Federal Register

Thursday,
January 14, 2010

Part III

Department of the Interior

Fish and Wildlife Service

50 CFR Part 17

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

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: Proposed rule, announcement of public hearing, and announcement of availability of draft economic analysis.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), propose to revise the designation of critical habitat for the bull trout (*Salvelinus confluentus*) under the Endangered Species Act of 1973, as amended. In total, approximately 36,498 kilometers (km) (22,679 miles (mi)) of streams (which includes 1,585.7 km (985.30 mi) of marine shoreline area in the Olympic Peninsula and Puget Sound), and 215,870 hectares (ha) (533,426 acres (ac)) of reservoirs or lakes are being proposed for the revised critical habitat designation. The revised proposed critical habitat is located in Adams, Benewah, Blaine, Boise, Bonner, Boundary, Butte, Camas, Canyon, Clearwater, Custer, Elmore, Gem, Idaho, Kootenai, Lemhi, Lewis, Nez Perce, Owyhee, Shoshone, Valley, and Washington counties in Idaho; Deer Lodge, Flathead, Glacier, Granite, Lake, Lewis and Clark, Lincoln, Mineral, Missoula, Powell, Ravalli, and Sanders counties in Montana; Baker, Clatsop, Columbia, Deschutes, Gilliam, Grant, Harney, Hood River, Jefferson, Klamath, Lake, Lane, Linn, Malheur, Morrow, Multnomah, Sherman, Umatilla, Union, Wallowa, Wasco, and Wheeler counties in Oregon; Asotin, Benton, Chelan, Clallam, Clark, Columbia, Cowlitz, Douglas, Franklin, Garfield, Grant, Grays Harbor, Island, Jefferson, King, Kittitas, Klickitat, Mason, Okanogan, Pend Oreille, Pierce, Skagit, Skamania, Snohomish, Thurston, Wahkiakum, Walla Walla, Whatcom, Whitman, and Yakima counties in Washington; and Elko county, Nevada.

DATES: *Written Comments*: We will accept comments received or postmarked on or before March 15, 2010. Because of the anticipated interest in this proposed designation, we are planning on holding a public hearing and several public meetings.

Public Hearing: We will hold a public hearing in Boise, Idaho on February 25, 2010, from 7 p.m. to 9 p.m.; and public meetings in:

- Bend, Oregon on February 2, 2010, 5:30 p.m. to 7:30 p.m.;
- Chiloquin, Oregon on February 3, 2010, 6 p.m. to 8 p.m.;
- LaGrande, Oregon on February 4, 2010, 5:30 p.m. to 7:30 p.m.;
- Post Falls, Idaho on February 11, 2010, 4 p.m. to 7 p.m.;
- Missoula, Montana on February 16, 2010, 3 p.m. to 8 p.m.;
- Elko, Nevada on February 17, 2010, 5 p.m. to 7 p.m.;
- Wenatchee, Washington on February 23, 2010, 6 p.m. to 8 p.m.; and
- Boise, Idaho on February 25, 2010, 4 p.m. to 6 p.m.

ADDRESSES: You may submit comments by one of the following methods:

- *Federal eRulemaking Portal*: *http://www.regulations.gov*. Search for docket FWS-R1-ES-2009-0085 and then follow the instructions for submitting comments.
- *U.S. mail or hand-delivery*: Public Comments Processing, Attn: FWS-R1-ES-2009-0085; Division of Policy and Directives Management; U.S. Fish and Wildlife Service; 4401 N. Fairfax Drive, Suite 222; Arlington, VA 22203.
- *Public Hearing*: We will hold the public hearing at Boise Centre on the Grove, 850 W. Front Street, Boise, Idaho.
- *Public Meetings:* We will hold the public meetings at:
  - o Hollingshead Barn, 1235 NE Jones Road, Bend Oregon;
  - o Chiloquin Community Center, 140 S. 1st Street, Chiloquin, Oregon;
  - o Blue Mountain Conference Center, 404 12th Street, la Grande, Oregon;
  - o Red Lion Templins Inn, 414 East 1st Avenue, Post Falls, Idaho;
  - o Montana Fish, Wildlife, and Parks Headquarters, 3201 Spurgin Road, Missoula, Montana;
  - o Elko Convention Center, Gold Room, 700 Moren Way, Elko, Nevada;
  - o Wenatchee-Okanogan National Forest Headquarters, 215 Melody Lane, Wenatchee, Washington; and
  - o Boise Centre on the Grove, 850 W. Front Street, Boise, Idaho.

We will post all comments on *http://www.regulations.gov*. This generally means that we will post any personal information you provide us (see the **Public Comments** section below for more information).

FOR FURTHER INFORMATION CONTACT: Jeff Foss, Field Supervisor, U.S. Fish and Wildlife Service, Idaho Fish and Wildlife Office, 1387 South Vinnell Way, Boise, ID 83702; telephone 208-378-5243; facsimile 208-378-5262. If you use a telecommunications device for the deaf (TDD), call the Federal Information Relay Service (FIRS) at 800-877-8339.

SUPPLEMENTARY INFORMATION:

Public Comments

We intend that any final action resulting from this proposed rule will be based on the best scientific and commercial data available and be as accurate and as effective as possible. Therefore, we request comments or information from the public, other concerned government agencies, the scientific community, industry, or other interested parties concerning this proposed rule. Verbal testimony or written comments may also be presented during the public hearing (see the **Public Hearing** section below for more information). We will consider information and recommendations from all interested parties. We particularly seek comments concerning:

(1) The reasons why we should or should not designate habitat as "critical habitat" under section 4 of the Endangered Species Act of 1973, as amended (Act) (16 U.S.C. 1531 *et seq.*), including whether there are threats to the species from human activity, the degree to which threats can be expected to increase due to the designation, and whether that increase in threat outweighs the benefit of designation;

(2) Specific information on:

- The amount and distribution of bull trout habitat,
- What areas occupied at the time of listing that contain features essential to the conservation of the species should be included in the designation and why,
- Special management considerations or protections that the features essential to the conservation of the bull trout that have been identified in this proposal may require, including managing for the potential effects of climate change, and
- What areas not occupied at the time of listing are essential to the conservation of the species and why;

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

(4) Any foreseeable economic, national security, or other relevant impacts of designating any area that may be included in the final designation. We are particularly interested in any impacts on small entities, and the benefits of including or excluding areas that exhibit these impacts;

(5) Whether the benefits of excluding any particular area from critical habitat

outweigh the benefits of including that area as critical habitat under section 4(b)(2) of the Act, after considering the potential impacts and benefits of the proposed critical habitat designation. Under section 4(b)(2) of the Act, we may exclude an area from critical habitat if we determine that the benefits of such exclusion outweigh the benefits of including that particular area as critical habitat, unless failure to designate that specific area as critical habitat will result in the extinction of the species. We request specific information on:

• The benefits of including specific areas in the final designation and supporting rationale,

• The benefits of excluding specific areas from the final designation and supporting rationale, and

• Whether any specific exclusions may result in the extinction of the species and why (see Exclusions section below).

(6) Whether our exemptions under section 4(a)(3)(B) of the Act of the lands on Department of Defense (DOD) land at the Bayview Acoustic Research Detachment (ARD) Naval Surface Warfare Center, Bayview Idaho; Naval Radio Station Jim Creek in western Washington; Naval Station Everett in western Washington; Naval Air Station Whidbey Island in western Washington, and U.S. Army Fort Lewis Installation in western Washington, are or are not appropriate, and why;

(7) Specific information on the following areas considered to be essential to the conservation of the species:

• Mainstem and tributary habitats within the White Salmon River Critical Habitat Subunit (CHSU) that are believed to be unoccupied, but which are considered essential for providing foraging, migration, and overwintering (FMO) habitat or spawning and rearing areas to reestablish a population within this system;

• Unoccupied tributaries within the Lake Pend Oreille, Pend Oreille River, and lower Priest River CHSU that are considered essential for providing spawning and rearing areas to reestablish a population within the Pend Oreille River; and

• Areas of mainstem habitat in the Yakima River (Yakima River Critical Habitat Unit (CHU)) and Touchet River (Walla Walla River Basin CHU) for which we have limited or no documented evidence of occupancy, but which are currently believed to be essential for providing connectivity to the mainstem Columbia River and Walla Walla River, respectively, for the fluvial life-history form;

(8) Specific information on areas of habitat that were historically occupied, or areas for which we have limited evidence of occupancy, which we do not consider to be essential to the conservation of the species in this proposed rule. These areas include Okanogan River; Lake Chelan and Stehekin River; west side tributaries to Hood Canal (e.g., Dosewallips River, Duckabush River, Quilcene River); and Willapa River;

(9) Specific information on areas believed to be unoccupied in the Klamath River basin, but essential for FMO habitat;

(10) Specific information as to whether the six recovery units identified in the "Critical Habitat Background" section accurately reflect the conservation needs of bull trout;

(11) Information on the projected and reasonably likely impacts of climate change on bull trout, and any special management needs or protections that may be needed in the critical habitat areas we are proposing.

(12) Information on the extent to which the description of potential economic impacts in the DEA is complete and accurate, and specifically:

• Whether regulatory protections and conservation activities already being implemented for salmon, steelhead, bull trout , other species, or other concerns (e.g., water quality) in areas proposed as critical habitat are appropriate to include as baseline costs (e.g., costs that would occur regardless of critical habitat designation for bull trout) for purposes of our economic analysis, and if not, why not;

• Whether there are incremental costs of critical habitat designation (e.g., costs attributable solely to critical habiatat designation) that have not been appropriately identified or considered in our economic analysis, including costs associated with future administrative costs or project modifications that may be required by Federal agencies related to section 7 consultation under the Act;

• Whether there are incremental economic benefits of critical habitat designation that have not been appropriately identified or considered in our economic analysis.

(13) Information on whether existing special management considerations or protections being implemented in areas designated as critical habitat for salmon by the National Marine Fisheries Service (NOAA Fisheries) are adequate for conserving essential bull trout habitat where proposed bull trout critical habitat overlaps, and if not, why not.

(14) We have organized the Primary Constituent Elements (PCEs) of bull trout critical habitat based on the life-history needs of the species. We are considering reorganizing the PCEs in order to improve clarity, into broad habitat attributes (water bodies and migratory corridors), and identify specific needs of bull trout within these broad categories. This approach would likely require repetition of specific features, but may be more understandable by making clear the relationships between the needs of the species and the specific locations where those needs are provided. We request comments on whether this reorganization would improve clarity of the PCEs.

(15) Whether we could improve or modify our approach to designating critical habitat in any way to provide for greater public participation and understanding, or to better accommodate public concerns and comments; and

(16) Specific information on ways to improve the clarity of this rule as it pertains to completion of consultations under section 7 of the Endangered Species Act.

You may submit your comments and materials concerning this proposed rule by one of the methods listed in the **ADDRESSES** section.

We will post your entire comment—including your personal identifying information—on *http://www.regulations.gov*. If you provide personal identifying information, in addition to the required items specified in the previous paragraphs, such as your street address, phone number, or e-mail address, you may request at the top of your document that we withhold this information from public review. However, we cannot guarantee that we will be able to do so.

Comments and materials we receive, as well as supporting documentation we used in preparing this proposed rule, will be available for public inspection on *http://www.regulations.gov*, or by appointment, during normal business hours, at the U.S. Fish and Wildlife Service, Idaho Fish and Wildlife Office (see **FOR FURTHER INFORMATION CONTACT**).

We are holding a public hearing on the date listed in the **DATES** section at the address listed in the **ADDRESSES** section. We are holding this public hearing to provide interested parties an opportunity to present verbal testimony (formal, oral comments) or written comments regarding the proposed critical habitat designation and the associated Draft Economic Analysis. An informational session will precede the hearing from 4 p.m. to 6 p.m. During

this session, Service biologists will be available to provide information and address questions on the proposed rule in advance of the formal hearing.

People needing reasonable accommodations in order to attend and participate in the public hearings should contact Jeff Foss, Idaho Fish and Wildlife Office, at 208-378-5243 as soon as possible (see **FOR FURTHER INFORMATION CONTACT** section). In order to allow sufficient time to process requests, please call no later than one week before the hearing date.

We are also holding public meetings on the dates listed in the **DATES** section at the addresses listed in the **ADDRESSES** section. During the public meetings, Service biologists will be available to provide information and address questions on the proposed rule. However, we will not accept verbal testimony at these public meetings.

Information regarding this notice is available in alternative formats upon request.

Background

It is our intent to discuss only those topics directly relevant to the designation of critical habitat in this proposed rule. For further information on the bull trout biology and habitat, population abundance and trend, distribution, demographic features, habitat use and conditions, threats, and conservation measures, please see the Bull Trout 5-year Review Summary and Evaluation, completed April 25, 2008. This document is available on the Idaho Fish and Wildlife Office web site at *http://ecos.fws.gov/docs/five_year_review/doc1907.pdf*.

Description, Distribution, Habitat and Recovery

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). This proposed rule identifies those physical and biological features essential to bull trout conservation.

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. 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 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. Most bull trout are migratory, spawning in tributary streams where juvenile fish usually rear from one to four 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).

Bull trout, coastal cutthroat trout (*Oncorhynchus clarki clarki*), Pacific salmon (*Oncorhynchus* spp.), and some other species are commonly referred to as anadromous (fish that can migrate from saltwater to freshwater to reproduce). 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). 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 our 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). Finalization of the 2002 draft recovery plan was held in abeyance pending completion of the 5–year review process, and was also affected by resource demands associated with the litigation discussed below. The bull trout 5–year review (Service 2008, p. 45) recommended that the recovery units identified in the 2002 draft recovery plan be updated throughout their range 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 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, 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 proposed 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 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 an inadequate analysis and the unlawful use of exclusions. 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 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 the Service to submit a new proposed rule to the **Federal Register** by December 31, 2009, and to submit a final decision on that proposed rule 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)). The court directed that the existing critical habitat rule shall remain in effect until completion of the remanded decision.

Summary of Changes from Previously Designated Critical Habitat

Approximately 36,498 km (22,679 mi) of streams (which includes 1,585.7 km (985.3 mi) of marine shoreline area, and 215,870 ha (533,426 ac) of reservoirs or lakes) are being proposed as revised critical habitat in this rule. Areas that were proposed as critical habitat in the November 29, 2002, proposed designation for the Klamath River and Columbia River bull trout populations (67 FR 71235) and the June 25, 2004, proposed designation for the Jarbidge, Coastal–Puget Sound, and Saint Mary–Belly River bull trout populations (69 FR 35767) are identified in Table 1 below. Based on better occupancy data and refined information on the importance of certain habitats, we are proposing to designate 3 percent more critical habitat in streams (measured on a linear basis) and 10 percent less critical habitat in lakes and reservoirs (measured by area) than were proposed in the combined 2002 and 2004 proposed rules.

TABLE 1.—EXTENT OF PROPOSED BULL TROUT CRITICAL HABITAT IN THE COMBINED 2002 AND 2004 PROPOSED RULES (67 FR 71235; 69 FR 35767)

Bull Trout Population	Stream length		Lakes, Reservoirs and Marshes		Marine shoreline		States
	km	mi	ha	ac	km	mi	
Klamath DPS	476	296	13,735	33,939			OR
Columbia River DPS (CDPS)	14,416	8,958	83,219	205,639			ID
CDPS	5,341	3,319	88,051	217,577			MT
CDPS	5,460	3,391	18,077	44,670			OR
CDPS	4,034	2,507	12,503	30,897			WA
Jarbidge	211	131					ID/NV
Coastal–Puget Sound	3,685	2,290	21,262	52,540	1,585	985	WA
St. Mary–Belly	142	88	2,548	6,295			MT
Total	33,765	20,980	239,395	591,577	1,585	985	

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

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 proposing to designate 36,498 km (22,679 mi) of streams (which includes 1,585.7 km (985.3 mi) of marine shoreline area in the Olympic Peninsula and Puget Sound), and 215,870 ha (533,426 ac) of lakes and reservoirs as critical habitat, which includes 266.9 km (165.9 mi) of streams in the Jarbidge River basin.

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). In this rule, we are proposing to designate 1,495 km (929 mi) of streams (four percent of the total) 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.

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 several DOD facilities; certain Tribal lands; Nisqually National Wildlife Refuge lands; lands subject to Habitat Conservation Plans (HCPs); lands subject to Federal or State management plans (including PACFISH, INFISH, Interior Columbia Basin Ecosystem Management Project, Northwest Forest Plan, Southwest Idaho Land and Resource Management Plan, Southeast Oregon Resource Management Plan, Federal Columbia River Power System, Snake River Basin Adjudication); waters impounded behind dams; and all lands that were proposed as critical habitat in the Jarbidge River in Nevada.

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. For this reason, Federal land management plans, in and of themselves, are generally not an appropriate basis for excluding essential habitat, thus this rule does not propose to exclude any Federal lands under section 4(b)(2) of the Act. However, in some areas, Federal land management agencies actively manage for bull trout and its habitat and conduct specific conservation actions for the species. Therefore, in this proposed rule, we are asking for specific information regarding whether the effects of these actions are such that the benefits of excluding these particular areas from critical habitat outweigh the benefits of including these area as critical habitat under section 4(b)(2) of the Act (see "Application of Section 4(b)(2) of the Act" below).

In addition, we are exempting several DOD facilities under section 4(a)(3) of the Act based on existing Integrated Natural Resource Management Plans that provide a benefit to bull trout, and we are considering excluding certain non-Federal lands under section 4(b)(2) of the Act based on other conservation management considerations (see "Exemptions under Section 4(a)(3) of the Act" and "Application of Section 4(b)(2) of the Act" below). We are also proposing to designate 266.9 km (165.9 mi) of streams in the Jarbidge River basin.

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 proposed 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 "Draft Economic Analysis" below provides additional information in this regard.

The PCEs in this rule are similar to those described in the 2005 final designation (70 FR 56236); however, we are proposing an additional PCE related to the presence of nonnative fish that may prey on, compete with, or inbreed with, bull trout. In addition, we are considering reorganizing the PCEs, as noted above, into broad habitat attributes (water bodies and migratory corridors), and identify specific needs of bull trout within these broad categories. This reorganization would keep all of the PCEs presented in this proposal intact, but organizing them in such a way as to show the most important broad categories first, and then breaking them down into specific descriptions.

A small proportion of critical habitat designated in the 2005 final rule is not being proposed 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 propose the stream channels through the marsh as critical habitat, allowing connectivity among populations, instead of the entire marsh. The remainder of the areas designated in the 2005 final rule would remain designated as critical habitat if this proposed revision is finalized. A similarly small proportion of habitat proposed in this rule was not designated in the 2005 final rule. These areas include streams and lakes since determined to be occupied by bull trout, to provide one or more PCEs, or as essential to their 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 proposed in this rule.

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 proposed rule are available on the Idaho Fish and Wildlife Office web site at *http://www.fws.gov/pacific/bulltrout*.

Critical Habitat

Background

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

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

(a) essential to the conservation of the species, and

(b) which may require special management considerations or protection; and

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

Conservation, as defined under section 3 of the Act, means the use of all methods and procedures that are necessary to bring 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. 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 the landowner. 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) 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, habitat within the geographical area occupied by the species at the time it was listed must contain the physical and biological features that are 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 habitat areas that provide essential life cycle needs of the species (areas on which are found the physical and biological features (PBFs) laid out in the appropriate quantity and spatial arrangement for the conservation of the species), based on the best scientific data available. Under the regulation at 50 CFR 424.12(e), we can designate critical habitat in areas outside the geographical area occupied by the species at the time it is listed only when we determine that those areas are essential for the conservation of the species and that designation limited to those areas occupied at the time of listing would be inadequate to ensure the conservation of the species. When the best available scientific data do not demonstrate that the conservation needs of the species require such additional areas, we will not designate critical habitat in areas outside the geographical area occupied by the species at the time of listing. An area currently occupied by the species but that was not occupied at the time of listing may, however, be essential to the conservation of the species and may be included in the critical habitat designation.

Section 4 of the Act requires that we designate critical habitat on the basis of the best scientific and commercial data available. Further, our Policy on Information Standards Under the Endangered Species Act (published in the **Federal Register** on July 1, 1994 (59 FR 34271)), the Information Quality Act (section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001 (Pub. L. 106-554; H.R. 5658)), and our associated Information Quality Guidelines, provide criteria,

establish procedures, and provide guidance to ensure that our decisions are based on the best scientific data available. They require our biologists, to the extent consistent with the Act and with the use of the best scientific data available, to use primary and original sources of information as the basis for recommendations to designate critical habitat.

When we are determining which areas should be proposed 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.

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, based on scientific data not now available to the Service. For these reasons, a critical habitat designation does not signal that habitat outside the designated area is unimportant or may not be required for recovery of the species.

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

Relationship of Critical Habitat to Recovery Planning

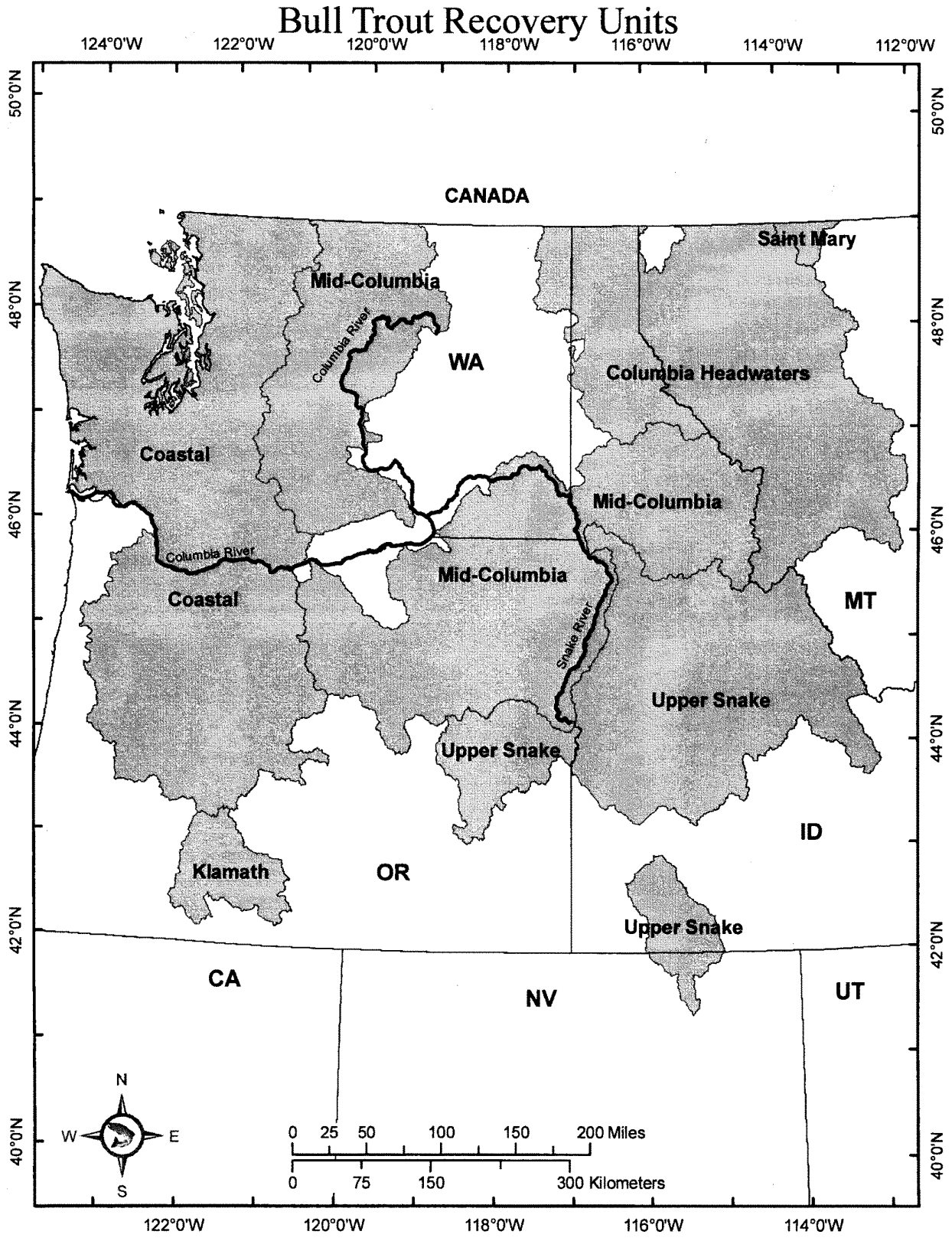
In developing this proposed rule, we considered the conservation relationship between the proposed critical habitat designation and recovery planning. Although recovery plans formulate the recovery strategy for a species, they are not regulatory documents, and there are no specific protections, prohibitions, 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. The Act states in section 3(5)(C), "except in those circumstances determined by the Secretary, critical habitat shall not include the entire geographical area which can be occupied by the threatened or endangered species." In most cases, it is not the intent of the Act to designate critical habitat for every population and every documented historical location of a species. Instead, the focus of critical habitat designation is on habitat that contains the physical and biological features essential to conservation of the species.

The 5–year review (Service 2008, p. 45) recommended, in part, that we update recovery units from the 2002 draft recovery plan 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 conterminous 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 that were considered in determining the geographic arrangement of the updated recovery units included ensuring (1) resiliency 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. In 2008 the Service completed a 5–year review of bull trout status and concluded in part that it should reevaluate the number of bull trout Distinct Population Segments (DPSs), and consider reclassifying bull trout into separate DPSs. The Service subsequently recommended not immediately pursuing reclassification due to time and cost constraints, but applied relevant factors in its 1996 DPS policy. As a result, six draft recovery units (RUs) were identified. Subsequent to identifying these six RUs, we evaluated each RU and determined that they were needed to ensure a resilient, redundant, and representative distribution of bull trout populations throughout the range of the listed entity. To accomplish these goals, we need to protect large areas of high-quality habitat, protect multiple populations, and protect diverse genetic and life-history aspects.

The six draft recovery units identified for bull trout in the conterminous 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 recovery units will be proposed to replace the 27 recovery units previously identified in the bull trout draft recovery plan (Service 2002, Chapter 1, p. 3).

Figure 1. Map of bull trout draft recovery units



BILLING CODE 4310–55–S

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. They 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 to these planning efforts calls for a different outcome.

Methods

As required by section 4(b)(2) of the Act, we use the best scientific data available in determining areas that contain the features that are essential to the conservation of bull trout. Data sources include research published in peer-reviewed journals and previous Service documents on the species, including the final listing determination (FR 64 58909–58933; November 1, 1999), the bull trout draft recovery plan (Service 2002), and the bull trout 5–year review (Service 2008). 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 and biological features that are essential to the conservation of the species and that may require special management considerations or protection. These features are the 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 historic, geographical, and ecological distributions of a species.

As discussed in greater detail below, 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 proposed rule and the following information. The nine PCEs relate to (1) water quality; (2) migration corridors; (3) food availability; (4) instream habitat; (5) water temperature; (6) substrate characteristics; (7) stream flow; (8) water quantity; and (9) nonnative species.

Space for Individual and Population Growth and for Normal Behavior

Streams and groundwater sources with high water quality and cold temperatures, complex habitat, and migratory corridors provide space for individual and population growth and for normal behavior for bull trout.

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. Some bull trout are migratory, spawning in tributary streams where juvenile fish usually rear from one to four years before migrating 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 downstream 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 to bull trout they 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 rely on migratory corridors to move from spawning and rearing habitats to foraging and overwintering habitats and back. Migratory bull trout become much larger than resident fish in the more productive waters of larger streams and lakes, leading to increased reproductive potential. Stream resident populations are associated with headwater streams in mountainous regions where cold water and velocity 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 in-stream cover, and most stream-resident populations are dwarfed (McPhail and Baxter 1996, p. 12). The use of migratory corridors by bull trout also results in increased dispersion, facilitating gene flow among local populations (interbreeding groups) when individuals from different local populations interbreed, stray, or return to non-natal streams. Also, local populations that have been extirpated by catastrophic events may become reestablished because of movements by bull trout through migratory corridors (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 downstream to a lake or reservoir from the spawning and rearing streams in its headwaters, 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. 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*)) from downstream areas upstream above the dam.

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). Habitats must provide the necessary aquatic and adjacent terrestrial conditions to harbor prey species in sufficient quantity and diversity to meet the physiological requirements necessary to maintain bull trout populations. An abundant food base, including a broad array of terrestrial organisms of riparian origin, aquatic macroinvertebrates, and 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). 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 that newly emerged fry are secretive and hide in gravel along stream edges and side channels. They also reported that 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. 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 two to four 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. 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 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).

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 the characteristics are not necessarily 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 from August to November during periods of decreasing water temperatures (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 that initiation of spawning by bull trout in the Flathead River system appeared to be related largely to water temperature, with spawning initiated when water temperatures dropped below 10 °Celsius (°C) (50 °Fahrenheit (°F)). Goetz (1989, pp. 22–32) reported a temperature range from 4 to 10 °C (39 to 50 °F). Such areas often are associated with cold-water springs or groundwater upwelling (Rieman *et al.* 1997, p. 1121; Baxter *et al.* 1999, p. 137). Fraley and Shepard (1989, p. 137) also found that 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.

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, such that 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 are especially vulnerable to fine sediments 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). Juveniles are likely also affected. High juvenile densities have been reported in areas characterized by a diverse cobble substrate and a low percent of fine sediments (Shepard *et al.* 1984, p. 6). Habitats with cold water temperature, appropriately-sized stream substrate, and stream substrate with a low level of fine material (i.e., less than 12 percent of fine substrate less than 0.85 millimeter (mm) (0.03 inch (in.)) in diameter) are necessary factors for egg incubation and juvenile rearing that supports individual and population growth (WFPB 1997, pp. 98, F-25).

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

There are some habitats throughout the range of the species that are well protected from disturbance and representative of ideal ecological conditions of the species. These areas mainly include wilderness, national parks, and other public lands specifically protected from most human disturbance (e.g., State parks), and often constitute bull trout "strongholds" with robust, well-distributed populations. Some populations outside of these areas may still be well protected for other reasons (e.g., conservation easements, Habitat Conservation Plans, Safe Harbor Agreements), but many other populations are threatened by human actions.

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.

Impoundments may also increase nonnative species predation and competition, which can significantly affect bull trout populations. 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 (Ratliff and Howell 1992, p. 16; Leary *et al.* 1993, p. 857).

The stability of stream channels and stream flows are important habitat characteristics for bull trout populations (Rieman and McIntyre 1993, p. 5). The 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). 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 ecological habitat of the species. Streams with these characteristics provide space for individual and population growth.

We propose bull trout habitats of two primary use types: spawning and rearing (SR), and foraging, migration, and overwintering (FMO). All nine PCEs listed below may be found in, or be essential to, bull trout in each of these two habitat use types. This proposed rule identifies over 3,500 water body segments as either SR or FMO habitat. Due to a lack of sufficiently detailed data, we do not identify the specific PCEs present for each water body segment. Future consultations with the Service on specific agency actions will help identify those PCEs that are most important in a specific water body segment. Factors such as time of year, seasonal precipitation, drought conditions, and other phenomenon can influence the essential physical and biological features present at any particular location at any particular time across its range 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, establishing an upper and lower range of conditions for specific attributes in some cases may be impracticable.

Primary Constituent Elements for Bull Trout

Based on the above needs and our current knowledge of the life-history, biology, and ecology of the species and the characteristics of the habitat necessary to sustain the essential life-history functions of the species, we have identified the following PCEs for bull trout critical habitat.

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

(2) Migratory 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 with features such as large wood, side channels, pools, undercut banks and 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 at the upper end of this range. Specific temperatures within this range will vary depending on bull trout life-history stage and form; geography; elevation; diurnal and seasonal variation; shade, such as that provided by riparian habitat; and local groundwater influence.

(6) Substrates 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 (e.g., less than 12 percent) of fine substrate less than 0.85 mm (0.03 in.) in diameter and minimal embeddedness of these fines in larger substrates are characteristic of these conditions.

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

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

(9) Few or no nonnative predatory (e.g., lake trout, walleye, northern pike, smallmouth bass; inbreeding (e.g., brook trout); or competitive (e.g., brown trout) species present.

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 and 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 (Service 2009; also see "Previous Federal Actions" section). The steps we followed in identifying critical habitat were:

(1) Our initial step in identifying critical habitat was to determine, in accordance with section 3(5)(A)(i) of the Act and regulations at 50 CFR 424.12, the physical and biological habitat features essential to the conservation of the species, as explained in the previous section. We reviewed the best available scientific data pertaining to the habitat requirements of this species, including consulting with biologists from partner agencies and entities including Federal, State, tribal, and private biologists; 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 and recovery. We also reviewed available data concerning bull trout habitat use and preferences, habitat conditions, threats, limiting factors, population demographics, and known locations, distribution, and abundances 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 data gathered during the bull trout recovery planning process and the bull trout draft recovery plan (Service 2002), and supplemented that data with recent data developed by State agencies, tribes, the U.S. Forest Service (USFS), and other entities. This data was used to update bull trout status and distribution data 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 and 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 serve the goals we believe are important for recovery: (a) conserve the opportunity for diverse life-history expression; (b) conserve the opportunity for genetic diversity; (c) ensure that 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 (see below); and (g) ensure sufficient redundancy in conserving population units. The above recovery goals take into account the threats and physical and biological needs of the species throughout its range, and focus on its range-wide recovery needs.

All critical habitat areas being proposed occur within the six new draft recovery units described above. Some areas contained the physical and biological features, but did not meet one or more of the above recovery goals because those features were not present in an appropriate quantity and spatial arrangement. Accordingly, we determined that such areas are not essential to bull trout conservation. For example, some areas contained spawning habitat (PCEs 5 and 6), but are disconnected from other populations and not large enough to support viable bull trout populations. Other areas were not included in this proposal because of limited habitat, marginal habitat, low bull trout density, or only sporadic presence of bull trout recorded.

Predicted global climate change appears likely to pose additional threats to bull trout in many parts of their 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 (33.8 to 36.5 °F) or more by 2050 (Reiman *et al.* 2007, p. 1,552). This predicted temperature trend will have important effects on the regional distribution and local extent of habitats available to salmonids (Rieman *et al.* 2007, p. 1,552). The optimal water temperatures for bull trout appear to be substantially lower than those for other salmonids (Rieman *et al.* 2007, p. 1,553). 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 existing thermally suitable habitat patches are often isolated from one another (Rieman *et al.* 2007, p. 1,553). 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. 1,558–1,562; 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. 1,558–1,560; 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. 1,313–1,323; Rahel *et al.* 2008, pp. 552–553); and flow alteration (McCullough *et al.* 2009, pp. 106–108), to render 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. 1,320) 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 probable effects of climate change on bull trout by first qualitatively screening core areas to assess those which might be most vulnerable to climate change effects, and highlighting them in our 2008 update of status and threats data 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 and 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 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. For example, in the Klamath basin where bull trout status is weak and threats are high (that is, where there are low number of individuals or populations, and poor habitat quality), we are proposing to designate all occupied habitat and some unoccupied habitat to ensure sufficient connectivity among existing bull trout populations. Unoccupied habitat proposed for protection is in FMO habitat, and is intended to ensure connectivity among existing, currently isolated bull trout populations. Conversely, examples of occupied areas that are not proposed as critical habitat include those where bull trout occur in low densities in very isolated or tenuous populations, areas where bull trout are heavily compromised by nonnative species, or areas where available habitat is restricted.

(4) In selecting areas to propose 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 range-wide 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 of these specific areas are 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 the scientific basis for effective conservation action. The NatureServe database is sometimes used as one of several factors in identifying species which may warrant listing under the Act, but in other cases the information in the NatureServe database is limited in its usefulness for that purpose. Additionally, NatureServe has developed a computer spreadsheet tool used world-wide for evaluating a suite of factors related to rarity, trends, and threats to assess the extinction or extirpation risk of species and ecosystems. We did use this spreadsheet tool in analyzing the data we have for the bull trout. The protocol for assigning a conservation status rank to a species or population of a species is based on using biological data to derive a score for each of ten conservation status factors, which are grouped into three categories based on the characteristic of the factor: rarity (six factors such as population size or habitat area), trends (two factors), and threats (two factors) (Master *et al.* 2007, pp. 6–11). By inserting extensive biological data for bull trout collected by the Service and its partners through 2007 into the NatureServe status assessment ranking tool spreadsheet for each of 118 bull trout core areas or watersheds throughout their range, we were able to determine the relative status and threats within each of the 118 bull trout core areas or watersheds and each of the 6 draft recovery units.

The proposed critical habitat designation identifies specific areas essential to the conservation of the bull trout 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 and biological features present). At the larger core area scale, the proposed 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 proposed 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, specific areas outside the geographical area occupied by bull trout at the time of listing have been determined to be essential for the conservation of the species and are being proposed 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 propose a greater proportion of occupied habitat and more unoccupied habitat for protection in areas where bull trout demonstrate less resiliency, redundancy, and representation, and less critical habitat elsewhere. We find that areas occupied at the time of listing are inadequate to ensure the conservation of the species. Therefore, we are proposing additional areas outside the geographical area occupied by the species at the time it is listed. For example, in the Klamath Basin Recovery Unit where threats to bull trout are greatest, we are proposing to designate all habitat known to be occupied at the time of listing that contains the physical and biological features essential to the conservation of the species and which may require special management considerations or protection, and we propose 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 in proposing critical habitat for occupied areas is to protect species strongholds for spawning and rearing and FMO habitats. Our primary consideration for most unoccupied areas is restoring connectivity among populations by protecting FMO habitats.

When determining proposed critical habitat boundaries within this proposed 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 and biological features essential 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 proposed rule have been excluded by text in the proposed rule and are not proposed for designation as critical habitat. Therefore, if the critical habitat is finalized as proposed, 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.

We are proposing for designation of critical habitat lands that we have determined were occupied at the time of listing and contain sufficient PBFs to support life-history functions essential for the conservation of the species and lands outside of the geographical area occupied at the time of listing that we have determined are essential for the conservation of bull trout.

We are proposing to designate 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 and biological features present that supports bull trout metapopulations, life processes, and overall species conservation. Twenty-nine of the units contain all of the physical and biological features identified in this proposed rule, supporting multiple life-history requirements. Three of the mainstem river units in the Columbia and Snake River basins contain most of the physical and 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 and 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 CHUs contain only a subset of the identified physical and 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.

Special Management Considerations or Protection

The term critical habitat is defined in section 3(5)(A) of the Act, in part, as geographical areas on which are found those physical and biological features essential to the conservation of the species and which may require special management considerations or protections. Accordingly, when designating critical habitat, we assess whether the specific areas within the geographical area occupied by the species at the time of listing contain features that are essential to the conservation of the species and which may require special management considerations or protection. Although the determination that special management considerations or protection may be required is not a prerequisite to designating critical

habitat in areas essential to the conservation of the species that were unoccupied at the time of listing, all areas being proposed as critical habitat require some level of management to address current and future threats to bull trout, to maintain or enhance the physical and biological features essential to its conservation, and to ensure the recovery of the species.

The primary land and water management activities impacting the physical and biological features essential to the conservation of bull trout which may require special management considerations within the proposed critical habitat units include timber harvest and road building (forest management practices), agriculture and agricultural diversions, livestock grazing, dams, mining, and nonnative species presence or introduction (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 1995b, p. i; MBTSG 1995c, p. i; MBTSG 1995d, 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 and biological features, and these features may require special management considerations or protections due to these development impacts.

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 it can increase sedimentation and peak stream flows (Chamberlin *et al.* 1991, p. 180). These activities can subsequently lead to increased stream temperatures and 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 clarki bouvieri*); westslope cutthroat trout (*O. c. lewisi*); and redband trout (*O. mykiss* ssp.)) 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, 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 and biological features described in PCEs 1–6. Special management considerations or protections that may be needed for the essential features include the implementation of best management practices that could result in project modifications specifically designed to reduce these impacts in streams with bull trout, particularly in spawning and rearing habitat. Such best management practices could result in project modifications that 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.

Agricultural practices and associated activities adjacent to streams and in upland portions of watersheds also can adversely affect the physical and biological features essential to bull trout conservation. Irrigation withdrawals, including diversions, can dewater spawning and rearing streams, impede fish passage and migration, and entrain fish into the irrigation ditch from the river. 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 and biological features described in PCEs 1–8. Special management for the essential features could include best management practices that could include project modifications specifically designed to reduce these types of impacts in streams with bull trout, such as fencing livestock from streamsides, 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 manipulation, and avoiding stream dewatering.

Dams constructed without fish passage features, 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). These activities can directly and immediately threaten the integrity of the essential physical and biological features described in PCEs 2–7 and 9. Special management considerations that may be needed for the essential features include the implementation of best management practices that could result in project modifications, 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 and biological features described in PCEs 1, 6, 7, and 8, even if they occur some distance upstream from critical habitat. Special management for these essential features could require best management practices that could result in project modifications specifically designed to reduce these impacts in streams with bull trout, such as avoiding surface water impacts from mining activities and neutralizing or containing toxic materials generated.

Introductions of nonnative 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 and biological features described in PCE 9. Special management needs and considerations for this essential feature could require the implementation of best management practices that could result in project modifications 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 led 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 and biological features described in PCEs 1–5, 7, and 8. Special management for these essential features could require best management practices that could result in project modifications 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 in watersheds, and minimizing impacts related to fertilizer application.

Proposed Critical Habitat Designation

We are proposing 32 critical habitat units in 6 recovery units for bull trout. Each CHU is comprised of a number of specific streams or reservoir/lake areas, which are identified as subunits in this proposed 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 is defined by the perimeter of the water body 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 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 critical habitat areas we describe below constitute our current best assessment of areas that meet the definition of critical habitat for bull trout. A total of 36,497.70 km (22,678.5 mi) of streams (which includes 1,587.7 km (985.3 mi) of marine shoreline area (Table 2), and 215,870.1 ha (533,426.4 ac) of reservoir and lake surface area (Table 3) are proposed as bull trout critical habitat. A total of 1,495 km (929 mi; four percent) of stream and marine shoreline distance was unoccupied at the time of listing, with the remainder occupied. A total of 17,422 km (10,825 mi; 48 percent) of stream habitat is used for spawning and rearing, with the remainder—and all reservoirs and lakes—used for FMO. Tables 4 and 5 present total stream shoreline distance and reservoir and lake surface area proposed in each state. Table 6 presents the ownership for all stream shoreline distances proposed as critical habitat.

TABLE 2.—STREAM/SHORELINE DISTANCE PROPOSED FOR DESIGNATION AS BULL TROUT CRITICAL HABITAT BY CRITICAL HABITAT UNIT AND REFERENCING RECOVERY UNIT

Recovery Unit	Critical habitat unit	Kilometers	Miles
Coastal	1.Olympic Peninsula	1,292.9	803.4
	1.Olympic Peninsula (Marine)	673.8	418.7
	2.Puget Sound	2,737.3	1,700.8
	2.Puget Sound (Marine)	911.9	566.6
	3.Lower Columbia River Basins	360.9	224.3
	4.Upper Willamette River	304.9	189.5
	5.Hood River	113.1	70.3
	6.Lower Deschutes River	463.2	287.8
	7.Odell Lake	27.4	17.0
	8.Mainstem Lower Columbia River	342.2	212.6
Klamath	9.Klamath River Basin	440.0	273.4
Mid-Columbia	10.Upper Columbia River Basins	1,125.9	699.6
	11.Yakima River	1,191.4	740.3
	12.John Day River	1,176.4	731.0
	13.Umatilla River	211.8	131.6
	14.Walla Walla River Basin	452.7	281.3
	15.Lower Snake River Basins	284.2	176.6
	16.Grande Ronde River	1,057.7	657.2
	17.Imnaha River	285.7	177.5
	18.Sheep and Granite Creeks	47.9	29.7
	19.Hells Canyon Complex	399.3	248.1
	20.Powder River Basin	404.3	251.2
	21.Clearwater River	2,702.1	1,679.0
	22.Mainstem Upper Columbia River	522.7	324.8
	23.Mainstem Snake River	552.2	343.1

TABLE 2.—STREAM/SHORELINE DISTANCE PROPOSED FOR DESIGNATION AS BULL TROUT CRITICAL HABITAT BY CRITICAL HABITAT UNIT AND REFERENCING RECOVERY UNIT—Continued

Recovery Unit	Critical habitat unit	Kilometers	Miles
Upper Snake	24. Malheur River Basin	250.7	155.8
	25.Jarbidge River	266.9	165.9
	26.Southwest Idaho River Basins	2,716.7	1,688.1
	27.Salmon River Basin	8,119.4	5,045.1
	28.Little Lost River	206.6	128.4
Columbia Headwaters	29.Coeur d'Alene River Basin	819.6	509.3
	30.Kootenai River Basin	587.0	364.7
	31.Clark Fork River Basin	5,332.1	3,313.2
Saint Mary	32.Saint Mary River Basin	116.8	72.6
	Total	36,497.7	22,678.5

TABLE 3.—AREA OF RESERVOIRS OR LAKES PROPOSED FOR DESIGNATION AS BULL TROUT CRITICAL HABITAT BY CRITICAL HABITAT UNIT

Critical habitat unit	Hectares	Acres
1.Olympic Peninsula	3,366.2	8,318.1
2.Puget Sound	17,890.5	44,208.3
3.Lower Columbia River Basins	4,856.1	11,999.7
4.Upper Willamette River	3,601.5	8,899.6
5.Hood River	36.9	91.1
6.Lower Deschutes River	1,670.2	4,127.3
7.Odell Lake	1,387.1	3,427.6
9.Klamath River Basin	3,775.5	9,329.5
10.Upper Columbia River Basins	1,033.2	2,553.1
11.Yakima River	6,285.2	15,531.0
16.Grande Ronde River	605.2	1,495.5
21.Clearwater River	6,721.9	16,610.2
24.Malheur River Basin	715.9	1,768.9
26.Southwest Idaho River Basins	15,540.2	38,400.6
27.Salmon River Basin	1,659.5	4,100.6
29.Coeur d'Alene River Basin	12,606.9	31,152.2
30.Kootenai River Basin	12,089.2	29,873.1
31.Clark Fork River Basin	119,473.5	295,225.5
32.Saint Mary River Basin	2,555.4	6,314.5
Total	215,870.1	533,426.40

TABLE 4.—STREAM/SHORELINE DISTANCE PROPOSED FOR DESIGNATION AS BULL TROUT CRITICAL HABITAT BY STATE

State	Kilometers	Miles
Idaho	15,563.4	9,670.6
Montana	4,978.8	3,093.7
Nevada	137.3	85.3
Oregon	4,988.3	3,099.6
Oregon/Idaho	273.8	170.1
Washington	8,421.1	5,232.6
Washington Marine	1,585.7	985.3
Washington/Idaho	59.9	37.2
Washington/Oregon	489.0	303.9
Total	36,497.30	22,678.30

TABLE 5.—AREA OF RESERVOIRS OR LAKES PROPOSED FOR DESIGNATION AS BULL TROUT CRITICAL HABITAT BY STATE

State	Hectares	Acres
Idaho	80,093.2	19,7914.7
Montana	90,553.3	22,3762.2
Oregon	11,792.3	29,139.5
Washington	33,431.2	82,610.3
Total	215,870.1	533,426.40

TABLE 6.—STREAM/SHORELINE DISTANCE PROPOSED FOR DESIGNATION AS BULL TROUT CRITICAL HABITAT BY OWNERSHIP

Ownership	Kilometers	Miles
Federal	21,276	13,220
Federal/Private	422	262
Federal/State	4	2
State	889	552
Tribal	683	424
Private	13,223	8,216
Total	36,497	22,676

We present a brief description of all critical habitat designated in each of 32 units below, organized by recovery unit. Maps depicting the units and subunits are included with the proposed amendatory language 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 **FOR FURTHER INFORMATION CONTACT** above). The areas being proposed as critical habitat below 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 water body segment that establish why a specific area is essential to the conservation of bull trout are identified in the reference (Service 2009). Examples of attributes that were considered include habitat use (FMO, spawning and rearing), occupancy data, geographic limits, accessibility, presence or absence of barriers, genetic analysis (used in metapopulation context), population data, habitat condition, and presence of anadromous salmonids.

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 1,292.9 km (803.4 mi) of stream, 3,366.2 ha (8,318.1 ac) of lake surface area, and 673.8 km (418.7 mi) of marine shoreline proposed 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 CHSUs. 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 proposed 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 proposed for critical habitat within the Puget Sound CHU, 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, 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 water bodies are proposed as critical habitat, and for documentation of occupancy by bull trout, see Service (2009 pp. 9–11), or *http://www.fws.gov/pacific/bulltrout*.

Unit 2: Puget Sound Unit

The Puget Sound CHU includes approximately 2,737.3 km (1,700.8 mi) of streams; 17,890.5 ha (44,208.3 ac) of lake surface area; and 911.9 km (566.6 mi) of marine shoreline proposed 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 water bodies are proposed as critical habitat, and for documentation of occupancy by bull trout, see Service (2009 pp. 11–13), 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 360.9 km (224.3 mi) of stream and 4,856.1 ha (11,999.7 ac) of reservoir surface area are proposed as critical habitat. There are three bull trout local populations in the Lewis River watershed and one in the Klickitat River watershed. 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 water bodies are proposed as critical habitat, and for documentation of occupancy by bull trout, see Service (2009 p. 14), or *http://www.fws.gov/pacific/bulltrout*.

Unit 4: Upper Willamette River Unit

The Upper Willamette River CHU includes 304.9 km (189.5 mi) of streams and 3,601.5 ha (8,899.6 ac) of lake surface area is proposed as 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 proposed as critical habitat are occupied by bull trout. The stream segments that make up the Willamette River Unit are described below. 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 water bodies are proposed as critical habitat, and for documentation of occupancy by bull trout, see Service (2009 pp. 14–15), 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 113.1 km (70.3 mi) of stream and 36.9 ha (91.1 ac) of lake surface is proposed 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 identified as essential: (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 water bodies are proposed as critical habitat, and for documentation of occupancy by bull trout, see Service (2009 p. 15), 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.

The Lower Deschutes River CHU includes (1) the Metolius River basin, consisting of Canyon Creek, Jack Creek, Heising Spring, Candle Creek, Jefferson Creek, Whitewater River, the mainstem Metolius River, and Lake Billy Chinook; (2) the mainstem Deschutes River from Lake Billy Chinook to Big Falls; (3) Whychus Creek upstream to the USFS 6360 Road crossing; (4) Crooked River from its confluence with Lake Billy Chinook upstream to Highway 97; (5) Shitike Creek; (6) Warm Springs River; and (7) mainstem Deschutes River from the Pelton Regulating Dam downstream to the Columbia River.

Approximately 463.2 km (287.8 mi) of streams and 1,670.2 ha (4,127.3 ac) of lake and reservoir surface area in the lower Deschutes River basin are proposed as critical habitat. A portion of the reaches occur on the Confederated Tribes of Warm Springs lands. The following stream segments are included in the Lower Deschutes River 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, included CHSUs, or in some cases individual water bodies are proposed as critical habitat, and for documentation of occupancy by bull trout, see Service (2009 p. 15), 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 proposed 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. The following lake area and stream segments are included in this CHU. 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 water bodies are proposed as critical habitat, and for documentation of occupancy by bull trout, see Service (2009 p. 16), 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 342.2 km (212.6 mi) of stream are being proposed 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 water bodies are proposed as critical habitat, and for documentation of occupancy by bull trout, see Service (2009 p. 16), or *http://www.fws.gov/pacific/bulltrout*.

Unit 9: Klamath River Basin Unit (Klamath Recovery 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 proposed critical habitat in this unit includes 440.0 km (273.4 mi) of streams and 3,775.5 ha (9,329.5 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 water bodies are proposed as critical habitat, and for documentation of occupancy by bull trout, see Service (2009 pp. 16–18), or *http://www.fws.gov/pacific/bulltrout*.

Unit 10: Upper Columbia River Basins Unit (Mid-Columbia Recovery Unit)

The Upper Columbia River Basins CHU includes the entire drainages of 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: (1) Wenatchee River CHSU in Chelan County; (2) Entiat River CHSU in Chelan County; and (3) Methow River CHSU in Okanogan County. The Upper Columbia River Basins CHU also includes the Lake Chelan basin (with some proposed critical habitat and Okanogan River basin) which historically provided spawning and rearing and FMO habitat. But it is unclear what role these drainages may play in recovery. A total of 1,125.9 km

(699.6 mi) of streams and 1,033.2 ha (2,553.1 ac) of lake surface area in this CHU are proposed as critical habitat to provide for spawning and rearing, FMO habitat to support three core areas essential for conservation and recovery. 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 water bodies are proposed as critical habitat, and for documentation of occupancy by bull trout, see Service (2009 pp. 18–19), 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 from the mouth of the Columbia River upstream to its headwaters at the crest of the Cascade Range. 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 1,191.4 km (740.3 mi) of stream habitat and 6,285.2 ha (15,531.0 ac) of lake and reservoir surface area in this CHU are proposed 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 CHU supports two potential resident local populations identified in the U.S. Fish and Service's 2008 five year review (Service 2008, p. 6). 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 water bodies are proposed as critical habitat, and for documentation of occupancy by bull trout, see Service (2009 pp. 19–20), 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 1,176.4 km (731.0 mi) of streams are proposed as critical habitat.

Four CHSUs are defined for the John Day River CHU: Lower Mainstem John Day River, Upper Mainstem John Day River, North Fork John Day River, and Middle Fork John Day River. The latter three generally correspond to core areas. All proposed critical habitat designations are essential to the long-term conservation of the species. 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 water bodies are proposed as critical habitat, and for documentation of occupancy by bull trout, see Service (2009 p. 20), 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 211.8 km (131.8 mi) of stream is proposed as critical habitat for bull trout in the Umatilla River basin. Approximately 48.7 km (30.3 mi) of stream within the Confederated Tribes of the Umatilla Indian Reservation lands is being proposed as critical habitat. The stream segments that make up the Umatilla River CHU are described below. 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 water bodies are proposed as critical habitat, and for documentation of occupancy by bull trout, see Service (2009 p. 21), 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 452.7 km (281.3 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 water bodies are proposed as critical habitat, and for documentation of occupancy by bull trout, see Service (2009 p. 21), 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 284.2 km (176.6 mi) of stream are proposed 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 water bodies are proposed as critical habitat, and for documentation of occupancy by bull trout, see Service (2009 pp. 21–22), 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 core area includes large portions of Union and Wallowa Counties and a small portion of Umatilla County in Oregon and about one-third of Asotin County and small portions of Columbia and Garfield Counties in Washington. The Little Minam core area is located entirely within the Eagle Cap Wilderness on the western edge of the Wallowa subbasin in both Union and Wallowa Counties in Oregon.

The Grande Ronde River CHU contains at least ten local populations in the Grande Ronde River basin: (1) Upper Grande Ronde; (2) Catherine; (3) Indian; (4) Minam/Deer; (5) Lostine/Bear; (6) Upper Hurricane; (7) North Fork Wenaha; (8) South Fork Wenaha; (9) Butte and West Fork Butte; and (10) Lookingglass. The Little Minam River, a separate core area and a tributary to the Minam River, encompasses tributaries containing one local population located above a barrier falls at approximately

9.0 km (5.6 mi) upstream, as well as the Little Minam River below the barrier to its confluence with the Minam River. The Grande Ronde River CHU includes 1,057.7 km (657.2 mi) of streams and 605.2 ha (1,495.5 ac) of lakes and reservoirs proposed 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 water bodies are proposed as critical habitat, and for documentation of occupancy by bull trout, see Service (2009 pp. 22–23), 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 proposed 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 if 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 water bodies are proposed as critical habitat, and for documentation of occupancy by bull trout, see Service (2009 p. 23), 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 proposed 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 water bodies are proposed as critical habitat, and for documentation of occupancy by bull trout, see Service (2009 p. 23), 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 399.3 km (248.1 mi) of streams proposed 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 water bodies are proposed as critical habitat, and for documentation of occupancy by bull trout, see Service (2009 pp. 23–24), or *http://www.fws.gov/pacific/bulltrout*.

Unit 20: Powder River Basin Unit

The Powder River Basin CHU includes approximately 404.3 km (251.2 mi) of stream proposed as critical habitat 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 proposed to provide connectivity and recovery opportunities for local populations. The stream segments that make up the Powder River Basin CHU are described below. 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 water bodies are proposed as critical habitat, and for documentation of occupancy by bull trout, see Service (2009 p. 24), 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. This unit includes five CHSUs: Lower/Middle Fork Clearwater River; North Fork Clearwater River (and Fish Lake); South Fork Clearwater River; Lochsa River (and Fish Lake); and the Selway River. In the Clearwater River CHU, 2,702.1 km (1,679.0 mi) of streams and 6,721.9 ha (16,610.2 ac) of lake and reservoir surface area are proposed 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 water bodies are proposed as critical habitat, and for documentation of occupancy by bull trout, see Service (2009 pp. 24–26), 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 522.7 km (324.8 mi) to Chief Joseph Dam. The Columbia River generally flows south from Canada, southwest through Washington, and west through Oregon. The Columbia River drains from its headwaters in Alberta, Canada, and the west slopes of the Rocky Mountains in Montana. This reach of river is heavily influenced by Grand Coulee Dam operations, which provide hydroelectricity and irrigation water. 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. Several dams, all of which have reports of bull trout using their ladders, are located throughout this portion of the Columbia River, including John Day, McNary, Priest Rapids, Wanapum, Rock Island, Rocky Reach, and Wells Dams. For a justification of why this CHU, included CHSUs, or in some cases individual water bodies are proposed as critical habitat, and for documentation of occupancy by bull trout, see Service (2009 p. 26), 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.

In the lower section of the Snake River are a series of dams and locks built by the U.S. Army Corps of Engineers (COE). The Lower Granite, Little Goose, Lower Monumental, and Ice Harbor Dams generate hydroelectric power and provide barge traffic navigation to Lewiston, Idaho. The major features in the Hells Canyon Hydroelectric Complex reach of the Snake River are Hells Canyon, Oxbow, and Brownlee Dams and their reservoirs. These projects are owned and operated by the Idaho Power Company to produce electrical power. The Mainstem Snake River CHU includes 552.2 km (343.1 mi) of streams proposed 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 water bodies are proposed as critical habitat, and for documentation of occupancy by bull trout, see Service (2009 p. 26), or *http://www.fws.gov/pacific/bulltrout*.

Unit 24: Malheur River Basin Unit (Upper Snake Recovery Unit)

The Malheur River Basin CHU is in eastern Oregon within Grant, Baker, Harney, and Malheur Counties. A total of 250.7 km (155.8 mi) of streams and 715.9 ha (1,768.9 ac) of reservoir surface area are proposed as critical habitat. There are two local bull trout populations (Upper Malheur and North Fork Malheur Rivers (Service 2002, pp. 34–35)). The Bull Trout Draft Recovery Plan also identified several streams, including Bosonberg Creek, McCoy Creek, and Corral Basin Creek, for expansion of bull trout range within the upper Malheur River local population (Service 2002, pp. 34–35). Summit Creek is considered potential suitable bull trout habitat and is included in the proposed designation. 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 water bodies are proposed as critical habitat, and for documentation of occupancy by bull trout, see Service (2009 p. 27), 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 266.9 km (165.9 mi) of streams proposed as critical habitat. The Jarbidge River CHU contains six local populations of resident and migratory bull trout and the stream segments in the Jarbidge River CHU provide either FMO or spawning and rearing habitat. These habitats maintain the population and the migratory life-history form essential to the species' long-term conservation and provide habitat necessary for the recovered distribution of bull trout (Service 2004b, pp. 7–9). The stream segments that make up the Jarbidge Unit are described below. 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 water bodies are proposed as critical habitat, and for documentation of occupancy by bull trout, see Service (2009 p. 27), 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 2,716.7 km (1,688.1 mi) of streams and 15,540.2 ha (38,400.6 ac) of lake and reservoir surface area proposed 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 water bodies are proposed as critical habitat, and for documentation of occupancy by bull trout, see Service (2009 pp. 27–28), 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 8,119.4 km (5,045.1 mi) of stream and 1,659.5 ha (4,100.6 ac) of lake and reservoir surface area proposed 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 water bodies are proposed as critical habitat, and for documentation of occupancy by bull trout, see Service (2009 pp. 29–30), 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 206.6 km (128.4 mi) of streams proposed 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 water bodies are proposed as critical habitat, and for documentation of occupancy by bull trout, see Service (2009 p. 30), or *http://www.fws.gov/pacific/bulltrout*.

Unit 29: Coeur d'Alene River Basin Unit (Columbia Headwaters Recovery 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 819.6 km (509.3 mi) of streams and 12,606.9 ha (31,152.2 ac) of lake surface area are proposed 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, included CHSUs, or in some cases individual water bodies are proposed as critical habitat, and for

documentation of occupancy by bull trout, see Service (2009 p. 31), 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 unique 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 587.0 km (364.7 mi) of streams and 12,089.2 ha (29,873.1 ac) of lake and reservoir surface area proposed 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 water bodies are proposed as critical habitat, and for documentation of occupancy by bull trout, see Service (2009 pp. 31–32), 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 5,332.1 km (3,313.2 mi) of streams and 119,473.5 ha (295,225.5 ac) of 45 lakes and reservoirs proposed 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 water bodies are proposed as critical habitat, and for documentation of occupancy by bull trout, see Service (2009 pp. 32–36), or *http://www.fws.gov/pacific/bulltrout*.

Unit 32: Saint Mary River Basin Unit (Saint Mary Recovery Unit)

We are proposing to designate critical habitat for bull trout in identified stream segments and lakes in the Saint Mary River Basin CHU in Montana. 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 proposed for designation as critical habitat in Montana is about 116.8 km (72.6 mi), and the five lakes have a surface area of about 2,555.4 ha (6,314.5 ac).

Most high-elevation waters in Glacier National Park were historically fishless. Due to natural migration barriers, bull trout occupancy in the headwaters of the Belly River drainage (directly west of and adjacent to the Saint Mary River drainage) was confined to only a very minor portion of the U.S habitat near the international border. Due to this restricted U.S. distribution and the fact that all FMO habitat for these populations is in Alberta, Canada, the Belly River headwaters in unroaded backcountry of Glacier National Park are not included in this proposed critical habitat designation. 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 water bodies are proposed as critical habitat, and for documentation of occupancy by bull trout, see Service (2009 p. 36), 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 U.S. Courts of Appeal 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.

Federal activities that may affect 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 consultation.

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

(1) A concurrence letter for Federal actions that may affect, but are not likely to adversely affect, listed species or critical habitat; or

(2) A biological opinion for Federal actions that may affect, and are likely to adversely affect, listed species or critical habitat.

When we issue a biological opinion concluding that a project is likely to jeopardize the continued existence of a listed species or destroy or adversely

modify critical habitat, we also provide reasonable and prudent alternatives to the project, if any are identifiable. We define "reasonable and prudent alternatives" at 50 CFR 402.02 as alternative actions identified during consultation that:

- Can be implemented in a manner consistent with the intended purpose of the action;
- Can be implemented consistent with the scope of the Federal agency's legal authority and jurisdiction;
- Are economically and technologically feasible; and
- 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 consultation has been completed, if those actions with discretionary involvement or control may affect subsequently listed species or designated critical habitat.

Application of the "Jeopardy" and "Adverse Modification" Standards

Jeopardy Standard

Currently, the Service applies an analytical framework for bull trout jeopardy analysis that relies heavily on the importance of known core area populations to the survival and recovery of bull trout. The section 7(a)(2) of the Act analysis is focused not only on these populations, but also on the habitat conditions that support them.

The jeopardy analysis usually expresses the survival and recovery needs of 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 range-wide status of 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 bull trout in the area affected by the proposed Federal action and the role of affected populations in the survival and recovery of 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 conserving 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) analyses 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 physical and biological features 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 physical and biological features 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 the conservation of the species. 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 degredation, 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 periodically support the species.

The adverse modification analysis focuses on the range-wide 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 range-wide 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 critical habitat for the bull trout, an adverse modification finding for the proposed action is considered to 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 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. Possible actions would include groundwater pumping, impoundment, water diversion, and hydropower generation. We note that such flow alterations resulting from actions affecting tributaries of the designated stream reaches may also destroy or adversely modify critical habitat.

(2) Alterations to the designated stream segments that could indirectly cause significant and detrimental effects to bull trout habitat. Possible actions include vegetation manipulation, timber harvest, road construction and maintenance, prescribed fire, livestock grazing, off-road vehicle use, powerline 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), and food supply.

(3) Detrimental alteration of the channel morphology of any of the designated stream segments. Possible actions would include channelization; impoundment; road and bridge construction; deprivation of substrate source; destruction and alteration of aquatic or riparian vegetation; reduction of available floodplain; removal of gravel or floodplain terrace materials; and 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 releases (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, and interbasin water transfers.

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

We consider all 32 CHUs to contain features 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). All units are likely to be used by the bull trout for foraging, migrating, overwintering, spawning, or rearing.

Federal agencies already consult with us on activities in areas currently occupied by the bull trout to ensure that their actions do not jeopardize the continued existence of the bull trout. These agencies may need to request reinitiation on some of their existing activities if the agency has continued discretional involvement or control and if the activity may affect designated critical habitat. However, we anticipate the burden of reinitiation 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. 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 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 (Publ. L. 108–136) amended the Act to limit areas eligible for designation of 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 listed species. We analyzed INRMPs developed by military installations located within the range of the Columbia and Coastal-Puget Sound populations of bull trout and which contain those features essential to the species' conservation, to determine if these installations may warrant consideration for exemption under section 4(a)(3) 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 continues.

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.

Acoustic Research Detachment (ARD) 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 kokanee salmon spawning habitat, 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–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 region's natural resources, threatened or endangered species (including bull trout), and geological history. The INRMP requires the natural resource 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 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 ha (16 ac) of habitat in this proposed critical habitat designation because of this exemption.

Naval Radio Station Jim Creek, Naval Station Everett, Naval Air Station Whidbey Island, and U.S. Army Fort Lewis Installation

Naval Radio Station Jim Creek in western Washington has an approved INRMP. The Naval Radio Station Jim Creek occurs in the Jim Creek watershed. 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 (1) restoration of riparian buffers along Jim Creek, (2) protection of Jim Creek from erosion and sedimentation, and (3) protection of Jim Creek from contaminants and herbicides.

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 (fish that move between fresh and salt water but not to breed) bull trout. The Naval Station Everett's INRMP benefits bull trout by providing (1) protection to bull trout in the marine environment from oil spills around berthing naval vessels; (2) bioswales to prevent the release of toxins, contaminants, and oils from reaching the water column through storm drains; and (3) restoration of riparian habitat on Navy lands located along the Middle Fork Quilceda Creek.

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. Naval Aviation Station Whidbey Island's INRMP benefits bull trout through (1) monitoring and managing livestock grazing, (2) managing road building and maintenance to prevent erosion and sedimentation of bull trout habitat, (3) assuring proper disposal of hazardous materials, and (4) implementation of their Integrated Pest Management Plan's best management practices to protect aquatic environments.

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 near important foraging and migration habitat for amphidromous bull trout. The INRMP for Fort Lewis benefits bull trout through (1) protecting and enhancing wetlands (e.g., all wetlands–marshes, lakes, rivers, and streams are protected with 300-foot-wide riparian buffers to maintain cold water temperatures, prevent sediment from entering the streams, and to provide for woody debris); (2) controlling invasive plant species that often diminish water quality and impact native plants and animals; and (3) restoring salmon spawning habitat and access to increase salmon productivity, which contributes to and enhances the bull trout prey base.

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. In addition, these installations already consult with us under section 7 of the Act on their actions (including those occurring in the open water training and testing areas) that may adversely affect bull trout and their habitat.

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, Naval Station Everett, Naval Air Station Whidbey Island, and U.S. Army Fort Lewis Installation INRMPs and that conservation efforts identified in the INRMPs will provide a benefit to bull trout occurring in habitats within or adjacent to DOD installations. Therefore, lands within these installations are exempt from critical habitat designation under section 4(a)(3) of the Act. We are not including approximately a total of 40 km (24.9 mi) of habitat determined to contain features essential to the conservation of the bull trout in this proposed 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 or make revisions to 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 impacts of specifying any particular area as critical habitat. The Secretary may exclude an area from critical habitat if he determines that the benefits of such exclusion outweigh the benefits of specifying such area as part of the critical habitat, unless he determines, based on the best scientific

data available, that the failure to designate such area as critical habitat will result in the extinction of the species. In making that determination, the 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 to national security, or any other relevant impacts. In considering whether to exclude a particular area from the designation, we must identify the benefits of including the area in the designation, identify the benefits of excluding the area from the designation, and determine whether the benefits of exclusion outweigh the benefits of inclusion. If based on this analysis, we make this determination, then we can 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 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 the overall conservation of the bull trout through the continuation, strengthening, or encouragement of partnerships and the implementation of management plans or programs that provide equal to or more conservation for the bull trout than could be achieved through a designation of critical habitat.

In the case of bull trout, where there may be little additional regulatory effects in areas occupied by the species resulting from the designation, the benefits of critical habitat include educational benefits resulting from identification of the features essential to the conservation of bull trout and the delineation of the areas important for its recovery. Further, there may be additional benefits realized by providing landowners, stakeholders, and project proponents greater certainty about which specific areas are important for bull trout that should be effectively addressed through coordination and consultation of activities that may affect those areas or essential features contained therein. Thus, critical habitat designation increases public awareness of bull trout presence and the importance of habitat protection and, in cases where a Federal nexus exists, increases habitat protection for bull trout due to the protection from adverse modification or destruction of critical habitat.

When we evaluate 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.

The Secretary can consider the existence of conservation agreements and other land management plans with Federal, private, State, and Tribal entities when making decisions under section 4(b)(2) of the Act. The Secretary may also consider voluntary partnerships and conservation plans, and weigh the implementation and effectiveness of these against that of designation. Consideration of relevant impacts of designation or exclusion under section 4(b)(2) may include, but is not limited to, any of the following factors: (1) whether the plan provides specific information on how it protects the species and the physical and biological features, and whether the plan is at a geographic scope commensurate with the species; (2) whether the plan is complete and will be effective at conserving and protecting of the physical and biological features; (3) whether a reasonable expectation exists that conservation management strategies and actions will be implemented, that those responsible for implementing the plan are capable of achieving the objectives, that an implementation schedule exists, and that adequate funding exists; (4) whether the plan provides assurances that the conservation strategies and measures will be effective (i.e., identifies biological goals, has provisions for reporting progress, and is of a duration sufficient to implement the plan); (5) whether the plan has a monitoring program or adaptive management to ensure that the conservation measures are effective; (6) the degree to which the record supports a conclusion that a critical habitat designation would impair the benefits of the plan; (7) the extent of public participation; (8) demonstrated track record of implementation success; (9) level of public benefits derived from encouraging collaborative efforts and encouraging private and local conservation efforts; and (10) the effect designation would have on partnerships.

After evaluating the benefits of inclusion and the benefits of exclusion, we carefully weigh the two sides to determine whether the benefits of excluding a particular area outweigh the benefits of its inclusion in critical habitat. If we determine that the benefits of excluding a particular area outweigh the benefits of its inclusion, then the Secretary can exercise his discretion to exclude the area, provided that the exclusion will not result in the extinction of the species.

Based on the information provided by entities seeking exclusion, as well as any additional public comments received, we will evaluate whether certain lands in proposed critical habitat may be appropriate for exclusion from the final designation. If our analysis results in a determination that the benefits of excluding particular areas from the final designation outweigh the benefits of designating those areas as critical habitat, then the Secretary may exercise his discretion to exclude the particular areas from the final designation.

Under section 4(b)(2) of the Act, we must consider all relevant impacts, including economic impacts. In addition to economic impacts (discussed in **Economics Analysis** section below), we consider a number of factors in a section 4(b)(2) analysis. For example, we consider whether there are lands owned by the DOD where a national security impact might exist. We also consider whether Federal or private landowners or other public agencies have developed management plans or HCPs for the area or whether there are conservation partnerships that would be encouraged or discouraged by designation of, or exclusion from, critical habitat in an area. In addition, we look at the presence of tribal lands or Tribal trust resources that might be affected, and consider the government-to-government relationship of the United States with the tribal entities. We also consider any social impacts that might occur because of the designation. To ensure that our final determination is based on the best available information, we are inviting comments on any foreseeable economic, national security, or other potential impacts resulting from this proposed designation

of critical habitat from governmental, business, or private interests and, in particular, any potential impacts on small businesses.

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 training and testing within the marine waters of Crescent Harbor and Dabob Bay in western Washington. These activities are conducted in open marine waters not controlled by the military and are not included in adjacent military INRMPs. However, because these training and testing activities may be essential for national security, we are evaluating whether it may be appropriate to consider the particular areas where these activities occur for exclusion from the final designation of critical habitat under section 4(b)(2) of the Act.

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.

Most federally-listed species in the United States will not recover without cooperation of non-Federal landowners. More than 60 percent of the United States is privately owned (Lubowski *et al.* 2006, p. 35), and at least 80 percent of endangered or threatened species occur either partially or solely on private lands (Crouse *et al.*2002, p. 720). Stein *et al.* (1995, p. 400) found that only about 12 percent of listed species were found almost exclusively on Federal lands (90 to 100 percent of their known occurrences restricted to Federal lands) and that 50 percent of federally-listed species are not known to occur on Federal lands at all.

Given the distribution of listed species with respect to landownership, conservation of listed species in many parts of the United States is dependent upon working partnerships with a wide variety of entities and the voluntary cooperation of many non-Federal landowners (Wilcove and Chen 1998, p. 1407; Crouse *et al.*2002, p. 720; James 2002, p. 271). Building partnerships and promoting voluntary cooperation of landowners is essential to understanding the status of species on non-Federal lands and necessary to implement recovery actions, such as the reintroduction of listed species, habitat restoration, and habitat protection.

Many non-Federal landowners derive satisfaction from contributing to endangered species recovery. Conservation agreements with non-Federal landowners, safe harbor agreements, other conservation agreements, easements, and State and local regulations enhance species conservation by extending species protections beyond those available through section 7 consultations. We encourage non-Federal landowners to enter into conservation agreements based on a view that we can achieve greater species conservation on non-Federal land through such partnerships than we can through regulatory methods (61 FR 63854).

Many private landowners, however, are wary of the possible consequences of attracting endangered species to their property. Mounting evidence suggests that some regulatory actions by the government, while well intentioned and required by law, can (under certain circumstances) have unintended negative consequences for the conservation of species on private lands (Wilcove *et al.*1996, pp. 5–6; Bean 2002, pp. 2–3; Conner and Mathews 2002, pp. 1–2; James 2002, pp. 270–271; Koch 2002, pp. 2–3; Brook *et al.*2003, pp. 1639–1643). Many landowners fear a decline in their property value due to real or perceived restrictions on land-use options where threatened or endangered species are found. Consequently, harboring endangered species is viewed by many landowners as a liability. This perception results in anti-conservation incentives because maintaining habitats that harbor endangered species represents a risk to future economic opportunities (Main *et al.*1999, pp. 1264–1265; Brook *et al.*2003, pp. 1644–1648).

According to some researchers, the designation of critical habitat on private lands significantly reduces the likelihood that landowners will support and carry out conservation actions (Main *et al.*1999, p. 1263; Bean 2002, p. 2; Brook *et al.*2003, pp. 1644–1648). The magnitude of this negative outcome is greatly amplified in situations where active management measures (such as reintroduction, fire management, and control of invasive species) are necessary for species conservation (Bean 2002, pp. 3–4). We believe the judicious exclusion of specific areas of non-federally owned lands from critical habitat designations can contribute to species recovery and provide a superior level of conservation than critical habitat alone.

The purpose of designating critical habitat is to contribute to the conservation of threatened and endangered species and the ecosystems upon which they depend. The outcome of the designation, triggering regulatory requirements for actions funded, authorized, or carried out by Federal agencies under section 7(a)(2) of the Act, can sometimes be counterproductive to its intended purpose on non-Federal lands. Thus, the benefits of excluding areas that are covered by partnerships or voluntary conservation efforts can, in specific circumstances, be high.

Benefits of Excluding Lands with Habitat Conservation Plans

The benefits of excluding lands with approved HCPs from critical habitat designation include relieving landowners, communities, and counties of any additional regulatory burden that might be imposed as a result of the critical habitat designation. Many HCPs take years to develop and, upon completion, are consistent with the recovery objectives for listed species covered within the plan area. Many conservation plans also provide conservation benefits to unlisted sensitive species.

A related benefit of excluding lands covered by approved HCPs from critical habitat designation is that it can make it easier for us to seek new partnerships with future plan participants, including States, counties, local jurisdictions, conservation organizations, and private landowners, which together can implement conservation actions that we would be unable to accomplish otherwise. HCPs often cover a wide range of species, including species that are not State and federally-listed and would otherwise receive little protection from development. By excluding these lands, we preserve our current partnerships and encourage additional future conservation actions.

We also note that permit issuance in association with HCP applications requires consultation under section 7(a)(2) of the Act, which would include the review of the effects of all HCP-covered activities that might adversely impact the species under a jeopardy standard, including possibly significant habitat modification (see definition of

"harm" at 50 CFR 17.3), even without the critical habitat designation. In addition, all other Federal actions that may affect the listed species would still require consultation under section 7(a)(2) of the Act, and we would review these actions for possible significant habitat modification in accordance with the definition of harm referenced above.

For the reasons discussed under the "Application of Section 4(b)(2) of the Act" section of this rule, if the Secretary decides to exercise his discretion under section 4(b)(2) of the Act, we have identified certain areas that we are considering excluding from the final revised critical habitat designation for bull trout. However, we solicit comments on the inclusion or exclusion of such particular areas (see Public Comments section). During the development of the final revised designation, we will consider economic impacts, public comments, and other new information. As a result, additional particular areas, in addition to those identified below for potential exclusion in this proposed rule, may be excluded from the final critical habitat designation under section 4(b)(2) of the Act.

We consider a current plan to be appropriate for consideration for exclusion from a final critical habitat designation under section 4(b)(2) of the Act if:

(1) It provides for the conservation of the essential physical and biological features;

(2) there is a reasonable expectation that the conservation management strategies and actions contained in a management plan will be implemented into the future; and

(3) 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.

Below is a brief description of each plan and the lands proposed as critical habitat covered by each plan that we are considering for exclusion from critical habitat designation under section 4(b)(2) of the Act.

Plum Creek Native Fish Habitat Conservation Plan

The Service is considering excluding bull trout habitat occurring on lands managed under the Plum Creek Native Fish Habitat Conservation Plan in the Kootenai and Clark Fork CHUs in the Columbia Headwaters draft recovery unit in Montana. Plum Creek Timber Company initiated an effort in 1997 to develop a conservation strategy for native salmonids (including bull trout) occurring on 647,500 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 NFHCP was permitted in 2000; Plum Creek no longer owns any of the lands that were covered under that HCP in the States of Idaho and Washington.

Currently, there are 392,393 ha (969,624 ac) of remaining Plum Creek land in Montana that are still covered by the original permit under the NFHCP. The NFHCP provisions cover approximately 550,700 ha (1.4 million ac) in western Montana and within its headwaters of the Columbia River basin (Clark Fork and Kootenai River watersheds). In 2003–2004, when the Stimson Lumber Company (Stimson) acquired about 32,650 ha (80,681 ac) of lands previously owned by Plum Creek, Stimson legally assumed all of the Plum Creek NFHCP commitments in that area by executing an assignment and assumption agreement. In 2008, the Montana Working Forests Project was initiated, which will result in the transfer of over 125,580 ha (310,312 ac) of Plum Creek NFHCP lands to The Nature Conservancy (TNC). Funds for the acquisition were obtained through a provision within the 2008 Farm Bill, and most of those lands are destined to eventually be transferred to either the Service or the Montana Department of Natural Resources and Conservation (DNRC) and Montana Fish, Wildlife, and Parks (FWP). Phase III of the Montana Working Forests Project is expected to close at the end of 2010 and will include an additional 28,135 ha (69,522 ac). Similar to Stimson, and through an agreement, TNC assumed the NFHCP commitments on previously owned Plum Creek lands for the first two phases of the Montana Working Forests Project and is anticipated to do the same for Phase III.

Montana Department of Natural Resources and Conservation Habitat Conservation Plan

The Service is considering excluding bull trout habitat occurring on 175,263 ha (433,084 ac) of lakes managed under the proposed DNRC Habitat Conservation Plan in the Kootenai, Clark Fork and Saint Mary CHUs in the Columbia Headwaters draft recovery unit, contingent on the compatibility of timing between the final HCP and the final bull trout revised critical habitat rule. The DNRC is developing an HCP for forest management activities on its forested State trust lands in Montana, which are managed by the Trust Lands Management Division (TLMD). The mission of the TLMD is to manage trust land resources to produce revenues for the trust beneficiaries while considering environmental factors and protecting the future income-generating capacity of the land. Under its forest management program, the TLMD generates revenues for trust beneficiaries through timber harvest on classified forest trust lands. DNRC manages its forested trust lands in accordance with the State Forest Land Management Plan (SFLMP) (DNRC 1996) and the Administrative Rules of Montana (ARMs) for Forest Management (ARMs 36.11.401–456) (Forest Management ARMs). DNRC's forested trust lands also support Federally-listed threatened species. The ARMs direct DNRC to confer with the Service to develop habitat mitigation measures to address the needs of listed species.

This proposed HCP is a programmatic plan that identifies DNRC's proposal for managing federally-listed species on DNRC's forested trust lands. Species covered under the HCP include bull trout, westslope cutthroat trout, Columbia redband trout, grizzly bear (*Ursus arctos*), and Canada lynx (*Lynx canadensis*). DNRC has proposed that a permit be issued under section 10(a)(1)(B) of the Act by the Service for a period of 50 years, and views the HCP as a long-term program for addressing and improving habitat needs across the landscape. DNRC evaluated which trust lands to include in the HCP by assessing where species overlapped with trust lands containing appreciable amounts of manageable forest area. This approach was adopted to ensure those lands facing the greatest risk of impacts from forest management actions were included in the plan so risks could be mitigated.

The HCP project area includes primarily forested trust lands, but it contains other non-forested trust lands that are portions of, or are needed to access, forested parcels included in the HCP project area. The DNRC HCP would cover forest management activities on forested trust lands that provide habitat for the HCP species and include timber harvest (commercial timber, salvage harvest, and silvicultural treatments such as thinning); other forest management activities (slash disposal, prescribed burning, site preparation, reforestation, fertilization, forest inventory, and access to forested lands for weed control); roads (forest management road construction,

reconstruction, maintenance, use, and associated gravel quarrying for forest road surface materials, as well as installation, removal, and replacement of stream crossing structures); and livestock grazing (grazing licenses on classified forest trust lands).

The public comment period for the DNRC HCP closed October 6, 2009; the current schedule calls for publishing the Final Environmental Impact Statement (FEIS) in October 2010. The Record of Decision (ROD) would be finalized 30 days after publication of the FEIS, and a section 10(a)(1)(B) permit could be issued at that time, if the Service determines that issuance of a permit is appropriate. To be considered for exclusion from the final designation of critical habitat for the bull trout, the DNRC HCP will need to be completed and finalized prior to the finalization of critical habitat, which is due by September 30, 2010.

Washington Department of Natural Resources Habitat Conservation Plan

The Service is considering excluding lands managed under the Washington Department of Natural Resources (WDNR) HCP in the Coastal Recovery Unit: Puget Sound, Olympic Peninsula, and Lower Columbia CHUs. The WDNR HCP covers State forest trust lands within the range of the northern spotted owl (*Strix occidentalis caurina*) in the State of Washington. The majority of the lands covered by the HCP (approximately 526,100 ha (1.3 million ac) is west of the Cascade Crest and includes the Olympic Peninsula and southwest Washington. The remainder of the lands are on the east side of the Cascade Range within the range of the northern spotted owl. The HCP covers activities primarily associated with commercial forest management. West of the Cascade Crest, the HCP covers all species, including bull trout and other salmonids. On the east side of the Cascade Crest, bull trout and other aquatic species are not covered under the HCP, and DNR follows State forest practice rules for riparian management and other forestry activities. The DNR HCP lands on the west side of the Olympic Peninsula are managed as the Olympic Experimental State Forest. The multispecies portion of the HCP depends upon several broad-scale conservation approaches: spotted owl conservation, marbled murrelet (*Brachyramphus marmoratus*) conservation, riparian conservation, certain species-specific protection measures, protection of uncommon habitats, and provisions to maintain a range of forest types across the HCP landscape.

Green Diamond Habitat Conservation Plan

The Service is considering excluding bull trout habitat on lands managed under the Green Diamond Habitat Conservation Plan in Coastal Recovery Unit, Olympic Peninsula CHU. In October 2000, Simpson Timber Company (now Green Diamond), completed an HCP, and we issued a permit authorizing incidental take associated with forestry operations on the company's Washington timberlands located on or adjacent to the Olympic Peninsula in Mason, Thurston, and Grays Harbor Counties. The HCP is designed to conserve riparian forests, improve water quality, prevent management-related hill-slope instability, and address hydrological maturity of small subbasins. The HCP addresses five listed species, including bull trout, and 46 non-listed species. The HCP covers the land owned by Green Diamond along the lower reaches of the North and South Fork Skokomish Rivers, the upper South Fork Skokomish River, West Fork Satsop River, and Canyon River.

City of Seattle Cedar River Watershed Habitat Conservation Plan

The Service is considering excluding bull trout habitat on lands managed under the City of Seattle Cedar River Watershed HCP in the Coastal Recovery Unit, Puget Sound CHU. In April 2000, the City of Seattle completed an HCP, and we issued an incidental take permit authorizing 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 in the upper Cedar River Watershed in King County. The HCP is designed to provide adequate fish flows in the lower Cedar River for the spawning and rearing of several salmonid species, manage water levels in Chester Morse Lake and Masonry Dam Reservoir to benefit instream flows in the lower Cedar River and bull trout spawning access to lake tributaries, and manage these lands in the upper Cedar River as an ecological reserve. 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 6 other listed species.

Tacoma Water Green River Water Supply Operations and Watershed Protection Habitat Conservation Plan

The Service is considering excluding bull trout habitat on lands managed under the Tacoma Green River Water Supply Operations and Watershed Protection HCP in the Coastal Recovery Unit, Puget Sound CHU. The Tacoma Water Green River Water Supply Operations and Watershed Protection HCP was completed in July 2001, addressing upstream and downstream fish passage issues, flows in the Middle and lower Green River, and timber and watershed management activities on Tacoma-owned land in the upper Green River Watershed. The HCP covers 32 species (including bull trout), and includes an upstream fish passage facility that will open up 57,000 ha (140,800 ac) of previously blocked fish habitat, sponsorship and funding for a downstream fish-passage facility at the Corps of Engineers' Howard Hanson Dam, water-flow improvements, improved riparian forest management on Tacoma's lands, and several major habitat restoration projects.

Washington State Forest Practices Rules and Forest Practices Regulations

The Service is considering excluding all public and private lands in the State of Washington that would be managed under the Washington forest practice rules. These lands occur in the Coastal Recovery Unit (Puget Sound, Olympic Peninsula, and Lower Columbia CHUs), Mid-Columbia Recovery Unit (Snake River Basin, Walla Walla River Basins, Yakima River, and Upper Columbia River CHUs), and the Columbia Headwaters Recovery Unit (Clark Fork River Basin CHU). Beginning in late 1996, faced with the imminent listing of several salmonid species under the Act, including bull trout, a diverse group of stakeholders in Washington State agreed to address emerging riparian habitat issues. The effort resulted in the Forests and Fish Report (FFR) in April 1999. Later that year, the Washington State Legislature passed the Forest Practices Salmon Recovery Act (Engrossed Substitute House Bill 2091), which directed the Washington Forest Practices Board to adopt new rules, encouraging the Forest Practices Board to follow the recommendations of the FFR. To further the purpose of regulatory stability, the Forest Practices Salmon Recovery Act also limited future changes to the new rules so that, outside of a court order or legislative directive, new rules could be adopted by the Forest Practices Board only if the changes or new rules are consistent with

the recommendations resulting from the scientifically based adaptive management process included in the FFR. The language further solidified the adaptive management process as a key component of the FFR conservation program.

Following the passage in 1999 of emergency forest practices rules based on the FFR, the Washington Forest Practices Board adopted new permanent rules in May 2001. Effective July 2001, these rules cover a wide variety of forest practices and include (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. In addition to these substantive provisions, the rules adopted the procedural recommendations of the FFR that address adaptive management, training, and other features. The Washington State Legislature and the U.S. Congress continued to support the collaboration with significant funding for the research, monitoring, and adaptive management activities called for in the FFR. In May 2006, the State forest practice rules were formally incorporated into the Washington State Forest Practices HCP.

Conservation Partnerships on Non-Federal Lands

Lewis River Hydroelectric Project Conservation Easements

The Service is considering excluding 48 km (30 mi) of bull trout habitat associated with the Lewis River Hydroelectric Project Conservation Easements in the Coastal Recovery Unit, Columbia River Basin CHU. PacifiCorp manages four projects and three dams impounding 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 are used by the majority of individuals within the 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. Conservation measures are incorporated in the Agreement to minimize or compensate for the effects of the projects on listed species, including bull trout. Conservation measures for bull trout include: perpetual conservation covenants on PacifiCorp's lands in the Cougar/Panamaker Creek area and PacifiCorp and Cowlitz PUD's lands along the Swift Creek arm of Swift Creek Reservoir, upstream and downstream fish passage improvements at all reservoirs, limiting factors analysis for bull trout to determine additional enhancement measures, public information program to protect bull trout, and monitoring and evaluation efforts for bull trout conservation measures. This agreement will also restore anadromous salmon to the upper Lewis River system, restoring a significant part of the historic forage base for bull trout.

Snake River Basin Adjudication

The Service is considering excluding bull trout habitat on 18,615,000 ha (46 million ac) of lands managed under the Snake River Basin Adjudication agreement in central Idaho. The stream flows in the basin were subject to litigation for 21 years. Litigants were the Federal Government, Nez Perce Tribe, and State of Idaho. In 2004, a settlement was reached by the parties in the proceeding. A Mediator's Term Sheet was developed to guide the settlement of the case, which identifies the responsibilities of the parties over the 30–year term of the agreement. The settlement was announced on May 15, 2004, by the Secretary of the Interior, Nez Perce Tribal Executive Committee Chairman, and Governor of Idaho.

As part of the settlement, the parties agreed to establish a habitat fund under two separate accounts, one for the Nez Perce Tribe and one for the State. The State account is managed through cooperative agreements under section 6 of the Act, and addresses off-reservation stream flow and forestry programs. The funds will be used to conduct habitat protection and restoration projects in the Salmon and Clearwater River basins (tributaries to the Snake River), including programs intended to protect and restore listed fish and their habitat. The United States will contribute $38 million to these accounts according to a schedule determined by Congress in the enacting legislation. To date, the State has received $5 million per year for 3 years and is expected to receive an additional $5 million for the next 2 years. Most of the funds have been used to acquire conservation easements on lands with anadromous habitat and some limited habitat restoration.

On December 8, 2004, the Snake River Water Rights Act of 2004 was enacted to resolve outstanding issues; reach a final settlement of tribal claims; authorize, ratify, and confirm the Agreement among the parties; direct Federal agencies to execute and perform necessary actions to carry out the agreement; and authorize actions and appropriations under the Snake River Basin Adjudication (SRBA) and the Act for the United States to meet its obligations. On March 31, 2005, a Memorandum of Agreement was signed between the State of Idaho, Nez Perce Tribe, Service, and National Marine Fisheries Service (NMFS) to establish a process for using the habitat trust fund accounts for habitat protection and restoration projects in the Salmon and Clearwater River basins in Idaho.

In a March 2005 letter, in response to a request from the State of Idaho, the Service and NMFS provided specific information as to the standard that would be the basis for the cooperative agreement under section 6 of the Act to implement the term sheet. In that letter, the two agencies indicated that meeting the express statutory requirements in section 6 of the Act for an adequate and active program for the conservation of the species, in this case, bull trout and salmon, would be required.

The Service, the National Marine Fisheries Service (NMFS), and the State are in the process of developing a Draft EIS for entering into a Cooperative Agreement on the Idaho Forestry Program. This Program would apply to private and State lands in the Clearwater and Salmon River basins. The Service will evaluate whether the Idaho Forestry Program will meet the requirements of section 6 and section 7 of the Act.

At the time the negotiations on the adjudication were completed, the bull trout was a listed species, but critical habitat had not been designated. The negotiations culminating in the final term sheet were completed prior to designation of critical habitat.

Tribal Lands–Exclusions under Section 4(B)(2) of the Act

In accordance with the Secretarial Order 3206, "American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act" (June 5, 1997); 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 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 threatened and endangered species populations depend.

We will take into consideration our partnerships and existing conservation actions that tribes have or are currently implementing when conducting our exclusion analysis in the final critical habitat designation. If the Secretary decides to exercise his discretion under section 4(b)(2) of the Act, we are considering lands covered by the tribes identified below for possible exclusion from final critical habitat. We are requesting comments regarding these areas and will continue to investigate whether any Indian lands overlap, and may warrant exclusion from, critical habitat for bull trout. We also request comments and information concerning other tribal activities that may be affected in areas proposed as critical habitat on lands other than tribal lands.

For this proposed critical habitat designation for bull trout, we reviewed maps indicating that some areas under consideration as critical habitat overlap with Indian lands. Indian lands are those defined in the Secretarial Order "American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act" (June 5, 1997), including: (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.

Our preliminary assessment indicates that the federally-recognized tribes in Table 7 have lands that may include or be adjacent to waterbodies under consideration for designation as critical habitat for bull trout. Based on the best available information, there are approximately 683 kilometers (424 miles) of streams and shoreline areas in or adjacent to Tribal lands being proposed as critical habitat for bull trout (Table 6).

Tribes have played a significant role in the development of HCPs, 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. If such lands are identified, the benefits of exclusion could include: (1) the furtherance of established national policies, our Federal trust obligations and our deference to 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; and (4) continued respect for tribal sovereignty over management of natural resources on Indian lands through established tribal natural resource programs. A list of tribal lands meeting the criteria of a tribal management or conservation plan, with proposed critical habitat unit and water body name, follows in Table 7.

TABLE 7.—TRIBAL LANDS MEETING THE CRITERIA OF A TRIBAL MANAGEMENT OR CONSERVATION PLAN AND THE PROPOSED CRITICAL HABITAT UNIT AND WATER BODY AFFECTED

Tribal Nation	Critical habitat unit	Stream/water body name
Confederated Tribes of Warm Springs	Deschutes River Basin	Deschutes River, Shitike Creek, Jefferson Creek, Warm Springs River, Metolius River
Confederated Tribes of the Umatilla	Umatilla River and Walla Walla River Basin	Umatilla River, South Fork Touchet River, Meacham Creek, Squaw Creek
Burns Paiute Tribe	Malheur River Basin	Malheur River
Nez Perce Tribe	Clearwater River	Mainstem, North Fork, Middle Fork, and South Fork Clearwater River, Lolo Creek, Clear Creek, and Dworshak Reservoir
Coeur d'Alene Tribe	Coeur d'Alene River Basin	Lake Coeur d'Alene and tributaries
Blackfeet Nation	Saint Mary River Basin	Saint Mary River
Confederated Salish and Kootenai Tribes	Clark Fork River Basin	Flathead Lake, Lower Flathead River, Jocko River, Mission Creek, Post Creek
Kalispel Tribe	Clark Fork River Basin	Pend Oreille River
Yakama Nation	Yakima and Lower Columbia River Basins	Yakima River, Ahtanum Creek, and 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
Confederated Tribes of the Chehalis	Olympic Peninsula	Chehalis River
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

TABLE 7.—TRIBAL LANDS MEETING THE CRITERIA OF A TRIBAL MANAGEMENT OR CONSERVATION PLAN AND THE PROPOSED CRITICAL HABITAT UNIT AND WATER BODY AFFECTED—Continued

Tribal Nation	Critical habitat unit	Stream/water body name
Quileute Tribe	Olympic Peninsula	Pacific Coast Nearshore
Quinault Nation	Olympic Peninsula	Quinault River, Lake Quinault, Pacific Coast nearshore, Raft River, Queets River, Salmon River, Moclips River, and Cook Creek
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
Nisqually Tribe	Puget Sound	Nisqually River
Nooksack Tribe	Puget Sound	Nooksack River
Puyallup Tribe	Puget Sound	Puyallup River and Puget Sound nearshore
Sauk-Suiattle Tribe	Puget Sound	Sauk River
Swinomish Tribe	Puget Sound	Swinomish Channel and Puget Sound nearshore
Tulalip Tribes	Puget Sound	Puget Sound nearshore

Federal Lands-Exclusions under Section 4(B)(2) of the Act

As noted above, 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. Therefore, Federal land management plans, in and of themselves, are generally not an appropriate basis for excluding essential habitat. Some broad-scale Federal resource management plans (e.g., INFISH, PACFISH, and the Northwest Forest Plan) may provide conservation benefits to bull trout as well as all other aquatic species within the plan boundaries. In addition, in some places, Federal land management agencies may actively manage for bull trout and conduct specific conservation actions for the species. We are therefore requesting comments regarding existing specific conservation actions that Federal land management agencies have or are currently implementing on their lands, and will take this information into account when conducting our exclusion analysis in the final critical habitat designation.

Draft Economic Analysis

Section 4(b)(2) of the Act requires that we designate or revise critical habitat based upon the best scientific data available, after taking into consideration the economic impact, impact on national security, or any other relevant impact of specifying any particular area as critical habitat.

We have prepared a Draft Economic Analysis (DEA), which identifies and analyzes the potential economic impacts associated with the proposed designation of critical habitat for bull trout. The DEA quantifies the economic impacts of all potential conservation efforts for bull trout; some of these costs would likely be incurred regardless of whether or not we designate critical habitat. The economic impact of the proposed 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 may 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 if we finalize the proposed critical habitat designation.

The DEA estimates impacts based on activities that are reasonably foreseeable, including, but not limited to, activities that are currently authorized, permitted, or funded, or for which proposed plans are currently available to the public. The DEA provides estimated costs of the foreseeable potential economic impacts of the proposed critical habitat designation for bull trout over the next 20 years, which was determined to be the appropriate period for analysis because limited planning information was available for most activities to reasonably forecast activity levels for projects beyond a 20–year timeframe. The DEA identifies potential incremental costs as a result of the proposed critical habitat designation; these are those costs attributed to critical habitat over and above those baseline costs attributed to listing. The DEA quantifies economic impacts of conservation efforts for bull trout associated with the following categories of activity: (1) forest management practices (timber sales, fuel reduction, salvage logging); (2) residential and commercial development; (3) dams (hydropower and others); (4) agriculture

and agricultural diversions; (5) roads; (6) mining; (7) livestock grazing; and (8) other activities (utilities, restoration, nonnative species management, recreation, other instream activities).

Of the currently proposed critical habitat areas, nearly 31,865 km (19,800 mi), or 87 percent, were previously proposed as bull trout critical habitat. Two detailed economic analyses of those past proposals were conducted in 2004 and 2005. Both of these analyses were made available for, and received, public comment. Due to extensive overlap between the current proposed critical habitat and the past proposals, the economic analysis prepared for this proposal draws heavily on still-valid data contained within the two prior economic analyses. Costs associated with bull trout conservation efforts estimated in the earlier economic analyses have been updated to current dollars, adjusted to reflect the currently proposed unit boundaries, and reported to provide context for the reported incremental costs associated with the currently proposed critical habitat designation.

Total future (2012-2032) baseline impacts are estimated to be $96.3 million to $103.0 million annually (assuming a 7 percent discount rate); discount rates express future costs and benefits at today's equivalent value. This estimate includes not only conservation activity costs resulting from the bull trout being listed under the Act, but also estimated costs of related conservation activities for salmon, steelhead, and other fish species, along with water quality and habitat protection, in overlapping areas where other protected species occur with bull trout. Under the baseline scenario, nearly half of all estimated costs are due to conservation efforts imposed on forest management activities. Costs imposed on development activities and dam operations make up most of the remaining estimated costs. Costs associated with project modifications to forest management activities account for nearly 44 percent of estimated baseline impacts. These costs are expected to be associated with conservation measures imposed on timber harvest activities, including efforts to reduce sedimentation timing restrictions, elimination of fish barriers, and changes to harvest methods. Under the high cost scenario, costs associated with project modifications imposed on development activities account for 25 percent of projected baseline impacts. These costs result from implementation of stormwater control requirements. Costs associated with project modifications imposed on dam operations account for 18 percent of estimated baseline impacts under the high cost scenario. These costs result from projected conservation efforts, including providing fish passage (fish ladder or trap and haul operations), temperature control projects, habitat acquisition, and seasonal adjustments of flow.

Because of all conservation measures in place for salmon, steelhead, the Klamath suckers, and other protected fish species, we believe the incremental regulatory and economic effect of critical habitat designation 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 4 percent of the proposed critical habitat) by the species. As a result, the DEA estimates that total potential incremental economic impacts in areas proposed as critical habitat over the next 20 years will be $4.97 million to $7.13 million annually (assuming a 7 percent discount rate); the range of costs represents uncertainty in the types and costs of project modifications. 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. For unoccupied areas overlapping with previous bull trout critical habitat proposals, cost estimates are drawn from the previous economic analyses and assigned to the critical habitat units proposed in this rule. For newly proposed unoccupied areas, the analysis focuses on identifying additional conservation efforts that may be expected as a result of critical habitat designation for bull trout. The 116 km (72 mi) of newly proposed unoccupied critical habitat that is already designated as critical habitat for listed salmon were not included in the incremental analysis. Existing (baseline) conservation efforts required in designated salmon critical habitat areas would generally be adequate to address bull trout conservation needs, and no significant additional conservation efforts are expected to be necessary. Dam operations are expected to incur the greatest incremental economic impacts, followed by forest management and administrative costs. Estimated incremental costs associated with dam project modifications range from $2.12 million to $2.52 million annually, and are primarily related to conservation efforts in the Upper Willamette River Basin. Project modifications could include fish passage (such as fish ladders and trap and haul operations), temperature control projects, and seasonal changes to flow. Estimated incremental costs associated with forest management projects range from $0.41 million to $1.65 million annually, associated with efforts to reduce sedimentation, timing restrictions, elimination of fish barriers (e.g., culverts), and changes to harvest methods.

Estimated incremental costs associated with additional section 7 administrative efforts (Federal agency consultations) are expected to be $1.99 million annually. Absent reasonably foreseeable economic impacts that are distinctly attributable to the critical habitat portion of the analysis, economic impacts from conservation efforts that avoid adverse modification of critical habitat coincidental to avoiding jeopardizing the species would be coextensive with the impacts of bull trout listing and within the regulatory baseline.

Benefits, as well as costs, can result from critical habitat designation. Bull trout conservation efforts for critical habitat may lead to improved water quality, increased open space, flood control, or aesthetic benefits. Indirect use benefits may also result (e.g., increased hiking or wildlife-viewing activities). Conservation efforts for bull trout critical habitat have the potential to result in increased bull trout populations, which in turn could result in increases in recreational fishing opportunities over the long term. In addition, increased bull trout population size could result in enhanced non-use value by the public (e.g., existence value). Existing studies support the conclusion that preservation of fish species in general is likely to generate substantial benefits to the public. However, absent information on the long term biological or physical changes expected to occur in bull trout critical habitat areas as a result of critical habitat designation, the DEA does not quantify these benefits.

The DEA is available for review at *http://www.regulations.gov*. We are seeking data and comments from the public on the DEA, as well as all aspects of the proposed rule and our amended required determinations. We may revise the proposed rule or supporting documents to incorporate or address information we receive during the public comment period, including information received during, or in response to, the public hearing.

Peer Review

In accordance with our joint policy published in the **Federal Register** on July 1, 1994 (59 FR 34270), we will seek

the expert opinions of at least three appropriate and independent specialists regarding this proposed rule. The purpose of peer review is to ensure that our critical habitat designation is based on scientifically sound data, assumptions, and analyses. We have invited these peer reviewers to comment during this public comment period on our specific assumptions and conclusions in this proposed designation of critical habitat.

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

Public Hearings

The Act provides for one or more public hearings on this proposal, if requested. Requests must be received within 45 days after the date of publication of this proposed rule in the **Federal Register**. Such requests must be sent to the address shown in the **ADDRESSES** section. In anticipation of the interest in this proposed rule, we have already scheduled the public hearing and several public meetings. See the **DATES** and **ADDRESSES** section of this proposed rule for information regarding the scheduled public hearing and public meetings.

Required Determinations

Regulatory Planning and Review—Executive Order 12866

The Office of Management and Budget (OMB) has determined that this rule is significant and has reviewed this proposed rule under Executive Order 12866 (E.O. 12866). OMB based its determination upon the following four criteria:

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

(2) Whether the rule will create inconsistencies with other Federal agencies' actions;

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

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

Regulatory Flexibility Act

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), 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 the agency certifies the rule will not have a significant economic impact on a substantial number of small entities. The SBREFA amended RFA to require Federal agencies to provide a statement of the factual basis for certifying that the rule will not have a significant economic impact on a substantial number of small entities.

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 whether 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 whether a designation of critical habitat could significantly affect a substantial number of small entities, we consider the number of small entities affected within particular types of economic activities (e.g., housing development, grazing, oil and gas production, timber harvesting). 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 carried out, funded, or permitted by Federal agencies. Some kinds of activities are unlikely to have any Federal involvement and so would not result in any additional effects under the Act. However, there are some state laws that limit activities in designated critical habitat even where there is no federal nexus. If there is a Federal nexus, Federal agencies will be required to consult with us under section 7 of the Act on activities they fund, permit, or carry out that may affect critical habitat. If we conclude, in a biological opinion, that a proposed action is likely to destroy or adversely modify critical habitat, we can offer "reasonable and prudent alternatives." Reasonable and prudent alternatives are alternative actions that can be implemented in a manner consistent with the scope of the Federal agency's legal authority and jurisdiction, that are economically and technologically feasible, and that would avoid destroying or adversely modifying critical habitat.

A Federal agency and an applicant may elect to implement a reasonable and prudent alternative associated with a biological opinion that has found adverse modification of critical habitat. An agency or applicant could alternatively choose to seek an exemption from the requirements of the Act or proceed without implementing the reasonable and prudent alternative. However, unless an exemption were obtained, the Federal agency or applicant would be at risk of violating section 7(a)(2) of the Act if it chose to proceed without implementing the reasonable and prudent alternatives. We may also identify discretionary conservation recommendations designed to minimize or avoid the adverse effects of a proposed action on critical habitat, help implement recovery plans, or to develop information that could contribute to the recovery of the species.

Within the proposed critical habitat designation, the types of actions or authorized activities that we have identified as potential concerns and that may be subject to consultation under section 7 if there is a Federal nexus are: operation of dams; forest management practices; livestock grazing; agriculture and irrigation diversions; management

of roads; mining; and management of nonnative species.

Any existing and planned projects, land uses, and activities that could affect the proposed critical habitat but have no Federal involvement would not require section 7 consultation with the Service, so they are not restricted by the requirements of the Act. Federal agencies may need to reinitiate a previous consultation if discretionary involvement or control over the Federal action has been retained or is authorized by law and the activities may affect critical habitat.

The DEA and its associated Initial Regulatory Flexibility Analysis (IRFA) estimate that total potential incremental economic impacts in areas proposed as critical habitat over the next 20 years will be $4.97 to $7.13 million annually, assuming a 7 percent discount rate. Incremental impacts are expected to consist of: (1) project modifications occurring within newly proposed unoccupied areas; and (2) administrative costs associated with consultations under section 7 of the Act. In total, third parties (some of which may be small entities) may bear a total annual impact of up to $5.6 million in incremental impacts. In unoccupied areas, project modifications may be associated with dam modifications, bridge replacement, grazing lease modification, road maintenance, and changes to timber harvest. In total, annual incremental costs associated with project modifications are forecast at $5.1 million (discounted at 7 percent). The DEA also forecasts the number of additional section 7 consultations that may take place as a result of critical habitat. Based on this forecast, annual incremental consultation costs that may be borne by third parties are forecast at $441,000 in total (discounted at 7 percent). Of the potentially affected entities in the proposed critical habitat areas, 97 percent are small entities, and depending on the unit, small entities may bear between 93 and 100 percent of the estimated impacts. The Small Business Size Standard for the industry sectors that could potentially be affected by the proposed critical habitat designation are as follows:

• Dams and Water Diversions Category: Electric Power Generation, Transmission and Distribution–4 million megawatts for the preceding year, and Water supply and Irrigation Systems–$7.0 million average annual receipts.

• Agriculture Category: Crop Production (Oilseed and Grain Farming; Vegetable and Melon Farming; and Fruit and Tree Nut Farming–$750,000 average annual receipts; and Food Manufacturing–500 employees.

• Grazing Category: Beef Cattle Ranching and Farming–$750,000 average annual receipts.

• Roads Category: Highway, Street and Bridge Construction–$33.5 million average annual receipts.

• Development Category: New Single–Family Housing Construction (except Operative Builders); New Multifamily Housing Construction (except Operative Builders); New Housing Operative Builders–$33.5 million average annual receipts; and Land Subdivision–$7.0 million.

• Forest Managent Category: Logging–500 employees; Timber Tract Operations, and Support Activities for Forestry–$7.0 million average annual receipts.

• Mining Category: Mining (except Oil and Gas), and Construction Sand and Gravel Mining–500 employees.

• Other Activities Category: Oil and Gas Pipeline and Related Structures Construction; Power and Communication Line and Related Structures Construction; and Other Heavy and Civil Engineering Construction–$33.5 million average annual receipts; Marinas–$7.0 million average annual receipts; Water and Sewer Line and Related Structures Construction–$33.5 million average annual receipts; and Sewage Treatment Facilities–$7.0 million average annual receipts.

If each of the 23,800 small entities located within the study area were to share the annualized costs, they could bear from $0 up to $60,300 per entity, depending on the affected industry. This would translate into an annual average cost of $234 per entity. This in turn translates into a projected range of impacts from 0.0007 to 0.03 percent, or in other words, less than 1 percent impact for all sectors. The expected annual impacts to the affected industries are significantly less than the annual revenues that could be garnered by a single small operator in those industries, and as such, impacts are low relative to potential revenues. We are seeking public comments regarding the estimated incremental impacts of this critical habitat designation on small entities. Specifically, we are interested in whether there is evidence suggesting that the economic impact of section 7(a)(2) consultations in areas currently occupied by the species is expected to be larger or smaller than estimated in this analysis.

Unfunded Mandates Reform Act

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

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

The designation of critical habitat does not impose a legally binding duty on non-Federal government entities or private parties. Under the Act, the only regulatory effect is that Federal agencies must ensure that their actions do not destroy or adversely modify critical habitat under section 7. While non-Federal entities that receive Federal funding, assistance, or permits, or that otherwise require approval or authorization from a Federal agency for an action, may be indirectly impacted by the designation of critical habitat, the legally binding duty to avoid destruction or adverse modification of critical habitat rests squarely on the

Federal agency. Furthermore, to the extent that non-Federal entities are indirectly impacted because they receive Federal assistance or participate in a voluntary Federal aid program, the Unfunded Mandates Reform Act would not apply, nor would critical habitat shift the costs of the large entitlement programs listed above onto State governments.

(b) As discussed in the DEA of the proposed designation of critical habitat for bull trout, we do not believe that this rule would significantly or uniquely affect small governments because it would 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 DEA concludes that incremental impacts may occur due to project modifications occurring within newly proposed, unoccupied areas and administrative costs associated with section 7 consultations. The DEA estimates that total potential incremental economic impacts in areas proposed as critical habitat over the next 20 years will be $4.97 to $7.13 million annually, assuming a 7 percent discount rate. Based on the range of potential incremental costs that have been identified, we do not believe that this rule will significantly or uniquely affect small government entities. As such, a Small Government Agency Plan is not required.

Takings

In accordance with Executive Order (E.O.) 12630 (Government Actions and Interference with Constitutionally Protected Private Property Rights), we have analyzed the potential takings implications of designating critical habitat for bull trout in a takings implications assessment. The takings implications assessment concludes that this designation of critical habitat for bull trout does not pose significant takings implications for lands within or affected by the designation.

Federalism

In accordance with E.O. 13132 (Federalism), this proposed 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 proposed critical habitat designation with appropriate State resource agencies in Washington, Oregon, Idaho, Montana, and Nevada. The designation may have some benefit to these governments because the areas that contain the features essential to the conservation of the species are more clearly defined, and the physical and biological features 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).

Where State and local governments require approval or authorization from a Federal agency for actions that may affect critical habitat, consultation under section 7(a)(2) of the Act would be required. 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.

Civil Justice Reform

In accordance with E.O. 12988 (Civil Justice Reform), the Office of the Solicitor has determined that the rule does not unduly burden the judicial system and that it meets the requirements of sections 3(a) and 3(b)(2) of the Executive Order. We have proposed designating critical habitat in accordance with the provisions of the Act. This proposed rule uses standard property descriptions and identifies the physical and biological features within the designated areas to assist the public in understanding the habitat needs of the bull trout.

Paperwork Reduction Act of 1995

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

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 National Environmental Policy Act (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)).]

Clarity of the Rule

We are required by Executive Orders 12866 and 12988 and by the Presidential Memorandum of June 1, 1998, to write all rules in plain language. This means that each rule we publish must:

(a) Be logically organized;

(b) Use the active voice to address readers directly;

(c) Use clear language rather than jargon;

(d) Be divided into short sections and sentences; and

(e) Use lists and tables wherever possible.

If you feel that we have not met these requirements, send us comments by one of the methods listed in the "**ADDRESSES**" section. To better help us revise the rule, your comments should be as specific as possible. For example, you should tell us the names of the sections or paragraphs that are unclearly written, which sections or sentences are too long, the sections where you feel lists or tables would be useful, etc.

Government-to-Government Relationship with Tribes

Our preliminary assessment indicates that 24 Federally-recognized Tribes in Table 7 have lands that may include or be adjacent to waterbodies under consideration for designation as critical habitat for bull trout. Based on the best available information, there are approximately 683 kilometers (424 miles) of streams and shoreline areas in or adjacent to Tribal lands being proposed as critical habitat for bull trout (Table 6).

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.

Maintaining an effective trust relationship between the Federal government and Tribes promotes (1) the furtherance of established national policies, our Federal trust obligations and our deference to 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; and (4) continued respect for Tribal sovereignty over management of natural resources on Indian lands through established tribal natural resource programs. We have engaged in preliminary discussions and coordination with our Tribal partners during development of the proposed rule, and are soliciting specific comments and information from tribes on areas being proposed as critical habitat on tribal land and on lands other than Tribal lands. The final rule will fully consider the Federal government's obligations to Federally-recognized Tribes, and comments and information received from the Tribes regarding the actions being implemented to conserve bull trout on Tribal lands and lands other than Tribal lands.

Energy Supply, Distribution, or Use

Executive Order E.O. 13211 pertains to regulations that significantly affect energy supply, distribution, and use. E.O. 13211 requires agencies to prepare Statements of Energy Effects when undertaking certain actions. The Office of Management and Budget (OMB) provides guidance for implementing this Executive Order, outlining nine outcomes (criteria) that may constitute "a significant adverse effect" when compared with the regulatory action under consideration. Two of these criteria are relevant to the bull trout economic analysis: (1) reduction in electricity production in excess of one billion kilowatts-hours per year or in excess of 500 megawatts of installed capacity and (2) increases in the cost of energy production in excess of one percent. The two primary activities that might lead to reduced energy generation are operation of the Federal Columbia River Power System (FCRPS) and operation of FERC-licensed hydroelectric dams. Incremental impacts to dam operations are expected to consist largely of the costs of installing fish passage capabilities. Some dam operators may also undertake relatively minor movements of peak energy production during the year. This practice does not reduce average energy production, but rather changes the temporal distribution of that power. Therefore, no impacts to electricity production or installed capacity are forecast. Given the high thresholds defined in the OMB guidance (i.e., reduction in electricity production in excess of one billion kilowatts-hours per year, increases in the cost of energy production in excess of one percent) and the fact that bull trout is unlikely to be the primary species leading to changes in flow regimes (because of the presence of listed salmon), it is unlikely the electricity industry will experience a "significant adverse effect" as a result of critical habitat designation for bull trout. The protection of bull trout stream and lake habitats should not require significant changes to energy management, and because bull trout have been listed under the Endangered Species Act for the past 10 years, with critical habitat designated over parts of its range for the past four years, and there have been no actions that have significantly affected energy supply, distribution or use over that time. Therefore, this action is not a significant energy action, and no Statement of Energy Effects is required. However, we will further evaluate this issue as we conduct our economic analysis, and review and revise this assessment as warranted.

References Cited

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

Author(s)

The primary authors of this package are the staff members of the following Fish and Wildlife Offices: Idaho, Montana, Washington, Oregon, Nevada, and Klamath Falls.

List of Subjects in 50 CFR Part 17

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

Proposed Regulation Promulgation

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

PART 17—[AMENDED]

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

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

2. Amend § 17.95(e) by revising critical habitat for "Bull Trout (*Salvelinus confluentus*)" 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, Canyon, Clearwater, 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, Douglas, Franklin, Garfield, Grant, Grays Harbor, Island, Jefferson, King, Kittitas, Klickitat, Mason, Okanogan, Pend Oreille, Pierce, Skagit, Skamania, Snohomish, 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)(6) of this section.

(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 water body 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 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 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 National Oceanic and Atmospheric Administration in the National Tidal Datum 1983 Through 2001. This area between the MHHW line and minus 10 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 (hyporehic flows) to contribute to water quality and quantity and provide thermal refugia.

(ii) Migratory 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 with features such as large wood, side channels, pools, undercut banks and substrates, to provide a variety of depths, gradients, velocities, and structure.

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

(vi) Substrates 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 (e.g., less than 12 percent) of fine substrate less than 0.85 mm (0.03 in.) in diameter and minimal embeddedness of these fines in larger substrates are characteristic of these conditions.

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

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

(ix) Few or no nonnative predatory (e.g., lake trout, walleye, northern pike, smallmouth bass; inbreeding (e.g., brook trout); or competitive (e.g., brown trout) species present.

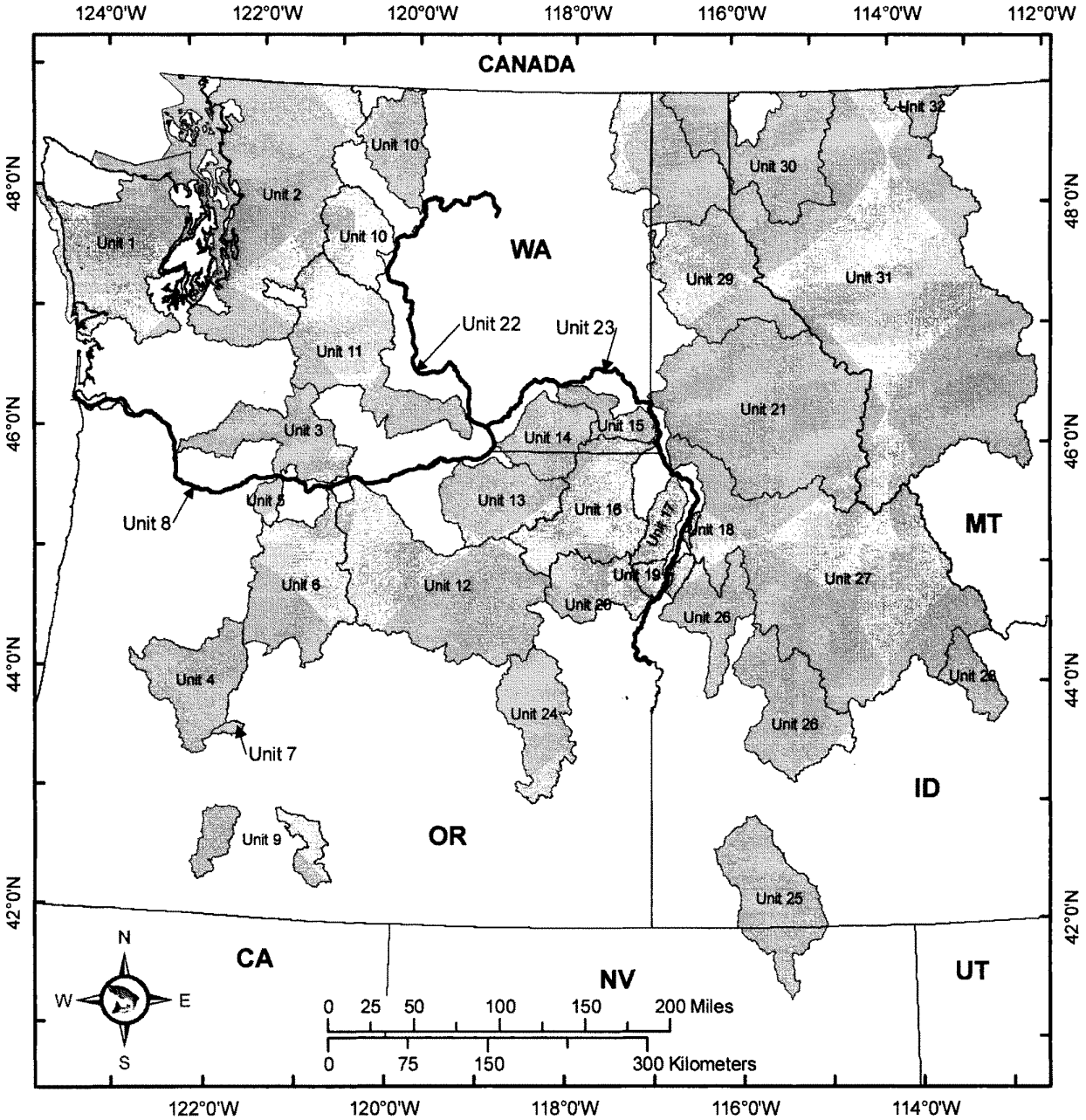
(4) Critical habitat does not include manmade structures (such as buildings, aqueducts, runways, roads, and other paved areas) and the land on which they are located existing within the legal boundaries on the effective date of this rule.

(5) Critical habitat map units. Data layers defining map units were created using U.S. Geological Survey (USGS) Hydrologic Unit Code maps (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 United States Geological Survey 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 (CHU) were based on Washington Department of Natural Resources 1:24,000 scale county boundaries and HUCs.

(6) Index map of critical habitat units for bull trout follows:

BILLING CODE 4310–55–S

Index Map: Critical Habitat Units



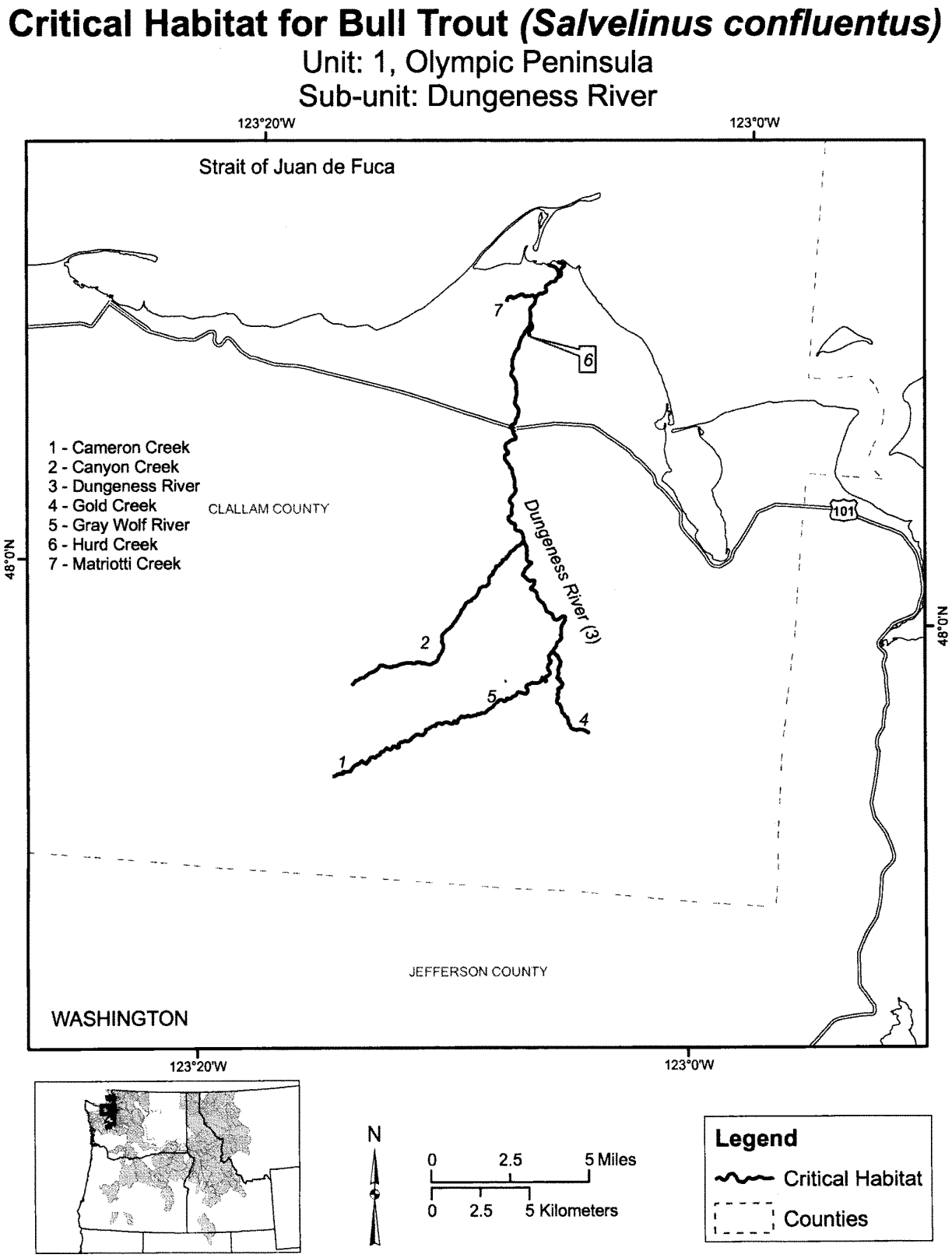
1	Olympic Peninsula	11	Yakima River	22	Mainstem Upper Columbia River
2	Puget Sound	12	John Day River	23	Mainstem Snake River
3	Lower Columbia River Basins	13	Umatilla River	24	Malheur River Basin
4	Upper Willamette River	14	Walla Walla River Basin	25	Jarbidge River
5	Hood River	15	Lower Snake River Basins	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

(7) Unit 1: Olympic Peninsula Unit, Washington.

(i) Dungeness River Subunit.

(A) [Reserved for textual description of unit.]

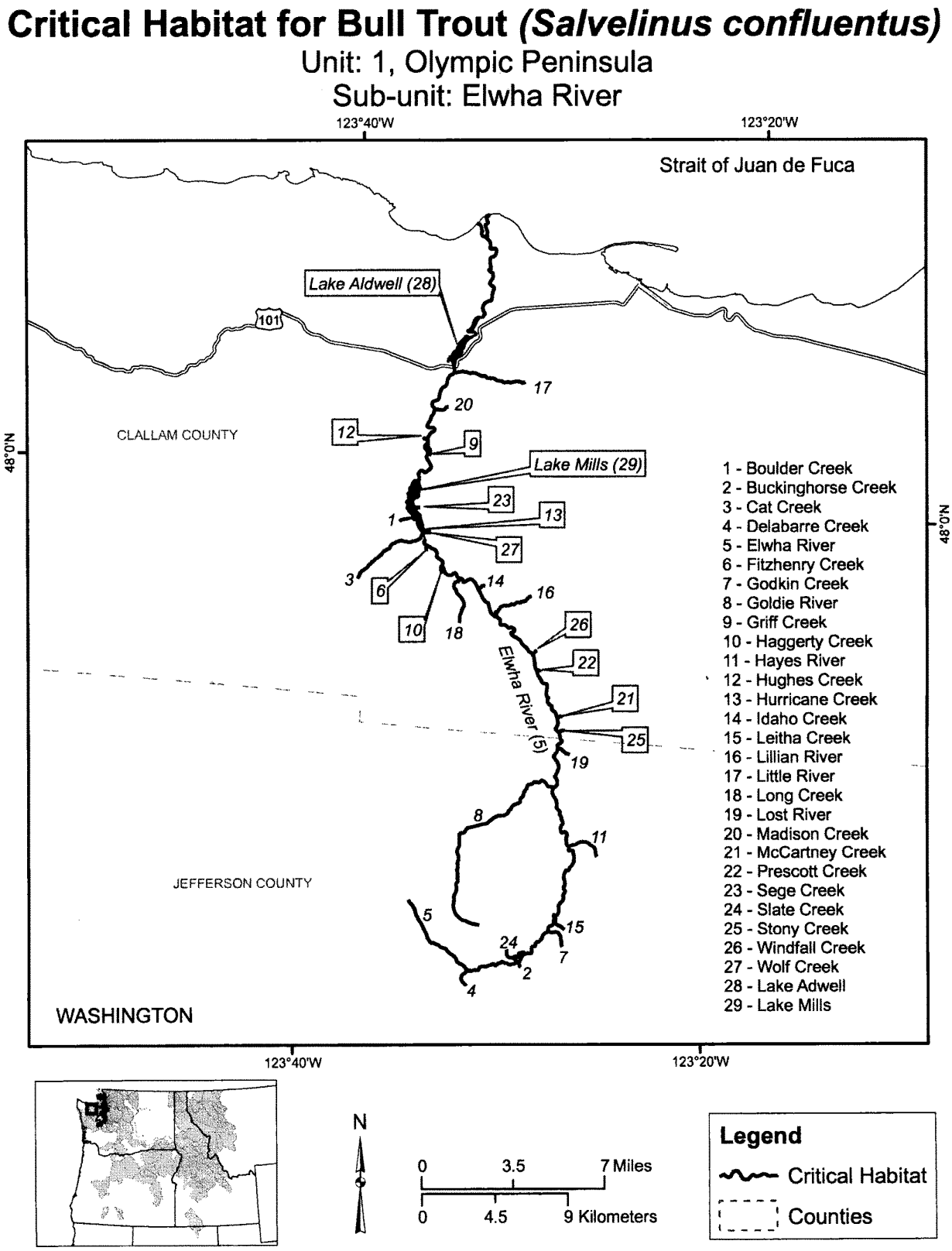
(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Dungeness River Subunit, follows:



(ii) Elwha River Subunit.

(A) [Reserved for textual description of unit.]

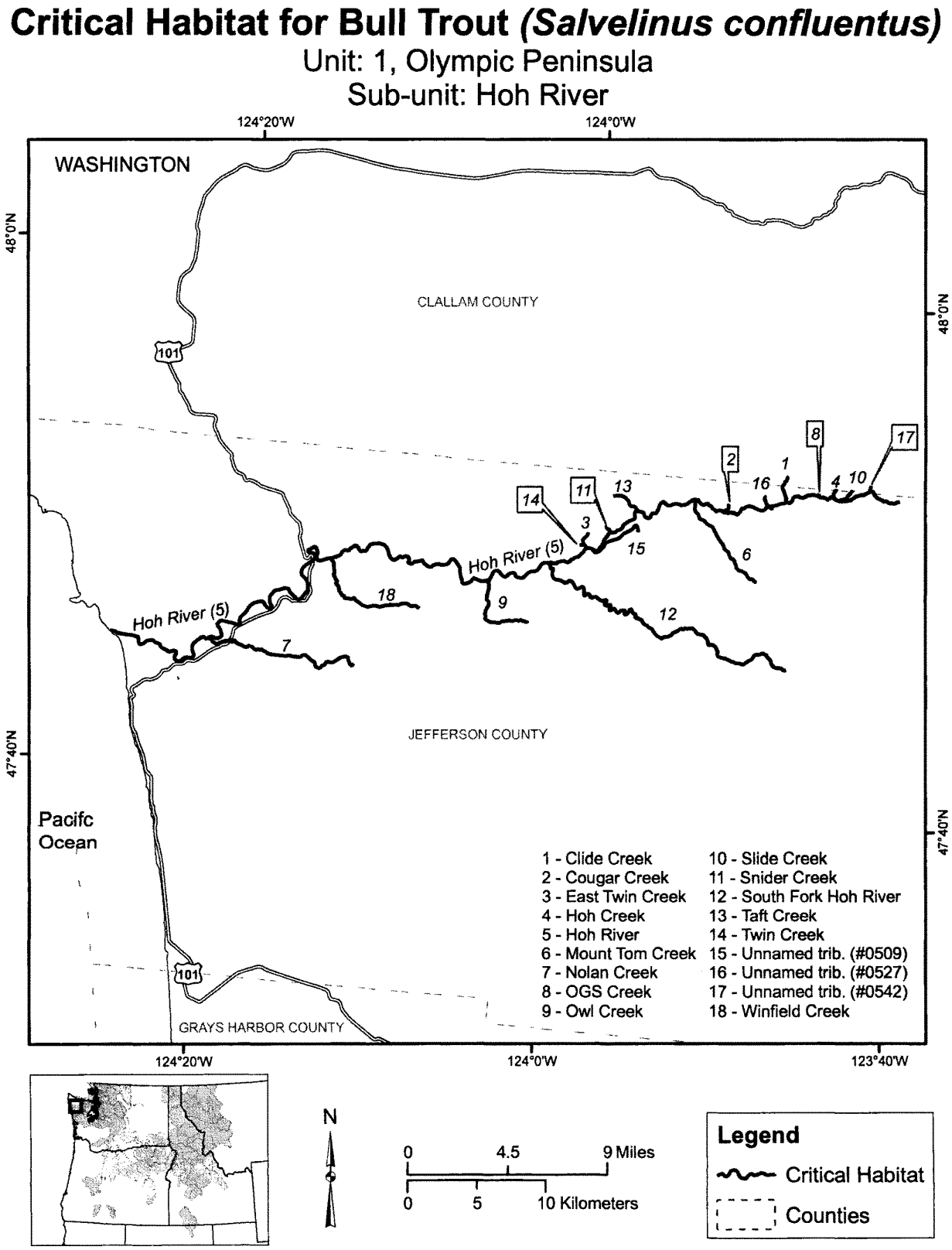
(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Elwha River Subunit, follows:



(iii) Hoh River Subunit.

(A) [Reserved for textual description of unit.]

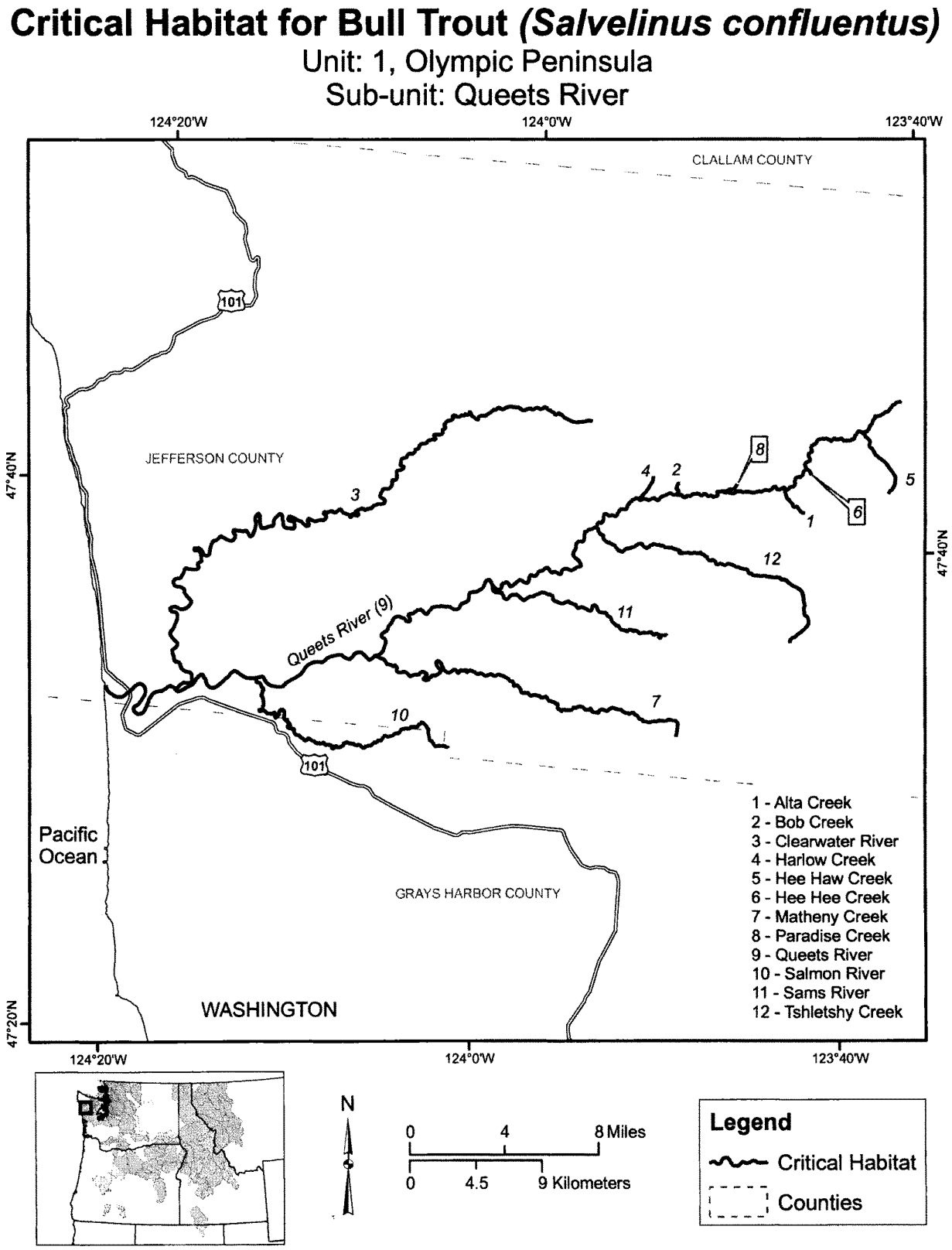
(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus),* Hoh River Subunit, follows:



(iv) Queets River Subunit.

(A) [Reserved for textual description of unit.]

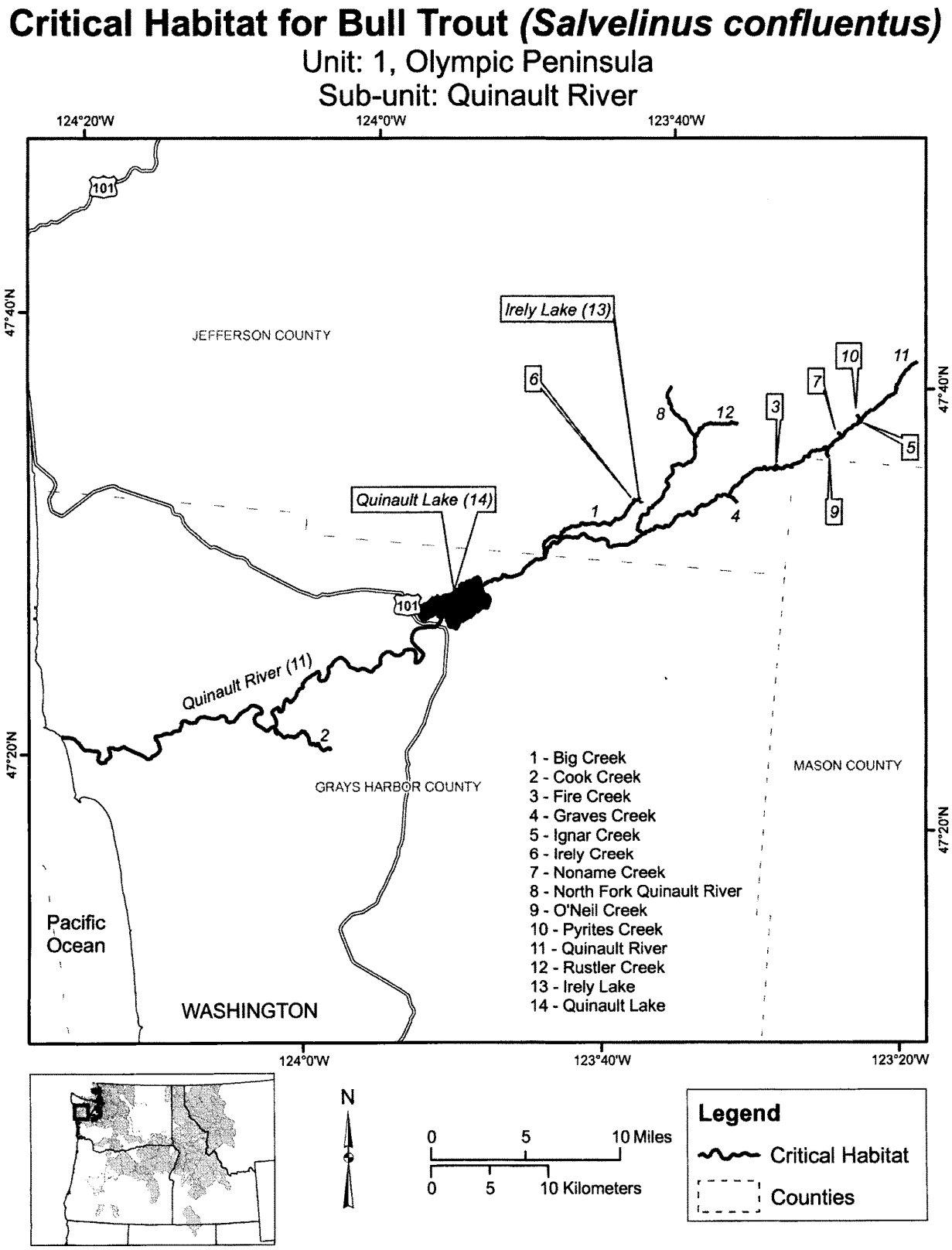
(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus),* Queets River Subunit, follows:



(v) Quinault River Subunit.

(A) [Reserved for textual description of unit.]

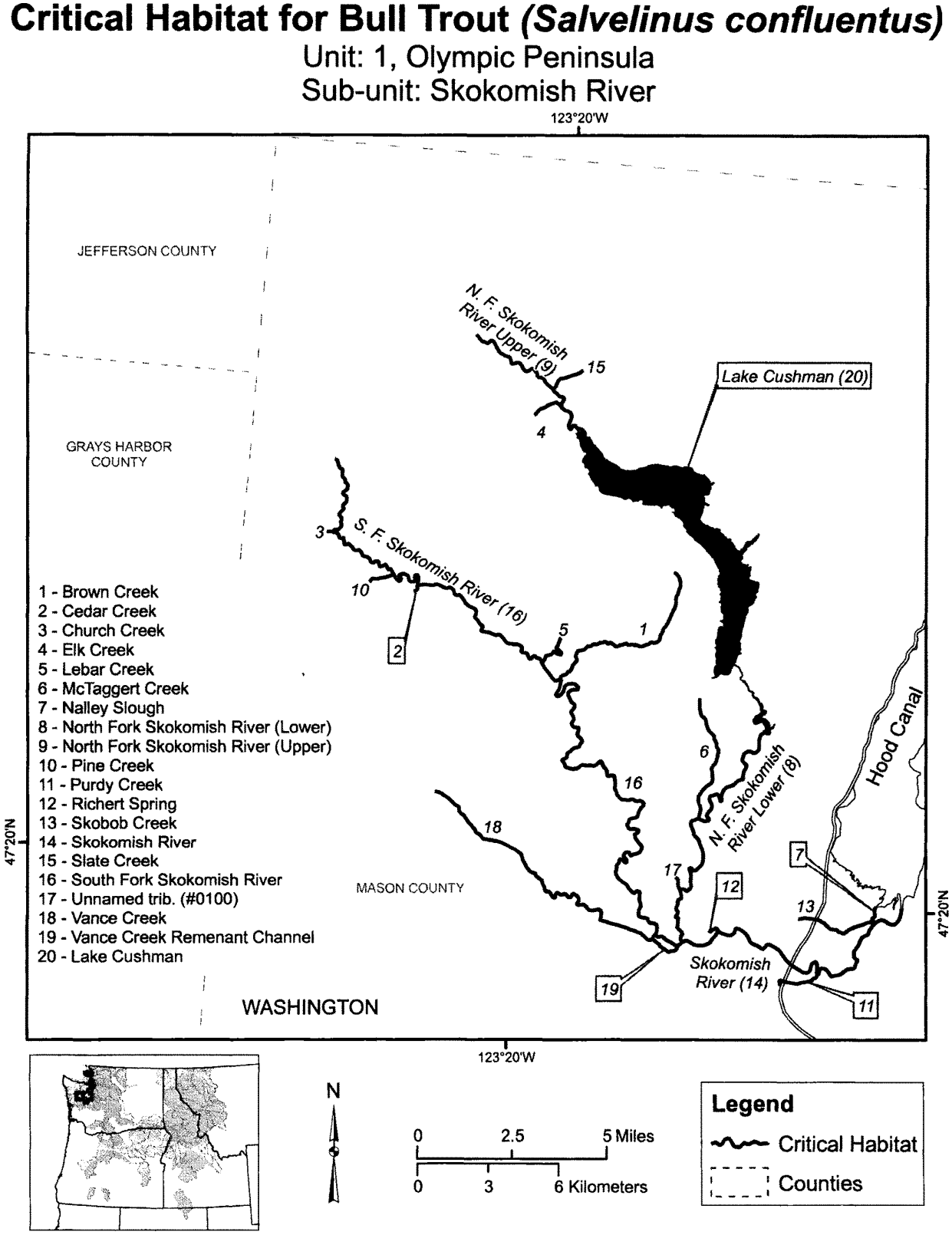
(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Quinault River Subunit, follows:



(vi) Skokomish River Subunit.

(A) [Reserved for textual description of unit.]

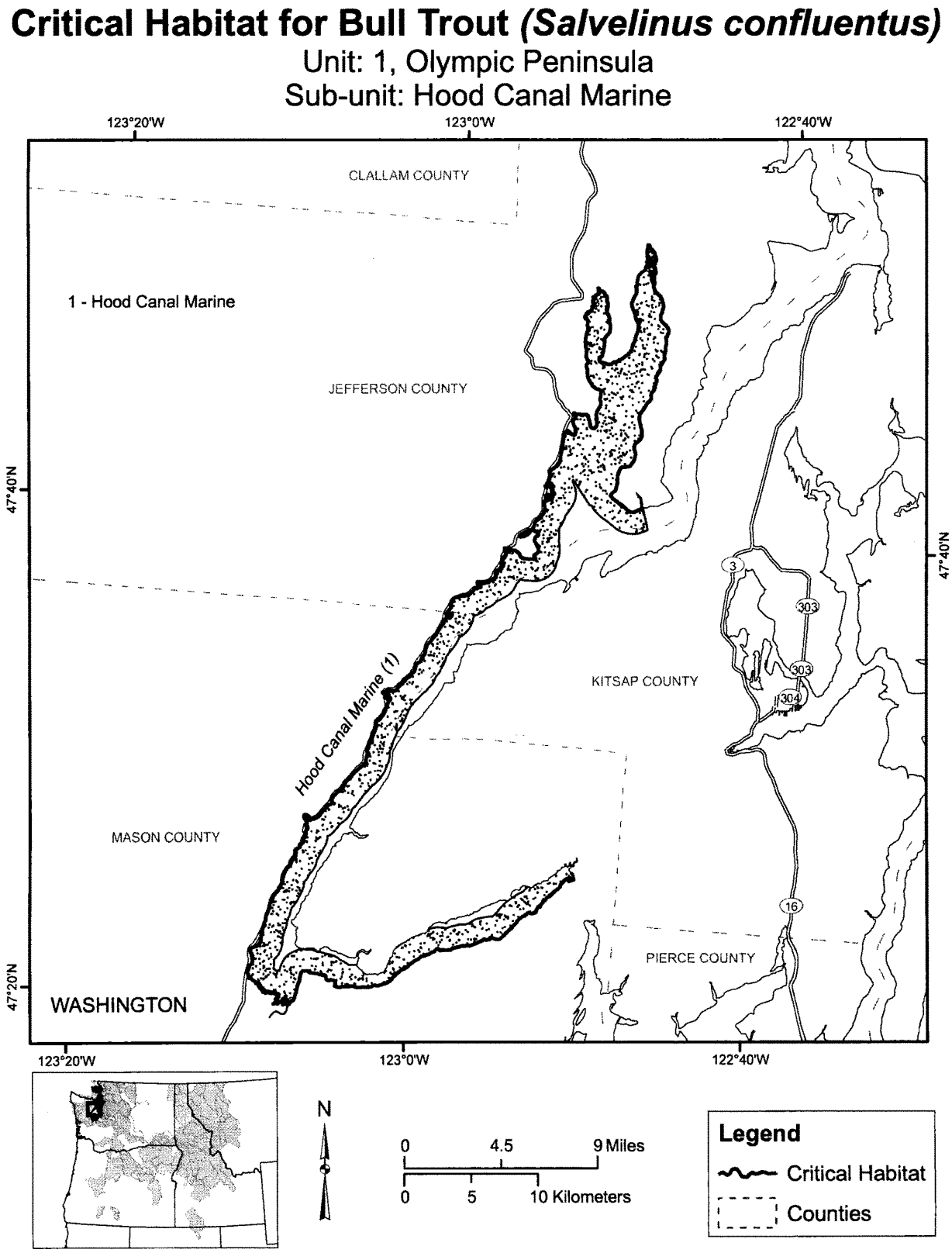
(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Skokomish River Subunit, follows:



(vii) Hood Canal Subunit.

(A) [Reserved for textual description of unit.]

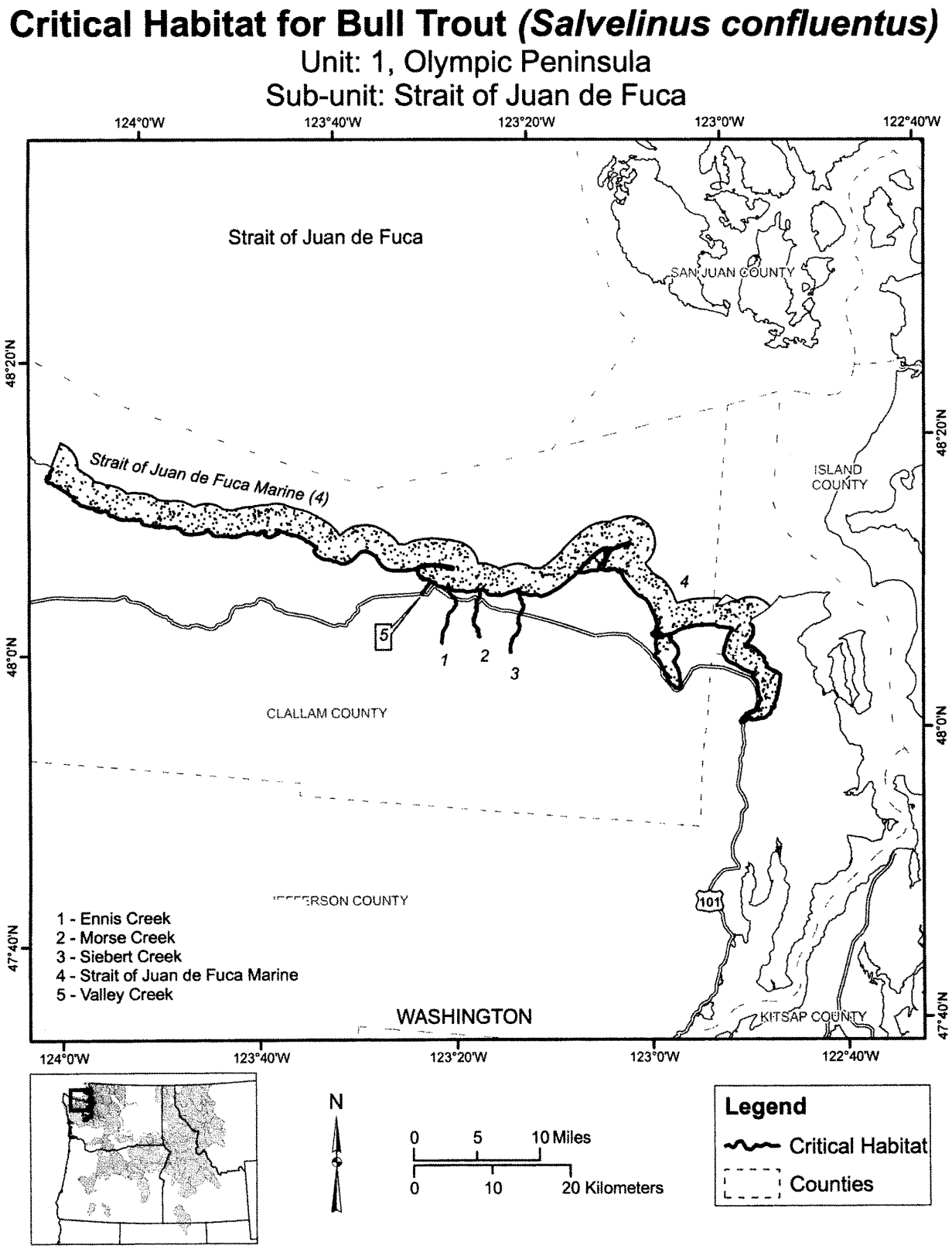
(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Hood Canal Subunit, follows:



(viii) Strait of Juan de Fuca Subunit.

(A) [Reserved for textual description of unit.]

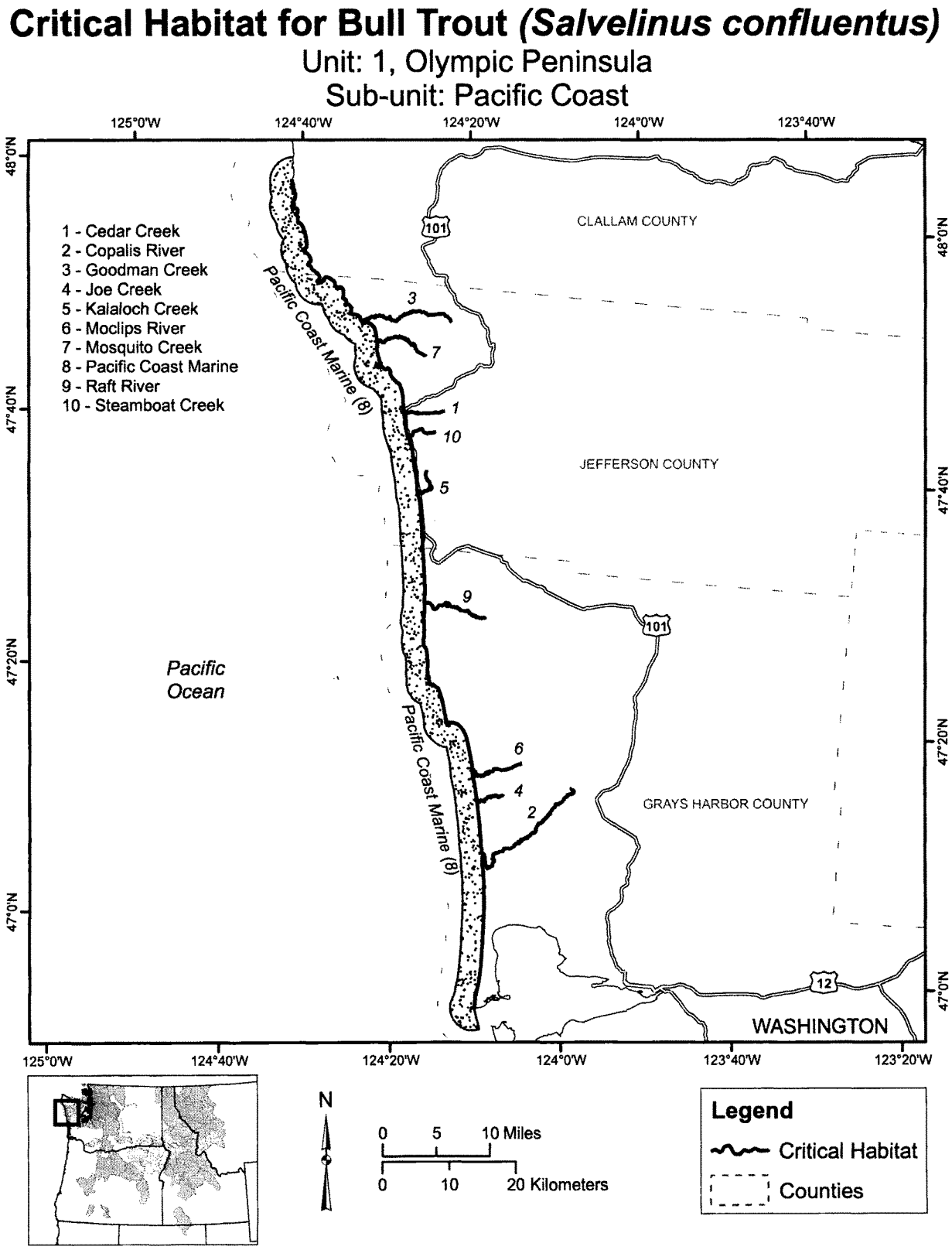
(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Juan de Fuca Subunit, follows:



(ix) Pacific Coast Subunit.

(A) [Reserved for textual description of unit.]

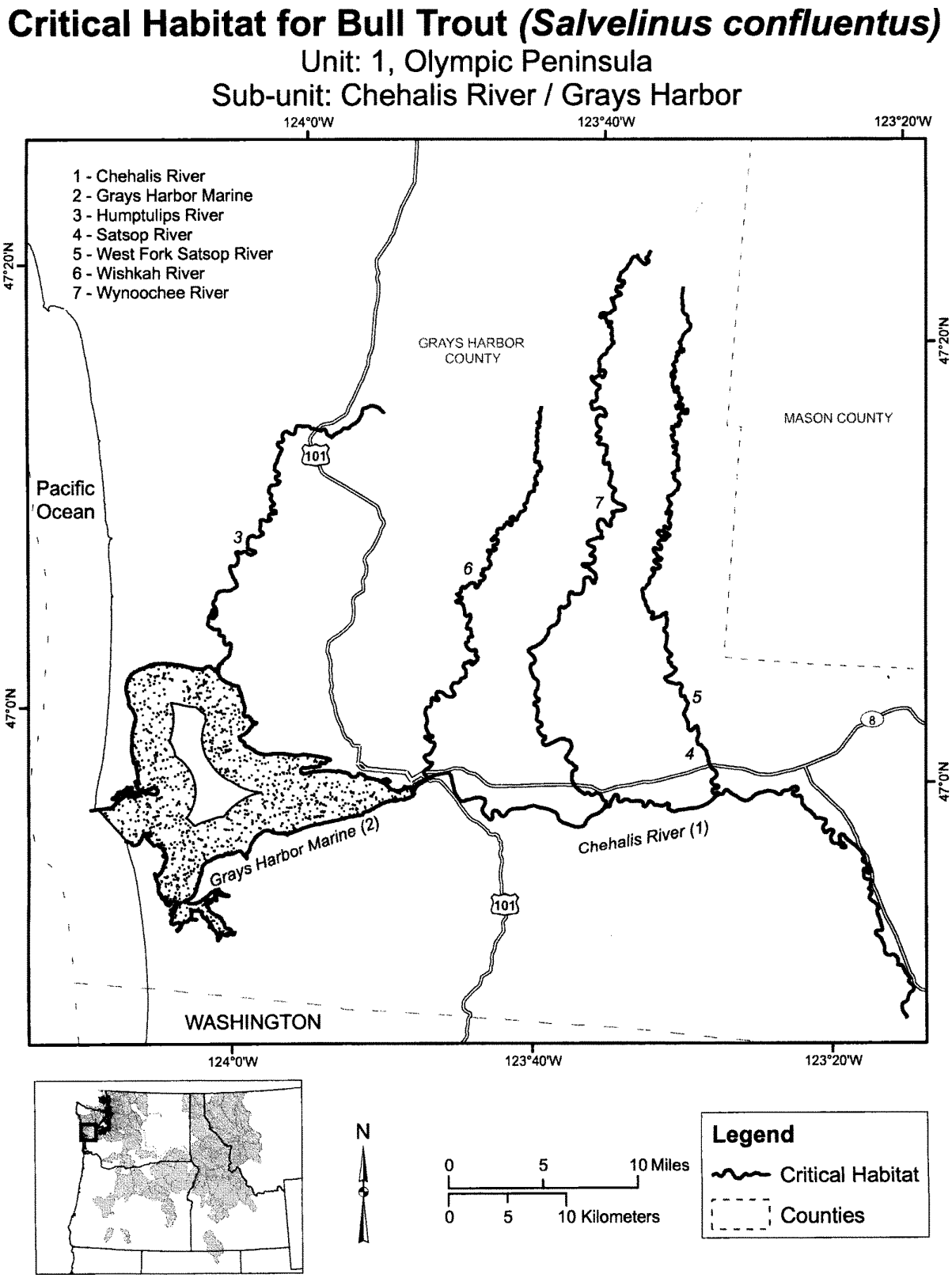
(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Pacific Coast Subunit, follows:



(x) Chehalis River/Grays Harbor Subunit.

(A) [Reserved for textual description of unit.]

(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Chehalis River/Grays Harbor Subunit, follows:

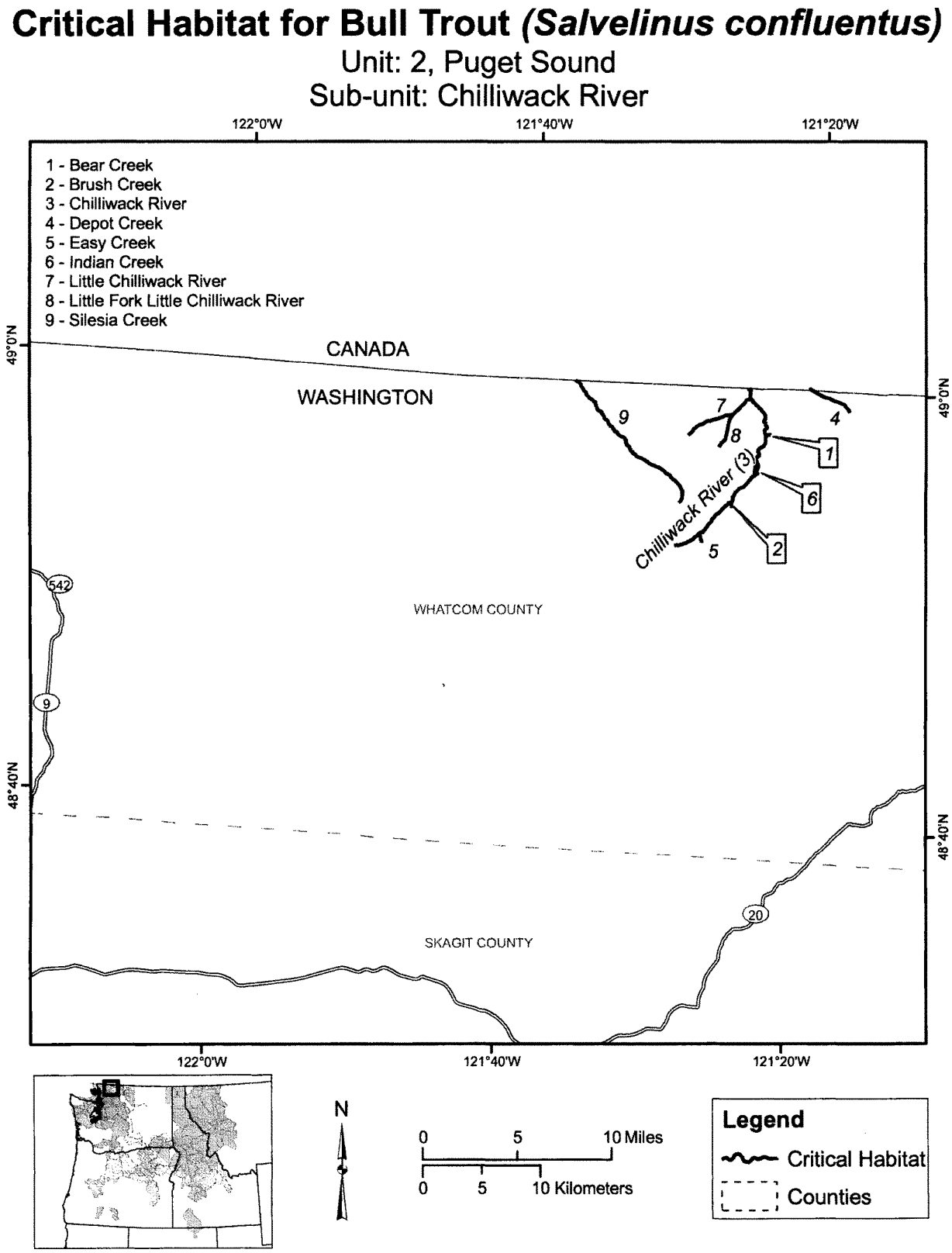


(8) Unit 2: Puget Sound Unit, Washington.

(i) Chilliwack River Subunit.

(A) [Reserved for textual description of unit.]

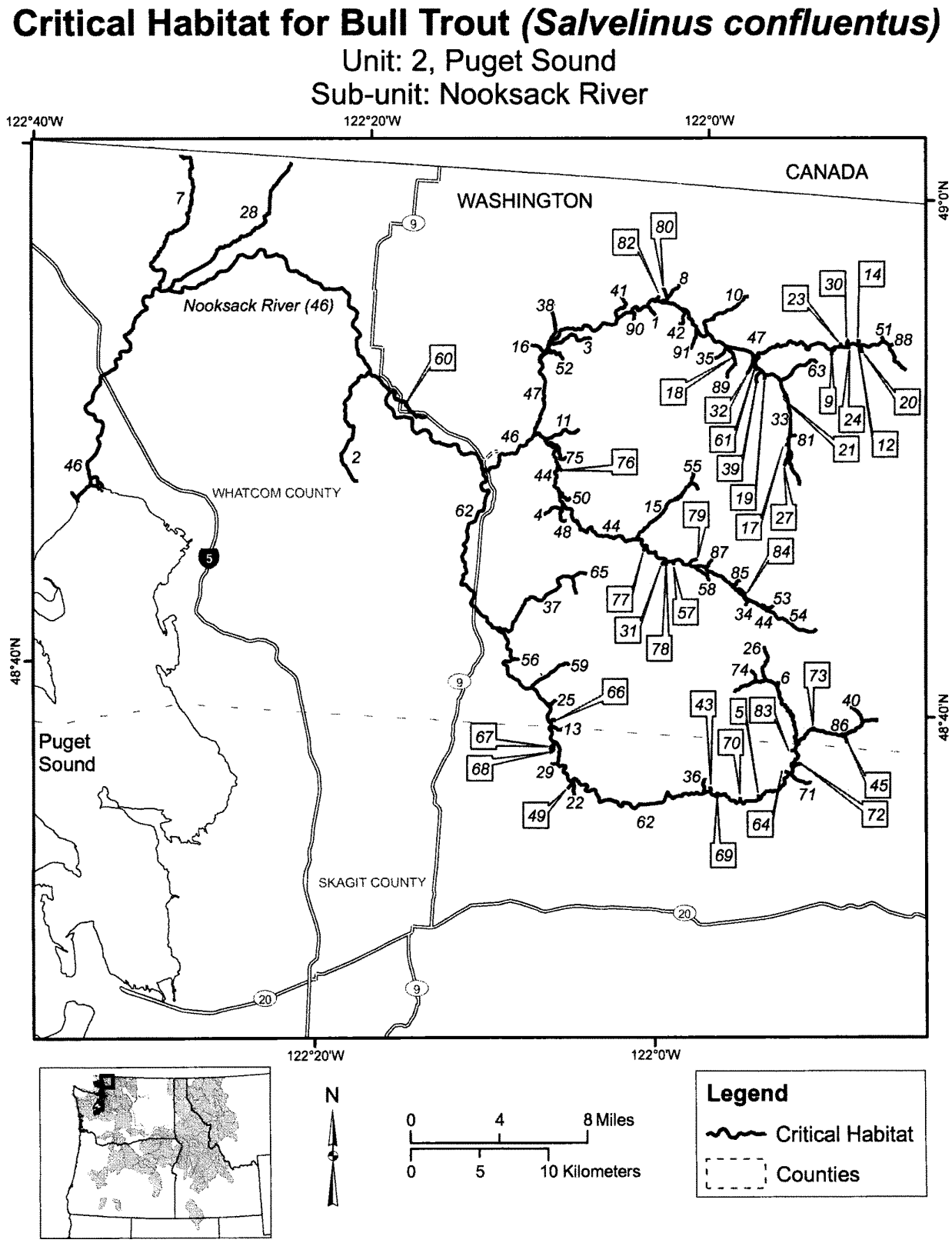
(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Chilliwack River Subunit, follows:



(ii) Nooksack River Subunit.

(A) [Reserved for textual description of unit.]

(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Nooksack River Subunit, follows:



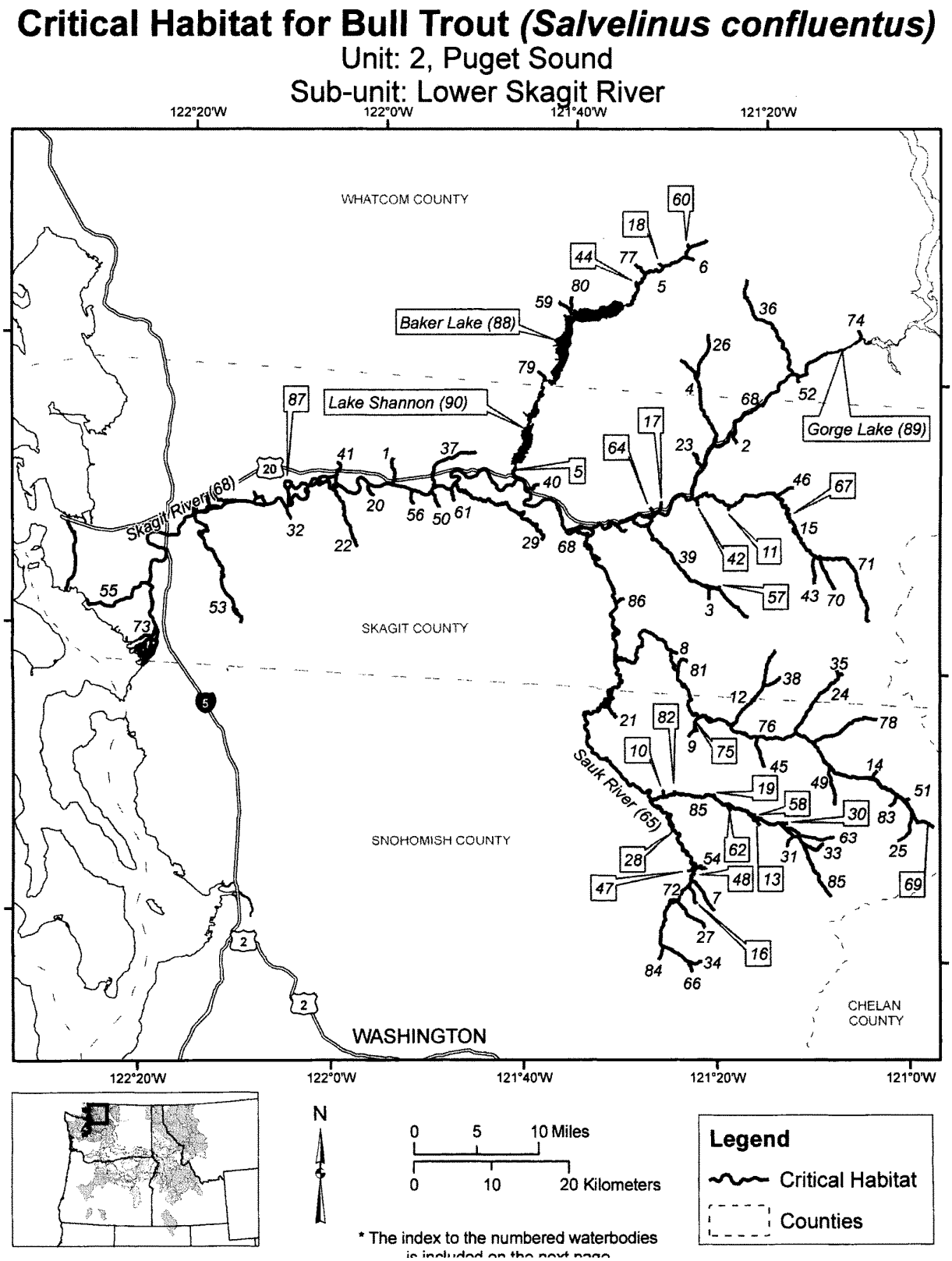
Unit 2: Puget Sound
Sub-Unit: Nooksack River

1 - Aldrich Creek (#0423)
2 - Anderson Creek
3 - Bear Creek
4 - Bear Creek (#0353)
5 - Bear Lake Outlet (#0317)
6 - Bell Creek
7 - Bertrand Creek
8 - Boulder Creek
9 - Boyd Creek
10 - Canyon Creek
11 - Canyon Creek (Canyon Lake Ck)
12 - Cascade Creek
13 - Cavanaugh Creek
14 - Chainup Creek
15 - Clearwater Creek
16 - Coal Creek
17 - Coal Creek (Upper)
18 - Cornell Creek
19 - Davis Creek
20 - Deadhorse Creek
21 - Deep Creek
22 - Deer Creek
23 - Deerhorn Creek
24 - Ditch Creek
25 - Edfro Creek
26 - Elbow Creek / Lake Doreen Outlet (#0331)
27 - Falls Creek
28 - Fishtrap Creek
29 - Fobes Creek
30 - Fossil Creek
31 - Galbraith Creek
32 - Gallop Creek
33 - Glacier Creek
34 - Green Creek
35 - Hedrick Creek
36 - Howard Creek
37 - Hutchinson Creek
38 - Kendall Creek
39 - Little Creek
40 - Loomis Creek
41 - Maple Creek
42 - McDonald Creek (#0435)
43 - McGinnis Creek
44 – M. F. Nooksack River
45 - Monument Creek (#0324)
46 - Nooksack River
47 – N. F. Nooksack River
48 - Peat Bog Creek (#0352)
49 - Plumbago Creek
50 - Porter Creek
51 - Powerhouse Creek
52 - Racehorse Creek
53 - Rankin Creek
54 - Ridley Creek
55 - Rocky Creek
56 - Saxson Creek
57 - Seymour Creek
58 - Sister Creek
59 - Skookum Creek
60 - Smith Creek
61 - Son of Gallop
62 – S. F. Nooksack River
63 - Thompson Creek
64 - Three Lakes Outlet (#0319)
65 - Unnamed trib. (#0265)
66 - Unnamed trib. (#0284)
67 - Unnamed trib. (#0290)
68 - Unnamed trib. (#0291)
69 - Unnamed trib. (#0315)
70 - Unnamed trib. (#0316)
71 - Unnamed trib. (#0320)
72 - Unnamed trib. (#0321)
73 - Unnamed trib. (#0323)
74 - Unnamed trib. (#0332)
75 - Unnamed trib. (#0347)
76 - Unnamed trib. (#0349)
77 - Unnamed trib. (#0367)
78 - Unnamed trib. (#0371)
79 - Unnamed trib. (#0374)
80 - Unnamed trib. (#0425)
81 - Unnamed trib. (#0476)
82 - Unnamed trib. downstream Boulder Ck
83 - Unnamed trib. downstream Wanlick Ck
84 - Unnamed trib. upstream Wallace Ck
85 - Wallace Creek
86 - Wanlick Creek
87 - Warm Creek
88 - Wells Creek
89 - West Cornell Creek
90 - West Slide Creek (#0422)
91 - Wildcat Creek

(iii) Skagit River Subunit.

(A) [Reserved for textual description of unit.]

(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Skagit River Subunit, follows:



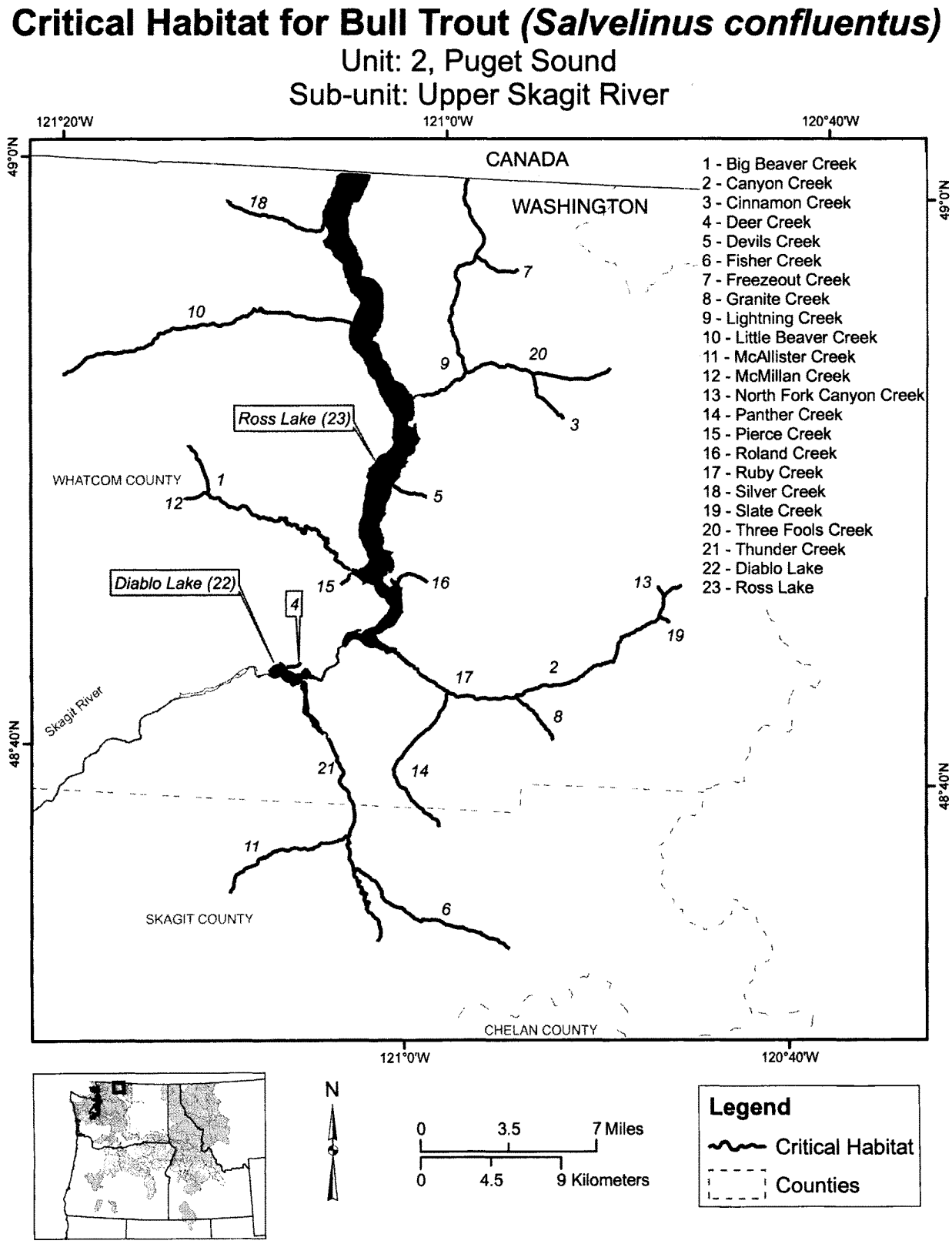
Unit 2: Puget Sound
Sub-unit: Lower Skagit

1 - Alder Creek
2 - Alma Creek
3 - Arrow Creek
4 - Bacon Creek
5 - Baker River
6 - Bald Eagle Creek
7 - Bedal Creek
8 - Big Creek
9 - Black Creek
10 - Black Oak Creek
11 - Boulder Creek
12 - Buck Creek
13 - Camp Creek
14 - Canyon Creek
15 - Cascade River
16 - Chocwick Creek
17 - Corkindale Creek
18 - Crystal Creek
19 - Crystal Creek
20 - Cumberland Creek
21 - Dan Creek
22 - Day Creek
23 - Diobsud Creek
24 - Downey Creek
25 - Dusty Creek
26 - East Fork Bacon Creek
27 - Elliott Creek
28 - Falls Creek
29 - Finney Creek
30 - Fire Creek
31 - Fourteenmile Creek
32 - Gilligan Creek
33 - Glacier Creek
34 - Glacier Creek
35 - Goat Creek
36 - Goodell Creek
37 - Grandy Creek
38 - Horse Creek
39 - Illabot Creek
40 - Jackman Creek
41 - Jones Creek
42 - Jordan Creek
43 - Kindy Creek
44 - Lake Creek
45 - Lime Creek
46 - Marble Creek
47 - Martin Creek
48 - Merry Brook Creek
49 - Milk Creek
50 - Mill Creek
51 - Miners Creek
52 - Newhalem Creek
53 - Nookachamps Creek
54 - North Fork Sauk River
55 - North Fork Skagit River
56 - O'Toole Creek
57 - Otter Creek
58 - Owl Creek
59 - Park Creek
60 - Pass Creek
61 - Pressentin Creek
62 - Pugh Creek
63 - Pumice Creek
64 - Rocky Creek
65 - Sauk River
66 - Seventysix Gulch
67 - Sibley Creek
68 - Skagit River
69 - Small Creek
70 - Sonny Boy Creek
71 - South Fork Cascade River
72 - South Fork Sauk River
73 - South Fork Skagit River
74 - Stetattle Creek
75 - Straight Creek
76 - Suiattle River
77 - Sulphide Creek
78 - Sulphur Creek
79 - Sulphur Creek (Lake Shannon)
80 - Swift Creek
81 - Tenas Creek
82 - Unnamed trib. (#1119)
83 - Vista Creek
84 - Weden Creek
85 - White Chuck River
86 - White Creek
87 - Wiseman Creek
88 - Baker Lake
89 - Gorge Lake
90 - Lake Shannon

(iv) Upper Skagit River Subunit.

(A) [Reserved for textual description of unit.]

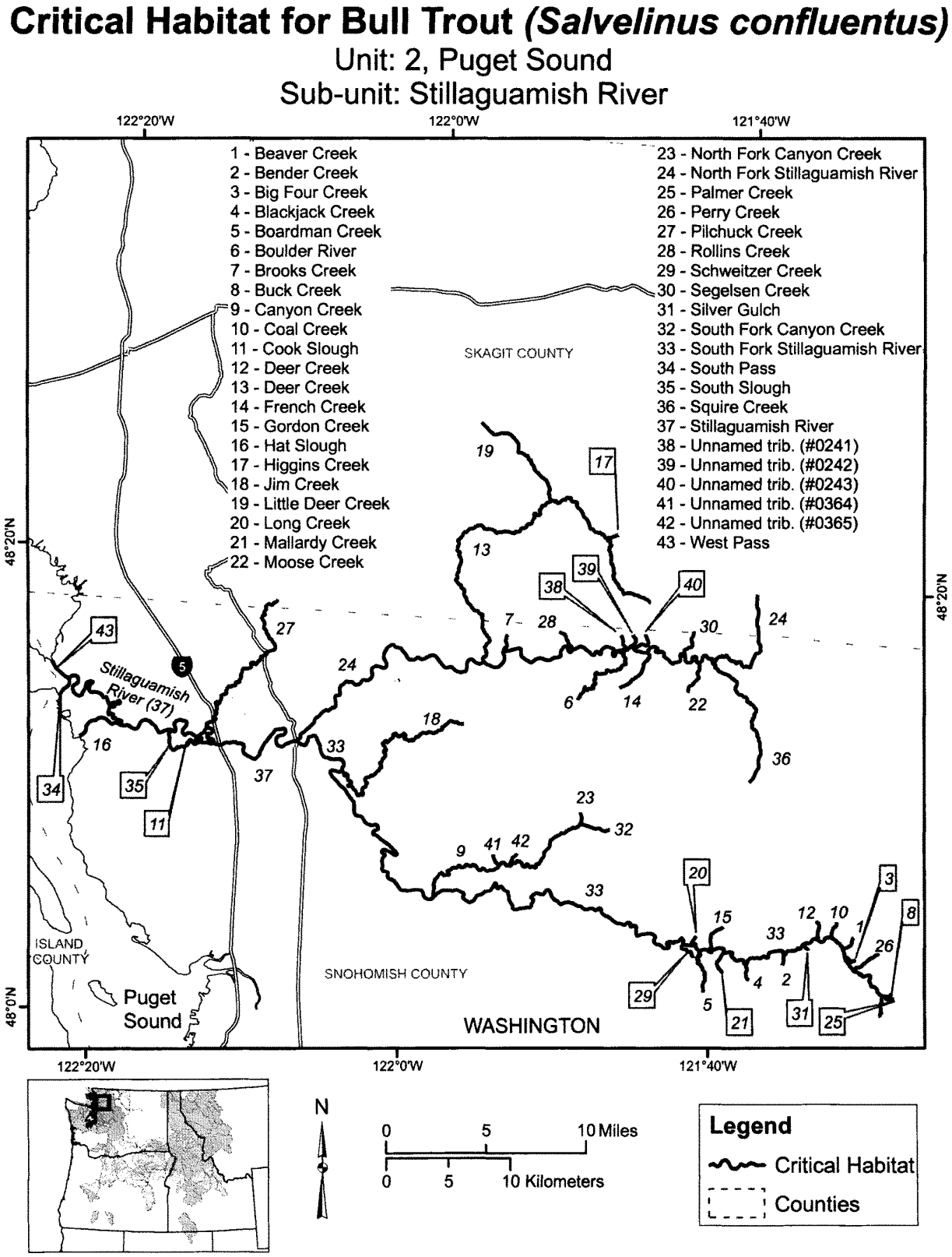
(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Upper Skagit River Subunit, follows:



(v) Stillaguamish River Subunit.

(A) [Reserved for textual description of unit.]

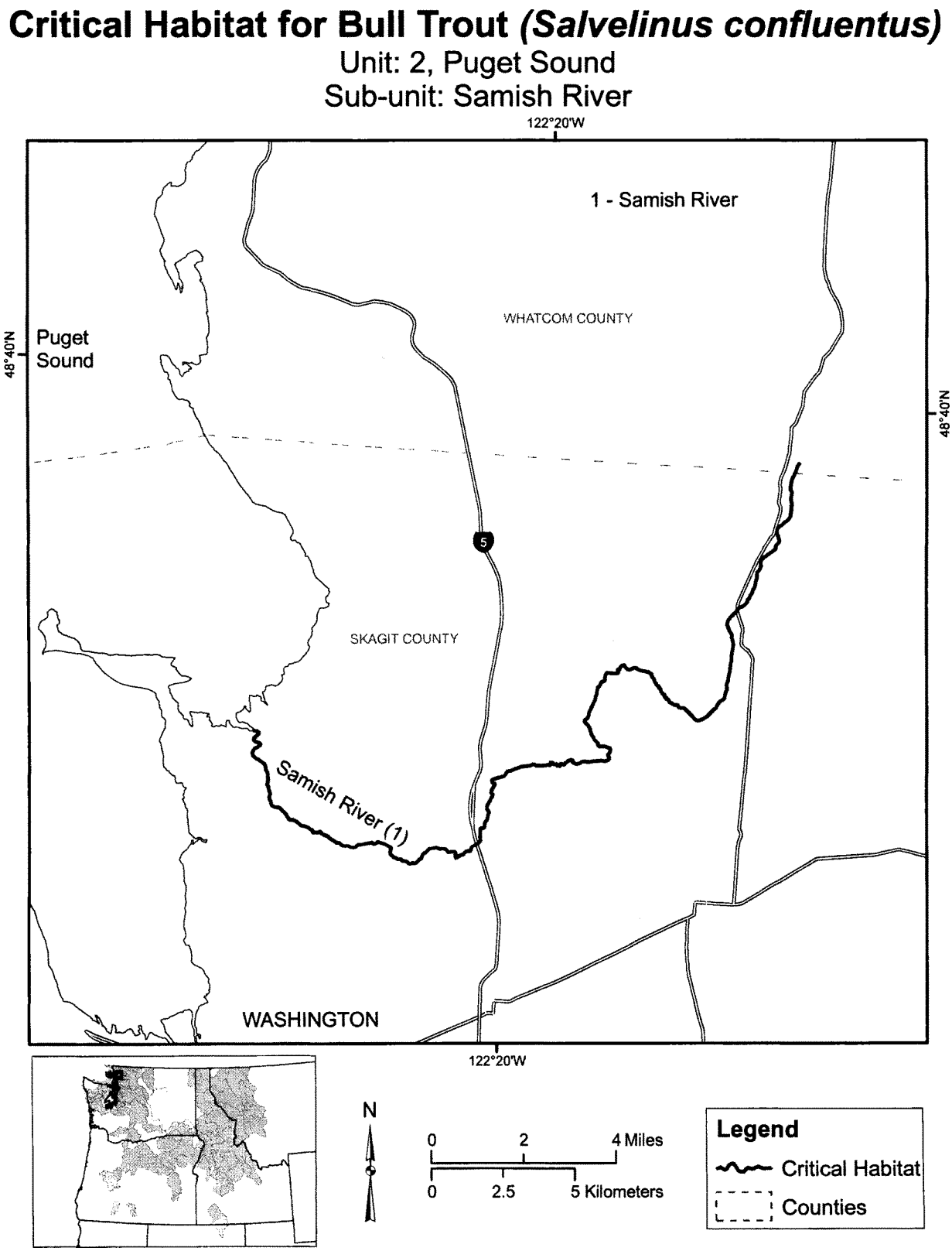
(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Stillaguamish River Subunit, follows:



(vi) Samish River Subunit.

(A) [Reserved for textual description of unit.]

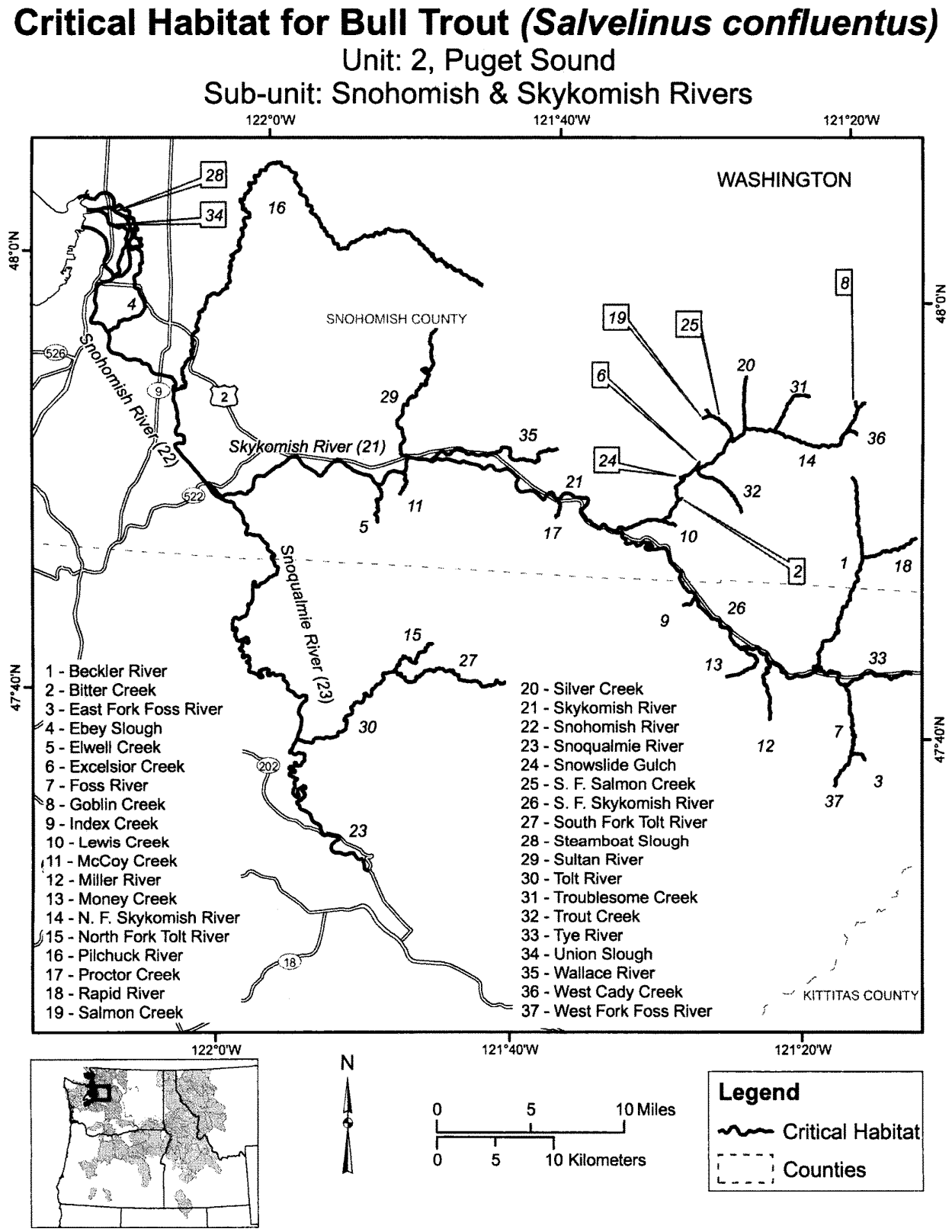
(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Samish River Subunit, follows:



(vii) Snohomish–Skykomish River Subunit.

(A) [Reserved for textual description of unit.]

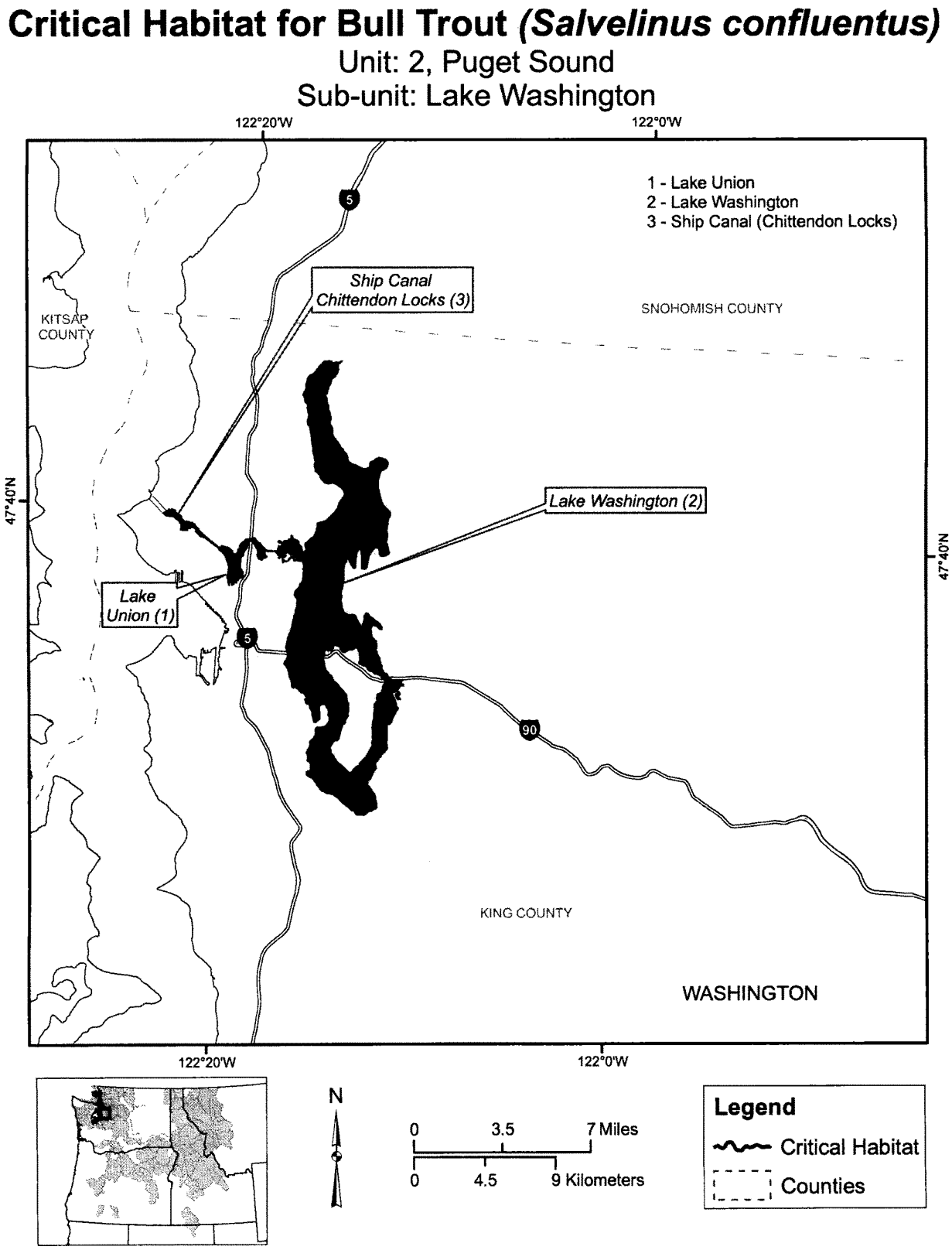
(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Snohomish–Skykomish River Subunit, follows:



(viii) Lake Washington Subunit.

(A) [Reserved for textual description of unit.]

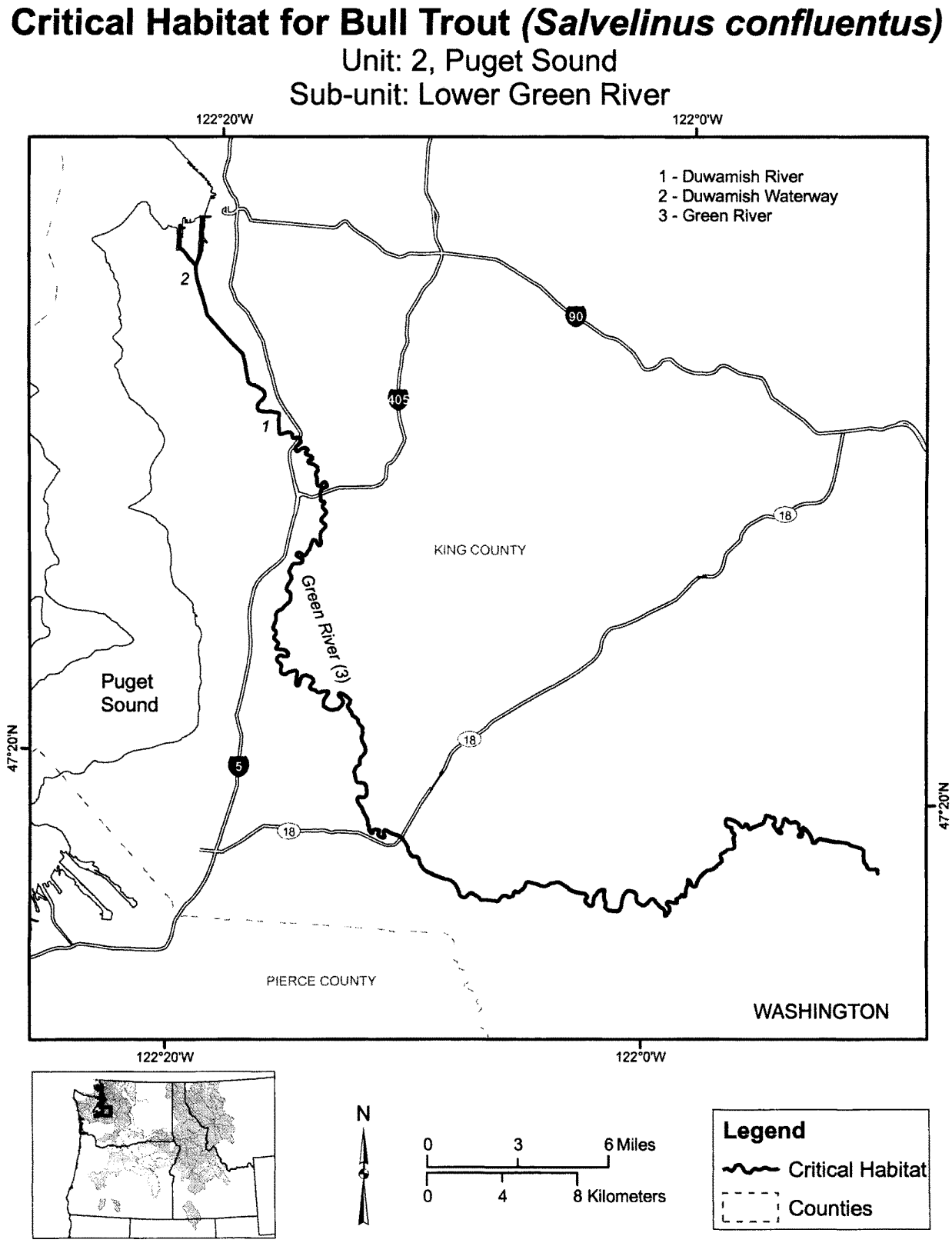
(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Lake Washington Subunit, follows:



(ix) Lower Green River Subunit.

(A) [Reserved for textual description of unit.]

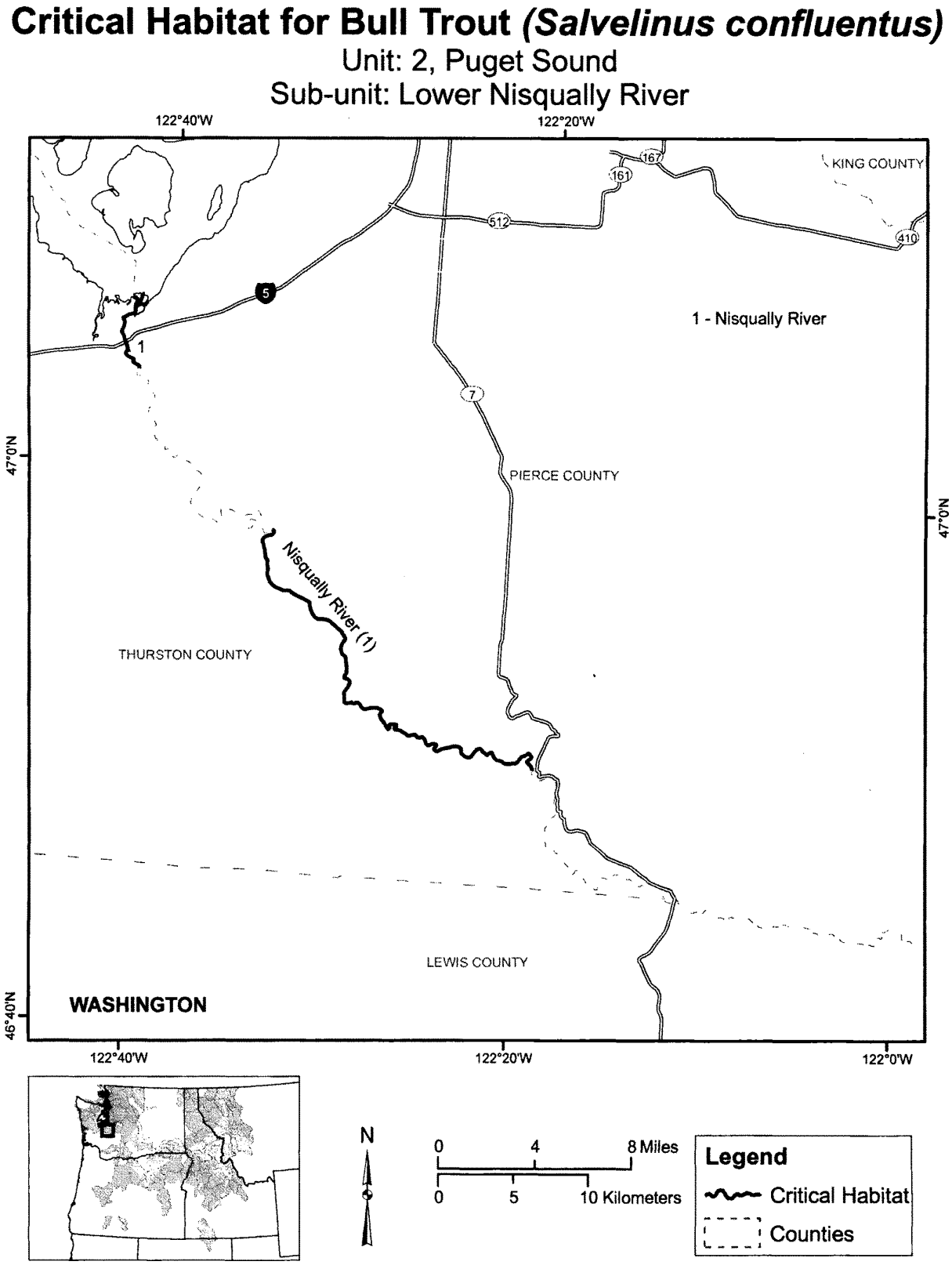
(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Lower Green River Subunit, follows:



(x) Lower Nisqually River Subunit.

(A) [Reserved for textual description of unit.]

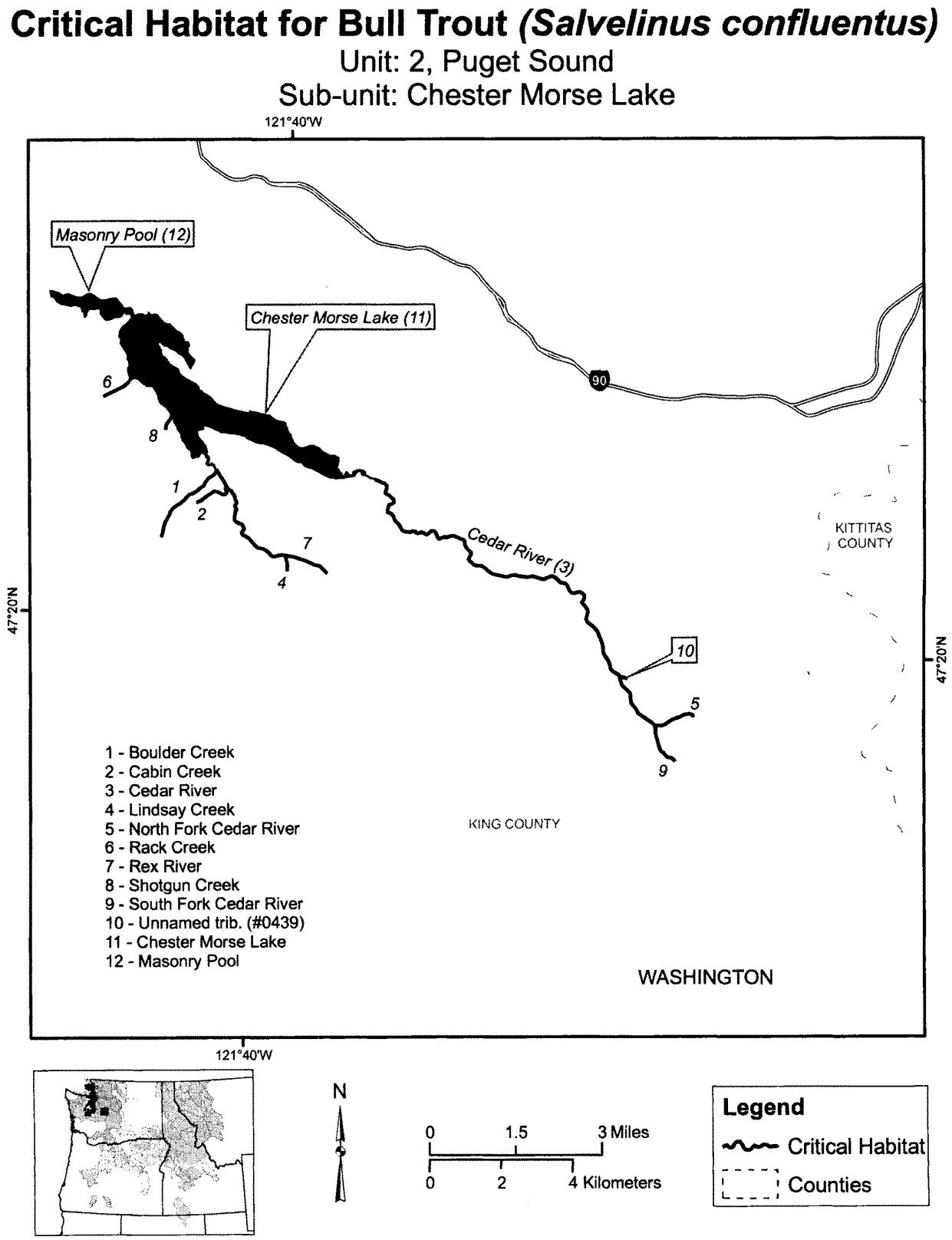
(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Lower Nisqually River Subunit, follows:



(xi) Chester Morse Lake Subunit.

(A) [Reserved for textual description of unit.]

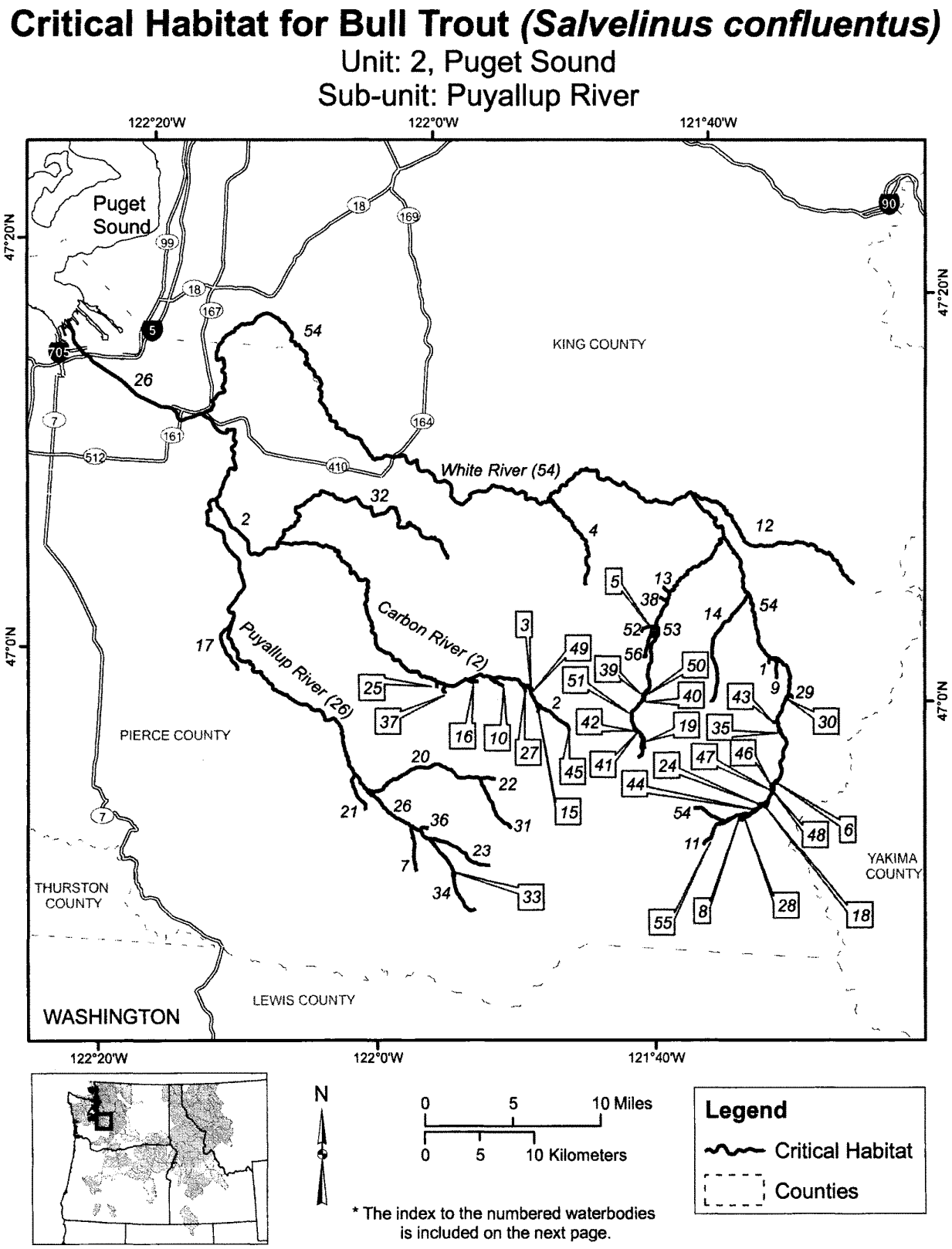
(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Chester Morse Lake Subunit, follows:



(xii) Puyallup River Subunit.

(A) [Reserved for textual description of unit.]

(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Puyallup River Subunit, follows:



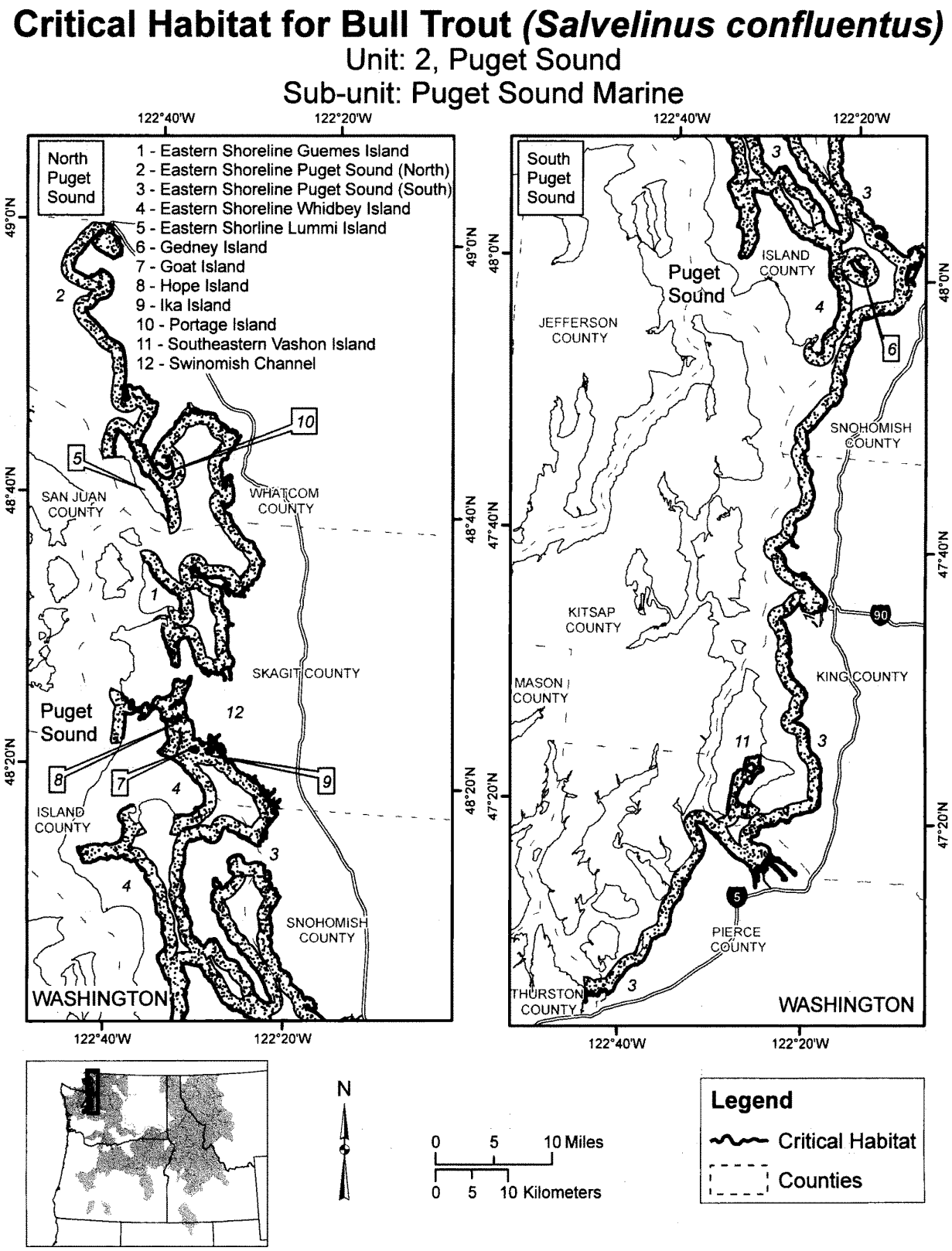
Unit 2: Puget Sound
Sub-Unit: Puyallup River

1 - Buck Creek
2 - Carbon River
3 - Chenuis Creek
4 - Clearwater River
5 - Cripple Creek
6 - Crystal Creek
7 - Deer Creek
8 - Discovery Creek
9 - Doe Creek
10 - Falls Creek
11 - Fryingpan Creek
12 - Greenwater River
13 - Hazzard Creek
14 - Huckleberry Creek
15 - Ipsut Creek
16 - June Creek
17 - Kapowsin Creek
18 - Klickitat Creek
19 - Lodi Creek
20 - Mowich River
21 - Niesson Creek
22 - North Mowich River
23 - North Puyallup River
24 - Parallel Creek
25 - Poch Creek
26 - Puyallup River
27 - Ranger Creek
28 - Shaw Creek
29 - Silver Creek
30 - Silver Springs
31 - South Mowich River
32 - South Prairie Creek
33 - South Puyallup River
34 - St.Andrews Creek
35 - Sunrise Creek
36 - Swift Creek
37 - Tolmie Creek
38 - Unnamed trib. (#0194)
39 - Unnamed trib. (#0217)
40 - Unnamed trib. (#0219)
41 - Unnamed trib. (#0226)
42 - Unnamed trib. (#0234)
43 - Unnamed trib. (#0336)
44 - Unnamed trib. (#0364)
45 - Unnamed trib. (#0565)
46 - Unnamed trib. (LB1) upstream of Crystal Ck
47 - Unnamed trib. (LB2) upstream of Crystal Ck
48 - Unnamed trib. (RB) upstream of Crystal Ck
49 - Unnamed trib. upstream Chenius Ck
50 - Unnamed trib. upstream of (#0214)
51 - Van Horn Creek
52 - Viola Creek
53 - West Fork White River
54 - White River
55 - Wright Creek
56 - Wrong Creek

(xiii) Puget Sound Marine Subunit.

(A) [Reserved for textual description of unit.]

(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Puget Sound Marine Subunit, follows:

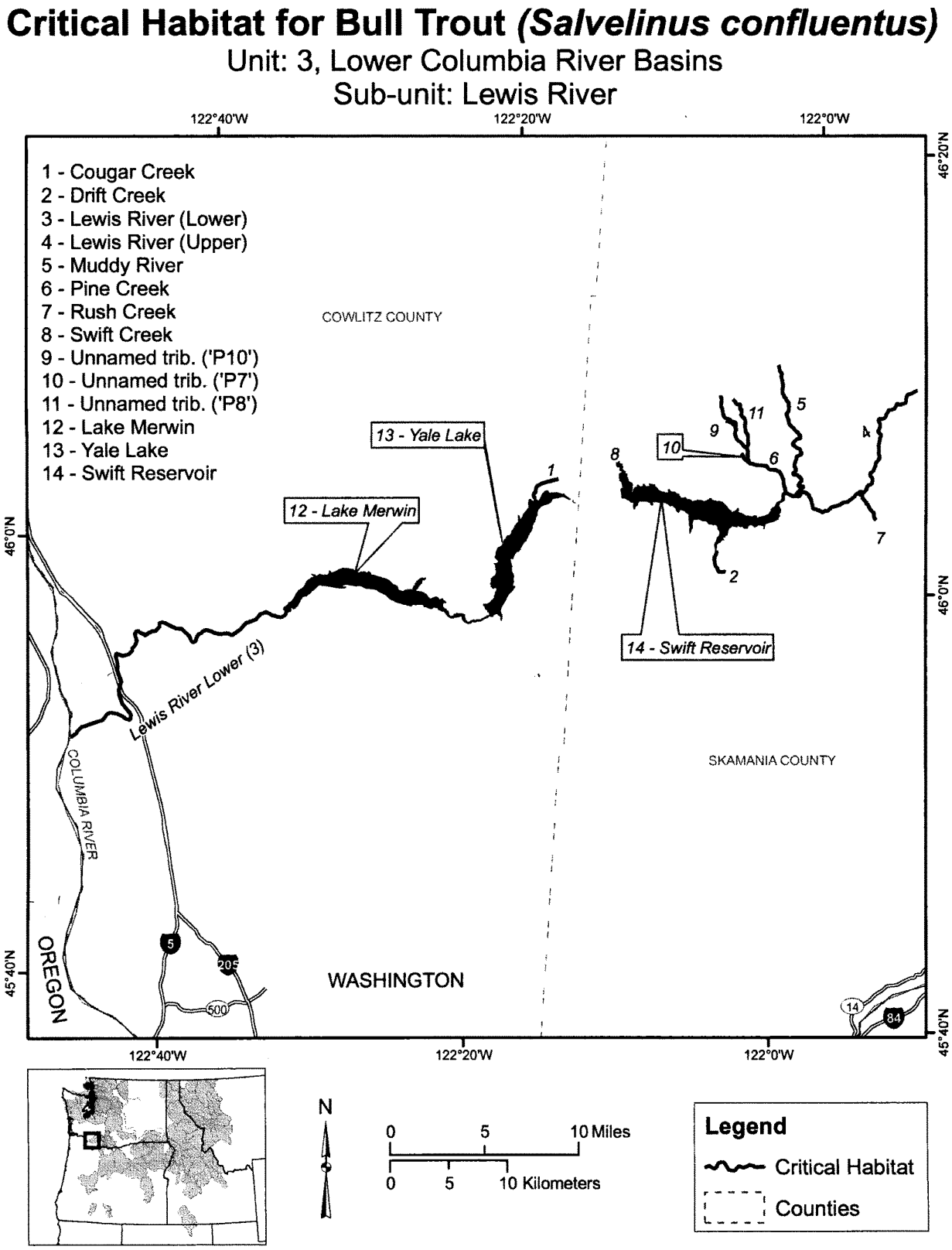


(9) Unit 3: Lower Columbia River Basins Unit, Washington.

(i) Lewis River Subunit.

(A) [Reserved for textual description of unit.]

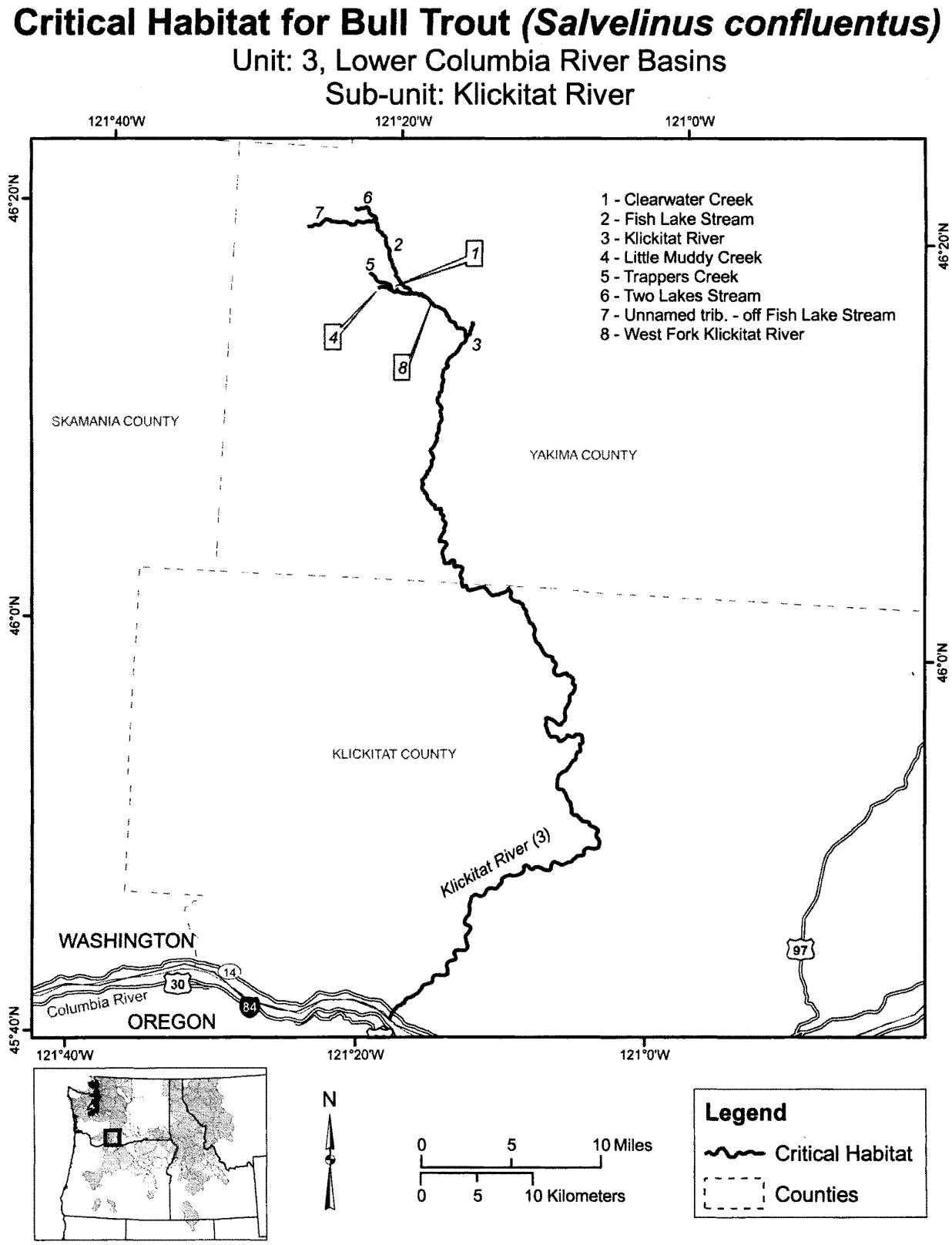
(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Lewis River Subunit, follows:



(ii) Klickitat River Subunit.

(A) [Reserved for textual description of unit.]

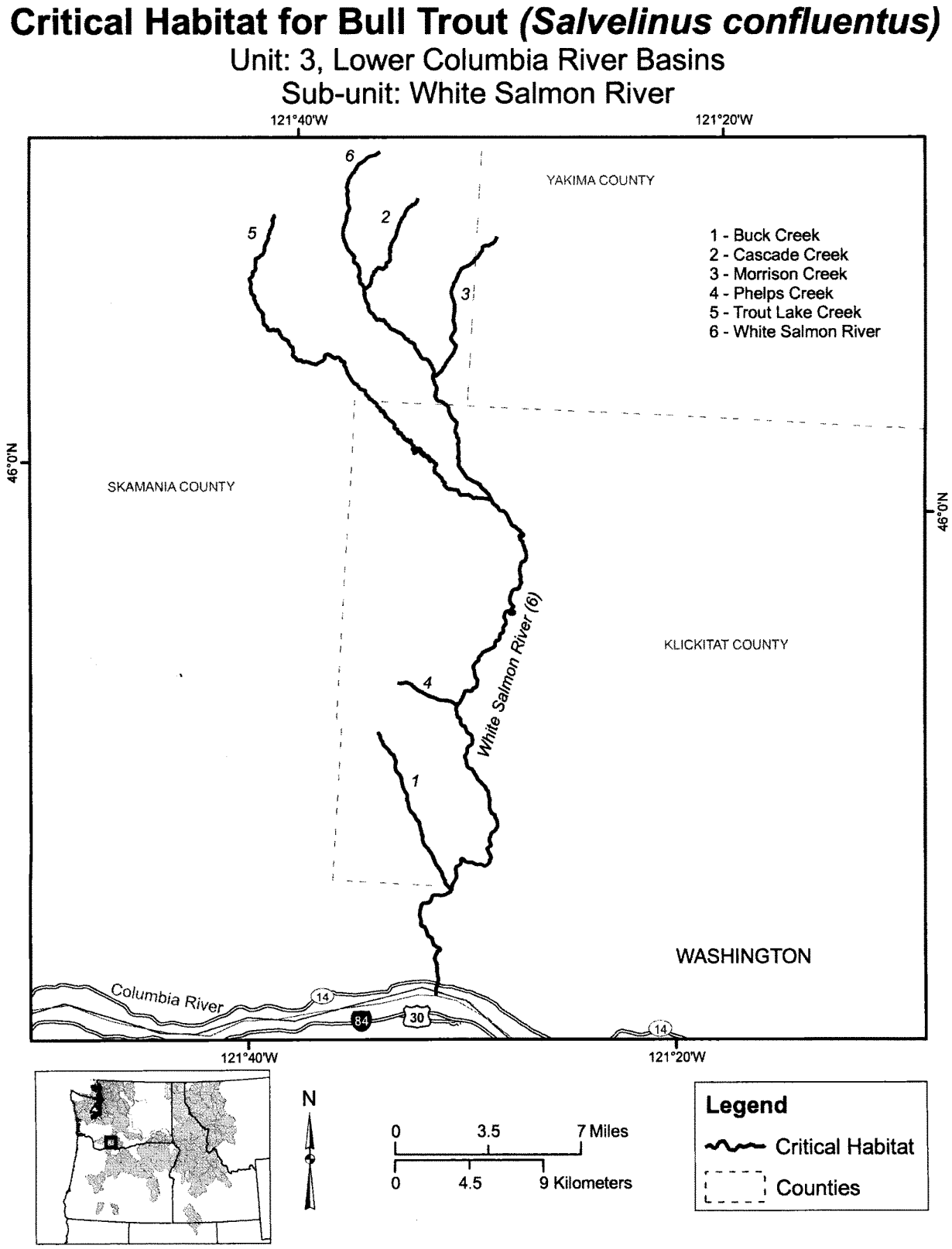
(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Klickitat River Subunit, follows:



(iii) White Salmon River Subunit.

(A) [Reserved for textual description of unit.]

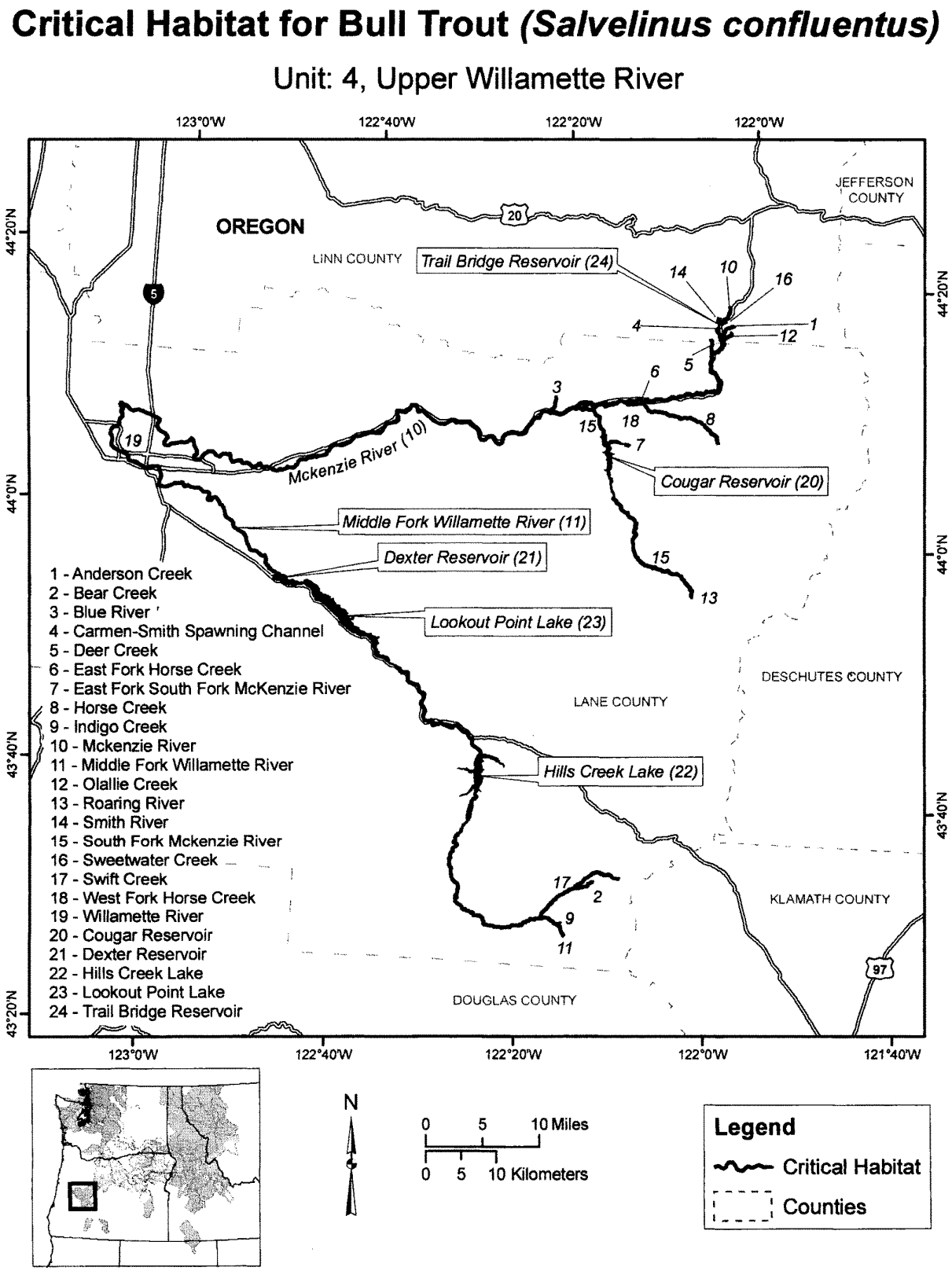
(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), White Salmon River Subunit, follows:



(10) Unit 4: Upper Willamette River Unit, Oregon.

(i) [Reserved for textual description of unit.]

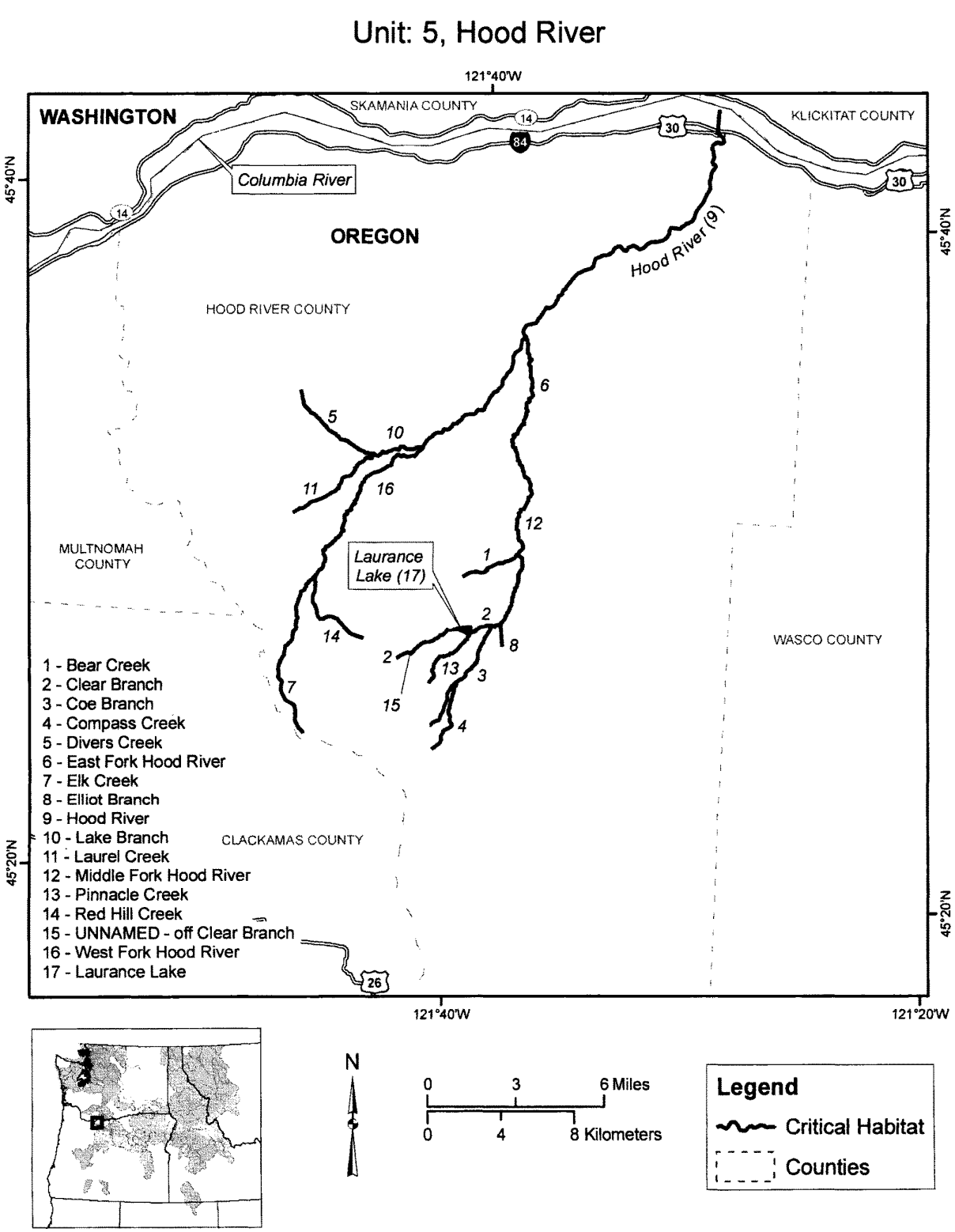
(ii) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Upper Willamette Unit, follows:



(11) Unit 5: Hood River Unit, Oregon.

(i) [Reserved for textual description of unit.]

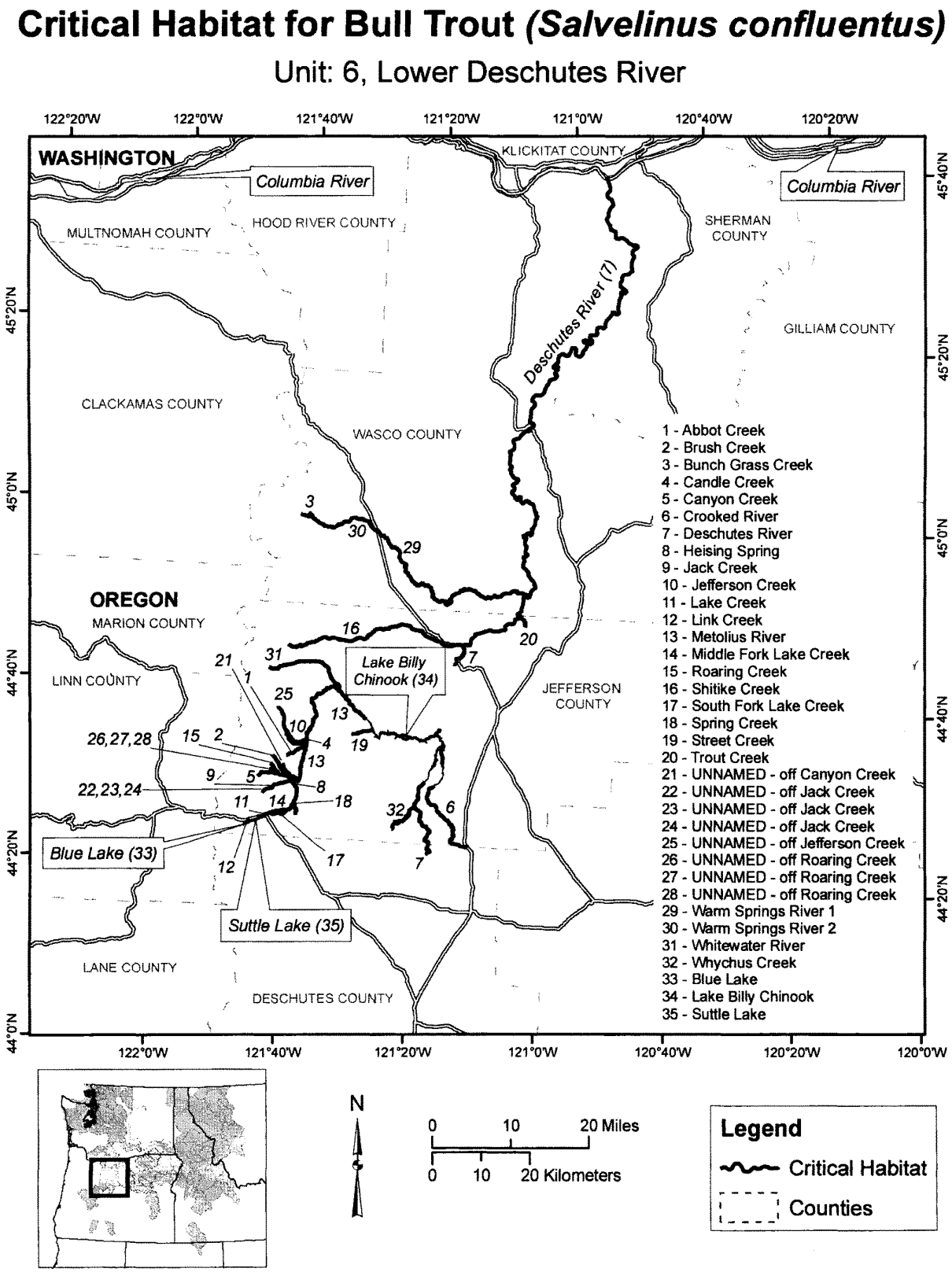
(ii) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Hood River Unit, follows:



(12) Unit 6: Lower Deschutes River Unit, Oregon.

(i) [Reserved for textual description of unit.]

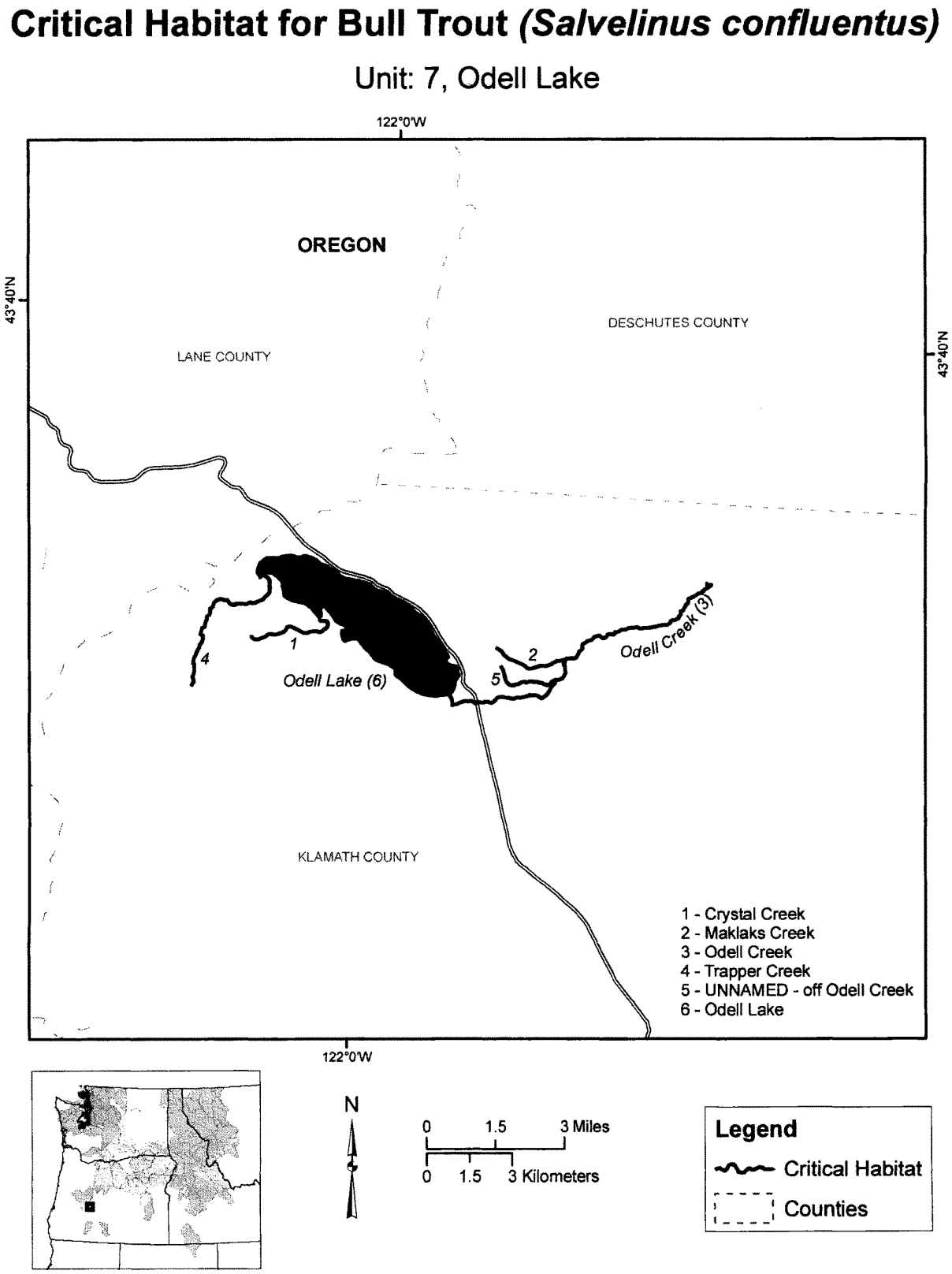
(ii) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Lower Deschutes River Unit, follows:



(13) Unit 7: Odell Lake Unit, Oregon.

(i) [Reserved for textual description of unit.]

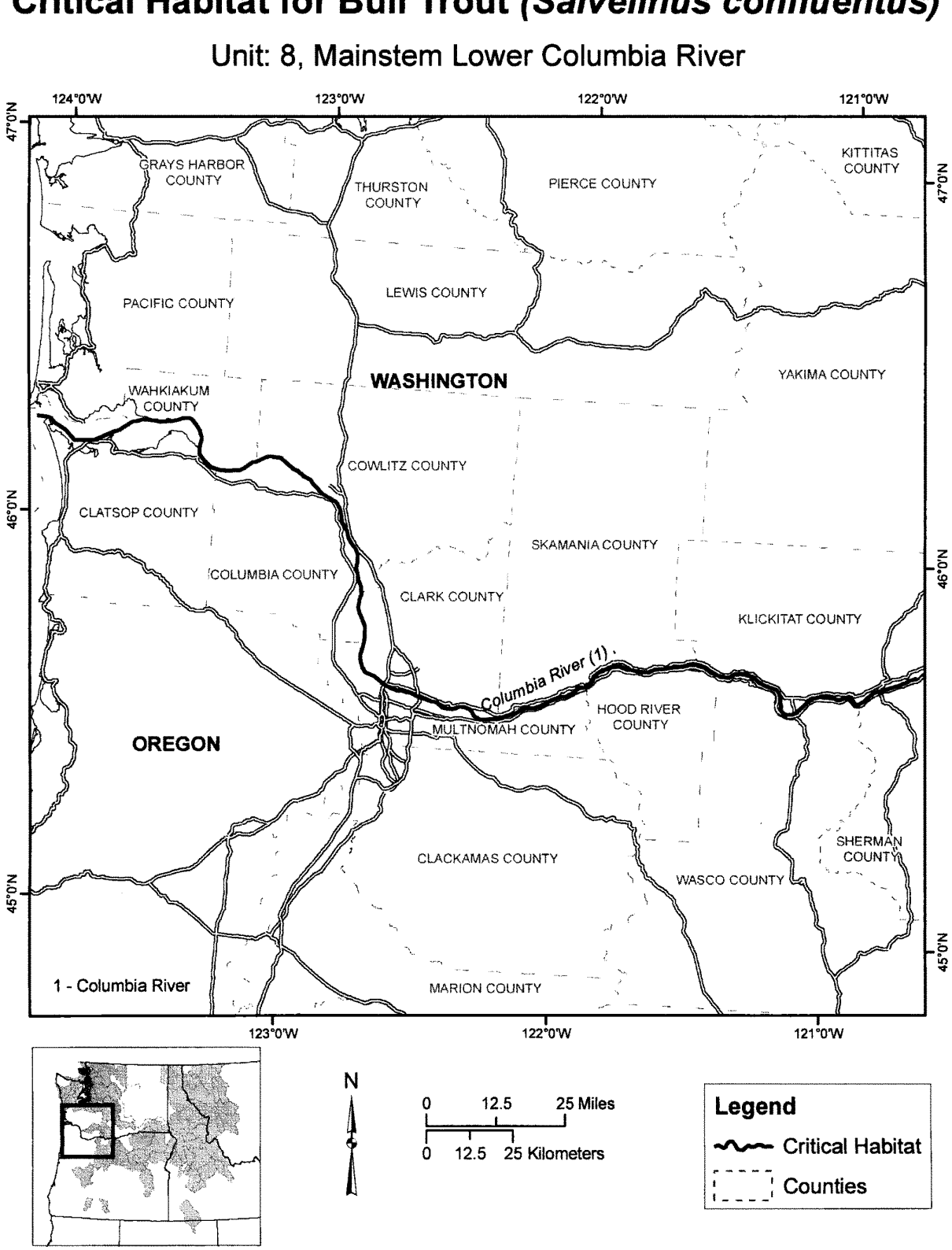
(ii) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Odell Lake Unit, follows:



(14) Unit 8: Mainstem Lower Columbia River Unit, Oregon and Washington.

(i) [Reserved for textual description of unit.]

(ii) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Mainstem Lower Columbia River Unit, follows:

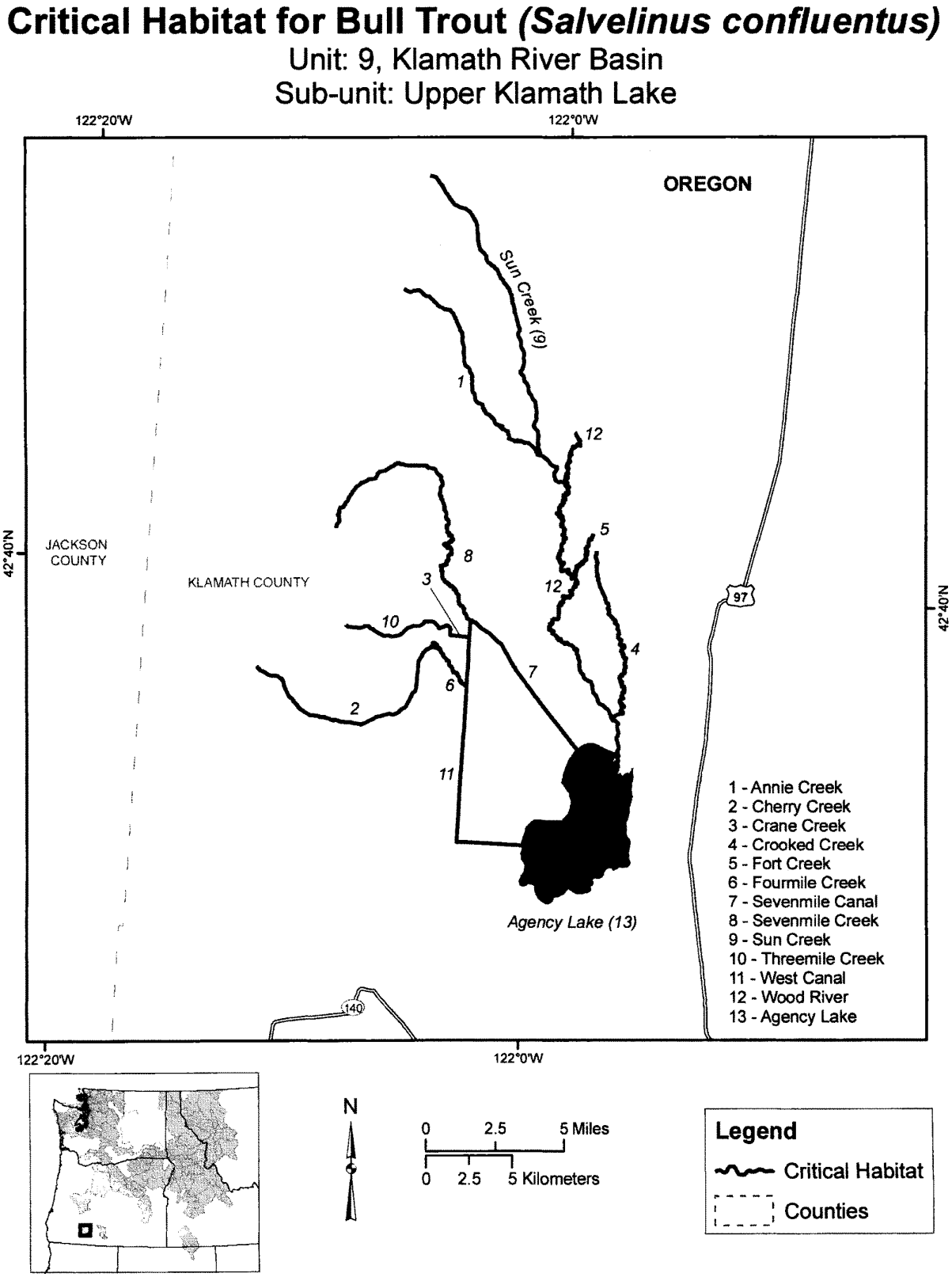


(15) Unit 9: Klamath River Basin Unit, Oregon.

(i) Upper Klamath Lake Subunit.

(A) [Reserved for textual description of unit.]

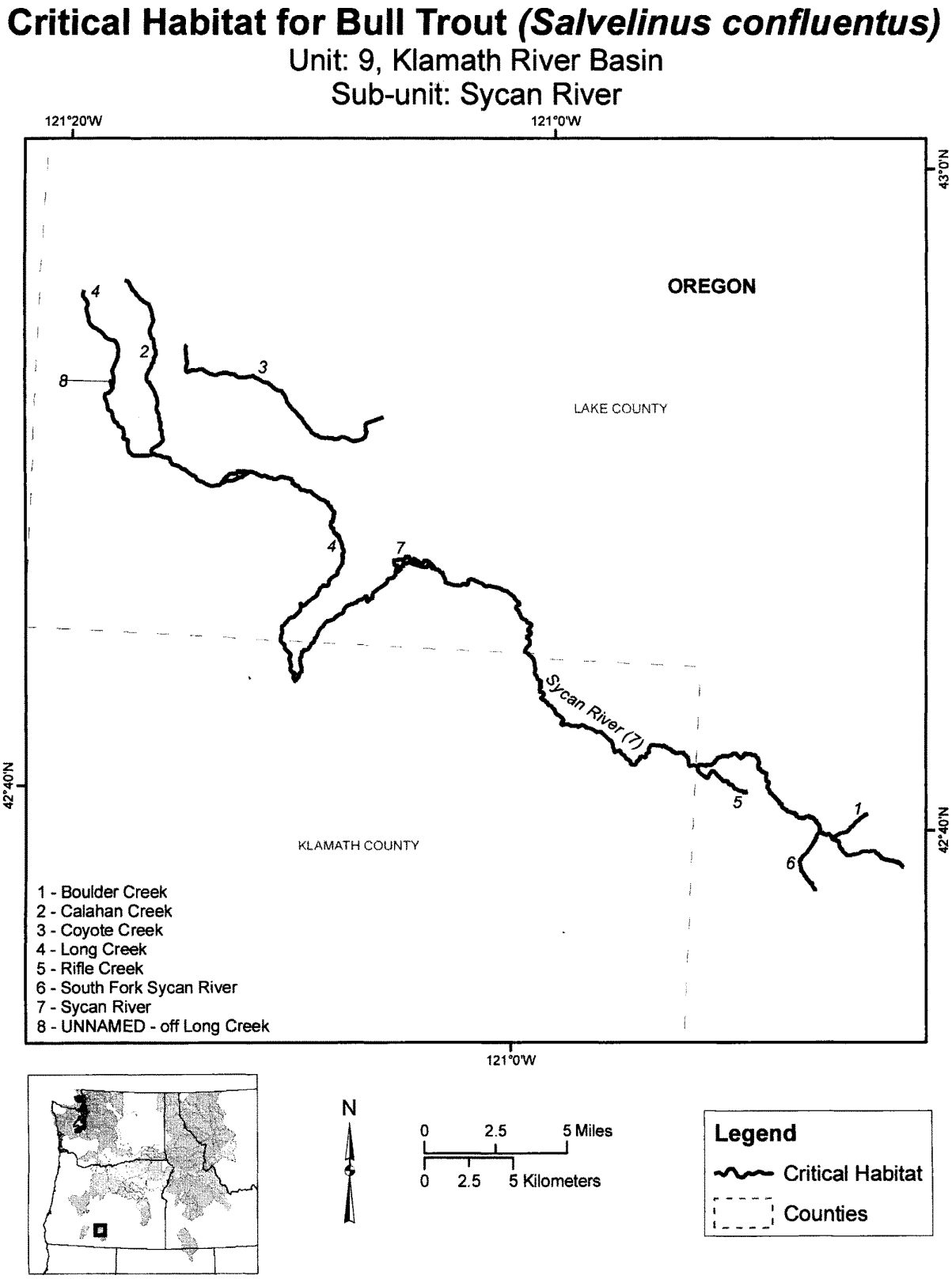
(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Klamath Lake Subunit, follows:



(ii) Sycan River Subunit.

(A) [Reserved for textual description of unit.]

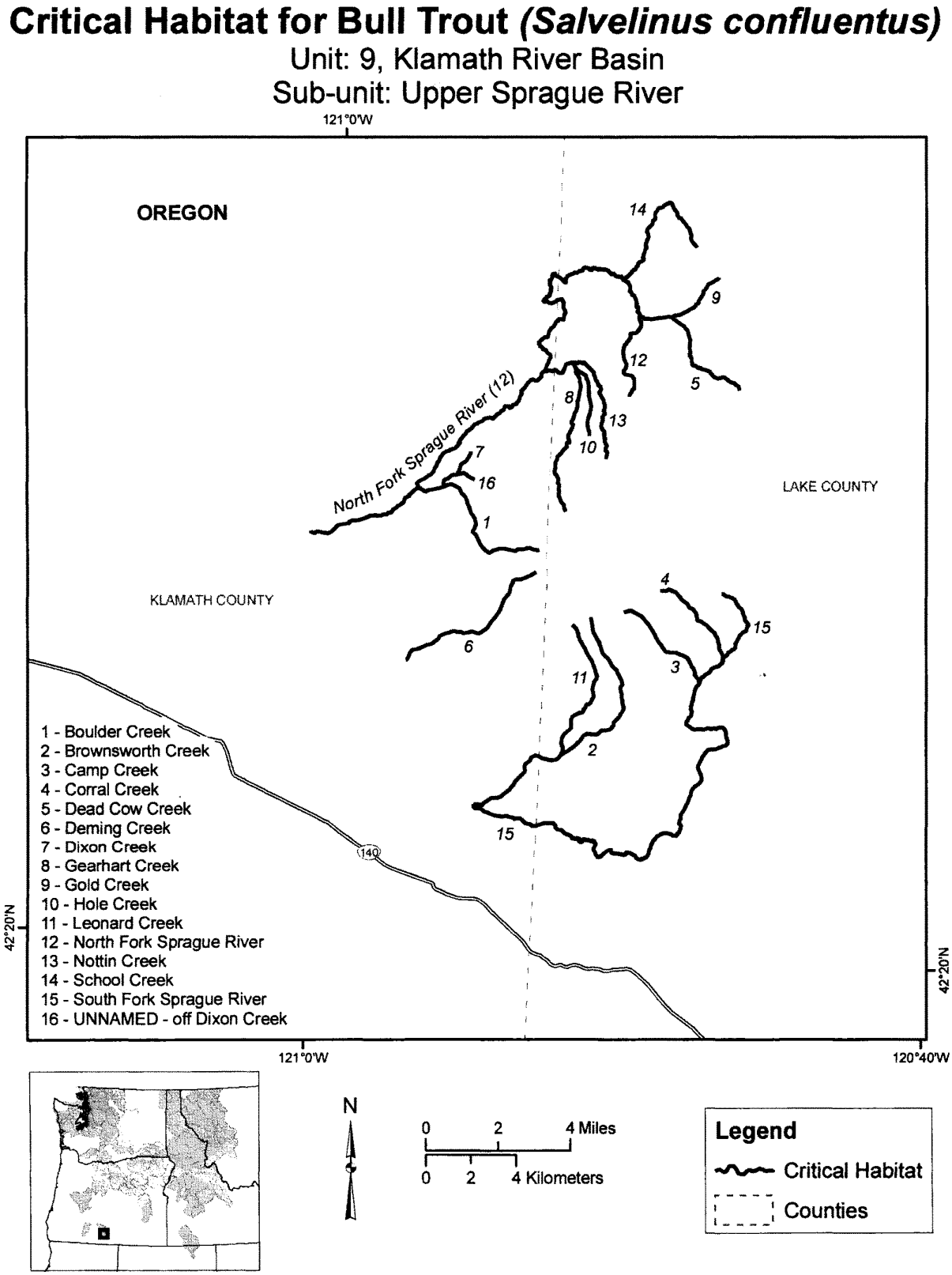
(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Sycan River Subunit, follows:



(iii) Upper Sprague River Subunit.

(A) [Reserved for textual description of unit.]

(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Upper Sprague River Subunit, follows:

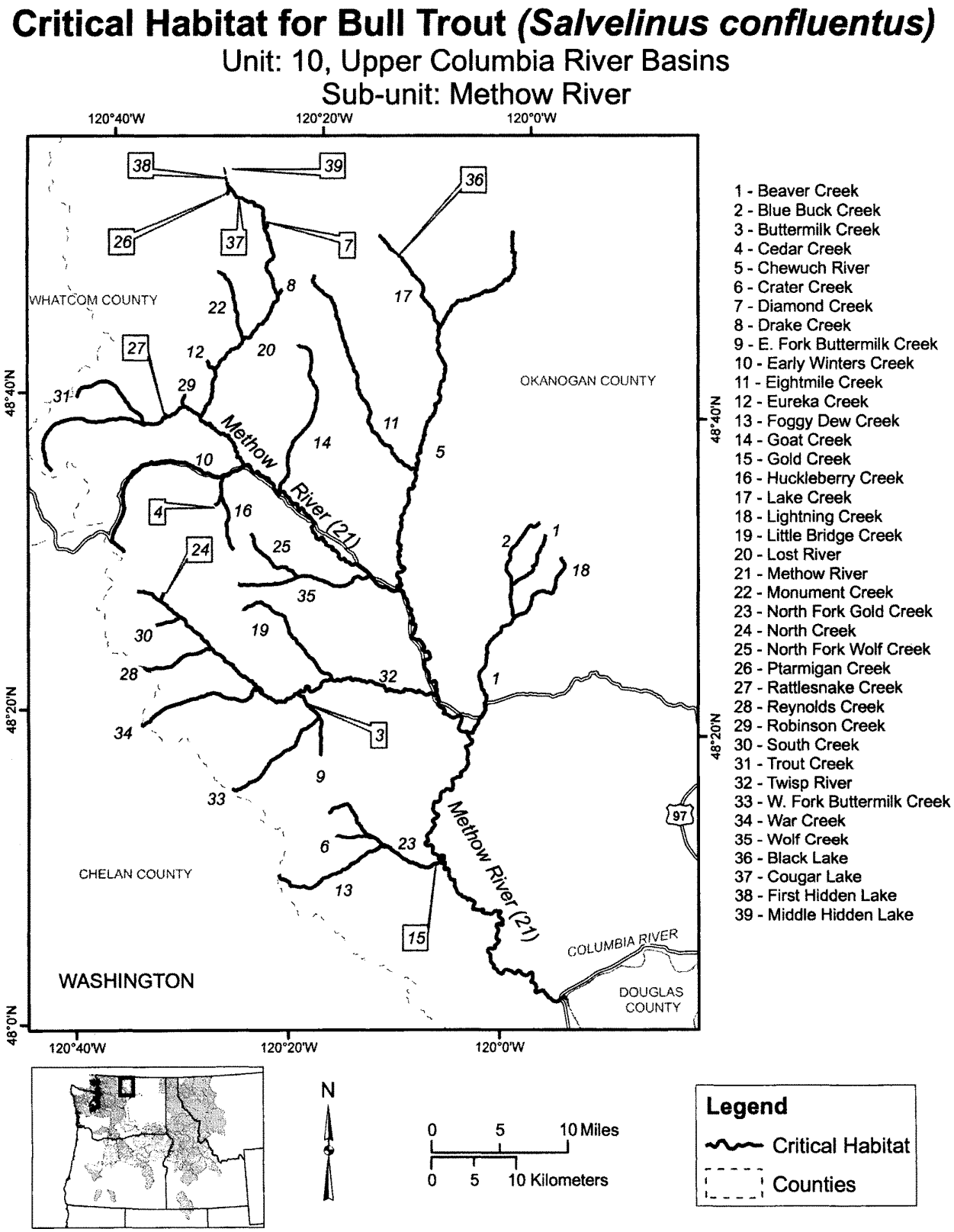


(16) Unit 10: Upper Columbia River Basins Unit, Washington.

(i) Methow River Subunit.

(A) [Reserved for textual description of unit.]

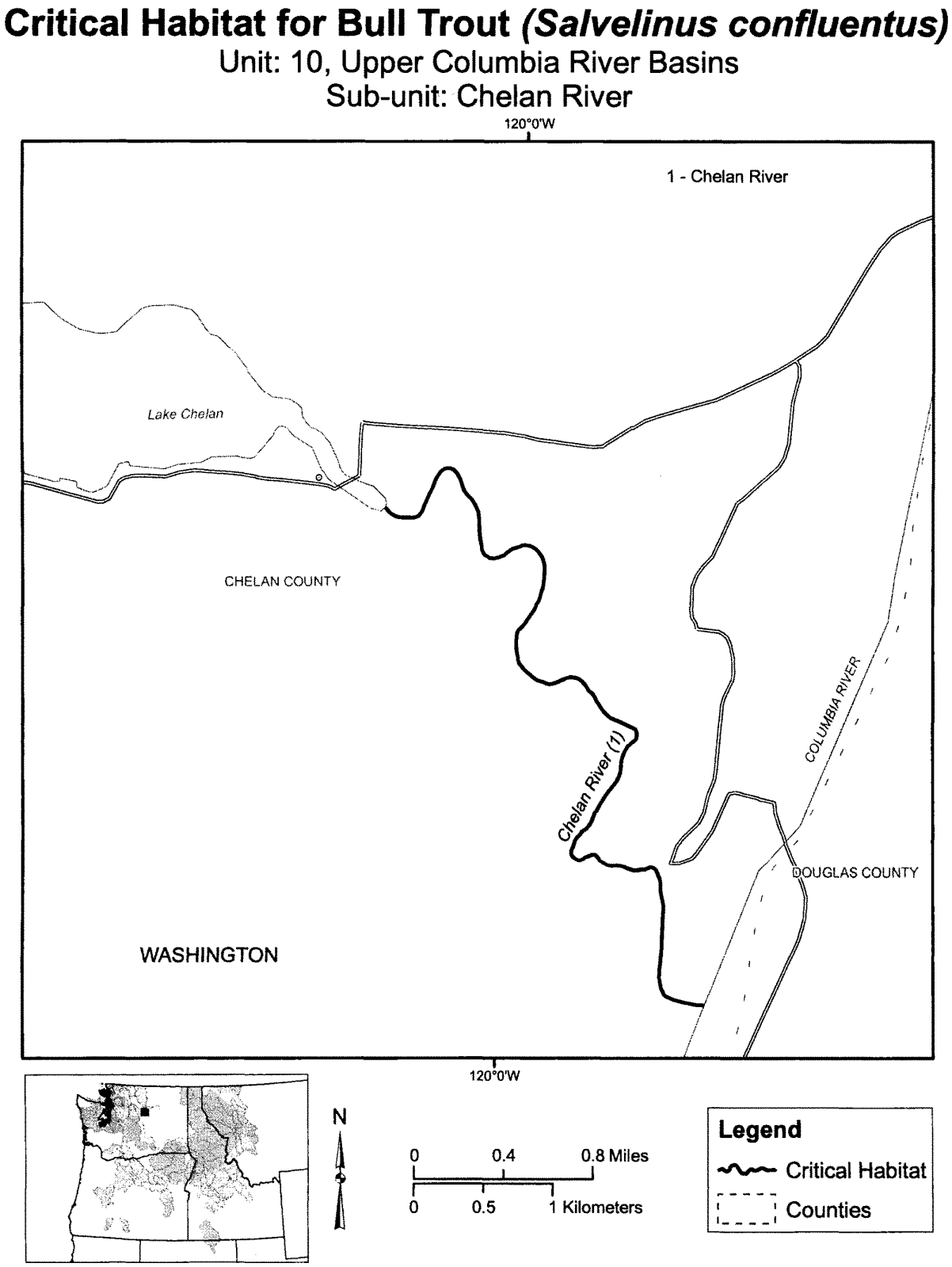
(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Methow River Subunit, follows:



(ii) Chelan River Subunit.

(A) [Reserved for textual description of unit.]

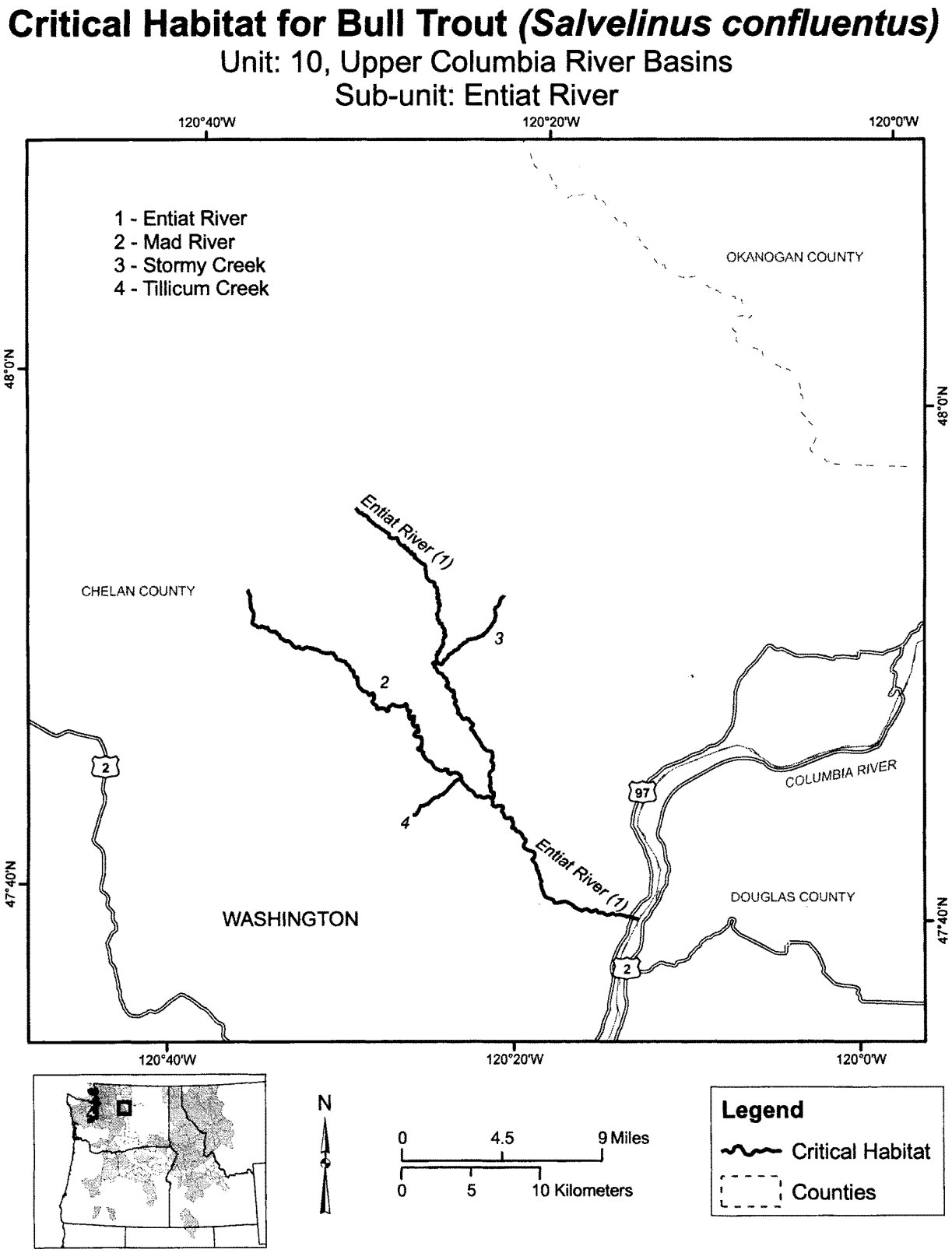
(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Chelan River Subunit, follows:



(iii) Entiat River Subunit.

(A) [Reserved for textual description of unit.]

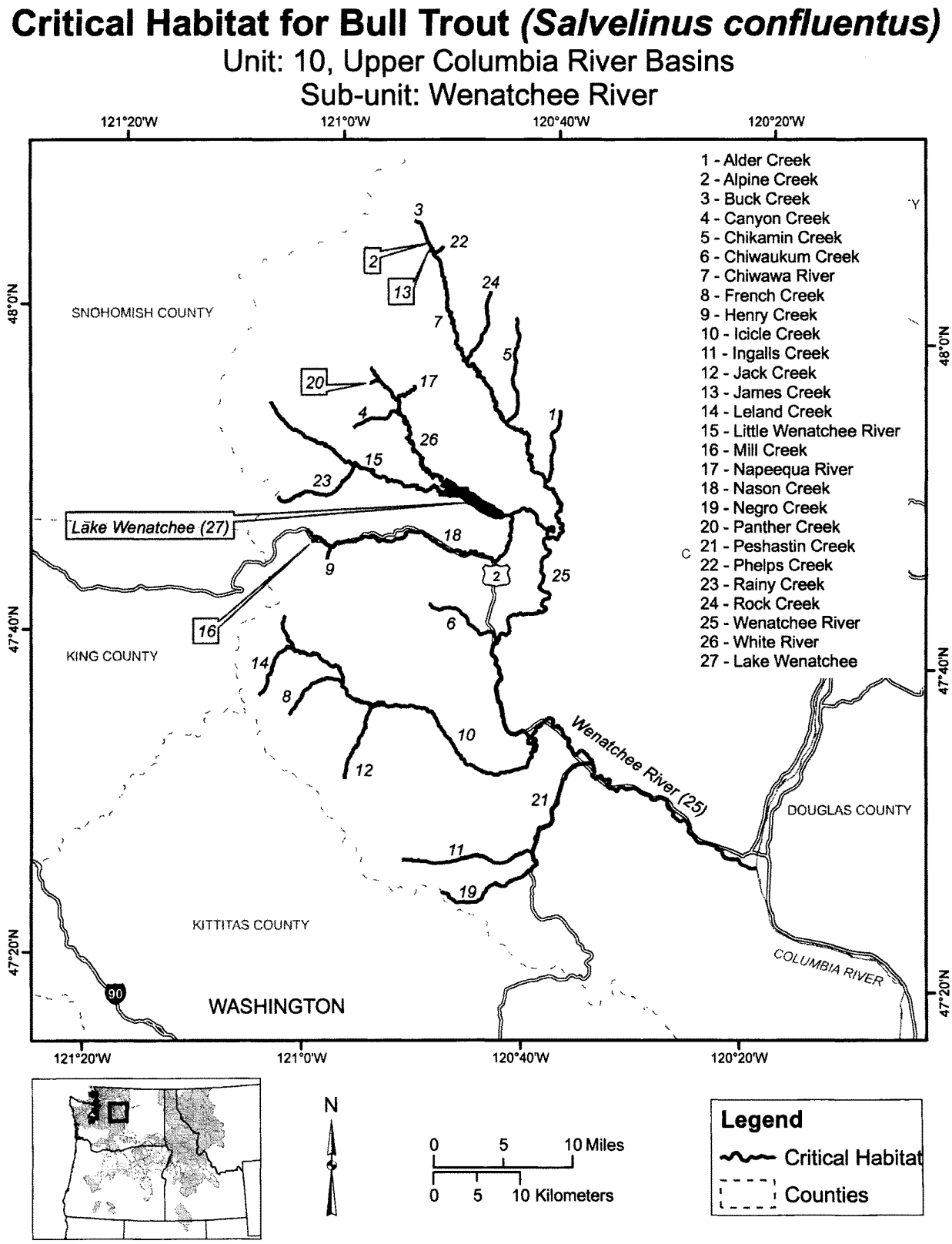
(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Entiat River Subunit, follows:



(iv) Wenatchee River Subunit.

(A) [Reserved for textual description of unit.]

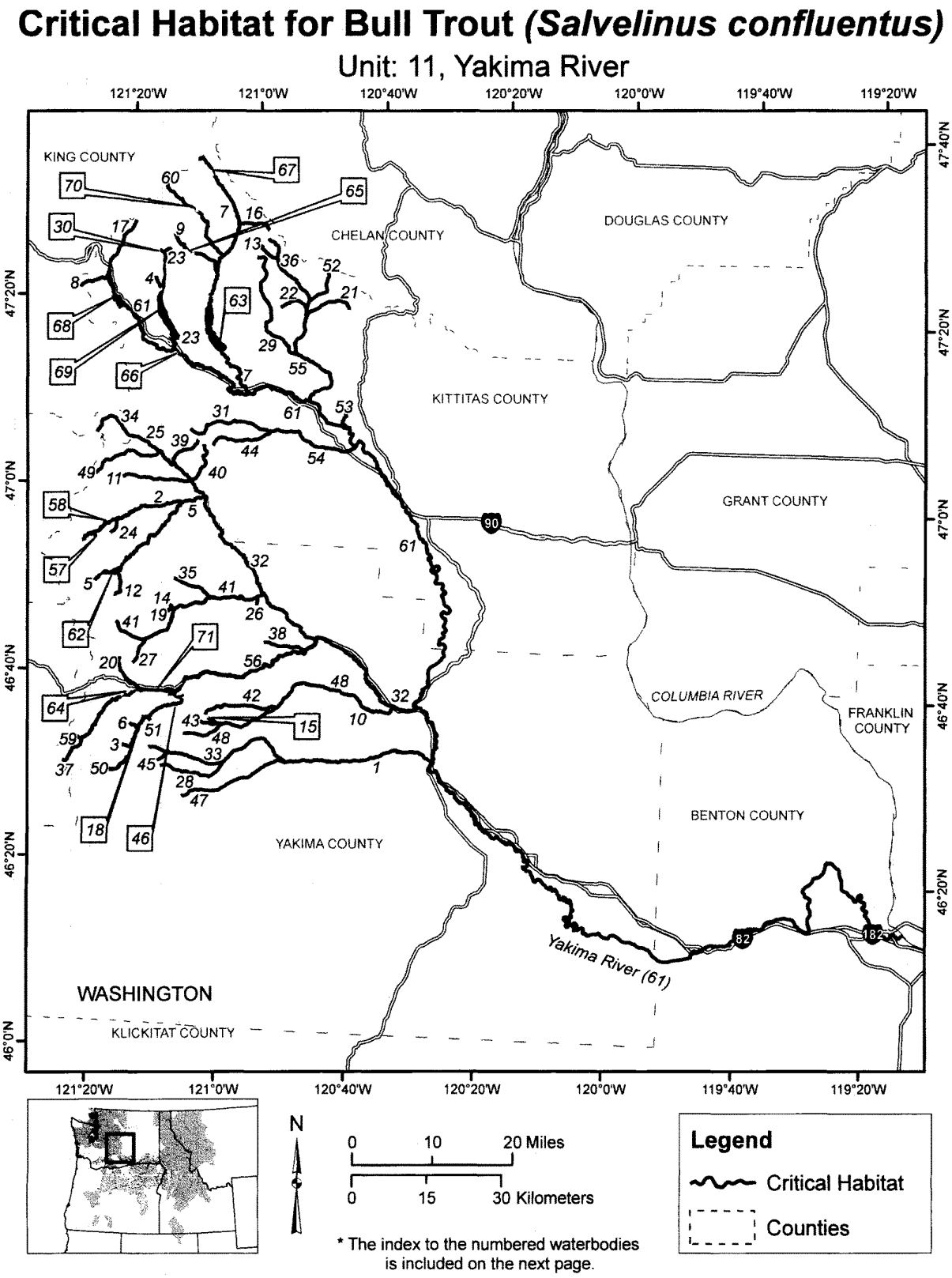
(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Wenatchee River Subunit, follows:



(17) Unit 11: Yakima River Unit.

(i) [Reserved for textual description of unit.]

(ii) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*),Yakima River Unit, follows:



Unit 11: Yakima River

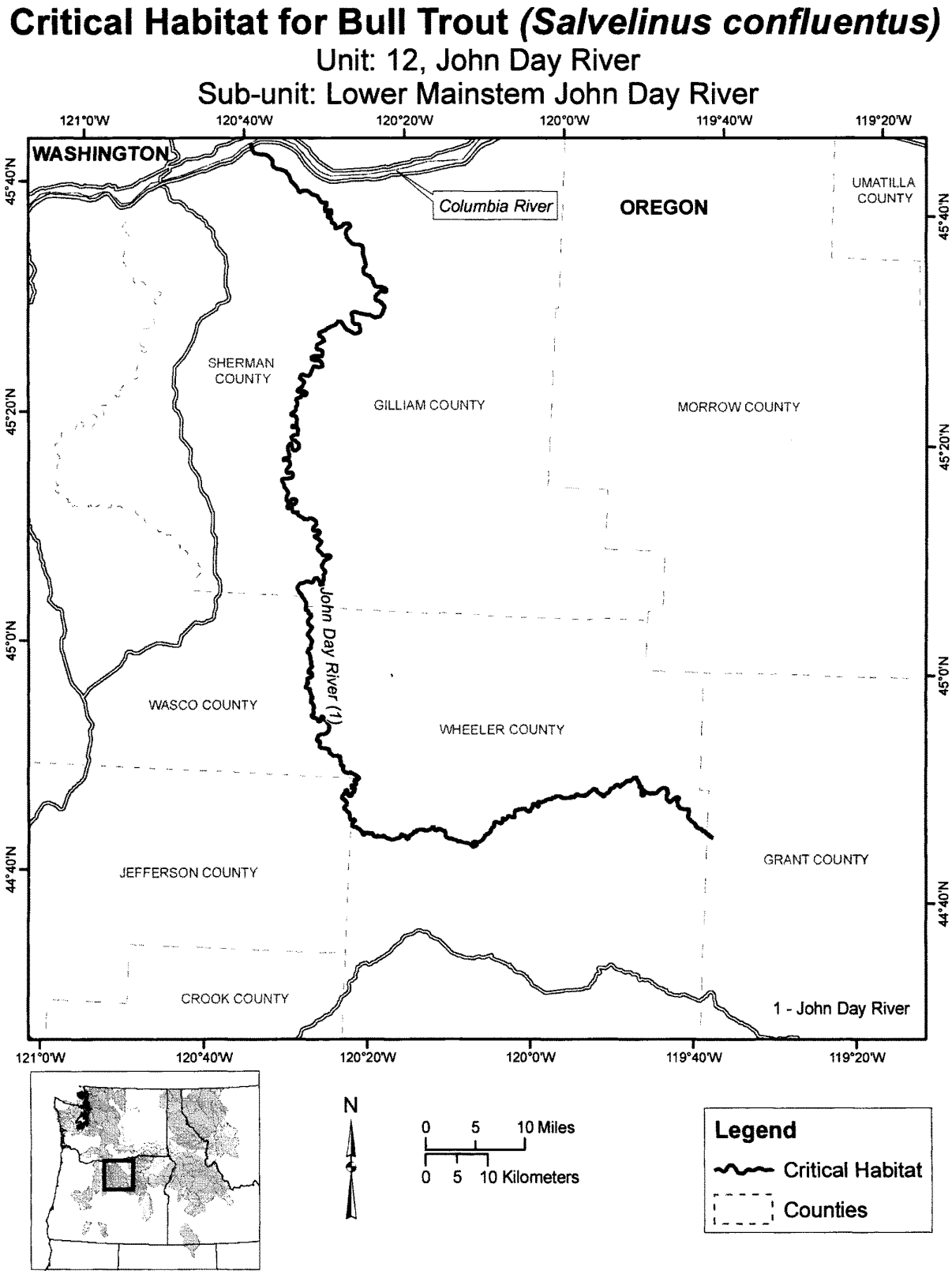
1 - Ahtanum Creek
2 - American River
3 - Bear Creek
4 - Box Canyon Creek
5 - Bumping River
6 - Camp Creek
7 - Cle Elum River
8 - Cold Creek
9 - Cooper River
10 - Cowiche Creek
11 - Crow Creek
12 - Deep Creek
13 - DeRoux Creek
14 - Dog Creek
15 - Fall Creek
16 - Fortune Creek
17 - Gold Creek
18 - Grey Creek
19 - Hindoo Creek
20 - Indian Creek
21 - Jack Creek
22 - Jungle Creek
23 - Kachess River
24 - Kettle Creek
25 - Little Naches River
26 - Little Rattlesnake Creek
27 - Little Wildcat Creek
28 - M.F. Ahtanum Creek
29 - Middle Fork Teanaway River
30 - Mineral Creek
31 - N. Fork Taneaum Creek
32 - Naches River
33 - North Fork Ahtanum Creek
34 - North Fork Little Naches River
35 - North Fork Rattlesnake Creek
36 - North Fork Teanaway River
37 - North Fork Tieton River
38 - Oak Creek
39 - Pileup Creek
40 - Quartz Creek
41 - Rattlesnake Creek
42 - Reynolds Creek
43 - Rock Creek
44 - S. Fork Taneaum Creek
45 - Shellneck Creek
46 - Short And Dirty Creek
47 - South Fork Ahtanum Creek
48 - South Fork Cowiche Creek
49 - South Fork Little Naches River
50 - South Fork Tieton River
51 - Spruce Creek
52 - Stafford Creek
53 - Swauk Creek
54 - Taneaum Creek
55 - Teanaway River
56 - Tieton River
57 - Timber Creek
58 - Union Creek
59 - Unnamed stream
60 - Waptus River
61 - Yakima River
62 - Bumping Lake
63 - Cle Elum Lake
64 - Clear Lake
65 - Cooper Lake
66 - Easten Lake
67 - Hyas Lake
68 - Kachess Lake
69 – Keechelus Lake
70 - Waptus Lake
71 - Rimrock Lake

(18) Unit 12: John Day River Unit, Oregon.

(i) Lower Mainstem John Day River Subunit.

(A) [Reserved for textual description of unit.]

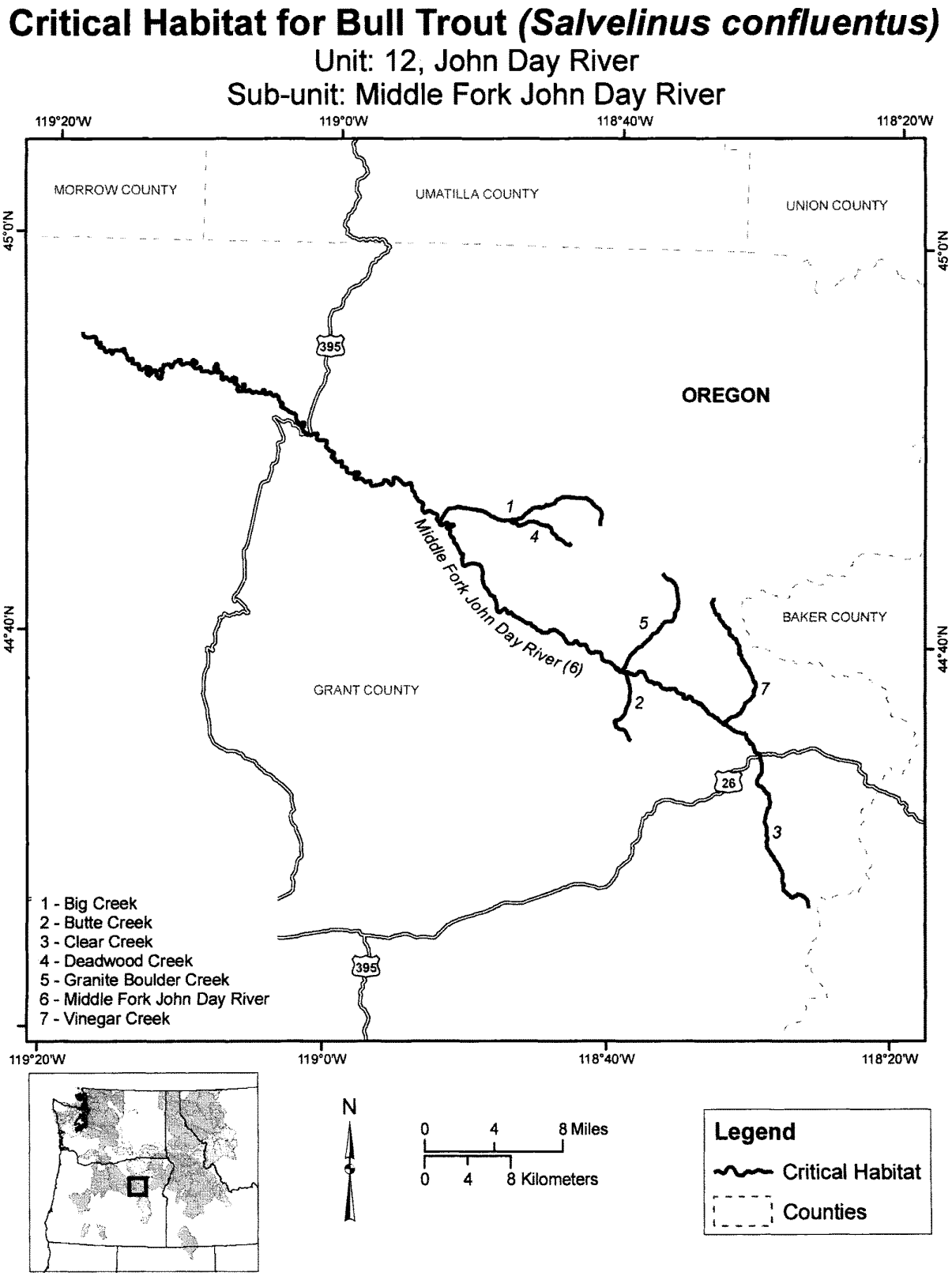
(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Lower Mainstem John Day River Subunit follows:



(ii) Middle Fork John Day River Subunit.

(A) [Reserved for textual description of unit.]

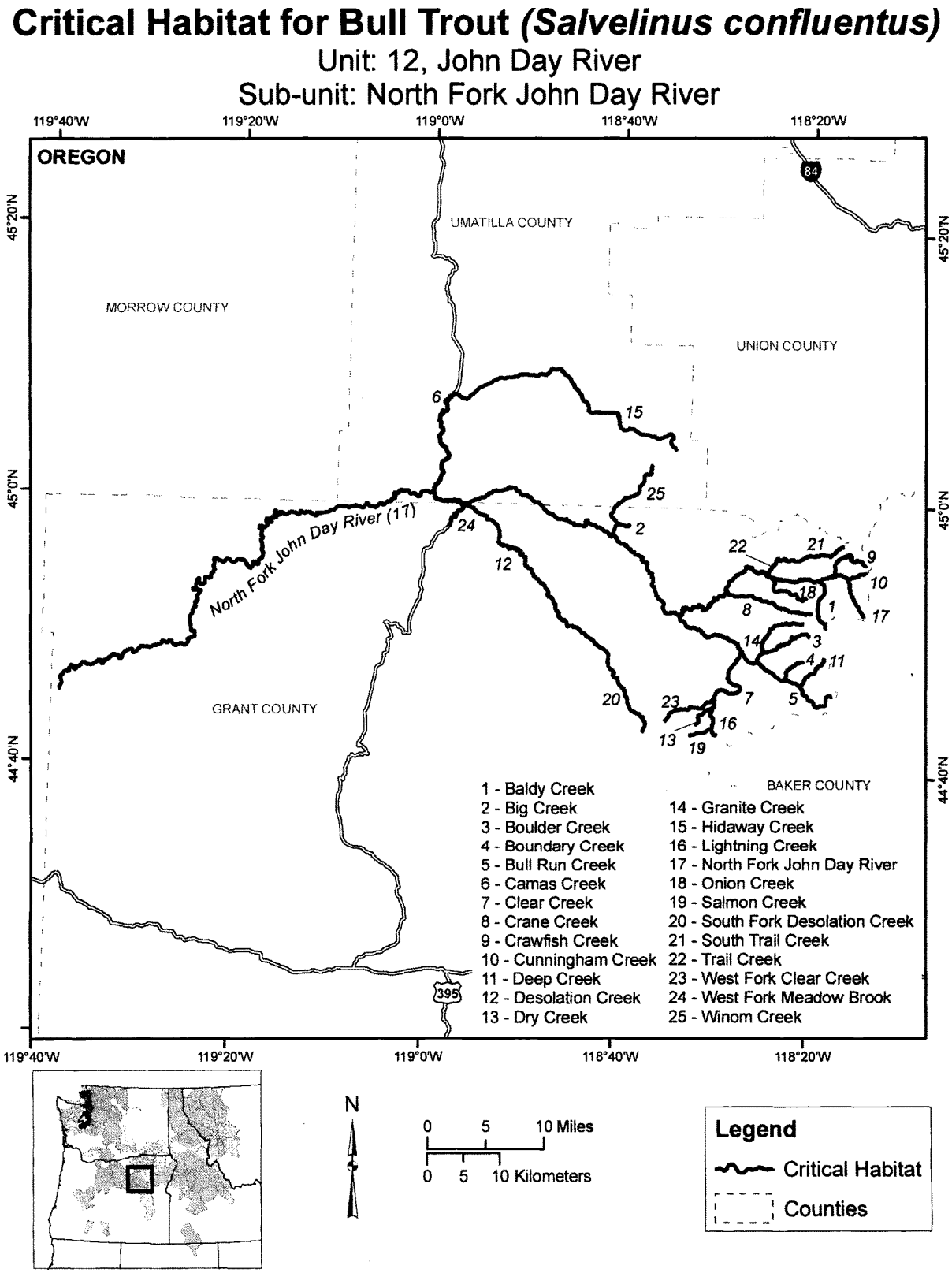
(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Middle Fork John Day River Subunit follows:



(iii) North Fork John Day River Subunit

(A) [Reserved for textual description of unit.]

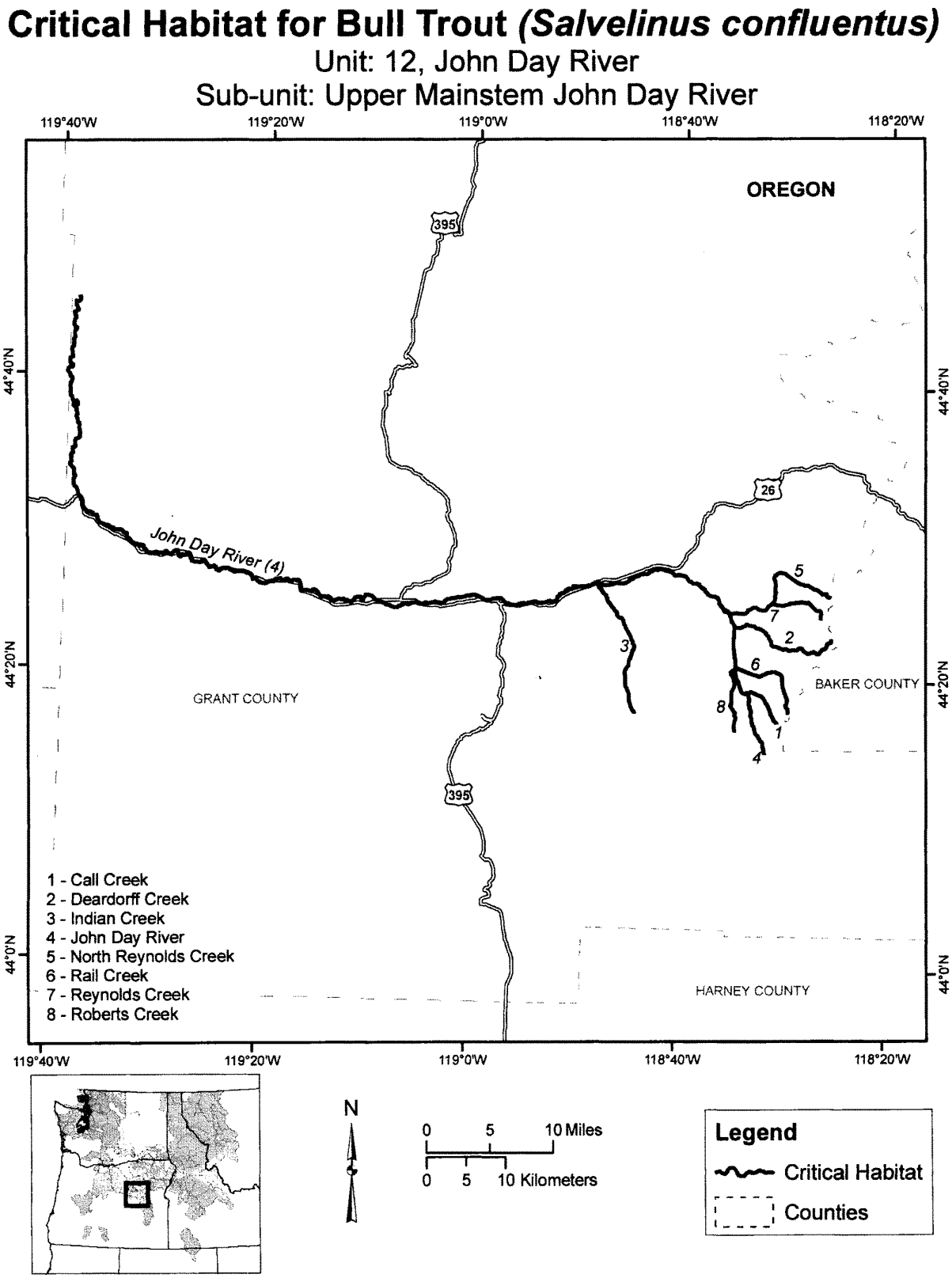
(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), North Fork John Day River Subunit, follows



(iv) Upper Mainstem John Day River Subunit.

(A) [Reserved for textual description of unit.]

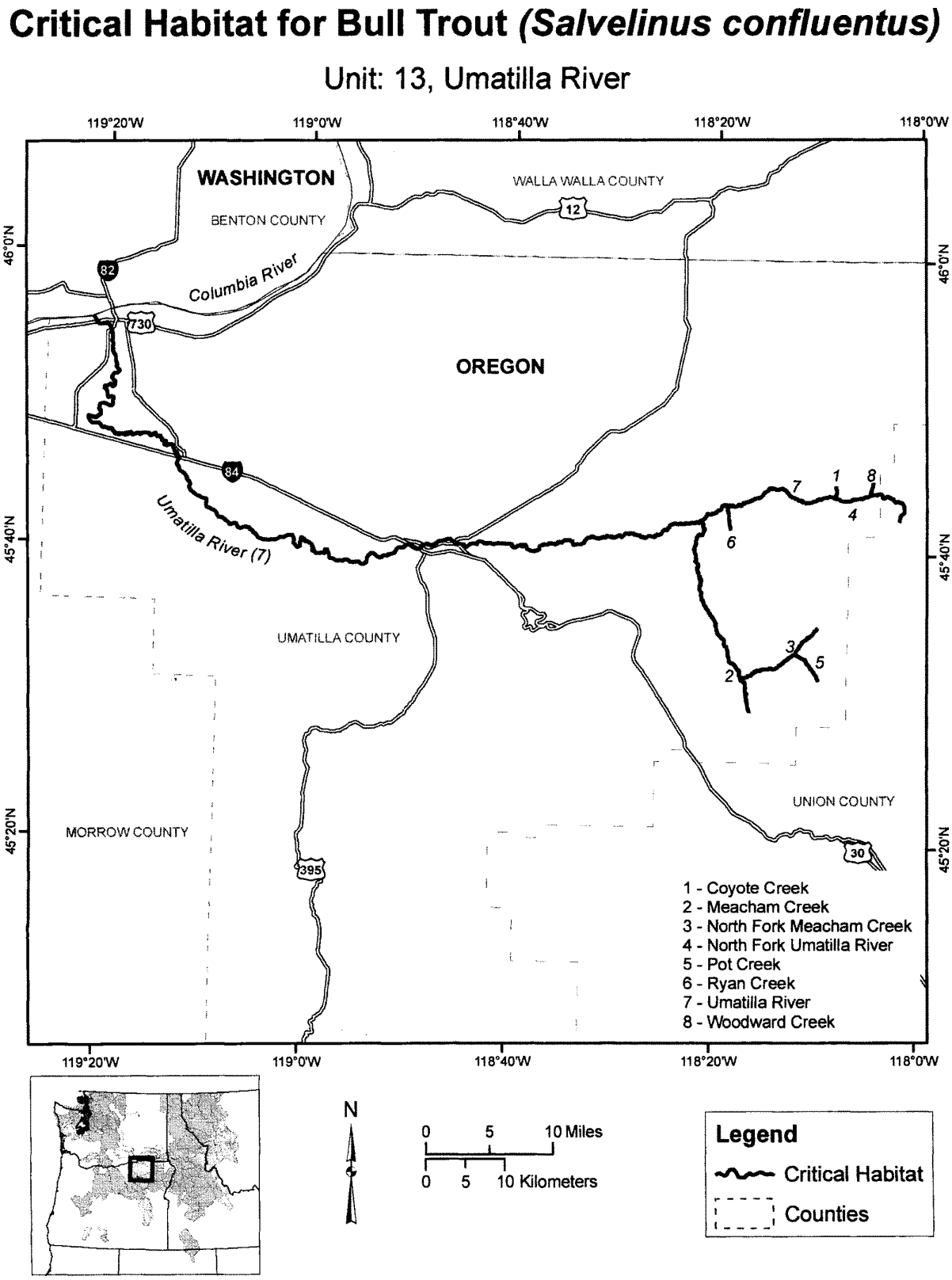
(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Upper Mainstem John Day River Subunit, follows:



(19) Unit 13: Umatilla River Unit, Oregon.

(i) [Reserved for textual description of unit.]

(ii) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Umatilla River Unit, follows:

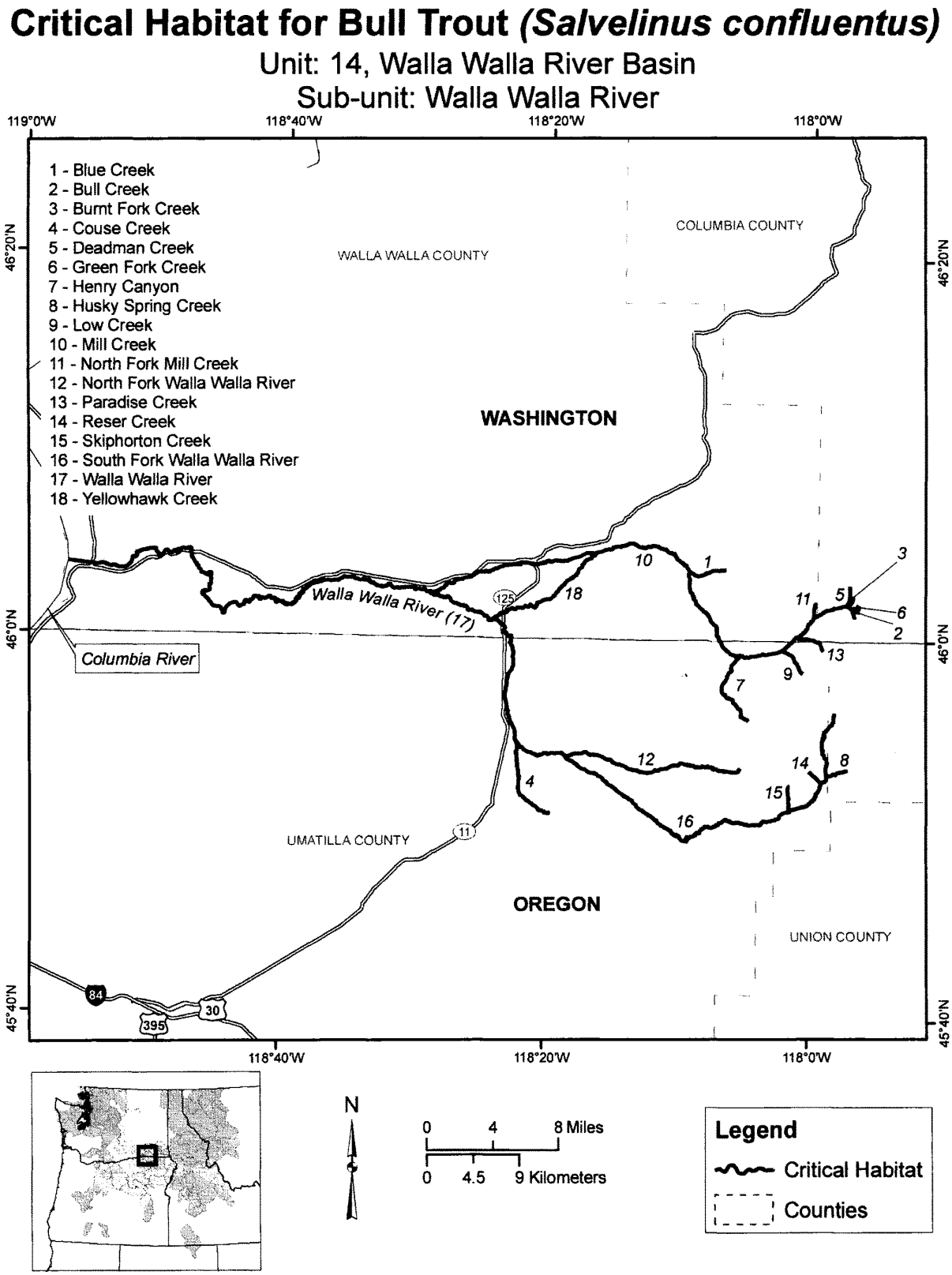


(20) Unit 14: Walla Walla River Basin Critical Habitat Unit, Oregon and Washington.

(i) Walla Walla River Subunit.

(A) [Reserved for textual description of unit.]

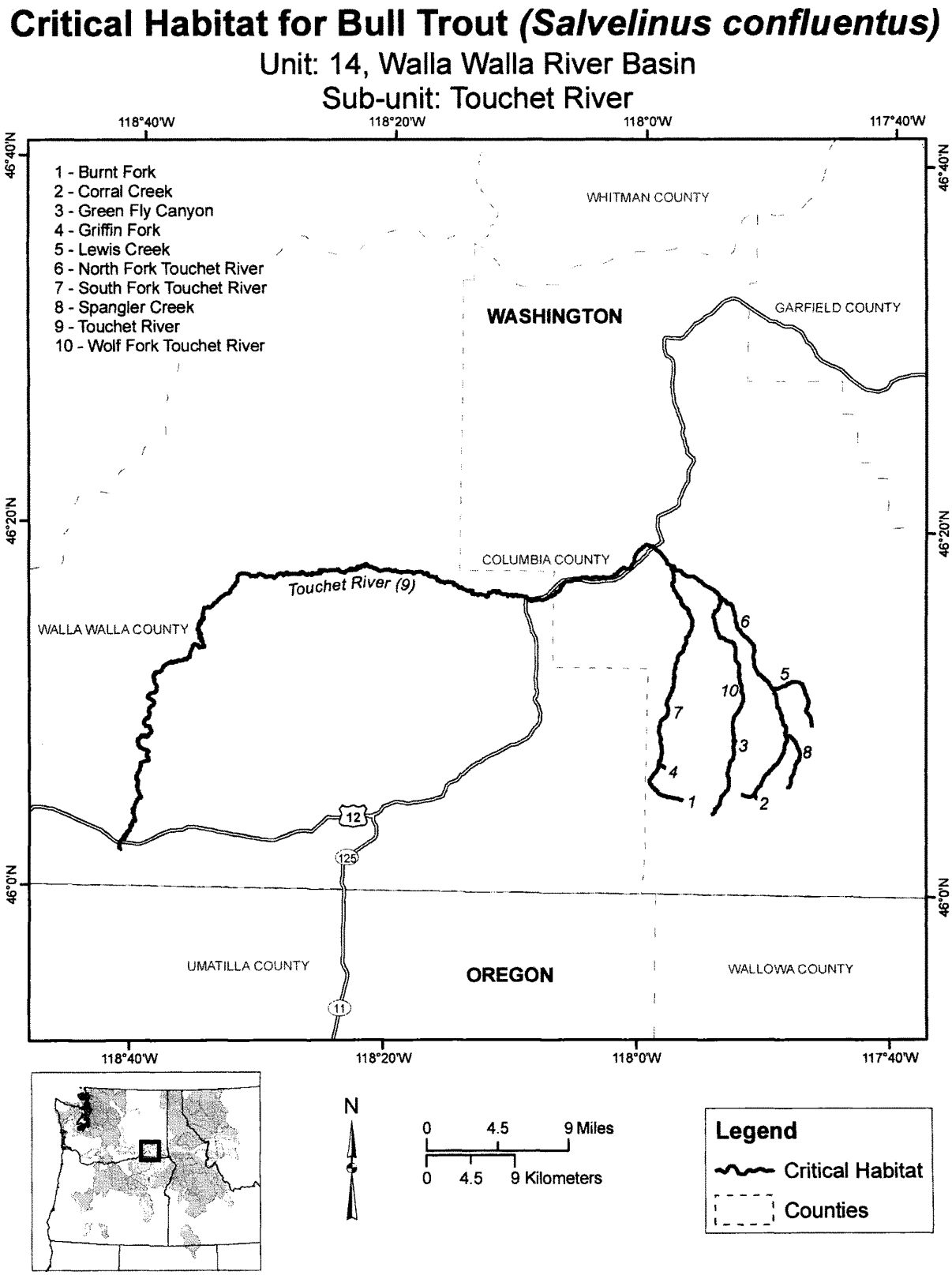
(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Walla Walla River Subunit, follows:



(ii) Touchet River Subunit.

(A) [Reserved for textual description of unit.]

(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Touchet River Subunit, follows:

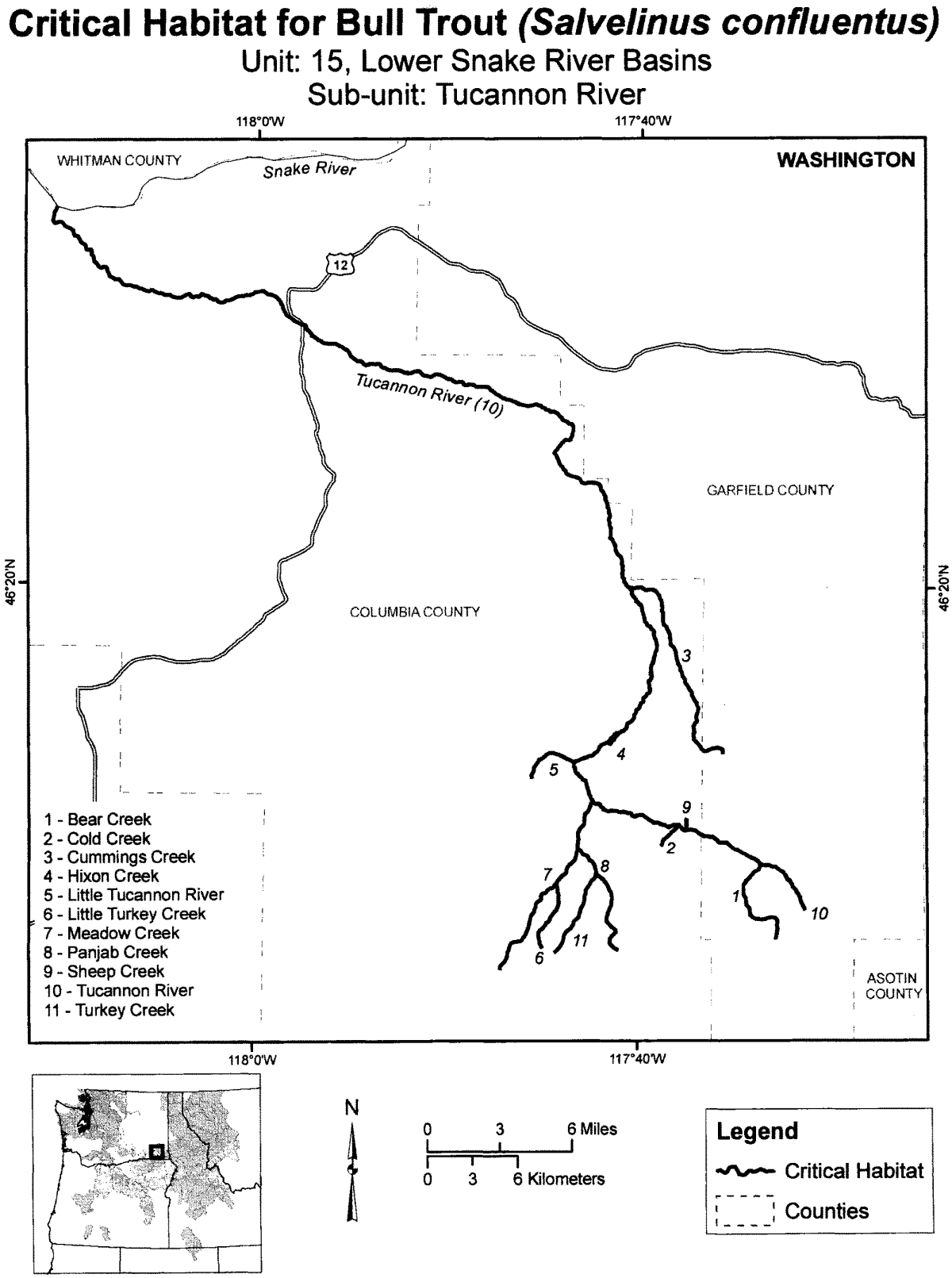


(21) Unit 15: Lower Snake River Basins Unit, Washington.

(i) Tucannon River Subunit.

(A) [Reserved for textual description of unit.]

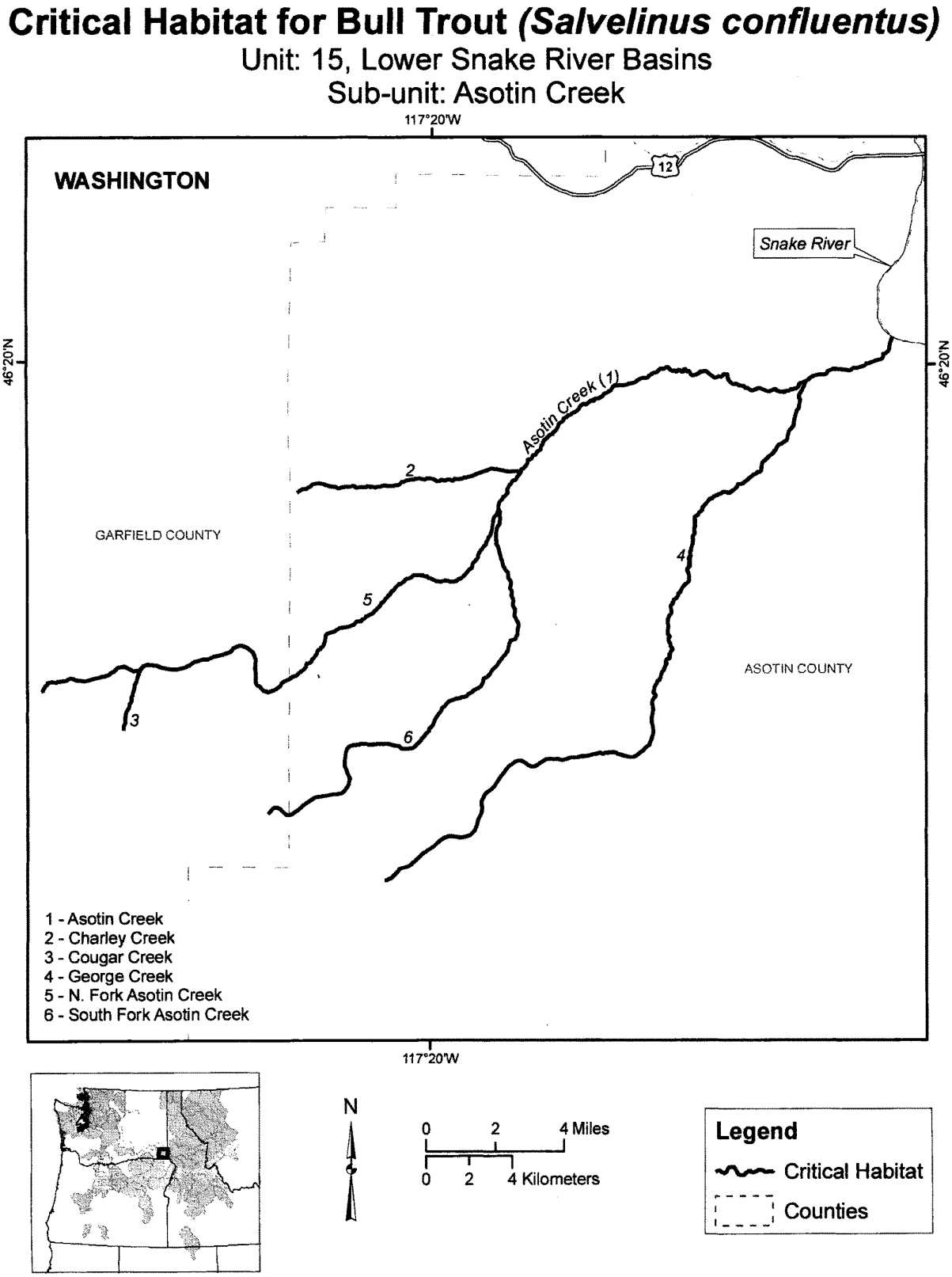
(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Tucannon River Subunit, follows:



(ii) Asotin Creek Subunit.

(A) [Reserved for textual description of unit.]

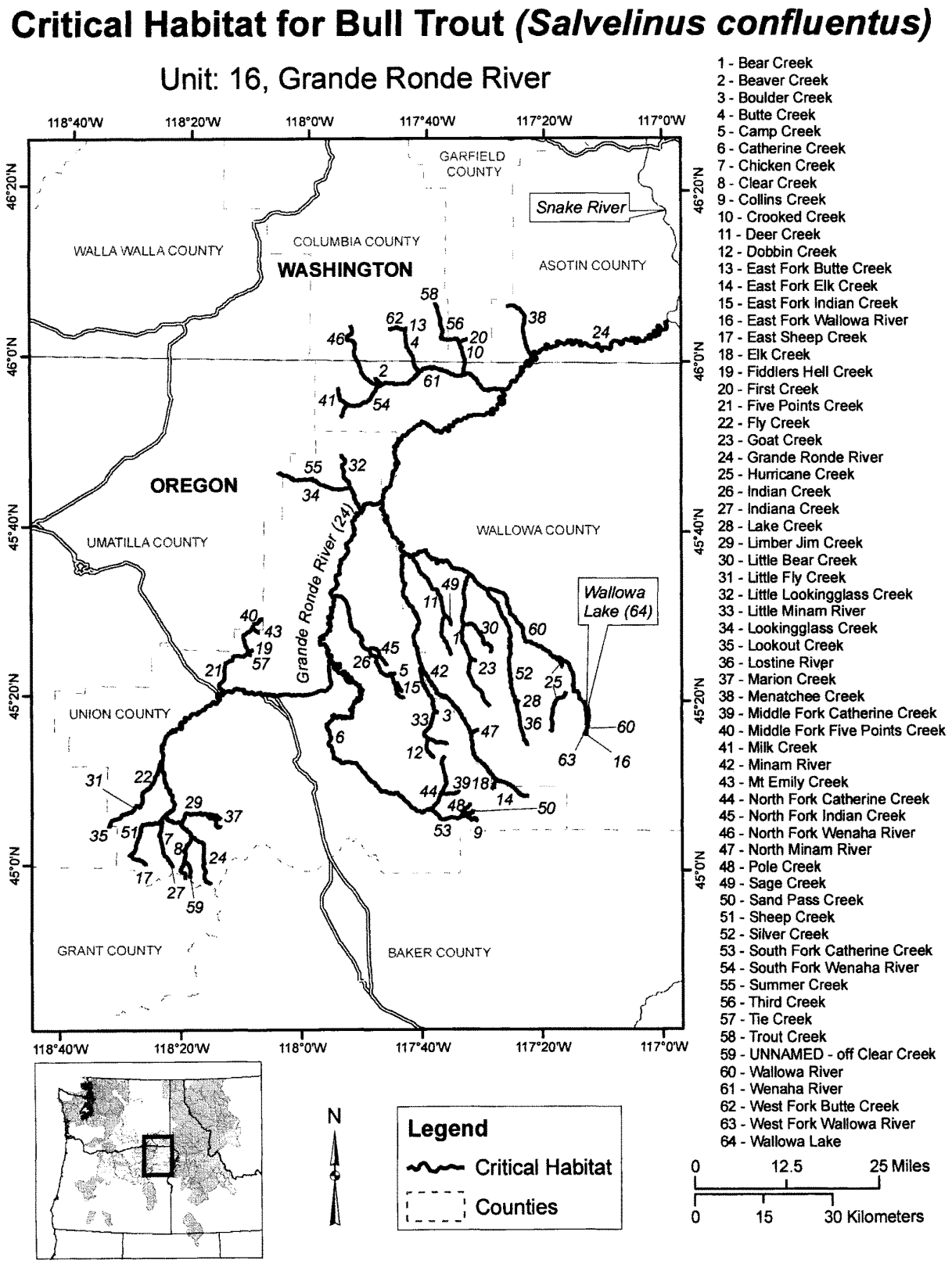
(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Asotin Creek Subunit, follows:



(22) Unit 16: Grande Ronde River Unit, Oregon and Washington.

(i) [Reserved for textual description of unit.]

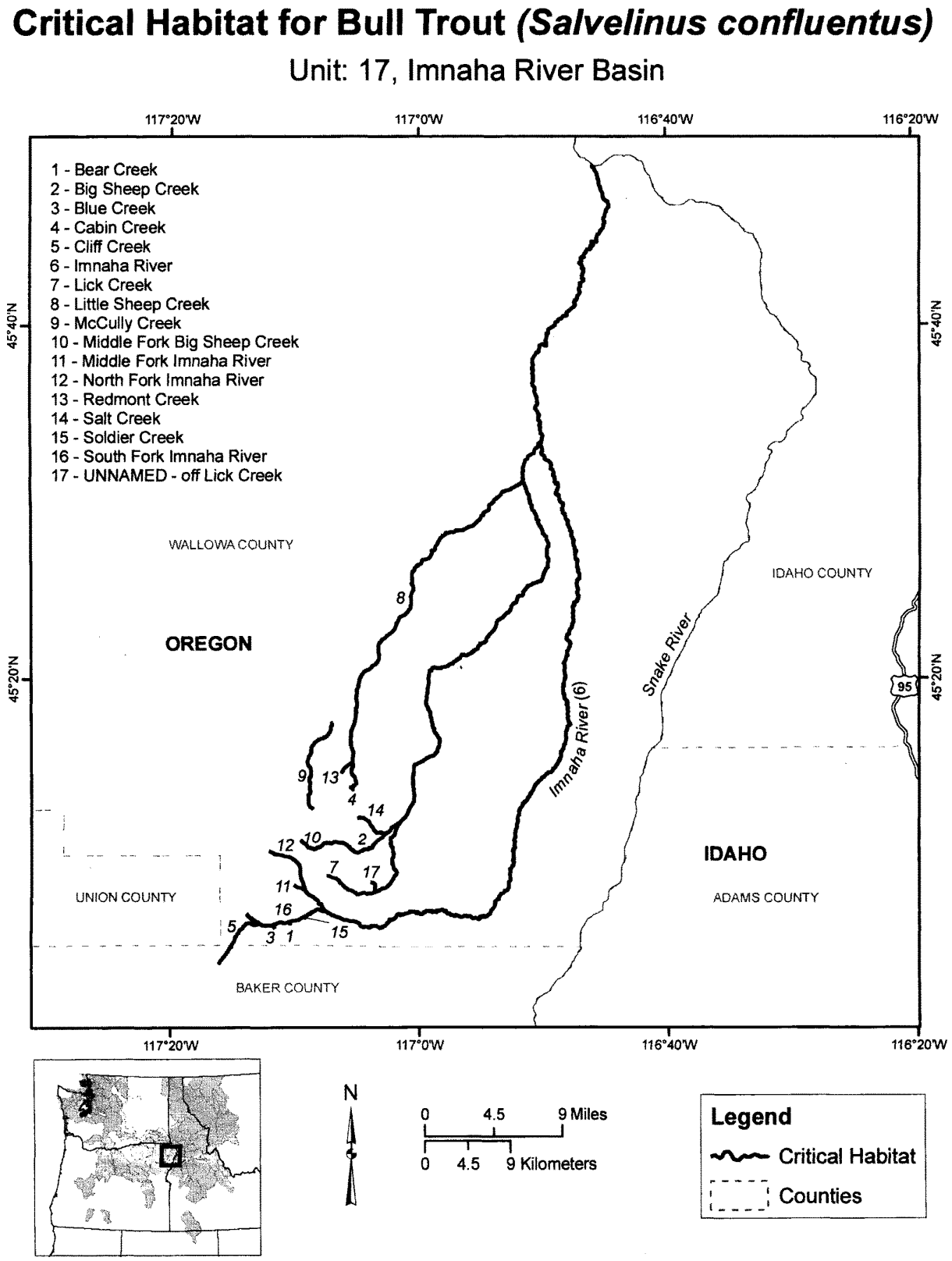
(ii) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Grande Ronde River Unit, follows:



(23) Unit 17: Imnaha River Unit, Oregon.

(i) [Reserved for textual description of unit.]

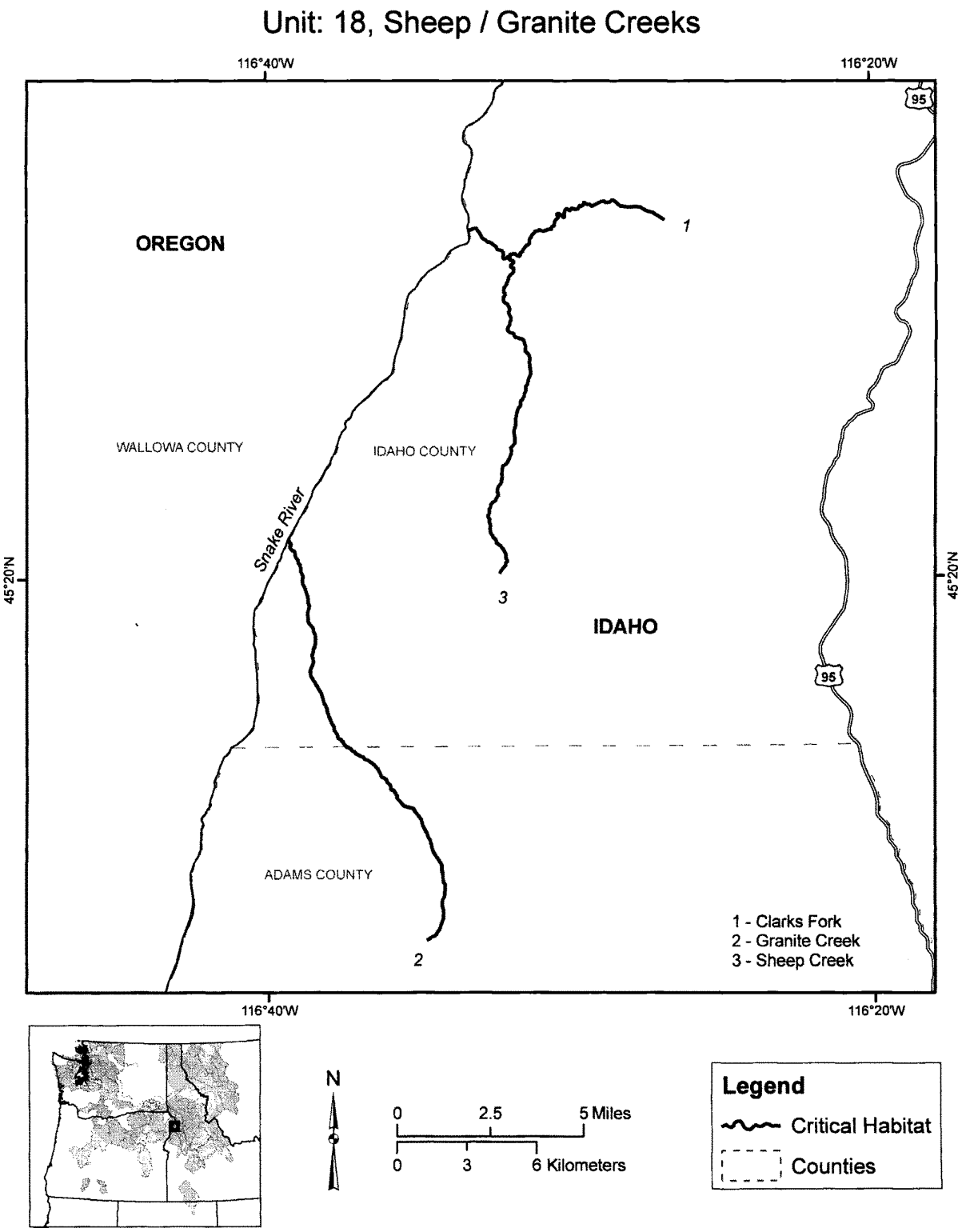
(ii) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Imnaha River Unit, follows:



(24) Unit 18: Sheep and Granite Creeks Unit, Idaho.

(i) [Reserved for textual description of unit.]

(ii) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Sheep and Granite Creeks Unit, follows:

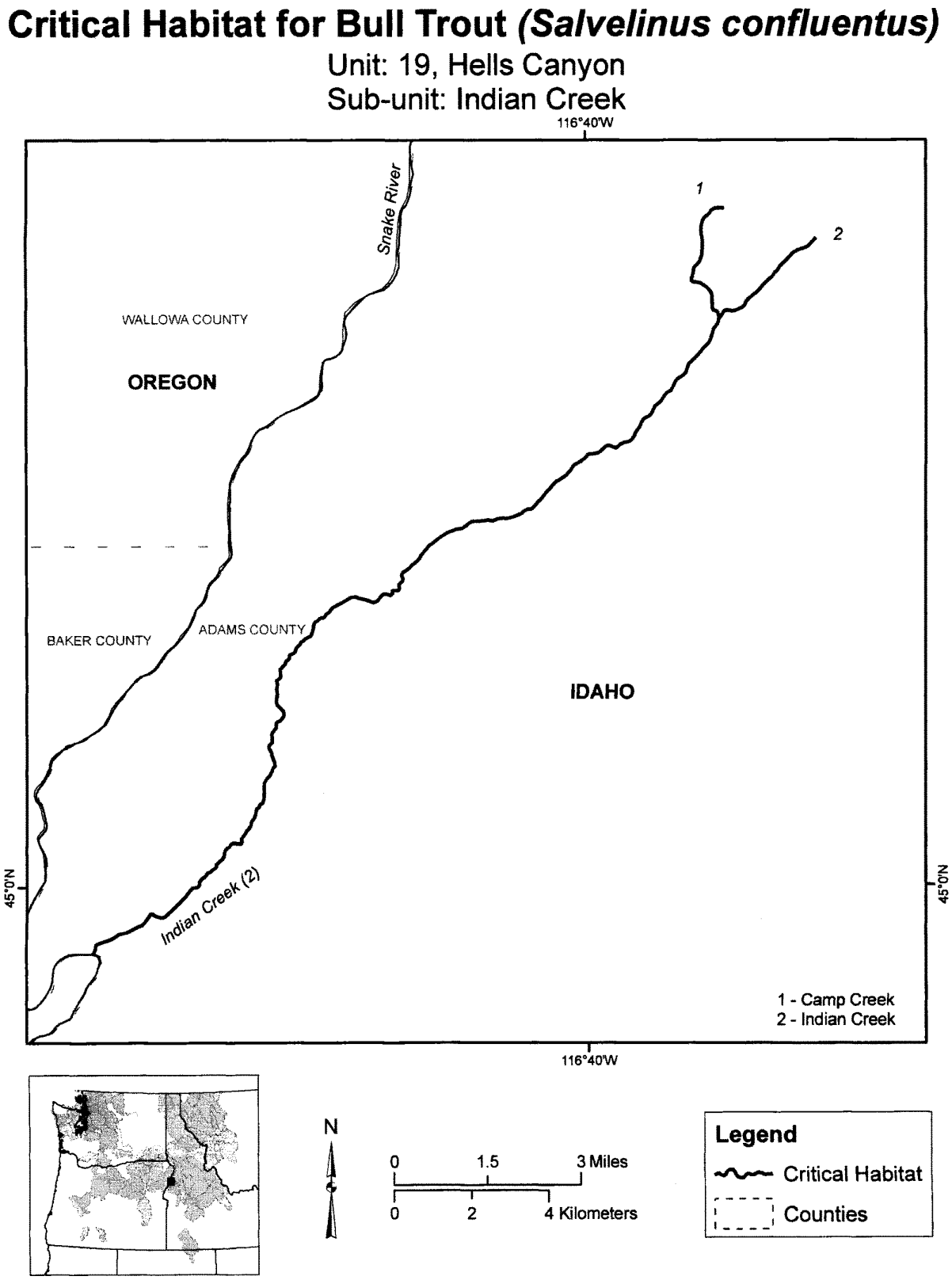


(25) Unit 19: Hells Canyon Complex Unit, Oregon.

(i) Indian Creek Subunit.

(A) [Reserved for textual description of unit.]

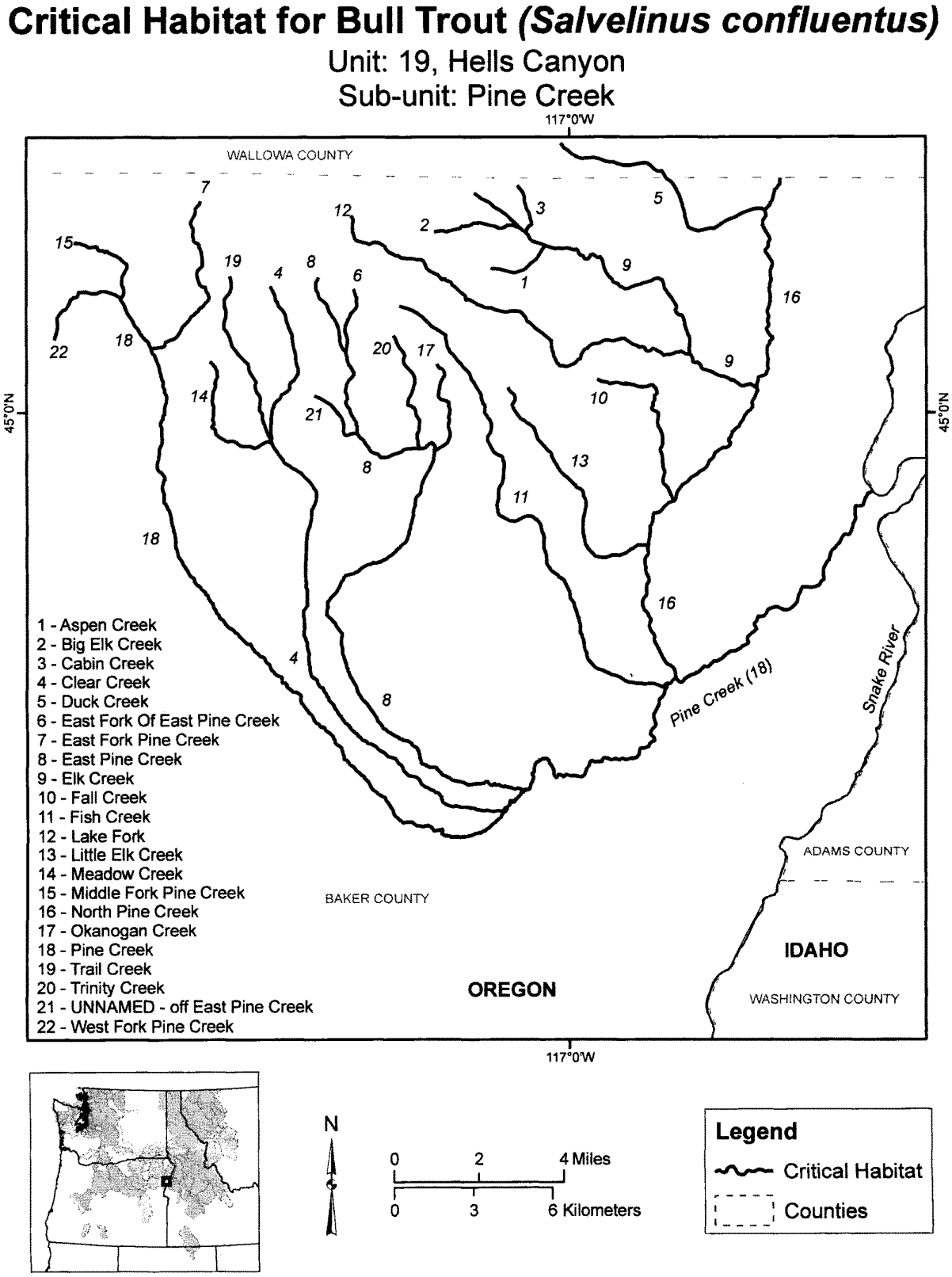
(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Indian Creek Subunit, follows:



(ii) Pine Creek Subunit.

(A) [Reserved for textual description of unit.]

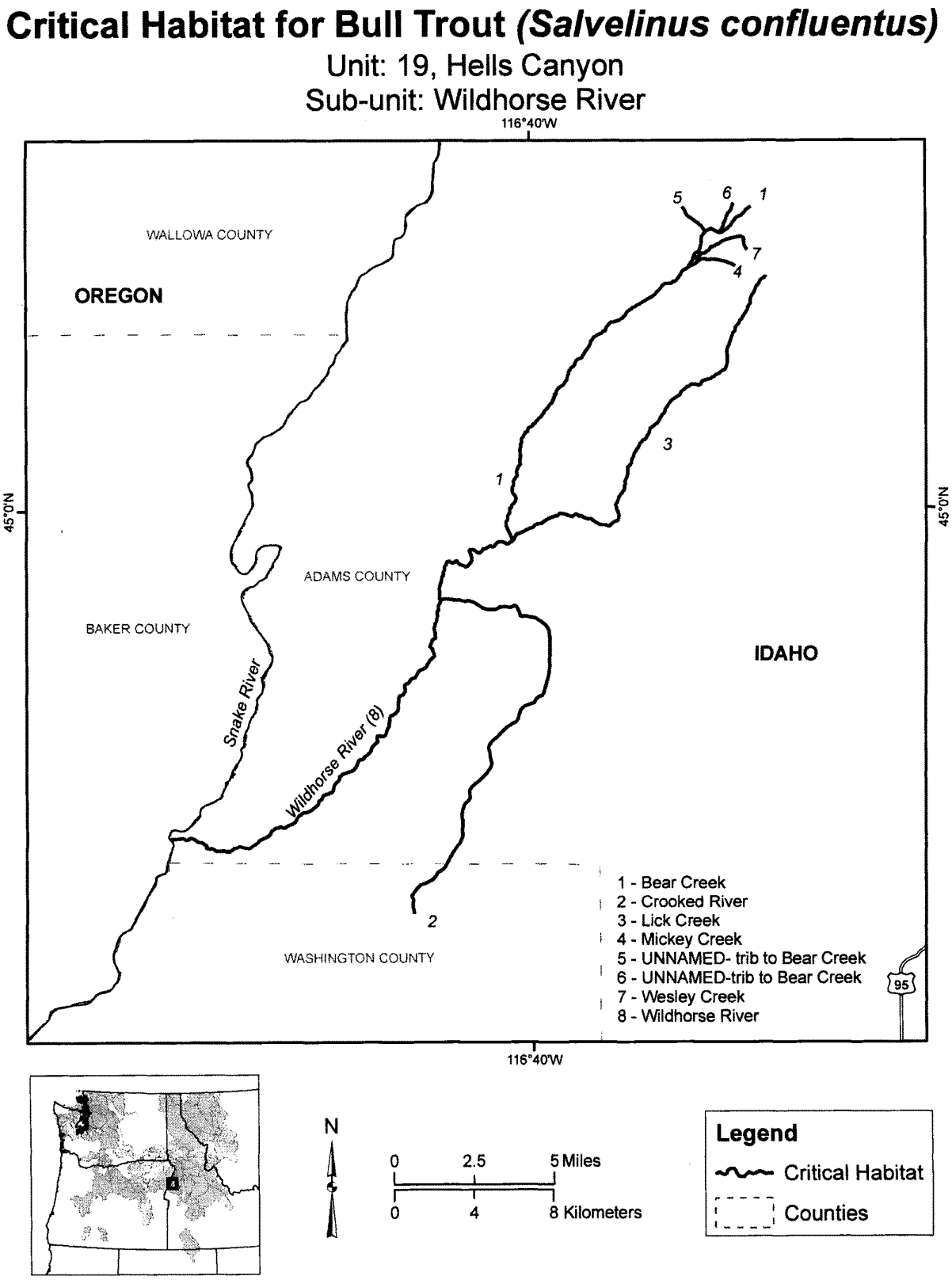
(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Pine Creek Subunit, follows:



(iii) Wildhorse River Subunit.

(A) [Reserved for textual description of unit.]

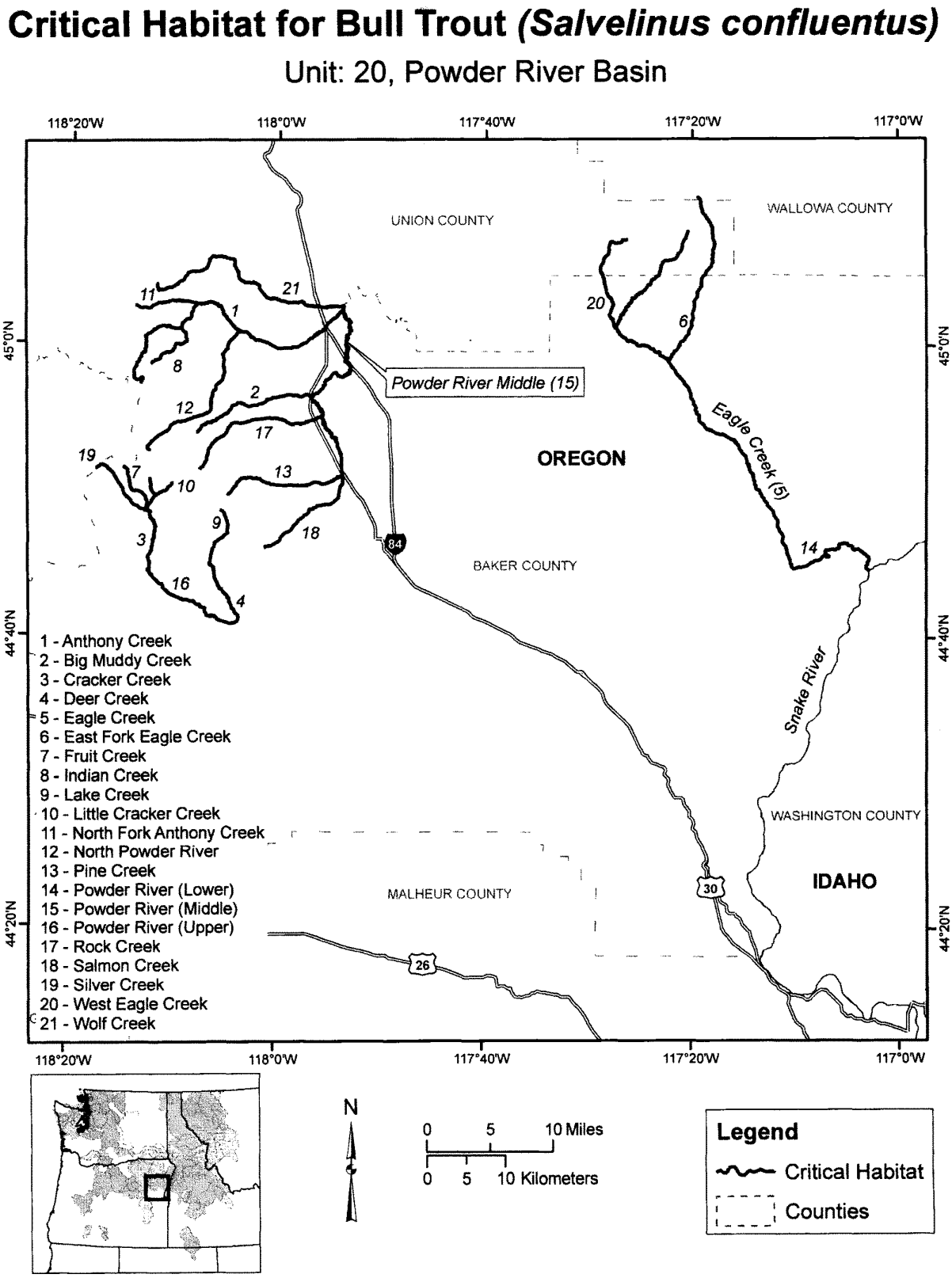
(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Wildhorse River Subunit, follows:



(26) Unit 20: Powder River Basin Unit, Oregon.

(i) [Reserved for textual description of unit.]

(ii) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Powder River Basin Unit, follows:

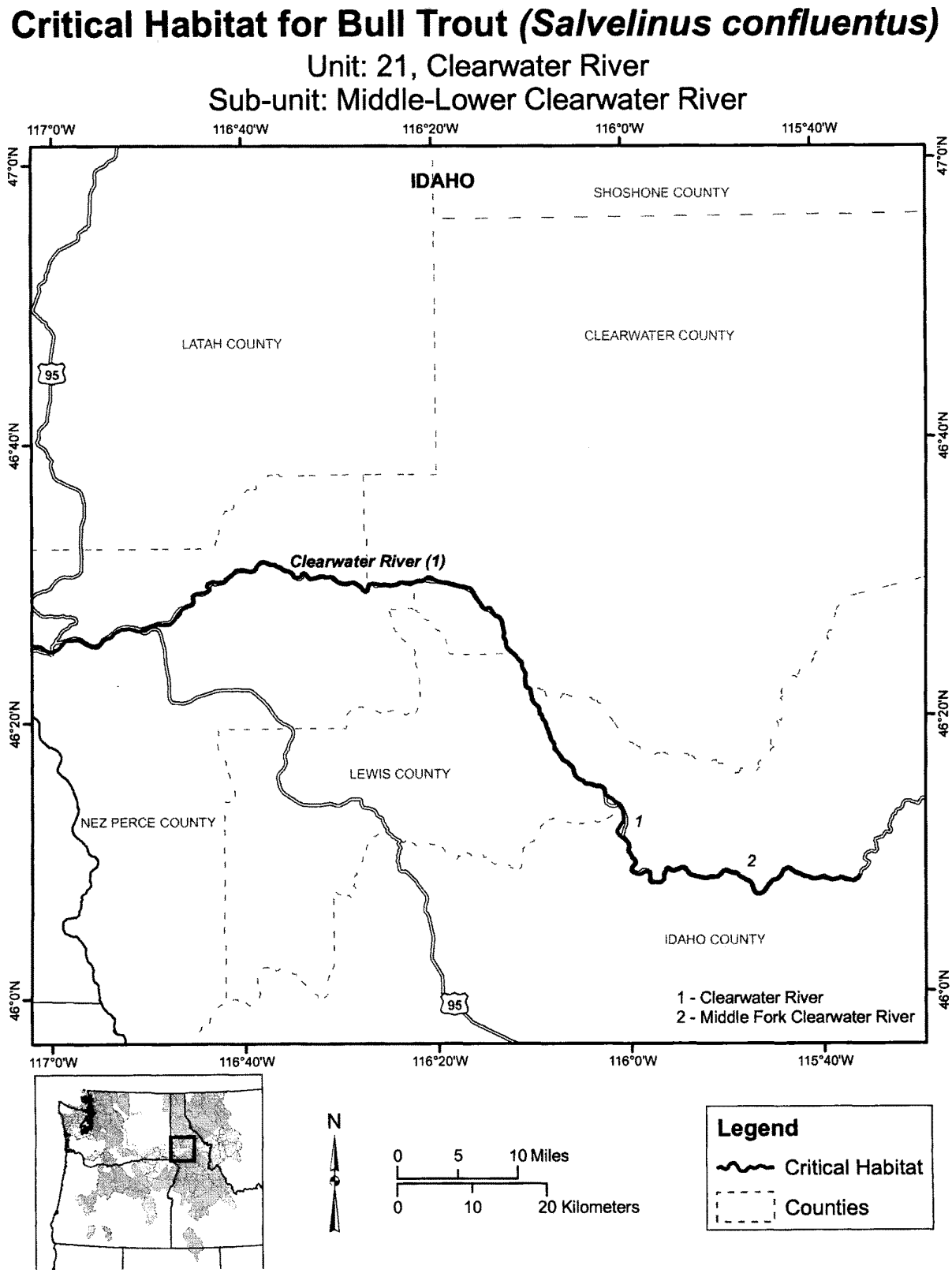


(27) Unit 21: Clearwater River Unit, Idaho.

(i) Middle–Lower Fork Clearwater River Subunit

(A) [Reserved for textual description of unit.]

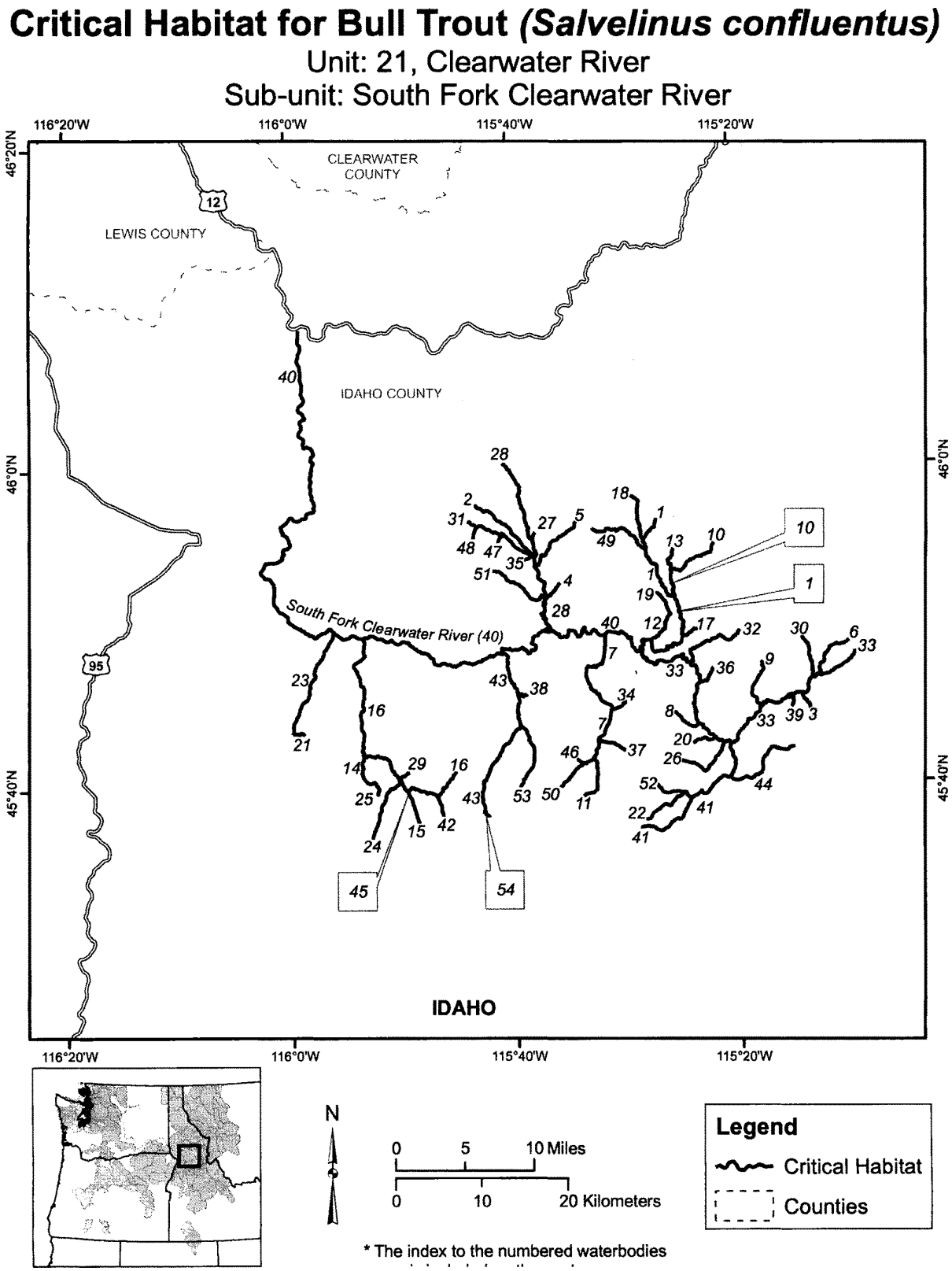
(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Middle–Lower Fork Clearwater River Subunit, follows:



(ii) South Fork Clearwater River Subunit.

(A) [Reserved for textual description of unit.]

(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), South Fork Clearwater River Subunit, follows:



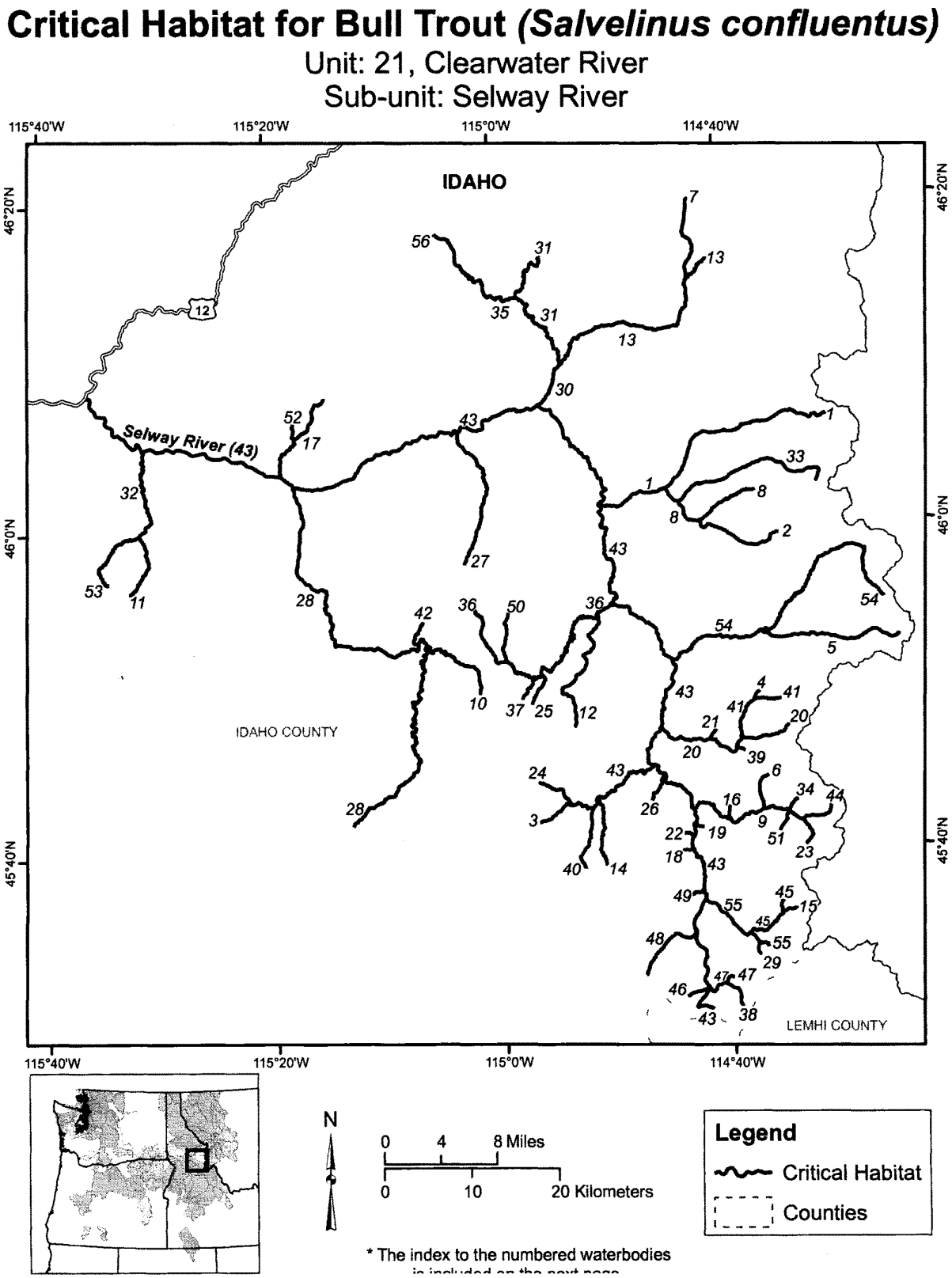
Unit: 21, Clearwater River
Sub-unit: South Fork Clearwater River

1 - American River
2 - Baldy Creek
3 - Baston Creek
4 - Bear Creek
5 - Beaver Creek
6 - Bridge Creek
7 - Crooked River
8 - Dawson Creek
9 - Ditch Creek
10 - E.Fk. American River
11 - East Fork Crooked River
12 - Elk Creek
13 - Flint Creek
14 - Gospel Creek
15 - Hagen Creek
16 - Johns Creek
17 - Kirks Fk. American River
18 - Lick Creek
19 - Little Elk Creek
20 - Little Moose Creek
21 - Melton Creek
22 - Middle Fork.Red River
23 - Mill Creek
24 - Moores Creek
25 - Moores Lake Creek
26 - Moose Butte Creek
27 - Mule Creek
28 - Newsome Creek
29 - Open Creek
30 - Otterson Creek
31 - Pilot Creek
32 - Red Horse Creek
33 - Red River
34 - Relief Creek
35 - Sawmill Creek
36 - Siegel Creek
37 - Silver Creek
38 - Sixmile Creek
39 - Soda Creek
40 - South Fork Clearwater River
41 - South Fork Red River
42 - Taylor Creek
43 - Tenmile Creek
44 - Trapper Creek
45 - Twin Lakes Creek
46 – UNNAMED - off West Fork Crooked River
47 - UNNAMED 1 - off Pilot Creek
48 - UNNAMED 2 - off Pilot Creek
49 - W.Fk. American River
50 - West Fork Crooked River
51 - West Fork Newsome Creek
52 - West Fork Red River
53 - Williams Creek
54 - Wiseboy Creek

(iii) Selway River Subunit.

(A) [Reserved for textual description of unit.]

(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Selway River Subunit, follows:



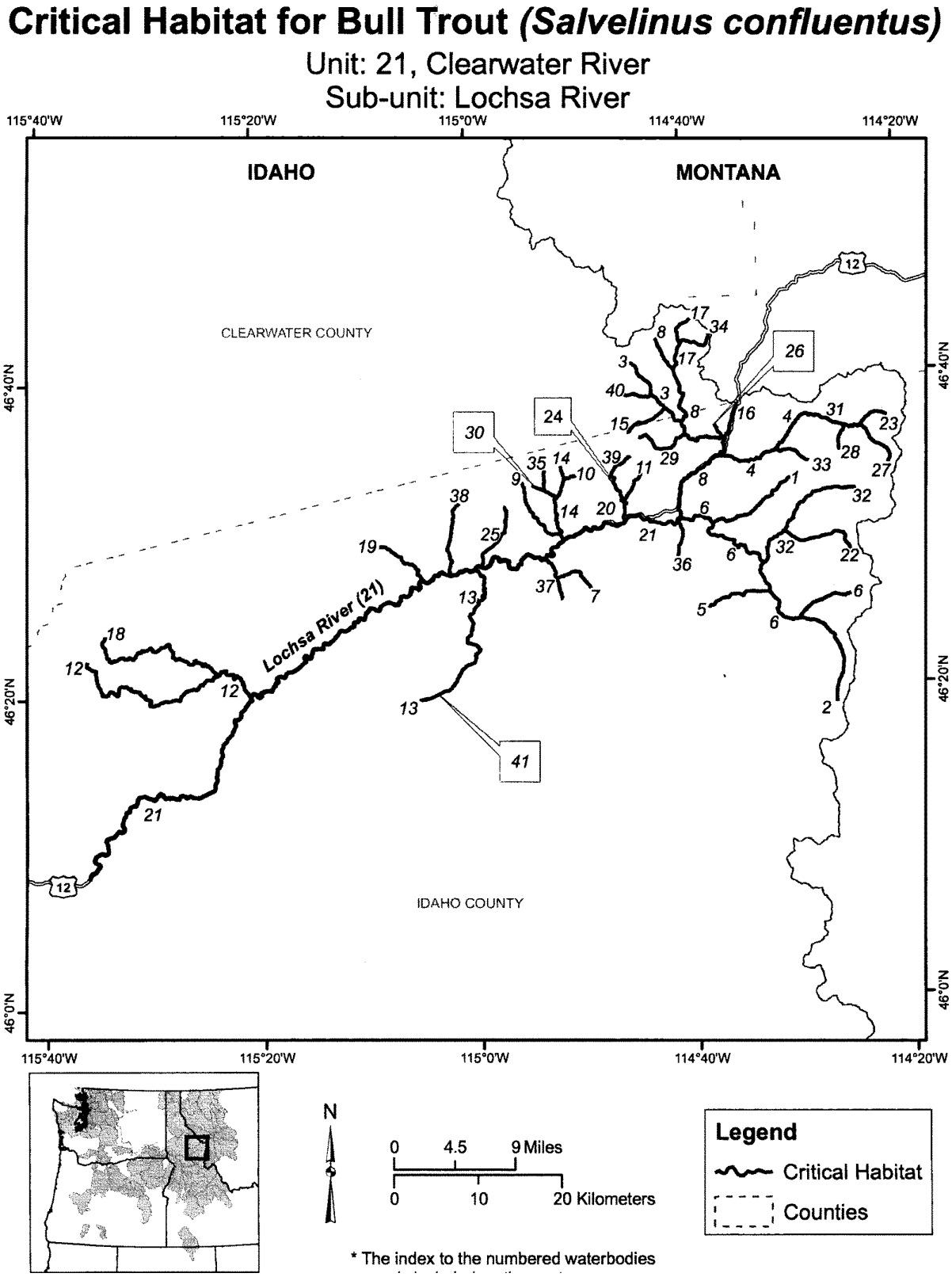
Unit: 21, Clearwater River
Sub-unit: Selway River

1 - Bear Creek
2 - Brushy Fork Creek
3 - Burnt Knob Creek
4 - Burnt Strip Creek
5 - Canyon Creek
6 - Cayuse Creek
7 - Cedar Creek
8 - Cub Creek
9 - Deep Creek
10 - E.Fk. Meadow Creek
11 - E.Fk. O'Hara Creek
12 - Eagle Creek
13 - East Fork Moose Creek
14 - Flat Creek
15 - French Creek
16 - Gabe Creek
17 - Gedney Creek
18 - Gold Pan Creek
19 - Hells Half Acre Creek
20 - Indian Creek
21 - Jack Creek
22 - Kim Creek
23 - Lazy Creek
24 - Little Clearwater River
25 - Lynx Creek
26 - Magruder Creek
27 - Marten Creek
28 - Meadow Creek
29 - Mist Creek
30 - Moose Creek
31 - North Fork Moose Creek
32 - O'Hara Creek
33 - Paradise Creek
34 - Pete Creek
35 - Rhoda Creek
36 - Running Creek
37 - S.Fk. Running Creek
38 - S.Fk. Surprise Creek
39 - Saddle Gulch
40 - Salamander Creek
41 - Schofield Creek
42 - Schwar Creek
43 - Selway River
44 - Slow Gulch Creek
45 - Storm Creek
46 - Stripe Creek
47 - Surprise Creek
48 - Swet Creek
49 - Three Lakes Creek
50 - Tom Creek
51 - Vance Creek
52 - W.Fk. Gedney Creek
53 - W.Fk. O'Hara Creek
54 - White Cap Creek
55 - Wilkerson Creek
56 - Wounded Doe Creek

(iv) Lochsa River Subunit.

(A) [Reserved for textual description of unit.]

(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Lochsa River Subunit, follows:



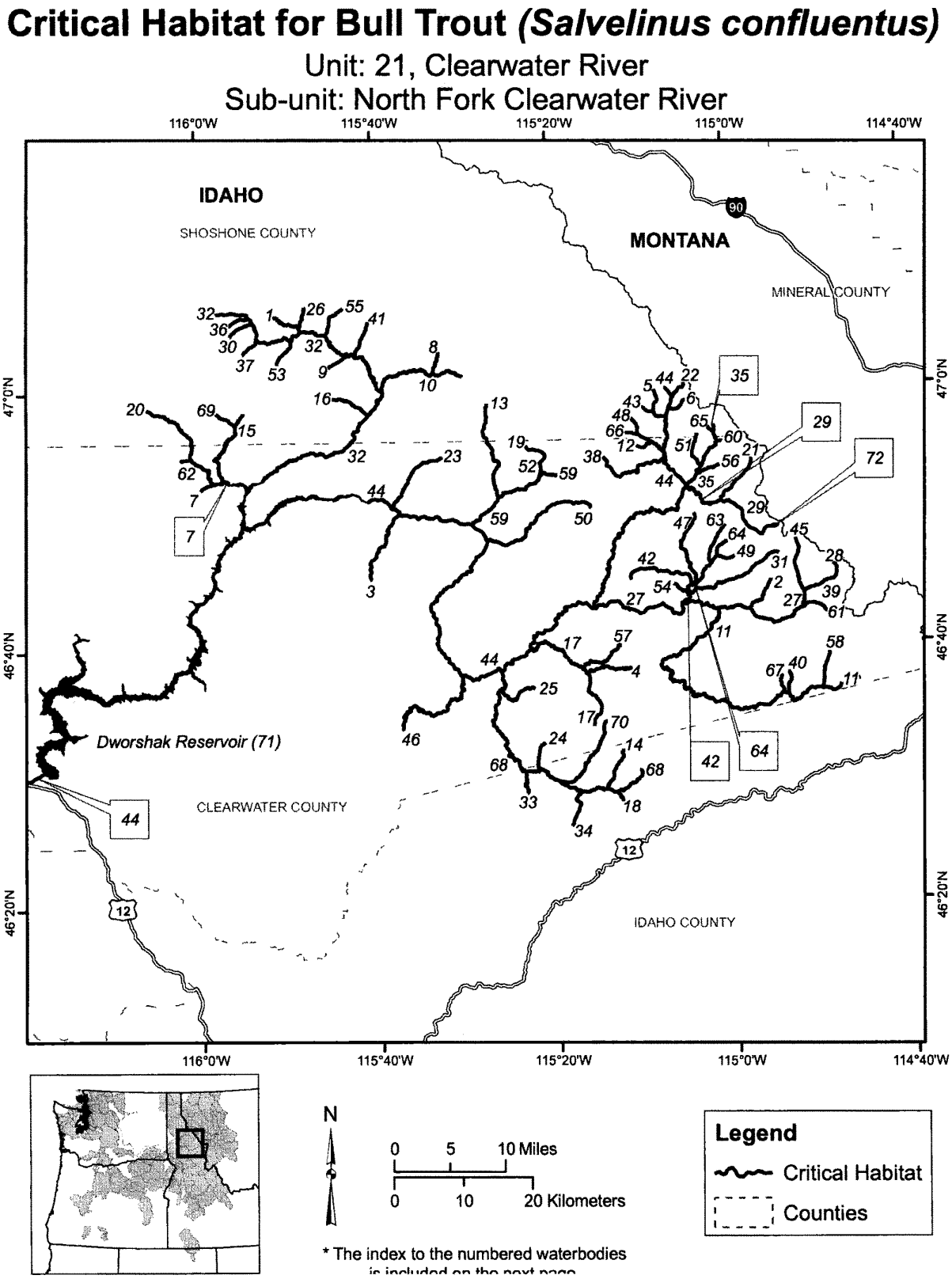
Unit: 21, Clearwater River
Sub-unit: Lochsa River

1 - Beaver Creek
2 - Big Flat Creek
3 - Boulder Creek
4 - Brushy Fork
5 - Colt Creek
6 - Colt Killed Creek
7 - Cooperation Creek
8 - Crooked Fork
9 - Doe Creek
10 - E.Fk. Fishing Creek
11 - East Fork Legendary Bear Creek
12 - Fish Creek
13 - Fish Lake Creek
14 - Fishing Creek
15 - Fox Creek
16 - Haskell Creek
17 - Hopeful Creek
18 - Hungery Creek
19 - Indian Grave Creek
20 - Legendary Bear Creek
21 - Lochsa River
22 - Maud Creek
23 - N.Fk. Spruce Creek
24 - Parachute Creek
25 - Postoffice Creek
26 - Rock Creek
27 - S.Fk. Spruce Creek
28 - Shoot Creek
29 - Shotgun Creek
30 - Spring Creek
31 - Spruce Creek
32 - Storm Creek
33 - Twin Creek
34 - UNNAMED - off Hopeful Creek
35 - W.Fk. Fishing Creek
36 - Walton Creek
37 - Warm Springs Creek
38 - Weir Creek
39 - West Fork Legendary Bear Creek
40 - Williams Lake Creek
41 - Fish Lake (Lochsa)

(v) North Fork Clearwater River Subunit.

(A) [Reserved for textual description of unit.]

(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), North Fork Clearwater Subunit, follows:



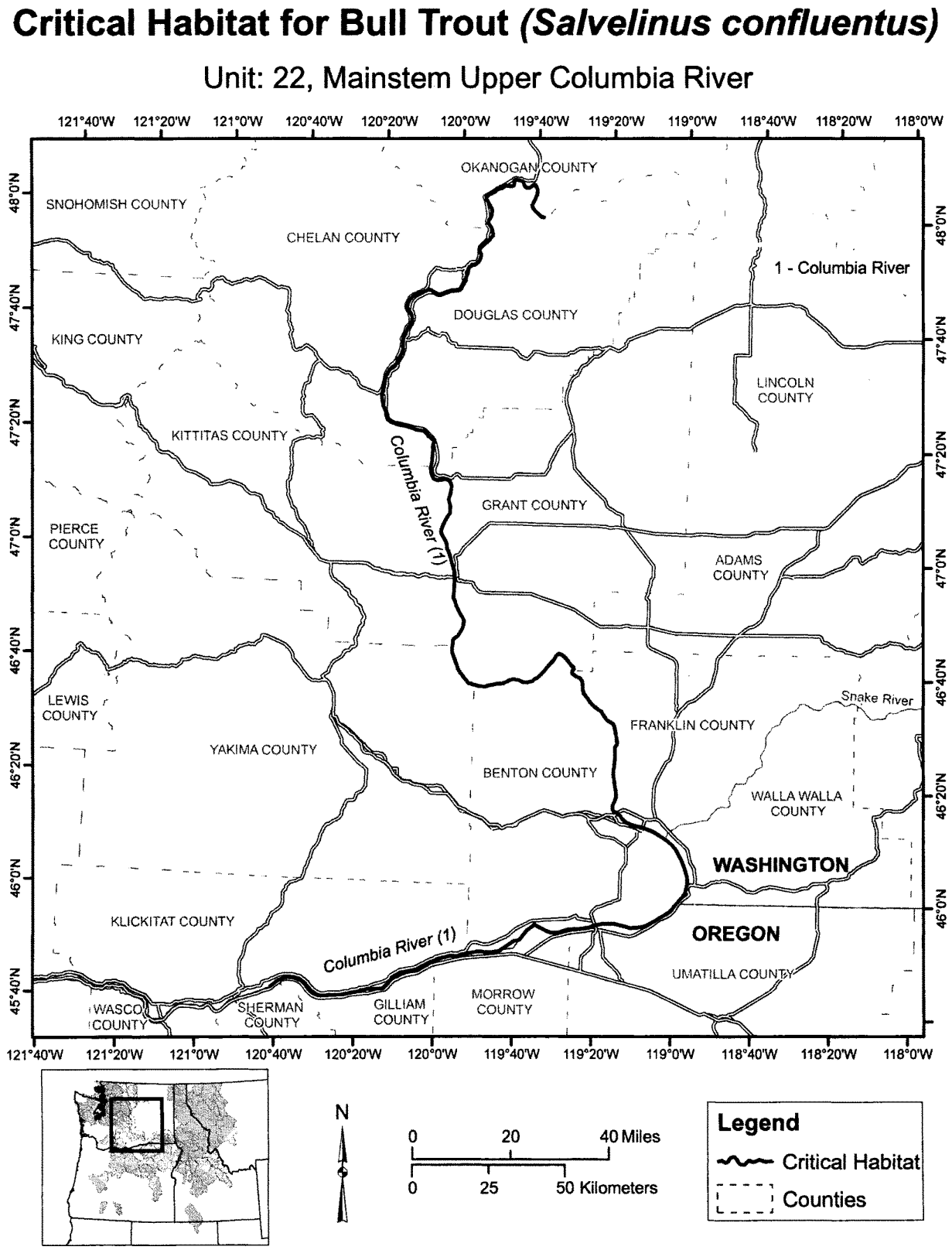
Unit: 21, Clearwater River
Sub-unit: North Fork Clearwater River

1 - Adair Creek
2 - Bear Creek
3 - Beaver Creek
4 - Bill Creek
5 - Bostonian Creek
6 - Boundary Creek
7 - Breakfast Creek
8 - Buck Creek
9 - Butte Creek (North Fork Clearwater)
10 - Canyon Creek
11 - Cayuse Creek
12 - Chamberlain Creek
13 - Collins Creek
14 - Corral Creek
15 - Floodwood Creek
16 - Foehl Creek
17 - Fourth of July Creek
18 - Fro Creek
19 - Frost Creek
20 - Glover Creek
21 - Goose Creek
22 - Graves Creek
23 - Isabella Creek
24 - Johnagan Creek
25 - Johnny Creek
26 - Jungle Creek
27 - Kelly Creek
28 - Kid Lake Creek
29 - Lake Creek
30 - Little Lost Lake Creek
31 - Little Moose Creek
32 - Little North Fork Clearwater River
33 - Little Weitas Creek
34 - Liz Creek
35 - Long Creek
36 - Lost Lake Creek
37 - Lund Creek
38 - Meadow Creek
39 - Middle Fork Kelly Creek
40 - Mink Creek
41 - Montana Cr
42 - Moose Creek
43 - Niagra Gulch
44 - North Fork Clearwater River
45 - North Fork Kelly Creek
46 - Orogrande Creek
47 - Osier Creek
48 - Placer Creek
49 - Pollock Creek
50 - Quartz Creek
51 - Rawhide Creek
52 - Roaring Creek
53 - Rocky Run
54 - Ruby Creek
55 - Rutledge Creek
56 - Short Creek
57 - Shot Creek
58 - Silver Creek
59 - Skull Creek
60 - Slate Creek
61 - South Fork Kelly Creek
62 - Stoney Creek
63 - Sugar Creek
64 - Swamp Creek
65 - UNNAMED - off Long Creek
66 - Vanderbilt Gulch
67 - Weasel Creek
68 - Weitas Creek
69 - West Fork Floodwood Creek
70 - Windy Creek
71 - Dworshak Reservoir
72 - Fish Lake

(28) Unit 22: Mainstem Upper Columbia River Unit, Oregon and Washington.

(i) [Reserved for textual description of unit.]

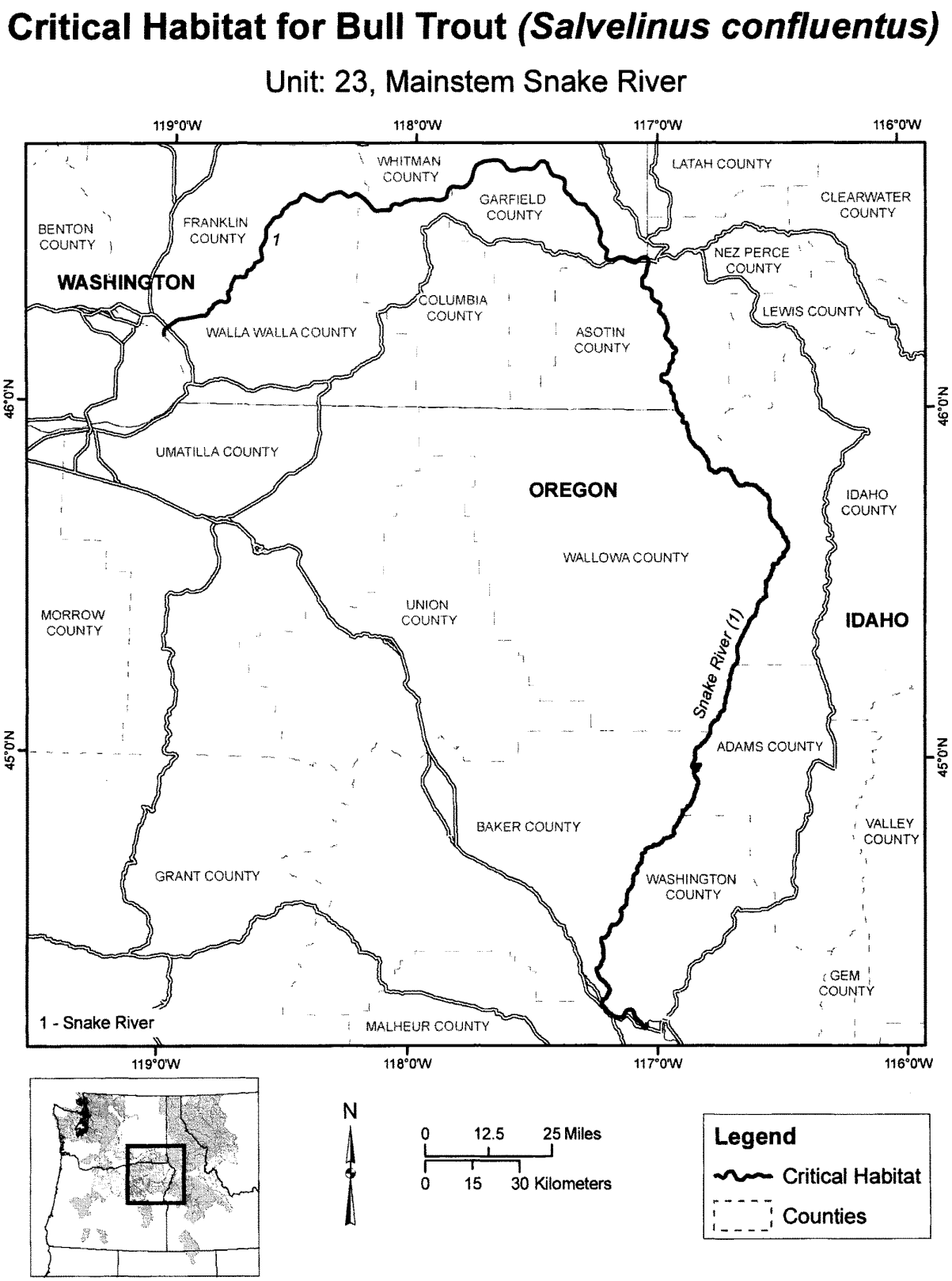
(ii) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Upper Columbia River Unit, follows:



(29) Unit 23: Mainstem Snake River Unit, Idaho, Oregon, and Washington.

(i) [Reserved for textual description of unit.]

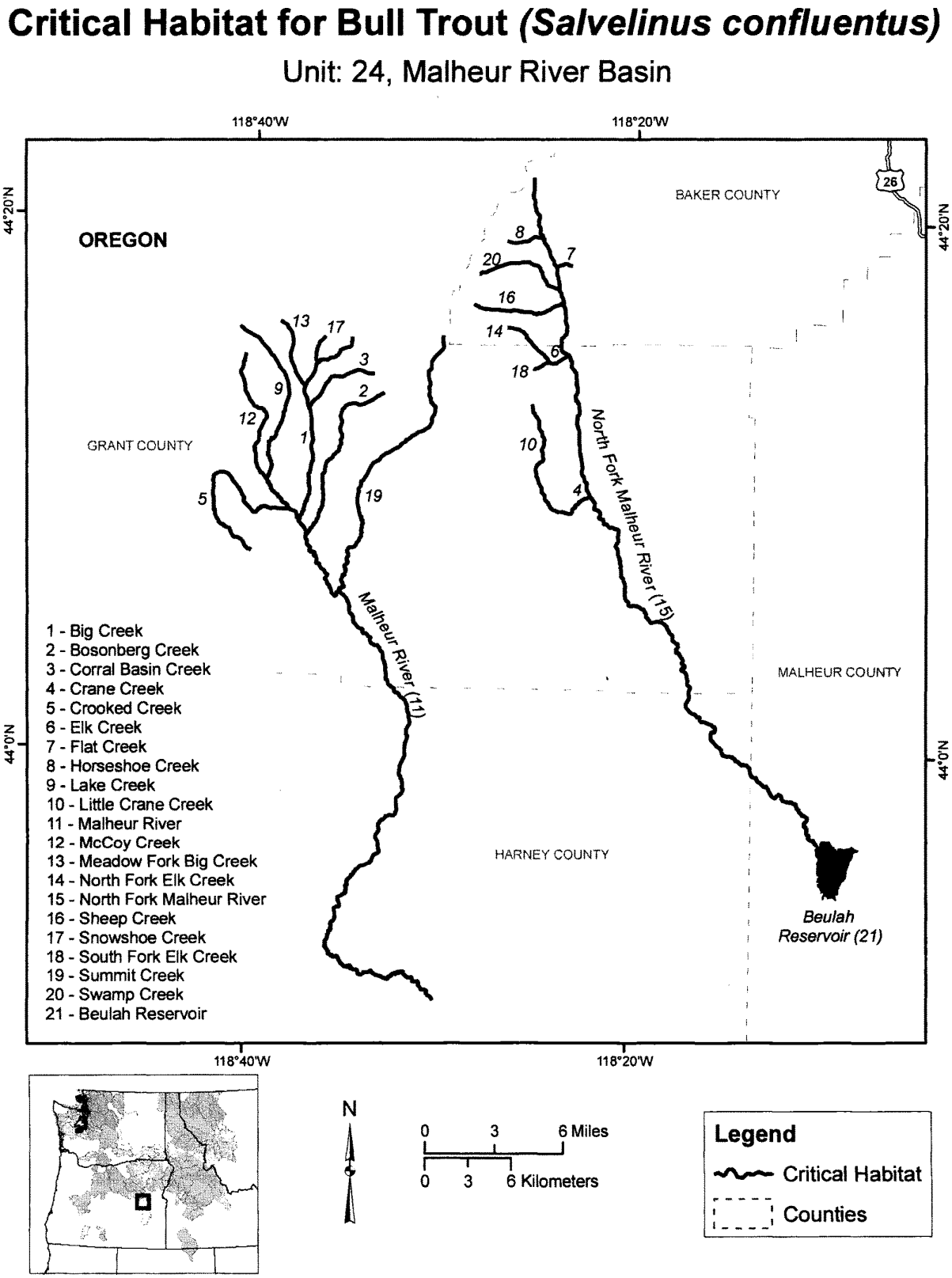
(ii) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Mainstem Snake River Unit, follows:



(30) Unit 24: Malheur River Basin Unit, Oregon.

(i) [Reserved for textual description of unit.]

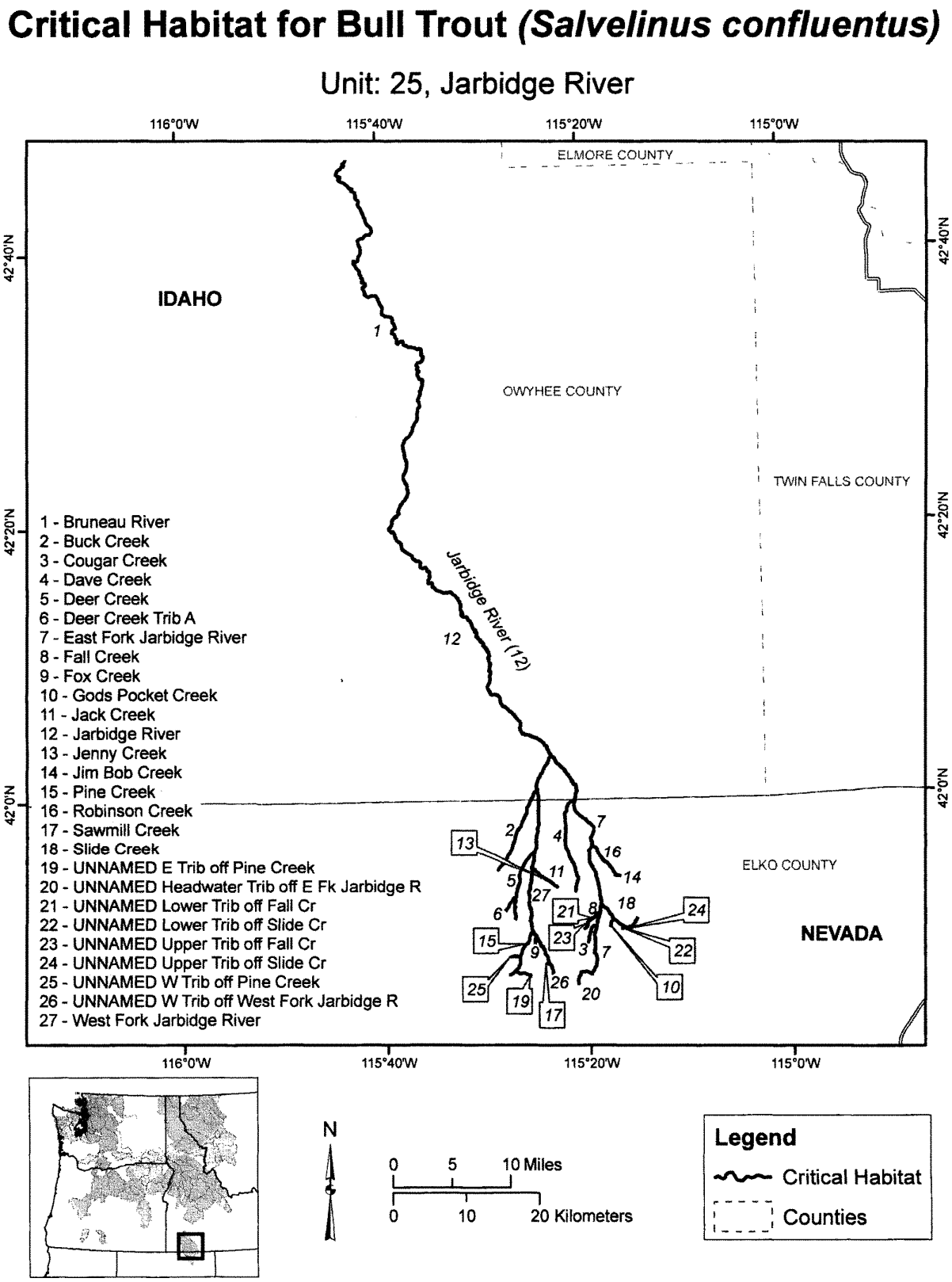
(ii) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Malheur River Basin Unit, follows:



(31) Unit 25: Jarbidge River Unit, Idaho and Nevada.

(i) [Reserved for textual description of unit.]

(ii) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Jarbidge River Unit, follows:

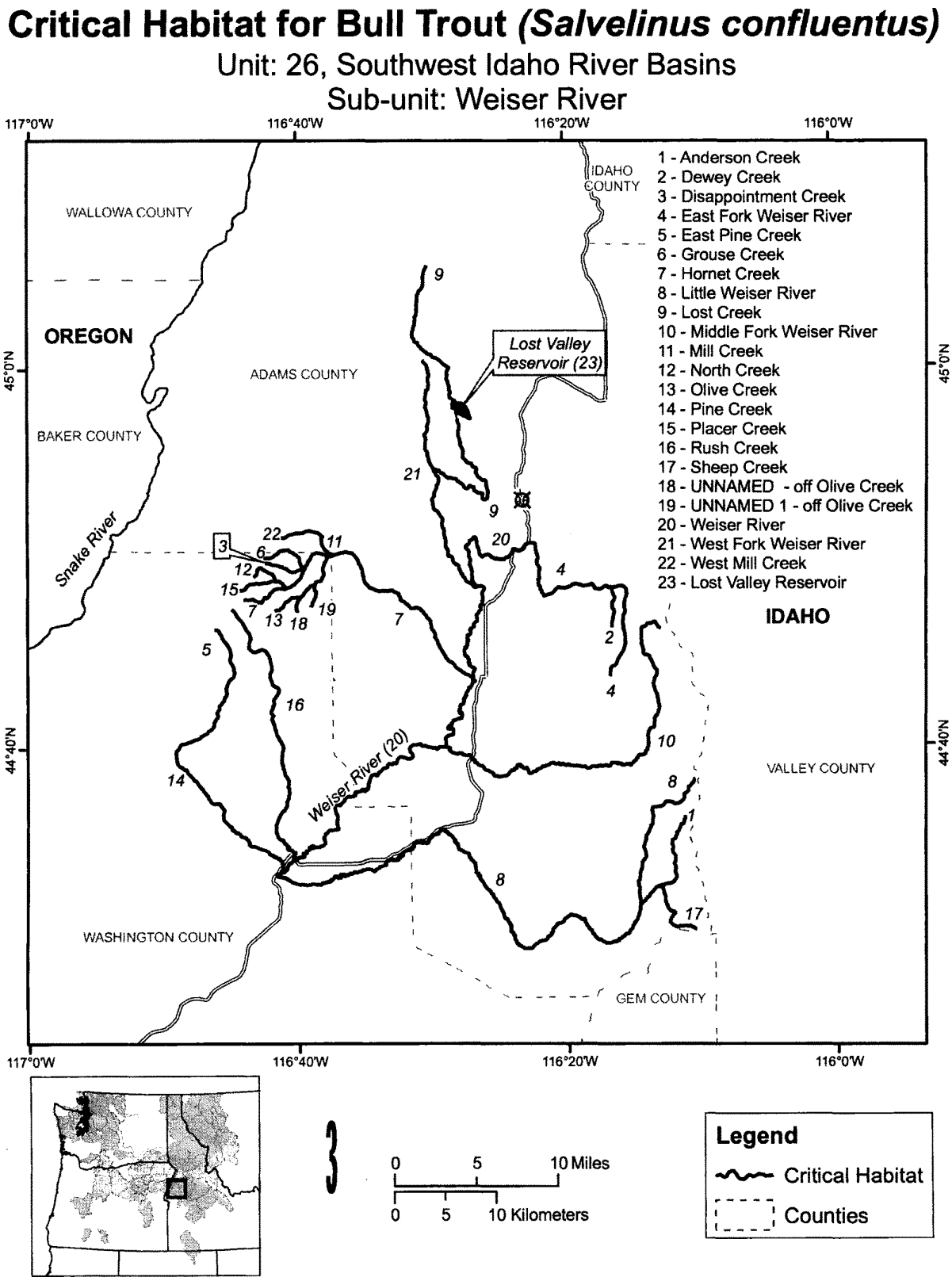


(32) Unit 26: Southwest Idaho River Basins Unit, Idaho.

(i) Weiser River Subunit.

(A) [Reserved for textual description of unit.]

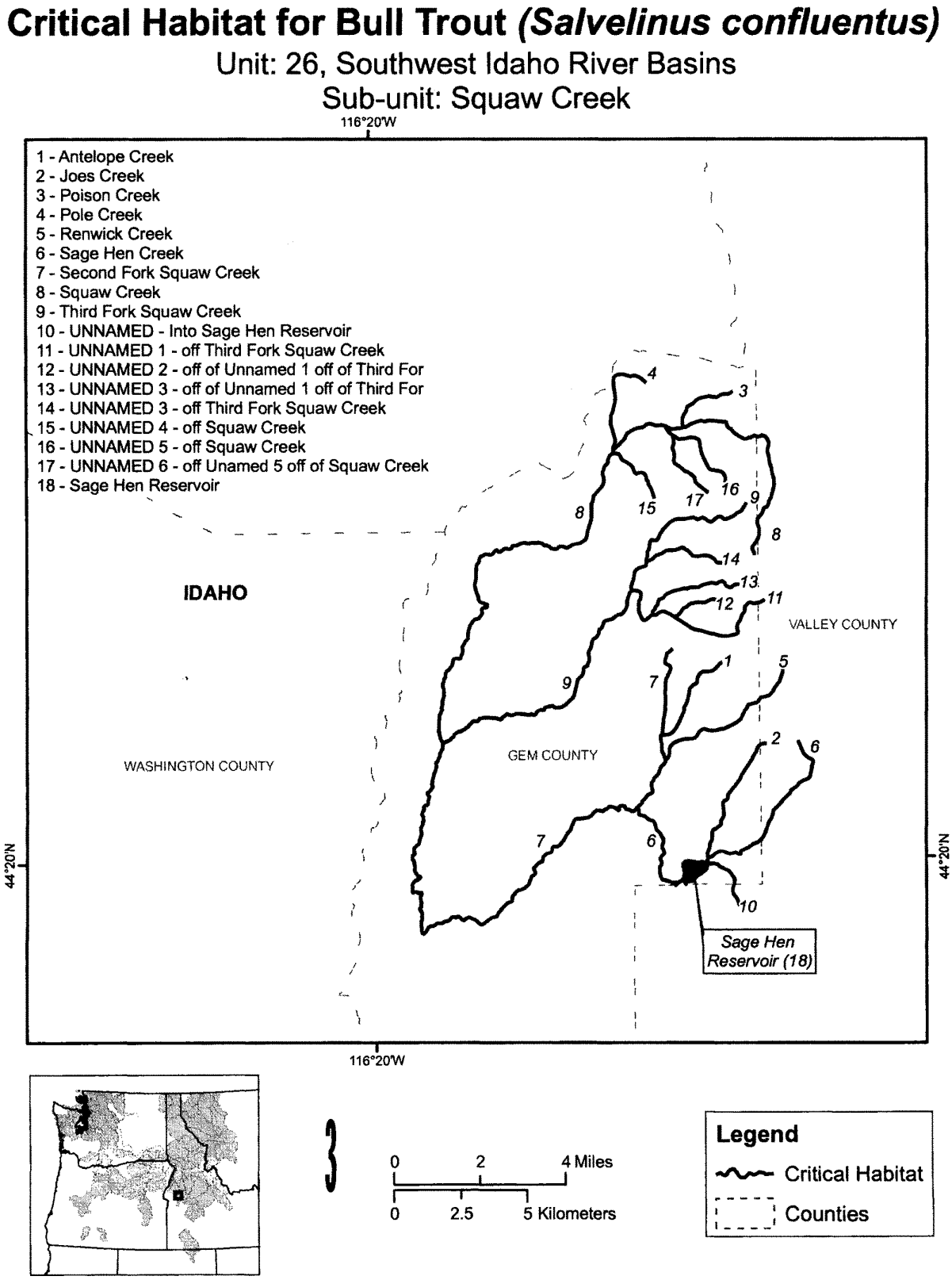
(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Weiser River Subunit, follows:



(ii) Squaw Creek Subunit.

(A) [Reserved for textual description of unit.]

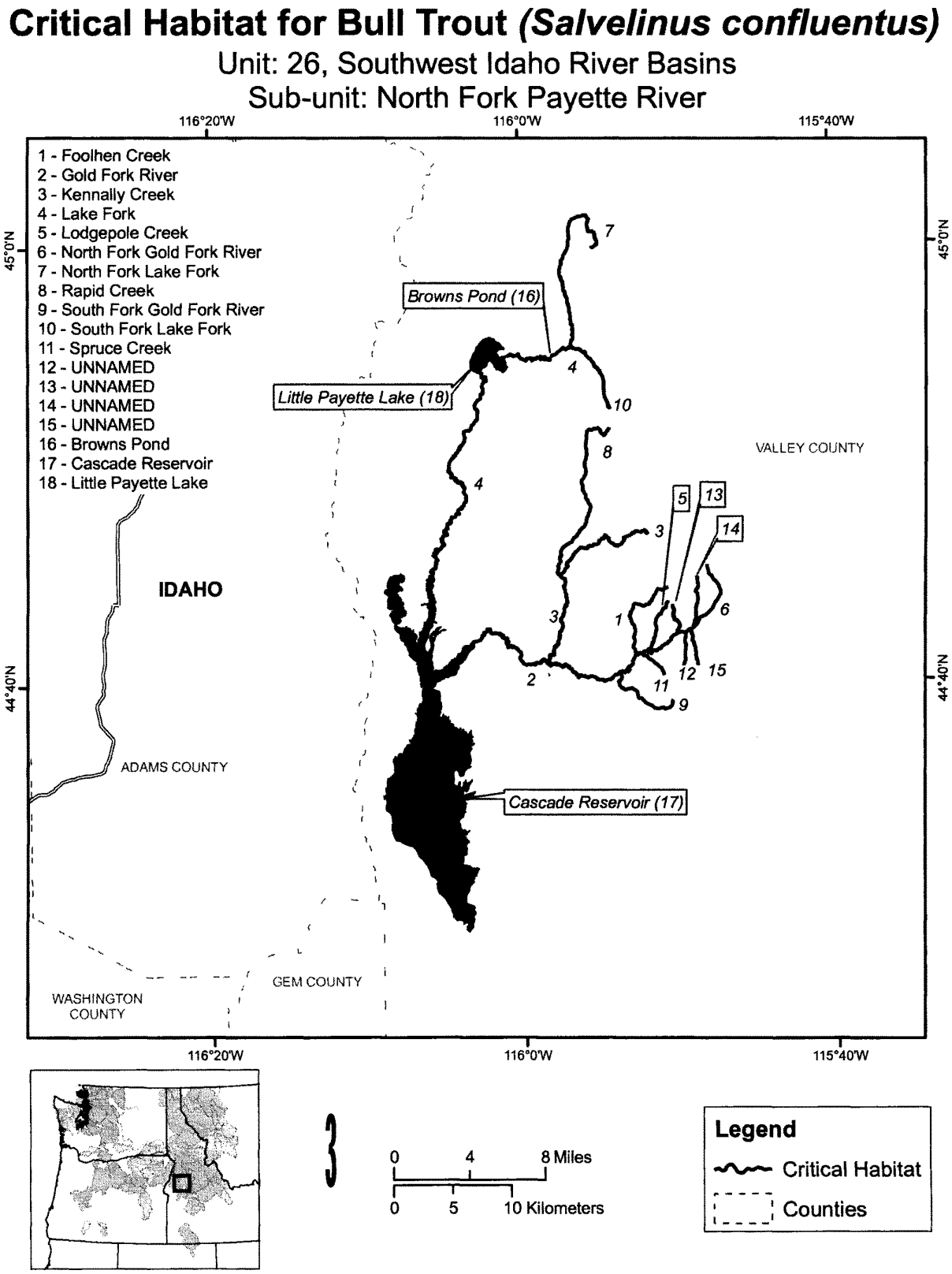
(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Squaw Creek Subunit, follows:



(iii) North Fork Payette River Subunit.

(A) [Reserved for textual description of unit.]

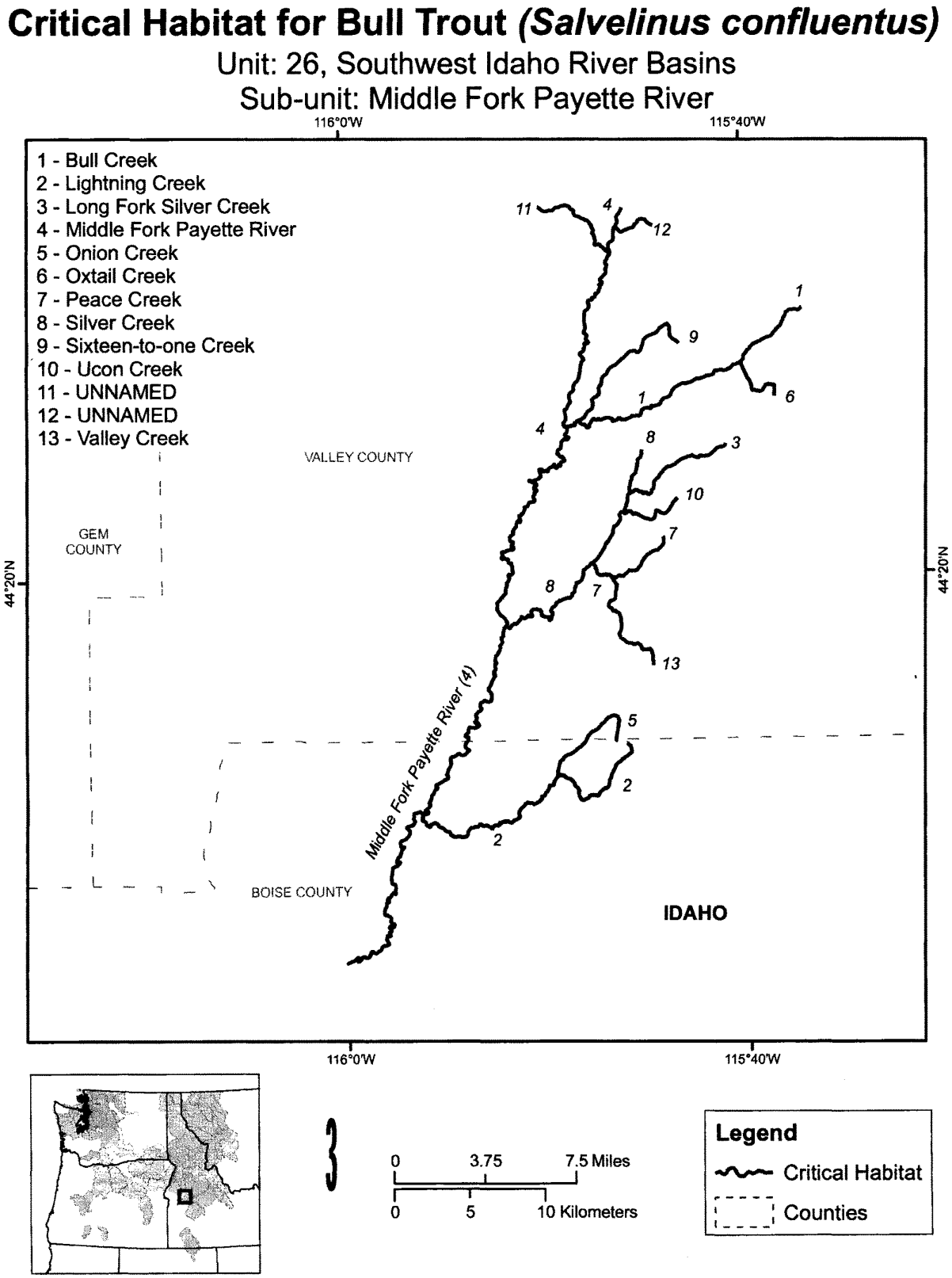
(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), North Fork Payette River Subunit, follows:



(iv) Middle Fork Payette River Subunit.

(A) [Reserved for textual description of unit.]

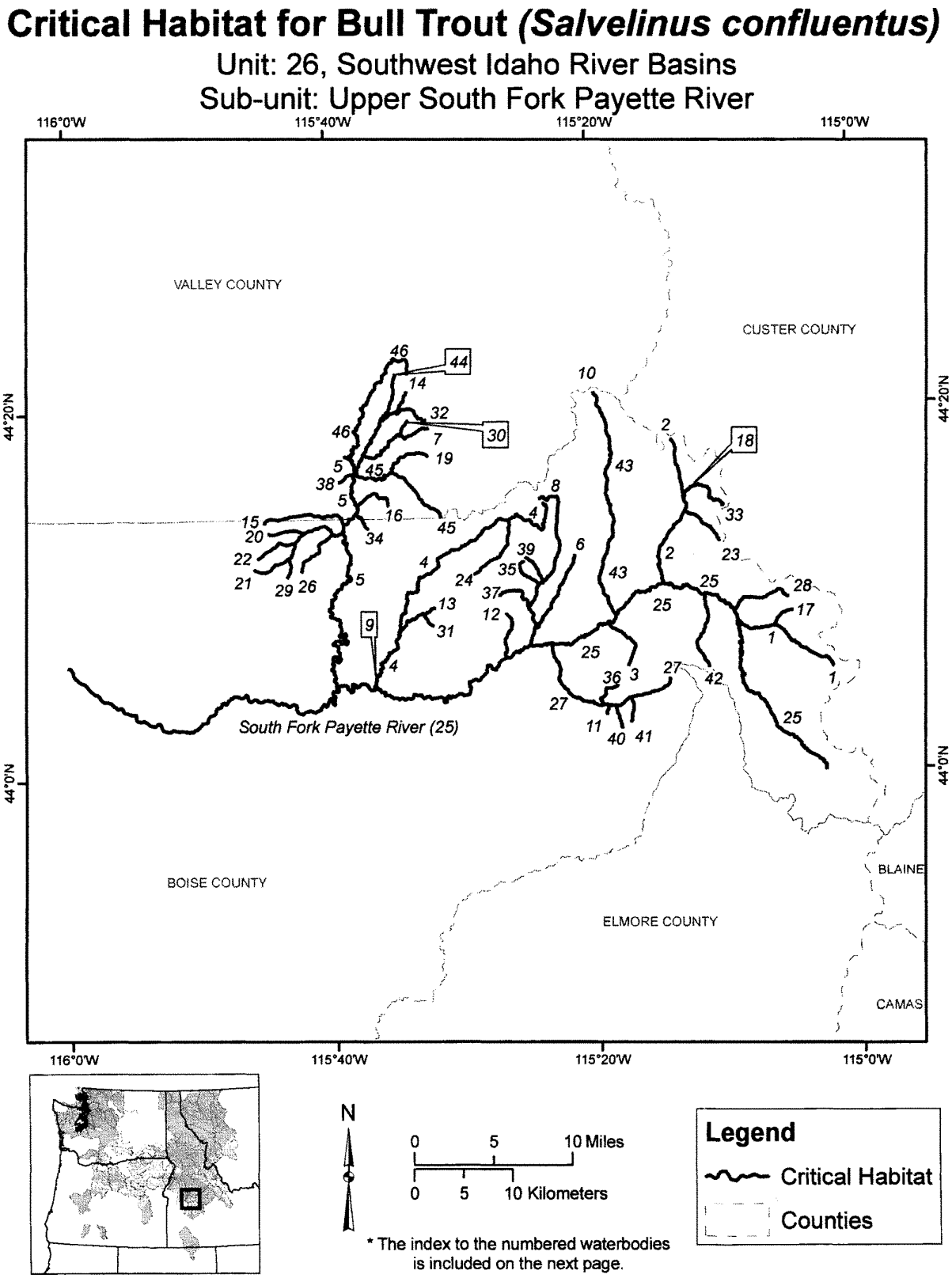
(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Middle Fork Payette River Subunit, follows:



(v) Upper South Fork Payette River Subunit.

(A) [Reserved for textual description of unit.]

(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Upper South Fork Payette River Subunit, follows:



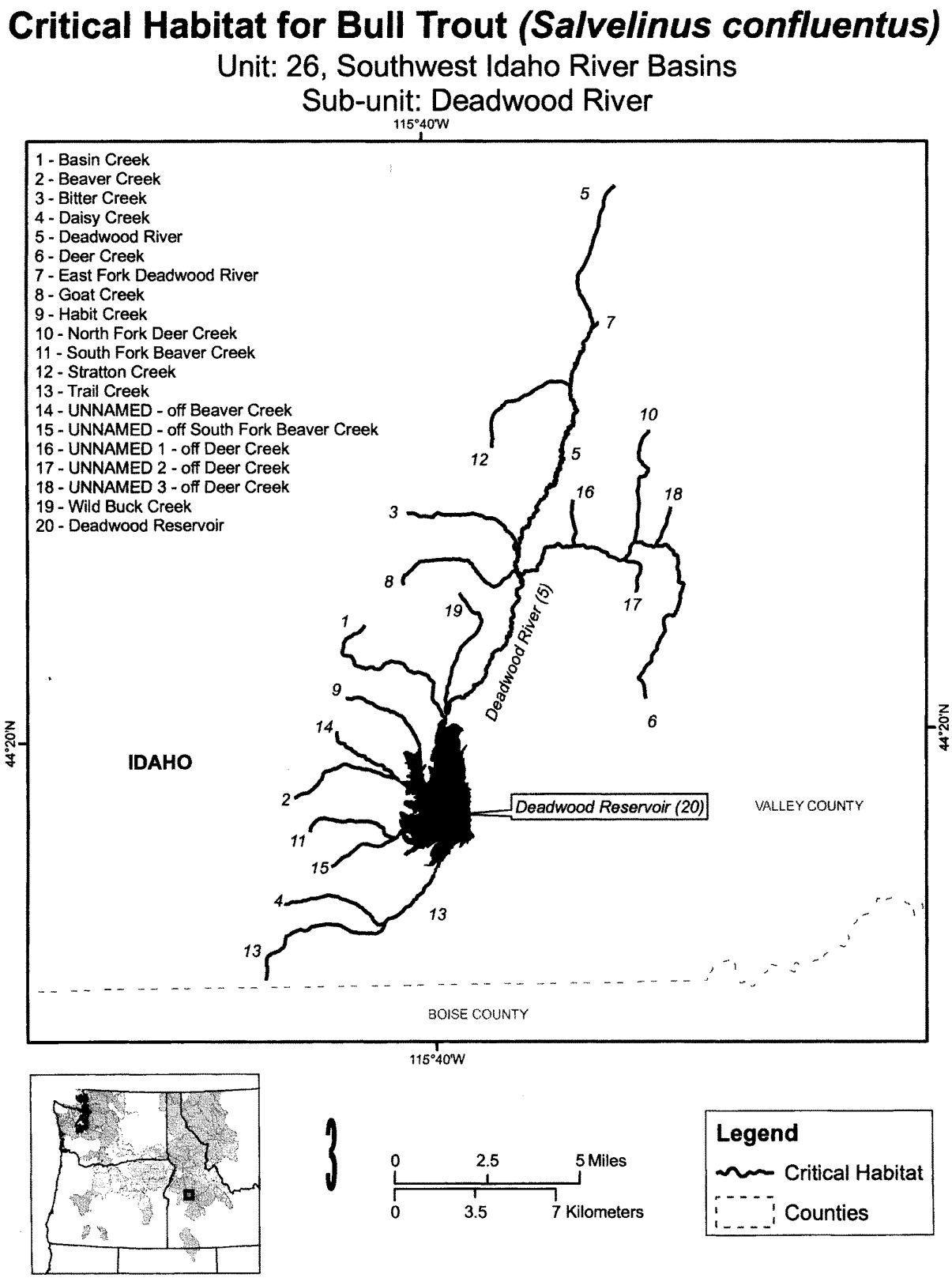
Unit: 26, Southwest Idaho River Basins
Sub-Unit: Upper South Fork Payette River Unit

1 - Baron Creek
2 - Canyon Creek
3 - Chapman Creek
4 - Clear Creek
5 - Deadwood River
6 - East Fork Eightmile Creek
7 - East Fork Warm Springs Creek
8 - Eightmile Creek
9 - Garney Creek
10 - Gates Creek
11 - Horseshoe Creek
12 - Kettle Creek
13 - Long Creek
14 - Middle Fork Warm Springs Creek
15 - Ninemile Creek
16 - No Man Creek
17 - North Fork Baron Creek
18 - North Fork Canyon Creek
19 - North Fork Whitehawk Creek
20 - Packsaddle Creek
21 - Scott Creek
22 - Smith Creek
23 - South Fork Canyon Creek
24 - South Fork Clear Creek
25 - South Fork Payette River
26 - South Fork Scott Creek
27 - Tenmile Creek
28 - Trail Creek
29 - Unnamed
30 - UNNAMED - off East Fork Warm Springs Creek
31 - UNNAMED - off Long Creek
32 - UNNAMED - off Middle Fork Warm Springs Creek
33 - UNNAMED - off North Fork Canyon Creek
34 - UNNAMED 1 - off Deadwood River
35 - UNNAMED 1 - off Eightmile Creek
36 - UNNAMED 1 - off Tenmile Creek
37 - UNNAMED 1a - off Eightmile Creek
38 - UNNAMED 2 - off Deadwood River
39 - UNNAMED 2 - off Eightmile Creek
40 - UNNAMED 2 - off Tenmile Creek
41 - UNNAMED 3 - off Tenmile Creek
42 - Wapiti Creek
43 - Warm Spring Creek
44 - Warm Springs Creek
45 - Whitehawk Creek
46 - Wilson Creek

(vi) Deadwood River Subunit.

(A) [Reserved for textual description of unit.]

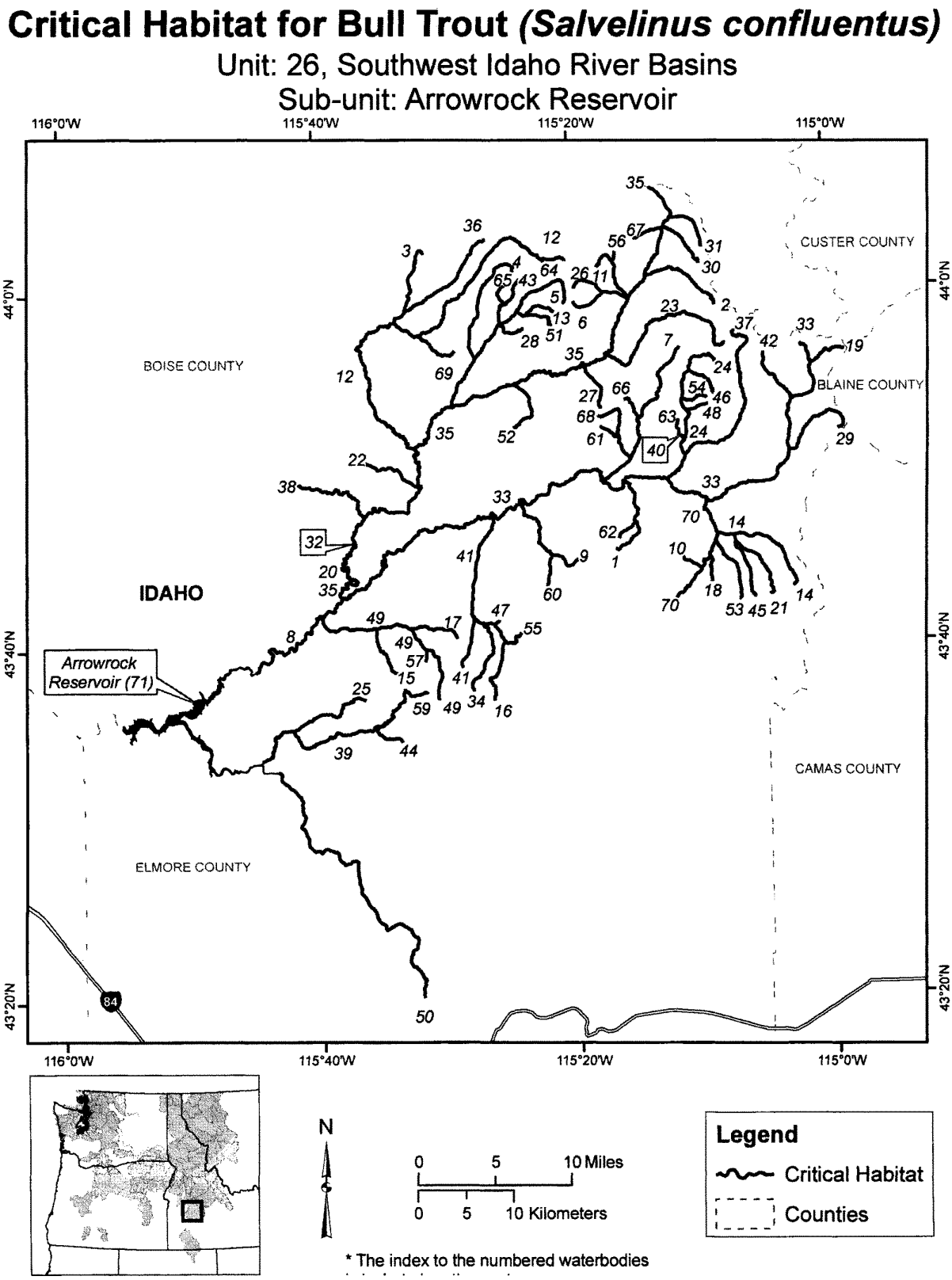
(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Deadwood River Subunit, follows:



(vii) Arrowrock Subunit.

(A) [Reserved for textual description of unit.]

(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Arrowrock Subunit, follows:



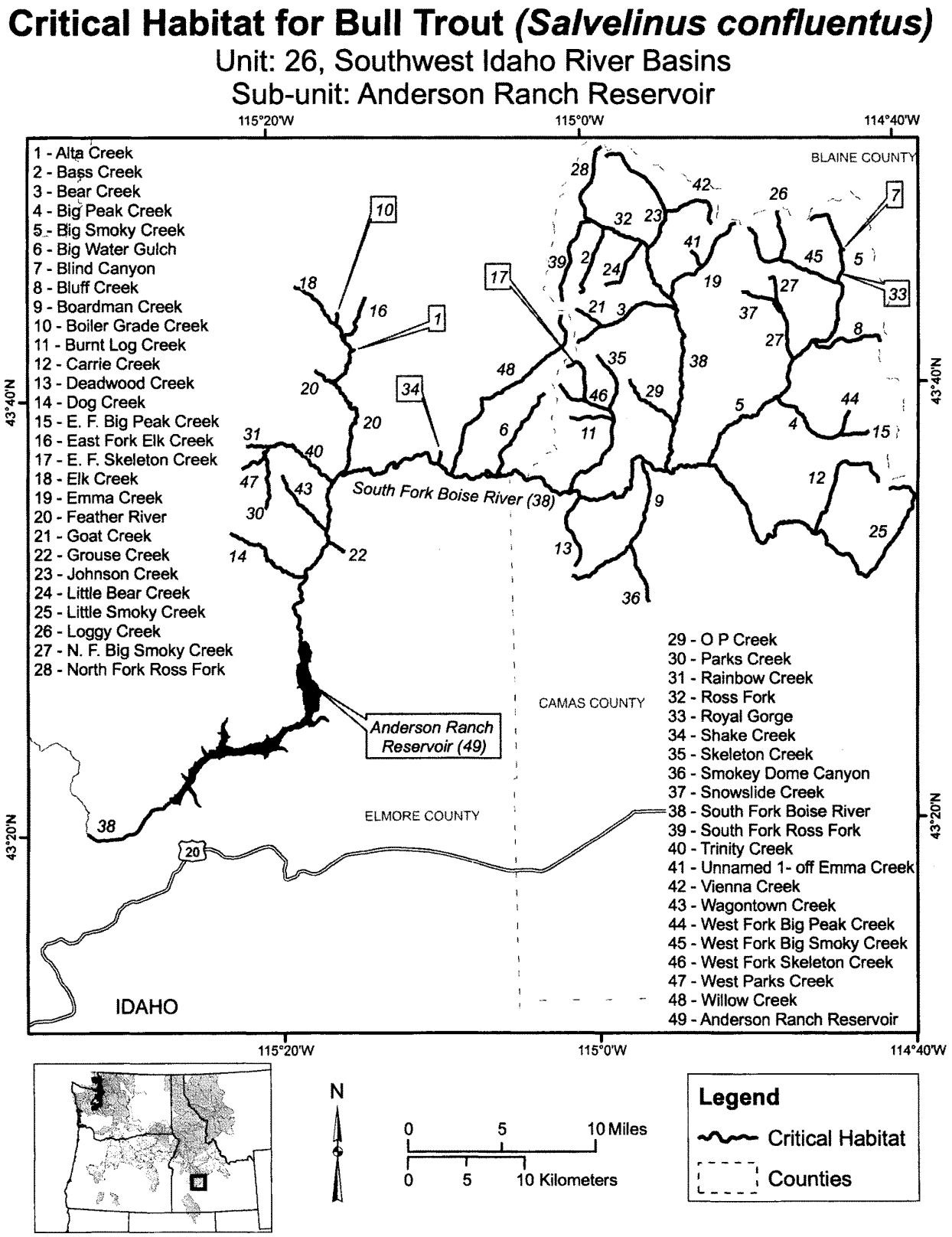
Unit: 26, Southwest Idaho River Basins
Sub-unit: Arrowrock Reservoir

1 - Bald Mountain Creek
2 - Ballentyne Creek
3 - Banner Creek
4 - Bear Creek
5 - Bear River
6 - Big Silver Creek
7 - Black Warrior Creek
8 - Boise River
9 - Buck Creek
10 - Corbus Creek
11 - Cow Creek
12 - Crooked River
13 - Cub Creek
14 - Decker Creek
15 - Devils Creek
16 - East Fork Roaring River
17 - East Fork Sheep Creek
18 - East Fork Yuba River
19 - Flytrip Creek
20 - French Creek
21 - Grouse Creek
22 - Hungarian Creek
23 - Johnson Creek
24 - Little Queens River
25 - Little Rattlesnake Creek
26 - Little Silver Creek
27 - Lodgepole Creek
28 - Louise Creek
29 - Mattingly Creek
30 - McLeod Creek
31 - McPhearson Creek
32 - Meadow Creek
33 - Middle Fork Boise River
34 - Middle Fork Roaring River
35 - North Fork Boise River
36 - Pikes Fork
37 - Queens River
38 - Rabbit Creek
39 - Rattlesnake Creek
40 - Right Creek
41 - Roaring River
42 - Rock Creek
43 - Rockey Creek
44 - Russel Gulch
45 - Sawmill Creek
46 - Scenic Creek
47 - Scotch Creek
48 - Scott Creek
49 - Sheep Creek
50 - South Fork Boise River
51 - South Fork Cub Creek
52 - Trail Creek
53 - Trail Creek-Yuba
54 - Tripod Creek
55 - UNNAMED
56 - Unnamed
57 - Unnamed
58 - Unnamed
59 - Unnamed
60 - UNNAMED
61 - UNNAMED
62 - UNNAMED
63 - Unnamed
64 - Unnamed
65 - UNNAMED
66 - UNNAMED - off Black Warrior Creek
67 - West Fork Creek
68 - West Warrior Creek
69 - Willow Creek
70 - Yuba River
71 - Arrowrock Reservoir

(viii) Anderson Ranch Subunit.

(A) [Reserved for textual description of unit.]

(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Anderson Ranch Subunit, follows:

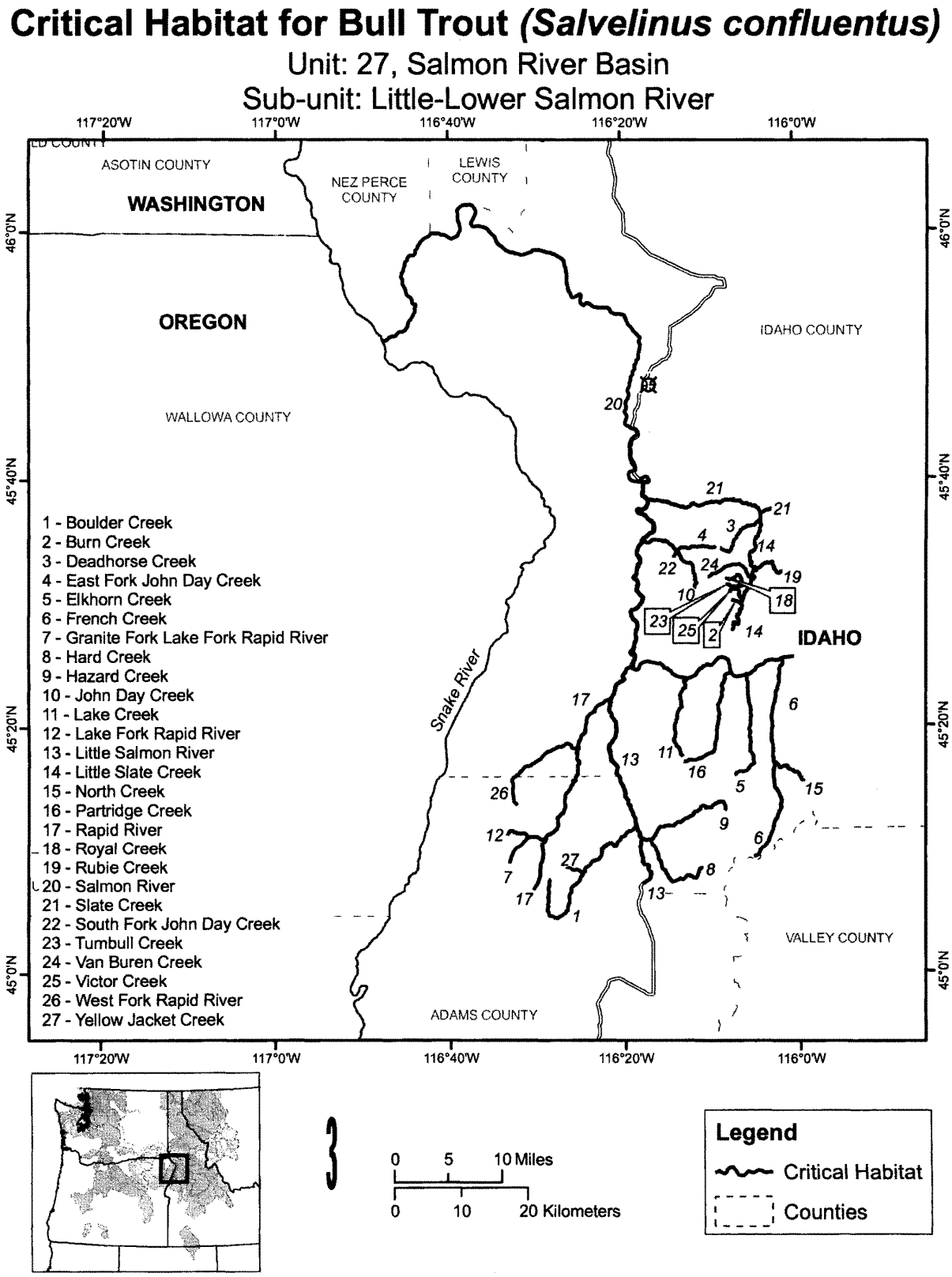


(33) Unit 27: Salmon River Basin Unit, Idaho.

(i) Little-Lower Salmon Subunit.

(A) [Reserved for textual description of unit.]

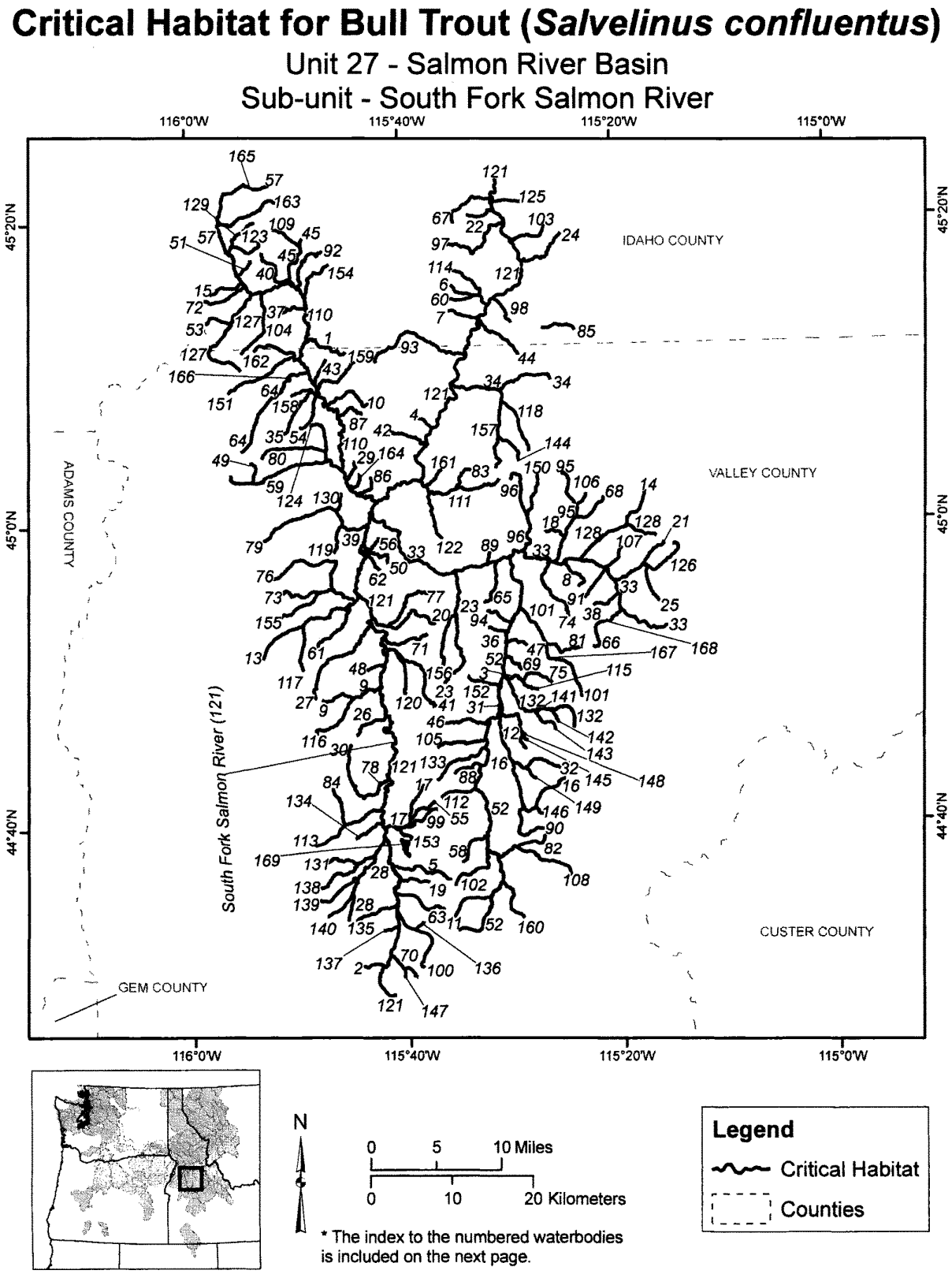
(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Little-Lower Salmon Subunit, follows:



(ii) South Fork Salmon River Subunit.

(A) [Reserved for textual description of unit.]

(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), South Fork Salmon River Subunit, follows:



Unit 27 - Salmon River Basin
Sub-unit – South Fork Salmon River

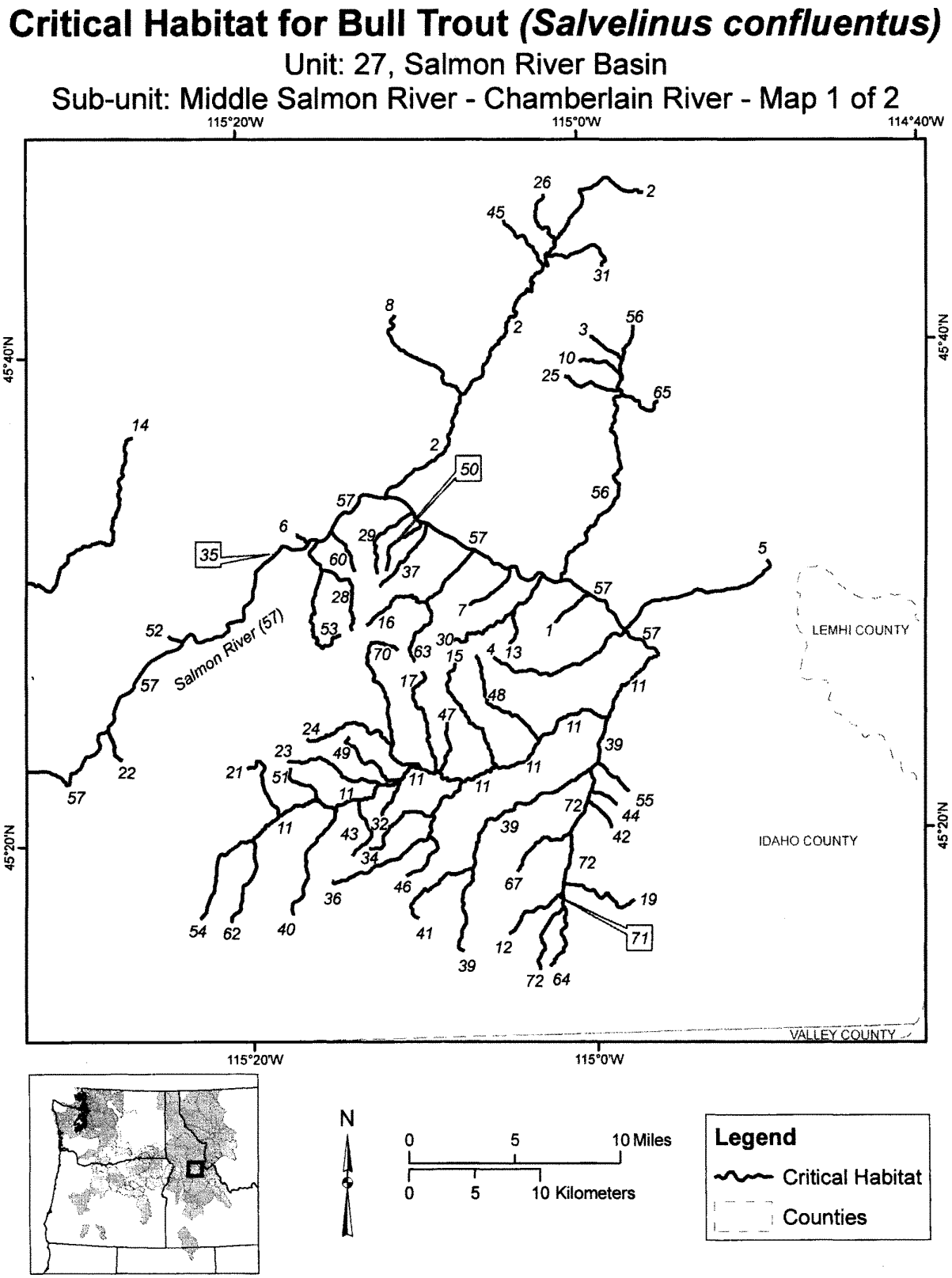
1 - Alez Creek
2 - Back Creek
3 - Bear Creek
4 - Bear Creek
5 - Bear Creek
6 - Big Buck Creek
7 - Big Flat Creek
8 - Bishop Creek
9 - Blackmare Creek
10 - Blue Lake Creek
11 - Boulder Creek
12 - Buck Creek
13 - Buckhorn Creek
14 - Bum Creek
15 - Burgdorf Creek
16 - Burntlog Creek
17 - Cabin Creek
18 - Camp Creek
19 - Camp Creek
20 - Camp Creek
21 - Cane Creek
22 - Carlson Creek
23 - Caton Creek
24 - Chicken Creek
25 - Cinnabar Creek
26 - Cliff Creek
27 - Cougar Creek
28 - Curtis Creek
29 - Deep Creek
30 - Dollar Creek
31 - Dutch Creek
32 - East Fork Burntlog Creek
33 - East Fork South Fork Salmon River
34 - Elk Creek
35 - Enos Creek
36 - Falls Creek
37 - Fernan Creek
38 - Fiddle Creek
39 - Fitsum Creek
40 - Flat Creek
41 - Fourmile Creek
42 - Fritser Creek
43 - Grimmet Creek
44 - Grouse Creek
45 - Grouse Creek
46 - Halfway Creek
47 - Hanson Creek
86 - Oompaul Creek
87 - Paradise Creek
88 - Park Creek
89 - Parks Creek
90 - Peanut Creek
91 - Pepper Creek
92 - Piah Creek
93 - Pony Creek
94 - Porcupine Creek
95 - Profile Creek
96 - Quartz Creek
97 - Raines Creek
98 - Rattlesnake Creek
99 - Reeves Creek
100 - Rice Creek
101 - Riordan Creek
102 - Rock Creek
103 - Rooster Creek
104 - Ruby Creek
105 - Rustican Creek
106 - Ryan Creek
107 - Salt Creek
108 - Sand Creek
109 - Sand Creek
110 - Secesh River
111 - Sheep Creek
112 - Sheep Creek
113 - Six-Bit Creek
114 - Smith Creek
115 - South Fork Bear Creek
116 - South Fork Blackmare Creek
117 - South Fork Buckhorn Creek
118 - South Fork Elk Creek
119 - South Fork Fitsum Creek
120 - South Fork Fourmile Creek
121 - South Fork Salmon River
122 - South Fork Sheep Creek
123 - South Fork Threemile Creek
124 - Split Creek
125 - Station Creek
126 - Sugar Creek
127 - Summit Creek
128 - Tamarack Creek
129 - Threemile Creek
130 - Tie Creek
131 - Trail Creek
132 - Trapper Creek

48 - Holdover Creek
49 - Hum Creek
50 - Indian Creek
51 - Jeanette Creek
52 - Johnson Creek
53 - Josephine Creek
54 - Jungle Creek
55 - Knee Creek
56 - Krassel Creek
57 - Lake Creek
58 - Landmark Creek
59 - Lick Creek
60 - Little Buck Creek
61 - Little Buckhorn Creek
62 - Little Indian Creek
63 - Lodgepole Creek
64 - Loon Creek
65 - Loosum Creek
66 - Meadow Creek
67 - Mill Creek
68 - Missouri Creek
69 - Moose Creek
70 - Mormon Creek
71 - Nasty Creek
72 - Nethker Creek
73 - Nick Creek
74 - No Mans Creek
75 - North Fork Bear Creek
76 - North Fork Buckhorn Creek
77 - North Fork Camp Creek
78 - North Fork Dollar Creek
79 - North Fork Fitsum Creek
80 - North Fork Lick Creek
81 - North Fork Riordan Creek
82 - North Fork Sand Creek
83 - North Fork Sheep Creek
84 - North Fork Six-bit Creek
85 - North Fork Wolf Fang Creek
133 - Trout Creek
134 - Two-bit Creek
135 - Tyndall Creek
136 - UNNAMED - Off Rice Creek
137 - UNNAMED - Off South Fork Salmon River
138 - UNNAMED - Off Trail Creek
139 - UNNAMED 1 - Off Curtis Creek
140 - UNNAMED 2 - Off Curtis Creek
141 - Unnamed Trib 1-Off Trapper Creek
142 - Unnamed Trib 2-Off Trapper Creek
143 - UNNAMED Trib 3- Off Trapper Creek
144 - Unnamed Tributary to West Fork Elk Creek
145 - Unnamed-Off Buck Creek
146 - Unnamed-Off Burntlog Creek
147 - Unnamed-Off Mormon Creek
148 - Unnamed-Off Unnamed to Buck Creek
149 - Unnamed-Off Unnamed to Burntlog Creek
150 - Vein Creek
151 - Victor Creek
152 - Wardenhoff Creek
153 - Warm Lake Creek
154 - Warm Spring Creek
155 - West Fork Buckhorn Creek
156 - West Fork Caton Creek
157 - West Fork Elk Creek
158 - West Fork Enos Creek
159 - Whangdoodle Creek
160 - Whiskey Creek
161 - Willey Creek
162 - Willow Basket Creek
163 - Willow Creek
164 - Zena Creek
165 - Lake Creek Lake
166 - Loon Lake
167 - Riordan Lake
168 - Unnamed Lake on Meadow Creek
169 - Warm Lake

(iii) Middle Salmon River–Chamberlain River Subunit.

(A) [Reserved for textual description of unit.]

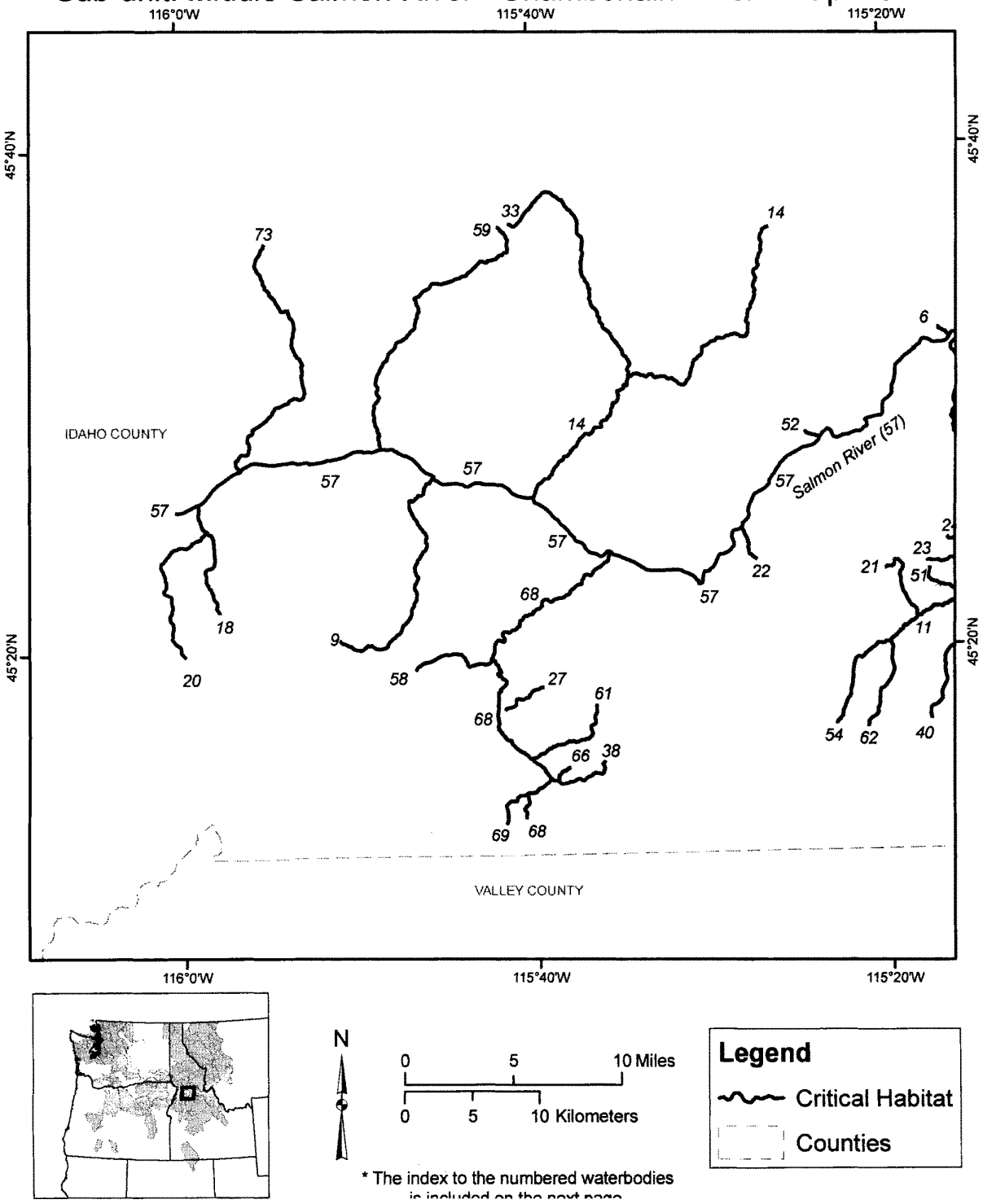
(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Middle Salmon River–Chamberlain River Subunit, follows:



Critical Habitat for Bull Trout *(Salvelinus confluentus)*

Unit: 27, Salmon River Basin

Sub-unit: Middle Salmon River - Chamberlain River - Map 2 of 2



* The index to the numbered waterbodies is included on the next page

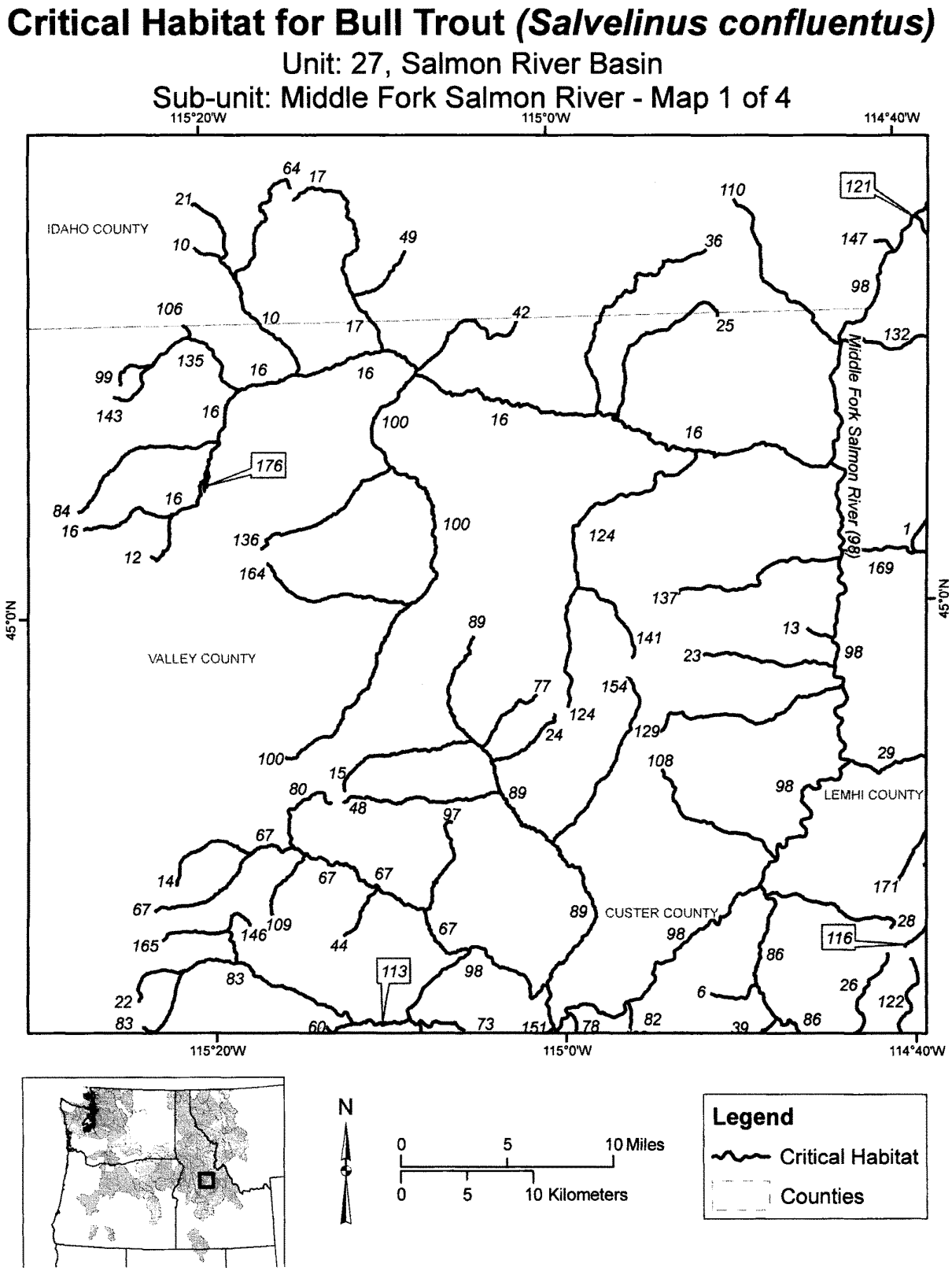
Unit: 27, Salmon River Basin
Sub-Unit: Middle Salmon River Chamberlain River

1 - Arctic Creek
2 - Bargamin Creek
3 - Basin Creek
4 - Big Bear Creek
5 - Big Harrington Creek
6 - Big Mallard Creek
7 - Bruin Creek
8 - Cache Creek
9 - California Creek
10 - Camp Creek
11 - Chamberlain Creek
12 - Club Creek
13 - Cold Creek
14 - Crooked Creek
15 - Deer Creek
16 - Dillinger Creek
17 - Dog Creek
18 - East Fork Fall Creek
19 - East Fork Whimstick Creek
20 - Fall Creek
21 - Fish Creek
22 - Fivemile Creek
23 - Flossie Creek
24 - Game Creek
25 - Goodman Creek
26 - Green Creek
27 - Guard Creek
28 - Hartan Creek
29 - Hida Creek
30 - Hot Springs Creek
31 - Hot Springs Creek
32 - Hotzel Creek
33 - Lake Creek
34 - Little Lodgepole Creek
35 - Little Mallard Creek
36 - Lodgepole Creek
37 - Magpie Creek
38 - Mayflower Creek
39 - McCalla Creek
40 - Moose Creek
41 - Moose Jaw Creek
42 - My Creek
43 - No Name Creek
44 - Our Creek
45 - Poet Creek
46 - Pole Creek
47 - Pup Creek
48 - Queen Creek
49 - Ranch Creek
50 - Raven Creek
51 - Red Top Creek
52 - Rhett Creek
53 - Richardson Creek
54 - Rim Creek
55 - Root Creek
56 - Sabe Creek
57 - Salmon River
58 - Schissler Creek
59 - Sheep Creek
60 - Silge Creek
61 - Slaughter Creek
62 - South Fork Chamberlain Creek
63 - South Fork Dillinger Creek
64 - South Fork Whimstick Creek
65 - Twist Creek
66 - Unnamed-North Fork Mayflower Creek
67 - Wapiti Creek
68 - Warren Creek
69 - Webfoot Creek
70 - West Fork Chamberlain Creek
71 - West Fork Whimstick Creek
72 - Whimstick Creek
73 - Wind River

(iv) Middle Fork Salmon River Subunit.

(A) [Reserved for textual description of unit.]

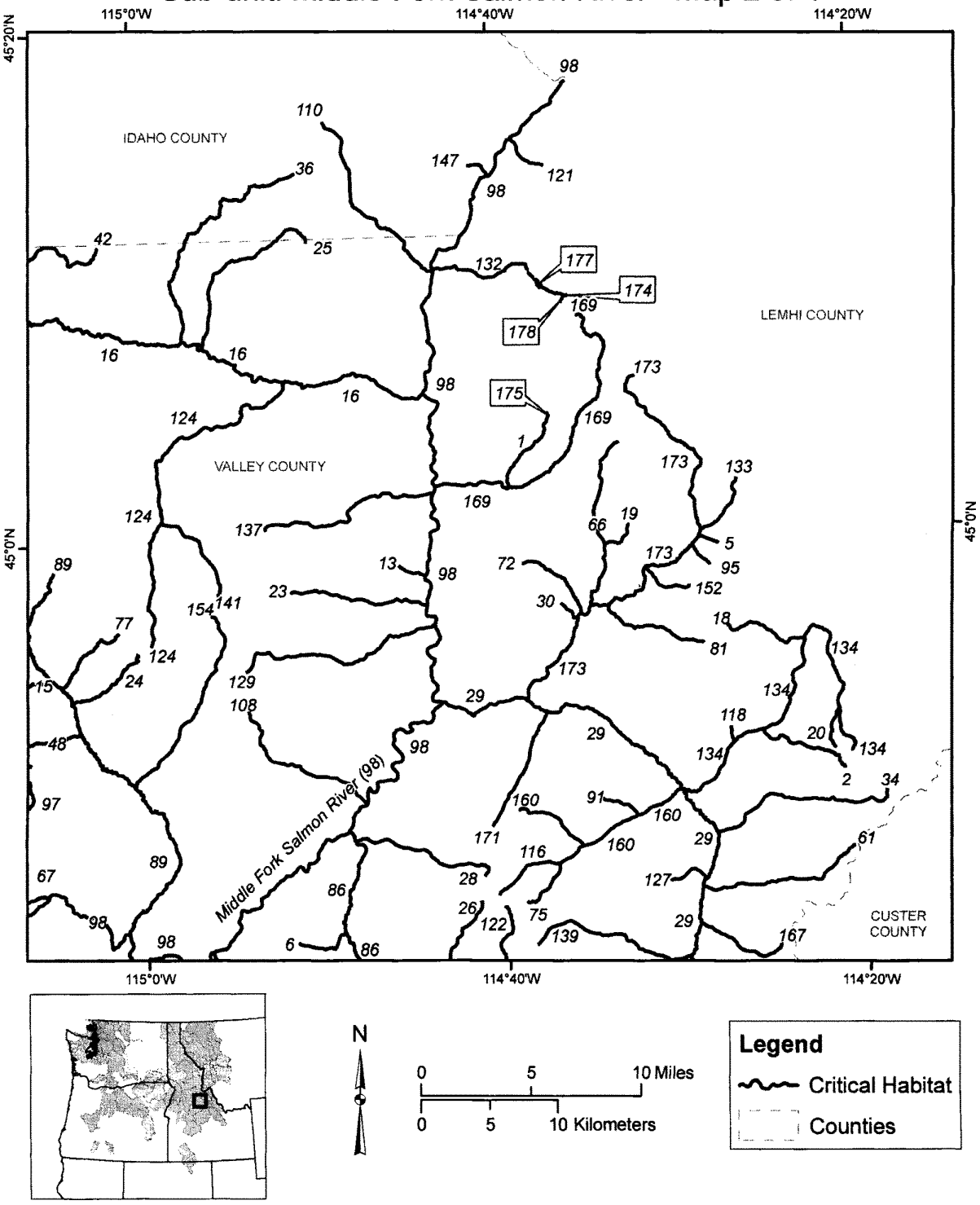
(B) **Note:** Maps of Critical Habitat for the bull trout (*Salvelinus confluentus*), Middle Fork Salmon River Subunit, follows.



Critical Habitat for Bull Trout *(Salvelinus confluentus)*

Unit: 27, Salmon River Basin

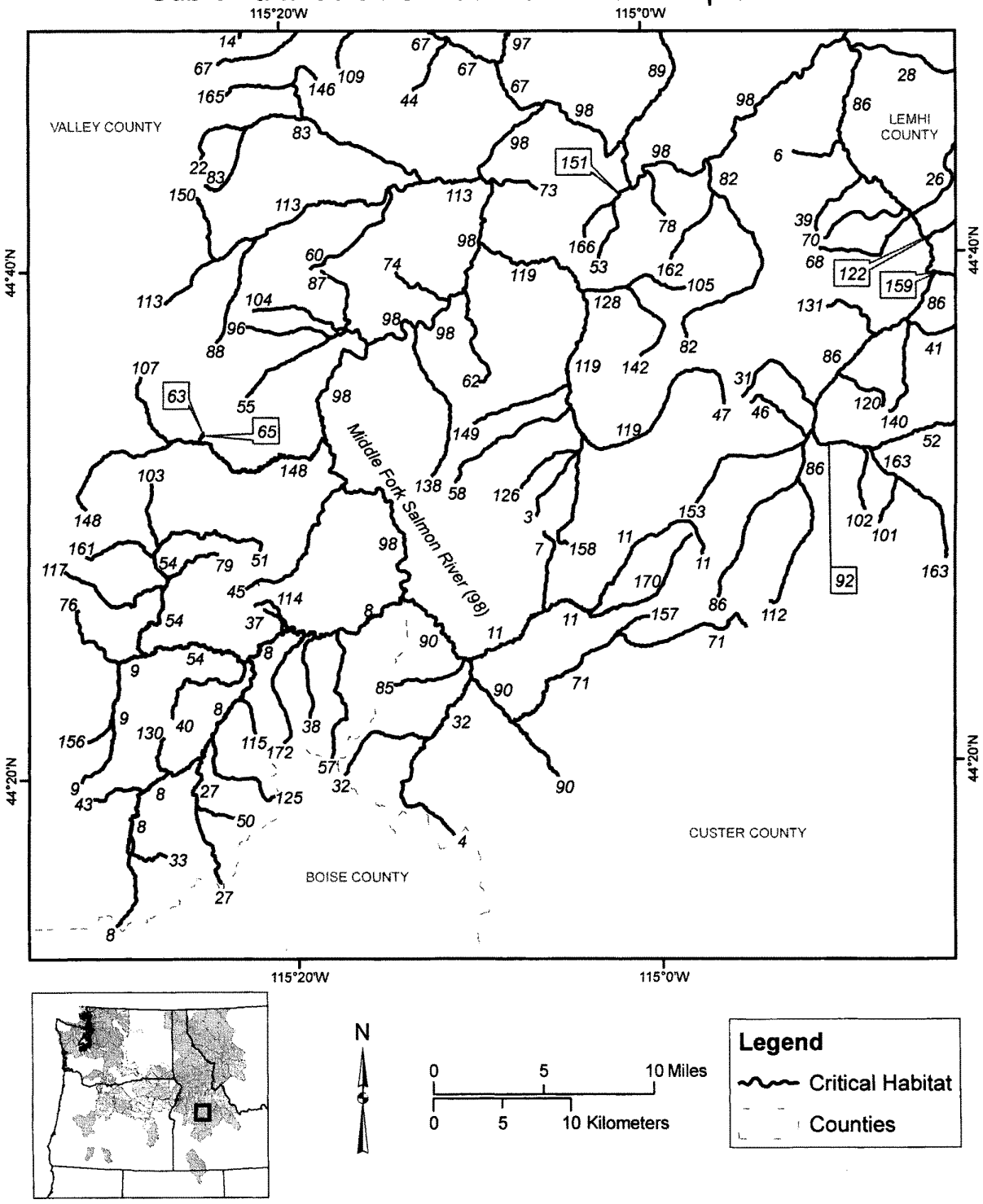
Sub-unit: Middle Fork Salmon River - Map 2 of 4



Critical Habitat for Bull Trout *(Salvelinus confluentus)*

Unit: 27, Salmon River Basin

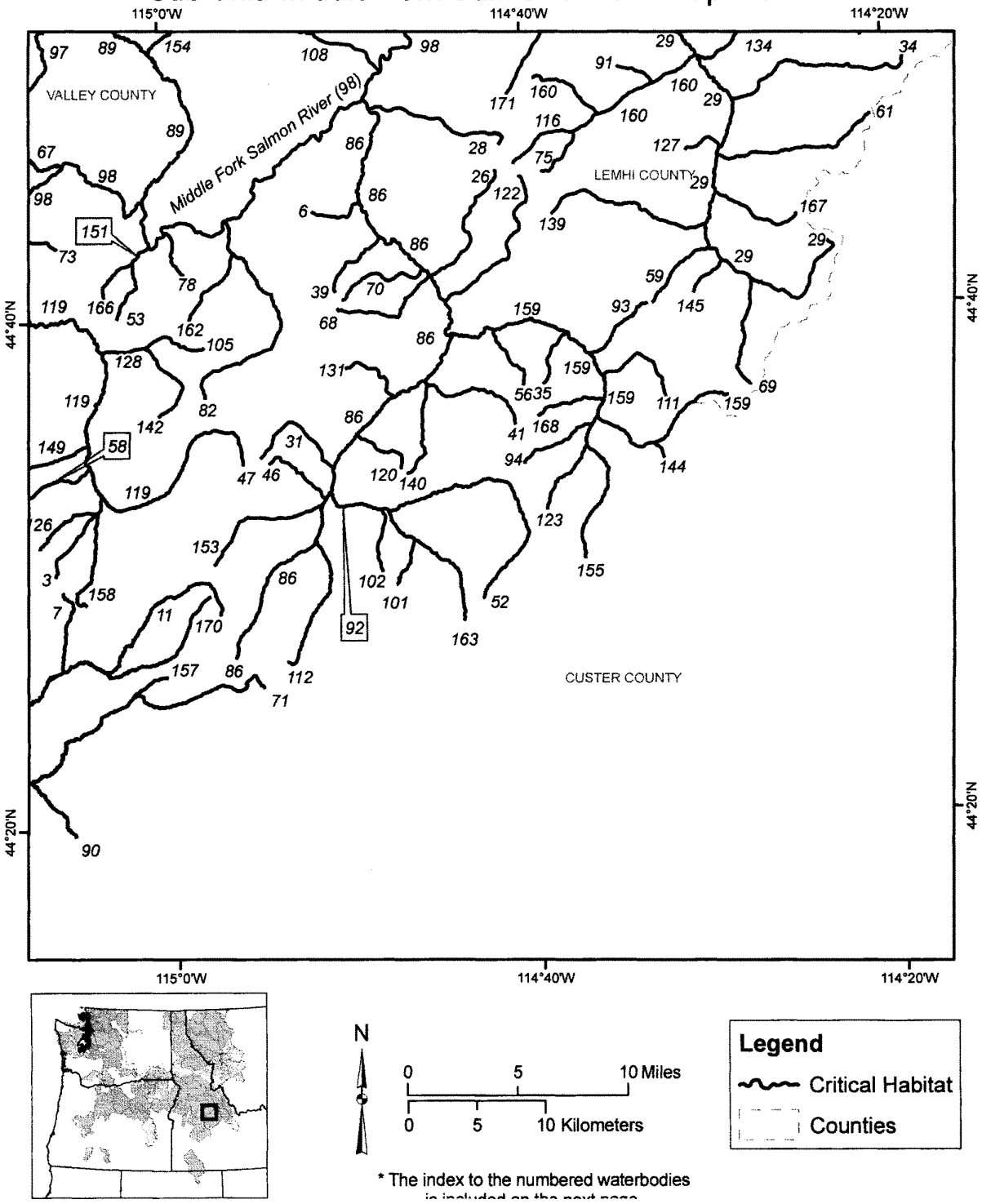
Sub-unit: Middle Fork Salmon River - Map 3 of 4



Critical Habitat for Bull Trout *(Salvelinus confluentus)*

Unit: 27, Salmon River Basin

Sub-unit: Middle Fork Salmon River - Map 4 of 4



* The index to the numbered waterbodies is included on the next page.

Unit: 27, Salmon River Basin
Sub-Unit: Middle Fork Salmon River

1 - Alpine Creek
2 - Arrastra Creek
3 - Baldwin Creek
4 - Banner Creek
5 - Beagle Creek
6 - Bear Creek-Loon
7 - Bear Creek-Marsh
8 - Bear Valley Creek
9 - Bearskin Creek
10 - Beaver Creek
11 - Beaver Creek
12 - Belvidere Creek
13 - Bernard Creek
14 - Big Chief Creek
15 - Big Cottonwood Creek
16 - Big Creek
17 - Big Ramey Creek
18 - Birdseye Creek
19 - Blackeagle Creek
20 - Blue Fork Silver Creek
21 - Boulder Creek
22 - Browning Creek
23 - Brush Creek
24 - Buck Creek
25 - Cabin Creek
26 - Cabin Creek-Loon
27 - Cache Creek
28 - Cache Creek-Loon
29 - Camas Creek
30 - Camp Creek
31 - Canyon Creek
32 - Cape Horn Creek
33 - Casner Creek
34 - Castle Creek
35 - Cat Creek
36 - Cave-Big Creek
37 - Chip Creek
38 - Cold Creek
39 - Cold Spring Creek-Loon
40 - Cook Creek
41 - Cottonwood Creek
42 - Crooked Creek
43 - Cub Creek
44 - Cultus Creek
45 - Dagger Creek
46 - Deer Creek
47 - Duffield Creek
48 - Dynamite Creek
49 - East Fork Big Ramey Creek
50 - East Fork Cache Creek
51 - East Fork Elk Creek
52 - East Fork Mayfield Creek
53 - East Fork Thomas Creek
54 - Elk Creek
55 - Elkhorn Creek
56 - Fir Creek
57 - Fir Creek
58 - Float Creek
59 - Fly Creek
60 - Forty-Five Creek
61 - Furnace Creek
62 - Greyhound Creek
63 - Half Moon Creek
64 - Hand Creek
65 - Honeymoon Creek
66 - Hoodoo Creek
67 - Indian Creek
68 - Indian Creek-Loon
69 - J Fell Creek
70 - Jack Creek
71 - Knapp Creek
72 - Lake Creek
73 - Lake Creek
74 - Lake Creek
75 - Liberty Creek
76 - Little Beaver Creek
77 - Little Cottonwood Creek
78 - Little Creek
79 - Little East Fork Elk Creek
80 - Little Indian Creek
81 - Little Jacket Creek
82 - Little Loon Creek
83 - Little Pistol Creek
84 - Logan Creek
85 - Lola Creek
86 - Loon Creek
87 - Lucky Creek
88 - Luger Creek
89 - Marble Creek
90 - Marsh Creek
91 - Martindale Creek
92 - Mayfield Creek
93 - McHoney Creek
94 - McKee Creek
95 - Meadow Creek
96 - Middle Fork Elkhorn Creek
97 - Middle Fork Indian Creek
98 - Middle Fork Salmon River
99 - Middle Fork Smith Creek
100 - Monumental Creek
101 - Mystery Creek
102 - Nelson Creek
103 - North Fork Elk Creek
104 - North Fork Elkhorn Creek
105 - North Fork Sheep Creek
106 - North Fork Smith Creek
107 - North Fork Sulphur Creek
108 - Norton Creek
109 - Papoose Creek
110 - Papoose Creek
111 - Parker Creek
112 - Pioneer Creek - Loon
113 - Pistol Creek
114 - Poker Creek
115 - Pole Creek
116 - Pole Creek-Camas
117 - Porter Creek
118 - Rams Creek
119 - Rapid River
120 - Rat Creek
121 - Roaring Creek
122 - Rock Creek-Loon
123 - Rush Creek
124 - Rush Creek
125 - Sack Creek
126 - Seafoam Creek
127 - Sheep Creek
128 - Sheep Creek
129 - Sheep Creek-Lmf
130 - Sheep Trail Creek
131 - Shell Creek
132 - Ship Island Creek

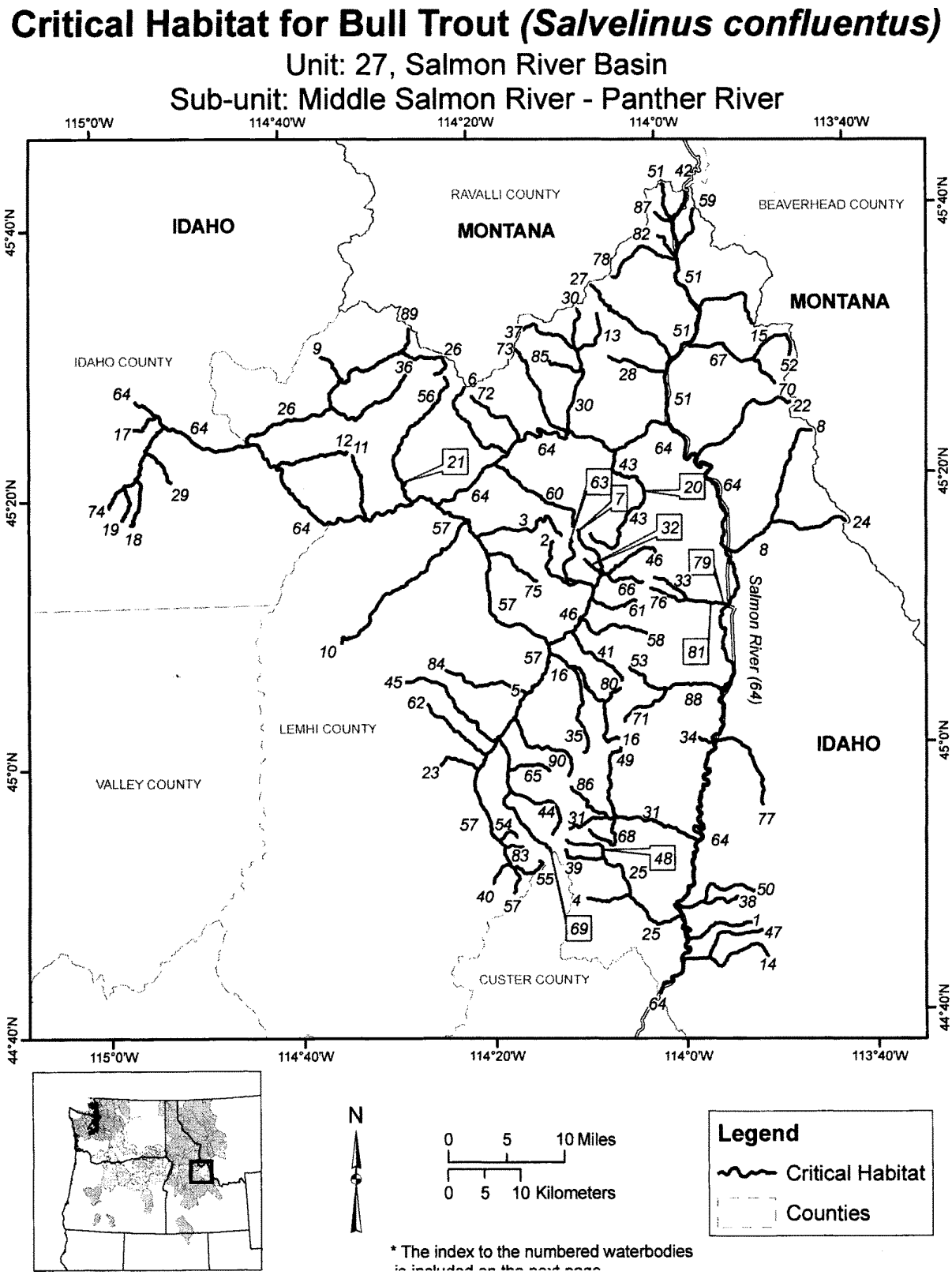
Unit: 27, Salmon River Basin
Sub-Unit: Middle Fork Salmon River

133 - Shovel Creek
134 - Silver Creek
135 - Smith Creek
136 - Snowslide Creek
137 - Soldier Creek
138 - Soldier Creek
139 - South Fork Camas Creek
140 - South Fork Cottonwood Creek
141 - South Fork Rush Creek
142 - South Fork Sheep Creek
143 - South Fork Smith Creek
144 - South Fork Warm Spring Creek
145 - Spider Creek
146 - Springfield Creek
147 - Stoddard Creek
148 - Sulphur Creek
149 - Sulphur Creek-Rapid
150 - Thirty-Eight Creek
151 - Thomas Creek
152 - Trail Creek
153 - Trail Creek-Loon
154 - Trail Creek-Marble
155 - Trapper Creek
156 - Unnamed to Bearskin Creek
157 - Unnamed-to Knapp Creek
158 - Vanity Creek
159 - Warm Spring Creek
160 - West Fork Camas Creek
161 - West Fork Elk Creek
162 - West Fork Little Loon Creek
163 - West Fork Mayfield Creek
164 - West Fork Monumental Creek
165 - West Fork Springfield Creek
166 - West Fork Thomas Creek
167 - White Goat Creek
168 - Wickiup Creek-Loon
169 - Wilson Creek
170 - Winnemucca Creek
171 - Woodtick Creek
172 - Wyoming Creek
173 - Yellowjacket Creek
174 - Airplane Lake
175 - Alpine Creek Lake #5
176 - Big Creek Marsh
177 - Ship Island Lake #1
178 - Shoban Lake

(v) Middle Salmon–Panther River Subunit.

(A) [Reserved for textual description of unit.]

(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Middle Salmon–Panther River Subunit, follows:



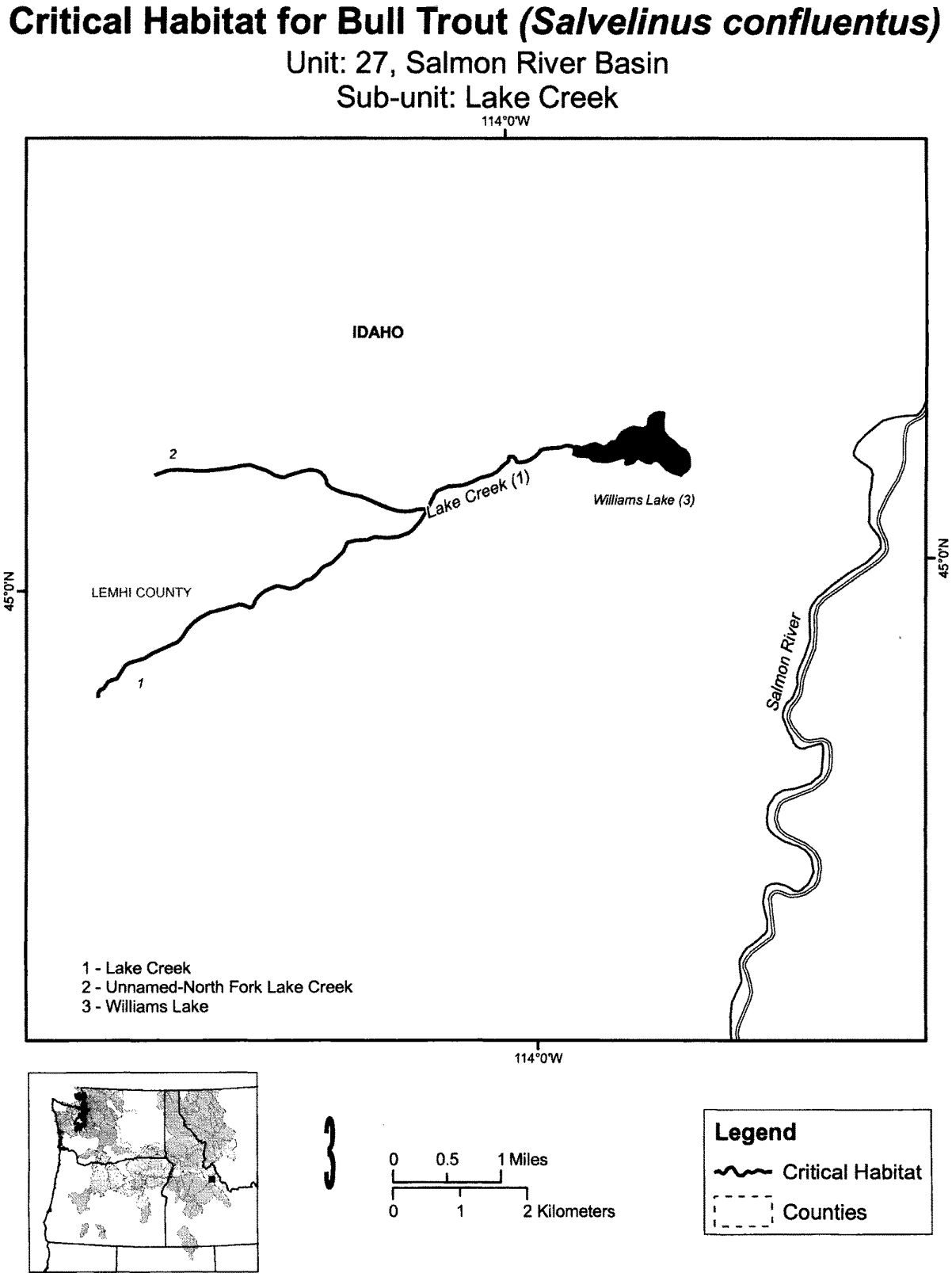
Unit: 27, Salmon River Basin
Sub-Unit: Middle Salmon River – Panther River

1 - Allison Creek
2 - Arnett Creek
3 - Beaver Creek
4 - Big Hat Creek
5 - Blackbird Creek
6 - Boulder Creek
7 - Camp Creek
8 - Carmen Creek
9 - Cayuse Creek
10 - Clear Creek
11 - Colson Creek
12 - Corn Creek
13 - Corral Creek
14 - Cow Creek
15 - Dahlonega Creek
16 - Deep Creek
17 - Devils Toe Creek
18 - Disappointment Creek
19 - Dismal Creek
20 - Dump Creek
21 - East Fork Owl Creek
22 - Fourth of July Creek
23 - Fourth of July Creek
24 - Freeman Creek
25 - Hat Creek
26 - Horse Creek
27 - Hughes Creek
28 - Hull Creek
29 - Hungry Creek
30 - Indian Creek
31 - Iron Creek
32 - Jefferson Creek
33 - Jesse Creek
34 - Lake Creek
35 - Little Deep Creek
36 - Little Horse Creek
37 - McConn Creek
38 - McKim Creek
39 - Middle Fork Hat Creek
40 - Mink Creek
41 - Moccasin Creek
42 - Moose Creek
43 - Moose Creek
44 - Moyer Creek
45 - Musgrove Creek
46 - Napias Creek
47 - North Fork Cow Creek
48 - North Fork Hat Creek
49 - North Fork Iron Creek
50 - North Fork McKim Creek
51 - North Fork Salmon River
52 - North Fork Sheep Creek
53 - North Fork Williams Creek
54 - Opal Creek
55 - Otter Creek
56 - Owl Creek
57 - Panther Creek
58 - Phelan Creek
59 - Pierce Creek
60 - Pine Creek
61 - Pony Creek
62 - Porphyry Creek
63 - Rapps Creek
64 - Salmon River
65 - Salt Creek
66 - Sharkey Creek
67 - Sheep Creek
68 - South Fork Iron Creek
69 - South Fork Moyer Creek
70 - South Fork Sheep Creek
71 - South Fork Williams Creek
72 - Spring Creek
73 - Squaw Creek
74 - Starvation Creek
75 - Trail Creek
76 - Turner Gulch (Trib to Jesse Creek)
77 - Twelvemile Creek
78 - Twin Creek
79 - Unnamed
80 - UNNAMED - off Deep Creek
81 - Unnamed-Needed bypass channel
82 - Vine Creek
83 - Weasel Creek
84 - West Fork Blackbird Creek
85 - West Fork Indian Creek
86 - West Fork Iron Creek
87 - West Fork North Fork Salmon River
88 - Williams Creek
89 - Woods Creek
90 - Woodtick Creek

(vi) Lake Creek Subunit.

(A) [Reserved for textual description of unit.]

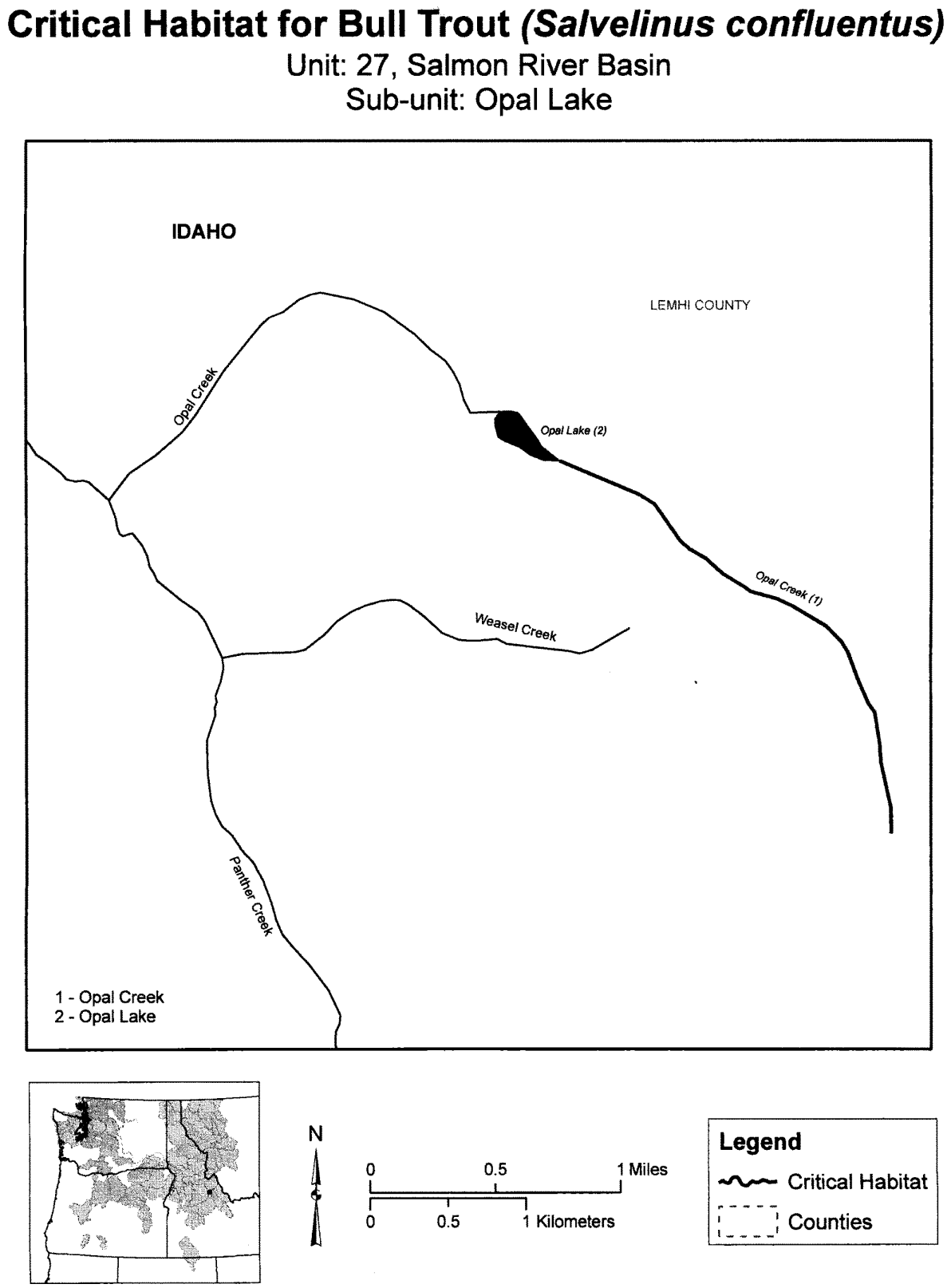
(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Lake Creek Subunit, follows:



(vii) Opal Lake Subunit.

(A) [Reserved for textual description of unit.]

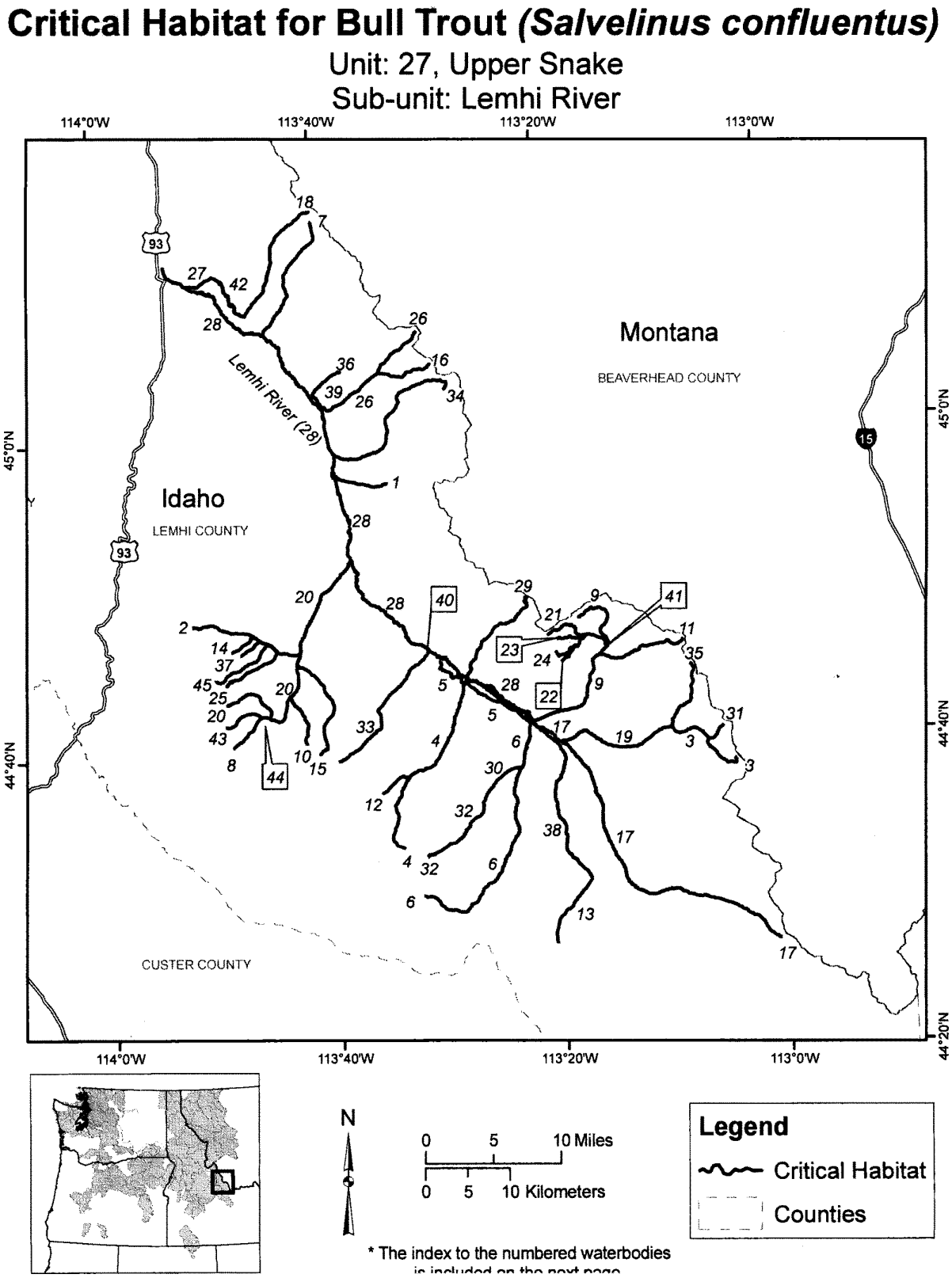
(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Opal Lake Subunit, follows:



(viii) Lemhi River Subunit.

(A) [Reserved for textual description of unit.]

(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Lemhi River Subunit, follows:



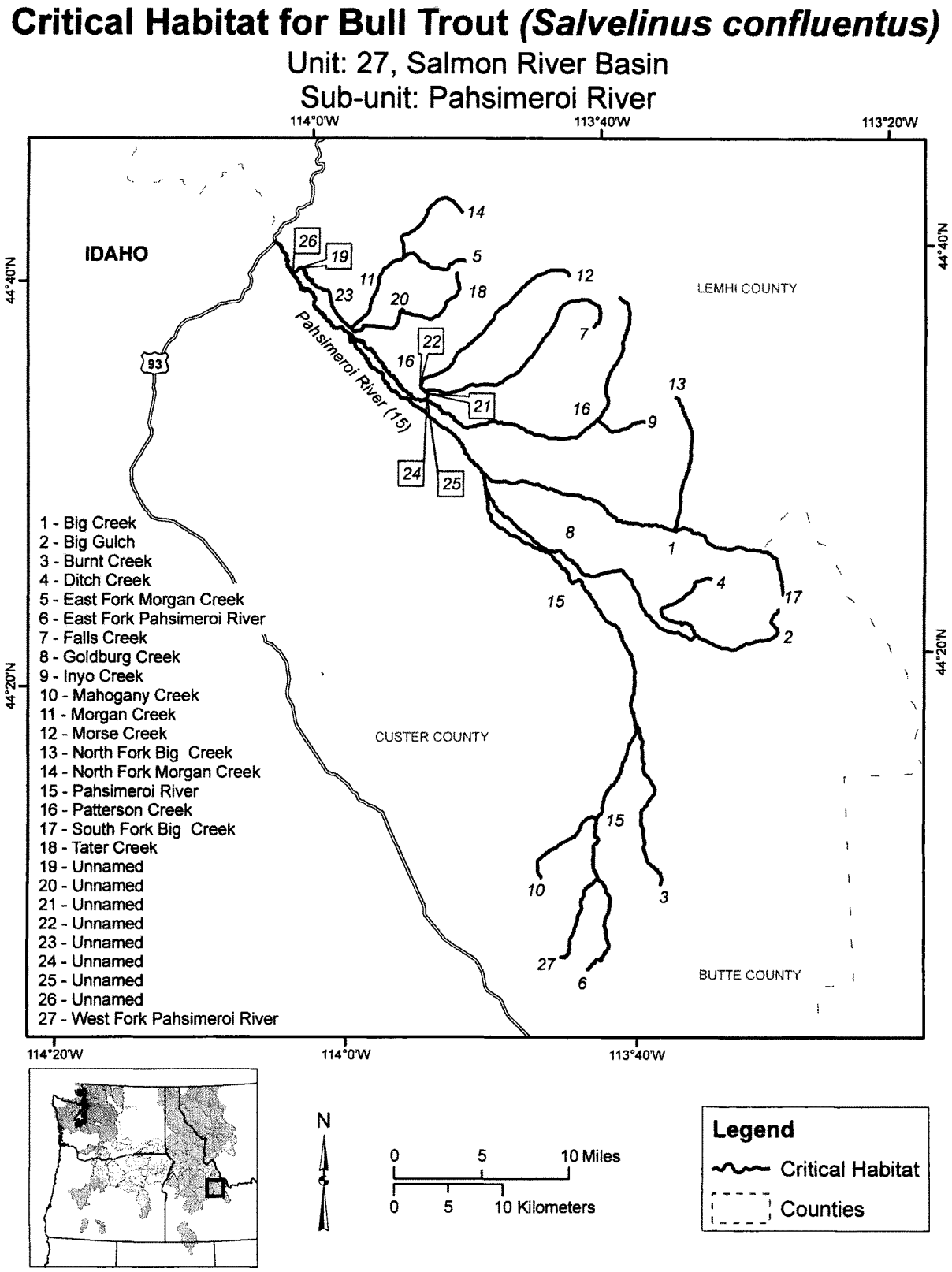
Unit 27: Upper Snake
Sub-Unit: Lemhi River

1 - Agency Creek
2 - Bear Valley Creek
3 - Big Bear Creek
4 - Big Eightmile Creek
5 - Big Springs Creek
6 - Big Timber Creek
7 - Bohannon Creek
8 - Bray Creek
9 - Canyon Creek
10 - Cooper Creek
11 - Cruikshank Creek
12 - Dairy Creek
13 - Deer Creek
14 - Deer Creek
15 - East Fork Hayden Creek
16 - East Fork Kenney Creek
17 - Eighteenmile Creek
18 - Geertson Creek
19 - Hawley Creek
20 - Hayden Creek
21 - Hood Gulch Springs 1
22 - Hood Gulch Springs 2
23 - Hood Gulch Springs 3
24 - Hood Gulch Springs 4
25 - Kadletz Creek
26 - Kenney Creek
27 - Kirtley Creek
28 - Lemhi River
29 - Little Eightmile Creek
30 - Little Timber Creek
31 - Meadow Creek
32 - Middle Fork Little Timber Creek
33 - Mill Creek
34 - Pattee Creek
35 - Reservoir Creek
36 - Sandy Creek
37 - Short Creek
38 - Texas Creek
39 - Unnamed
40 - Unnamed - didgitized
41 - Unnamed - digitized
42 - Unnamed - Diversion between Geertson Creek an
43 - WEST FORK HAYDEN CR
44 - West Fork Hayden Creek
45 - Wright Creek

(ix) Pahsimeroi River Subunit.

(A) [Reserved for textual description of unit.]

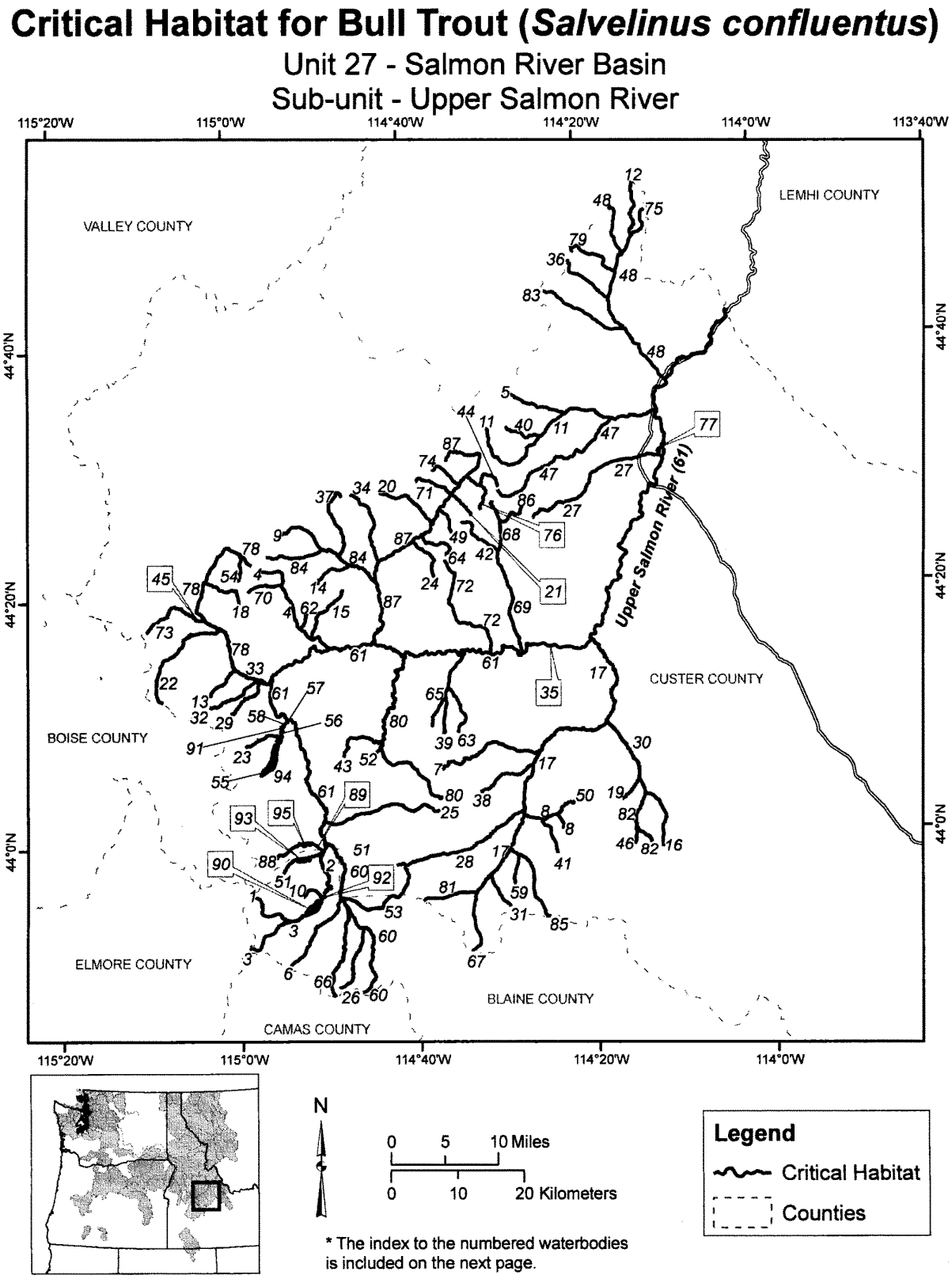
(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Pahsimeroi River Subunit, follows:



(x) Upper Salmon River Subunit.

(A) [Reserved for textual description of unit.]

(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Upper Salmon River Subunit, follows:



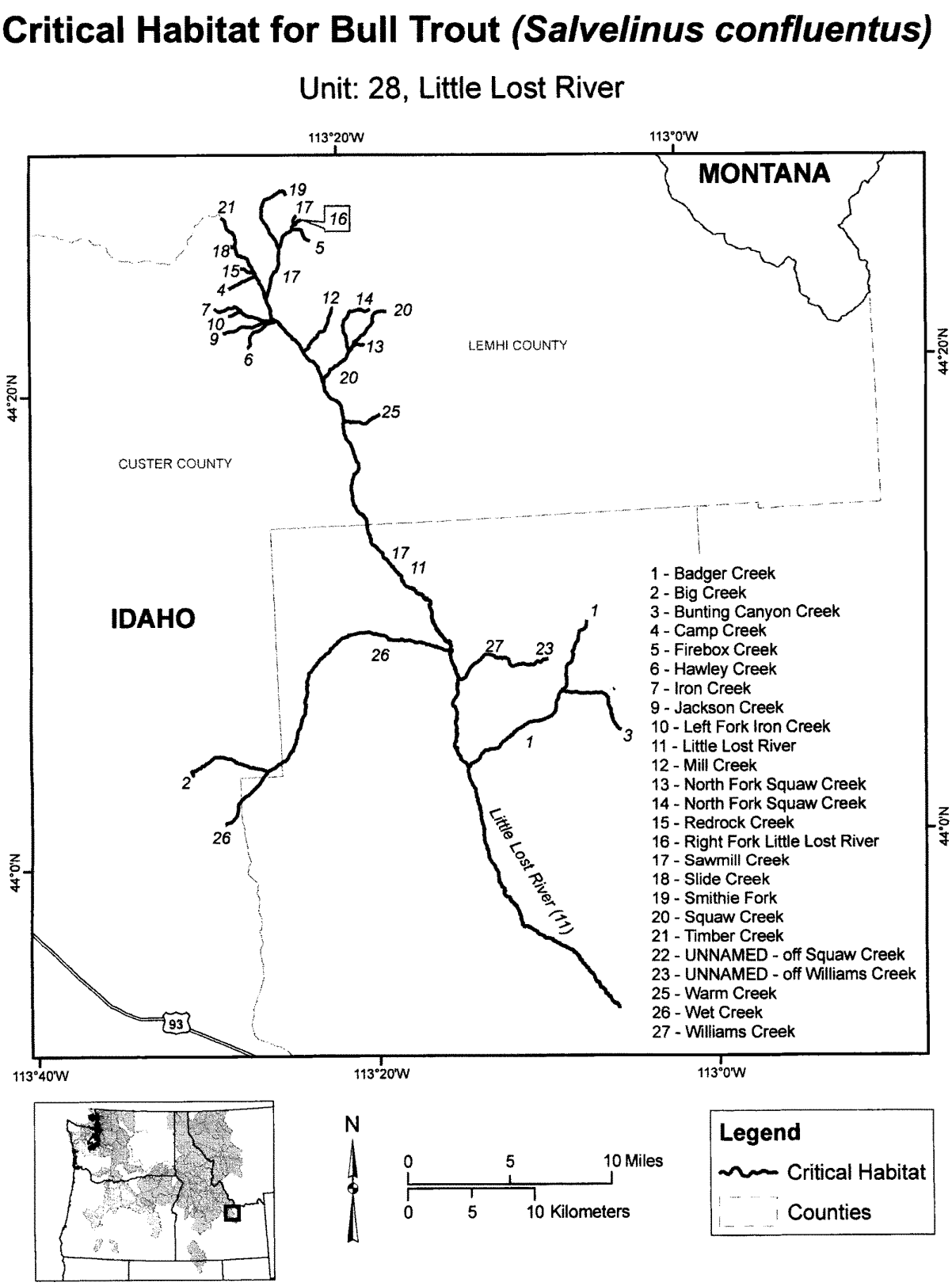
Unit 27 - Salmon River Basin
Sub-unit - Upper Salmon River

1 - Alpine Creek
2 - Alturas Lake Creek (Above Lake)
3 - Alturas Lake Creek (Below Lake)
4 - Basin Creek
5 - Bear Creek
6 - Beaver Creek
7 - Big Boulder Creek
8 - Bowery Creek
9 - Cabin Creek
10 - Cabin Creek
11 - Challis Creek
12 - Corral Creek
13 - Crooked Creek
14 - Deadwood Creek
15 - East Basin Creek
16 - East Fork Herd Creek
17 - East Fork Salmon River
18 - East Fork Valley Creek
19 - East Pass Creek
20 - Eightmile Creek
21 - Elevenmile Creek
22 - Elk Creek
23 - Fishhook Creek
24 - Fivemile Creek
25 - Fourth of July Creek
26 - Frenchman Creek
27 - Garden Creek
28 - Germania Creek
29 - Goat Creek
30 - Herd Creek
31 - Ibex Creek
32 - Iron Creek
33 - Job Creek
34 - Jordan Creek
35 - Kinnikinic Creek
36 - Lick Creek
37 - Lightning Creek
38 - Little Boulder Creek
39 - Livingston Creek
40 - Lodgepole Creek
41 - Long Tom Creek
42 - Martin Creek
43 - Martin Creek
44 - McKay Creek
45 - Meadow Creek - mouth to Trap Cr
46 - Meridian Creek
47 - Mill Creek
48 - Morgan Creek
49 - Ninemile Creek
50 - North Fork Bowery Creek
51 - Pettit Lake Creek
52 - Pigtail Creek
53 - Pole Creek
54 - Prospect Creek
55 - Redfish Lake Creek - inlet to ~ 0.1 km upstream
56 - Redfish Lake Creek - L Redfish Lk to Redfish
57 - Redfish Lake Creek - mouth to L. Redfish Lk
58 - Redfish Lake Creek - mouth to Redfish Lk
59 - Roaring Creek
60 - Salmon River - Alturas Lk Creek to headwater
61 - Salmon River - mouth to Alturas Lk Creek
62 - Short Creek
63 - Silver Rule Creek
64 - Sixmile Creek
65 - Slate Creek
66 - Smiley Creek
67 - South Fork East Fork Salmon River
68 - Squaw Creek - Martin Cr to headwaters
69 - Squaw Creek - mouth to Martin Cr
70 - Sunday Creek
71 - Tenmile Creek
72 - Thompson Creek
73 - Trap Creek
74 - Twelvemile Creek
75 - UNNAMED - off Corral Creek
76 - UNNAMED - off McKay Creek
77 - Unnamed-Garden Creek
78 - Valley Creek
79 - Van Horn Creek
80 - Warm Springs Creek
81 - West Fork East Fork Salmon River
82 - West Fork Herd Creek
83 - West Fork Morgan Creek
84 - West Fork Yankee Fork
85 - West Pass Creek
86 - Willow Creek
87 - Yankee Fork
88 - Yellowbelly Creek - Yellowbelly Lk to Farley
89 - Yellowbelly Lake - Alturas Lk Cr to Yellowbelly Lk
90 - Alturas Lake
91 - Little Redfish Lake
92 - Perkins Lake
93 - Petit Lake
94 - Redfish Lake
95 - Yellowbelly Lake

(34) Unit 28: Little Lost River Unit, Idaho.

(i) [Reserved for textual description of unit.]

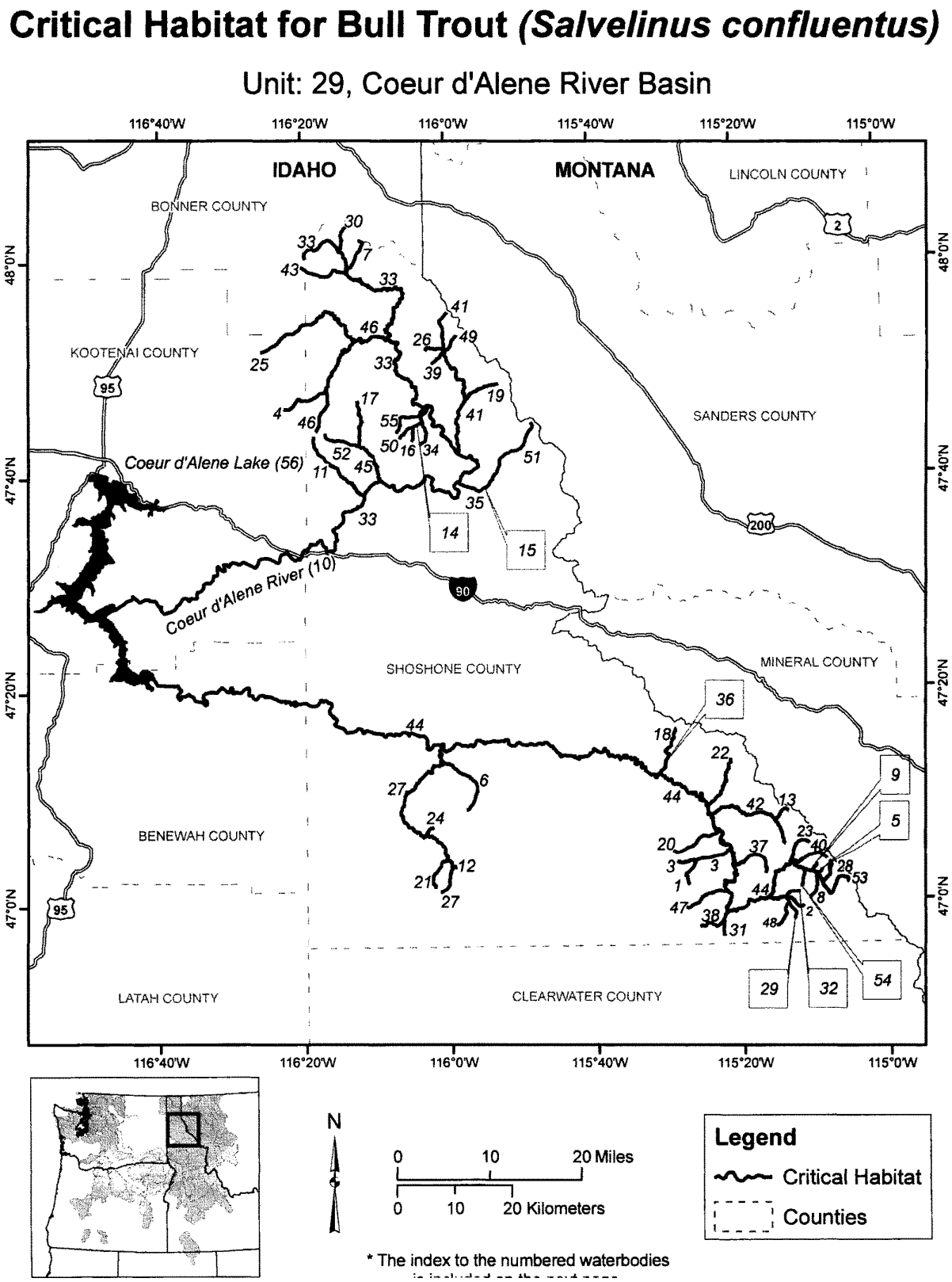
(ii) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Little Lost River Unit, follows:



(35) Unit 29: Coeur d'Alene River Basin Unit, Idaho.

(i) [Reserved for textual description of unit.]

(ii) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Coeur d'Alene River Basin Unit follows:



Unit: 29, Coeur d'Alene River Basin

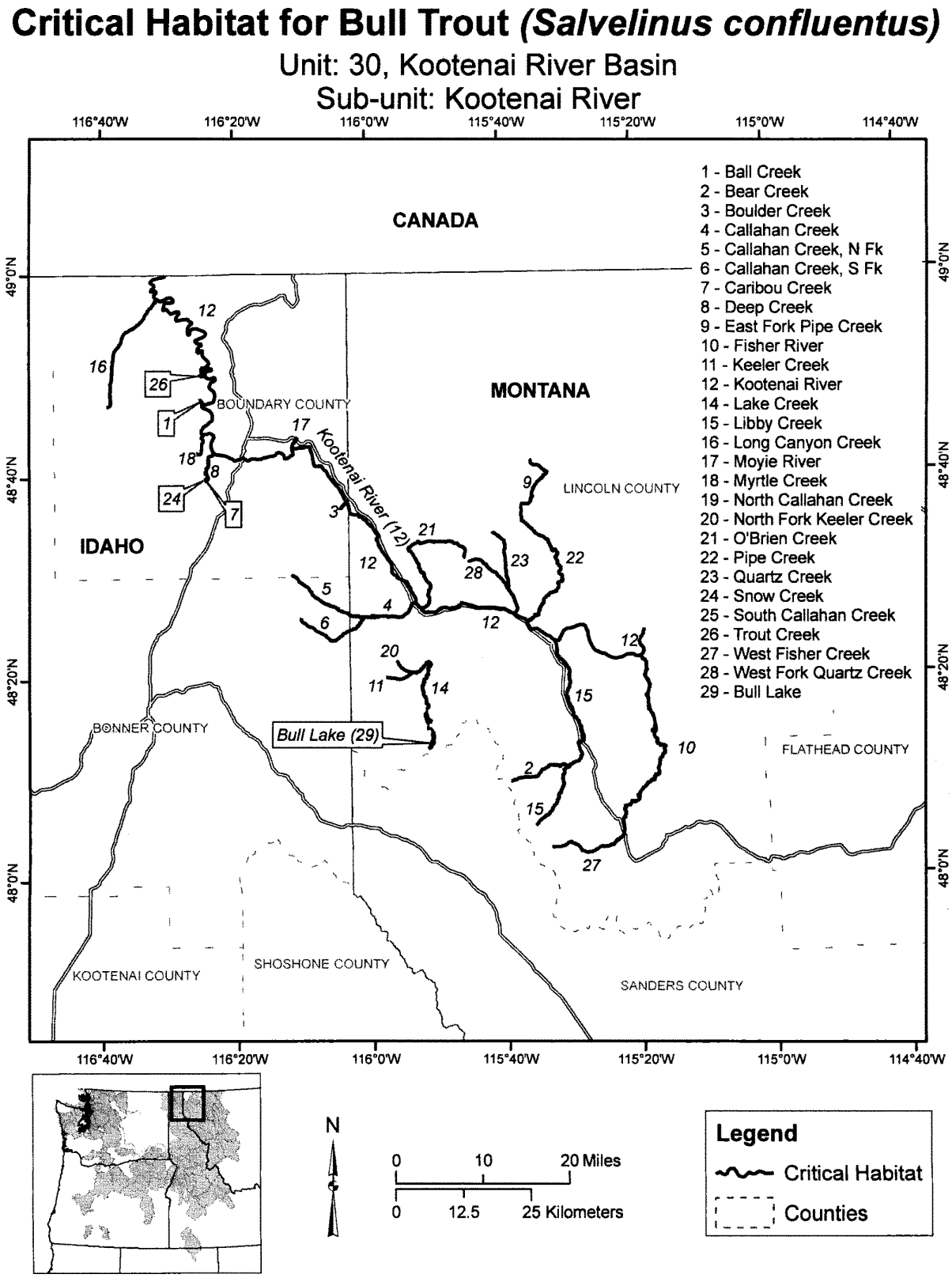
1 - Bad Bear Creek
2 - Bean Creek
3 - Beaver Creek
4 - Big Elk Creek
5 - Bluebells Creek
6 - Boulder Creek
7 - Buckskin Creek
8 - California Creek
9 - Cascade Creek (St. Joe trib)
10 - Coeur d'Alene River
11 - Cougar Creek
12 - Delaney Creek
13 - Dolly Creek
14 - Downey Creek
15 - Eagle Creek
16 - East Fork Downey Creek
17 - East Fork Steamboat Creek
18 - Entente Creek
19 - Falls Creek
20 - Fly Creek
21 - Freezeout Creek
22 - Gold Creek
23 - Heller Creek
24 - Homestead Creek
25 - Independence Creek
26 - Little Lost Fork
27 - Marble Creek
28 - Medicine Creek
29 - Mill Creek
30 - Mosquito Creek
31 - My Creek
32 - North Fork Bean Creek
33 - North Fork Coeur d'Alene River
34 - North Grizzly Creek
35 - Prichard Creek
36 - Quartz Creek
37 - Red Ives Creek
38 - Ruby Creek
39 - Sentinel Creek
40 - Sherlock Creek
41 - Shoshone Creek
42 - Simmons Creek
43 - Spruce Creek
44 - St. Joe River
45 - Steamboat Creek
46 - Tepee Creek
47 - Timber Creek
48 - Tinear Creek
49 - Ulm Creek
50 - West Fork Downey Creek
51 - West Fork Eagle Creek
52 - West Fork Steamboat Creek
53 - Wisdom Creek
54 - Yankee Bar Creek
55 - Yellow Dog Creek
56 - Coeur d'Alene Lake

(36) Unit 30: Kootenai River Basin Unit, Idaho and Montana.

(i) Kootenai River Subunit.

(A) [Reserved for textual description of unit.]

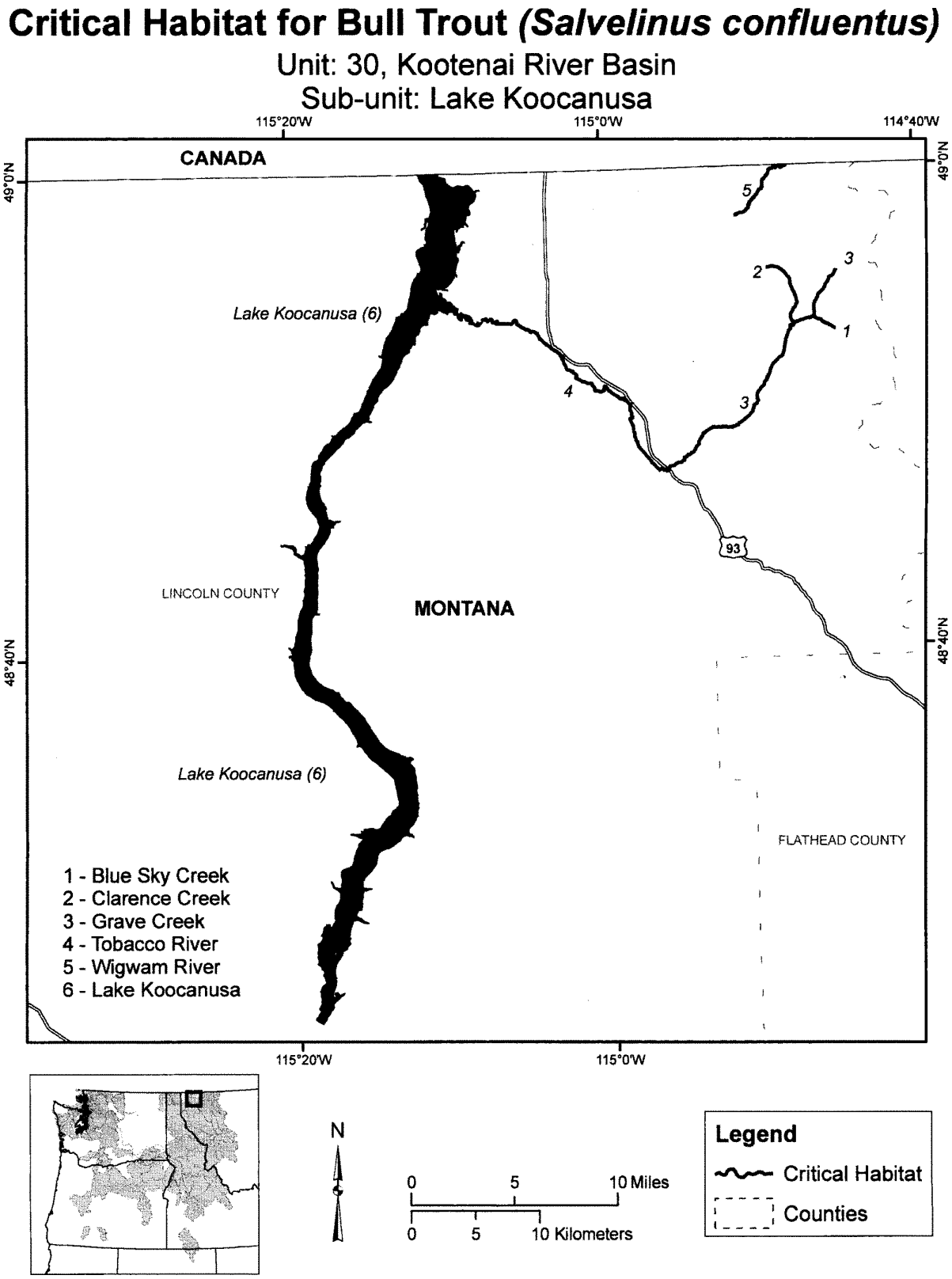
(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Kootenai River Subunit, follows:



(ii) Lake Koocanusa Subunit.

(A) [Reserved for textual description of unit.]

(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Lake Koocanusa Subunit, follows:

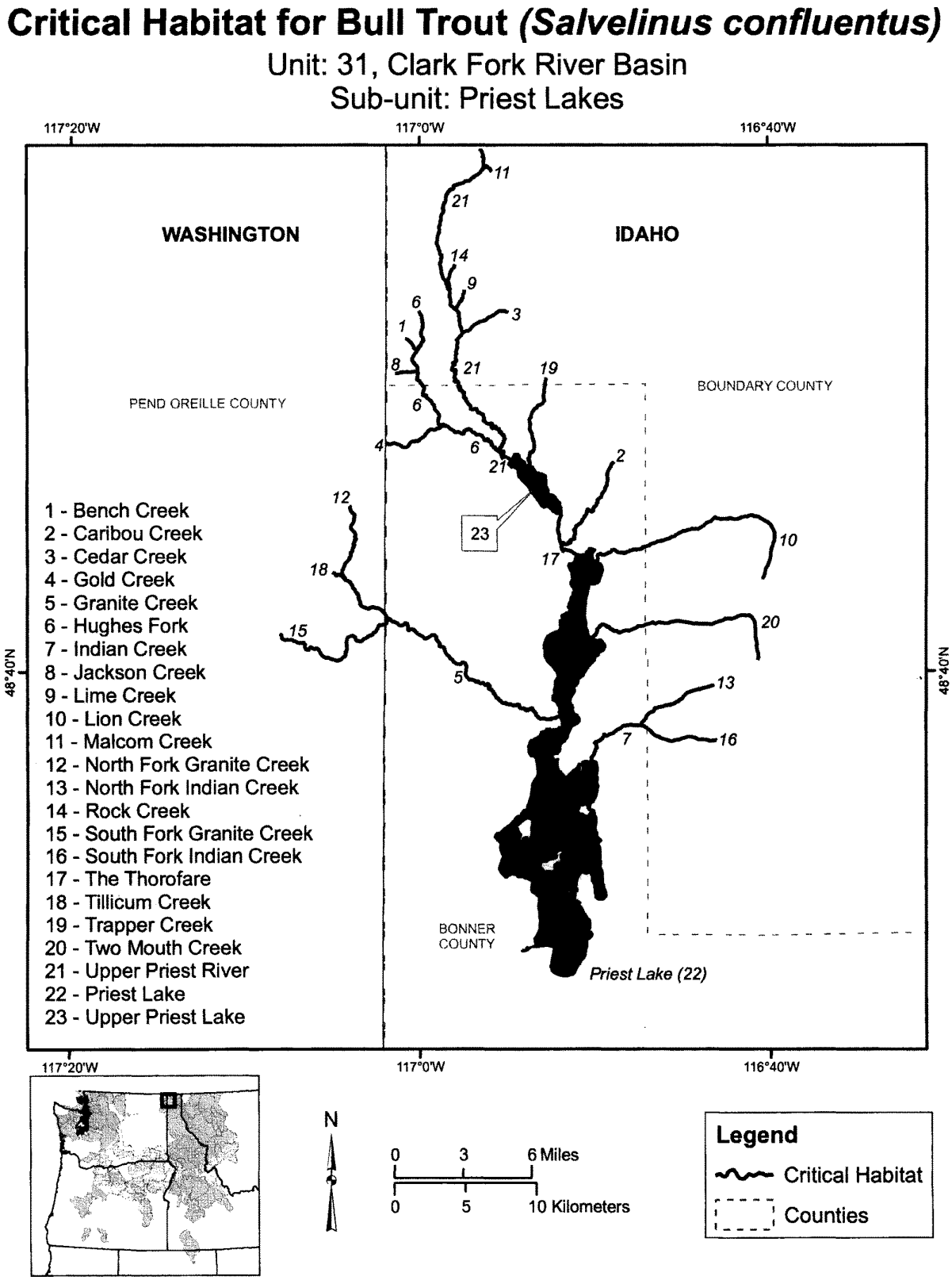


(36) Unit 31: Clark Fork River Basin Unit, Idaho, Montana, and Washington.

(i) Priest Lakes and Upper Priest River (Priest Lakes) Subunit.

(A) [Reserved for textual description of unit.]

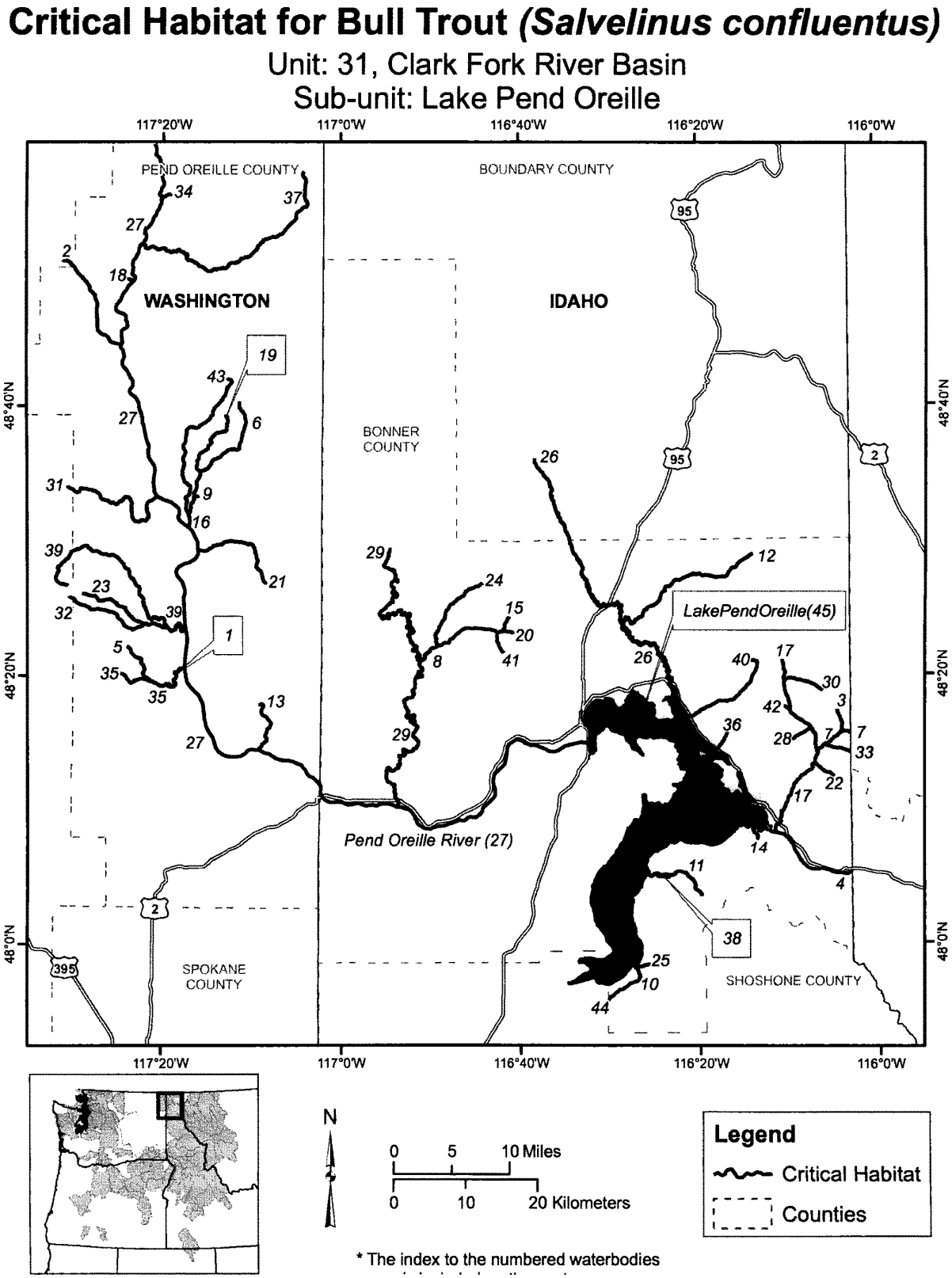
(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Priest Lakes and Upper Priest River (Priest Lakes) Subunit, follows:



(ii) Lake Pend Oreille, Pend Oreille River, and lower Priest River (Lake Pend Oreille) Subunit

(A) [Reserved for textual description of unit.]

(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Lake Pend Oreille, Pend Oreille River, and lower Priest River (Lake Pend Oreille) Subunit, follows:



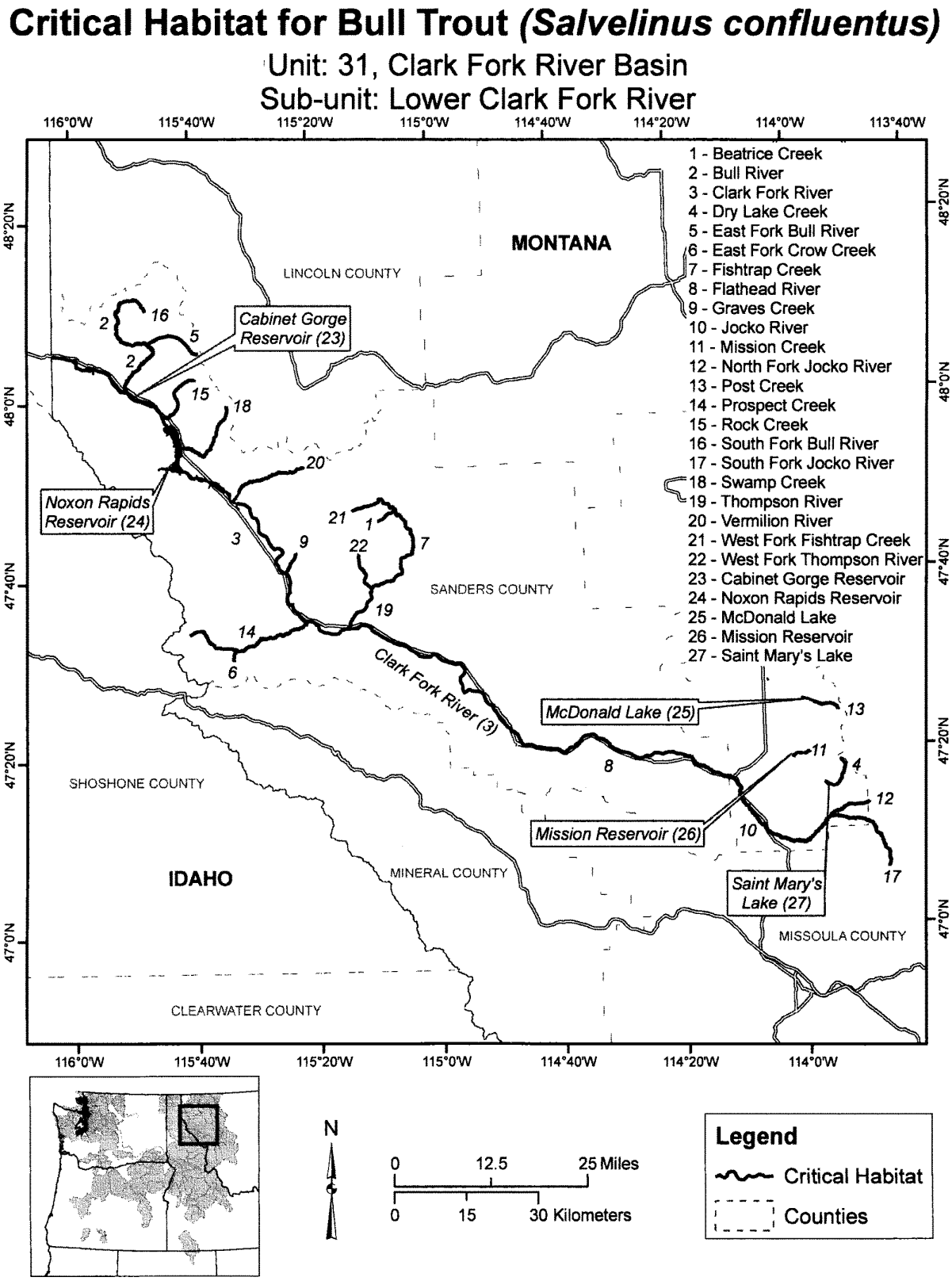
Unit: 31, Clark Fork River Basin
Sub-unit: Lake Pend Oreille

1 - Calispell Creek
2 - Cedar Creek
3 - Char Cr
4 - Clark Fork River
5 - E. Fork Small Creek
6 - East Branch LeClerc Creek
7 - East Fork Cr
8 - East River
9 - Fourth of July Creek
10 - Gold Creek
11 - Granite Creek
12 - Grouse Creek
13 - Indian Creek
14 - Johnson Cr
15 - Keokee Creek
16 - LeClerc Creek
17 - Lightning Creek
18 - Lunch Creek
19 - Middle Branch Le Clerc Creek
20 - Middle Fork East River
21 - Mill Creek
22 - Morris Creek
23 - N.F. Of S. Fork Tacoma Creek
24 - North Fork East River
25 - North Gold Creek
26 - Pack River
27 - Pend Oreille River
28 - Porcupine Creek
29 - Priest River
30 - Rattle Creek
31 - Ruby Creek
32 - S. Fork Tacoma Creek
33 - Savage Cr
34 - Slate Creek
35 - Small Creek
36 - Strong Creek
37 - Sullivan Creek
38 - Sullivan Springs
39 - Tacoma Creek
40 - Trestle Creek
41 - Uleda Creek
42 - Wellington Creek
43 - West Branch LeClerc Creek
44 - West Gold Creek
45 - Lake Pend Oreille

(iii) Lower Clark Fork River Subunit.

(A) [Reserved for textual description of unit.]

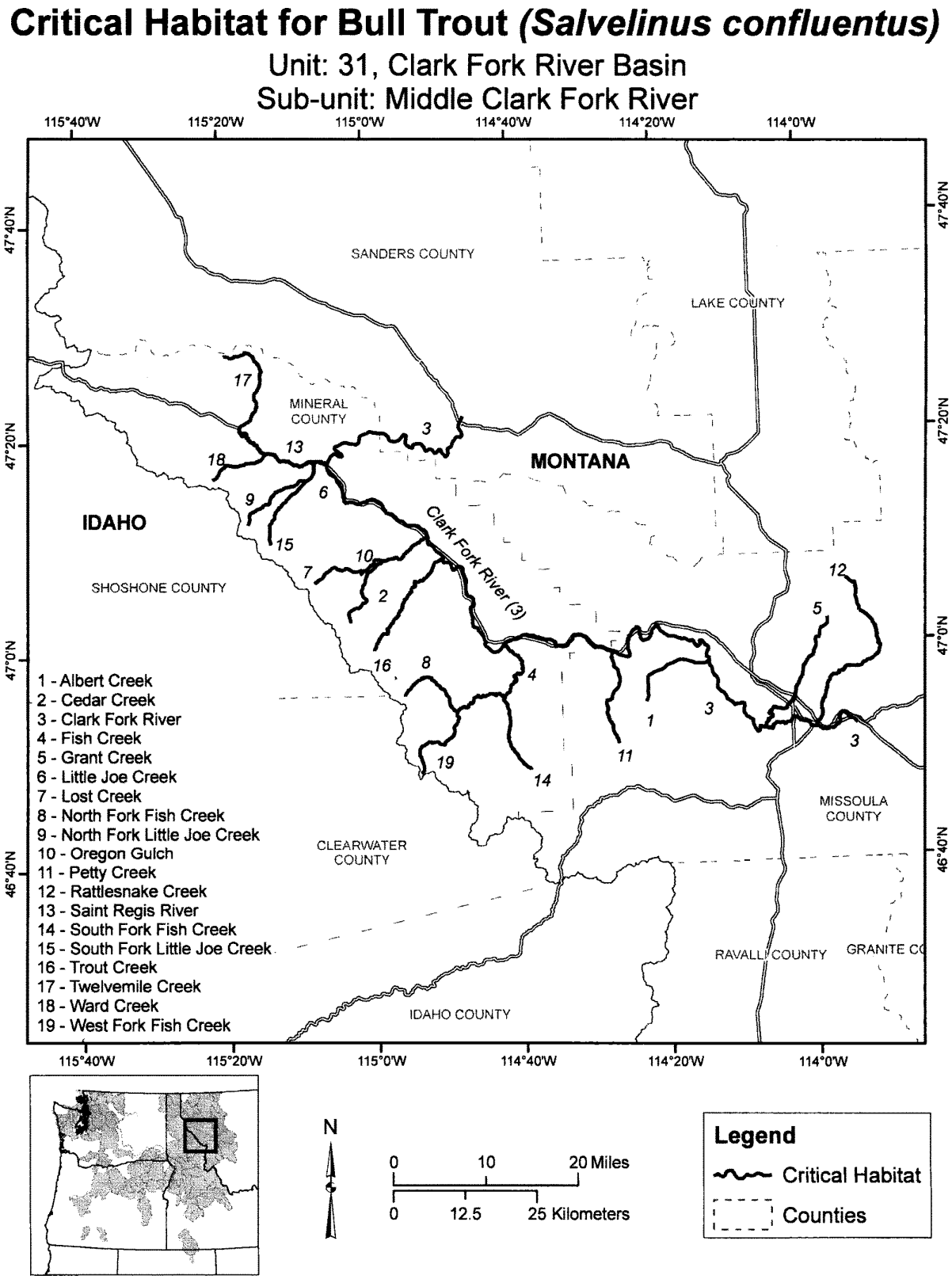
(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Lower Clark Fork River Subunit, follows:



(iv) Middle Clark Fork River Subunit.

(A) [Reserved for textual description of unit.]

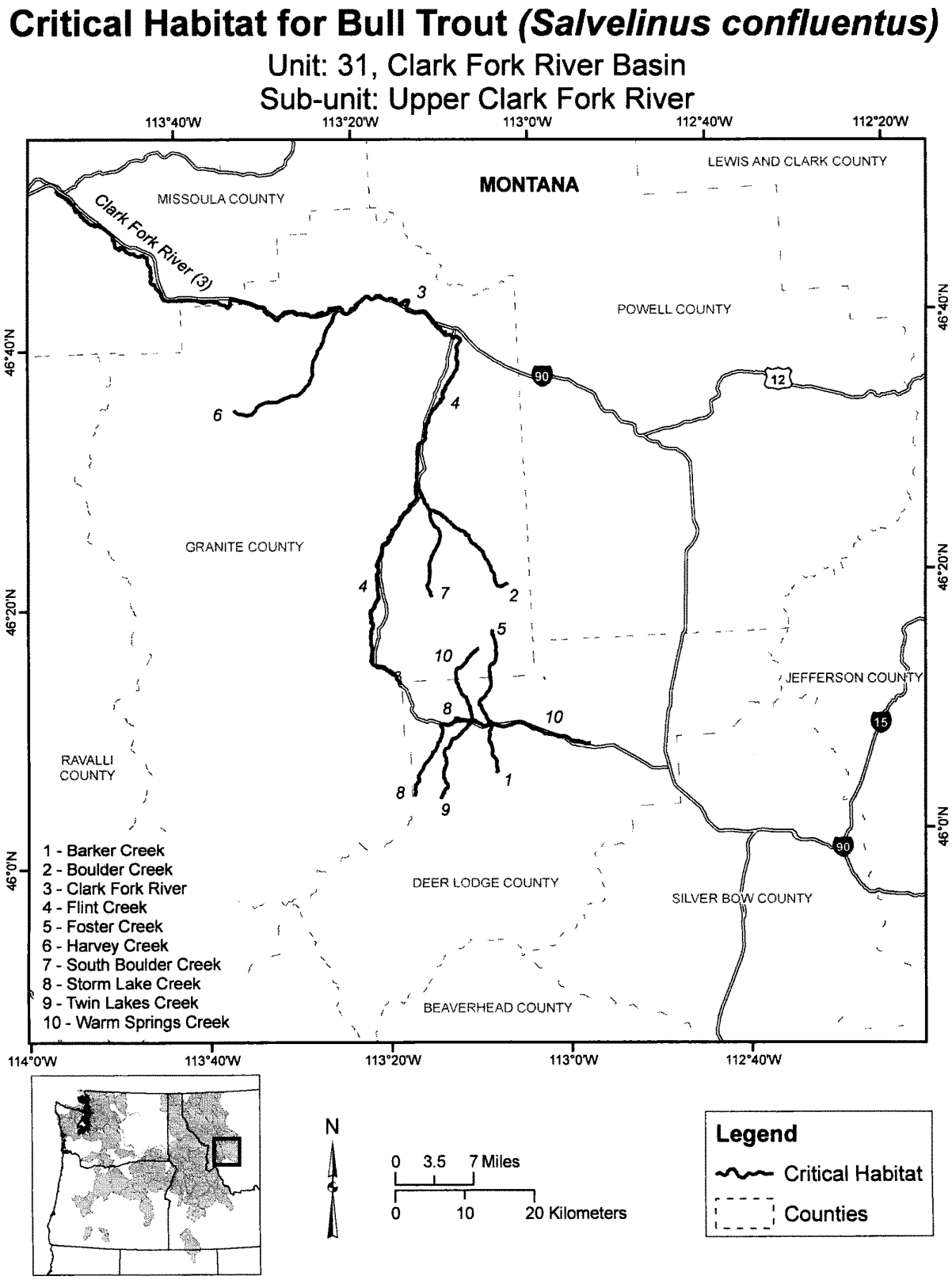
(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Middle Clark Fork River Subunit, follows:



(v) Upper Clark Fork River Subunit.

(A) [Reserved for textual description of unit.]

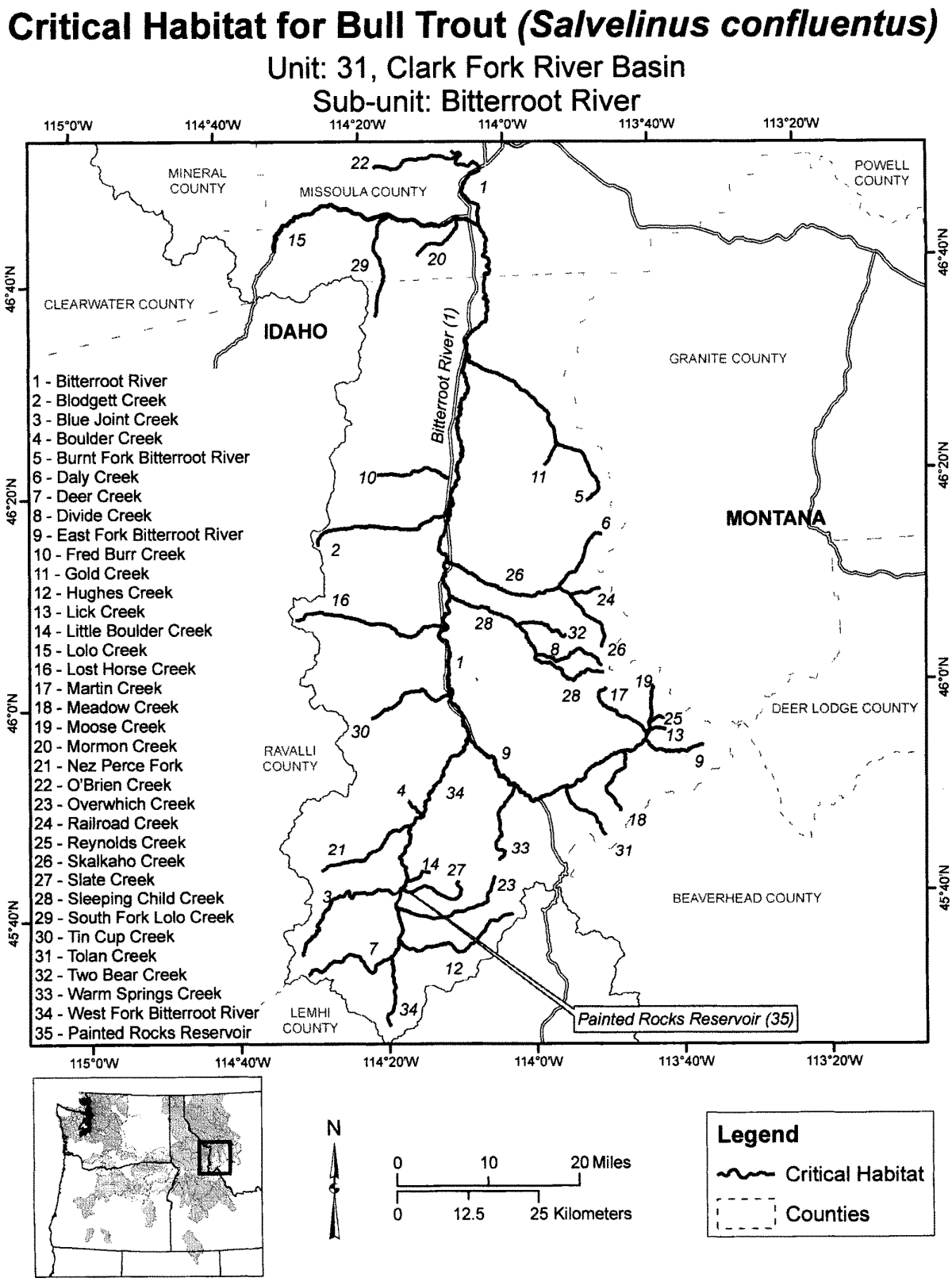
(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Upper Clark Fork River Subunit, follows:



(vi) Bitterroot River Subunit.

(A) [Reserved for textual description of unit.]

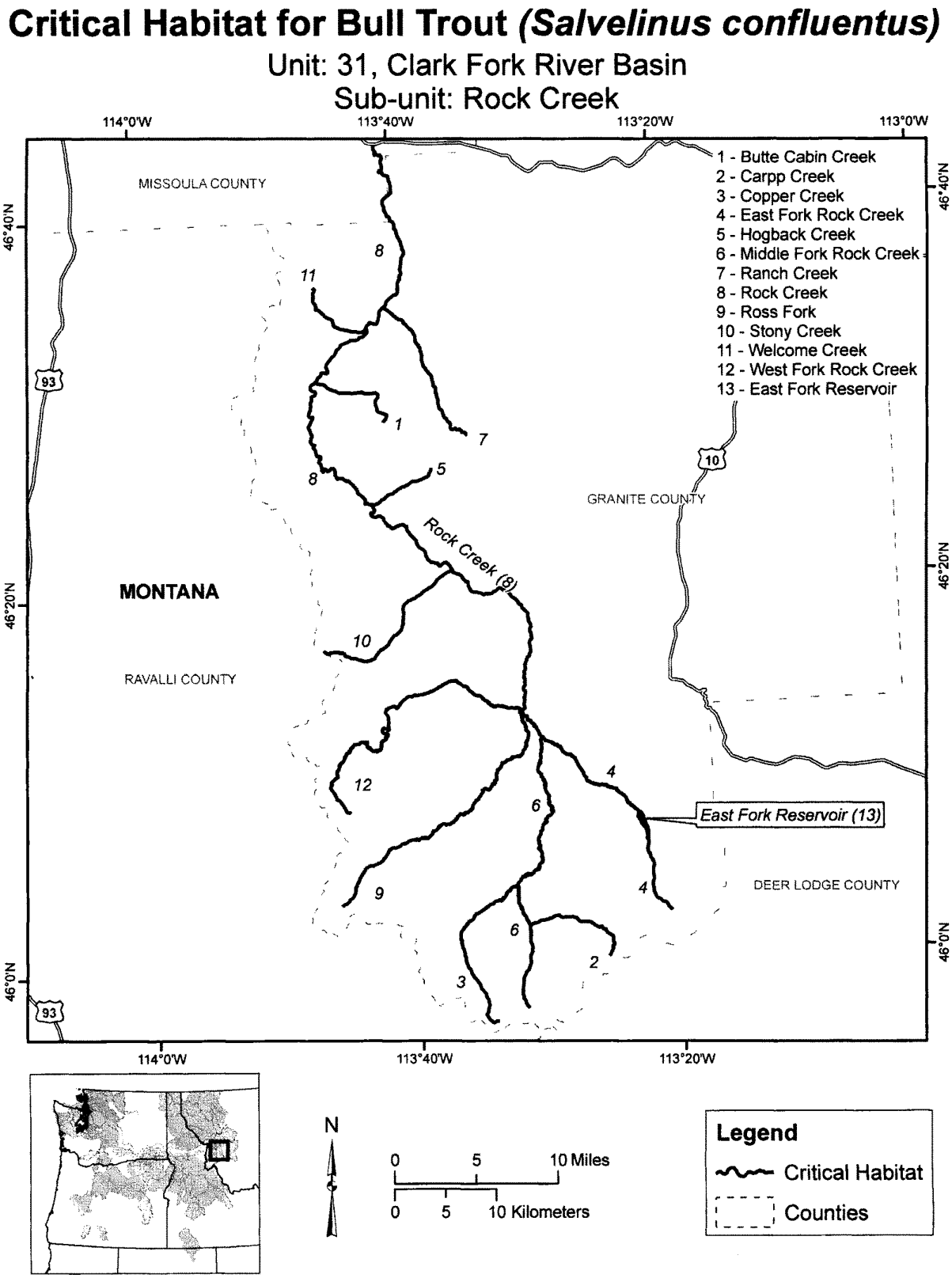
(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Bitterroot River Subunit, follows:



(vii) Rock Creek Subunit

(A) [Reserved for textual description of unit.]

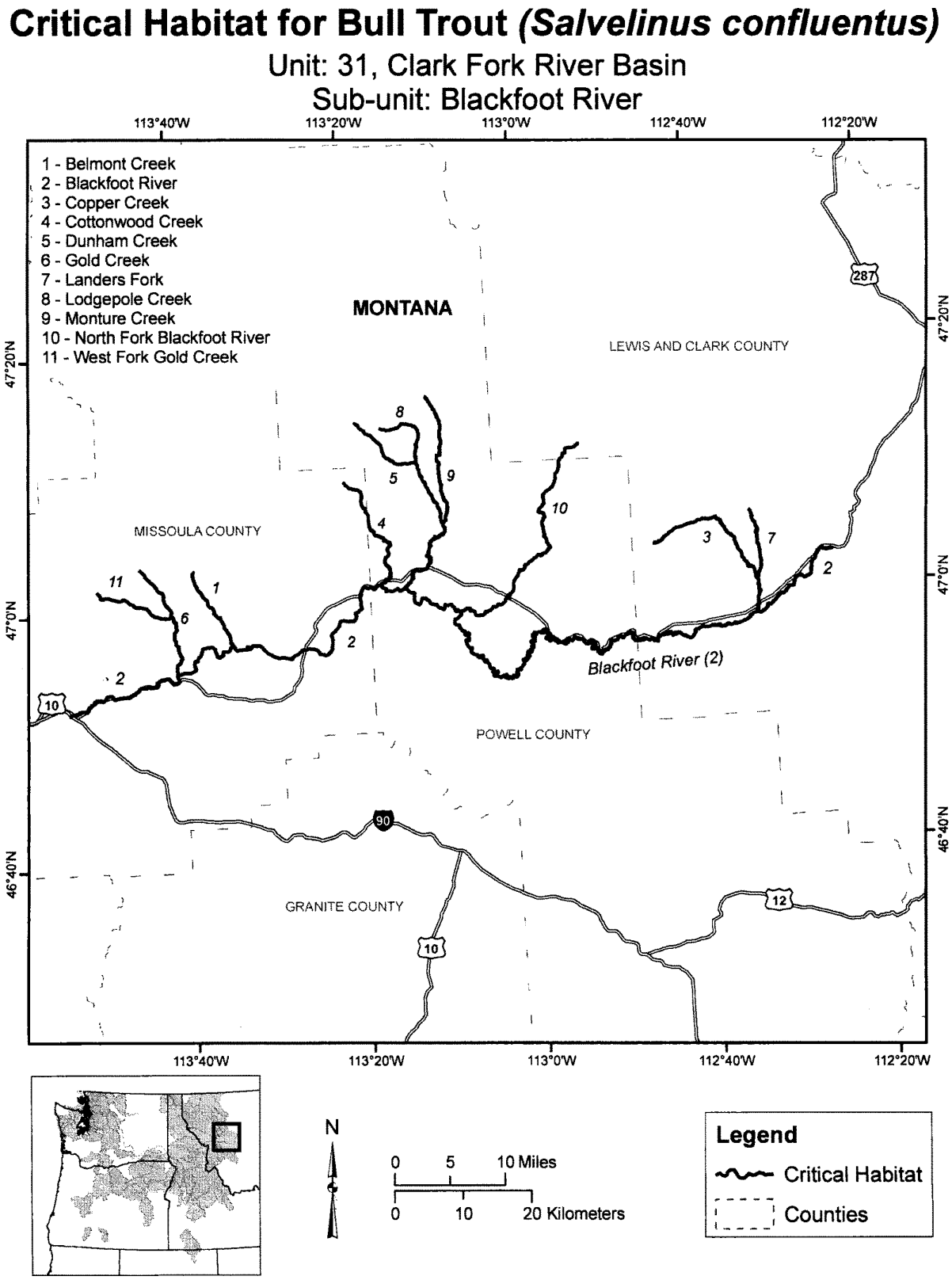
(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Rock Creek Subunit, follows:



(viii) Blackfoot River Subunit.

(A) [Reserved for textual description of unit.]

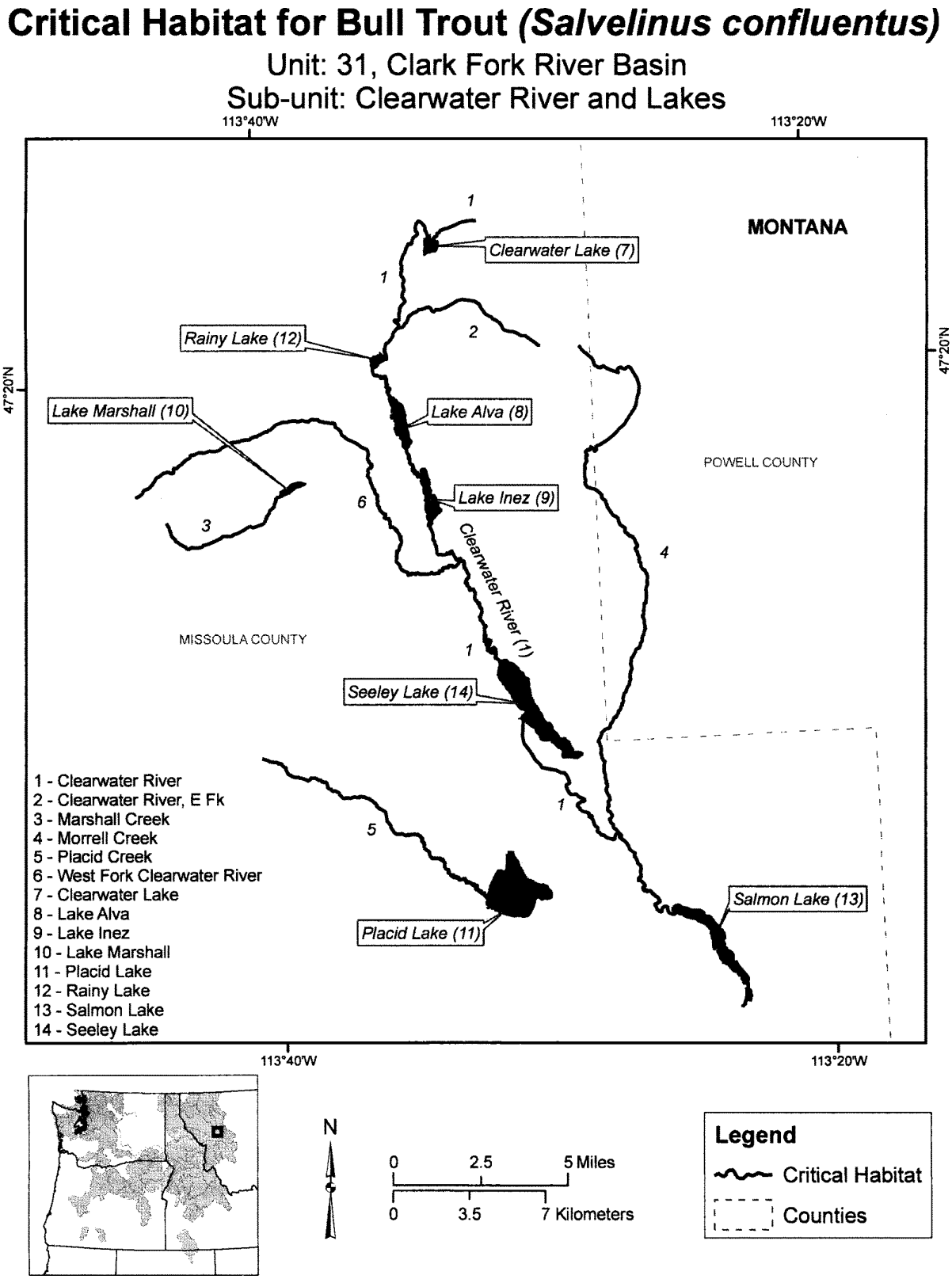
(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Blackfoot River Subunit, follows:



(ix) Clearwater River and Lakes Subunit.

(A) [Reserved for textual description of unit.]

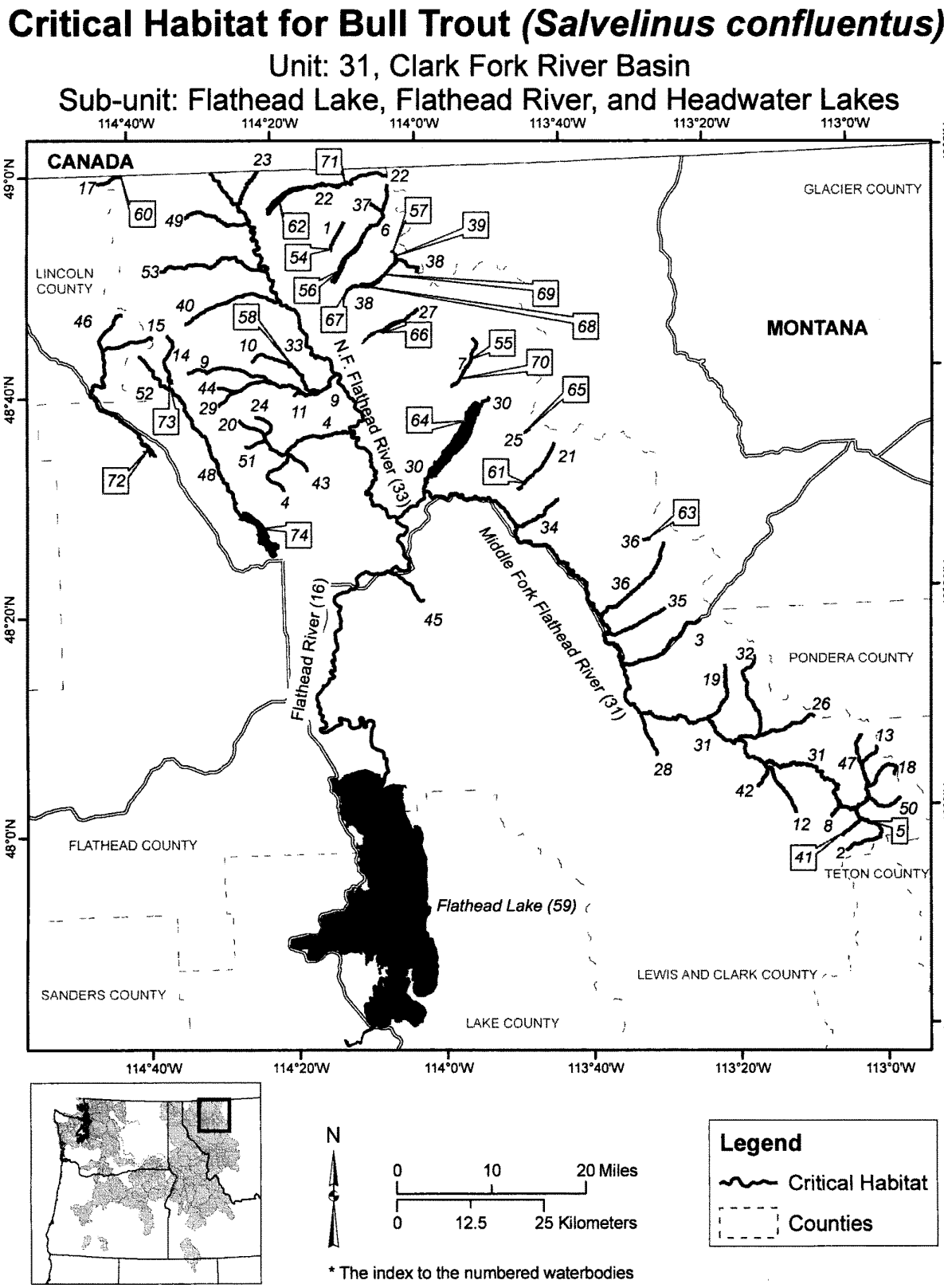
(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Clearwater River and Lakes Subunit, follows:



(x) Flathead Lake, Flathead River, and Headwater Lakes (Flathead) Subunit.

(A) [Reserved for textual description of unit.]

(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Flathead Lake, Flathead River, and Headwater Lakes (Flathead) Subunit follows:



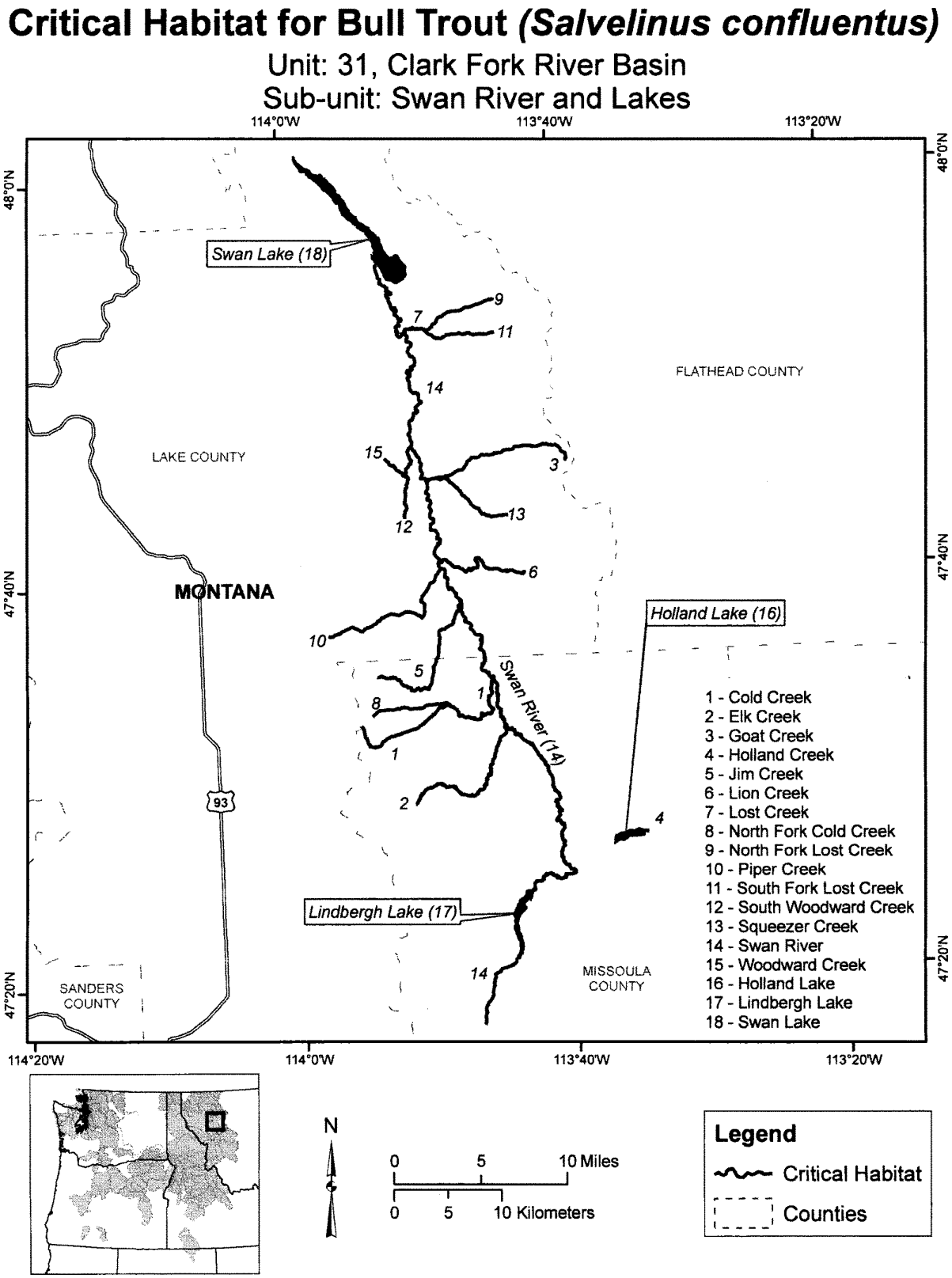
Unit: 31, Clark Fork River Basin
Sub-unit: Flathead Lake, Flathead River, and Headwater Lakes

1 - Akokala Creek
2 - Basin Creek
3 - Bear Creek
4 - Big Creek
5 - Bowl Creek
6 - Bowman Creek
7 - Camas Creek
8 - Clack Creek
9 - Coal Creek
10 - Cyclone Creek
11 - Dead Horse Creek
12 - Dolly Varden Creek
13 - East Fork Strawberry Creek
14 - East Fork Swift Creek
15 - Fitzsimmons Creek
16 - Flathead River
17 - Frozen Creek
18 - Gateway Creek
19 - Granite Creek
20 - Hallowat Creek
21 - Harrison Creek
22 - Kintla Creek
23 - Kishenehn Creek
24 - Kletomus Creek
25 - Lincoln Creek
26 - Lodgepole Creek
27 - Logging Creek
28 - Long Creek
29 - Mathias Creek
30 - McDonald Creek
31 - Middle Fork Flathead River
32 - Morrison Creek
33 - North Fork Flathead River
34 - Nyack Creek
35 - Ole Creek
36 - Park Creek
37 - Pocket Creek
38 - Quartz Creek
39 - Rainbow Creek
40 - Red Meadow Creek
41 - Scalp Creek
42 - Schafer Creek
43 - Skookoleel Creek
44 - South Fork Coal Creek
45 - South Fork Flathead River
46 - Stillwater River
47 - Strawberry Creek
48 - Swift Creek
49 - Trail Creek
50 - Trail Creek
51 - Werner Creek
52 - West Fork Swift Creek
53 - Whale Creek
54 - Akokala Lake
55 - Arrow Lake
56 - Bowman Lake
57 - Cerulean Lake
58 - Cyclone Lake
59 - Flathead Lake
60 - Frozen Lake
61 - Harrison Lake
62 - Kintla Lake
63 - Lake Isabel
64 - Lake McDonald
65 - Lincoln Lake
66 - Logging Lake
67 - Lower Quartz Lake
68 - Middle Quartz Lake
69 - Quartz Lake
70 - Trout Lake
71 - Upper Kintla Lake
72 - Upper Stillwater Lake
73 - Upper Whitefish Lake
74 - Whitefish Lake

(xi) Swan River and Lakes (Swan) Subunit.

(A) [Reserved for textual description of unit.]

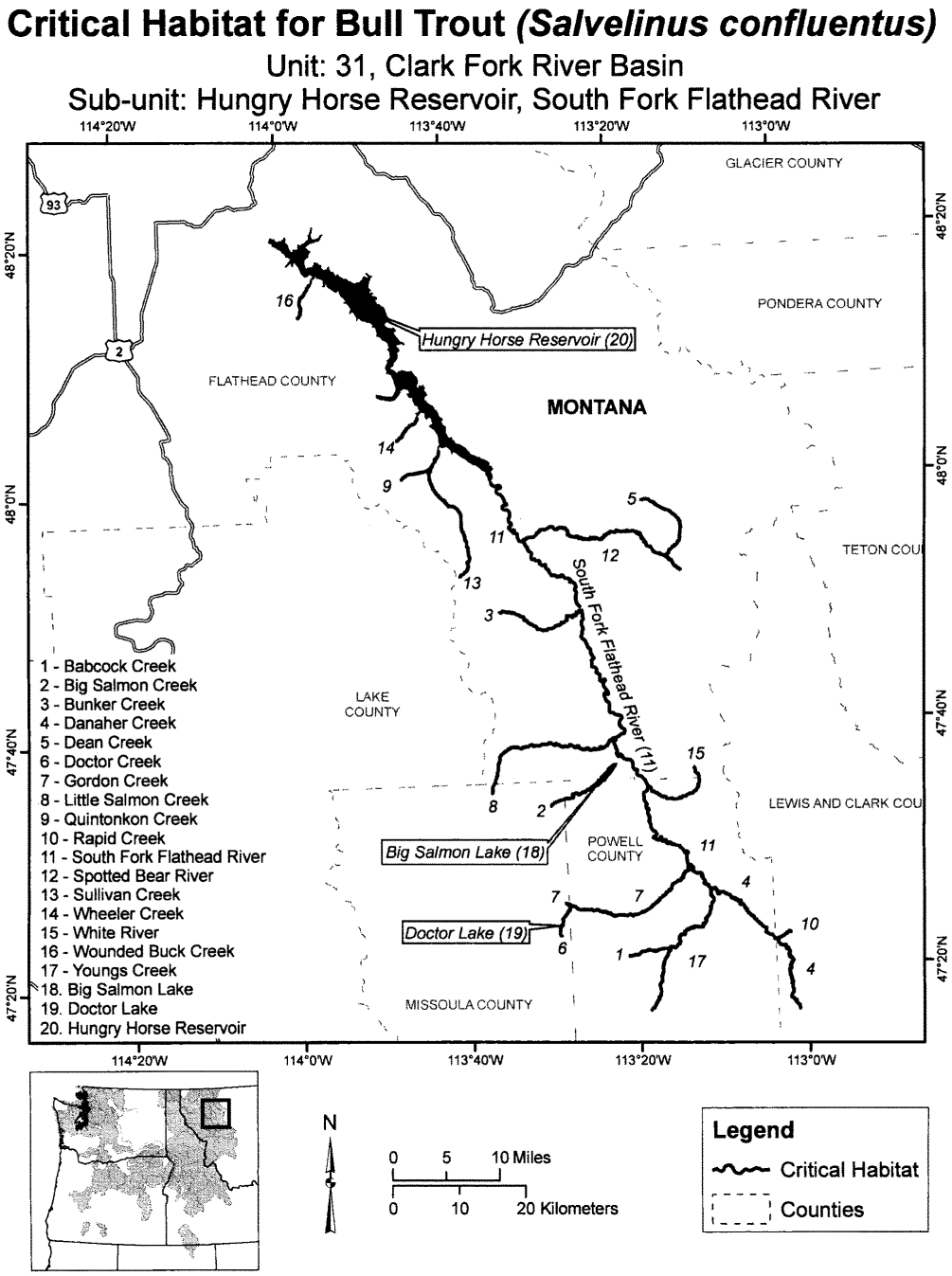
(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Swan River and Lakes (Swan) Subunit, follows:



(xii) Hungry Horse Reservoir, South Fork Flathead River and Headwater Lakes (South Fork Flathead) Subunit.

(A) [Reserved for textual description of unit.]

(B) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Hungry Horse Reservoir, South Fork Flathead River and Headwater Lakes (South Fork Flathead) Subunit, follows:



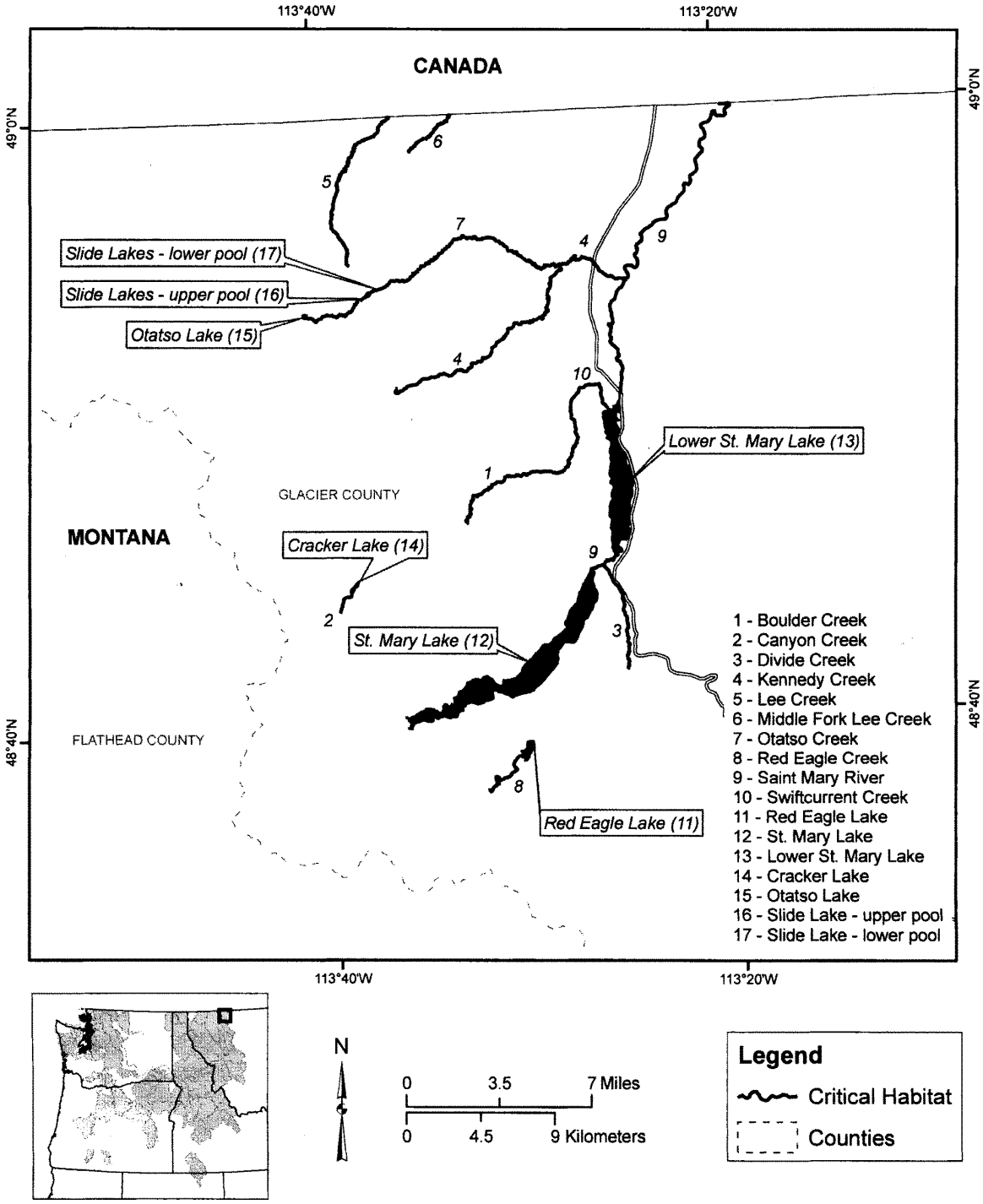
(37) Unit 32: Saint Mary River Basin Unit, Montana.

(i) [Reserved for textual description of unit.]

(ii) **Note:** Map of Critical Habitat for the bull trout (*Salvelinus confluentus*), Saint Mary River Basin Unit, follows:

Critical Habitat for Bull Trout *(Salvelinus confluentus)*

Unit: 32, Saint Mary River Basin



* * * * *

Dated: December 31, 2009

Eileen Sobeck,

Acting Assistant Secretary for Fish and Wildlife and Parks.

[FR Doc. 2010–176 Filed 1–13–10; 8:45 am]

BILLING CODE 4310–55–C