-117.143	45.046	-117.163
Trinity Creek	44.988	-117.072	45.026	-117.084
Unnamed - Off East Pine Creek	44.993	-117.102	45.006	-117.122
Unnamed - trib To Bear Creek	45.124	-116.545	45.137	-116.536
Unnamed - Trib To Bear Creek	45.124	-116.554	45.136	-116.569
Wesley Creek	45.112	-116.562	45.116	-116.527
West Fork Pine Creek	45.039	-117.216	45.025	-117.247
Wildhorse River	44.851	-116.897	44.959	-116.725

(iii) No waterbodies are excluded from critical habitat designation in this unit.

(iv) Map of Unit 19, Hell's Canyon Complex follows:

Critical Habitat for Bull Trout *(Salvelinus confluentus)*

Unit: 19, Hells Canyon Complex



(27) Unit 20: Powder River Basin

(i) This unit consists of 296.5 km (184.2 mi) of streams and 897.0 ha (2,216.5 ac) of lakes and reservoirs. The unit is located in northeastern Oregon.

(ii) Individual waterbodies in the unit are bounded by the following coordinates:

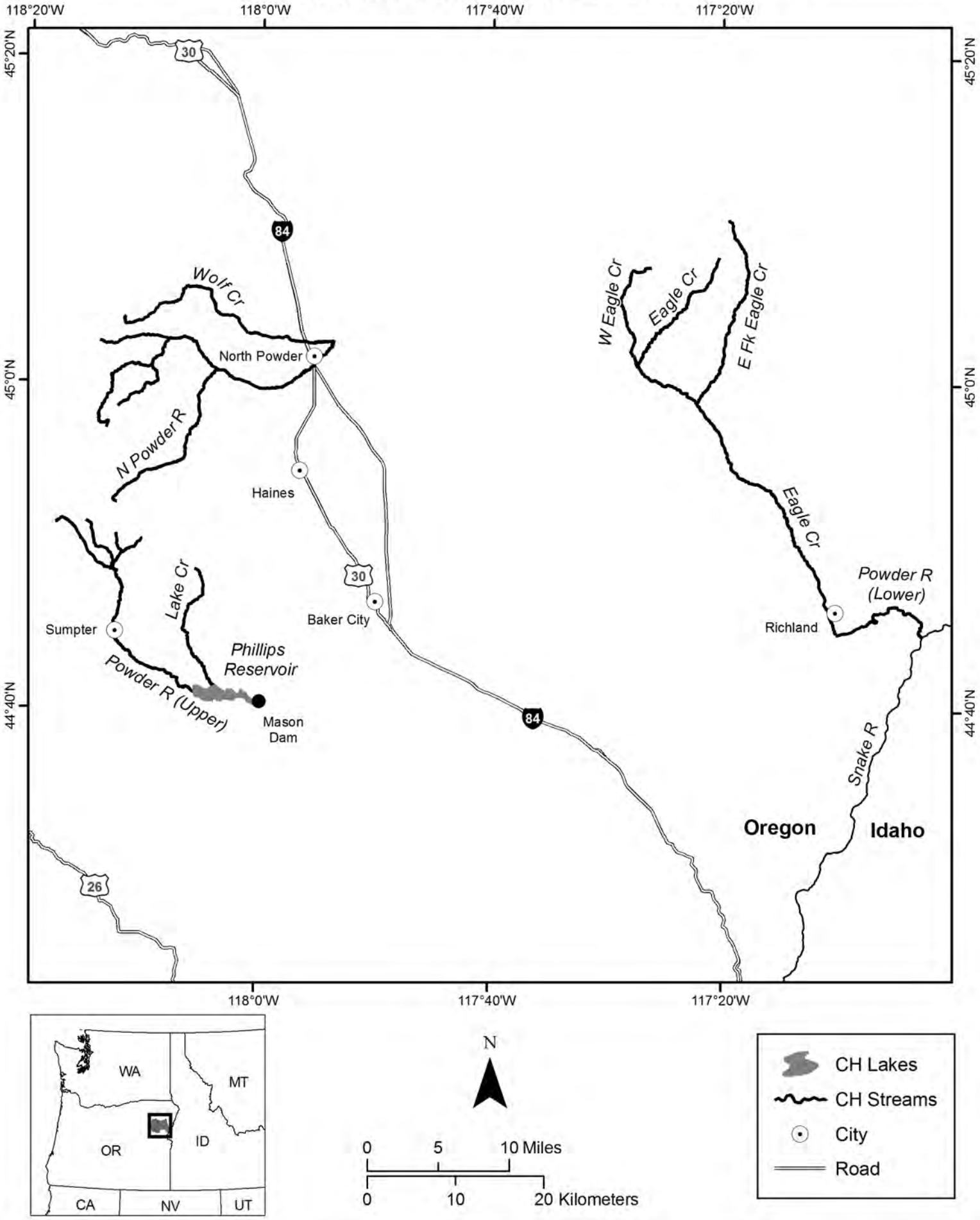
Waterbody Name	Stream Begin Point or Lake Center Latitude	Stream Begin Point or Lake Center Longitude	Stream End Point Latitude	Stream End Point Longitude
Anthony Creek	45.013	-118.060	44.953	-118.221
Cracker Creek	44.741	-118.206	44.846	-118.205
Deer Creek	44.684	-118.060	44.749	-118.108
Eagle Creek	44.746	-117.170	45.132	-117.339
East Fork Eagle Creek	44.983	-117.371	45.170	-117.325
Fruit Creek	44.809	-118.212	44.858	-118.248
Indian Creek	45.019	-118.155	44.975	-118.205
Lake Creek	44.749	-118.108	44.810	-118.092
Little Cracker Creek	44.826	-118.197	44.840	-118.167
North Fork Anthony Creek	45.045	-118.131	45.042	-118.232
North Powder River	44.878	-118.204	45.038	-117.896
Phillips Reservoir	44.681	-118.052		
Powder River (Lower)	44.743	-117.047	44.746	-117.170
Powder River (Middle)	45.044	-117.894	45.038	-117.896
Powder River (Upper)	44.684	-118.060	44.741	-118.206
Silver Creek	44.809	-118.208	44.857	-118.292
West Eagle Creek	45.019	-117.454	45.121	-117.437
Wolf Creek	45.044	-117.894	45.067	-118.194

(iii) No waterbodies are excluded from critical habitat designation in this unit.

(iv) Map of Unit 20, Powder River Basin follows:

Critical Habitat for Bull Trout *(Salvelinus confluentus)*

Unit: 20, Powder River Basin



(28) Unit 21: Clearwater River

(i) This unit consists of 2,702.1 km (1,679.0 mi) of streams and 6,721.9 ha (16,610.1 ac) of lakes and reservoirs. The unit is located in northcentral Idaho.

(ii) Individual waterbodies in the unit are bounded by the following coordinates:

Waterbody Name	Stream Begin Point or Lake Center Latitude	Stream Begin Point or Lake Center Longitude	Stream End Point Latitude	Stream End Point Longitude
Adair Creek	47.097	-115.853	47.083	-115.806
American River	45.808	-115.475	45.945	-115.450
Baldy Creek	45.908	-115.630	45.961	-115.721
Baston Creek	45.760	-115.235	45.731	-115.223
Bear Creek	46.019	-114.845	46.108	-114.509
Bear Creek	46.711	-114.963	46.750	-114.922
Bear Creek	45.863	-115.618	45.878	-115.595
Beaver Creek	46.506	-114.627	46.553	-114.504
Beaver Creek	46.842	-115.621	46.758	-115.678
Beaver Creek	45.896	-115.631	45.943	-115.569
Big Flat Creek	46.402	-114.494	46.313	-114.441
Bill Creek	46.631	-115.271	46.637	-115.187
Bostonian Creek	46.962	-115.114	46.996	-115.137
Boulder Creek	46.615	-114.671	46.678	-114.749
Boundary Creek	46.972	-115.108	46.981	-115.077
Breakfast Creek	46.883	-115.940	46.875	-115.995
Bridge Creek	45.779	-115.210	45.814	-115.164
Brushy Fork	46.578	-114.612	46.616	-114.455
Brushy Fork Creek	46.002	-114.699	45.988	-114.583
Buck Creek	47.021	-115.555	47.049	-115.543
Burnt Knob Creek	45.715	-114.899	45.697	-114.946
Burnt Strip Creek	45.826	-114.618	45.817	-114.626
Butte Creek (North Fork Clearwater)	47.045	-115.720	47.031	-115.751
Canyon Creek	45.888	-114.614	45.882	-114.409
Canyon Creek	47.000	-115.651	47.017	-115.499
Cayuse Creek	45.705	-114.615	45.740	-114.608
Cayuse Creek	46.712	-115.021	46.612	-114.793
Cedar Creek	46.249	-114.709	46.330	-114.706
Chamberlain Creek	46.929	-115.143	46.924	-115.171
Clearwater River	46.428	-117.040	46.146	-115.981
Collins Creek	46.862	-115.434	46.982	-115.453
Colt Creek	46.433	-114.540	46.419	-114.636
Colt Killed Creek	46.508	-114.682	46.428	-114.415
Cooperation Creek	46.452	-114.870	46.440	-114.817
Corral Creek	46.483	-115.241	46.534	-115.207
Crooked Fork	46.508	-114.682	46.704	-114.709
Crooked River	45.824	-115.530	45.695	-115.549
Cub Creek	46.034	-114.757	46.031	-114.618
Dawson Creek	45.730	-115.391	45.743	-115.426
Deep Creek	45.707	-114.719	45.708	-114.516
Ditch Creek	45.747	-115.298	45.794	-115.293
Doe Creek	46.499	-114.863	46.554	-114.921
Dworshak Reservoir	46.660	-116.120		
Eagle Creek	45.908	-114.854	45.794	-114.891
East Fork American River	45.864	-115.425	45.919	-115.363
East Fork Crooked River	45.695	-115.549	45.656	-115.564
East Fork Fishing Creek	46.556	-114.855	46.561	-114.837
East Fork Legendary Bear Creek	46.562	-114.736	46.535	-114.766
East Fork Meadow Creek	45.880	-115.104	45.829	-115.028
East Fork Moose Creek	46.165	-114.898	46.270	-114.680
East Fork O'Hara Creek	45.998	-115.524	45.939	-115.541
Elk Creek	45.818	-115.459	45.841	-115.435
Fish Creek	46.333	-115.346	46.373	-115.597
Fish Lake	46.817	-114.912		
Fish Lake (Lochsa)	46.333	-115.052		
Fish Lake Creek	46.331	-115.057	46.407	-115.001
Fishing Creek	46.492	-114.858	46.571	-114.860
Flat Creek	45.722	-114.858	45.651	-114.848
Flint Creek	45.891	-115.428	45.913	-115.424
Floodwood Creek	46.888	-115.954	46.974	-115.913
Foehl Creek	46.970	-115.676	46.990	-115.743
Fourth of July Creek	46.665	-115.377	46.564	-115.260
Fox Creek	46.605	-114.755	46.630	-114.696
French Creek	45.597	-114.592	45.603	-114.572
Fro Creek	46.479	-115.222	46.467	-115.209
Frost Creek	46.918	-115.349	46.926	-115.380

Waterbody Name	Stream Begin Point or Lake Center Latitude	Stream Begin Point or Lake Center Longitude	Stream End Point Latitude	Stream End Point Longitude
Gabe Creek	45.697	-114.671	45.710	-114.666
Gedney Creek	46.056	-115.314	46.135	-115.249
Glover Creek	46.916	-116.013	46.980	-116.095
Gold Pan Creek	45.667	-114.722	45.665	-114.737
Goose Creek	46.852	-115.013	46.906	-114.953
Gospel Creek	45.703	-115.891	45.677	-115.891
Graves Creek	46.986	-115.101	47.006	-115.079
Hagen Creek	45.649	-115.818	45.630	-115.809
Haskell Creek	46.596	-114.604	46.632	-114.583
Hells Half Acre Creek	45.692	-114.718	45.689	-114.705
Hopeful Creek	46.671	-114.681	46.724	-114.654
Hungery Creek	46.356	-115.398	46.400	-115.569
Indian Creek	45.792	-114.765	45.792	-114.575
Indian Grave Creek	46.452	-115.077	46.490	-115.143
Isabella Creek	46.849	-115.631	46.913	-115.539
Jack Creek	45.778	-114.692	45.788	-114.683
Johnagan Creek	46.510	-115.367	46.543	-115.354
Johnny Creek	46.613	-115.435	46.614	-115.372
Johns Creek	45.824	-115.890	45.683	-115.755
Jungle Creek	47.076	-115.804	47.110	-115.796
Kelly Creek	46.716	-115.258	46.730	-114.861
Kid Lake Creek	46.747	-114.806	46.768	-114.805
Kim Creek	45.679	-114.720	45.682	-114.734
Kirks Fork American River	45.822	-115.411	45.829	-115.390
Lake Creek	46.869	-115.079	46.819	-114.905
Lazy Creek	45.679	-114.546	45.668	-114.555
Legendary Bear Creek	46.511	-114.762	46.535	-114.766
Lick Creek	45.923	-115.469	45.969	-115.487
Little Clearwater River	45.754	-114.776	45.738	-114.946
Little Elk Creek	45.841	-115.435	45.868	-115.449
Little Lost Lake Creek	47.089	-115.893	47.073	-115.936
Little Moose Creek	46.733	-115.078	46.783	-114.906
Little Moose Creek	45.716	-115.368	45.709	-115.400
Little North Fork Clearwater River	46.887	-115.878	47.101	-115.963
Little Weitas Creek	46.506	-115.392	46.479	-115.389
Liz Creek	46.482	-115.290	46.436	-115.306
Lochsa River	46.140	-115.600	46.508	-114.682
Long Creek	46.872	-115.076	46.950	-115.025
Lost Lake Creek	47.095	-115.901	47.087	-115.937
Lund Creek	47.068	-115.884	47.050	-115.913
Lynx Creek	45.849	-114.938	45.817	-114.952
Magruder Creek	45.745	-114.761	45.717	-114.780
Marten Creek	46.099	-115.053	45.963	-115.046
Maud Creek	46.497	-114.515	46.474	-114.411
Meadow Creek	46.910	-115.233	46.905	-115.117
Meadow Creek	46.046	-115.296	45.698	-115.218
Melton Creek	45.725	-115.996	45.724	-115.979
Middle Fork Clearwater River	46.146	-115.981	46.140	-115.600
Middle Fork Kelly Creek	46.730	-114.861	46.747	-114.806
Middle Fork Red River	45.659	-115.413	45.631	-115.472
Mill Creek	45.830	-115.932	45.725	-115.996
Mink Creek	46.601	-114.895	46.628	-114.894
Mist Creek	45.567	-114.629	45.555	-114.626
Montana Creek	47.045	-115.701	47.089	-115.676
Moores Creek	45.676	-115.838	45.614	-115.880
Moores Lake Creek	45.677	-115.891	45.659	-115.870
Moose Butte Creek	45.710	-115.353	45.692	-115.417
Moose Creek	46.122	-114.935	46.165	-114.898
Moose Creek	46.721	-115.087	46.752	-115.185
Mule Creek	45.925	-115.635	45.932	-115.631
Newsome Creek	45.828	-115.616	46.004	-115.679
Niagra Gulch	46.967	-115.137	46.973	-115.159
North Fork Clearwater River	46.503	-116.332	46.999	-115.113
North Fork Kelly Creek	46.730	-114.861	46.801	-114.874
North Fork Moose Creek	46.165	-114.898	46.274	-114.924
North Fork Spruce Creek	46.606	-114.393	46.616	-114.352
O'Hara Creek	46.086	-115.518	45.998	-115.524
Open Creek	45.676	-115.838	45.683	-115.823
Orogrande Creek	46.631	-115.507	46.564	-115.623
Osier Creek	46.744	-115.074	46.837	-115.065

Waterbody Name	Stream Begin Point or Lake Center Latitude	Stream Begin Point or Lake Center Longitude	Stream End Point Latitude	Stream End Point Longitude
Otterson Creek	45.776	-115.220	45.820	-115.234
Parachute Creek	46.528	-114.762	46.530	-114.757
Paradise Creek	46.022	-114.729	46.039	-114.527
Pete Creek	45.703	-114.580	45.715	-114.564
Pilot Creek	45.907	-115.630	45.944	-115.732
Placer Creek	46.938	-115.168	46.959	-115.179
Pollock Creek	46.780	-115.023	46.780	-114.990
Postoffice Creek	46.466	-114.986	46.529	-114.950
Quartz Creek	46.806	-115.456	46.846	-115.259
Rawhide Creek	46.898	-115.047	46.938	-115.056
Red Horse Creek	45.794	-115.401	45.827	-115.327
Red River	45.808	-115.475	45.803	-115.155
Relief Creek	45.748	-115.520	45.754	-115.498
Rhoda Creek	46.234	-114.961	46.239	-115.009
Roaring Creek	46.886	-115.356	46.918	-115.349
Rock Creek	46.598	-114.609	46.612	-114.620
Rocky Run	47.069	-115.819	47.035	-115.848
Ruby Creek	46.733	-115.079	46.745	-115.105
Running Creek	45.919	-114.832	45.916	-115.033
Rutledge Creek	47.073	-115.755	47.108	-115.723
Saddle Gulch	45.770	-114.654	45.766	-114.641
Salamander Creek	45.711	-114.866	45.648	-114.879
Sawmill Creek	45.908	-115.635	45.904	-115.647
Schofield Creek	45.777	-114.646	45.819	-114.586
Schwar Creek	45.882	-115.117	45.905	-115.109
Selway River	46.140	-115.600	45.500	-114.698
Shoot Creek	46.606	-114.415	46.580	-114.426
Short Creek	46.886	-115.058	46.898	-115.014
Shot Creek	46.639	-115.281	46.666	-115.207
Shotgun Creek	46.601	-114.665	46.600	-114.738
Siegel Creek	45.773	-115.388	45.787	-115.368
Silver Creek	46.607	-114.831	46.653	-114.814
Silver Creek	45.716	-115.540	45.703	-115.501
Sixmile Creek	45.764	-115.660	45.763	-115.646
Skull Creek	46.827	-115.486	46.888	-115.321
Slate Creek	46.928	-115.009	46.927	-115.019
Slow Gulch Creek	45.694	-114.561	45.679	-114.546
Soda Creek	45.756	-115.257	45.746	-115.252
South Fork Clearwater River	46.146	-115.981	45.808	-115.475
South Fork Kelly Creek	46.712	-114.863	46.707	-114.818
South Fork Red River	45.711	-115.345	45.623	-115.480
South Fork Running Creek	45.845	-114.945	45.823	-114.966
South Fork Spruce Creek	46.606	-114.393	46.565	-114.353
South Fork Surprise Creek	45.527	-114.680	45.503	-114.655
Spring Creek	46.546	-114.886	46.552	-114.903
Spruce Creek	46.616	-114.455	46.606	-114.393
Stoney Creek	46.884	-115.970	46.915	-116.033
Storm Creek	46.463	-114.549	46.541	-114.403
Storm Creek	45.578	-114.641	45.611	-114.591
Stripe Creek	45.523	-114.704	45.513	-114.736
Sugar Creek	46.771	-115.035	46.820	-115.006
Surprise Creek	45.521	-114.702	45.532	-114.667
Swamp Creek	46.745	-115.068	46.799	-115.002
Swet Creek	45.580	-114.720	45.537	-114.795
Taylor Creek	45.659	-115.783	45.637	-115.774
Tenmile Creek	45.806	-115.684	45.639	-115.713
Three Lakes Creek	45.623	-114.709	45.618	-114.724
Tom Creek	45.862	-114.987	45.912	-114.985
Trapper Creek	45.674	-115.345	45.705	-115.248
Twin Creek	46.582	-114.528	46.570	-114.475
Twin Lakes Creek	45.664	-115.828	45.649	-115.818
Unnamed - Off Hopeful Creek	46.708	-114.625	46.699	-114.669
Unnamed - Off Long Creek	46.947	-115.036	46.939	-115.024
Unnamed - Off West Fork Crooked River	45.695	-115.574	45.690	-115.563
Unnamed 1 - Off Pilot Creek	45.923	-115.688	45.930	-115.677
Unnamed 2 - Off Pilot Creek	45.938	-115.717	45.927	-115.723
Vance Creek	45.703	-114.580	45.683	-114.593
Vanderbilt Gulch	46.916	-115.120	46.940	-115.191
W.Fk. American River	45.913	-115.466	45.935	-115.545
W.Fk. Fishing Creek	46.537	-114.868	46.567	-114.885

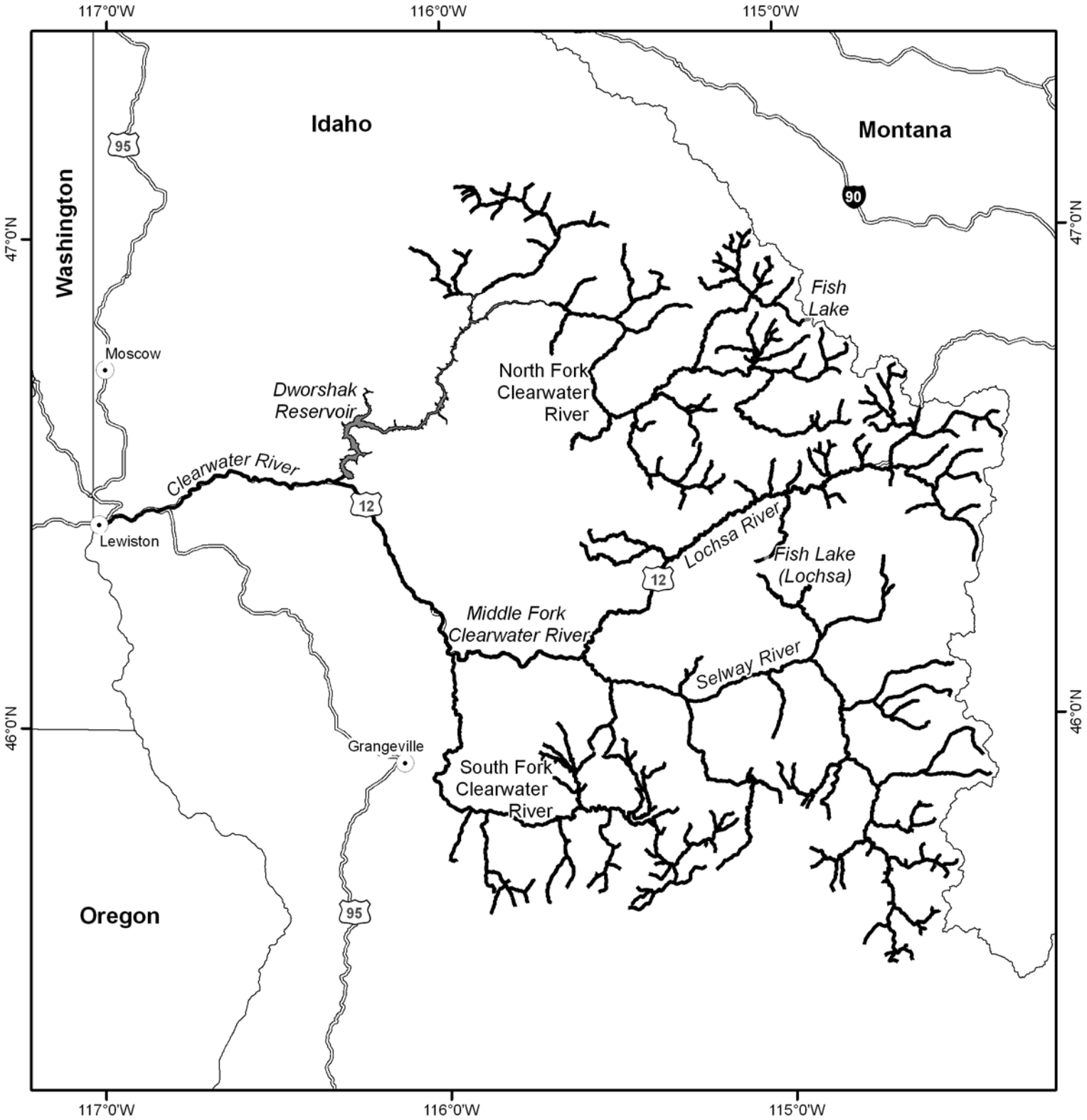
Waterbody Name	Stream Begin Point or Lake Center Latitude	Stream Begin Point or Lake Center Longitude	Stream End Point Latitude	Stream End Point Longitude
W.Fk. Gedney Creek	46.094	-115.294	46.110	-115.295
W.Fk. O'Hara Creek	45.998	-115.524	45.949	-115.570
Walton Creek	46.508	-114.682	46.472	-114.681
Warm Springs Creek	46.473	-114.888	46.430	-114.864
Weasel Creek	46.601	-114.905	46.623	-114.906
Weir Creek	46.457	-115.035	46.534	-115.018
Weitas Creek	46.636	-115.434	46.508	-115.174
West Fork Crooked River	45.695	-115.549	45.666	-115.597
West Fork Floodwood Creek	46.957	-115.928	46.973	-115.964
West Fork Legendary Bear Creek	46.535	-114.766	46.580	-114.752
West Fork Newsome Creek	45.865	-115.618	45.892	-115.695
West Fork Red River	45.653	-115.402	45.667	-115.453
White Cap Creek	45.860	-114.745	45.919	-114.431
Wilkerson Creek	45.612	-114.707	45.563	-114.615
Williams Creek	45.731	-115.656	45.667	-115.658
Williams Lake Creek	46.644	-114.717	46.647	-114.768
Windy Creek	46.494	-115.328	46.570	-115.236
Wiseboy Creek	45.642	-115.712	45.637	-115.704
Wounded Doe Creek	46.239	-115.009	46.300	-115.080

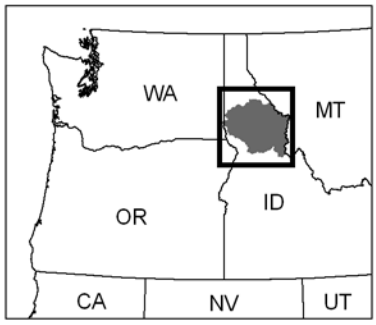
(iii) No waterbodies are excluded from critical habitat designation in this unit.

(iv) Map of Unit 21, Clearwater River follows:

Critical Habitat for Bull Trout *(Salvelinus confluentus)*

Unit: 21, Clearwater River





N

0 12.5 25 Miles

0 20 40 Kilometers

CH Lakes

CH Streams

City

Road

(29) Unit 22: Mainstem Upper Columbia River

(i) This unit consists of 520.1 km (323.2 mi) of streams. The unit is located in central Washington.

(ii) Individual waterbodies in the unit are bounded by the following coordinates:

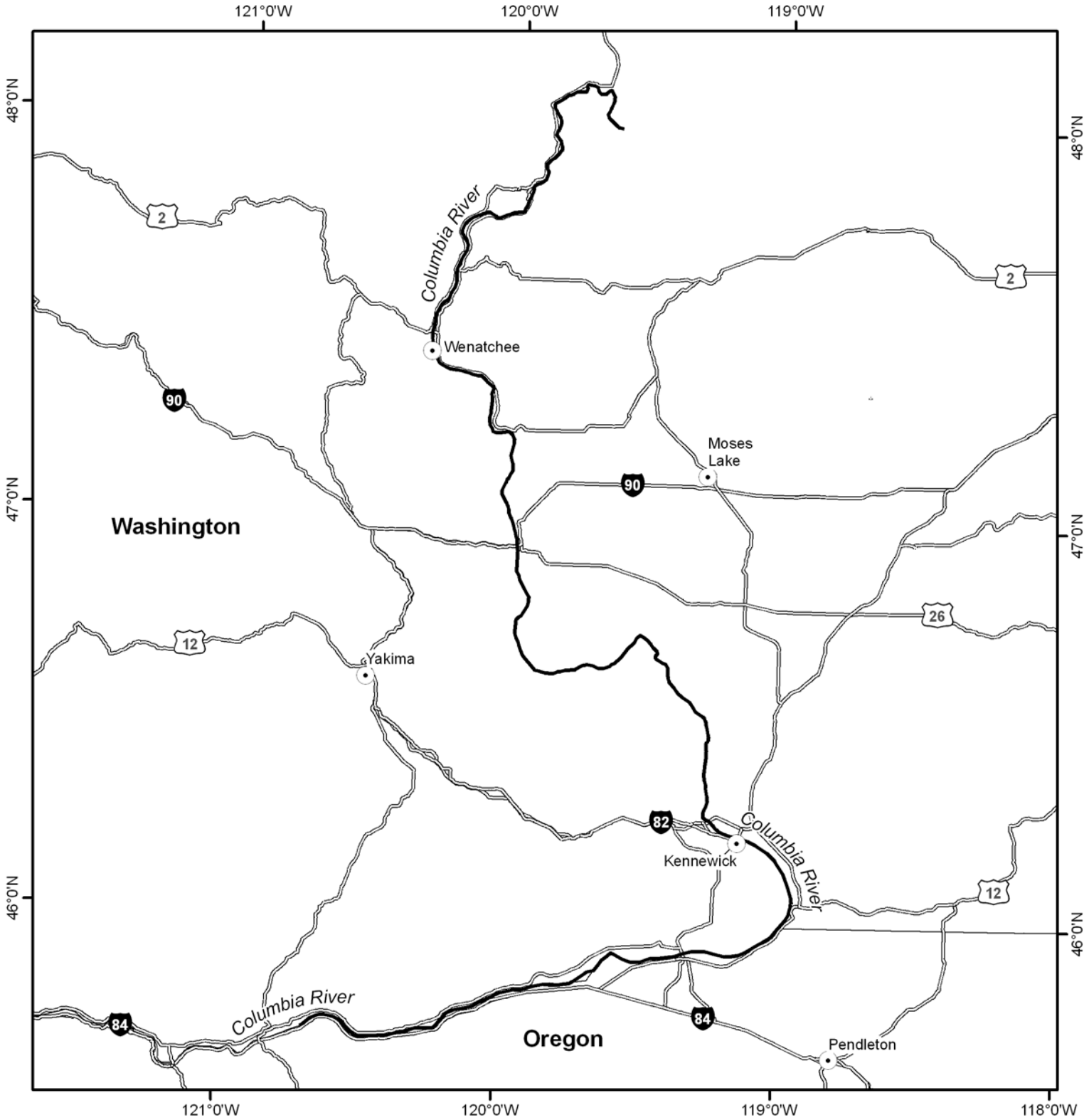
Waterbody Name	Stream Begin Point or Lake Center Latitude	Stream Begin Point or Lake Center Longitude	Stream End Point Latitude	Stream End Point Longitude
Columbia River	45.715	-120.693	47.997	-119.633

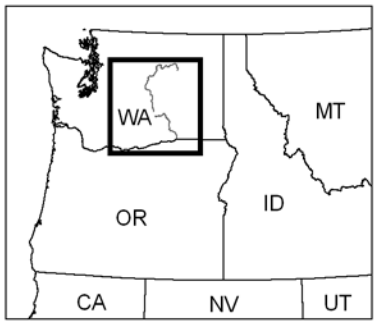
(iii) Waterbodies associated with the following habitat conservation plans (HCPs) totaling 2.5 km (1.6 mi) of streams have been excluded from critical habitat designation under section 4(b)(2) of the Act in this unit. These are waterbodies within the geographic area covered by the Washington State Forest Practices Habitat Conservation Plan (HCP).

(iv) Map of Unit 22, Mainstem Upper Columbia River follows:

Critical Habitat for Bull Trout *(Salvelinus confluentus)*

Unit: 22, Mainstem Upper Columbia River





N

0 15 30 Miles

0 25 50 Kilometers

For excluded lands in this CHU refer to the section on exclusions in the rule

CH Streams

City

Road

(30) Unit 23: Mainstem Snake River

(i) This unit consists of 451.7 km (280.6 mi) of streams. The unit is located in southeastern Washington, northeastern Oregon, and west-central Idaho.

(ii) Individual waterbodies in the unit are bounded by the following coordinates:

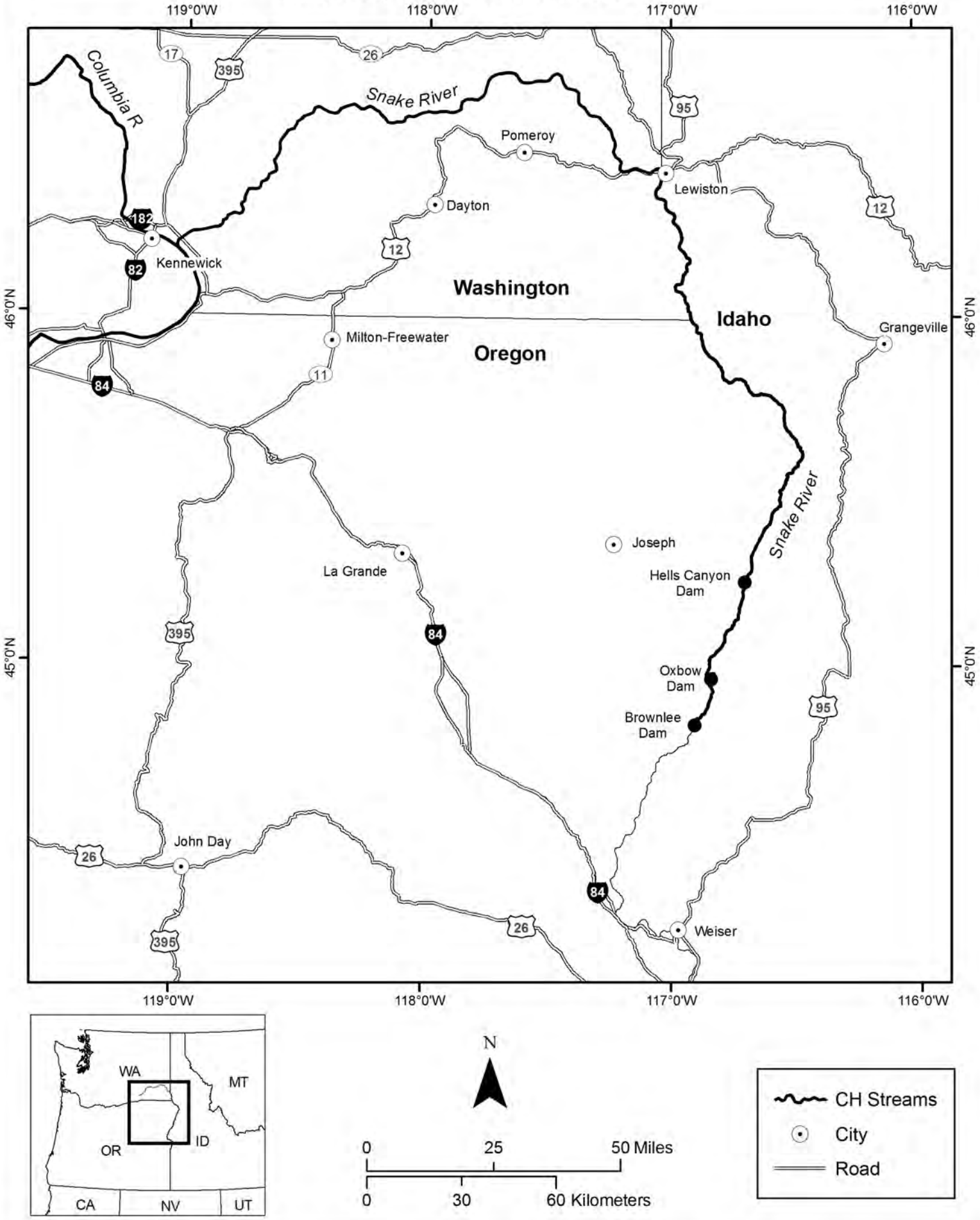
Waterbody Name	Stream Begin Point or Lake Center Latitude	Stream Begin Point or Lake Center Longitude	Stream End Point Latitude	Stream End Point Longitude
Snake River	46.188	-119.031	44.836	-116.901

(iii) No waterbodies are excluded from critical habitat designation in this unit.

(iv) Map of Unit 23, Mainstem Snake River follows:

Critical Habitat for Bull Trout *(Salvelinus confluentus)*

Unit: 23, Mainstem Snake River



(31) Unit 24: Malheur River Basin

(i) This unit consists of 272.3 km (169.2 mi) of streams and 715.9 ha (1,768.9 ac) of lakes and reservoirs. The unit is located in eastern Oregon.

(ii) Individual waterbodies in the unit are bounded by the following coordinates:

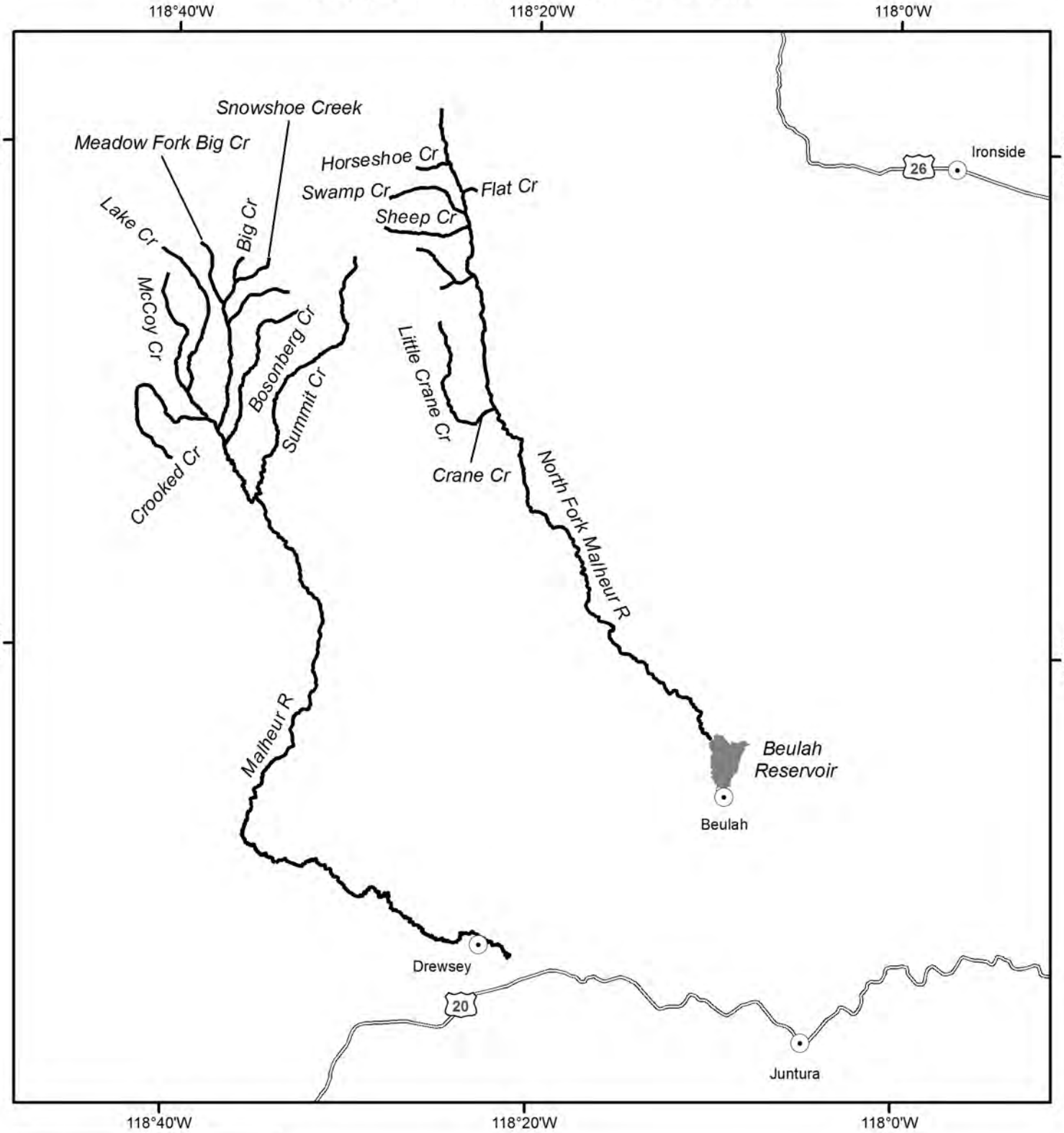
Waterbody Name	Stream Begin Point or Lake Center Latitude	Stream Begin Point or Lake Center Longitude	Stream End Point Latitude	Stream End Point Longitude
Beulah Reservoir	43.931	-118.154		
Big Creek	44.259	-118.604	44.145	-118.625
Bosonberg Creek	44.224	-118.553	44.135	-118.619
Corral Basin Creek	44.236	-118.562	44.214	-118.618
Crane Creek	44.151	-118.387	44.162	-118.371
Crooked Creek	44.125	-118.666	44.151	-118.635
Elk Creek	44.245	-118.409	44.250	-118.392
Flat Creek	44.305	-118.390	44.304	-118.403
Horseshoe Creek	44.320	-118.448	44.323	-118.416
Lake Creek	44.265	-118.679	44.145	-118.625
Little Crane Creek	44.219	-118.423	44.151	-118.387
Malheur River	44.145	-118.625	43.797	-118.350
McCoy Creek	44.248	-118.674	44.169	-118.654
Meadow Fork Big Creek	44.268	-118.644	44.227	-118.622
North Fork Elk Creek	44.266	-118.446	44.245	-118.409
North Fork Malheur River	44.360	-118.425	43.945	-118.168
Sheep Creek	44.281	-118.476	44.281	-118.397
Snowshoe Creek	44.259	-118.581	44.242	-118.612
South Fork Elk Creek	44.241	-118.423	44.245	-118.409
Summit Creek	44.261	-118.502	44.099	-118.588
Swamp Creek	44.299	-118.471	44.291	-118.401

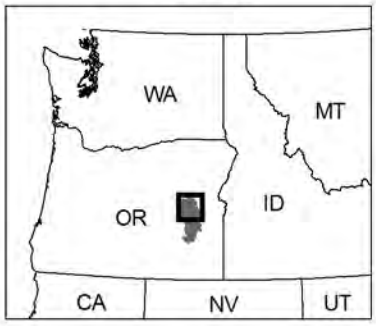
(iii) No waterbodies are excluded from critical habitat designation in this unit.

(iv) Map of Unit 24, Malheur River Basin follows:

Critical Habitat for Bull Trout *(Salvelinus confluentus)*

Unit: 24, Malheur River Basin





N

0 5 10 Miles

0 5 10 Kilometers

CH Lakes

CH Streams

City

Road

(32) Unit 25: Jarbidge River

(i) This unit consists of 245.2 km (152.4 mi) of streams. The unit is located in northeastern Nevada and southwestern Idaho.

(ii) Individual waterbodies in the unit are bounded by the following coordinates:

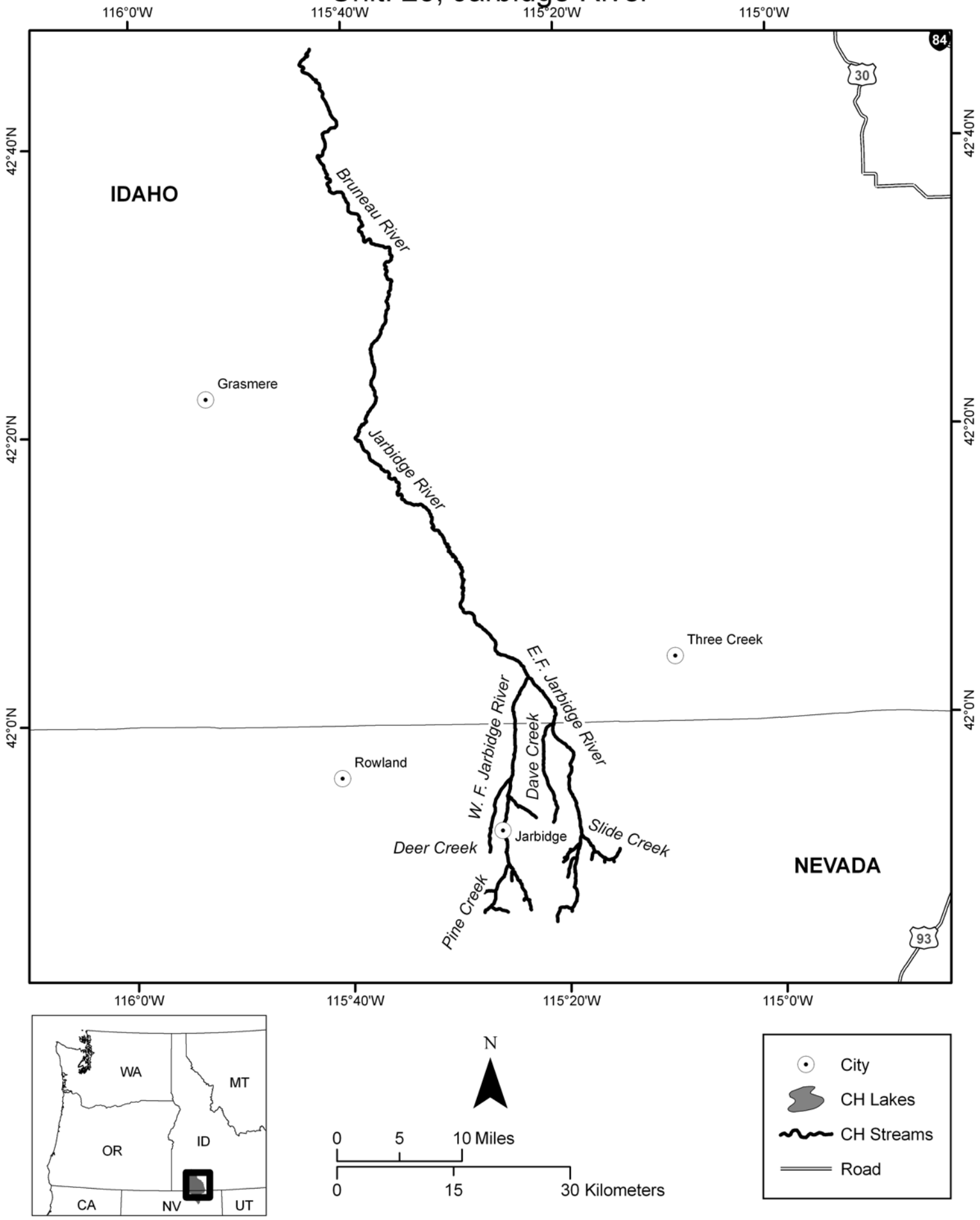
Waterbody Name	Stream Begin Point or Lake Center Latitude	Stream Begin Point or Lake Center Longitude	Stream End Point Latitude	Stream End Point Longitude
Bruneau River	42.780	-115.715	42.329	-115.652
Cougar Creek	41.840	-115.320	41.818	-115.335
Dave Creek	41.882	-115.356	41.995	-115.353
Deer Creek	41.848	-115.455	41.933	-115.420
East Fork Jarbidge River	41.778	-115.330	42.049	-115.391
Fall Creek	41.856	-115.315	41.835	-115.342
Fox Creek	41.827	-115.420	41.815	-115.422
Gods Pocket Creek	41.847	-115.293	41.838	-115.298
Jack Creek	41.887	-115.383	41.912	-115.425
Jarbidge River	42.049	-115.391	42.329	-115.652
Jenny Creek	41.901	-115.410	41.900	-115.410
Pine Creek	41.779	-115.464	41.833	-115.425
Sawmill Creek	41.794	-115.399	41.792	-115.404
Slide Creek	41.867	-115.312	41.850	-115.254
Unnamed E Trib Off Pine Creek	41.779	-115.429	41.786	-115.455
Unnamed Headwater Trib Off E Fk Jarbidge River	41.767	-115.352	41.782	-115.330
Unnamed Lower Trib Off Fall Creek	41.849	-115.327	41.850	-115.331
Unnamed Lower Trib Off Slide Creek	41.839	-115.277	41.834	-115.278
Unnamed Upper Trib Off Fall Creek	41.843	-115.335	41.840	-115.340
Unnamed Upper Trib Off Slide Creek	41.838	-115.264	41.834	-115.263
Unnamed W Trib Off Pine Creek	41.802	-115.465	41.803	-115.447
Unnamed W Trib Off West Fork Jarbidge River	41.781	-115.393	41.792	-115.397
West Fork Jarbidge River	41.792	-115.395	42.049	-115.391

(iii) No waterbodies are excluded from critical habitat designation in this unit.

(iv) Map of Unit 25, Jarbidge River follows:

Critical Habitat for Bull Trout *(Salvelinus confluentus)*

Unit: 25, Jarbidge River



(33) Unit 26: Southwest Idaho Basins – East Half

(i) The entire Southwest Idaho Basins unit consists of 2,150 km (1,335.9 mi) of streams and 4,310.5 ha (10,651.5 ac) of lakes and reservoirs. The unit is located in southwestern Idaho.

(ii) Individual waterbodies in the unit are bounded by the following coordinates:

Waterbody Name	Stream Begin Point or Lake Center Latitude	Stream Begin Point or Lake Center Longitude	Stream End Point Latitude	Stream End Point Longitude
Alta Creek	43.701	-115.248	43.701	-115.243
Anderson Creek	44.605	-116.187	44.527	-116.243
Anderson Ranch Reservoir	43.415	-115.348		
Antelope Creek	44.400	-116.169	44.375	-116.198
Arrowrock Reservoir	43.599	-115.840		
Bald Mountain Creek	43.756	-115.277	43.818	-115.267
Ballentyne Creek	43.983	-115.143	44.011	-115.233
Banner Creek	43.998	-115.543	44.037	-115.522
Baron Creek	44.093	-115.028	44.137	-115.149
Basin Creek	44.377	-115.702	44.341	-115.659
Bass Creek	43.741	-115.003	43.791	-114.975
Bear Creek	43.702	-115.007	43.727	-114.901
Bear Creek	44.017	-115.406	43.938	-115.457
Bear River	43.987	-115.341	43.892	-115.489
Beaver Creek	44.318	-115.692	44.317	-115.685
Big Peak Creek	43.658	-114.795	43.628	-114.730
Big Silver Creek	43.989	-115.328	43.989	-115.256
Big Smoky Creek	43.792	-114.756	43.604	-114.916
Big Water Gulch	43.665	-115.043	43.604	-115.108
Bitter Creek	44.421	-115.678	44.406	-115.618
Black Warrior Creek	43.945	-115.190	43.818	-115.291
Blind Canyon	43.768	-114.724	43.769	-114.720
Bluff Creek	43.697	-114.686	43.700	-114.755
Boardman Creek	43.525	-115.019	43.612	-114.940
Boiler Grade Creek	43.720	-115.262	43.730	-115.263
Boise River	43.713	-115.636	43.645	-115.749
Buck Creek	43.747	-115.326	43.803	-115.397
Bull Creek	44.491	-115.615	44.422	-115.813
Burnt Log Creek	43.646	-115.017	43.643	-114.970
Canyon Creek	44.303	-115.231	44.172	-115.244
Carrie Creek	43.590	-114.691	43.552	-114.759
Chapman Creek	44.097	-115.290	44.136	-115.314
Clear Creek	44.228	-115.409	44.248	-115.395
Corbus Creek	43.737	-115.165	43.747	-115.190
Cow Creek	44.021	-115.296	43.991	-115.255
Crooked River	44.027	-115.338	43.853	-115.537
Cub Creek	43.979	-115.353	43.980	-115.402
Daisy Creek	44.269	-115.748	44.260	-115.694
Deadwood Creek	43.532	-115.015	43.585	-115.008
Deadwood Reservoir	44.309	-115.663		
Deadwood River	44.547	-115.561	44.342	-115.658
Deadwood River	44.293	-115.646	44.079	-115.658
Decker Creek	43.718	-115.047	43.769	-115.145
Deer Creek	44.347	-115.549	44.396	-115.616
Devils Creek	43.642	-115.564	43.685	-115.592
Dewey Creek	44.772	-116.276	44.807	-116.278
Disappointment Creek	44.830	-116.707	44.825	-116.658
Dog Creek	43.529	-115.302	43.529	-115.302
East Fork Big Peak Creek	43.628	-114.730	43.630	-114.699
East Fork Deadwood River	44.494	-115.571	44.492	-115.575
East Fork Eightmile Creek	44.200	-115.355	44.133	-115.407
East Fork Elk Creek	43.742	-115.231	43.709	-115.254
East Fork Roaring River	43.687	-115.438	43.694	-115.465
East Fork Sheep Creek	43.674	-115.486	43.684	-115.548
East Fork Skeleton Creek	43.685	-115.019	43.658	-114.999
East Fork Warm Springs Creek	44.317	-115.538	44.294	-115.622
East Fork Weiser River	44.729	-116.279	44.846	-116.380
East Fork Yuba River	43.747	-115.155	43.723	-115.153
Eightmile Creek	44.251	-115.400	44.118	-115.413
Elk Creek	43.751	-115.307	43.678	-115.265
Emma Creek	43.791	-114.835	43.735	-114.906
Feather River	43.678	-115.265	43.687	-115.286
Flytrip Creek	43.928	-115.019	43.939	-114.974
French Creek	43.741	-115.627	43.741	-115.638
Garney Creek	44.091	-115.609	44.094	-115.611

Waterbody Name	Stream Begin Point or Lake Center Latitude	Stream Begin Point or Lake Center Longitude	Stream End Point Latitude	Stream End Point Longitude
Gates Creek	44.348	-115.328	44.292	-115.306
Goat Creek	43.729	-115.007	43.715	-114.980
Goat Creek	44.393	-115.680	44.398	-115.619
Grouse Creek	43.731	-115.079	43.710	-115.077
Grouse Creek	44.835	-116.708	44.826	-116.657
Habit Creek	44.349	-115.713	44.330	-115.673
Hornet Creek	44.797	-116.733	44.838	-116.635
Horseshoe Creek	44.062	-115.317	44.053	-115.317
Hungarian Creek	43.818	-115.539	43.841	-115.603
Johnson Creek	43.844	-114.971	43.774	-114.929
Johnson Creek	43.947	-115.130	43.940	-115.285
Lightning Creek	44.233	-115.766	44.193	-115.937
Little Bear Creek	43.746	-114.975	43.779	-114.936
Little Queens River	43.930	-115.144	43.843	-115.185
Little Rattlesnake Creek	43.589	-115.700	43.617	-115.607
Little Silver Creek	44.001	-115.326	43.997	-115.289
Little Smoky Creek	43.585	-114.680	43.608	-114.872
Little Weiser River	44.637	-116.175	44.506	-116.308
Lodgepole Creek	43.888	-115.295	43.930	-115.315
Loggy Creek	43.763	-114.788	43.800	-114.790
Long Creek	44.153	-115.533	44.129	-115.579
Long Fork Silver Creek	44.411	-115.680	44.382	-115.761
Louise Creek	43.964	-115.392	43.968	-115.425
Mattingly Creek	43.853	-115.036	43.846	-115.049
McLeod Creek	44.022	-115.163	44.057	-115.208
McPhearson Creek	44.038	-115.159	44.066	-115.199
Meadow Creek	43.764	-115.617	43.765	-115.622
Middle Fork Boise River	43.946	-115.033	43.713	-115.636
Middle Fork Payette River	44.551	-115.765	44.103	-116.000
Middle Fork Roaring River	43.624	-115.466	43.688	-115.452
Middle Fork Warm Springs Creek	44.351	-115.565	44.326	-115.599
No Man Creek	44.247	-115.591	44.247	-115.630
North Creek	44.818	-116.721	44.814	-116.693
North Fork Baron Creek	44.145	-115.078	44.131	-115.102
North Fork Big Smoky Creek	43.723	-114.789	43.748	-114.802
North Fork Boise River	44.094	-115.225	43.713	-115.636
North Fork Canyon Creek	44.260	-115.199	44.250	-115.215
North Fork Deer Creek	44.452	-115.545	44.408	-115.554
North Fork Gold Fork River	44.756	-115.801	44.674	-115.897
North Fork Ross Fork	43.852	-114.976	43.796	-114.989
North Fork Whitehawk Creek	44.291	-115.539	44.277	-115.585
Olive Creek	44.787	-116.694	44.836	-116.628
Onion Creek	44.234	-115.776	44.214	-115.825
Oxtail Creek	44.439	-115.639	44.459	-115.668
Packsaddle Creek	44.223	-115.698	44.224	-115.744
Parks Creek	43.629	-115.337	43.582	-115.342
Peace Creek	44.356	-115.734	44.341	-115.792
Pikes Fork	44.048	-115.441	43.971	-115.562
Placer Creek	44.806	-116.738	44.808	-116.680
Poison Creek	44.491	-116.163	44.478	-116.186
Pole Creek	44.494	-116.203	44.471	-116.219
Queens River	43.959	-115.119	43.821	-115.208
Rabbit Creek	43.797	-115.613	43.821	-115.690
Rainbow Creek	43.630	-115.341	43.630	-115.361
Rattlesnake Creek	43.622	-115.526	43.561	-115.740
Renwick Creek	44.397	-116.140	44.367	-116.196
Right Creek	43.855	-115.187	43.867	-115.194
Roaring River	43.647	-115.480	43.790	-115.440
Rock Creek	43.894	-115.045	43.939	-115.081
Rockey Creek	43.969	-115.424	44.011	-115.397
Ross Fork	43.796	-114.989	43.774	-114.929
Royal Gorge	43.751	-114.725	43.750	-114.723
Russel Gulch	43.577	-115.559	43.591	-115.596
Salt Creek	43.607	-114.872	43.539	-114.860
Sawmill Creek	43.709	-115.095	43.761	-115.121
Scenic Creek	43.901	-115.145	43.921	-115.179
Scotch Creek	43.687	-115.438	43.690	-115.432
Scott Creek	43.891	-115.153	43.883	-115.181
Scott Creek	44.191	-115.762	44.223	-115.648
Second Fork Squaw Creek	44.404	-116.192	44.367	-116.196

Waterbody Name	Stream Begin Point or Lake Center Latitude	Stream Begin Point or Lake Center Longitude	Stream End Point Latitude	Stream End Point Longitude
Sheep Creek	43.617	-115.511	43.697	-115.662
Sheep Creek	44.504	-116.175	44.542	-116.222
Silver Creek	44.408	-115.750	44.304	-115.865
Sixteen-to-one Creek	44.467	-115.755	44.470	-115.718
Skeleton Creek	43.694	-114.987	43.589	-115.022
Smith Creek	44.200	-115.758	44.214	-115.710
Smokey Dome Canyon	43.503	-114.938	43.547	-114.956
Snowslide Creek	43.738	-114.830	43.723	-114.789
South Fork Beaver Creek	44.297	-115.733	44.295	-115.686
South Fork Boise River	43.358	-115.449	43.481	-115.307
South Fork Boise River	43.335	-115.537	43.550	-115.722
South Fork Canyon Creek	44.226	-115.192	44.210	-115.170
South Fork Clear Creek	44.183	-115.484	44.232	-115.440
South Fork Cub Creek	43.968	-115.356	43.977	-115.389
South Fork Gold Fork River	44.653	-115.840	44.674	-115.897
South Fork Payette River	43.999	-115.040	44.103	-116.000
South Fork Ross Fork	43.735	-115.022	43.796	-114.989
South Fork Scott Creek	44.187	-115.703	44.222	-115.661
Squaw Creek	44.436	-116.153	44.437	-116.279
Stratton Creek	44.446	-115.631	44.470	-115.587
Tenmile Creek	44.086	-115.237	44.119	-115.386
Third Fork Squaw Creek	44.453	-116.157	44.424	-116.211
Trail Creek	44.164	-115.093	44.158	-115.084
Trail Creek	43.912	-115.407	43.871	-115.409
Trail Creek	44.239	-115.759	44.279	-115.667
Trail Creek-Yuba	43.707	-115.118	43.763	-115.146
Trinity Creek	43.600	-115.270	43.630	-115.341
Tripod Creek	43.896	-115.155	43.895	-115.189
Ucon Creek	44.379	-115.721	44.371	-115.767
Unnamed	43.867	-115.194	43.877	-115.194
Unnamed	43.781	-115.252	43.766	-115.273
Unnamed	43.861	-115.271	43.872	-115.295
Unnamed	43.751	-115.361	43.722	-115.368
Unnamed	43.987	-115.418	44.005	-115.416
Unnamed	44.201	-115.717	44.182	-115.721
Unnamed	43.625	-115.556	43.628	-115.556
Unnamed	43.664	-115.527	43.657	-115.526
Unnamed	43.657	-115.526	43.653	-115.528
Unnamed	44.026	-115.275	44.035	-115.272
Unnamed	44.029	-115.368	44.026	-115.365
Unnamed - Off Olive Creek	44.801	-116.661	44.787	-116.666
Unnamed - Off Beaver Creek	44.336	-115.718	44.318	-115.687
Unnamed - Off Black Warrior Creek	43.896	-115.263	43.878	-115.245
Unnamed - Off East Fork Warm Springs Creek	44.324	-115.564	44.312	-115.578
Unnamed - Off Long Creek	44.136	-115.535	44.148	-115.547
Unnamed - Off Middle Fork Warm Springs Creek	44.324	-115.541	44.332	-115.580
Unnamed - Off North Fork Canyon Creek	44.241	-115.166	44.260	-115.199
Unnamed - Off South Fork Beaver Creek	44.283	-115.722	44.294	-115.687
Unnamed 1 - Off Deer Creek	44.425	-115.587	44.407	-115.586
Unnamed 1 - Off Middle Fork Payette River	44.552	-115.835	44.524	-115.775
Unnamed 1 - Off Olive Creek	44.812	-116.644	44.791	-116.649
Unnamed 1 - Off Third Fork Squaw Creek	44.420	-116.148	44.424	-116.211
Unnamed 1- Off Emma Creek	43.772	-114.884	43.759	-114.872
Unnamed 2 - Off Deer Creek	44.388	-115.554	44.401	-115.560
Unnamed 2 - Off Eightmile Creek	44.198	-115.419	44.174	-115.398
Unnamed 2 - Off Of Unnamed 1 Off Of Third Fork Squaw Creek	44.421	-116.172	44.415	-116.191
Unnamed 3 - Off Deer Creek	44.422	-115.534	44.407	-115.542
Unnamed 3 - Off Middle Fork Payette River	44.540	-115.739	44.539	-115.771
Unnamed 3 - Off Of Unnamed 1 Off Of Third Fork Squaw Creek	44.426	-116.161	44.416	-116.202
Unnamed 3 - Off Third Fork Squaw Creek	44.433	-116.168	44.434	-116.204
Unnamed 4 - Off Squaw Creek	44.455	-116.200	44.470	-116.220
Unnamed 5 - Off Squaw Creek	44.460	-116.166	44.479	-116.194
Unnamed 6 - Off Unamed 5 Off Of Squaw Creek	44.456	-116.175	44.476	-116.191
Unnamed Trib 3 - Off North Fork Gold Fork River	44.747	-115.812	44.708	-115.817
Unnamed Trib 4 - Off North Fork Gold Fork River	44.679	-115.812	44.706	-115.820
Valley Creek	44.280	-115.743	44.333	-115.777
Vienna Creek	43.802	-114.906	43.802	-114.910
Wagontown Creek	43.565	-115.277	43.607	-115.324
Wapiti Creek	44.117	-115.202	44.094	-115.186
Warm Spring Creek	44.292	-115.306	44.144	-115.304

Waterbody Name	Stream Begin Point or Lake Center Latitude	Stream Begin Point or Lake Center Longitude	Stream End Point Latitude	Stream End Point Longitude
Warm Springs Creek	44.367	-115.580	44.279	-115.631
West Fork Big Peak Creek	43.628	-114.730	43.646	-114.719
West Fork Big Smoky Creek	43.788	-114.821	43.744	-114.727
West Fork Creek	44.048	-115.247	44.055	-115.210
West Fork Skeleton Creek	43.672	-115.027	43.651	-114.974
West Parks Creek	43.623	-115.341	43.612	-115.366
West Warrior Creek	43.882	-115.298	43.840	-115.257
Whitehawk Creek	44.261	-115.556	44.235	-115.524
Wild Buck Creek	44.389	-115.650	44.342	-115.658
Willow Creek	43.725	-115.023	43.605	-115.144
Willow Creek	43.959	-115.531	43.944	-115.484
Wilson Creek	44.366	-115.565	44.292	-115.641
Yuba River	43.707	-115.202	43.803	-115.160

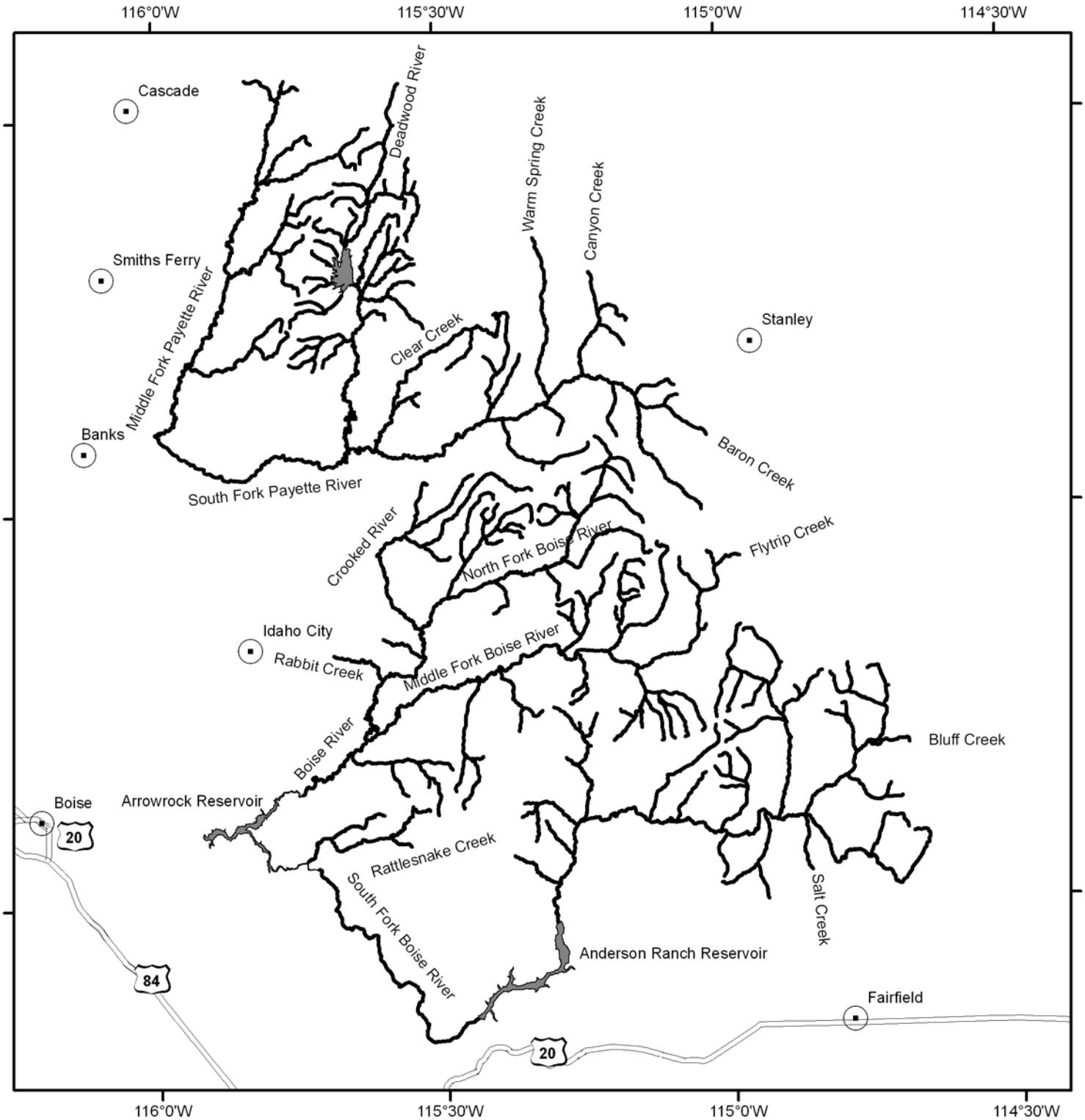
(iii) No waterbodies are excluded from critical habitat designation in this unit.

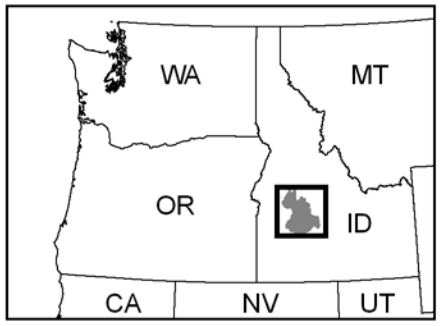
(iv) Map of Unit 26, Southwest Idaho Basins – East Half follows:

[Insert Map, Unit 26 Southwest Idaho Basins – East Half]

Critical Habitat for Bull Trout *(Salvelinus confluentus)*

Unit: 26, Southwest Idaho Basins (East Half)





N

0 10 20 Miles

0 10 20 Kilometers

CH Lakes

CH Streams

City

Road

(34) Unit 26: Southwest Idaho Basins – West Half

(i) The entire Southwest Idaho Basins unit consists of 2,150 km (1,335.9 mi) of streams and 4,310.5 ha (10,651.5 ac) of lakes and reservoirs. The unit is located in southwestern Idaho.

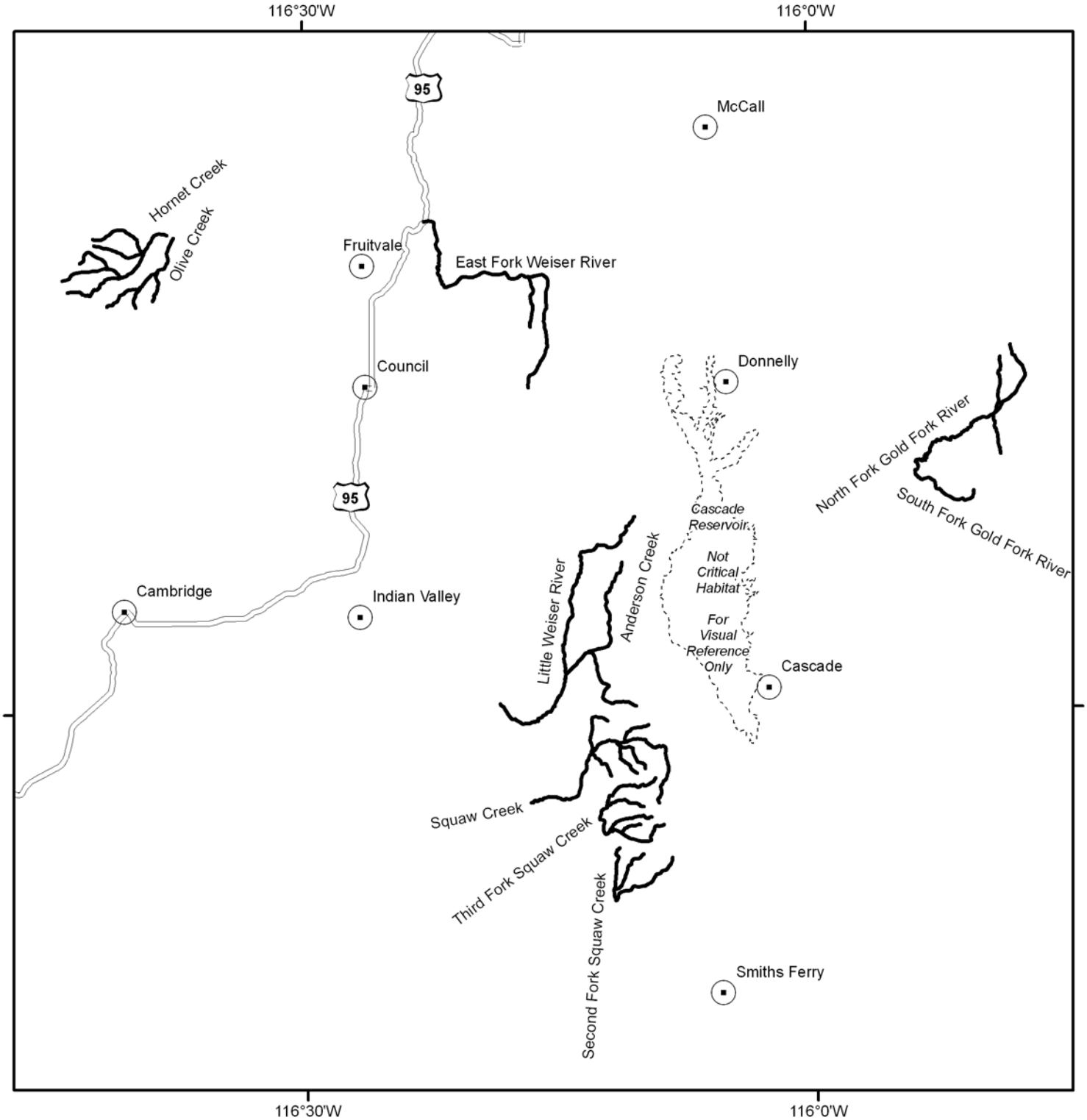
(ii) See paragraph (e)(33)(ii) of this entry for a list of individual waterbodies in this unit.

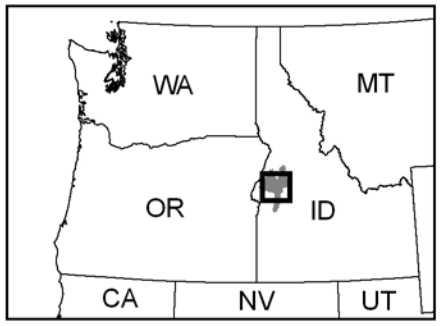
(iii) No waterbodies are excluded from critical habitat designation in this unit.

(iv) Map of Unit 26, Southwest Idaho Basins – West Half follows:

Critical Habitat for Bull Trout *(Salvelinus confluentus)*

Unit: 26, Southwest Idaho Basins (West Half)





N

0 5 10 Miles

0 5 10 Kilometers

CH Lakes

CH Streams

City

Road

(35) Unit 27: Salmon River – East Half

(i) The entire Salmon River unit consists of 7,376.5 km (4,583.5 mi) of streams and 1,683.8 ha (4,160.6 ac) of lakes and reservoirs. The unit is located in central Idaho.

(ii) Individual waterbodies in the unit are bounded by the following coordinates:

Waterbody Name	Stream Begin Point or Lake Center Latitude	Stream Begin Point or Lake Center Longitude	Stream End Point Latitude	Stream End Point Longitude
(Mill Creek (Tributary to Big Creek)	44.467	-113.685	44.507	-113.619
Airplane Lake	45.156	-114.599		
Alpine Creek	45.032	-114.655	45.080	-114.619
Alpine Creek	43.930	-114.970	43.896	-114.907
Alpine Creek Lake #5	45.078	-114.617		
Alturas Lake	43.914	-114.861		
Alturas Lake Creek	43.893	-114.919	44.004	-114.837
Arctic Creek	45.498	-114.998	45.479	-115.031
Arnett Creek	45.265	-114.201	45.205	-114.134
Arrastra Creek	44.841	-114.351	44.868	-114.426
Back Creek	44.511	-115.707	44.512	-115.739
Baldwin Creek	44.500	-115.106	44.541	-115.068
Banner Creek	44.291	-115.188	44.356	-115.209
Bargamin Creek	45.770	-114.935	45.567	-115.192
Basin Creek	44.368	-114.943	44.263	-114.818
Basin Creek	45.657	-114.960	45.674	-114.991
Bayhorse Creek	44.378	-114.257	44.411	-114.402
Beagle Creek	44.996	-114.480	44.991	-114.462
Bear Creek	44.597	-114.463	44.569	-114.362
Bear Creek	44.834	-115.514	44.826	-115.483
Bear Creek	45.106	-115.618	45.117	-115.638
Bear Creek	44.606	-115.601	44.623	-115.691
Bear Creek-Loon	44.735	-114.862	44.742	-114.818
Bear Creek-Marsh	44.490	-115.099	44.439	-115.101
Bear Valley Creek	44.804	-113.867	44.772	-113.708
Bear Valley Creek	44.236	-115.500	44.449	-115.231
Bearskin Creek	44.330	-115.529	44.415	-115.467
Beaver Creek	45.272	-114.186	45.274	-114.335
Beaver Creek	43.836	-114.907	43.925	-114.810
Beaver Creek	44.472	-114.954	44.406	-115.171
Beaver Creek	45.242	-115.315	45.250	-115.340
Belvidere Creek	45.041	-115.387	45.069	-115.365
Bernard Creek	44.975	-114.735	44.982	-114.760
Big Bear Creek	45.472	-114.963	45.457	-115.093
Big Boulder Creek	44.113	-114.551	44.118	-114.429
Big Buck Creek	45.252	-115.540	45.263	-115.586
Big Chief Creek	44.817	-115.369	44.838	-115.298
Big Cottonwood Creek	44.879	-115.207	44.912	-115.083
Big Creek	44.442	-113.601	44.495	-113.819
Big Creek	45.060	-115.452	45.094	-114.733
Big Creek Marsh	45.091	-115.333		
Big Eightmile Creek	44.560	-113.563	44.739	-113.460
Big Flat Creek	45.227	-115.545	45.235	-115.590
Big Harrington Creek	45.518	-114.824	45.473	-114.964
Big Mallard Creek	45.537	-115.270	45.544	-115.280
Big Ramey Creek	45.279	-115.244	45.177	-115.160
Big Timber Creek	44.509	-113.539	44.699	-113.375
Birdseye Creek	44.938	-114.457	44.927	-114.385
Blackeagle Creek	44.992	-114.568	45.006	-114.547
Blackmare Creek	44.809	-115.796	44.822	-115.704
Blue Fork Silver Creek	44.854	-114.359	44.883	-114.355
Blue Lake Creek	45.132	-115.781	45.133	-115.717
Bohannon Creek	45.229	-113.668	45.112	-113.747
Boulder Creek	45.277	-115.341	45.242	-115.315
Boulder Creek	45.129	-116.476	45.204	-116.311
Bowery Creek	44.011	-114.390	44.032	-114.461
Bray Creek	44.675	-113.814	44.706	-113.769
Browning Creek	44.759	-115.364	44.738	-115.407
Bruin Creek	45.517	-115.076	45.492	-115.113
Brush Creek	44.965	-114.860	44.955	-114.734
Buck Creek	44.929	-115.003	44.896	-115.065
Buck Creek	44.751	-115.480	44.792	-115.519
Buckhorn Creek	44.853	-115.887	44.922	-115.737
Bum Creek	45.036	-115.287	44.995	-115.319
Burgdorf Creek	45.268	-115.911	45.255	-115.963
Burn Creek	45.500	-116.105	45.505	-116.125

Waterbody Name	Stream Begin Point or Lake Center Latitude	Stream Begin Point or Lake Center Longitude	Stream End Point Latitude	Stream End Point Longitude
Burnt Creek	44.149	-113.633	44.284	-113.653
Burntlog Creek	44.718	-115.420	44.803	-115.519
Cabin Creek	44.419	-114.902	44.397	-114.828
Cabin Creek	43.929	-114.880	43.928	-114.843
Cabin Creek	45.195	-114.838	45.126	-114.936
Cabin Creek	44.703	-115.648	44.666	-115.686
Cabin Creek-Loon	44.760	-114.693	44.691	-114.754
Cache Creek	45.636	-115.118	45.691	-115.181
Cache Creek	44.262	-115.403	44.346	-115.420
Cache Creek-Loon	44.776	-114.688	44.801	-114.806
California Creek	45.341	-115.851	45.448	-115.760
Camas Creek	44.708	-114.388	44.892	-114.723
Camp Creek	45.222	-114.115	45.279	-114.159
Camp Creek	44.945	-114.595	44.955	-114.611
Camp Creek	45.643	-114.961	45.657	-115.001
Camp Creek	44.985	-115.414	44.990	-115.444
Camp Creek	44.607	-115.680	44.605	-115.634
Camp Creek	44.898	-115.717	44.891	-115.618
Cane Creek	44.978	-115.262	44.953	-115.292
Canyon Creek	44.575	-114.914	44.568	-114.847
Cape Horn Creek	44.333	-115.288	44.395	-115.169
Carlson Creek	45.345	-115.517	45.339	-115.560
Casner Creek	44.281	-115.452	44.295	-115.485
Castle Creek	44.826	-114.313	44.801	-114.472
Cat Creek	44.619	-114.653	44.652	-114.628
Cave-Big Creek	45.240	-114.847	45.132	-114.956
Cayuse Creek	45.500	-114.603	45.474	-114.569
Challis Creek	44.552	-114.512	44.570	-114.187
Chamberlain Creek	45.336	-115.330	45.454	-114.933
Champion Creek	44.026	-114.839	43.988	-114.691
Chicken Creek	45.287	-115.474	45.319	-115.412
Chip Creek	44.443	-115.359	44.429	-115.341
Cinnabar Creek	44.912	-115.267	44.952	-115.294
Clear Creek	45.146	-114.579	45.295	-114.352
Cliff Creek	44.790	-115.697	44.769	-115.744
Club Creek	45.291	-115.037	45.266	-115.084
Cold Creek	45.488	-115.071	45.465	-115.077
Cold Creek	44.371	-115.318	44.425	-115.311
Cold Spring Creek-Loon	44.682	-114.841	44.718	-114.799
Colson Creek	45.299	-114.532	45.379	-114.552
Cook Creek	44.373	-115.445	44.408	-115.378
Cooper Creek	44.675	-113.703	44.726	-113.726
Corn Creek	45.368	-114.685	45.385	-114.559
Corral Creek	45.545	-114.111	45.498	-114.147
Corral Creek	44.876	-114.220	44.779	-114.248
Cottonwood Creek	44.623	-114.761	44.593	-114.680
Cougar Creek	44.810	-115.805	44.889	-115.717
Crooked Creek	45.195	-115.032	45.163	-115.129
Crooked Creek	45.612	-115.439	45.434	-115.667
Cub Creek	44.319	-115.518	44.324	-115.474
Cultus Creek	44.781	-115.211	44.813	-115.176
Curtis Creek	44.562	-115.760	44.652	-115.704
Dagger Creek	44.456	-115.374	44.523	-115.282
Dahlonega Creek	45.524	-113.836	45.541	-113.929
Dairy Creek	44.620	-113.594	44.637	-113.553
Deadhorse Creek	45.574	-116.145	45.613	-116.067
Deadwood Creek	44.349	-114.836	44.376	-114.777
Deep Creek	45.018	-114.098	45.126	-114.216
Deep Creek	45.051	-115.754	45.071	-115.743
Deer Creek	44.776	-113.810	44.793	-113.778
Deer Creek	44.571	-114.907	44.548	-114.855
Deer Creek	45.382	-115.092	45.453	-115.130
Devils Toe Creek	45.436	-114.893	45.419	-114.935
Dillinger Creek	45.530	-115.108	45.480	-115.215
Disappointment Creek	45.422	-114.880	45.300	-114.945
Dismal Creek	45.351	-114.950	45.306	-114.958
Ditch Creek	45.506	-114.004	45.597	-114.041
Dog Creek	45.380	-115.151	45.448	-115.163
Dollar Creek	44.722	-115.696	44.759	-115.752
Duffield Creek	44.570	-114.931	44.551	-115.008

Waterbody Name	Stream Begin Point or Lake Center Latitude	Stream Begin Point or Lake Center Longitude	Stream End Point Latitude	Stream End Point Longitude
Dump Creek	45.329	-114.041	45.318	-114.039
Dutch Creek	44.799	-115.520	44.798	-115.523
Dynamite Creek	44.871	-115.208	44.876	-115.058
East Basin Creek	44.343	-114.791	44.277	-114.850
East Fork Big Ramey Creek	45.245	-115.137	45.214	-115.188
East Fork Burntlog Creek	44.730	-115.427	44.737	-115.502
East Fork Cache Creek	44.306	-115.390	44.314	-115.424
East Fork Elk Creek	44.481	-115.360	44.485	-115.453
East Fork Fall Creek	45.360	-115.964	45.415	-115.976
East Fork Hayden Creek	44.664	-113.684	44.760	-113.712
East Fork Herd Creek	43.984	-114.204	44.058	-114.234
East Fork John Day Creek	45.577	-116.154	45.573	-116.230
East Fork Mayfield Creek	44.480	-114.714	44.539	-114.798
East Fork Morgan Creek	44.670	-113.829	44.675	-113.900
East Fork Owl Creek	45.340	-114.463	45.345	-114.458
East Fork Pahsimeroi River	44.081	-113.721	44.157	-113.704
East Fork Salmon River	43.929	-114.555	44.268	-114.327
East Fork South Fork Salmon River	44.886	-115.257	45.015	-115.714
East Fork Thomas Creek	44.668	-115.043	44.705	-115.028
East Fork Valley Creek	44.327	-114.988	44.357	-115.049
East Fork Whimstick Creek	45.300	-115.029	45.288	-114.962
East Pass Creek	44.050	-114.277	44.076	-114.244
Eightmile Creek	44.471	-114.716	44.426	-114.620
Elevenmile Creek	44.436	-114.545	44.467	-114.579
Elk Creek	44.196	-115.134	44.293	-115.024
Elk Creek	44.485	-115.453	44.410	-115.373
Elk Creek	45.157	-115.432	45.156	-115.585
Elkhorn Creek	44.582	-115.370	44.615	-115.257
Elkhorn Creek	45.270	-116.122	45.404	-116.095
Enos Creek	45.148	-115.795	45.102	-115.851
Fall Creek	45.331	-115.996	45.432	-115.984
Falls Creek	44.611	-113.685	44.565	-113.879
Falls Creek	44.881	-115.508	44.885	-115.536
Fernan Creek	45.238	-115.813	45.235	-115.850
Fir Creek	44.618	-114.671	44.655	-114.698
Fir Creek	44.344	-115.299	44.428	-115.291
Fish Creek	45.352	-115.304	45.384	-115.335
Fishhook Creek	44.133	-114.982	44.143	-114.920
Fitsum Creek	45.000	-115.763	44.999	-115.723
Fivemile Creek	44.355	-114.616	44.405	-114.655
Fivemile Creek	45.412	-115.470	45.392	-115.456
Flat Creek	45.302	-115.880	45.271	-115.837
Float Creek	44.523	-115.179	44.571	-115.072
Flossie Creek	45.372	-115.207	45.389	-115.295
Fly Creek	44.670	-114.551	44.705	-114.497
Forty-Five Creek	44.665	-115.309	44.718	-115.233
Fourmile Creek	44.798	-115.622	44.857	-115.696
Fourth of July Creek	45.427	-113.774	45.364	-113.944
Fourth of July Creek	44.986	-114.347	44.991	-114.414
Fourth of July Creek	44.044	-114.621	44.032	-114.837
French Creek	45.370	-116.042	45.425	-116.031
Fritser Creek	45.091	-115.627	45.103	-115.684
Furnace Creek	44.789	-114.344	44.766	-114.487
Game Creek	45.404	-115.275	45.398	-115.193
Garden Creek	45.314	-114.404	45.239	-114.517
Germania Creek	43.968	-114.704	44.039	-114.462
Goat Creek	44.179	-115.009	44.219	-114.942
Goodman Creek	45.636	-114.965	45.647	-115.017
Granite Fork Lake Fork Rapid River	45.151	-116.553	45.187	-116.518
Green Creek	45.739	-115.023	45.771	-115.033
Greyhound Creek	44.588	-115.155	44.648	-115.168
Grimmet Creek	45.156	-115.800	45.184	-115.782
Grouse Creek	45.226	-115.545	45.186	-115.482
Grouse Creek	45.317	-115.817	45.265	-115.831
Guard Creek	45.308	-115.659	45.293	-115.696
Half Moon Creek	44.557	-115.412	44.558	-115.410
Hand Creek	45.287	-115.246	45.228	-115.301
Hanson Creek	44.869	-115.508	44.865	-115.475
Hard Creek	45.125	-116.240	45.183	-116.284
Hartan Creek	45.519	-115.258	45.477	-115.229

Waterbody Name	Stream Begin Point or Lake Center Latitude	Stream Begin Point or Lake Center Longitude	Stream End Point Latitude	Stream End Point Longitude
Hayden Creek	44.722	-113.820	44.869	-113.627
Hazard Creek	45.201	-116.255	45.184	-116.301
Hell Roaring Creek	44.023	-114.842	44.027	-114.929
Hell Roaring Lake	44.024	-114.935		
Herd Creek	44.058	-114.234	44.154	-114.301
Hida Creek	45.556	-115.167	45.515	-115.204
Holdover Creek	44.845	-115.698	44.840	-115.726
Honeymoon Creek	44.553	-115.414	44.560	-115.411
Hoodoo Creek	45.060	-114.553	44.953	-114.582
Horse Creek	45.475	-114.402	45.395	-114.733
Hot Springs Creek	45.729	-115.032	45.721	-114.977
Hot Springs Creek	45.511	-115.042	45.468	-115.131
Hotzel Creek	45.373	-115.188	45.349	-115.204
Hughes Creek	45.582	-114.121	45.476	-113.989
Hull Creek	45.468	-113.993	45.491	-114.094
Hungry Creek	45.392	-114.916	45.352	-114.870
Ibex Creek	43.908	-114.493	43.953	-114.526
Indian Creek	45.552	-114.145	45.400	-114.168
Indian Creek	44.799	-115.390	44.770	-115.090
Indian Creek	44.970	-115.732	44.958	-115.691
Indian Creek-Loon	44.672	-114.840	44.692	-114.755
Inyo Creek	44.532	-113.628	44.535	-113.684
Iron Creek	44.189	-115.047	44.223	-114.948
J Fell Creek	44.614	-114.462	44.684	-114.459
Jack Creek	44.678	-114.836	44.696	-114.761
Jeanette Creek	45.276	-115.919	45.294	-115.899
Jefferson Creek	45.220	-114.120	45.242	-114.149
Job Creek	44.243	-115.003	44.243	-115.002
John Day Creek	45.521	-116.196	45.586	-116.296
Johnson Creek	44.632	-115.526	44.962	-115.502
Jordan Creek	44.469	-114.771	44.379	-114.721
Josephine Creek	45.225	-115.971	45.224	-115.930
Jungle Creek	45.147	-115.799	45.108	-115.826
Kadletz Creek	44.740	-113.820	44.775	-113.743
Kenney Creek	45.110	-113.514	45.032	-113.663
Kinnikinic Creek	44.258	-114.402	44.260	-114.403
Knapp Creek	44.424	-114.916	44.365	-115.132
Knee Creek	44.676	-115.662	44.695	-115.624
Krassel Creek	44.979	-115.727	44.987	-115.704
Lake Creek	44.985	-114.081	45.017	-113.989
Lake Creek	44.981	-114.646	44.947	-114.592
Lake Creek	44.720	-115.142	44.714	-115.097
Lake Creek	44.643	-115.181	44.662	-115.231
Lake Creek	45.616	-115.687	45.514	-115.575
Lake Creek	45.374	-115.899	45.372	-115.895
Lake Creek	45.294	-116.220	45.400	-116.213
Lake Creek Lake	45.373	-115.897		
Lake Fork Rapid River	45.190	-116.558	45.187	-116.483
Landmark Creek	44.657	-115.543	44.626	-115.583
Lee Creek	44.740	-113.482	44.659	-113.616
Lemhi River	44.682	-113.355	45.188	-113.890
Liberty Creek	44.783	-114.618	44.759	-114.650
Lick Creek	44.775	-114.348	44.722	-114.272
Lick Creek	45.049	-115.915	45.062	-115.762
Lightning Creek	44.466	-114.788	44.388	-114.796
Little Beaver Creek	44.445	-115.528	44.409	-115.492
Little Boulder Creek	44.065	-114.543	44.099	-114.443
Little Buck Creek	45.252	-115.551	45.247	-115.588
Little Cottonwood Creek	44.942	-115.020	44.907	-115.074
Little Creek	44.695	-114.981	44.724	-114.998
Little Deep Creek	45.001	-114.163	45.108	-114.180
Little East Fork Elk Creek	44.480	-115.398	44.464	-115.446
Little Eightmile Creek	44.823	-113.366	44.739	-113.460
Little Horse Creek	45.440	-114.585	45.477	-114.450
Little Indian Creek	44.871	-115.219	44.841	-115.257
Little Indian Creek	44.967	-115.727	44.951	-115.702
Little Jacket Creek	44.926	-114.479	44.953	-114.566
Little Lodgepole Creek	45.351	-115.155	45.328	-115.218
Little Loon Creek	44.615	-114.964	44.731	-114.941
Little Mallard Creek	45.530	-115.306	45.529	-115.304

Waterbody Name	Stream Begin Point or Lake Center Latitude	Stream Begin Point or Lake Center Longitude	Stream End Point Latitude	Stream End Point Longitude
Little Pistol Creek	44.721	-115.405	44.721	-115.204
Little Redfish Lake	44.161	-114.909		
Little Salmon River	45.181	-116.302	45.417	-116.314
Little Slate Creek	45.620	-116.067	45.463	-116.122
Little Timber Creek	44.605	-113.445	44.642	-113.384
Livingston Creek	44.144	-114.609	44.194	-114.604
Lodgepole Creek	44.554	-114.475	44.540	-114.409
Lodgepole Creek	45.372	-115.126	45.305	-115.255
Lodgepole Creek	44.576	-115.611	44.593	-115.687
Logan Creek	45.072	-115.456	45.118	-115.320
Lola Creek	44.391	-115.240	44.408	-115.175
Long Tom Creek	43.978	-114.402	44.027	-114.430
Loon Creek	44.444	-114.941	44.553	-114.850
Loon Creek	45.167	-115.837	45.170	-115.809
Loon Lake	45.163	-115.840		
Lucky Creek	44.625	-115.277	44.664	-115.299
Luger Creek	44.618	-115.396	44.686	-115.358
Magpie Creek	45.548	-115.153	45.506	-115.201
Mahogany Creek	44.159	-113.768	44.208	-113.702
Marble Creek	44.983	-115.080	44.743	-115.017
Marsh Creek	44.329	-115.092	44.449	-115.231
Martin Creek	44.426	-114.564	44.387	-114.495
Martin Creek	44.117	-114.798	44.137	-114.725
Martindale Creek	44.813	-114.545	44.825	-114.577
Mayfield Creek	44.552	-114.850	44.539	-114.798
Mayflower Creek	45.259	-115.602	45.248	-115.654
McCalla Creek	45.255	-115.128	45.414	-114.982
McConn Creek	45.527	-114.243	45.504	-114.153
McHoney Creek	44.638	-114.610	44.670	-114.555
McKay Creek	44.475	-114.492	44.489	-114.551
McKee Creek	44.567	-114.672	44.577	-114.649
Meadow Creek	44.990	-114.487	44.977	-114.471
Meadow Creek	44.863	-115.373	44.902	-115.328
Meadow Creek - mouth to Trap	44.316	-115.089	44.306	-115.053
Meridian Creek	43.988	-114.257	44.011	-114.252
Middle Fork Elkhorn Creek	44.628	-115.369	44.620	-115.291
Middle Fork Indian Creek	44.856	-115.104	44.796	-115.133
Middle Fork Salmon River	44.449	-115.231	45.296	-114.594
Middle Fork Smith Creek	45.157	-115.413	45.170	-115.381
Mill Creek	44.656	-113.657	44.766	-113.519
Mill Creek	44.470	-114.492	44.561	-114.275
Mill Creek	45.356	-115.520	45.331	-115.581
Mink Creek	44.865	-114.298	44.842	-114.331
Missouri Creek	45.028	-115.352	45.007	-115.395
Moccasin Creek	45.088	-114.090	45.153	-114.172
Monumental Creek	44.903	-115.263	45.160	-115.130
Moose Creek	45.691	-113.945	45.654	-113.971
Moose Creek	45.318	-114.039	45.328	-114.042
Moose Creek	45.283	-115.293	45.356	-115.250
Moose Creek	44.853	-115.510	44.838	-115.484
Moose Jaw Creek	45.312	-115.118	45.278	-115.172
Morgan Creek	44.675	-113.900	44.618	-113.964
Morgan Creek	44.846	-114.262	44.612	-114.169
Mormon Creek	44.499	-115.655	44.524	-115.696
Morse Creek	44.653	-113.709	44.569	-113.886
Moyer Creek	45.024	-114.312	44.900	-114.223
Musgrove Creek	45.096	-114.471	45.022	-114.313
My Creek	45.357	-115.004	45.338	-114.982
Mystery Creek	44.519	-114.775	44.490	-114.793
Napias Creek	45.244	-114.024	45.137	-114.218
Nasty Creek	44.877	-115.697	44.879	-115.630
Nelson Creek	44.499	-114.805	44.540	-114.804
Nethker Creek	45.249	-115.972	45.265	-115.906
Nick Creek	44.927	-115.795	44.926	-115.855
Ninemile Creek	44.414	-114.583	44.445	-114.605
No Name Creek	45.361	-115.225	45.322	-115.234
North Fork Bear Creek	44.826	-115.483	44.824	-115.437
North Fork Big Creek	44.552	-113.593	44.442	-113.601
North Fork Bowery Creek	44.049	-114.366	44.032	-114.401
North Fork Buckhorn Creek	44.928	-115.775	44.941	-115.868

Waterbody Name	Stream Begin Point or Lake Center Latitude	Stream Begin Point or Lake Center Longitude	Stream End Point Latitude	Stream End Point Longitude
North Fork Camp Creek	44.888	-115.691	44.924	-115.629
North Fork Dollar Creek	44.715	-115.707	44.718	-115.710
North Fork Elk Creek	44.527	-115.459	44.485	-115.453
North Fork Elkhorn Creek	44.638	-115.363	44.625	-115.277
North Fork Fitsum Creek	44.985	-115.884	44.999	-115.760
North Fork Lick Creek	45.072	-115.784	45.075	-115.885
North Fork Little Timber Creek	44.605	-113.445	44.583	-113.513
North Fork Morgan Creek	44.710	-113.830	44.675	-113.900
North Fork Riordan Creek	44.867	-115.447	44.862	-115.389
North Fork Salmon River	45.702	-113.990	45.405	-113.994
North Fork Sand Creek	44.642	-115.497	44.656	-115.451
North Fork Sheep Creek	45.483	-113.774	45.482	-113.837
North Fork Sheep Creek	44.648	-114.964	44.649	-115.018
North Fork Sheep Creek	45.039	-115.584	45.059	-115.557
North Fork Six-bit Creek	44.670	-115.763	44.711	-115.782
North Fork Smith Creek	45.188	-115.346	45.197	-115.352
North Fork Sulphur Creek	44.597	-115.466	44.554	-115.440
North Fork Wolf Fang Creek	45.216	-115.444	45.212	-115.393
Norton Creek	44.890	-114.902	44.827	-114.794
Oompaul Creek	45.034	-115.736	45.054	-115.717
Opal Creek	44.898	-114.278	44.896	-114.315
Opal Lake	44.899	-114.281		
Otter Creek	44.869	-114.249	44.860	-114.291
Our Creek	45.364	-115.000	45.354	-114.976
Owl Creek	45.474	-114.383	45.318	-114.448
Pahsimeroi River	44.157	-113.704	44.692	-114.049
Panther Creek	44.829	-114.295	45.316	-114.406
Papoose Creek	45.174	-114.721	45.273	-114.821
Papoose Creek	44.796	-115.278	44.837	-115.246
Paradise Creek	45.121	-115.765	45.123	-115.727
Park Creek	44.734	-115.551	44.724	-115.593
Parker Creek	44.622	-114.597	44.608	-114.540
Parks Creek	44.955	-115.536	44.970	-115.531
Partridge Creek	45.287	-116.218	45.408	-116.127
Patterson Creek	44.635	-113.653	44.614	-113.966
Peanut Creek	44.688	-115.486	44.663	-115.454
Pepper Creek	44.949	-115.351	44.916	-115.384
Perkins Lake	43.929	-114.841		
Pete Creek	45.298	-115.926	45.285	-115.979
Petit Lake	43.980	-114.879		
Pettit Lake Creek	43.976	-114.902	43.988	-114.841
Phelan Creek	45.146	-114.042	45.167	-114.161
Pierce Creek	45.670	-113.933	45.621	-113.964
Pigtail Creek	44.122	-114.736	44.129	-114.727
Pine Creek	45.282	-114.168	45.364	-114.300
Pioneer Creek - Loon	44.521	-114.865	44.441	-114.895
Pistol Creek	44.644	-115.443	44.724	-115.150
Poet Creek	45.722	-115.034	45.754	-115.073
Poker Creek	44.445	-115.367	44.429	-115.335
Pole Creek	43.964	-114.691	43.926	-114.810
Pole Creek	45.335	-115.160	45.308	-115.182
Pole Creek	44.361	-115.367	44.386	-115.380
Pole Creek-Camas	44.763	-114.675	44.794	-114.595
Pony Creek	45.194	-114.138	45.187	-114.059
Pony Creek	45.179	-115.704	45.187	-115.563
Porcupine Creek	44.890	-115.499	44.902	-115.538
Porphyry Creek	45.069	-114.434	45.004	-114.334
Porter Creek	44.470	-115.540	44.457	-115.451
Profile Creek	45.053	-115.417	44.957	-115.429
Prospect Creek	44.357	-114.985	44.394	-114.986
Pruvan Creek	45.498	-113.821	45.467	-113.790
Pup Creek	45.378	-115.147	45.413	-115.139
Quartz Creek	45.048	-115.497	44.970	-115.478
Queen Creek	45.400	-115.049	45.458	-115.110
Raines Creek	45.332	-115.501	45.308	-115.591
Rams Creek	44.861	-114.453	44.871	-114.456
Ranch Creek	45.374	-115.186	45.404	-115.234
Rapid River	44.551	-115.008	44.680	-115.153
Rapid River	45.114	-116.507	45.374	-116.356
Rapps Creek	45.268	-114.172	45.213	-114.164

Waterbody Name	Stream Begin Point or Lake Center Latitude	Stream Begin Point or Lake Center Longitude	Stream End Point Latitude	Stream End Point Longitude
Rat Creek	44.566	-114.785	44.588	-114.826
Rattlesnake Creek	45.249	-115.518	45.221	-115.492
Raven Creek	45.550	-115.161	45.517	-115.195
Red Top Creek	45.362	-115.266	45.384	-115.292
Redfish Lake	44.117	-114.932		
Redfish Lake Creek	44.099	-114.954	44.169	-114.899
Reeves Creek	44.686	-115.619	44.667	-115.667
Rhett Creek	45.476	-115.408	45.472	-115.394
Rice Creek	44.510	-115.645	44.575	-115.686
Richardson Creek	45.539	-115.261	45.474	-115.240
Rim Creek	45.281	-115.383	45.336	-115.330
Riordan Creek	44.808	-115.392	44.907	-115.486
Riordan Lake	44.850	-115.439		
Roaring Creek	45.259	-114.646	45.241	-114.615
Rock Creek	44.639	-115.543	44.600	-115.593
Rock Creek-Loon	44.754	-114.671	44.674	-114.741
Rocky Creek	44.521	-113.434	44.535	-113.505
Rooster Creek	45.309	-115.490	45.328	-115.437
Root Creek	45.382	-114.993	45.362	-114.964
Royal Creek	45.525	-116.098	45.525	-116.134
Rubie Creek	45.546	-116.079	45.543	-116.026
Ruby Creek	45.190	-115.915	45.258	-115.879
Rush Creek	44.536	-114.652	44.578	-114.614
Rush Creek	44.933	-114.991	45.105	-114.861
Ryan Creek	45.019	-115.395	45.033	-115.380
Sabe Creek	45.681	-114.949	45.507	-115.025
Sack Creek	44.320	-115.352	44.359	-115.408
Salmon River	43.797	-114.775	45.856	-116.795
Salt Creek	44.984	-114.297	44.979	-114.223
Salt Creek	44.973	-115.325	44.949	-115.353
Sand Creek	44.632	-115.526	44.609	-115.414
Sand Creek	45.327	-115.863	45.307	-115.821
Schissler Creek	45.320	-115.780	45.328	-115.708
Seafoam Creek	44.518	-115.119	44.542	-115.065
Secesh River	45.256	-115.897	45.025	-115.707
Sharkey Creek	45.222	-114.109	45.212	-114.048
Sheep Creek	45.482	-113.837	45.504	-113.954
Sheep Creek	44.770	-114.483	44.769	-114.516
Sheep Creek	44.649	-115.018	44.647	-115.058
Sheep Creek	44.708	-115.561	44.698	-115.613
Sheep Creek	45.049	-115.637	45.049	-115.515
Sheep Creek	45.614	-115.697	45.468	-115.811
Sheep Creek-Lmf	44.915	-114.904	44.943	-114.727
Sheep Trail Creek	44.360	-115.452	44.337	-115.448
Shell Creek	44.632	-114.834	44.613	-114.789
Ship Island Creek	45.152	-114.603	45.174	-114.633
Ship Island Lake #1	45.166	-114.625		
Shoban Lake	45.153	-114.602		
Short Creek	44.773	-113.797	44.788	-113.768
Short Creek	44.313	-114.856	44.291	-114.872
Shovel Creek	45.034	-114.444	45.000	-114.479
Silge Creek	45.545	-115.248	45.517	-115.225
Silver Creek	44.852	-114.344	44.830	-114.502
Silver Rule Creek	44.146	-114.582	44.207	-114.597
Six-Bit Creek	44.645	-115.809	44.686	-115.707
Sixmile Creek	44.385	-114.596	44.413	-114.638
Slate Creek	44.154	-114.630	44.256	-114.564
Slate Creek	45.625	-116.055	45.626	-116.046
Slaughter Creek	45.297	-115.610	45.261	-115.673
Smith Creek	45.170	-115.381	45.152	-115.298
Smith Creek	45.241	-115.528	45.280	-115.583
Snowslide Creek	45.045	-115.282	45.098	-115.157
Soldier Creek	45.007	-114.882	45.029	-114.727
Soldier Creek	44.528	-115.202	44.626	-115.213
South Fork Bear Creek	44.826	-115.483	44.817	-115.458
South Fork Big Creek	44.385	-113.476	44.442	-113.601
South Fork Blackmare Creek	44.770	-115.804	44.809	-115.748
South Fork Buckhorn Creek	44.840	-115.824	44.890	-115.824
South Fork Camas Creek	44.730	-114.641	44.721	-114.499
South Fork Chamberlain Creek	45.336	-115.330	45.278	-115.353

Waterbody Name	Stream Begin Point or Lake Center Latitude	Stream Begin Point or Lake Center Longitude	Stream End Point Latitude	Stream End Point Longitude
South Fork Cottonwood Creek	44.563	-114.781	44.621	-114.760
South Fork Dillinger Creek	45.495	-115.156	45.455	-115.169
South Fork East Fork Salmon River	43.848	-114.567	43.929	-114.555
South Fork Elk Creek	45.136	-115.509	45.079	-115.467
South Fork Fitsum Creek	45.000	-115.763	44.970	-115.775
South Fork Fourmile Creek	44.860	-115.680	44.814	-115.665
South Fork John Day Creek	45.571	-116.229	45.555	-116.226
South Fork Moyer Creek	44.958	-114.294	44.879	-114.227
South Fork Rush Creek	44.965	-114.929	45.014	-114.979
South Fork Salmon River	44.493	-115.714	45.378	-115.513
South Fork Sheep Creek	45.449	-113.801	45.482	-113.837
South Fork Sheep Creek	44.603	-115.007	44.649	-115.018
South Fork Sheep Creek	45.036	-115.623	44.984	-115.604
South Fork Smith Creek	45.149	-115.420	45.170	-115.381
South Fork Threemile Creek	45.307	-115.929	45.315	-115.886
South Fork Warm Spring Creek	44.568	-114.543	44.578	-114.552
South Fork Whimstick Creek	45.284	-115.031	45.243	-115.045
Spider Creek	44.697	-114.484	44.676	-114.512
Springfield Creek	44.789	-115.298	44.764	-115.313
Squaw Creek	45.504	-114.258	45.399	-114.169
Squaw Creek	44.249	-114.455	44.456	-114.504
Starvation Creek	45.358	-114.934	45.323	-114.980
Station Creek	45.352	-115.521	45.355	-115.473
Stoddard Creek	45.235	-114.668	45.243	-114.687
Sugar Creek	44.936	-115.337	44.975	-115.246
Sulphur Creek	44.510	-115.519	44.555	-115.298
Sulphur Creek-Rapid	44.562	-115.162	44.586	-115.073
Summit Creek	45.172	-115.916	45.256	-115.897
Sunday Creek	44.341	-114.970	44.349	-114.906
Tamarack Creek	44.984	-115.270	44.959	-115.390
Tater Creek	44.661	-113.840	44.632	-113.903
Tenmile Creek	44.484	-114.647	44.465	-114.582
Thirty-Eight Creek	44.713	-115.413	44.673	-115.396
Thomas Creek	44.705	-115.028	44.715	-115.012
Thompson Creek	44.284	-114.523	44.284	-114.523
Threemile Creek	45.334	-115.891	45.299	-115.930
Tie Creek	45.017	-115.770	45.037	-115.762
Trail Creek	45.215	-114.234	45.250	-114.320
Trail Creek	44.976	-114.532	44.964	-114.490
Trail Creek	44.628	-115.791	44.635	-115.718
Trail Creek-Loon	44.506	-114.960	44.543	-114.859
Trail Creek-Marble	44.952	-114.935	44.841	-115.009
Trapper Creek	44.504	-114.618	44.597	-114.603
Trapper Creek	44.774	-115.405	44.831	-115.514
Tumbull Creek	45.523	-116.093	45.533	-116.136
Twelvemile Creek	44.497	-114.615	44.478	-114.565
Twin Creek	45.591	-114.082	45.608	-113.965
Twist Creek	45.633	-114.961	45.628	-114.926
Tyndall Creek	44.562	-115.749	44.580	-115.685
Unnamed	44.618	-113.964	44.670	-114.018
Unnamed	44.670	-114.018	44.667	-114.025
Unnamed	44.632	-113.903	44.618	-113.964
Unnamed	44.565	-113.881	44.562	-113.877
Unnamed	44.565	-113.881	44.569	-113.886
Unnamed - didgitized	44.766	-113.519	44.769	-113.515
Unnamed - digitized	44.562	-113.877	44.557	-113.881
Unnamed - digitized	44.565	-113.879	44.565	-113.881
Unnamed - digitized	44.667	-114.025	44.665	-114.030
Unnamed - Diversion between Geertson Creek and Kirtley Creek	45.175	-113.816	45.132	-113.770
Unnamed - North Fork Lake Creek	45.015	-114.068	45.009	-114.017
Unnamed - North Fork Mayflower Creek	45.245	-115.647	45.254	-115.635
Unnamed - Off Buck Creek	44.767	-115.485	44.761	-115.477
Unnamed - Off Burntlog Creek	44.686	-115.468	44.680	-115.455
Unnamed - Off Corral Creek	44.840	-114.199	44.804	-114.225
Unnamed - Off Deep Creek	45.080	-114.092	45.064	-114.122
Unnamed - Off Mckay Creek	44.445	-114.526	44.477	-114.526
Unnamed - Off Mormon Creek	44.509	-115.676	44.498	-115.674
Unnamed - Off Rice Creek	44.561	-115.644	44.551	-115.656
Unnamed - Off South Fork Salmon River	44.556	-115.683	44.552	-115.707
Unnamed - Off Trail Creek	44.599	-115.803	44.626	-115.746

Waterbody Name	Stream Begin Point or Lake Center Latitude	Stream Begin Point or Lake Center Longitude	Stream End Point Latitude	Stream End Point Longitude
Unnamed - Off Unnamed to Buck Creek	44.767	-115.484	44.769	-115.479
Unnamed - Off Unnamed to Burntlog Creek	44.730	-115.482	44.720	-115.463
Unnamed - to Knapp Creek	44.421	-115.036	44.433	-115.004
Unnamed 1 - Off Curtis Creek	44.586	-115.804	44.609	-115.746
Unnamed 2 - Off Curtis Creek	44.568	-115.794	44.594	-115.753
Unnamed Lake on Meadow Creek	44.890	-115.351		
Unnamed to Bearskin Creek	44.374	-115.500	44.358	-115.523
Unnamed Trib 1-Off Trapper Creek	44.794	-115.462	44.800	-115.452
Unnamed Trib 2-Off Trapper Creek	44.795	-115.441	44.781	-115.427
Unnamed Trib 3- Off Trapper Creek	44.772	-115.434	44.793	-115.465
Unnamed Tributary to Pete Creek	45.281	-115.955	45.272	-115.967
Unnamed Tributary to Threemile Creek	45.323	-115.912	45.317	-115.894
Unnamed Tributary to West Fork Elk Creek	45.069	-115.483	45.095	-115.514
Valley Creek	44.377	-114.961	44.225	-114.928
Van Buren Creek	45.536	-116.169	45.532	-116.083
Van Horn Creek	44.785	-114.338	44.757	-114.257
Vanity Creek	44.481	-115.077	44.553	-115.062
Vein Creek	45.008	-115.472	45.056	-115.455
Victor Creek	45.147	-115.937	45.182	-115.822
Victor Creek	45.510	-116.101	45.515	-116.127
Vine Creek	45.638	-114.001	45.611	-113.967
Wapiti Creek	45.335	-115.022	45.309	-115.074
Wardenhoff Creek	44.822	-115.518	44.832	-115.568
Warm Lake	44.645	-115.670		
Warm Lake Creek	44.653	-115.662	44.666	-115.699
Warm Spring Creek	44.609	-114.482	44.653	-114.737
Warm Springs Creek	44.059	-114.614	44.254	-114.676
Warren Creek	45.237	-115.676	45.397	-115.593
Weasel Creek	44.888	-114.273	44.887	-114.306
Webfoot Creek	45.217	-115.696	45.237	-115.676
West Fork Buckhorn Creek	44.917	-115.743	44.900	-115.858
West Fork Camas Creek	44.819	-114.655	44.831	-114.504
West Fork Chamberlain Creek	45.463	-115.185	45.383	-115.167
West Fork East Fork Salmon River	43.918	-114.656	43.929	-114.555
West Fork Elk Creek	44.480	-115.521	44.479	-115.458
West Fork Elk Creek	45.061	-115.520	45.147	-115.512
West Fork Enos Creek	45.148	-115.804	45.143	-115.837
West Fork Hayden Creek	44.697	-113.823	44.705	-113.757
West Fork Herd Creek	43.990	-114.225	44.058	-114.234
West Fork Indian Creek	45.489	-114.199	45.475	-114.139
West Fork Little Loon Creek	44.666	-114.977	44.710	-114.935
West Fork Mayfield Creek	44.539	-114.798	44.465	-114.732
West Fork Monumental Creek	45.034	-115.276	45.005	-115.140
West Fork Morgan Creek	44.734	-114.394	44.681	-114.244
West Fork North Fork Salmon River	45.667	-114.003	45.654	-113.971
West Fork Pahsimeroi River	44.092	-113.750	44.157	-113.704
West Fork Rapid River	45.230	-116.538	45.307	-116.420
West Fork Springfield Creek	44.780	-115.383	44.786	-115.321
West Fork Thomas Creek	44.682	-115.055	44.705	-115.028
West Fork Whimstick Creek	45.294	-115.031	45.291	-115.037
West Fork Yankee Fork	44.388	-114.933	44.351	-114.727
West Pass Creek	43.893	-114.419	43.988	-114.491
Whangdoodle Creek	45.150	-115.797	45.181	-115.738
Whimstick Creek	45.241	-115.054	45.378	-115.000
White Goat Creek	44.726	-114.416	44.741	-114.489
Wickiup Creek-Loon	44.598	-114.659	44.606	-114.597
Willey Creek	45.043	-115.628	45.061	-115.604
Williams Lake	45.016	-113.976		
Willow Basket Creek	45.192	-115.895	45.186	-115.832
Willow Creek	44.447	-114.446	44.428	-114.490
Willow Creek	45.356	-115.858	45.331	-115.950
Wilson Creek	45.143	-114.589	45.033	-114.724
Wimpey Creek	45.098	-113.721	45.176	-113.598
Wind River	45.605	-115.918	45.455	-115.942
Winnemucca Creek	44.485	-114.963	44.436	-115.059
Woods Creek	45.535	-114.443	45.505	-114.460
Woodtick Creek	44.973	-114.192	45.046	-114.283
Woodtick Creek	44.808	-114.680	44.884	-114.626
Wright Creek	44.746	-113.836	44.783	-113.755
Wyoming Creek	44.355	-115.342	44.425	-115.321

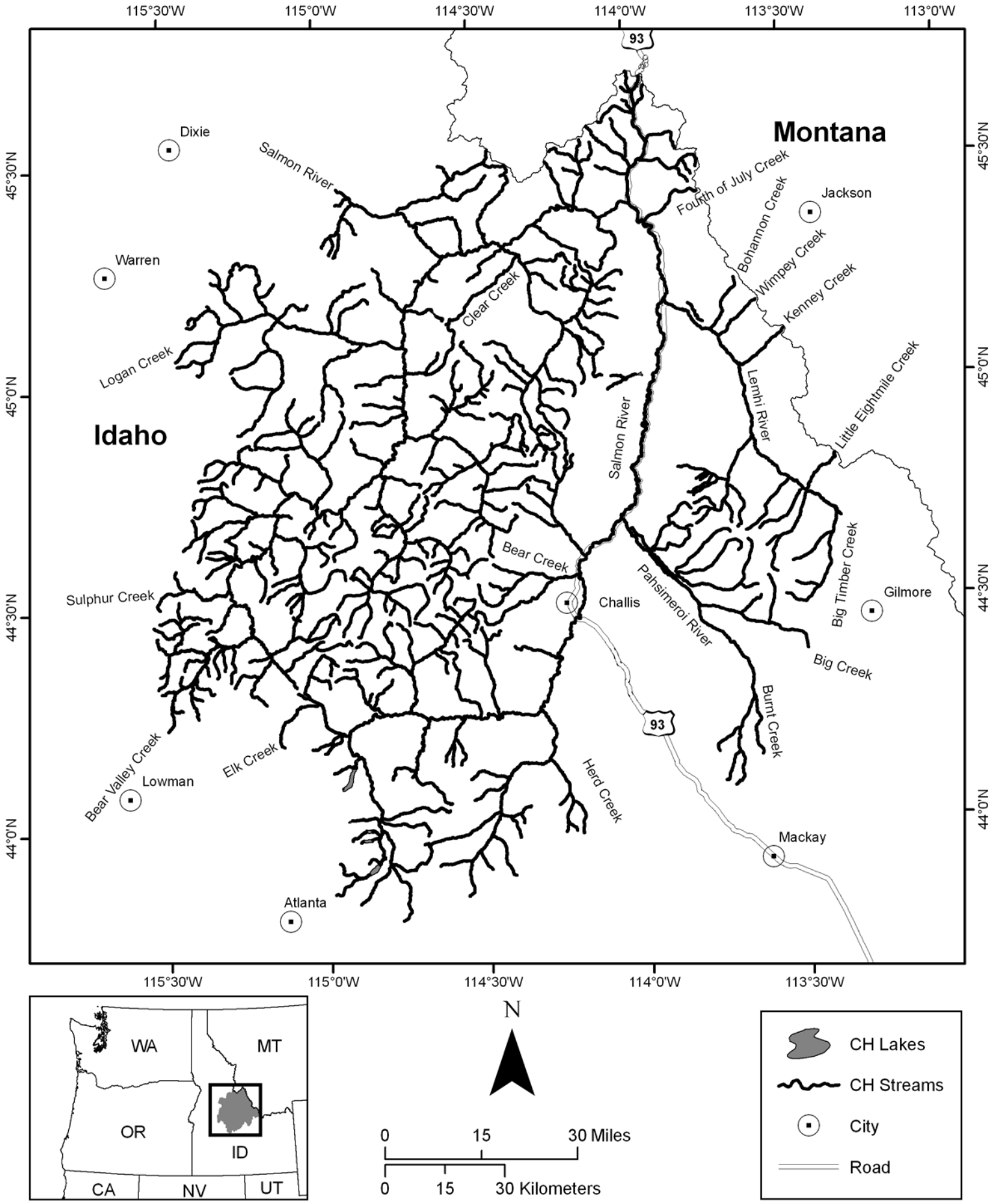
Waterbody Name	Stream Begin Point or Lake Center Latitude	Stream Begin Point or Lake Center Longitude	Stream End Point Latitude	Stream End Point Longitude
Yankee Fork	44.510	-114.589	44.270	-114.735
Yellow Jacket Creek	45.145	-116.445	45.137	-116.413
Yellowbelly Creek	43.981	-114.928	44.000	-114.869
Yellowbelly Lake	44.001	-114.876		
Yellowjacket Creek	45.103	-114.536	44.892	-114.645
Zena Creek	45.041	-115.748	45.057	-115.732

(iii) No waterbodies are excluded from critical habitat designation in this unit.

(iv) Map of Unit 27, Salmon River – East Half follows:

Critical Habitat for Bull Trout *(Salvelinus confluentus)*

Unit: 27, Salmon River (East Half)



(36) Unit 27: Salmon River – West Half

(i) The entire Salmon River unit consists of 7,376.5 km (4,583.5 mi) of streams and 1,683.8 ha (4,160.6 ac) of lakes and reservoirs. The unit is located in central Idaho.

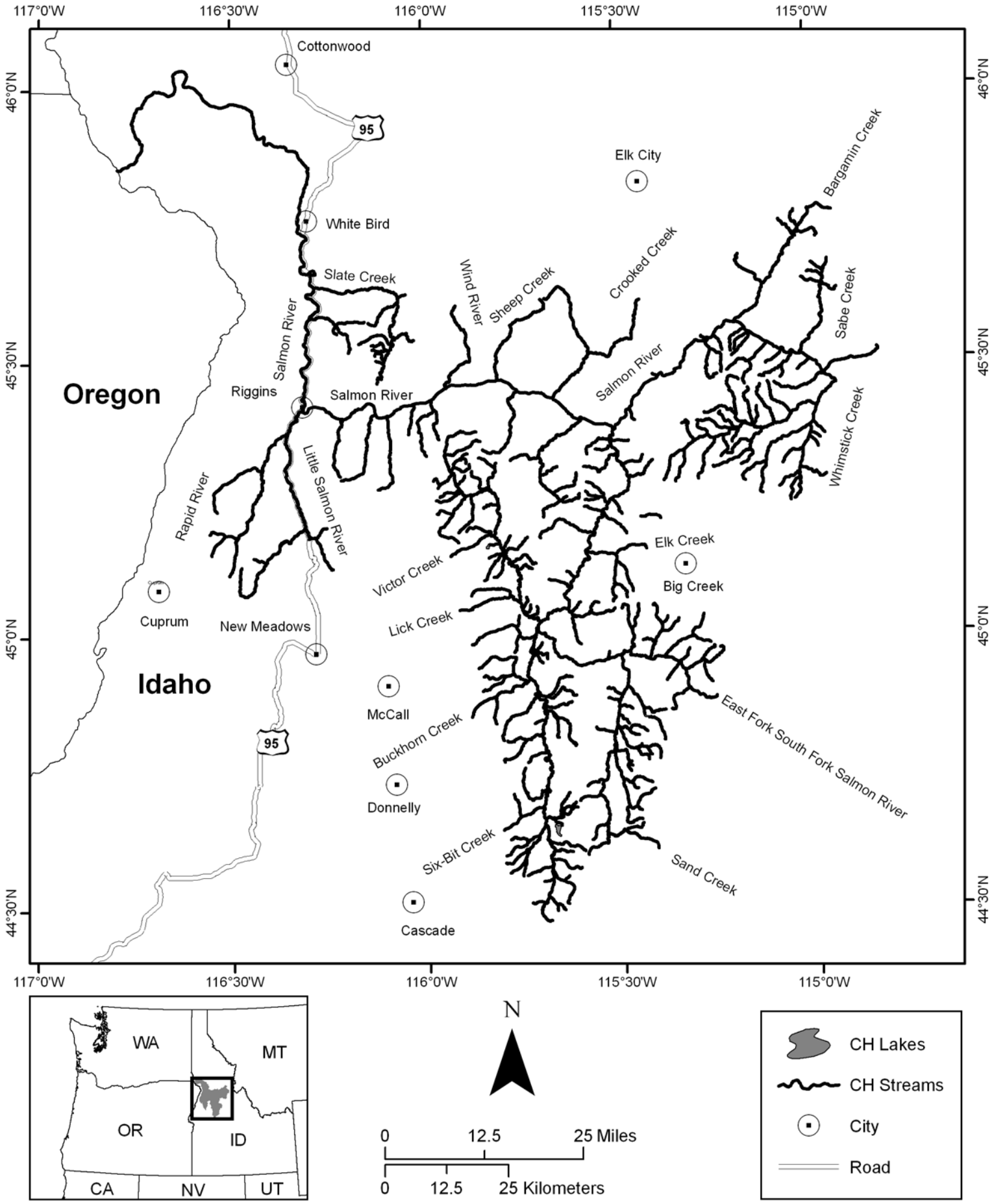
(ii) See paragraph (e)(35)(ii) of this entry for a complete list of individual waterbodies in this unit.

(iii) No waterbodies are excluded from critical habitat designation in this unit.

(iv) Map of Unit 27, Salmon River – West Half follows:

Critical Habitat for Bull Trout *(Salvelinus confluentus)*

Unit: 27, Salmon River (West Half)



(37) Unit 28: Little Lost River

(i) This unit consists of 89.2 km (55.4 mi) of streams. The unit is located in eastern Idaho.

(ii) Individual waterbodies in the unit are bounded by the following coordinates:

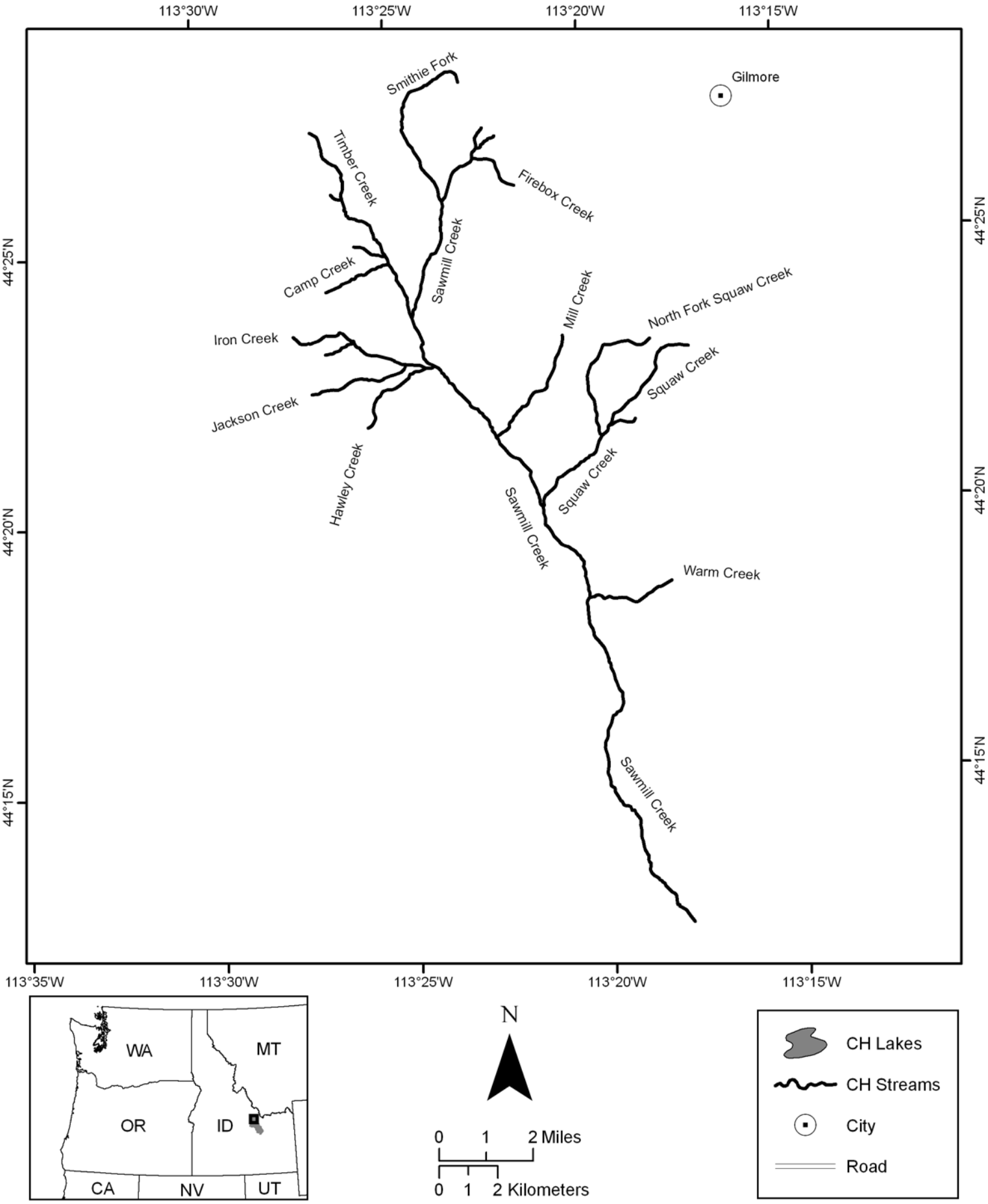
Waterbody Name	Stream Begin Point or Lake Center Latitude	Stream Begin Point or Lake Center Longitude	Stream End Point Latitude	Stream End Point Longitude
Camp Creek	44.408	-113.433	44.411	-113.418
Firebox Creek	44.434	-113.363	44.443	-113.380
Hawley Creek	44.361	-113.430	44.379	-113.404
Iron Creek	44.387	-113.435	44.390	-113.461
Iron Creek	44.389	-113.437	44.387	-113.435
Jackson Creek	44.372	-113.454	44.380	-113.413
Left Fork Iron Creek	44.384	-113.447	44.387	-113.435
Mill Creek	44.387	-113.345	44.357	-113.375
North Fork Squaw Creek	44.379	-113.330	44.356	-113.330
Redrock Creek	44.417	-113.433	44.414	-113.419
Right Fork Little Lost River	44.449	-113.370	44.446	-113.378
Sawmill Creek	44.452	-113.376	44.204	-113.299
Slide Creek	44.433	-113.442	44.432	-113.437
Smithie Fork	44.430	-113.394	44.467	-113.385
Squaw Creek	44.375	-113.306	44.375	-113.306
Timber Creek	44.394	-113.409	44.453	-113.450
Unnamed - Off Squaw Creek	44.360	-113.315	44.359	-113.326
Warm Creek	44.310	-113.302	44.306	-113.338

(iii) No waterbodies are excluded from critical habitat designation in this unit.

(iv) Map of Unit 28, Little Lost River follows:

Critical Habitat for Bull Trout *(Salvelinus confluentus)*

Unit: 28, Little Lost River



(38) Unit 29: Coeur d'Alene River Basin

(i) This unit consists of 821.5 km (510.5 mi) of streams and 12,606.9 ha (31,152.1 ac) of lakes and reservoirs. The unit is located in northern Idaho.

(ii) Individual waterbodies in the unit are bounded by the following coordinates:

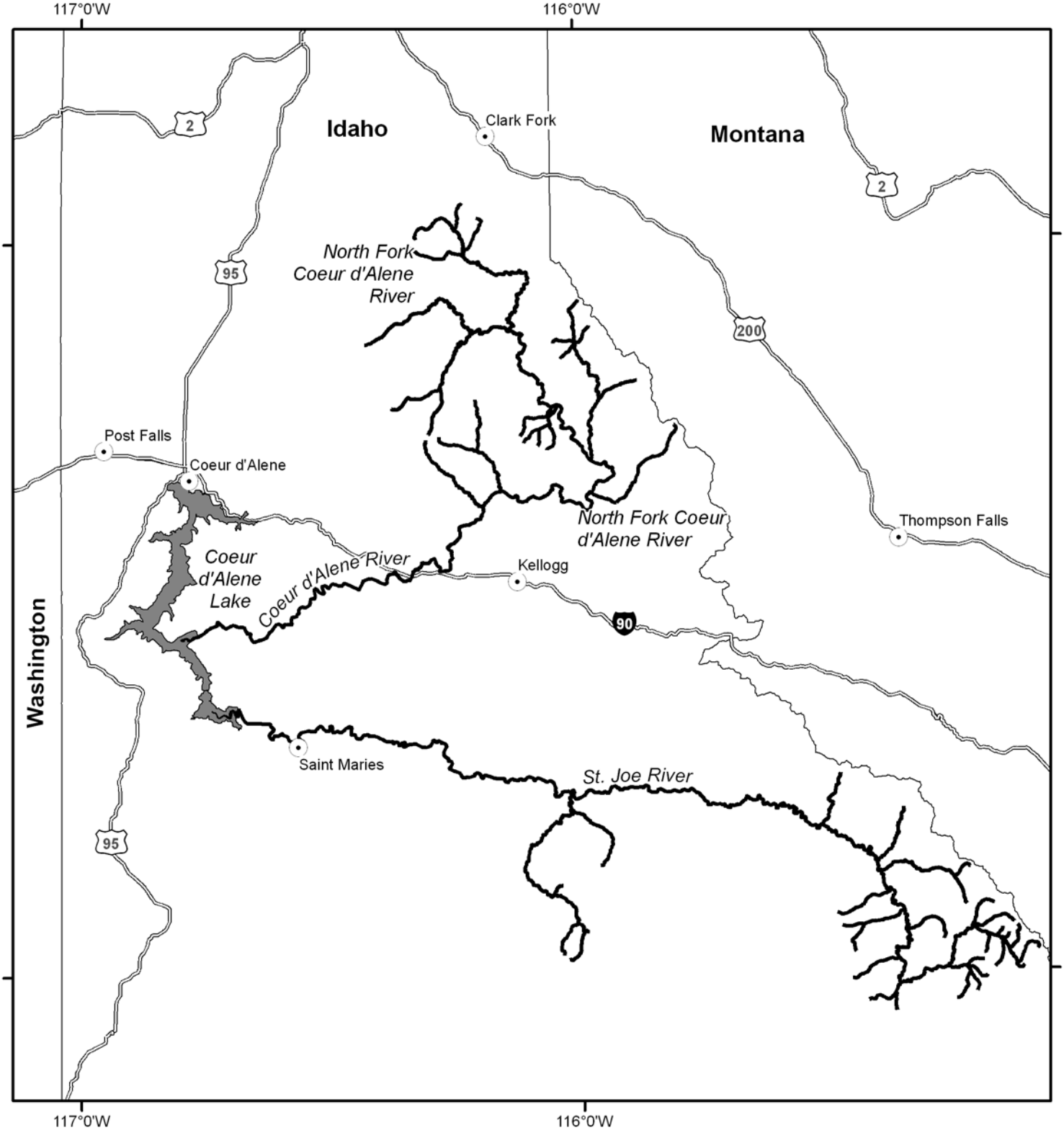
Waterbody Name	Stream Begin Point or Lake Center Latitude	Stream Begin Point or Lake Center Longitude	Stream End Point Latitude	Stream End Point Longitude
Bad Bear Creek	47.045	-115.460	47.045	-115.460
Bean Creek	47.005	-115.271	46.993	-115.193
Beaver Creek	47.083	-115.356	47.064	-115.481
Big Elk Creek	47.804	-116.276	47.775	-116.374
Bluebells Creek	47.041	-115.157	47.050	-115.149
Boulder Creek	47.227	-116.020	47.149	-115.963
Buckskin Creek	47.987	-116.226	48.034	-116.200
California Creek	47.041	-115.160	47.004	-115.178
Cascade Creek (St. Joe trib)	47.044	-115.171	47.057	-115.162
Coeur d'Alene Lake	47.525	-116.794		
Coeur d'Alene River	47.460	-116.799	47.557	-116.258
Cougar Creek	47.640	-116.192	47.732	-116.306
Delaney Creek	47.062	-115.998	47.059	-115.987
Dolly Creek	47.126	-115.255	47.140	-115.223
Downey Creek	47.778	-116.037	47.746	-116.075
Eagle Creek	47.644	-115.922	47.652	-115.904
East Fork Downey Creek	47.746	-116.075	47.723	-116.079
East Fork Steamboat Creek	47.716	-116.200	47.787	-116.205
Entente Creek	47.231	-115.494	47.271	-115.478
Falls Creek	47.787	-115.955	47.811	-115.878
Fly Creek	47.113	-115.386	47.081	-115.490
Freezeout Creek	47.071	-116.009	47.027	-116.036
Gold Creek	47.151	-115.409	47.224	-115.354
Heller Creek	47.061	-115.221	47.091	-115.177
Homestead Creek	47.109	-116.058	47.123	-116.038
Independence Creek	47.877	-116.209	47.862	-116.428
Little Lost Fork	47.862	-116.002	47.862	-116.046
Marble Creek	47.251	-116.022	47.021	-116.026
Medicine Creek	47.028	-115.150	47.060	-115.132
Mill Creek	46.997	-115.227	46.971	-115.214
Mosquito Creek	48.018	-116.245	48.055	-116.229
My Creek	46.971	-115.377	46.946	-115.375
North Fork Bean Creek	47.005	-115.235	47.014	-115.199
North Fork Coeur d'Alene River	47.557	-116.258	48.005	-116.322
North Grizzly Creek	47.753	-116.054	47.717	-116.061
Prichard Creek	47.658	-115.977	47.644	-115.922
Quartz Creek	47.201	-115.517	47.231	-115.494
Red Ives Creek	47.056	-115.352	47.043	-115.279
Ruby Creek	46.983	-115.368	46.961	-115.431
Sentinel Creek	47.861	-116.001	47.842	-116.032
Sherlock Creek	47.064	-115.219	47.064	-115.138
Shoshone Creek	47.703	-115.972	47.922	-115.995
Simmons Creek	47.137	-115.401	47.090	-115.232
Spruce Creek	47.982	-116.226	47.993	-116.333
St. Joe River	47.354	-116.726	47.005	-115.119
Steamboat Creek	47.662	-116.155	47.716	-116.200
Tepee Creek	47.881	-116.133	47.739	-116.300
Timber Creek	47.018	-115.369	46.991	-115.463
Tinear Creek	47.002	-115.231	46.961	-115.256
Ulm Creek	47.861	-116.001	47.886	-115.974
West Fork Downey Creek	47.746	-116.075	47.727	-116.107
West Fork Eagle Creek	47.652	-115.904	47.750	-115.804
West Fork Steamboat Creek	47.716	-116.200	47.736	-116.278
Wisdom Creek	47.009	-115.134	47.027	-115.088
Yankee Bar Creek	47.049	-115.192	47.021	-115.195
Yellow Dog Creek	47.776	-116.050	47.736	-116.114

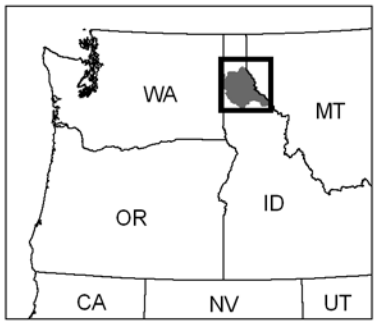
(iii) No waterbodies are excluded from critical habitat designation in this unit.

(iv) Map of Unit 29, Coeur d'Alene River Basin follows:

Critical Habitat for Bull Trout *(Salvelinus confluentus)*

Unit: 29, Coeur d'Alene River Basin





N

0 10 20 Miles

0 15 30 Kilometers

CH Lakes

CH Streams

City

Road

(39) Unit 30: Kootenai River Basin

(i) This unit consists of 522.5 km (324.7 mi) of streams and 12,089.2 ha (29,873.0 ac) of lakes and reservoirs. The unit is located in northern Idaho and northwestern Montana.

(ii) Individual waterbodies in the unit are bounded by the following coordinates:

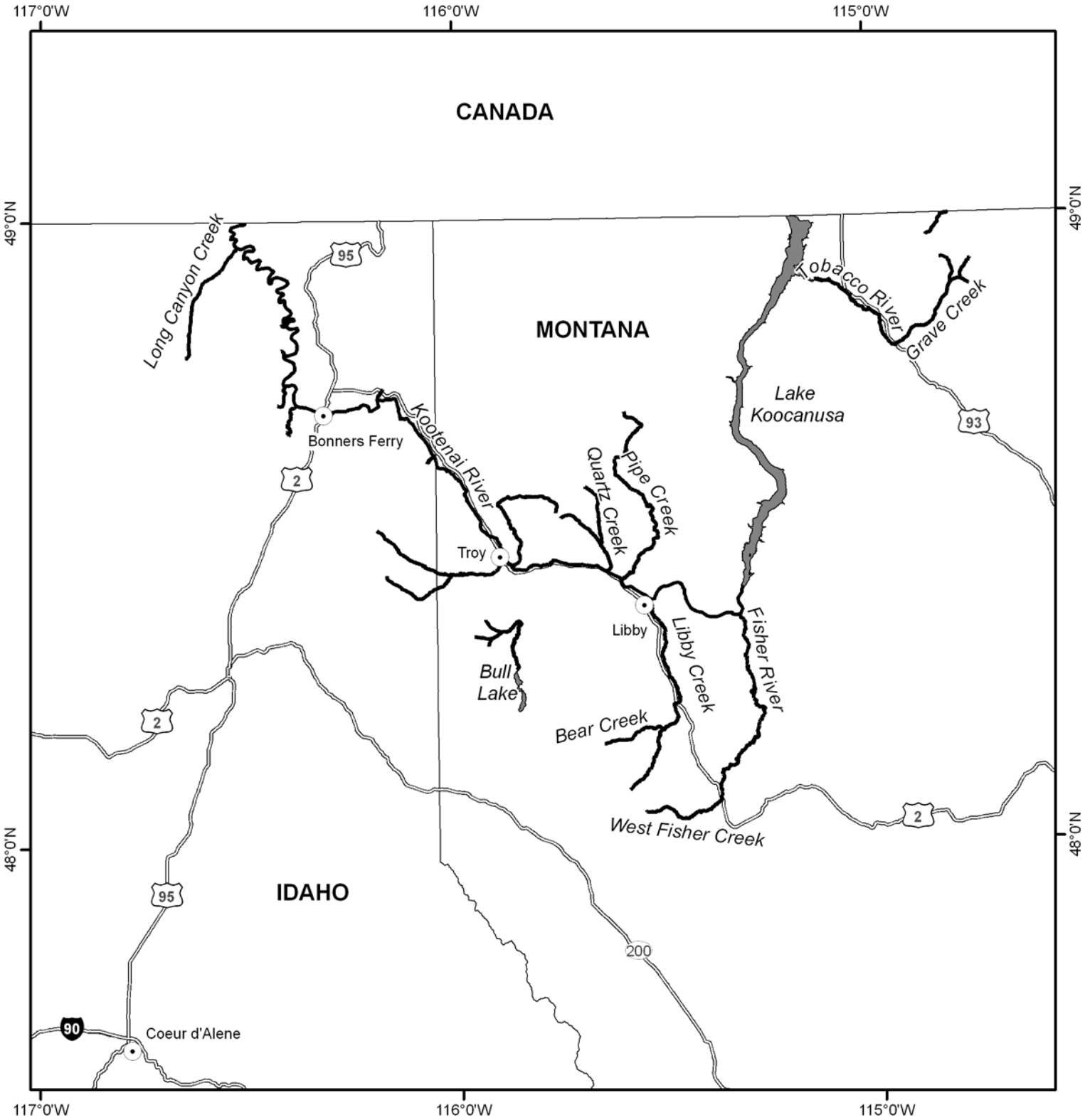
Waterbody Name	Stream Begin Point or Lake Center Latitude	Stream Begin Point or Lake Center Longitude	Stream End Point Latitude	Stream End Point Longitude
Ball Creek	48.787	-116.410	48.794	-116.420
Bear Creek	48.162	-115.654	48.184	-115.508
Blue Sky Creek	48.895	-114.776	48.887	-114.752
Boulder Creek	48.625	-116.052	48.613	-116.070
Bull Lake	48.247	-115.852		
Callahan Creek	48.457	-115.882	48.435	-116.013
Caribou Creek	48.664	-116.400	48.659	-116.402
Clarence Creek	48.889	-114.799	48.930	-114.825
Deep Creek	48.708	-116.384	48.664	-116.400
East Fork Pipe Creek	48.616	-115.619	48.692	-115.594
Fisher River	48.069	-115.375	48.366	-115.324
Grave Creek	48.798	-114.953	48.927	-114.751
Keeler Creek	48.360	-115.852	48.335	-115.961
Kootenai River	48.617	-116.048	48.617	-116.048
Lake Creek	48.360	-115.852	48.282	-115.859
Lake Koocanusa	48.727	-115.244		
Libby Creek	48.121	-115.544	48.121	-115.544
Long Canyon Creek	48.961	-116.527	48.784	-116.652
Moyie River	48.715	-116.186	48.732	-116.176
Myrtle Creek	48.739	-116.412	48.707	-116.430
North Callahan Creek	48.435	-116.013	48.506	-116.192
North Fork Keeler Creek	48.342	-115.897	48.362	-115.934
O'Brien Creek	48.448	-115.867	48.531	-115.763
Pipe Creek	48.424	-115.607	48.616	-115.619
Quartz Creek	48.438	-115.639	48.573	-115.690
Snow Creek	48.664	-116.403	48.665	-116.409
South Callahan Creek	48.414	-116.049	48.435	-116.013
South Fork Keeler Creek	48.320	-115.927	48.333	-115.919
Tobacco River	48.897	-115.127	48.798	-114.953
Trout Creek	48.840	-116.411	48.835	-116.420
West Fisher Creek	48.069	-115.375	48.052	-115.555
West Fork Quartz Creek	48.479	-115.654	48.523	-115.750
Wigwam River	49.000	-114.801	48.965	-114.856

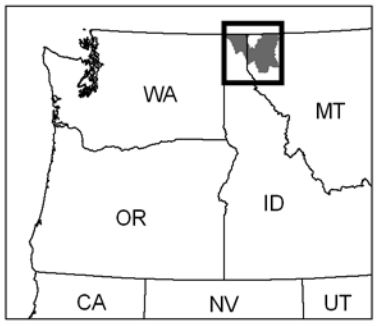
(iii) Waterbodies associated with the following habitat conservation plan (HCP) totaling 66.2 km (41.1 mi) of streams have been excluded from critical habitat designation under section 4(b)(2) of the Act in this unit. These are waterbodies within the geographic area covered by the Plum Creek Native Fish Habitat Conservation Plan (HCP), including portions of the Kootenai River and Lake Koocanusa CHSUs.

(iv) Map of Unit 30, Kootenai River Basin follows:

Critical Habitat for Bull Trout *(Salvelinus confluentus)*

Unit: 30, Kootenai River Basin





N

0 10 20 Miles

0 15 30 Kilometers

For excluded lands in this CHU refer to the section on exclusions in the rule.

CH Lakes

CH Streams

City

Road

(40) Unit 31: Clark Fork River Basin

(i) This unit consists of 5,356.0 km (3,328.1 mi) of streams and 119,620.1 ha (295,586.6 ac) of lakes and reservoirs. The unit is located in northwestern Montana and northern Idaho.

(ii) Individual waterbodies in the unit are bounded by the following coordinates:

Waterbody Name	Stream Begin Point or Lake Center Latitude	Stream Begin Point or Lake Center Longitude	Stream End Point Latitude	Stream End Point Longitude
Akokala Creek	48.881	-114.199	48.920	-114.167
Akokala Lake	48.879	-114.199		
Albert Creek	46.972	-114.311	46.972	-114.311
Alder Creek	46.442	-113.826	46.471	-113.777
Arrow Lake	48.706	-113.885		
Babcock Creek	47.366	-113.270	47.359	-113.353
Barker Creek	46.100	-113.116	46.163	-113.116
Basin Creek	47.966	-112.996	47.935	-113.075
Bear Creek	48.234	-113.567	48.296	-113.384
Beatrice Creek	47.794	-115.103	47.775	-115.153
Belmont Creek	46.954	-113.570	47.054	-113.642
Bench Creek	48.869	-117.003	48.876	-117.014
Big Creek	48.604	-114.164	48.515	-114.327
Big Salmon Creek	47.586	-113.420	47.567	-113.495
Big Salmon Lake	47.602	-113.387		
Bitterroot River	46.861	-114.118	45.944	-114.129
Blackfoot River	46.870	-113.891	47.043	-112.409
Blodgett Creek	46.304	-114.154	46.304	-114.154
Blue Joint Creek	45.695	-114.314	45.600	-114.519
Boles Creek	47.119	-113.547	47.099	-113.731
Boulder Creek	46.343	-113.077	46.478	-113.238
Boulder Creek	45.817	-114.239	45.842	-114.272
Bowl Creek	47.996	-113.058	47.966	-112.996
Bowles Creek	46.192	-113.748	46.207	-113.813
Bowman Creek	48.906	-114.118	48.974	-114.064
Bowman Lake	48.864	-114.161		
Bull River	48.024	-115.845	48.193	-115.816
Bunker Creek	47.830	-113.416	47.829	-113.582
Burnt Fork Bitterroot River	46.542	-114.100	46.304	-113.838
Butte Cabin Creek	46.482	-113.684	46.520	-113.768
Cabinet Gorge Reservoir	48.036	-115.873		
Cache Creek	46.813	-114.640	46.725	-114.759
Calispell Creek	48.321	-117.308	48.321	-117.308
Calispell Lake	48.274	-117.333		
Camas Creek	48.664	-113.935	48.737	-113.883
Caribou Creek	48.748	-116.865	48.798	-116.815
Carpp Creek	46.025	-113.428	46.032	-113.525
Cedar Creek	47.048	-115.044	47.178	-114.863
Cedar Creek	48.893	-116.916	48.880	-116.960
Cedar Creek	48.742	-117.412	48.845	-117.522
Cerulean Lake	48.872	-114.057		
Char Creek	48.291	-116.074	48.262	-116.068
Clack Creek	48.012	-113.090	47.988	-113.106
Clark Fork River	46.601	-113.037	47.961	-115.734
Clearwater Lake	47.385	-113.560		
Clearwater River	47.067	-113.391	47.395	-113.531
Clearwater River, E Fk	47.342	-113.496	47.352	-113.581
Coal Creek	48.690	-114.194	48.698	-114.540
Cold Creek	47.547	-113.920	47.584	-113.757
Cooper Gulch	47.544	-115.592	47.513	-115.648
Copper Creek	47.009	-112.558	47.060	-112.753
Copper Creek	46.068	-113.539	45.948	-113.570
Cottonwood Creek	47.025	-113.282	47.161	-113.346
Crow Creek	47.539	-115.547	47.525	-115.558
Crow Creek	47.525	-115.558	47.539	-115.547
Cyclone Creek	48.665	-114.239	48.712	-114.392
Cyclone Lake	48.705	-114.301		
Daly Creek	46.168	-113.911	46.250	-113.807
Danaher Creek	47.445	-113.183	47.275	-113.014
Dead Horse Creek	48.663	-114.279	48.659	-114.296
Deer Creek	45.595	-114.322	45.570	-114.510
Divide Creek	46.043	-113.819	46.064	-113.968
Doctor Creek	47.402	-113.485	47.407	-113.480
Doctor Lake	47.404	-113.481		
Dolly Varden Creek	48.066	-113.245	47.995	-113.185
Dry Lake Creek	47.259	-113.904	47.308	-113.894

Waterbody Name	Stream Begin Point or Lake Center Latitude	Stream Begin Point or Lake Center Longitude	Stream End Point Latitude	Stream End Point Longitude
Dunham Creek	47.103	-113.156	47.238	-113.317
East Branch LeClerc Creek	48.534	-117.283	48.673	-117.189
East Fork Bitterroot River	45.944	-114.129	45.911	-113.596
East Fork Bull River	48.109	-115.783	48.091	-115.645
East Fork Creek	48.241	-116.113	48.262	-116.040
East Fork Crow Creek	47.525	-115.558	47.519	-115.556
East Fork Reservoir	46.118	-113.375		
East Fork Rock Creek	46.103	-113.369	46.200	-113.500
East Fork Small Creek	48.328	-117.355	48.371	-117.399
East Fork Strawberry Creek	48.064	-113.031	48.092	-112.992
East Fork Swift Creek	48.687	-114.583	48.757	-114.585
East River	48.371	-116.820	48.353	-116.853
Elk Creek	47.544	-113.742	47.480	-113.857
Fish Creek	47.003	-114.699	46.927	-114.697
Fishtrap Creek	47.713	-115.059	47.817	-115.152
Fitzsimmons Creek	48.735	-114.734	48.751	-114.618
Flathead Lake	47.885	-114.134		
Flathead River	47.365	-114.777	48.467	-114.070
Flint Creek	46.528	-113.227	46.528	-113.227
Foster Creek	46.164	-113.120	46.284	-113.110
Fourth of July Creek	48.556	-117.273	48.557	-117.264
Fred Burr Creek	46.348	-114.152	46.357	-114.316
Frozen Creek	49.000	-114.678	48.990	-114.738
Frozen Lake	48.999	-114.681		
Gateway Creek	48.030	-113.022	48.046	-112.959
Goat Creek	47.749	-113.829	47.760	-113.657
Gold Creek	46.919	-113.677	47.058	-113.745
Gold Creek	46.398	-113.904	46.363	-113.931
Gold Creek	47.971	-116.455	47.953	-116.452
Gold Creek	48.811	-117.032	48.821	-116.974
Gordon Creek	47.423	-113.439	47.434	-113.474
Granite Creek	48.145	-113.377	48.227	-113.333
Granite Creek	48.087	-116.428	48.060	-116.330
Granite Creek	48.639	-116.864	48.700	-117.030
Grant Creek	46.868	-114.104	47.036	-113.955
Graves Creek	47.682	-115.410	47.718	-115.381
Grouse Creek	48.403	-116.478	48.483	-116.229
Hallowat Creek	48.574	-114.317	48.625	-114.425
Harrison Creek	48.529	-113.751	48.574	-113.702
Harrison Lake	48.516	-113.771		
Harvey Creek	46.581	-113.574	46.707	-113.373
Hogback Creek	46.410	-113.703	46.440	-113.626
Holland Creek	47.451	-113.582	47.451	-113.572
Holland Lake	47.448	-113.598		
Hughes Creek	45.621	-114.304	45.657	-114.044
Hughes Fork	48.805	-116.924	48.893	-117.001
Hungry Horse Reservoir	48.201	-113.798		
Indian Creek	48.610	-116.837	48.634	-116.790
Indian Creek	48.242	-117.153	48.299	-117.152
Jackson Creek	48.856	-117.002	48.854	-117.024
Jim Creek	47.648	-113.793	47.587	-113.898
Jocko River	47.195	-113.853	47.201	-113.924
Johnson Creek	48.131	-116.226	48.139	-116.230
Keokee Creek	48.389	-116.698	48.407	-116.685
Kintla Creek	48.975	-114.250	48.986	-114.064
Kintla Lake	48.959	-114.307		
Kishenehn Creek	48.950	-114.412	49.000	-114.365
Lake Alva	47.313	-113.582		
Lake Inez	47.282	-113.567		
Lake Isabel	48.422	-113.494		
Lake Marshall	47.288	-113.650		
Lake McDonald	48.583	-113.926		
Lake Pend Oreille	48.152	-116.410		
Landers Fork	46.965	-112.563	47.099	-112.569
LeClerc Creek	48.518	-117.284	48.534	-117.283
Lick Creek	45.939	-113.679	45.938	-113.718
Lightning Creek	48.140	-116.192	48.353	-116.176
Lime Creek	48.907	-116.957	48.894	-116.965
Lincoln Creek	48.592	-113.767	48.596	-113.759
Lincoln Lake	48.591	-113.771		

Waterbody Name	Stream Begin Point or Lake Center Latitude	Stream Begin Point or Lake Center Longitude	Stream End Point Latitude	Stream End Point Longitude
Lindbergh Lake	47.381	-113.734		
Lion Creek	47.681	-113.816	47.670	-113.711
Lion Creek	48.736	-116.832	48.725	-116.673
Little Boulder Creek	45.716	-114.278	45.726	-114.228
Little Joe Creek	47.269	-115.141	47.297	-115.121
Little Salmon Creek	47.587	-113.611	47.654	-113.361
Little Stony Creek	46.293	-113.683	46.286	-113.775
Lodgepole Creek	47.182	-113.203	47.229	-113.271
Lodgepole Creek	48.115	-113.264	48.141	-113.133
Logging Creek	48.776	-114.020	48.784	-114.002
Logging Lake	48.758	-114.075		
Lolo Creek	46.712	-114.533	46.743	-114.061
Long Creek	48.157	-113.530	48.094	-113.497
Lost Creek	47.870	-113.849	47.873	-113.825
Lost Creek	47.118	-115.109	47.118	-115.109
Lost Horse Creek	46.120	-114.306	46.120	-114.306
Lower Quartz Lake	48.807	-114.172		
Lunch Creek	48.825	-117.399	48.820	-117.389
Malcom Creek	48.982	-116.940	48.980	-116.931
Marshall Creek	47.279	-113.598	47.276	-113.727
Martin Creek	45.930	-113.724	46.009	-113.812
Mathias Creek	48.669	-114.423	48.647	-114.472
McDonald Creek	48.506	-114.006	48.646	-113.848
McDonald Lake	47.421	-113.977		
Meadow Creek	46.128	-113.429	46.097	-113.441
Meadow Creek	45.908	-113.781	45.813	-113.791
Middle Branch Le Clerc Creek	48.585	-117.262	48.654	-117.218
Middle Fork East River	48.371	-116.820	48.386	-116.678
Middle Fork Flathead River	48.468	-114.070	47.996	-113.058
Middle Fork Rock Creek	46.001	-113.526	46.223	-113.522
Middle Quartz Lake	48.822	-114.142		
Mill Creek	48.489	-117.266	48.447	-117.139
Mission Creek	47.320	-113.990	47.324	-113.974
Mission Reservoir	47.319	-114.008		
Monture Creek	47.020	-113.236	47.268	-113.181
Moose Creek	45.922	-113.728	46.009	-113.708
Mormon Creek	46.756	-114.115	46.697	-114.205
Morrell Creek	47.141	-113.461	47.342	-113.472
Morris Creek	48.208	-116.081	48.224	-116.118
Morrison Creek	48.110	-113.311	48.237	-113.261
Nez Perce Fork	45.802	-114.268	45.734	-114.473
North Fork Blackfoot River	46.985	-113.130	47.196	-112.887
North Fork Cold Creek	47.562	-113.812	47.555	-113.906
North Fork East River	48.371	-116.820	48.449	-116.735
North Fork Fish Creek	46.907	-114.806	46.932	-114.924
North Fork Flathead River	48.469	-114.073	49.000	-114.475
North Fork Granite Creek	48.700	-117.030	48.771	-117.067
North Fork Indian Creek	48.658	-116.719	48.634	-116.790
North Fork Jocko River	47.201	-113.924	47.226	-113.816
North Fork Little Joe Creek	47.203	-115.275	47.269	-115.141
North Fork Lost Creek	47.873	-113.825	47.896	-113.738
North Fork Of South Fork Tacoma Creek	48.399	-117.362	48.435	-117.483
North Fork Rock Creek	46.212	-113.697	46.232	-113.756
North Gold Creek	47.973	-116.453	47.975	-116.427
Noxon Rapids Reservoir	47.892	-115.675		
Nyack Creek	48.452	-113.797	48.490	-113.701
O'Brien Creek	46.837	-114.299	46.850	-114.103
Ole Creek	48.283	-113.599	48.316	-113.464
Oregon Gulch	47.143	-114.968	47.122	-115.021
Overwhich Creek	45.674	-114.308	45.717	-114.081
Pack River	48.320	-116.383	48.603	-116.637
Painted Rocks Reservoir	45.701	-114.294		
Park Creek	48.310	-113.614	48.420	-113.509
Pend Oreille River	48.989	-117.349	48.251	-116.538
Petty Creek	46.992	-114.447	46.849	-114.439
Piper Creek	47.675	-113.816	47.622	-113.956
Placid Creek	47.116	-113.542	47.178	-113.675
Placid Lake	47.119	-113.525		
Pocket Creek	48.934	-114.079	48.955	-114.104
Poorman Creek	46.897	-112.653	46.897	-112.653

Waterbody Name	Stream Begin Point or Lake Center Latitude	Stream Begin Point or Lake Center Longitude	Stream End Point Latitude	Stream End Point Longitude
Porcupine Creek	48.267	-116.124	48.253	-116.157
Post Creek	47.416	-113.961	47.399	-113.893
Priest Lake	48.588	-116.865		
Priest River	48.173	-116.893	48.490	-116.905
Prospect Creek	47.592	-115.358	47.568	-115.677
Quartz Creek	48.815	-114.166	48.839	-114.004
Quartz Lake	48.829	-114.102		
Quintonkon Creek	48.013	-113.768	48.026	-113.708
Railroad Creek	46.158	-113.886	46.167	-113.816
Rainbow Creek	48.855	-114.054	48.869	-114.054
Rainy Lake	47.339	-113.595		
Ranch Creek	46.468	-113.578	46.583	-113.679
Rapid Creek	47.372	-113.055	47.382	-113.026
Rattle Creek	48.326	-116.173	48.314	-116.101
Rattlesnake Creek	46.867	-113.986	47.098	-113.910
Red Meadow Creek	48.805	-114.325	48.773	-114.543
Reynolds Creek	45.947	-113.718	45.957	-113.682
Rock Creek	46.725	-113.683	46.223	-113.522
Rock Creek	47.975	-115.744	48.044	-115.654
Rock Creek	48.923	-116.966	48.906	-116.971
Ross Fork	46.184	-113.526	46.184	-113.526
Ruby Creek	48.556	-117.343	48.568	-117.510
Saint Mary's Lake	47.261	-113.923		
Saint Regis River	47.297	-115.090	47.349	-115.292
Salmon Lake	47.093	-113.404		
Sand Basin Creek	46.197	-113.704	46.153	-113.688
Savage Creek	48.226	-116.029	48.248	-116.097
Scalp Creek	47.982	-113.042	47.957	-113.082
Schafer Creek	48.038	-113.270	48.071	-113.251
Seeley Lake	47.194	-113.510		
Shorty Creek	48.851	-114.594	48.818	-114.614
Skalkaho Creek	46.220	-114.163	46.071	-113.818
Slate Creek	45.698	-114.287	45.712	-114.166
Slate Creek	48.923	-117.333	48.927	-117.318
Sleeping Child Creek	46.161	-114.160	46.033	-113.815
Small Creek	48.321	-117.308	48.337	-117.410
Soup Creek	47.837	-113.844	47.812	-113.751
South Boulder Creek	46.415	-113.201	46.415	-113.201
South Fork Bull River	48.170	-115.789	48.193	-115.816
South Fork Coal Creek	48.680	-114.346	48.674	-114.472
South Fork Fish Creek	46.927	-114.697	46.813	-114.640
South Fork Flathead River	47.830	-113.416	47.833	-113.417
South Fork Granite Creek	48.700	-117.030	48.691	-117.134
South Fork Indian Creek	48.624	-116.717	48.634	-116.790
South Fork Jocko River	47.103	-113.768	47.195	-113.853
South Fork Little Joe Creek	47.172	-115.224	47.269	-115.141
South Fork Lolo Creek	46.762	-114.266	46.605	-114.309
South Fork Lost Creek	47.868	-113.738	47.873	-113.825
South Fork Tacoma Creek	48.394	-117.324	48.432	-117.507
South Woodward Creek	47.754	-113.858	47.717	-113.858
Spotted Bear River	47.924	-113.526	47.877	-113.212
Squeezer Creek	47.750	-113.816	47.717	-113.729
Stillwater River	48.604	-114.657	48.789	-114.686
Stony Creek	46.274	-113.731	46.274	-113.731
Storm Lake Creek	46.169	-113.154	46.075	-113.268
Strawberry Creek	47.996	-113.058	48.111	-113.028
Strong Creek	48.243	-116.303	48.264	-116.279
Sullivan Creek	48.050	-113.689	47.879	-113.657
Sullivan Creek	48.865	-117.371	48.955	-117.069
Sullivan Springs	48.088	-116.412	48.084	-116.388
Swamp Creek	47.920	-115.689	47.994	-115.565
Swan Lake	47.955	-113.895		
Swan River	47.346	-113.742	47.404	-113.718
Swift Creek	48.481	-114.425	48.654	-114.551
Tacoma Creek	48.391	-117.289	48.445	-117.508
The Thorofare	48.740	-116.843	48.766	-116.865
Thompson River	47.576	-115.241	47.713	-115.059
Tillicum Creek	48.725	-117.071	48.729	-117.083
Tin Cup Creek	45.973	-114.349	46.016	-114.168
Tolan Creek	45.777	-113.827	45.856	-113.913

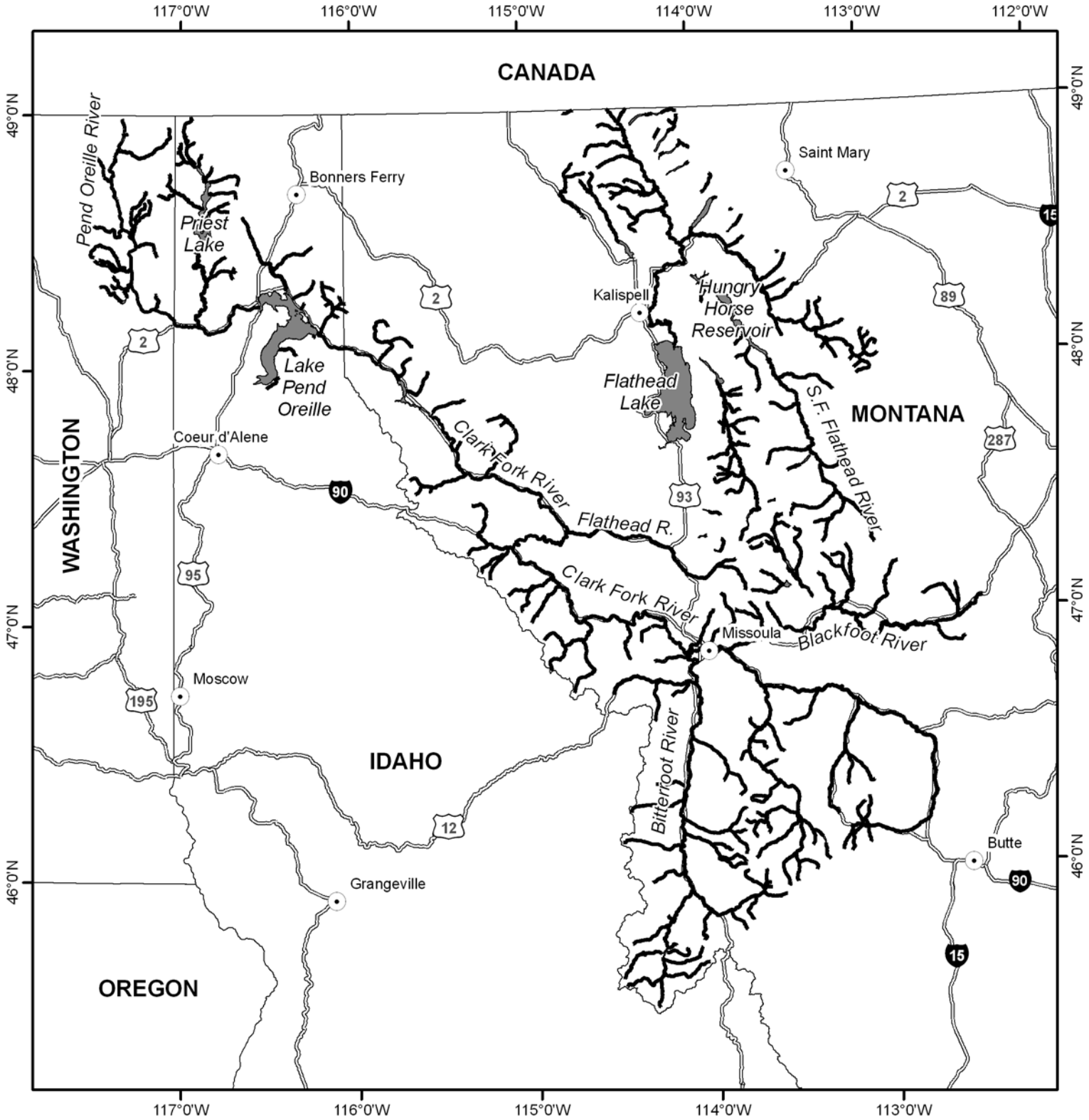
Waterbody Name	Stream Begin Point or Lake Center Latitude	Stream Begin Point or Lake Center Longitude	Stream End Point Latitude	Stream End Point Longitude
Trail Creek	48.013	-113.020	48.012	-112.946
Trail Creek	48.924	-114.386	48.933	-114.536
Trapper Creek	48.796	-116.897	48.851	-116.879
Trestle Creek	48.351	-116.235	48.283	-116.353
Trout Creek	47.030	-114.966	47.106	-114.897
Trout Lake	48.680	-113.910		
Twelvemile Creek	47.349	-115.292	47.465	-115.325
Twin Lakes Creek	46.070	-113.221	46.169	-113.153
Two Bear Creek	46.111	-114.010	46.094	-113.897
Two Mouth Creek	48.674	-116.677	48.687	-116.837
Uleda Creek	48.388	-116.708	48.362	-116.696
Upper Kintla Lake	48.976	-114.176		
Upper Priest Lake	48.785	-116.889		
Upper Priest River	48.799	-116.912	48.995	-116.942
Upper Stillwater Lake	48.588	-114.637		
Upper Whitefish Lake	48.687	-114.579		
Vermilion River	47.832	-115.535	47.879	-115.355
Ward Creek	47.274	-115.355	47.312	-115.234
Warm Springs Creek	46.210	-112.768	46.261	-113.137
Warm Springs Creek	45.860	-114.026	45.742	-114.070
Welcome Creek	46.566	-113.701	46.603	-113.768
Wellington Creek	48.295	-116.174	48.290	-116.163
West Branch LeClerc Creek	48.534	-117.283	48.701	-117.212
West Fork Bitterroot River	45.621	-114.304	45.718	-114.281
West Fork Clearwater River	47.256	-113.551	47.287	-113.745
West Fork Fish Creek	46.927	-114.697	46.812	-114.891
West Fork Fishtrap Creek	47.793	-115.224	47.816	-115.145
West Fork Gold Creek	46.996	-113.686	47.032	-113.828
West Fork Rock Creek	46.170	-113.762	46.171	-113.762
West Fork Swift Creek	48.654	-114.551	48.726	-114.653
West Fork Thompson River	47.650	-115.174	47.714	-115.207
West Gold Creek	47.953	-116.452	47.930	-116.504
Whale Creek	48.849	-114.353	48.851	-114.594
Wheeler Creek	48.097	-113.730	48.066	-113.776
White River	47.588	-113.299	47.611	-113.204
Whitefish Lake	48.451	-114.381		
Winchester Creek	48.271	-117.343	48.329	-117.476
Woodward Creek	47.767	-113.880	47.777	-113.846
Wounded Buck Creek	48.280	-113.936	48.234	-113.963
Youngs Creek	47.445	-113.183	47.282	-113.314

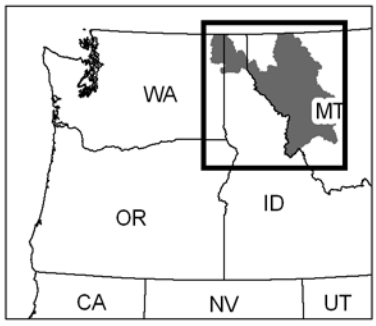
(iii) Waterbodies associated with the following habitat conservation plan (HCP) totaling 209.0 km (129.9 mi) of streams and 32.2 ha (79.7 ac) of lakes and reservoirs have been excluded from critical habitat designation under section 4(b)(2) of the Act in this unit. These are waterbodies within the geographic area covered by the Plum Creek Native Fish Habitat Conservation Plan (HCP), including portions of Lower Clark Fork River, Middle Clark Fork River, Upper Clark Fork River, Bitterroot River, Rock Creek, Blackfoot, Clearwater, Flathead, Swan, and South Fork CHSUs.

(iv) Map of Unit 31, Clark Fork River Basin follows:

Critical Habitat for Bull Trout *(Salvelinus confluentus)*

Unit: 31, Clark Fork River Basin





N

0 25 50 Miles

0 37.5 75 Kilometers

For excluded lands in this CHU refer to the section on exclusions in the rule.

CH Lakes

CH Streams

City

Road

(41) Unit 32: St. Mary River Basin

(i) This unit consists of 34.7 km (21.6 mi) of streams and 1,669.3 ha (4,125.0 ac) of lakes and reservoirs. The unit is located in northwestern Montana.

(ii) Individual waterbodies in the unit are bounded by the following coordinates:

Waterbody Name	Stream Begin Point or Lake Center Latitude	Stream Begin Point or Lake Center Longitude	Stream End Point Latitude	Stream End Point Longitude
Boulder Creek	48.776	-113.550	48.839	-113.460
Canyon Creek	48.740	-113.647	48.730	-113.657
Cracker Lake	48.744	-113.644		
Divide Creek	48.694	-113.421	48.751	-113.438
Kennedy Creek	48.851	-113.604	48.905	-113.409
Lee Creek	48.998	-113.601	48.919	-113.638
Lower St. Mary Lake	48.796	-113.423		
Middle Fork Lee Creek	48.998	-113.550	48.978	-113.585
Otatso Creek	48.894	-113.638	48.904	-113.621
Otatso Lake	48.892	-113.677		
Red Eagle Creek	48.648	-113.510	48.630	-113.541
Red Eagle Lake	48.652	-113.507		
Saint Mary River	48.756	-113.425	48.844	-113.418
Slide Lakes - lower pool	48.905	-113.616		
Slide Lakes - upper pool	48.902	-113.625		
St. Mary Lake	48.699	-113.509		
Swiftcurrent Creek	48.836	-113.429	48.839	-113.460

(iii) Waterbodies associated with the following tribal lands totaling 82.1 km (51.0 mi) of streams and 886.1 ha (2,189.5 ac) of lakes and reservoirs have been excluded from critical habitat designation under section 4(b)(2) of the Act in this unit. These are waterbodies within the areas under management by the Blackfeet Tribe, within reservation boundaries, and waterbodies that are adjacent to:

(A) Lands held in trust by the United States for their benefit;

(B) Lands held in trust by the United States for any Indian Tribe or individual subject to restrictions by the United States against alienation;

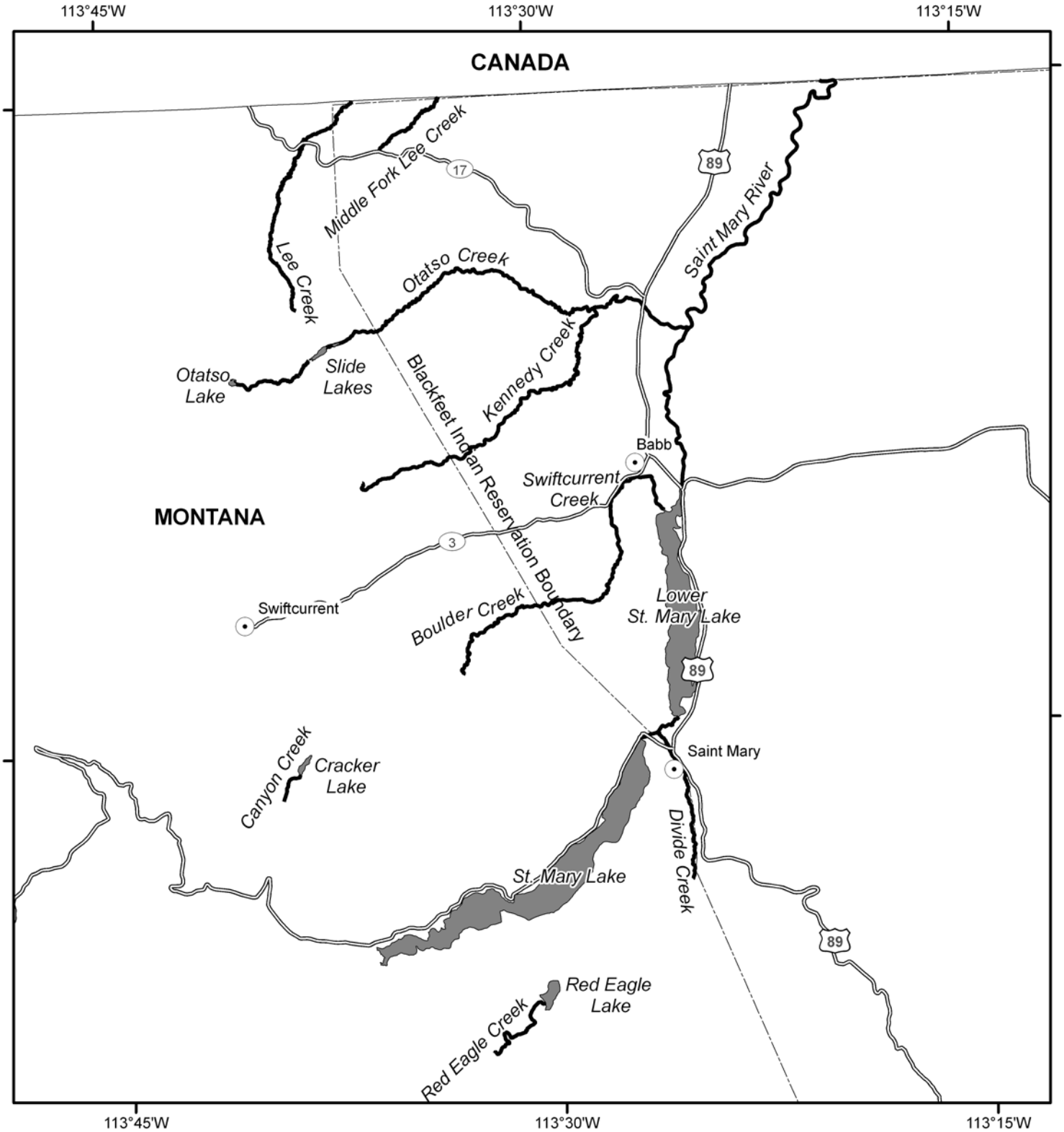
(C) Fee lands, either within or outside the reservation boundaries, owned by the tribal government; and

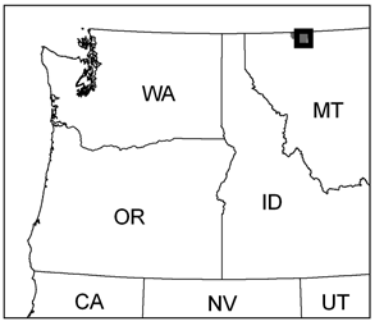
(D) Fee lands within the reservation boundaries owned by individual Indians.

(iv) Map of Unit 32, St. Mary River Basin follows:

Critical Habitat for Bull Trout *(Salvelinus confluentus)*

Unit: 32, Saint Mary River Basin





N

0 2.5 5 Miles

0 3 6 Kilometers

For excluded lands in this CHU refer to the section on exclusions in the rule.

City

CH Lakes

CH Streams

Road

* * * * *

Dated: September 10, 2010

Thomas L. Strickland,

Assistant Secretary for Fish and Wildlife and Parks.

[FR Doc. 10–?????? Filed ??–??– 10; 8:45 am]

BILLING CODE 4310–55–S