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50 CFR Part 226

Endangered and Threatened Species; Designation of Critical Habitat for 12 Evolutionarily Significant Units of West Coast Salmon and Steelhead in Washington, Oregon, and Idaho; Final Rule

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 226

[Docket No. 030716175–5203–04; I.D. No. 070303A]

RIN 0648–AQ77

Endangered and Threatened Species; Designation of Critical Habitat for 12 Evolutionarily Significant Units of West Coast Salmon and Steelhead in Washington, Oregon, and Idaho

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration, Commerce.

ACTION: Final rule.

SUMMARY: We, the National Marine Fisheries Service (NMFS), are issuing a final rule designating critical habitat for 12 Evolutionarily Significant Units (ESUs) of West Coast salmon (chum, *Oncorhynchus keta;* sockeye, *O. nerka;* chinook, O. *tshawytscha*) and steelhead (*O. mykiss*) listed as of the date of this designation under the Endangered Species Act of 1973, as amended (ESA). The specific areas designated in the rule text set out below include approximately 20,630 mi (33,201 km) of lake, riverine, and estuarine habitat in Washington, Oregon, and Idaho, as well as approximately 2,312 mi (3,721 km) of marine nearshore habitat in Puget Sound, Washington. Some of the areas designated are occupied by two or more ESUs. The annual net economic impacts of changes to Federal activities as a result of critical habitat designation (regardless of whether those activities would also change as a result of the ESA's jeopardy requirement) are estimated to be approximately $201.2 million. Fish and wildlife conservation actions for the Federal Columbia River Power System and other major hydropower projects in the Pacific Northwest are expected to generate another $500–700 million in annual costs, including forgone power revenues. While these hydropower projects are covered by ESA section 7, the conservation actions that generate these costs are imposed by a wide variety of laws. We solicited information and comments from the public in an Advance Notice of Proposed Rulemaking (ANPR) and on all aspects of the proposed rule. This rule is being issued to meet the timeline established in litigation between NMFS and Pacific Coast Federation of Fishermen's Associations (*PCFFA et. al* v. *NMFS* (Civ. No. 03–1883)). In the proposed rule, we identified a number of potential exclusions we were considering including exclusions for federal lands subject to the Pacific Northwest Forest Plan, PACFISH and INFISH. We are continuing to analyze whether exclusion of those federal lands is appropriate.

DATES: This rule becomes effective January 2, 2006.

ADDRESSES: Comments and materials received, as well as supporting documentation used in the preparation of this final rule, are available for public inspection by appointment, during normal business hours, at the National Marine Fisheries Service, NMFS, Protected Resources Division, 1201 NE Lloyd Blvd., Suite 1100, Portland, OR 97232–1274. The final rule, maps, and other materials relating to these designations can be found on our website at *http://www.nwr.noaa.gov/1salmon/salmesa/crithab/CHsite.htm.*

FOR FURTHER INFORMATION CONTACT: Steve Stone at the above address, at (503) 231–2317, or Marta Nammack at (301) 713–1401 ext. 180.

SUPPLEMENTARY INFORMATION:

Organization of the Final Rule

This **Federal Register** notice describes the final critical habitat designations for 12 ESUs of West Coast salmon and steelhead under the ESA. The pages that follow summarize the comments and information received in response to proposed designations published on December 14, 2004 (69 FR 74572), describe any changes from the proposed designations, and detail the final designations for 12 ESUs. To assist the reader, the content of this document is organized as follows:

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I. Background and Previous Federal Action

We are responsible for determining whether species, subspecies, or distinct population segments of West Coast salmon and steelhead (*Oncorhynchus* spp.) are threatened or endangered, and for designating critical habitat for them under the ESA (16 U.S.C. 1531 *et seq*). To qualify as a distinct population segment, a West Coast salmon or steelhead population must be substantially reproductively isolated from other conspecific populations and represent an important component in the evolutionary legacy of the biological species. According to agency policy, a population meeting these criteria is considered to be an Evolutionarily Significant Unit (ESU) (56 FR 58612; November 20, 1991).

We are also responsible for designating critical habitat for species listed under our jurisdiction. Section 3 of the ESA defines critical habitat as (1) specific areas within the geographical area occupied by the species at the time of listing, on which are found those physical or biological features that are essential to the conservation of the listed species and that may require special management considerations or protection, and (2) specific areas outside the geographical area occupied by the species at the time of listing that are essential for the conservation of a listed species. Our regulations direct us to focus on ''primary constituent elements,'' or PCEs, in identifying these physical or biological features. Section 7(a)(2) of the ESA requires that each Federal agency shall, in consultation with and with the assistance of NMFS, ensure that any action authorized, funded or carried out by such agency is not likely to jeopardize the continued existence of an endangered or threatened salmon or steelhead ESU or result in the destruction or adverse modification of critical habitat. Section 4 of the ESA requires us to consider the economic impacts, impacts on national security, and other relevant impacts of

specifying any particular area as critical habitat.

The timeline for completing the critical habitat designations described in this **Federal Register** document was established pursuant to litigation between NMFS and the Pacific Coast Federation of Fishermen's Associations, Institute for Fisheries Resources, the Center for Biological Diversity, the Oregon Natural Resources Council, the Pacific Rivers Council, and the Environmental Protection Information Center (PCFFA *et al.*) and is subject to a Consent Decree and Stipulated Order of Dismissal (Consent Decree) approved by the D.C. District Court. A complete summary of previous court action regarding these designations can be found in the proposed rule (69 FR 74578; December 14, 2004).

In keeping with the Consent Decree, on December 14, 2004 (69 FR 74572), we published proposed critical habitat designations for eight ESUs of salmon and five ESUs of *O. mykiss*. (For the latter ESUs we used the species' scientific name rather than ''steelhead'' because at the time they were being proposed for revision to include both anadromous (steelhead) and resident (rainbow/redband) forms of the species—see 69 FR 33101; June 14, 2004). The 13 ESUs addressed in the proposed rule were: (1) Puget Sound Chinook salmon; (2) Lower Columbia River Chinook salmon; (3) Upper Willamette River Chinook salmon; (4) Upper Columbia River spring-run Chinook salmon; (5) Hood Canal summer-run chum salmon; (6) Columbia River chum salmon; (7) Ozette Lake sockeye salmon; (8) Oregon Coast coho salmon; (9) Upper Columbia River *O. mykiss*; (10) Snake River Basin *O. mykiss*; (11) Middle Columbia River *O. mykiss*; (12) Lower Columbia River *O. mykiss*; and (13) Upper Willamette River *O. mykiss*. The comment period for the proposed critical habitat designations was originally open until February 14, 2005. On February 7, 2005 (70 FR 6394), we announced a court-approved Amendment to the Consent Decree which revised the schedule for completing the designations and extended the comment period until March 14, 2005, and the date to submit final rules to the **Federal Register** as August 15, 2005.

In the critical habitat proposed rule we stated that ''the final critical habitat designations will be based on the final listing decisions for these 13 ESUs due by June 2005 and thus will reflect occupancy 'at the time of listing' as the ESA requires.'' All of these ESUs had been listed as threatened or endangered between 1997–1999, but in 2002 we announced that we would reassess the listing status of these and other ESUs (67 FR 6215; February 11, 2002). We recently published final listing decisions for seven of the 13 ESUs and extended the deadline for the Oregon Coast coho salmon ESU and the five ESUs of *O. mykiss* (70 FR 37160; June 28, 2005). Final listing determinations for these six ESUs are expected by December 2005 (70 FR 37217 and 37219, June 28, 2005). However, the Consent Decree governing the schedule for our final critical habitat designations requires that we complete final designations for those of the 13 ESUs identified above that are listed as of August 15, 2005. We are not issuing a final critical habitat designation for the Oregon Coast coho salmon ESU because it is only proposed for listing at this time (70 FR 37217; June 28, 2005). In contrast, because anadromous forms (*i.e.*, ''steelhead'') of the five *O. mykiss* ESUs have been listed since 1997–1999 (see summary in June 14, 2004 **Federal Register** notice, 69 FR 33103), we are now issuing final critical habitat designations for them in this notice in accordance with the Consent Decree. We are able to do so because in developing critical habitat designations for this species we have focused on the co-occurring range of both anadromous and resident forms. Therefore, both the proposed and final designations were restricted to the species' anadromous range, although we did consider (but did not propose to designate) some areas occupied solely by resident fish (for example, areas above Dworshak Dam in Idaho). We focused on the co-occurring range due to uncertainties about (1) the distribution of resident fish outside the range of co-occurrence, (2) the location of natural barriers impassable to steelhead and upstream of habitat areas proposed for designation, and (3) the final listing status of the resident form. Section 4(a)(3)(B) of the ESA provides for the revision of critical habitat designations as appropriate, and we will do so if necessary after making final listing determinations for those five *O. mykiss* ESUs. Moreover, we intend to actively review critical habitat and make revisions as needed for all 12 ESUs to keep them as up-to-date as possible. Parties are encouraged to contact NMFS if they have questions or need additional information regarding these designations (see **ADDRESSES**).

In an ANPR (68 FR 55926; September 29, 2003), we noted that the ESA and its supporting regulations require the agency to address a number of issues before designating critical habitat: ''What areas were occupied by the species at the time of listing? What physical and biological features are essential to the species' conservation? Are those essential features ones that may require special management considerations or protection? Are areas outside those currently occupied 'essential for conservation'? What are the benefits to the species of critical habitat designation? What economic and other relevant impacts would result from a critical habitat designation, even if coextensive with other causes such as listing? What is the appropriate geographic scale for weighing the benefits of exclusion and benefits of designation? What is the best way to determine if the failure to designate an area as critical habitat will result in the extinction of the species concerned?'' We recognized that ''[a]nswering these questions involves a variety of biological and economic considerations'' and therefore were seeking public input before issuing a proposed rule. As we stated in the proposed rule that followed: ''We received numerous comments in response to the ANPR and considered them during development of this proposed rulemaking. Where applicable, we have referenced these comments in this **Federal Register** notice as well as in other documents supporting this proposed rule.'' In the proposed rule, we described the methods and criteria we applied to address these questions, relying upon the unique life history traits and habitat requirements of salmon and steelhead.

In issuing the final rule, we considered the comments we received to determine whether a change in our proposed approach to designating critical habitat for salmon and steelhead was warranted. In some instances, we concluded based on comments received that a change was warranted. For example, in this final rule we have revised our approach to allow us to consider excluding areas covered by habitat conservation plans in those cases where the benefits of exclusion outweigh the benefits of designation.

In other instances, we believe the approach taken is supported by the best available scientific information, and that given the time and additional analyses required, changes to the methods and criteria we applied in the proposed rule were not feasible. We recognize there are other equally valid approaches to designating critical habitat and for answering the myriad questions described above. Nevertheless, issuance of the final rule for designating critical habitat for these ESUs is subject to a Court Order that requires us to submit the final regulation to the **Federal**

Register no later than August 15, 2005, less than five months after the close of the public comment period. Taking alternative approaches to designating critical habitat would have required a retooling of multiple interrelated analyses and undertaking additional new analyses in support of the final rule, and was not possible given the time available to us. We will continue to study alternative methods and criteria and may apply them in future rulemakings designating critical habitat for these or other species.

II. Summary of Comments and Recommendations

As described in agency regulations at 50 CFR 424.16 (c) (1), in the critical habitat proposed rule we requested that all interested parties submit written comments on the proposals. We also contacted the appropriate Federal, state, and local agencies, scientific organizations, and other interested parties and invited them to comment on the proposed rule. To facilitate public participation we made the proposed rule available via the internet as soon as it was signed (approximately 2 weeks prior to actual publication) and accepted comments by standard mail and fax as well as via e-mail and the internet (*e.g., www.regulations.gov*). In addition, we held four public hearings between January 11, 2005, and January 25, 2005, in the following locations: Kennewick and Seattle, WA; Boise, ID; and Portland, OR. We received a total of 5,230 written comments (5,111 of these in the form of e-mail with nearly identical verbiage) during the comment period on the proposed rule. Three comments dealt solely with Oregon Coast coho salmon and are not addressed in this rule.

In December 2004, the Office of Management and Budget (OMB) issued a Final Information Quality Bulletin for Peer Review establishing minimum peer review standards, a transparent process for public disclosure, and opportunities for public input (70 FR 2664; January 14, 2005). The OMB Peer Review Bulletin, implemented under the Information Quality Act (Pub. L. 106–554), is intended to provide public oversight on the quality of agency information, analyses, and regulatory activities, and applies to information disseminated on or after June 16, 2005. Prior to publishing the proposed rule we submitted the initial biological assessments of our Critical Habitat Analytical Review Teams (CHARTs) to state and tribal comanagers and asked them to review those findings. These co-manager reviews resulted in several changes to the CHARTs' preliminary assessments (for example, revised fish distribution as well as conservation value ratings) and helped to ensure that the CHARTs' revised findings (NMFS, 2005a) incorporated the best available scientific data. We later solicited technical review of the entire critical habitat proposal (biological, economic, and policy bases) from 45 independent experts selected from the academic and scientific community, Native American tribal groups, Federal and state agencies, and the private sector. We also solicited opinions from three individuals with economics expertise to review the draft economics analysis supporting the proposed rule. All three of the economics reviewers and three of the biological reviewers submitted written opinions on our proposal. We have determined that the independent expert review and comments received regarding the science involved in this rulemaking constitute adequate prior review under section II.2 of the OMB Peer Review Bulletin (NMFS, 2005b).

We reviewed all comments received from the peer reviewers and the public for substantive issues and new information regarding critical habitat for the various ESUs, and we address them in the following summary. Peer reviewer comments were sufficiently similar to public comments that we have responded to their comments through our general responses below. For readers' convenience we have assigned comments to major issue categories and where possible have combined similar comments into single comments and responses.

Notification and General Comments

Comment 1: Several commenters raised concerns/complaints regarding the adequacy of public notification and time to comment.

Response: We made all reasonable attempts to communicate our rulemaking process and the critical habitat proposal to the affected public. Prior to the proposed rule we published an ANPR in which we identified issues for consideration and evaluation, and solicited comments regarding these issues and information regarding the areas and species under consideration (68 FR 55926; September 29, 2003). We considered comments on the ANPR during our development of the proposed rule. As soon as the proposed rule was signed on November 29, 2004 (2 weeks before actual publication in the **Federal Register**), we posted it and supporting information on the agency's internet site to facilitate public review, and we have provided periodic updates to that site (see **ADDRESSES**). In response to numerous requests—in particular from plaintiffs as well as private citizens, counties, farm bureaus, and state legislators in Washington—the original 60-day public comment period was extended by 30 days (70 FR 6394; February 7, 2005) to allow additional time for the public to submit comments on the critical habitat proposals. As required by the ESA, we also provided notice of these proposals to affected Federal agencies, states, counties, and tribal governments. Further, we provided notice of these proposals to professional scientific organizations and media sources in Washington, Oregon, and Idaho.

Additionally, we realize that the statutory scheme provides a short time frame for designating critical habitat. Congress amended the ESA in 1982 to establish the current time frame for designation. In doing so Congress struck a balance between the recognition that critical habitat designations are based upon information that may not be determinable at the time of listing and the desire to ensure that designations occur in a timely fashion. Additionally, the ESA and supporting regulations provide that designations may be revised as new data become available to the Secretary. We recognize that where the designation covers a large geographic area, as is the case here, the short statutory time frame provides a short period for the public to consider a great deal of factual information. We also recognize that this designation takes a new approach by considering relative conservation value of different areas and applying a cost-effectiveness framework. In this notice we are announcing our intention to consider revising the designations as new habitat conservation plans and other management plans are developed, and as other new information becomes available. Through that process we anticipate continuing to engage the interested public and affected landowners in an ongoing dialogue regarding critical habitat designations.

Comment 2: One commenter disapproved of our decision to vacate the February 2000 critical habitat designations for these ESUs. Another expressed the view that we should have focused only on completing an economic analysis (which was lacking in the 2000 designations) rather than revising the entire approach to designation.

Response: We believe that the issues identified in a legal challenge to our February 2000 designations warranted withdrawing that rule. Moreover, we believe a new approach was needed, unless we were to simply disregard the economic analysis once it was

completed. Developing a cost-effectiveness approach, designed to achieve the greatest conservation at the least cost, is in keeping with long-standing Executive direction on rulemaking and is a responsible and conservation-oriented approach to implementing section 4(b)(2) of the ESA. In addition, we had new and better information in 2004 than we had in 2000, such as the state fish and wildlife agency data on fish distribution. The ESA requires that we use the best available information, and the distribution data are the best information currently available. Finally, the litigation challenging our 2000 designation also challenged the lack of specificity in our designation of the riparian area, leading us to consider whether there was a better approach that was more consistent with our regulations and with the best available information. This issue is discussed in greater detail in a later response.

Comment 3: Some commenters stated that we should wait to publish final critical habitat designations until after final listing determinations have been made and the final hatchery listing policy is published.

Response: The ESA states that the Secretary *shall* designate critical habitat, defined as areas within or outside the geographical area occupied by the species a*t the time of listing* and using the best *available* information (emphasis added). These designations follow that statutory mandate and have been completed on a schedule established under a Consent Decree. Also, the final hatchery listing policy and final listing determinations for several salmon ESUs were published on June 28, 2005 (70 FR 37160 and 37204) in advance of the completion of this final critical habitat designation. For reasons described above in the ''Background and Previous Federal Action'' section, we are now making final designations for those listed salmon and steelhead ESUs in the Northwest Region that are subject to the Consent Decree and listed as of the date of this designation.

Comment 4: One peer reviewer disagreed with the agency's approach to identifying ESUs and, consequently, found it very difficult to comment objectively on the substance of the critical habitat designations because how NMFS identifies ESUs affects the criteria one would develop to address critical habitat. Another commenter requested clarification regarding whether listed hatchery fish will be considered genetically the same as wild fish and suggested a change in the ESU boundary between Lower Columbia and Middle Columbia River *O. mykiss* ESUs. One commenter disagreed with our inclusion of hatchery fish in an ESU and argued that Congress had no intention of using critical habitat to afford protection to artificial breeding facilities such as hatchery raceways. One commenter did not support the inclusion of resident and anadromous *O. mykiss* in the same ESU.

Response: For reasons described above, we are subject to a Consent Decree to issue these final critical habitat designations. Comments regarding whether hatchery fish should be considered as part of an ESU are not addressed in this document but are related to issues discussed in our hatchery listing policy published on June 28, 2005 (70 FR 37204), as well as a concurrent listing determination notice (70 FR 37160, June 28, 2005). With respect to concerns about the possible designation of hatchery raceways as critical habitat, we do not believe that these and other manmade structures associated with the hatchery environment (such as rearing ponds, egg incubation trays, etc.) contain the requisite PCEs.

Comments regarding inclusion of resident trout in *O. mykiss* ESUs are not addressed in this document but are related to issues discussed in our hatchery listing policy published on June 28, 2005 (70 FR 37160). However, for reasons described earlier in this document, we are making final critical habitat designations for the anadromous form of *O. mykiss* in five steelhead ESUs because this life history form has been listed since as early as 1997 (depending on the ESU). This action is in keeping with the Consent Decree which requires us to designate critical habitat for all ESUs listed as threatened or endangered as of August 15, 2005. We will revise the designations if appropriate following the final listing determinations for these five ESUs.

Identification of Critical Habitat Areas

Comment 5: Several commenters contended that we can only designate areas that are essential for species conservation.

Response: Section 3(5)(A) of the ESA has a two-pronged definition of critical habitat: ''(i) The specific areas *within the geographical area occupied by the species*, at the time it is listed * * * on which are found those physical or biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protection; and (ii) *specific areas outside the geographical area occupied by the species,* at the time it is listed * * * upon a determination by the Secretary that such areas are essential for the conservation of the species'' (emphasis added). As described in the proposed rule, and documented in the reports supporting it, we have strictly applied this definition and made the requisite findings. We requested and received comments on various aspects of our identification of areas meeting this definition and address those here. Only those areas meeting the definition were considered in the designation process. Comments regarding the section 4(b)(2) process, in which we considered the impacts of designation and whether areas should be excluded, are addressed in a subsequent section.

Comment 6: In the proposed rule we considered occupied streams within a fifth field watershed (as delineated by the U.S. Geological Survey) as the ''specific area'' in which the physical or biological features essential to conservation of the ESUs were found. We also used these watershed delineations as the ''particular areas''—the analytical unit—for purposes of the section 4(b)(2) analysis. In the proposed rule we requested public comment on whether considering exclusions on a stream-by-stream approach would be more appropriate. Two commenters believed that the watershed scale was too broad for making critical habitat designations and suggested that a sixth field watershed or a stream-by-stream approach was more appropriate. One commenter believed that we should conduct a reach-by-reach assessment in their particular watershed.

Response: Our ESA section 4(b)(2) report (NMFS, 2005c) acknowledges that the delineation of both specific areas and particular areas should be as small as practicable, to ensure our designations are not unnecessarily broad and to carry out congressional intent that we fully consider the impacts of designation. For reasons described in the section below on ''Methods and Criteria Used to Identify Critical Habitat,'' we continue to believe that the specific facts of salmon biology and life history make the fifth field watershed an appropriate scale to use in delineating the ''specific'' areas in which physical or biological features are found. We also believe consideration of the impacts of designation on a fifth field watershed scale results in a meaningful section 4(b)(2) balancing process. Moreover, congressional direction requires that designations be completed in a very short time frame by a specified deadline, ''based on such data as may be available at that time.'' Given that short time frame and the geographic extent of salmon critical habitat (approximately 29,000 stream miles), the fifth field

watershed was the smallest practicable area we were able to analyze.

Comment 7: Some commenters believed we applied the definition of ''specific areas within the geographical area occupied by the species at the time it is listed'' too narrowly. In their views, this led to two errors—failure to designate all ''accessible'' stream reaches and failure to designate riparian and upstream areas. The argument raised in support of the first assertion is that the ''best scientific data available'' support a conclusion that salmon and steelhead will occupy all accessible streams in a watershed during a period of time that can be reasonably construed as ''at the time it is listed.'' One commenter stated that ''[w]hether a particular stream reach is occupied cannot be determined with certainty based on 'occupation' data alone, especially for fragmented, declining, or depressed populations of fish.'' The commenter pointed to the rationale provided in our 2000 rule for identifying occupied areas as all areas accessible within a subbasin (a 4th field watershed, using U.S. Geological Survey terminology): ''NMFS believes that adopting a more inclusive, watershed based description of critical habitat is appropriate because it (1) recognizes the species' use of diverse habitats and underscores the need to account for all of the habitat types supporting the species' freshwater and estuarine life stages, from small headwater streams to migration corridors and estuarine rearing areas; (2) takes into account the natural variability in habitat use that makes precise mapping problematic (e.g. some streams may have fish present only in years with abundant rainfall) (65 FR 7764; February 16, 2000).''

The argument raised in support of the second assertion is that in delineating ''specific areas within the geographical area occupied by the species,'' we need not confine ourselves to areas that are literally ''occupiable'' by the species. If there are physical or biological features essential to conservation to be found within a broadly defined ''geographical area occupied by the species,'' we have the duty to delineate specific areas in a way that encompasses them. Some argued that limiting the designation to the stream channel fails to recognize the biological and hydrological connections between streams and riparian areas and would lead to further degradation of the latter. Two commenters suggested that we use a fixed distance (e.g., 300 ft (91.4m)) if a functional description is not used. Some requested that we adopt the ''functional zone'' description for lateral extent used in the 2000 designations (65 FR 7764; February 16, 2000) while other commenters felt that our reference to habitat linkages with upslope and upstream areas was vague and wondered whether we were actually using the old approach anyway. Other commenters believed that using the line of ordinary high water or bankfull width was appropriate and noted that this would remove prior ambiguities about which areas were designated. The U.S. Forest Service (USFS) commented that regardless of the lateral extent designated, they would continue to protect and restore riparian and upslope areas in occupied and unoccupied watersheds. Other commenters supported the approach taken in this designation, to identify specific areas occupied by the species and not broadly designate ''all areas accessible,'' some commenting that this was a more rigorous assessment and more in keeping with the ESA.

Response: The approach we took in the proposed designation is different from the approach we took in the vacated 2000 designation for a variety of reasons. The ESA directs that we will use the best scientific data available in designating critical habitat. Our regulations also provide direction: ''[e]ach critical habitat will be defined by specific limits using reference points and lines as found on standard topographic maps of the area. * * * Ephemeral reference points (e.g., trees, sand bars) shall not be used in defining critical habitat.'' (50 CFR 424.12(c)) With respect to our approach for identifying ''the geographical area occupied by the species,'' we recognize that the state fish and wildlife distribution data are limited to areas that have been surveyed or where professional judgment has been applied to infer distribution, and that large areas of watersheds containing fish may not have been observed or considered. We also recognize there have been many instances in which previously unobserved areas are found to be occupied once they are surveyed (NMFS, 2005a). Nevertheless, we believe the extensive data compiled by the state fish and wildlife agencies, which was not available when we completed the 2000 designations, represents the best scientific data that is currently available regarding the geographical area occupied by the species. Moreover, the CHARTs reviewed the data and had an opportunity to interact with the state fish and wildlife biologists to confirm the accuracy of the data. We also believe the approach we have taken in this designation better conforms to the regulatory direction to use ''specific limits'' for the designation. The approach we used in 2000 used subbasin boundaries to delineate ''specific areas,'' which arguably met the requirement to use ''specific limits,'' but we believe using latitude-longitude endpoints in stream reaches, as we have done here, better adheres to the letter and spirit of our regulations.

With respect to our approach of limiting the designation to the occupied stream itself, not extending the designation into the riparian zone or upstream areas, we acknowledge that our regulations contemplate situations in which areas that are not literally occupiable may nevertheless be designated. Section (d) of 50 CFR 424.12 gives as an example a situation in which areas upland of a pond or lake may be designated if it is determined that ''the upland areas were essential to the conservation of an aquatic species located in the ponds and lakes.'' For this designation, however, given the vast amount of habitat under consideration (nearly 30,000 stream miles) and the short statutory time frames in which to complete the designation, we could not determine ''specific limits'' that would allow us to map with accuracy what part of the riparian zone or upstream area could be considered to contain PCEs. As an alternative, we considered the approach we used in 2000, which was to designate riparian areas that provide function, but concluded that approach may not have been entirely consistent with the regulatory requirement to use ''specific limits.'' We believe limiting the designation to streams will not compromise the ability of an ESA section 7 consultation to provide for conservation of the species. Section 7 requires Federal agencies to ensure their actions are not likely to destroy or adversely modify critical habitat. Actions occurring in the riparian zone, upstream areas, or upland areas all have the potential to destroy or adversely modify the critical habitat in the stream. Although these areas are not themselves designated, Federal agencies must nevertheless meet their section 7 obligations if they are taking actions in these areas that ''may affect'' the designated critical habitat in the stream. Thus, although this designation is restricted to the stream itself, we will continue to be concerned about the same activities we have emphasized in the past decade of consultations.

Comment 8: Several commenters believed we incorrectly applied the definition of ''specific areas outside the geographical area occupied by the species.'' In the view of some, we failed our duty under the ESA by not making a determination that we had identified

as critical habitat enough areas (occupied and unoccupied) to support conservation. In the view of others, it was this failure that led to one of the errors described in the previous comment—the failure to designate all ''accessible stream reaches.'' Many commenters, without identifying the analytical flaw, expressed concern about statements made in the press that the change from ''all areas accessible'' to areas documented as occupied led to a 90-percent reduction in critical habitat. Other commenters supported the approach taken in this designation, to identify specific areas occupied by the species and not broadly designate ''all areas accessible,'' some commenting that this was a more rigorous assessment and more in keeping with the ESA.

Response: Section 3(5)(A)(i) of the ESA requires us to identify specific areas within the geographical area occupied by the species that contain physical or biological features that may require special management considerations or protection. Section 3(5)(A)(ii) requires that specific areas outside the geographical area occupied by the species only fall within the definition of critical habitat if the Secretary determines that the area is essential for conservation. Our regulations further provide that we will designate unoccupied areas ''only when a designation limited to [the species'] present range would be inadequate to ensure the conservation of the species (50 CFR 424.12(e)).'' The ESA requires the Secretary to designate critical habitat at the time of listing. If critical habitat is not then determinable, the Secretary may extend the period by 1 year, ''but not later than the close of such additional year the Secretary must publish a final regulation, based on such data as may be available at that time, designating, to the maximum extent prudent, such habitat.''

At the present time, we do not have information allowing us to determine that the specific areas within the geographical area occupied by the species are inadequate for conservation, such that unoccupied areas are essential for conservation, aside from the three areas designated for Hood Canal summer-run chum. In this case, we were able to determine that these specific areas are essential for conservation because summer-run chum have such a restricted geographic area, there is a local recovery plan that has been in place for several years, and conservation hatchery fish are currently being released in these areas in an effort the recovery plan finds is essential for conservation of this ESU. We received no comments specifically questioning our findings that these unoccupied areas proposed for designation are essential for conservation. We anticipate revising our critical habitat designations in the future as additional information becomes available through recovery planning processes (see Comment 12).

Regarding the concern about changing the designation from ''all areas accessible'' to the delineation of stream reaches actually occupied, when we announced the proposal we stated that it represented a 90 percent reduction in stream miles designated. The facts are more complicated. In those subbasins where we designated all areas accessible below dams and long-standing natural barriers, there are approximately 127,000 miles (204,400 km) of streams. A large proportion of these stream miles are not and have never been ''accessible'' to salmon and steelhead. In 2000, when we designated all areas accessible, however, we created an impression that every mile of stream in these subbasins was designated. We did not have information at that time, nor do we presently have information, that allows us to quantify exactly how many stream miles may be ''accessible'' and therefore how much of a reduction this rule represents over what may have been designated in the 2000 rule. Although we acknowledge it is a reduction, it is far less than a 90-percent reduction and we regret any confusion our statements may have created.

Comment 9: Some commenters (including one peer reviewer) questioned the adequacy of our identification of PCEs, in particular the lack of specificity. The peer reviewer agreed that spawning areas were essential habitat features but did not believe that the others were because they are large and spread out or it is unclear what additional protections are needed. One commenter noted that it is difficult using the state fish and wildlife agency data to pinpoint PCEs with accuracy and that ''[s]ome of this information may require additional review, field verification, or confirmation by local sources such as Oregon Department of Fish and Wildlife biologists.'' With respect to one particular PCE, this commenter pointed out: ''For example, PCE 5 (nearshore marine areas free of obstruction) includes an element of ''natural cover such as submerged and overhanging large wood, aquatic vegetation, large rocks and boulders and side channels. It is not clear how nearshore marine areas free of obstruction would possess these features.''

Response: To determine the physical or biological features essential to conservation of these ESUs, we first considered their complex life cycle. As described in the ANPR and proposed rule, ''[t]his complex life cycle gives rise to complex habitat needs, particularly during the freshwater phase (see review by Spence *et al.*, 1996).'' We considered these habitat needs in light of our regulations regarding criteria for designating critical habitat. Those criteria state that the requirements essential to species' conservation include such things as ''space * * * [f]ood, water, air, light, minerals, or other nutritional or physiological requirements. * * * cover or shelter.'' They further state that we are to focus on the ''primary constituent elements'' such as ''spawning sites, feeding sites, * * * water quality or quantity,'' etc. In the ANPR and proposed rule we identified the features of the habitat that are essential for the species to complete each life stage and are therefore essential to its conservation. We described the features in terms of sites (spawning, rearing, migration) that contain certain elements. We disagree with the peer reviewer that rearing and migration habitat is not ''essential to the conservation of the species'' or that it is not possible to determine where those areas are. The peer reviewer's contention that rearing and migration sites do not require ''additional protections'' is discussed in a separate comment and response.

Regarding one commenter's point, we have sought to verify the presence of fish and of PCEs with the relevant state, tribal, or Federal biologists for each specific area. Before publishing the proposed rule we provided the CHART reports to the state fish and wildlife agencies for review, and again during the comment period. We held further discussions with them where questions were raised. Also to clarify the point raised by this commenter regarding our description of the nearshore PCE, by free of obstruction we were referring to various manmade in-water structures placed in nearshore areas (such as seawalls, jetties, tide gates) that modify or simplify the habitat and restrict or impede the nearshore movements of salmon. In contrast, natural features identified with this PCE, such as aquatic vegetation, large wood and rocks, provide important cover to salmon and steelhead migrating and foraging in the nearshore area.

Comment 10: Some commenters believed it was inappropriate to designate critical habitat in irrigation returns, drains, or wasteways because these are not natural waterbodies and were not historically occupied. They argue that critical habitat must be

limited to areas that were historically occupied by the species.

Response: The ESA defines critical habitat as ''(i) the specific areas within the geographical area *occupied by the species, at the time it is listed* * * * on which are found those physical or biological features * * * essential to the conservation of the species'' (emphasis added). The statute does not limit designation to areas that were historically occupied. In some cases the historically occupied habitat may be unavailable or too degraded to support the species, in which case newly created habitat may be the most suitable habitat available. Moreover, some of these comments were directed at waterways that were historically occupied, have not been occupied in recent decades because of habitat degradation, but now may be occupied because of habitat restoration or increased water quantity. In light of comments received on specific waterways, we asked the CHARTs to review them and confirm their determination that the areas were occupied and contained the PCEs, and that the PCEs may require special management considerations or protection. During our final review of occupied stream reaches we found areas in four watersheds where the PCEs were either entirely lacking or were so degraded as to be functionally nonexistent, and so removed them from consideration as critical habitat.

Comment 11: One peer reviewer noted that introduced predatory fishes should be identified as having a significant impact on critical habitat. Another wondered how we were dealing with listed bull trout eating listed steelhead.

Response: We agree that predators, both exotic and native, can have an impact on listed salmon and steelhead and initially considered the absence of predators as a potential PCE. However, after reviewing our regulations at 50 CFR 424.12 we concluded that they are not one of the ''principal biological or physical constituent elements within the defined area that are essential to the conservation of the species.'' We recognize that these predators can have negative impacts on native fishes and in 1998 co-chaired a workshop to assess these impacts (NMFS and Oregon Department of Fish and Wildlife (ODFW), 1998). As a result, we have been working with state and Federal co-managers to address this issue, in particular via harvest regulations for introduced fishes. Regarding predation by bull trout (a native species), we concur with conclusions made by the U.S. Fish and Wildlife Service (USFWS) in a recent final rule: ''[W]e are not aware of any published scientific studies or other convincing evidence indicating bull trout predation is the leading cause in the decline of other native or introduced species.'' If evidence to the contrary becomes available then we will work with the USFWS to assess and address the conservation risks.

Comment 12: In the proposed rule we requested comments on the extent to which specific areas may require special management considerations or protection in light of existing management plans. Several commenters stated that lands covered by habitat conservation plans or other management or regulatory schemes do not require special management considerations or protection. Others commented that even where management plans are present, there still may be ''methods or procedures useful'' for protecting the habitat features.

Response: The statutory definition and our regulations (50 CFR 424.02; 424.12) require that specific areas within the geographical area occupied by the species must contain ''physical or biological features'' that are ''essential to the conservation of the species,'' and that ''may require special management considerations or protection.'' As described in the proposed rule, and documented in the reports supporting it, we first identified the physical or biological features essential to conservation (described in our regulations at 50 CFR 424.12(b)(5) as ''primary constituent elements'' or PCEs). We next determined the ''specific areas'' in which those PCEs are found based on the occupied stream reaches within a fifth field watershed. We used this watershed-scale approach to delineating specific areas because it is relevant to the spatial distribution of salmon and steelhead, whose innate homing behavior brings them back to spawn in the watersheds where they were born (Washington Department of Fisheries *et al.*, 1992; Kostow, 1995; McElhany *et al.*, 2000). We then considered whether the PCEs in each specific area (watershed) ''may require special management considerations or protection.''

We recognize there are many ways in which ''specific areas'' may be delineated, depending upon the biology of the species, the features of its habitat and other considerations. In addressing these comments, we considered whether to change the approach described in our proposed rule and instead delineate specific areas based on ownership. The myriad ownerships and state and local regulatory regimes present in any watershed, as well as the timing issues discussed previously, made such an approach impractical for this rulemaking, as noted in Section I above. While there are other equally valid methods for identifying areas as critical habitat, we believe that the watershed scale is an appropriate scale for identifying specific areas for salmon and steelhead, and for then determining whether the PCEs in these areas may require special management considerations or protections. We will continue to study this issue and alternative approaches in future rulemakings designating critical habitat.

Comment 13: One commenter stated that we could not designate any unoccupied areas if we had excluded any occupied areas, relying on the regulatory provision cited in a previous comment and response. The commenter also asserted that reducing harvest of listed species would allow more habitat to be fully seeded and thereby also reduce the amount of habitat needed for designation as critical habitat.

Response: The first comment assumes that all habitat areas are equivalent and exchangeable, which they are not. An area may be essential for conservation because it was historically the most productive spawning area for an ESU and unless access to it is restored, the ESU will not fully recover to the point that the protections of the ESA are no longer necessary. This area will be essential regardless of whether some other specific area has been excluded. The second comment reflects the view that if mortality of listed fish can be reduced in some life stage outside the spawning grounds, then less spawning habitat will be needed to support recovery. This comment could apply equally to any activity that affects fish survival, not just harvest in fisheries (for example, mortality of fish passing through dams). An increased number of returning adults would not necessarily result in a decreased need for critical habitat. Healthy salmon ESUs rely for their long-term survival on the abundance, productivity, spatial distribution and diversity of their constituent populations. Well-distributed habitat of high enough quality to ensure productivity across cycles of varying ocean survival will remain important to salmon conservation, regardless of whether fewer salmon are harvested or suffer from other forms of human-induced mortality (McElhany *et al.*, 2003).

Comment 14: Several commenters supported the designation of unoccupied areas above dams and some believed that by not designating these areas we will make it more difficult to achieve fish passage in the future. They

further noted that excluding these presently blocked areas now may promote habitat degradation that will hinder conservation efforts should passage be provided in the future. Several commenters identified areas above specified dams as being essential for conservation.

Response: At the present time, we do not have information allowing us to determine that the specific areas within the geographical area occupied by the species are inadequate for conservation, such that we can make a determination that currently unoccupied areas above dams are essential for conservation. With respect to the particular dams identified by the commenters, the Northwest region is actively involved in a multi-year, large-scale recovery planning effort that involves scientific teams (called technical recovery teams or TRTs), which identify biological recovery goals, and policy teams, who actively work with local planning groups to identify actions to achieve those goals. These local recovery efforts are developing information which will be important to inform decisions about whether unoccupied habitat will be needed to facilitate conservation beyond what is currently occupied, and this work is part of our ongoing effort to work with and seek input from those stakeholders directly affected by the salmon listings. We accepted the first partial local recovery plan developed under this effort in March and anticipate receiving several more by the end of the year. Until those processes are more fully developed, we cannot make the specific determinations required under the ESA to designate critical habitat in ''unoccupied'' areas except for in the few noted instances (see Comment 7). We use our authorities under the ESA and other statutes to advocate for salmon passage above impassible dams where there is evidence such passage would promote conservation. This is not the same, however, as making the determinations required by the statute and our regulations to support designation.

Comment 15: In the proposed rule we requested comments regarding the use of professional judgment as a basis for identifying areas occupied by the species. One commenter indicated that it was appropriate to accept the professional judgment of fish biologists who are most familiar with fish habitat within a watershed. Others believed that limiting the definition of occupied stream reaches to only those where fish presence has been observed and documented is overly narrow and fails to consider a number of conditions that affect species distribution, including natural population fluctuations and habitat alterations that affect accessibility or condition (*e.g.*, de-watering stream reaches). These commenters also argued that defining occupied reaches should be based on a broad time scale that takes into account metapopulation processes such as local extinction and recolonization, adding along with other commenters that many streams have not been adequately surveyed and species may frequent stream reaches but not actually be observed by a biologist at the time that critical habitat is being assessed.

Response: We relied on data provided by state fish and wildlife agencies as well as the USFS and Bureau of Land Management to determine which specific stream reaches were occupied by each ESU. The data sets we relied on to define occupancy reported distribution based on two general categories: (1) Field observations based on stream surveys or (2) professional judgment based on the expert opinion of area biologists. We reviewed other classifications used in these data sets, such as ''potential,'' suitable habitat blocked, disputed, unknown, and historic, but determined that areas classified as such were not suitable for defining occupancy. Depending on the source, each used similar criteria for the judgment that an unobserved area had fish present. For example, in Oregon there are streams considered occupied based on ''strong'' or ''modest'' professional opinion, while in Washington similar data are classified as ''presumed'' (NMFS, 2005a). In all cases the exercise of professional judgment included the consideration of habitat suitability for the particular species. Each agency's data set was compiled using input principally from state, Federal, and tribal biologists. In a few cases the data identify streams where local biologists (*e.g.*, private consultants for a county or watershed group) had survey data or expertise, and the state incorporated the data after its own review. Federal biologists on the CHARTs reviewed these data, relying on their first-hand knowledge and experience with the watersheds as well as a variety of published and unpublished reports (*e.g.*, watershed analyses and recent field survey reports). When questions arose about a particular site, we reconfirmed the data with the state, tribal, or Federal biologist(s) familiar with the area. We received several comments on our proposed rule regarding the accuracy of the distribution data in specific locations and, where we could confirm that the information provided by the commenter was accurate, we accepted it as the best available information and adjusted our designation. We view designation of critical habitat as an ongoing process and expect to adjust the designations as necessary as new information or improved methods become available.

Comment 16: Several comments addressed the proposed designation of nearshore habitats in Puget Sound, including the lateral extent of these areas. In the proposed rule we described this extent as the area inundated by extreme high tide but requested comments on whether ordinary high water line may be more appropriate to use in estuarine and nearshore marine areas. We also noted that these zones may be excluded from critical habitat if the benefits of exclusion outweigh the benefits of designation. Most commenters on this issue supported the designation of nearshore areas (in particular the shoreline of Vashon and Maury islands) and using the line of extreme high water as the lateral extent, although one commenter requested that we extend the lateral extent landward to include riparian and other areas, such as backshores and bluffs, affecting the nearshore zone. One commenter noted that flooding events cause vegetation changes and debris movement important to salmon, and some commented that development in this zone (bulkheads, seawalls, levees, etc.) needs to be addressed. Others noted that this zone is also important spawning habitat for forage fishes and provides both aquatic and terrestrial invertebrate prey. One commenter requested that we extend the designated nearshore zone westward to include all shallow waters in the Strait of Juan de Fuca while another requested that we continue to research whether other marine areas warrant designation. One commenter noted that excluding these nearshore zones would contradict the CHART findings which identified them as high conservation value rearing and migration areas. In contrast, one commenter asserted that there is a lack of science to support designating nearshore zones as critical habitat.

Response: We believe that the best available scientific data support a designation of nearshore zones in Puget Sound. This unique, fjord-like ecosystem contains a variety of habitats with physical or biological features essential to Chinook and chum salmon conservation, ranging from deep water habitats used by subadult and adults for migration and foraging to shallow nearshore areas important for juvenile rearing and for migration. In the 2000 critical habitat designations we

designated all marine areas of Puget Sound (as well as a lateral extent defined by riparian function) adopting an approach that mirrored our designation of all areas accessible in fresh water. However, since then we have revised our approach to be more definite about which specific areas contain physical or biological features essential to conservation, and that may require special management considerations or protection and thus warrant designation as critical habitat.

While all waters of Puget Sound can be occupied by salmon, we have far greater certainty that the nearshore areas associated with the photic zone are both occupied and contain essential features that may require special management considerations or protection. In terms of occupation, it is well documented that juvenile salmon leaving their natal streams typically stay in nearshore areas where they depend on a photic-based food web of plankton and other invertebrates (Pacific Fishery Management Council, 1999). While the photic zone layer is present throughout Puget Sound, it only penetrates to the bottom in nearshore areas to a depth of approximately 30 meters (Williams *et al.*, 2001). We have defined the PCEs for nearshore marine areas as being free of obstruction with water quality and quantity conditions and forage, including aquatic invertebrates and fishes, supporting growth and maturation; and natural cover such as submerged and overhanging large wood, aquatic vegetation, large rocks and boulders, and side channels. This area is also the zone containing important marine vegetation and cover (*e.g.*, eelgrass meadows and kelp forests) and in which salmon forage species reside (*e.g.*, surf smelt and sand lance) (Puget Sound Water Quality Action Team, 2000 and 2002). Activities potentially affecting PCEs in this zone include the construction of overwater structures (*e.g.*, docks and piers), dredging and bank armoring (Puget Sound Water Quality Action Team, 2002).

Similarly, we believe that the lateral extent of critical habitat in nearshore marine areas is best described in terms of tidal fluctuations that govern the areas occupied by salmon. We believe that the area inundated by extreme high tide is an appropriate delineation for the landward extent of critical habitat because it represents a regularly-occurring intertidal fringe that is recognizable (*e.g.*, vegetation and landform changes), and contains and influences PCE elements such as large wood, rocks and boulders, and aquatic vegetation. We recognize that other areas landward of the line of extreme high tide (*e.g.*, bluffs) have a major influence on the high intertidal zone and that activities in this zone could adversely modify adjacent designated areas. However, for the reasons described in our response to riparian zones we have not designated areas beyond extreme high tide.

Comment 17: Several comments addressed the CHART process although few recommended changes to the CHARTs' ratings of watershed conservation values. Several commenters supported the process used, in particular the recognition that not all habitats have the same conservation value for an ESU and that this in turn allows for a more meaningful exclusion assessment under section 4(b)(2) of the ESA. One peer reviewer agreed with the CHART's recognition of the importance of connectivity when identifying critical habitat, and emphasized that protecting upstream areas accrues benefits to downstream areas. One commenter contended that the CHART assessments were compromised by restricting them to consider only the stream channel rather than upslope areas as well. One commenter and a peer reviewer noted the lack of emphasis on the dynamic, process-based character of salmonid habitat and suggested that we adopt a model of species persistence across the landscape and incorporating metapopulation considerations to identify critical habitat.

Response: The CHART process was an important part of our analytical framework in that it allowed us to improve our analysis of the best available scientific data and to provide watershed-specific conservation ratings useful for the Secretary's exercise of discretion in balancing whether the benefits of exclusion outweigh the benefits of designation under section 4(b)(2) of the ESA. We do not believe that designating only the stream channel compromised the CHARTs' ability to assess watershed conservation values. As noted in the CHART report (NMFS, 2005a), the CHARTs employed a scoring system to assess—among other area characteristics—the quality, quantity, and distribution of PCEs within a watershed. The PCEs we have defined for these ESUs are found within occupied stream channels and therefore it is appropriate to focus our assessment on those areas. That said, the CHART scoring did include a factor related to the potential improvement of existing PCEs and thereby allowed the CHARTs to consider the ability of the watershed to contribute PCEs via natural processes such as recruitment of large wood and substrate, flow regulation, floodplain connectivity, etc. We recognize that salmon habitat is dynamic and that our present understanding of areas important for conservation will likely change as recovery planning sheds light on areas that can and should be protected and restored. We intend to actively update these designations as needed so that they reflect the best available scientific data and understanding.

Comment 18: Two commenters questioned why only Federal biologists served on the CHARTs, one noting that including other non-Federal biologists would have increased the CHARTs' knowledge base. One commenter also suggested improving the CHART process by assembling multiple teams of independent scientists and comparing their results with the existing CHART conclusions.

Response: The CHARTs consisted of over 65 Federal biologists from NMFS, USFWS, and BLM, and were all well-qualified to conduct critical habitat assessments. Nearly all of the biologists have had first hand experience with ESA, in particular implementation of section 7 in the areas evaluated and have knowledge of the existing management plans and protections. We recognize that numerous other non-Federal biologists have great experience; however, including them would have potentially triggered the requirements of the Federal Advisory Committee Act (FACA), which include chartering a committee. We were concerned that the FACA's procedural requirements would have prevented our timely compliance with the existing Consent Decree. As noted in the proposed rule, we sought state and tribal co-manager review of the initial CHART findings and believe that opportunity for notice and comment on our proposed rule has provided the opportunity for all biologists interested in these designations to provide their expertise.

Comment 19: Some commenters wondered whether the CHARTs considered the work of the various Technical Recovery Teams (TRTs), and one commenter contended that the CHART assessments should be reviewed by the TRTs. One commenter asked how conservation genetic concepts were incorporated into the designations.

Response: We solicited participation and input from the various TRTs and salmon recovery coordinators. Given their priorities (*i.e.*, providing crucial recovery planning criteria and guidance), and the time constraints under which we needed to complete the critical habitat assessments, not all of the TRT members were able to participate on the CHARTs. However,

each CHART did receive valuable support and input from at least one TRT scientist or recovery coordinator both during the course of CHART deliberations as well as informally on numerous occasions where we needed up-to-date information to support CHART assessments. Therefore we believe that we have been able to integrate much of the TRT findings into our final critical habitat designations. These findings include population identification and viability criteria (McElhany *et al.*, 2000; NMFS, 2001; Interior Columbia Basin Technical Recovery Team, 2003; McElhany *et al.*, 2003; Myers *et al.*, 2003; McClure *et al.*, 2005) which incorporate conservation genetic concepts and in turn aided the CHART's assignment of watershed conservation values. We recognize that recovery planning is an ongoing process and that new information from the TRTs and recovery planning stakeholders may result in changes to our critical habitat assessments and we can and will make needed adjustments in the future.

Comment 20: Two commenters requested that we provide maps that show both designated and excluded areas. Another noted that it would be helpful to provide the stream length mileages to describe the areas designated.

Response: To avoid confusion in this **Federal Register** notice—which is limited to black and white graphics—we have only depicted designated stream reaches in this document. However, we have made color maps depicting designated and excluded reaches available in documents via the internet (see **ADDRESSES**). Also, while we recognize the utility of providing stream mileages, we have instead relied on defining designated stream reaches using endpoints (*i.e.*, latitude and longitude coordinates) because they are not subject to the potentially large errors associated with estimating mileages at varying map scales. However, the CHART report (NMFS, 2005a) does contain larger scale maps that may be easier for estimating stream mileages, and we have also made geographic information systems (GIS) data available via the internet (see **ADDRESSES**) to further facilitate viewing the geographic extent of these designations. Landowners can (and did in the course of evaluating our proposal) use these resources to determine if their land is designated critical habitat or can contact us for assistance (see **FOR FURTHER INFORMATION CONTACT**).

Economics Methodology

Comment 21: Several commenters stated that the economic analysis overestimates the actual costs of the rule by including costs that should be attributed to the baseline. For example, commenters asserted that costs associated with listing and application of the jeopardy requirement should not be included in the analysis. Commenters also asserted that costs that would have occurred under PACFISH, INFISH, or the Northwest Forest Plan should be excluded from the analysis. One commenter also stated that costs associated with existing critical habitat designations for salmon or other endangered species should be considered baseline impacts.

Response: Regarding costs associated with listing and application of ESA section 7's jeopardy requirement, the economic analysis follows the direction of the *New Mexico Cattlegrowers* decision, in which the Court of Appeals for the Tenth Circuit called for ''a full analysis of all of the economic impacts of a critical habitat designation, regardless of whether those impacts are attributable coextensively to other causes (*New Mexico Cattle Growers' Association* v. *U.S. Fish and Wildlife Service,* 248 F.3d 1277, 10th Cir. 2001). Consistent with this decision, the economic analysis includes incremental impacts, those that are solely attributable to critical habitat designation and would not occur without the designation, as well as coextensive impacts, or those that are associated with habitat-modifying actions covered by both the jeopardy and adverse modification standards under section 7 of the ESA. This overestimate of costs does not bias our 4(b)(2) balancing for two reasons. On the ''benefit of designation'' side of the balance, we consider the benefit of designation to be the entire benefit that results from application of section 7's requirements regarding adverse modification of critical habitat, regardless of whether application of the jeopardy requirement would result in the same impact. Moreover, the cost-effectiveness approach we have adopted allows us to consider relative benefits of designation or exclusion and prioritize for exclusion areas with a relatively low conservation value and a relatively high economic cost. With such an approach it is most important that we are confident our analysis has accurately captured the relative economic impacts. We believe it has.

In many cases, the protections afforded by PACFISH, the Northwest Forest Plan and other regulations are intertwined with those of section 7. In cases in which the specific regulation or initiative driving the salmon and steelhead conservation efforts is uncertain, we considered it as an ESA section 7 impact and examined the record of consultations with the affected agencies and based our analysis on the habitat protection measures routinely incorporated into the consultations. The economic analysis therefore assumes that the impacts of these types of habitat protection measures are attributable to the implementation of section 7. In these instances, to the extent that conservation burdens on economic activity are not, in fact, resulting from section 7 consultation, the economic analysis may overstate costs of the designation. We took this possibility into account in conducting the 4(b)(2) balancing of benefits. Conservation efforts clearly engendered by other regulations are included in the regulatory baseline. For example, Federal lands management activities in the Northwest Forest Plan planning area are affected by PACFISH. As a result, some projects that would have affected salmon habitat will not be proposed, and therefore will not be subject to section 7 consultation. These changes in projects are considered baseline and are not included as a cost of section 7 in the economic analysis.

Commenters correctly note that there are designations currently in place protecting critical habitat for salmon, specifically those in the Snake River Basin. We acknowledged this in our proposed rule, but also noted that the presence of those existing designations weighs equally on both sides of the 4(b)(2) balance—that is, the existing designations also could be considered as part of the baseline for determining the benefit of designation for the ESUs addressed in the present rule. This concern is also addressed by the cost-effectiveness approach we have adopted since it relies on relative benefits of designation and exclusion rather than absolute benefits.

Comment 22: One commenter and one peer reviewer noted that the economic analysis assigns costs to all activities within the geographic boundary of the watersheds, though not all activities in this area will lead to an ESA section 7 consultation or are equally likely to have economic impacts. By doing this, the agency assumed that if the stream reaches currently occupied by salmon were designated as critical habitat, then activities throughout the watershed would be affected, whether or not they are adjacent to critical habitat stream reaches.

Response: It is possible for activities not directly adjacent to the proposed streambanks to affect salmon and steelhead or their habitat, for example, by increasing risk of erosion or

decreased water quality, and may therefore be subject to consultation and modification. Thus, the watersheds represent a reasonable proxy for the potential boundary of consultation activities. In some cases the revised economic analysis applies costs less broadly by refining the geographic scale for certain activities. For example, the analysis of pesticide impacts and the analysis of potential impacts on Federal lands management activities and Federal grazing activities have been refined and are now calculated based on stream mile estimates within a watershed.

Comment 23: One commenter asserted that the draft report inflates its cost estimates by repeatedly choosing the high-end of a range of costs, while a peer reviewer suggested that using the mid-range as a representative cost estimate was problematic.

Response: In determining likely costs associated with modifications to activities to benefit salmon and steelhead, the economic analysis identifies a range of costs using available data from, for example, agency budgets, documented conversations with stakeholders, and published literature. The full range of costs of these activities is presented in the economic analysis and individual watersheds are generally ranked in terms of cost impact by the midpoint of the cost range, as opposed to the high end. While we recognize that a formal sample of projects costs based on the consultation record or other sources is a better approach in theory, available data did not allow such an approach. In gathering the cost information that was available, we avoided using outliers and sought to construct a typical range of costs.

Comment 24: Some commenters asserted that the economic analysis fails to account for regional economic interactions between watersheds. One commenter stated that this would result in an overstatement of the costs, while other comments state that this would underestimate the costs. One peer reviewer suggested using regional economic models to address these interactions.

Response: We acknowledge that modifications to economic activities within one watershed may affect economic activities in other watersheds. The economic analysis discusses the potential for regional economic impacts associated with each of the potentially affected activities. Impacts are assigned to particular areas (watersheds) based on where they are generated as opposed to felt. That is, if the designation of a watershed causes impacts in multiple nearby watersheds, and exclusion of the impact-causing watershed would remove those economic impacts from the region, the economic analysis appropriately assigns the total cost impact to the impact-causing watershed. This method of assigning impacts is most useful to us in deciding the relative cost-effectiveness of excluding particular areas from critical habitat designation. As we acknowledge in NMFS 2005d, the economic analysis does not explicitly analyze the potential for these regional interactions to introduce cumulative economic impacts. Data are not available to support such an effort, nor would the results necessarily be applicable at the level of a particular watershed. If these impacts in fact exist, our results are likely to be biased downward, in that we have likely underestimated the costs of critical habitat designation at the level of the ESU. At the level of a watershed, however, the potential error is smaller. For this reason, we do not believe the lack of a regional modeling framework introduces a significant bias into the results for particular watersheds.

Comment 25: Several commenters stated that the economic analysis underestimates the actual costs of the rule by excluding several categories of costs from the estimates. One commenter stated that the *New Mexico Cattlegrowers* decision specifically requires a full analysis of all impacts, including those resulting from the species' listing. One commenter requested that assessment of impacts stemming from activities occurring outside the designated area should be included, including indirect and regional impacts. Another commenter stated that the analysis should consider direct, indirect, and induced economic impacts including: Changes in property values, property takings, water rights impacts, business activity and potential economic growth, commercial values, county and state tax base, public works project impacts, disproportionate economic burdens on society sections, impacts to custom and culture, impacts to other endangered species, environmental impacts to other types of wildlife, and any other relevant impact. One comment more specifically noted that the economic analysis of impacts on dredging activities did not take into account the potential impact on the barging industry, or how the nation's trade balance would be impacted if farmers lose or have less ability to ship grain and other products on barges.

Response: As noted in a previous response, the Court in the *New Mexico Cattlegrowers* decision called for ''a full analysis of all of the economic impacts of a *critical habitat designation,* regardless of whether those impacts are attributable coextensively to other causes.'' (emphasis added) The economic analysis conducted for this rule evaluates direct costs associated with the designation of critical habitat and includes: (1) Direct coextensive impacts, or those that are associated with habitat-modifying actions covered by both the jeopardy (listing) and adverse modification (critical habitat) standards; and (2) direct incremental impacts, or those that are solely attributable to critical habitat designation.

We acknowledge that designation of critical habitat may also trigger economic impacts outside of the direct effects of section 7 or outside of the watersheds subject to the economic analysis. For example, state environmental laws may contain provisions that are triggered if a state-regulated activity occurs in Federally-designated critical habitat. Another possibility is that critical habitat designation could have ''stigma'' effects, or impacts on the economic value of private land not attributable to any direct restrictions on the use of the land. Our economic analysis did not reveal significant economic impacts from stigma effects for the designation of salmon and steelhead. Further, significant impacts of critical habitat on an industry may lead to broader regional economic impacts. All of these types of impacts are considered in the analysis, although it was not possible to estimate quantitative impacts in every case. We took these considerations into account in balancing benefits under section 4(b)(2).

We acknowledge that designation of critical habitat may also trigger impacts on customs, culture, or other wildlife species. We concluded that data were not presently available that would allow us to quantify these impacts, at the scale of this designation, for the economic analysis. Our analysis was further circumscribed by the short time frames available, and our primary focus on conservation benefits to the listed species that are the subject of this designation. We took this limitation into account in the balancing of benefits under section 4(b)(2).

Comment 26: Some commenters expressed concern that the economic analysis does not address cumulative costs of multiple layers of regulation on economic activities.

Response: Our economic analysis estimates costs associated with conducting an ESA section 7 consultation to ensure Federal agency

actions are not likely to destroy or adversely modify critical habitat. We did not have information available at the scale of this designation to determine the marginal cost or benefit of such a consultation, in addition to any state or local review that may occur, nor did the commenter provide data that would allow us to make such a determination.

Comment 27: One commenter stated that the economic analysis fails to factor in subsidies given to industries such as livestock grazing, hydropower operations, and irrigation activities, which minimizes true costs to the public. Another commenter further stated that the analysis does not distinguish between several countervailing cost elements, including ''socialized costs'' (costs Congress has decided that the public should bear, such as costs to Federal activities), actual costs to private entities, incentive costs, subsidies, and offsetting costs. As a result, for Federal programs, the analysis miscategorizes activities that benefit a small but favored sector of society, but that cause costs to the larger society. The analysis assumes that costs to these activities are costs to society in general.

Response: The analysis attempts to measure true social costs associated with implementing the critical habitat rule. To accomplish this, the analysis uses the measurement of the direct costs associated with meeting the regulatory burden imposed by the rule as the best available proxy for the measurement of true social costs. We agree that it is relevant to consider appropriate countervailing or net cost impacts, where possible, in determining the benefit of exclusion. Where data are available, our analysis attempts to capture the net economic impact (*i.e.*, the increased regulatory burden less any discernable offsetting market gains) of section 7 efforts imposed on regulated entities and the regional economy. For example, in the economic analysis, the revised impact estimates for pesticide use restrictions explicitly net out agriculture subsidy payments in the estimation of lost agricultural profits.

Comment 28: One commenter stated that the increase in paperwork as a result of re-initiating consultation on potential impacts to critical habitat for projects that have already been through section 7 consultation is a major concern.

Response: We do consider that all activities may be subject to future consultation, regardless of whether past consultation occurred on these activities. Designation of critical habitat may result in reinitiating consultation on activities that were subject to previous consultation to ensure that the adverse modification requirement is addressed in addition to the jeopardy requirement. The economic analysis estimates the level of administrative effort associated with section 7 consultations, whether those consultations concern a new activity or readdress the impacts of a previously reviewed activity. The revised economic analysis includes a refined estimate of administrative costs associated with consultations on West Coast salmon and steelhead.

Comment 29: One commenter and two peer reviewers stated that the economic analysis should include a discussion of flow change impacts to irrigation and other activities. Excluding these costs underestimates total economic impact. A commenter pointed out that low flow years and drought years are not discussed in the economic impacts, and consideration of these events is especially relevant to estimating impacts of instream flow augmentation. Similarly, another commenter stated that the analysis should include an analysis of impacts of increased spill at hydropower dams on the cost of power in the region.

Response: The amount of water within particular areas that may be diverted from activities such as irrigation, flood control, municipal water supply, and hydropower, for the purposes of salmon and steelhead conservation is uncertain. As a result, a comprehensive prospective analysis of the impacts of potential water diversion from these activities would be highly speculative. In addition, the interrelated nature of dam and diversion projects, and hydrology, across river systems makes it impossible to attribute flow-related impacts from salmon and steelhead conservation to specific watersheds. We acknowledge this limitation of the economic analysis. The revised economic analysis, however, includes an expanded discussion of the potential impacts of changes in flow regimes on hydropower production and prices and water diversions on irrigation based on historical examples. This broader context will assist us in our decision making.

Comment 30: Some commenters stated that the economic analysis estimates impacts using a constant per-capita income basis and that doing so is likely to underestimate the impacts on rural communities.

Response: Per-capita income is not explicitly factored into the per-watershed quantitative impact estimates in the economic analysis. The commenter is highlighting that equal costs in any given watersheds will not likely result in the same relative economic burden to residents of those watersheds. This is because the ratio of costs of the designation to income may vary across watersheds. In lower income areas, the cost of implementing modifications to projects for the benefit of the salmon may be more burdensome relative to higher income areas. We did consider the extent to which costs of designation within a watershed are likely to be borne locally. In addition, information on distribution of wealth across the designation is provided contextually in the economic analysis, and this information is weighed in considering the benefits of exclusion of particular areas.

Comment 31: One commenter stated that the analysis makes no attempt to explain or quantify with any level of precision what the additional costs of design and operation modification and mitigation measures required by ESA section 7 consultation are.

Response: The economic analysis focuses on the impacts of section 7 consultation on economic activities by first identifying the types of activities occurring that may be subject to section 7 consultation. The analysis then estimates the regulatory burden placed upon these activities as a result of these consultations. The burden estimate is based upon a review of past modifications to those activities undertaken for the benefit of West Coast salmon and steelhead, interviews with NMFS' consulting biologists, affected parties, and available documents and literature. This research on the potential costs of these modifications then determined a typical range of costs for potential project modifications that may be associated with section 7 consultation in the future.

Comment 32: One commenter stated that the economic analysis assumes that the population growth and economy of the impact areas is stagnant, and asserted that the analysis should evaluate population and economic growth on a regional, state, and county basis, and evaluate the degree to which the listing of salmon and steelhead may have contributed to any population and economic decline. Another commenter asserted that past costs are not good indicators of future costs due to streamlining of the consultation process, for example, for fire management on Federal lands. One peer reviewer suggested using the consultation record to forecast trends in consultations for particular types of projects.

Response: The economic analysis does not uniformly assume that all activities and associated consultations

will occur at the same rate in future years as past, but projects the most likely level of future activity using information available at the watershed level. Further, the economic analysis does not quantify retrospective impacts of West Coast salmon and steelhead conservation as the focus of the analysis is the impact associated with the future critical habitat designation. Finally, while the consultation record may reveal some short-term trends for individual or groups of ESUs, it is not adequate to estimate trends for particular types of activities at a watershed level.

Comment 33: Some commenters stated that the economic analysis uses data that are overly broad or makes assumptions across geographic areas that are too far reaching. For example, one commenter states that the economic analysis assumes that the necessity and scope of modifications will be constant across ESUs for most activities, when in reality, these are actually likely to vary substantially.

Response: For each activity, the economic analysis examines the probability of consultation and the likelihood of modification. A variety of activity-specific information sources were used to forecast the frequency and geographic distribution of potentially affected activities. That is, frequency of consultation was not always assumed to be uniform across ESUs. The economic analysis does not, however, assume that costs increase in areas of overlapping ESUs. In other words, the presence of critical habitat for multiple ESUs is not expected to generate a greater impact than if the particular area is critical habitat for only a single ESU. Examination of the consultation history did not reveal differences in requests for modification to projects (reasonable and prudent alternatives) among the ESUs. We recognize, however, that the broad scope and scale of the analysis required us to make simplifying assumptions in order to complete the designations in a timely fashion (see, for example, the summary of major assumptions and potential biases of the analysis described in the final economic analysis (NMFS, 2005d)).

Comment 34: Several commenters and a peer reviewer expressed concern that the economic analysis fails to consider the full range of economic benefits of salmon habitat conservation and therefore provides a distorted picture of the economic consequences of designating versus excluding each of these areas. Similarly, commenters expressed concerns that the economic impact of not designating particular areas to fishers and investors in recovery efforts should be considered in the economic analysis. Commenters specifically cited the lack of consideration in the economic analysis of the potential benefits of critical habitat designation on: (1) Decreased risk of extinction; (2) benefits to other aquatic and riparian species; (3) water quality; (4) flood control values; (5) recreation; (6) commercial fishing; (7) fish harvest for tribal uses; and (8) increased public education.

Response: As described in the economic analysis (NMFS, 2005e) and ESA section 4(b)(2) report (NMFS, 2005b), we did not have information available at the scale of this designation that would allow us to quantify the benefits of designation in terms of increased fisheries. Such an estimate would have required us to determine the additional number of fish likely to be produced as a result of the designation, and would have required us to determine how to allocate the economic benefit from those additional fish to a particular watershed. Instead, we considered the ''benefits of designation'' in terms of conservation value ratings for each particular area (see ''Methods and Criteria Used to Designate Critical Habitat'' section). We also lacked information to quantify and include in the economic analysis the economic benefit that might result from such things as improved water quality or flood control, or improved condition of other species.

Moreover, we did not have information at the scale of this designation that would allow us to consider the relative ranking of these types of benefits on the ''benefits of designation'' side of the 4(b)(2) balance. Our primary focus was to determine, consider, and balance the benefits of designating these areas to conservation of the listed species. Given the uncertainties involved in quantifying or even ranking these ancillary types of benefits, we were concerned that their consideration would interject an element of uncertainty into our primary task.

Comment 35: One commenter asserted that the economic analysis does not consider the importance of agriculture in Washington and how many communities rely upon the agriculture industry to survive. A number of commenters further stated that the analysis should address impacts on agriculture of a judicially imposed moratorium on pesticide use near salmon-bearing streams. The inability to use pesticides on farmland could result directly in decreases in crop yields. More specifically, the commenters believed that the economic analysis underestimates the impacts of the Washington Toxics litigation (*Washington Toxics Coalition et. al.* v. *EPA*, No. 04–35138) limiting pesticide use around salmon-supporting waters and suggests that the economic analysis should analyze the impact of this injunction.

Response: Regarding impacts to agricultural communities, we considered impacts to small businesses in our Regulatory Flexibility Act analysis, and also took account of disparate impacts by considering per capita impacts as a basis for exclusion in the ESA section 4(b)(2) balancing. We did not otherwise separately consider economic impacts to various economically or culturally defined communities in the economic analysis or in the section 4(b)(2) balancing. For example, we also did not separately consider impacts of designation or exclusion on coastal fishing communities. As with the consideration of ancillary unquantifiable benefits of designation described above, we were concerned that including a consideration of these ancillary benefits of exclusion would inject an unacceptable level of uncertainty into our analysis.

We agree that the draft economic analysis did not adequately consider the impact of pesticide restrictions on the agricultural industry. The revised economic analysis (NMFS, 2005d), therefore, includes refined estimates of potential lost profits associated with reduced crop yields as a result of implementing pesticide restrictions across the critical habitat designation. The analysis assumes that the agricultural net revenue generated by land within certain distances of salmon-supporting waters would be completely lost. That is, the analysis assumes that no changes in behavior are undertaken to mitigate the impact of pesticide restrictions. This assumption may lead to overestimated impacts of restricting pesticide use. On the other hand, the analysis may underestimate the impact of pesticide restrictions by assuming that farmers outside the designated areas (*e.g.*, upstream) will not be restricted in their activities.

Comment 36: A few commenters and peer reviewers stated that impacts associated with changes in the operations of the Federal Columbia River Power System (FCRPS) and other major hydropower dams should be included. One commenter noted that the FCRPS is an important issue as salmon-related conservation at these sites have impacted the price of power. Conversely, another stated that modifications to the FCRPS projects and

operations would result in high costs regardless of the presence of critical habitat for these salmon and steelhead ESUs due to the listing of the species and existing critical habitat for three Snake River ESUs in this region (Snake River spring/summer Chinook, fall Chinook, and sockeye salmon). This commenter therefore concluded that costs of modifications to FCRPS for the three ESUs with existing critical habitat should be part of the baseline.

Response: The revised economic analysis includes an expanded discussion of the impacts on the FCRPS and other major hydropower projects of section 7 consultations and other conservation measures. We have provided more detailed estimated of these impacts and find them to be in the range of $500–700 million. We do not apportion these costs to a particular watershed, however, because the FCRPS and some other major hydropower projects are operated as integrated systems that span multiple watersheds. As a result, the impacts of section 7 consultations on these systems are best considered at a spatial scale considerably greater than an individual watershed. We agree that the impacts specifically attributable to the listing of the three Snake River ESUs are an appropriate part of the baseline, but available information did not allow us to distinguish these impacts from impacts specifically attributable to the salmon and steelhead ESUs addressed in this rule.

Comment 37: One comment letter contended that the Initial Regulatory Flexibility Analysis (IRFA) mischaracterizes the number of potential farms that would be affected by critical habitat designation. The analysis states that only three farms in Adams County, Washington, may be affected by critical habitat designation, while U.S. Department of Agriculture reports that there are 717 farms in the county.

Response: The IRFA analysis identified potential impacts to small entities using data from Dun and Bradstreet's ''Market Identifiers'' on the ratio of small businesses to total businesses in potentially affected industries within counties containing proposed critical habitat. The IRFA listed a single type of agricultural operation: Beef Cattle Ranching & Farming. The estimated number of these operations in a county was weighted by the proportion of that county covered by the critical habitat designation. The Final Regulatory Flexibility Act analysis includes three additional types of agricultural operations.

Comment 38: Another commenter stated that the IRFA needs more citations regarding the applied sources of information.

Response: We have provided appropriate citations in the Final Regulatory Flexibility Analysis.

Comment 39: One commenter stated that the Small Business Regulatory Enforcement Fairness Act (SBREFA) analysis assumes that most compliance costs would be borne by third parties when, in fact, a significant portion of all section 7 related costs are not borne by those entities, but rather are borne by the Bureau of Reclamation (BOR).

Response: In many cases it is uncertain who will bear the costs of modification. The potentially burdened parties associated with modifications to activities are identified in the economic analysis. The BOR may, in fact, bear the cost of modifications to BOR dams, Federal land management activities, and so forth. Where information is not available on a per-project basis regarding the potentially affected party, the analysis takes a conservative approach, assuming that impacts may be borne by private entities, a portion of which may be small entities.

Weighing the Benefits of Designation vs. Exclusion

Comment 40: Several commenters supported the use of a cost-effectiveness framework, one commenter explicitly objected to it, and some commenters had concerns with the way we applied it. One commenter asserted that the economic analysis ''would have been very different'' if we had evaluated the absolute conservation value of an area ''with or without [section] 7 requirements,'' rather than relative conservation values. One commenter asserted that ''[w]ithout any target level of conservation for designation, the framework does not guarantee that areas necessary for conservation will be designated.'' Another commenter asserted that weighing quantitative economic costs against qualitative habitat ratings prejudiced the ESA section 4(b)(2) analysis in favor of excluding areas lacking a high conservation value. Several commenters suggested that the 4(b)(2) process could benefit from more explanation regarding how the process was applied.

Response: We believe the comparison of benefits provides the Secretary useful information as to the benefits of any particular inclusion or exclusion. The Secretary has discretion in balancing the statutory factors, including what weight to give those factors. The ESA provides the Secretary with the discretion to exclude areas based on the economic impact, or any other relevant impact, so long as a determination is made that the benefits of exclusion outweigh the benefits of designation, and so long as the exclusion will not result in extinction of the species concerned.

Subsequent to publication of this rule, we will undertake a review of the methods and criteria applied in this rule. If the Secretary determines the critical habitat designations should be modified as a result of that review, we will propose a revised designation with appropriate opportunity for notice and comment.

Comment 41: In the proposed rule we identified a number of potential exclusions that we were considering but were not at that time proposing. These potential exclusions included: Federal lands subject to Northwest Forest Plan, PACFISH and INFISH (including watersheds where 45 percent or more of the land was covered by one of these plans); all critical habitat for four ESUs (Snake River *O. mykiss*, Middle Columbia River *O. mykiss*, Upper Columbia River spring-run Chinook salmon, and Oregon Coast coho salmon); areas in the mainstem Columbia River that contain or are directly affected by the operation of the Federal dams on the river, including reservoir pools above dams, tail race areas below dams, and the navigation locks.

Several commenters opposed these potential exclusions. Some disagreed that designation of critical habitat is unnecessary or diminished in light of existing management constraints, contending that such a position is contrary to the ESA's conservation purpose and our implementing regulations and citing recent Court decisions bearing on this issue. Several noted that because these species are still listed, existing regulatory and voluntary mechanisms are inadequate and noted that we concluded as such in our 2000 designations. Some commenters believed that the assumptions underlying such exclusions were unjustifiable and potentially disastrous for salmon recovery. Some commenters noted that INFISH was incorrectly identified in this list since that strategy applies only to non-anadromous watersheds. Several commenters believed that we failed to adequately describe the benefits of designation as they pertain to these potential exclusions. One commenter noted that the lack of specificity regarding which areas might be excluded as well as the lack of clear exclusion standards seriously hindered the public's ability to comment on the proposed exclusions. This commenter cited agency

regulations at 50 CFR 424.16(b) and believed that this and other potential exclusions did not contain an adequate ''summary of the data on which the proposal is based (including, as appropriate, citation of pertinent information sources), and shall show the relationship of such data to the rule proposed.''

In contrast, several commenters supported the potential exclusions mentioned in the proposed rule. One peer reviewer supported the exclusion of Federal lands covered by PACFISH and the Northwest Forest Plan and believed that critical habitat designation would have negligible benefit in these areas. Some commenters contended that designating critical habitat on these Federal lands was duplicative with existing ESA section 7 consultation processes, inefficient (*e.g.,* citing costs of re-initiating consultation), and offers no additional conservation benefit to the listed species. One commenter believed that excluding Federal lands would be consistent with our exclusion of lands subject to Integrated Natural Resource Management Plans since existing land management plans provide similar protections. This commenter also cited the USFWS' exclusion of Federal lands for bull trout (69 FR 59996; October 6, 2004) and provided information supporting their belief that we should make the same determination for salmon and steelhead ESUs. Several commenters and one peer reviewer contended that we are obligated to fully examine the web of private, local, state, regional, and Federal protections already in place and only designate as critical habitat those areas that are affirmatively in need of additional management considerations.

Response: Section 4(b)(2) provides the Secretary with discretion to exclude areas from the designation of critical habitat if the Secretary determines that the benefits of exclusion outweigh the benefits of designation, and the Secretary finds that exclusion of the area will not result in extinction of the species. In the proposed rule, and the reports supporting it, we explained the policies that guided us and provided supporting analysis for a number of proposed exclusions. We also noted a number of additional potential exclusions, explaining that we were considering them because the Secretary of the Interior had recently made similar exclusions in designating critical habitat for the bull trout: ''On October 6, 2004, the FWS issued a final rule designating critical habitat for the bull trout * * * The Secretary of the Interior found that a number of conservation measures designed to protect salmon and steelhead on Federal, state, tribal and private lands would also have significant beneficial impacts to bull trout. Therefore, the Secretary of the Interior determined that the benefits of excluding those areas exceeded the benefits of including those areas as critical habitat. The Secretary of Commerce has reviewed the bull trout rule and has recognized the merits of the approach taken by the Secretary of the Interior to these emerging issues.'' We acknowledged, in the proposed rule, however, that we lacked the analysis to propose these potential exclusions for West Coast salmon and steelhead: At this time, the Secretary of Commerce still ''has not had an opportunity to fully evaluate all of the potential exclusions, the geographical extent of such exclusions, or compare the benefits of these exclusions to the benefits of inclusion.'' Our regulations require that our proposed and final rules provide the data upon which the rule is based (50 CFR 424.16; 50 CFR 424.18).

Recently, in response to the Department of Interior's request, a District Court has remanded the bull trout rule to the Department of Interior for further rulemaking. *Alliance for the Wild Rockies and Friends of the Wild Swan* v. *David Allen and United States Fish and Wildlife* (CV 04–1812). In seeking the remand the Department of Interior noted that it intends to reconsider the 4(b)(2) exclusions in the proposed rule and that it recently issued a **Federal Register** notice seeking comment on those exclusions (70 FR 29998; May 25, 2005). In response, we received extensive comment from those supporting and opposing these potential exclusions. Based on our review of the information received and the short time between the close of the comment period and the court-ordered deadline for completing this rulemaking, we are unable to conclude at this time that the benefits of excluding these areas outweigh the benefits of designation, with the exception of areas covered by three habitat conservation plans, discussed below.

Nevertheless, we will continue to study this issue and alternative approaches in future rulemakings designating critical habitat. In particular, we intend to analyze the planning and management framework for each of the ownership categories proposed for consideration for exclusion. In each case, we envision that the planning and management framework would be evaluated against a set of criteria, which could include at least some or all of the following:

1. Whether the land manager has specific written policies that create a commitment to protection or appropriate management of the physical or biological features essential to long-term conservation of ESA-listed salmon and steelhead.

2. Whether the land manager has geographically specific goals for protection or appropriate management of the physical or biological features essential to long-term conservation of ESA-listed salmon and steelhead.

3. Whether the land manager has guidance for land management activities designed to achieve goals for protection or appropriate management of the physical or biological features essential to long-term conservation of ESA-listed salmon and steelhead.

4. Whether the land manager has an effective monitoring system to evaluate progress toward goals for protection or appropriate management of the physical or biological features essential to long-term conservation of ESA-listed salmon and steelhead.

5. Whether the land manager has a management framework that will adjust ongoing management to respond to monitoring results and/or external review and validation of progress toward goals for protection or appropriate management of the physical or biological features essential to long-term conservation of ESA-listed salmon and steelhead.

6. Whether the land manager has effective arrangements in place for periodic and timely communications with NOAA on the effectiveness of the planning and management framework in reaching mutually agreed goals for protection or appropriate management of the physical or biological features essential to long-term conservation of ESA-listed salmon and steelhead.

Comment 42: In the proposed rule we requested comments on the potential exclusion of lands subject to conservation commitments by state and private landowners reflected in habitat conservation plans and cooperative agreements approved by NMFS, specifically: (1) Land subject to Washington state forest practice rules referred to as the Forests and Fish Agreement; (2) lands covered by a Habitat Conservation Plan (HCP) approved under section 10 of the ESA (NMFS, 2004f); and (3) non-Federal timber lands covered by the Term Sheet in the Snake River Basin Adjudication. Several commenters (including three with NMFS-approved HCPs) concurred with the potential exclusion of lands covered by an HCP, believing that we would not likely secure additional conservation benefits by designating these areas as critical habitat. These and other commenters acknowledged the

potential education benefits of designation but asserted that designating HCP lands could have an unintended consequence of damaging existing and future cooperative relationships. Some commenters noted that the USFWS had excluded lands addressed in the Washington Department of Natural Resources' (WDNR) HCP and the Forest and Fish Agreement in their recent bull trout critical habitat designation (69 FR 59996; October 6, 2004) and requested that we do the same. These commenters additionally noted that HCPs have already undergone extensive environmental review and ESA section 7 consultation and been found to not likely jeopardize the species. With respect to the potential exclusion of lands subject to the Forest and Fish Agreement, several commenters asserted that Washington Forest Practice regulations already provide adequate protections and that excluding these areas would promote keeping them in a forested landscape rather than converting them to other land uses and smaller parcels that are not as good for fish. Several commenters expressed support for the Oregon Plan for Salmon and Watersheds. One commenter believed that we should consider excluding all basins with water rights adjudications. Some commenters believe that such exclusions should be based on the actual effectiveness of the habitat conservation strategies and plans, including whether they are being fully funded and implemented.

Several commenters (including one with a NMFS-approved HCP) disagreed with the potential exclusion of lands covered by HCPs, believing it would be contrary to the ESA, and some cited recent litigation bearing on this issue (e.g., *Center for Biological Diversity* v. *Norton*, 240 F. Supp. 2d 1090 (D. Ariz. 2003); *Gifford Pinchot Task Force* v. *FWS*, 378 F. 3d 1059 (9th Cir. 2004). One commenter did not support such exclusions because they contended there are no guarantees the plans will remain in place, when for example, ownership changes or landowners change their minds. Another commenter who presently has a NMFS-approved HCP welcomed the critical habitat designation and noted that doing so would help ensure that actions by other landowners within and adjacent to its HCP lands will help ensure conservation of an area that provides fish habitat and valuable drinking water. One commenter believed that we should not exclude areas subject to licenses issued by the Federal Energy Regulatory Commission (FERC), noting in particular the Mid-Columbia HCP and uncertainties associated with downstream FERC projects at Priest Rapids and Wanapum Dams. Another commenter cited agency regulations at 50 CFR 424.16(b) and believed that this and other potential exclusions did not contain an adequate ''summary of the data on which the proposal is based (including, as appropriate, citation of pertinent information sources),'' nor did they ''show the relationship of such data to the rule proposed.'' Several commenters believed that we failed to adequately describe the benefits of designation as they pertain to these potential exclusions.

Response: The analysis required for these types of exclusions, as with all others, first requires careful consideration of the benefits of designation versus the benefits of exclusion to determine whether benefits of exclusion outweigh benefits of designation. The benefit of designating critical habitat on non-Federal areas covered by an approved HCP or other type of conservation agreement depends upon the type and extent of Federal activities expected to occur in that area in the future. Activities may be initiated by the landowner, such as when the landowner seeks a permit for bank armoring, water withdrawal, or dredging. Where the area is covered by an HCP, the activity for which a permit is sought may or may not be covered by the HCP. For example, an HCP covering forestry activities may include provisions governing construction of roads, but may not include provisions governing bank armoring or pesticide application. The activity may be initiated by the Federal agency without any landowner involvement, such as when a Federal agency is involved in building a road or bridge, dredging a navigation channel, or applying a pesticide on Federal land upstream of the HCP-covered area. In analyzing the benefits of designation for these HCP-covered areas, we must consider which Federal activities are covered by the HCP and which are not. Where activities are covered by the HCP, we must consider whether an ESA section 7 consultation on that particular activity would result in beneficial changes to the proposed action over and above what would be obtained under the HCP. Designation may also benefit the species by notifying the landowner and the public of the importance of an area to species' conservation.

On the other side of the balance are the benefits of exclusion. We believe the primary benefits of exclusion are related to the conservation benefits to the species that come from conservation agreements on non-Federal land. If a landowner considers exclusion from critical habitat as a benefit, exclusion may enhance the partnership between NMFS and the landowner and thus enhance the implementation of the HCP or other agreement. If other landowners also consider exclusion from critical habitat as a benefit, our willingness to exclude such areas may provide an incentive for them to seek conservation agreements with us. Improved implementation of existing partnerships, and the creation of new conservation partnerships, would ultimately benefit conservation of the species.

Conservation agreements with non-Federal landowners enhance species conservation by extending species' protections beyond those available through other ESA provisions. Section 7 applies only to Federal agency actions. Its requirements protect listed salmon and steelhead on Federal lands and whenever a Federal permit or funding is involved in non-Federal actions, but its reach is limited. The vast majority of activities occurring in riparian and upland areas on non-Federal lands do not require a Federal permit or funding and are not reached by section 7 (in contrast to instream activities, most of which do require a Federal permit). The ability of the ESA to induce landowners to adopt conservation measures lies instead in the take prohibitions of sections 9(a) and 4(d). Many landowners have chosen to put conservation plans in place to avoid any uncertainty regarding whether their actions constitute ''take''.

Beginning in 1994, when we released our draft HCP Handbook for public review and comment, we have pursued policies that provide incentives for non-Federal landowners to enter into cooperative partnerships, based on a view that we can achieve greater species' conservation on non-Federal land through HCPs than we can through coercive methods (61 FR 63854; December 2, 1996). Before we approve an HCP and grant an incidental take permit, we must conduct a rigorous analysis under ESA section 10. The HCP must specify the impact likely to result from take, what steps the applicant will take to minimize and mitigate such impacts, and the funding available to implement such steps. The applicant must have considered alternative actions and explained why other alternatives are not being pursued, and we may require additional actions necessary or appropriate for the purposes of the plan. Before an HCP can be finalized, we must conclude that any take associated with implementing the

plan will be incidental, that the impact of such take will be minimized and mitigated, that the plan is adequately funded, and that the take will not appreciably reduce the likelihood of the survival and recovery of the species in the wild. The HCP undergoes environmental analysis under the National Environmental Policy Act (NEPA) and we conduct a section 7 consultation with ourselves to ensure granting the permit is not likely to jeopardize the continued existence of the species or destroy or adversely modify designated critical habitat.

Based on comments received, we could not conclude that all landowners view designation of critical habitat as imposing a burden on the land, and exclusion from designation as removing that burden and thereby strengthening the ongoing relationship. Where an HCP partner affirmatively requests designation, exclusion is likely to harm rather than benefit the relationship. We anticipate further rulemaking in the near future to refine these designations, for example, in response to developments in recovery planning. In order to aide in future revisions, we will affirmatively request information from those with approved HCPs regarding the effect of designation on our ongoing partnership. We did not consider pending HCPs (e.g., Washington's Forest and Fish Agreement) for exclusion, both because we do not want to prejudge the outcome of the ongoing HCP process, and because we expect to have future opportunities to refine the designation and consider whether exclusion will outweigh the benefit of designation in a particular case.

During the comment period we received comments from only three landowners with current HCPs stating that they would consider exclusion as a benefit to our ongoing relationship—WDNR, Green Diamond Resources Company, and West Fork Timber Company. For those HCPs, we analyzed the activities covered by the HCPs, the protections afforded by the HCP agreement, and the Federal activities that are likely to occur on the affected lands. From this information we determined the benefit of designation, which we then weighed against the benefit of exclusion. We concluded that the conservation benefits to the species from the HCPs outweigh the conservation benefits of designation and therefore have excluded lands covered by these agreements in this final designation. The analysis is described in further detail (NMFS, 2005e).

Comment 43: Several commenters addressed the exclusion of Indian Lands. All of the commenting Tribes and inter-tribal commissions reiterated their support for the exclusions. One non-tribal commenter suggested that designation was not needed for Indian lands in Bellingham Bay.

Response: This final rule maintains the exclusion of Indian lands for the reasons described in the ''*Exclusions Based on Impacts to Tribes*'' section below.

Comment 44: A few commenters addressed our assessment of Integrated Natural Resource Management Plans (INRMPs) and the exclusion of Department of Defense (DOD) areas due to impacts on national security. One commenter thought it was reasonable to exclude military lands while another commenter asserted that we may not use the general ''national security'' language in ESA section 4(b)(2) to remove our obligation to comply with the demand for adequate INRMPs. One commenter wondered whether we considered the protection of U.S. agriculture in the context of national security.

Response: Pursuant to section 4(a)(3)(B)(i) of the ESA (16 U.S.C. 1533(a)(3)(B)(i)), we contacted the DOD and, after evaluating the relevant INRMPs, we concluded that, as implemented, they provide conservation benefits greater than or equal to what would be expected to result from a section 7 consultation (NMFS, 2005f). We also determined that these INRMP sites as well as 13 additional DOD sites (e.g., Naval security zones and restricted areas in Puget Sound) should be excluded from designation due to potential impacts on national security (NMFS, 2005f). However, we did not have information available to draw a connection between the possible impacts of designation on agriculture and food supply and whether doing so might constitute an impact on ''national security,'' nor did the commenter provide specific information.

Effects of Designating Critical Habitat

Comment 45: One commenter questioned whether there exists an acceptable or unacceptable level of negative economic impact to communities, landowners, or local governments and whether the government must consider the impacts that their decisions will have on local economies.

Response: The economic analysis provides information regarding the impact to potentially affected economic activities of the proposed critical habitat designation. This information is used to identify the particular areas according to their relative cost burden. We weighed this information against the relative conservation value of the particular areas, considering the economic and any other relevant impact of designating critical habitat. Further, concurrent with the economic analysis, we prepared an analysis of potential impacts to small entities, including small businesses and government. This analysis identified the number of small businesses and governments likely impacted by the proposed critical habitat using county-specific data on the ratio of small businesses to total businesses in each potentially affected economic sector.

Comment 46: Some commenters noted that the success of watershed management and restoration efforts is dependent on critical habitat protections, noting that designations assist local recovery planning efforts and leverage needed money and cooperation. Several expressed concern that excluding areas from designation—in particular areas identified in existing recovery efforts as important for salmon—would undermine ongoing regional and local recovery planning efforts (e.g., Lower Columbia Salmon Recovery and Fish and Wildlife Subbasin Plan, WRIA 8, Elwha River Restoration Project) by signaling that these areas are not important for recovery.

Response: We acknowledge that critical habitat designations can serve an important educational role and that they can assist local recovery efforts as stated. The ESA requires that we use the best available scientific data to evaluate which areas warrant designation and that we balance the benefits of designation against the benefits of excluding particular areas. In so doing, it is possible that some areas subject to ongoing restoration activities may have been excluded from designation. However, such exclusion does not indicate that the area is unimportant to salmon or steelhead, but instead reflects the practical result of following the ESA's balancing of benefits as required under section 4(b)(2). We are hopeful that the information gathered and the analyses conducted to support these final designations (such as species distribution, watershed conservation value, and economic impacts from section 7 consultations) will be viewed as valuable resources for local recovery planners. As recovery planning proceeds and if we find that additional or different areas warrant designation or exclusion, we can and will make needed revisions using the same rulemaking process.

Comment 47: Several commenters asked for clarification regarding how we will make adverse modification determinations in ESA consultations. One commenter also suggested that a

finding of adverse modification would need to be contingent on the habitat conditions existing at the time of designation. They noted that where such conditions are the result of past and present management actions, and where those existing conditions would not be altered through proposed future actions, it is their belief that consultation on such future actions would result in a ''no adverse modification'' determination.

Response: In *Gifford Pinchot Task Force* v. *United States Fish and Wildlife Service*, 378 F. 3d 1059 (9th Cir. 2004), the Court of Appeals for the Ninth Circuit Court ruled that the USFWS' regulatory definition of ''destruction or adverse modification'' of critical habitat, which is also NMFS' regulatory definition (50 CFR 402.02), is contrary to law. Pending issuance of a new regulatory definition, we are relying on the statutory standard, which relates critical habitat to conservation of the species. The related point raised by one commenter regarding the relevance of habitat conditions at the time of listing when making an adverse modification determination cannot be answered in a generic way and would depend on the facts associated with a specific consultation.

Comment 48: Some commenters objected to the potential land use regulations that critical habitat designation would prompt, citing specific cases where county and Federal agencies imposed buffers and other restrictions to protect ESA-listed fish. One commenter asked what forms of compensation are available for landowners if their lands are designated as critical habitat. One commenter asserted that specific guidelines should be developed and applied fairly and consistently in all areas, urban or rural.

Response: The ESA requires that we designate critical habitat and these designations follow that statutory mandate and have been completed on a schedule established under a Consent Decree. Whether and if local jurisdictions will implement their authorities to issue land use regulations is a separate matter and is not under our control.

Comment 49: Several commenters urged us to commit to monitoring the effects of the designations and exclusions and to describe how we will respond to new information and make needed future revisions to critical habitat.

Response: We are actively engaged with an array of private and public stakeholders in recovery planning throughout the range of West Coast salmon and steelhead. As a result of this involvement and our regular contact with Federal, state and tribal comanagers (*e.g.*, via section 7 consultations and other forums) we believe we will be able to effectively monitor the effects of these designations. Moreover, we intend to actively revise critical habitat designations as needed for all 12 ESUs to keep them as up-to-date as possible. We encourage all parties to contact us (see **ADDRESSES** and **FOR FURTHER INFORMATION CONTACT**) if they have information indicating that these designations warrant revision.

Comment 50: Several commenters believed that we fail to (or inadequately) address required determinations related to a number of laws, regulations, and executive orders, including the NEPA, Regulatory Flexibility Act, and Data Quality Act. One commenter requested that we name Franklin County, Washington, as a joint lead or cooperating agency in the development of an environmental assessment or environmental impact statement pursuant to NEPA.

Response: Our responses to each of these issues are described below, and we also direct the reader to the ''Required Determinations'' section below to review our response to each of the determinations relevant to this rulemaking.

(a) *NEPA*—We believe that in *Douglas County* v. *Babbitt*, 48 F.3d 1495 (9th Cir. 1995), cert. denied, 116 S.Ct. 698 (1996) the Court correctly interpreted the relationship between NEPA and critical habitat designation under the ESA. The Court of Appeals for the Ninth Circuit rejected the suggestion that irreconcilable statutory conflict or duplicative statutory procedures are the only exceptions to application of NEPA to Federal actions. The court held that the legislative history of the ESA demonstrated that Congress intended to displace NEPA procedures with carefully crafted procedures specific to critical habitat designation. Further, the Douglas County Court held that the critical habitat mandate of the ESA conflicts with NEPA in that, although the Secretary may exclude areas from critical habitat designation if such exclusion would be more beneficial than harmful, the Secretary has no discretion to exclude areas from designation if such exclusion would result in extinction. The court noted that the ESA also conflicts with NEPA's demand for impact analysis, in that the ESA dictates that the Secretary ''shall'' designate critical habitat for listed species based upon an evaluation of economic and other ''relevant'' impacts, which the Court interpreted as narrower than NEPA's directive. Finally, the court, based upon a review of precedent from several circuits including the Fifth Circuit, held that an environmental impact statement is not required for actions that do not change the physical environment.

(b) *Regulatory Flexibility Act*—We have prepared a final regulatory flexibility analysis that estimates the number of regulated small entities potentially affected by this rulemaking and the estimated coextensive costs of section 7 consultation incurred by small entities. As described in the analysis, we considered various alternatives for designating critical habitat for these 12 ESUs. After considering these alternatives in the context of the section 4(b)(2) process of weighing benefits of exclusion against benefits of designation, we determined that our current approach to designation provides an appropriate balance of conservation and economic mitigation and that excluding the areas identified in this rulemaking would not result in extinction of the ESUs. Our final regulatory flexibility analysis estimates how much small entities will save in compliance costs due to the exclusions made in these final designations.

(c) *Data Quality Act*—One commenter asked if we had complied with the Data Quality Act. We have reviewed this rule for compliance with that Act and found that it complies with NOAA and OMB guidance.

(d) *Negotiated Rulemaking Act* (*5 U.S.C. 561 et seq.*)—One commenter asserted that we should have engaged in negotiated rulemaking to issue this final critical habitat designation. This is an interesting idea and could be pursued in future critical habitat rulemaking. However, because a court approved consent decree governs the time frame for completion of this final rule, we do not feel that there was ample time to comply with the numerous processes defined in the Negotiated Rulemaking Act for this rulemaking. For example, the Negotiated Rulemaking Act provides that if the agency decides to use this tool, it must follow Federal Advisory Committee Act procedures for selection of a committee, conduct of committee activities, as well as specific documentation processes (See *Negotiated Rulemaking Source Book*, 1990).

(e) *Intergovernmental Cooperation Act*—One commenter asserted that we did not properly and fully coordinate with local governments and did not comply with the Intergovernmental Cooperation Act. First, the commenter did not provide a statutory citation for the Intergovernmental Cooperation Act.

Although we are reluctant to speculate on that Act, we believe the comment is in reference to the Intergovernmental Cooperative Act, Public Law 90–577, 82 Stat. 1098 (1968) as amended by Public Law 97–258 (1982) (codified at 31 U.S.C. section 6501–08 and 40 U.S.C. section 531–35 (1988)). This Act addresses Federal grants and development assistance. Accordingly we do not find it relevant to the mandatory designation of critical habitat under the ESA. To the extent that the commenter's concern is assuring that state, local and regional viewpoints be solicited during the designation process, the ESA and our implementing regulations provide explicitly for public outreach. 16 U.S.C. 1533 (b)(3)(A); 50 CFR 424.16. As noted in response to Comment 1, we actively sought input from all sectors beginning with meetings with many stakeholders to inform an ANPR (68 FR 55926, September 29, 2003), and culminating in four public hearings to facilitate comment from the interested public in response to the proposed rule. In addition we met with several local governments and made ourselves available to meet with others.

(f) *National Historic Preservation Act (NHPA)*—One commenter asserted that we failed to comply with the NHPA (16 U.S.C. sections 470–470x–6). The NHPA does not apply to this designation. The NHPA applies to ''undertakings.'' ''Undertakings'' are defined under the implementing regulations as ''a *project, activity* or *program* funded in whole or in part under the direct or indirect jurisdiction of a Federal agency * * *.'' (emphasis added) (50 CFR 800.16). The mandatory designation of specific areas pursuant to the criteria defined in the ESA does not constitute an ''undertaking'' under the NHPA.

(g) *Farmland Protection Policy (FPPA)*—One commenter asserted that we failed to comply with FPPA (7 U.S.C. 4201). The FFPA does not apply to this designation. The FPPA applies to Federal programs. Federal programs under the Act are defined as ''those activities or responsibilities of a department, agency, independent commission, or other unit of the Federal Government that involve (A) undertaking, financing, or assisting construction or improvement projects; or (B) acquiring, managing or disposing of Federal lands and facilities. The designation of critical habitat does not constitute a ''Federal program'' under the FFPA.

(h) *Unfunded Mandates Reform Act*—One commenter asserted that we failed to properly conduct and provide an unfunded mandates analysis because, they contend, we based our decision solely on public awareness of the salmon listings. This is not the case. In the proposed rule, we found that the designation of critical habitat is not subject to the Unfunded Mandates Reform Act (2 U.S.C. 1501 *et seq.*) We then explained in detail why this is the case. The commenter does not take issue with these findings and we find nothing in the commenter's assertions to warrant changing our original determination.

(i) *Federalism*—One commenter asserted that we failed to properly comply with E.O. 13132.

In the proposed rule, we found that the designation of critical habitat does not have significant Federalism effects as defined under that order and, therefore, a Federalism assessment is not required. We find nothing in the commenter's assertions to warrant changing our original determination.

(j) *Takings*—One commenter disputed our conclusion in the proposed rule that the designations would not result in a taking. The commenter offered no information or analysis that would provide a basis for a different conclusion.

(k) *Civil Justice Reform*—One commenter asserted that we failed to properly conduct and provide a Civil Justice Reform analysis pursuant to E.O. 12988. In relevant part, Section 3 of E.O. 12988 requires agencies, within current budgetary constraints and existing executive branch coordination procedures such as E.O. 12866, to review new regulations pursuant to certain specified requirements. The review is conducted to eliminate unnecessary litigation over agency rules. As called for by Section (3)(a), we reviewed both the proposed and final rules to eliminate drafting errors and ambiguity, and we drafted both rules so as to minimize legal issues that would occasion litigation. This critical habitat designation does not of itself circumscribe conduct, but we have designated critical habitat as clearly as possible and, through our comprehensive 4(b)(2) analysis, have produced the least burdensome critical habitat designation that is also ESA compliant. As required by the applicable portions of Section (3)(b)(2), we have also described the changes to the regulatory language and attempted to clearly define key terms used in the regulation, either explicitly or with reference to other regulations or statutes that explicitly define those terms.

ESU-Specific Issues

ESU Specific Comments—Puget Sound Chinook Salmon

Comment 51: Several commenters believed that unoccupied areas above the Elwha and Glines Canyon dams should be designated as critical habitat for this ESU.

Response: The CHART agreed that these unoccupied areas may be essential for conservation of this ESU, especially given the relatively limited number of populations and available habitat for them in the North Olympic region. The CHART noted that Elwha Dam is scheduled for removal as early as 2007 and has been the subject of comprehensive environmental studies. Also, recent recovery planning assessments for this area (Shared Strategy, 2004a) indicate that the Elwha River and Dungeness River Chinook salmon populations must achieve the planning targets and other viable salmonid population parameters established by the TRT. However, as described in the general comments above (see ''Identification of Critical Habitat Areas'' section), at the present time we do not have information allowing us to determine that the specific areas within the geographical area occupied by the species are inadequate for conservation, such that we can make a determination that currently unoccupied areas above dams are essential for conservation. We will revise the designation if ongoing recovery planning indicates that specific areas above these dams warrant designation as critical habitat.

Comment 52: One commenter requested clarification as to why the Skokomish River watershed was designated as critical habitat and asked whether occupied areas were based on professional judgment or observation. Another commenter said that the Skokomish River watershed, including mainstem and tributary spawning areas, should not be excluded from designation.

Response: According to fish distribution data from Washington Department of Fish and Wildlife (WDFW) for this watershed, all but approximately 1 mile (1.6 km) of habitat (in upper Purdy Creek) is identified as occupied based on documented observation. We agree with comments that this watershed should not be excluded from designation. The CHART reviewed these comments and maintained that this watershed is of high conservation value to this ESU, especially in light of the relatively limited number of populations and available habitat for them in the Hood

Canal region as well as the importance of the early returning life history type (Puget Sound TRT, 2004). The CHART noted that recent recovery planning assessments for this area (Shared Strategy, 2004b) indicate that the Skokomish River and Dosewallips River Chinook salmon populations must achieve the planning targets and other viable salmonid population parameters established by the TRT.

Comment 53: One commenter questioned the exclusion of Bellingham Bay noting that it contains the estuary for two very depressed stocks of Chinook salmon.

Response: Our proposed exclusions were for the freshwater streams, not for the nearshore and estuarine areas which the CHART concluded were of high conservation value to rearing and migrating Chinook salmon. The CHART considered this comment and maintained that the Bellingham Bay watershed is still of low conservation value to this ESU, in particular noting that there is a limited amount of freshwater habitat here, and that exclusion of these habitat areas from designation would not significantly impede conservation of the ESU. This finding includes an implicit determination that exclusion will not lead to extinction of the species.

Comment 54: One commenter and a peer reviewer recommended that critical habitat on the Middle Fork Nooksack River be extended above the City of Bellingham's diversion dam to include all areas occupied by Chinook salmon.

Response: The CHART reviewed the new data and determined that the areas are occupied and contain spawning and rearing PCEs which may require special management considerations or protection (NMFS, 2005a). The CHART noted that WDFW has been placing fish into this portion of the river annually since 2001 in order to increase returns and that plans are underway to allow passage at the diversion dam (Shared Strategy, 2005; WDFW, 2004). The resultant changes are identified below under ''Summary of Revisions.''

Comment 55: Two commenters provided information indicating mapping errors in our Chinook salmon distribution in the Lower Snoqualmie River watershed, noting that distribution is limited by a canyon and gradient barrier at RM 2.5 on the South Fork Tolt River.

Response: The CHART reviewed the comments as well as maps and information in Washington Department of Fisheries' (WDF) catalog of Washington streams (WDF, 1975) and concluded that the species' distribution in the proposed rule was in error. The CHART concurred with the commenter's assessment that a gradient barrier likely exists as indicated, and the resultant changes are summarized below under ''Summary of Revisions.''

Comment 56: One commenter provided information indicating mapping errors in our Chinook salmon distribution in the Cedar River watershed, noting that distribution above Landsburg Dam should be extended to Lower Cedar Falls based on recent fish passage above the dam and spawning surveys in the vicinity of the falls.

Response: The CHART reviewed the comments as well as recent spawner survey information (Burton *et al.*, 2005) and concluded that the species' distribution in the proposed rule was in error. The CHART concurred with the commenter's assessment that spawning and rearing PCEs and fish distribution should be extended above Landsburg Diversion Dam to the natural barrier falls indicated. Similarly, in reviewing distribution for this and nearby subbasins, the CHART also noted that Chinook salmon distribution in the South Fork Stillaguamish River should extend up to at least RM 67 to near confluence of Buck and Palmer Creeks as well as farther up Canyon Creek. Sources supporting this correction include WDF's stream catalog (WDF, 1975) and the June 2004 Draft Stillaguamish Chinook Salmon Recovery Plan (Stillaguamish Implementation Review Committee, 2004). The resultant changes are summarized below under ''Summary of Revisions.''

Comment 57: Several commenters objected to our rating of North Lake Washington as medium and the resulting proposed exclusion due to economic impacts. One commenter contended that excluding North Lake Washington tributaries could jeopardize that population and compromise recovery of the entire ESU. One commenter also asked that we reconsider the exclusion of the Sammamish River watershed. One commenter asked whether we had considered data collected by the Watershed Resource Inventory Assessment (WRIA) 8 Technical Committee.

Response: The CHART reviewed these comments, as well as information prepared by the WRIA 8 Technical Committee (WRIA8 Steering Committee, 2002) and Washington Conservation Commission's Limiting Factors Report (Kerwin, 2001), and maintained that the Lake Sammamish, Sammamish River, and Lake Washington watersheds were of medium conservation value relative to other watersheds in the range of this ESU. The CHART also underscored that the medium rating for the Lake Washington watershed related to the tributaries to the lake, but that Lake Washington itself was of high conservation value due to its connectivity with the high-value Cedar River watershed and its support of rearing and migration habitat for fish from all four watersheds in the subbasin. The CHART concluded that excluding the Lake Sammamish and Sammamish River watersheds, and the tributary habitats to Lake Washington, would not significantly impede conservation of the ESU. This finding includes an implicit determination that exclusion will not lead to extinction of the species concerned.

Comment 58: One commenter wondered whether we analyzed the potential impacts of proposed exclusions on the prospects for achieving recovery of this ESU by meeting delisting criteria and asked what assurances we can make that the exclusions will not preclude recovery.

Response: The CHART was specifically tasked with reviewing the best available scientific data for this ESU and determining the relative conservation value of occupied watersheds. During our consideration of exclusions, as required by ESA section 4(b)(2), the CHARTs provided their best professional judgment as to whether any exclusions being considered due to economic impacts would significantly impede conservation. If so, then the area was not recommended for exclusion. We will revise the designation for this ESU if ongoing recovery planning efforts indicate that previously excluded areas warrant designation as critical habitat.

Comment 59: One commenter provided a minor clarification regarding the proposed rule's reference to the ''White Acclimation Pond,'' noting that there are actually four acclimation ponds for White River spring Chinook in the upper White River basin. Another noted that our ESU description contained a typographical error in defining the boundaries of this ESU.

Response: We appreciate receiving the clarifications and corrections and have updated the CHART report for this ESU to reflect these changes.

Comment 60: Several commenters objected to the potential exclusion of all nearshore zones for this ESU and noted these areas have been identified by Puget Sound watershed planners and scientists as crucial for juvenile salmon. One noted that excluding these zones would run contrary to our 4(b)(2) approach since all of the Puget Sound nearshore areas were identified as high-

conservation value areas. One commenter requested that we extend the designated nearshore zone westward to include all shallow waters in the Strait of Juan de Fuca

Response: We agree with the commenters' concerns and are going forward with designating nearshore areas as critical habitat for this ESU. The CHART also noted that additional nearshore areas west of the Elwha River may be essential for the conservation of this ESU, but based on the best information available at this time, we cannot conclude that the area is either occupied and contains the PCEs, or is unoccupied and is essential for conservation. If we determine that these or other nearshore areas warrant designation or revision, we will do so under subsequent rulemaking.

Comment 61: One commenter objected to the exclusion of streams on Vashon Island based on genetic concerns or small numbers of fish. This commenter believed that more documentation was needed to substantiate the assertion that these fish are not part of the ESU.

Response: The CHART considered these comments and determined that the limited number of habitat areas in the Puget Sound/East Passage watershed remain of low conservation value to the ESU. In addition, the CHART concluded that exclusion of these areas would not significantly impede the conservation of the ESU. Given these findings and the relatively high economic impacts associated with these areas, we conclude that exclusion is warranted.

Comment 62: Two commenters requested that we expand the designation for this ESU to include estuarine areas located behind tide gates in the Skagit River basin.

Response: The CHART concurred that these and other currently unoccupied estuarine areas were historically occupied and may be essential to the conservation of this ESU. However, we presently lack the information needed to prioritize and map the specific areas that warrant designation as critical habitat. We welcome such information and will revise our designations if new information—in particular, scientific assessments accompanying a recovery plan(s) involving affected landowners and other stakeholders—supports designating these and other unoccupied areas.

ESU Specific Comments—Lower Columbia River Chinook Salmon

Comment 63: In the proposed rule we requested comments on the potential designation of unoccupied areas upstream of Condit, Merwin, Swift, Yale, and Bull Run Dams. We noted that the CHART believed that each of these unoccupied areas may be essential to the conservation of this ESU. Several commenters supported the designation of areas above Condit Dam on the Big White Salmon River. Several commenters also supported the designation of areas above Merwin, Swift, and Yale Dams in the Lewis River Basin while one opposed it and contended that there was no biological basis for such designation and that even if there were, the benefits of designation are outweighed by the benefits of exclusion. This commenter also cited the USFWS' exclusion of these areas for bull trout and requested that we do so as well. Another commenter believed that critical habitat should not be designated above Bull Run Dam, citing recent modeling estimates indicating that these blocked areas are not likely to be as productive as other areas in the Sandy River Basin and that the costs of such designation could be substantial.

Response: The CHART maintained that unoccupied areas above all of these dams, except Bull Run Dam, may be essential for the conservation of this ESU. In the latter case the CHART concurred with the information provided by the commenter and believed that these areas were not likely to be as important to the conservation of the ESU (especially the spring-run fish) as unoccupied areas in the upper Lewis River above Merwin, Swift and Yale Dams. Moreover, the CHART noted that the recent interim recovery plan for the Washington portion of this ESU supports the reintroduction of fish to areas above the Lewis River dams (Lower Columbia Fish Recovery Board, 2004). The CHART also agreed that the areas above Condit Dam may be essential to ESU conservation, given the unique ecological setting of that drainage and the limited number of populations and habitat areas in the Columbia River Gorge (Rawding, 2000; Haring, 2003; McElhany *et al.*, 2003). However, as described in the general comments above (see ''Identification of Critical Habitat Areas'' section), at the present time we do not have information allowing us to determine that the specific areas within the geographical area occupied by the species are inadequate for conservation, such that we can make a determination that currently unoccupied areas above dams are essential for conservation. We will revise the designation if ongoing recovery planning indicates that specific areas above these dams warrant designation as critical habitat.

Comment 64: Two commenters disagreed with the exclusion of habitat areas in the Washougal River and Germany/Abernethy watersheds, citing concerns for fall-run fish in these watersheds and noting that they were deemed important in a recent interim recovery plan for this region of the lower Columbia River (Lower Columbia Fish Recovery Board, 2004).

Response: The CHART reviewed these comments, as well as information contained in the cited interim recovery plan, and maintained that both watersheds were of medium conservation value relative to other watersheds in the range of this ESU. All habitat areas in both watersheds had been proposed for exclusion due to economic impacts, and they still exceed these economic thresholds (NMFS, 2005c). After reviewing these and other comments received on the proposed rule, the CHART now concludes that excluding habitat areas in the Washougal River watershed would significantly impede the conservation of the ESU, but that excluding areas in the Germany/Abernethy watershed would not. The CHART noted that the interim recovery plan (Lower Columbia Fish Recovery Board, 2004) specifies that the Washougal River fall-run population is targeted to achieve a high viability level, while the population in the Germany/Abernethy watershed is proposed to achieve a reduced goal of medium viability. In addition, it believed that other watersheds in the coastal region of this ESU and adjacent to Germany/Abernethy (*e.g.*, Big Creek and Skamokawa/Elochoman watersheds) had a higher conservation value for the ESU because they support fall-run populations identified by the Willamette/Lower Columbia TRT (McElhany *et al.*, 2003) as core populations (historically abundant and may offer the most likely path to recovery). The resultant changes are summarized below under ''Summary of Revisions.''

Comment 65: One commenter disagreed with the designation of Riffe Lake in the Cowlitz River Basin, contending that it is unoccupied by this ESU because fish are trapped and hauled around the lake and it is not essential for recovery of the ESU.

Response: The CHART disagreed that Riffe Lake is unoccupied and noted a recent report (Tacoma Public Utilities, 2003) noting that juvenile fish do escape capture at the upstream dam and transit the lake on their downstream migration. Furthermore, the CHART underscored that the designation of Riffe Lake maintains the connectivity of a high value rearing and migration corridor for Chinook salmon spawning in five high-value watersheds upstream.

ESU Specific Comments—Upper Willamette River Chinook Salmon

Comment 66: In the proposed rule we requested comments on the potential designation of unoccupied areas upstream of Big Cliff and Detroit dams. We noted that the CHART believed that each of these unoccupied areas may be essential to the conservation of this ESU. No comments disputed this conclusion and one commenter noted that the Willamette/Lower Columbia River TRT's viability assessments indicate a relatively high risk of extinction for this ESU and thereby support designating, and re-gaining access to, unoccupied historical areas upstream of these dams as well as Green Peter Dam on the South Santiam River.

Response: The CHART maintained that areas above the North Santiam dams may be essential for the conservation of this ESU and agreed that the TRT's viability assessment (McElhany *et al.*, 2003) strongly suggests that these areas may warrant designation. The CHART also noted that recent reintroduction efforts underscore the importance of these areas and, if continued, may warrant considering them as occupied habitat areas. The CHART also agreed that areas upstream of Green Peter Dam may be essential for the conservation of this ESU, especially given the limited number of populations in this ESU (Myers *et al.*, 2003) and the likely productivity of that historical habitat. However, as described in the general comments above (see ''Identification of Critical Habitat Areas'' section), at the present time we do not have information allowing us to determine that the specific areas within the geographical area occupied by the species are inadequate for conservation, such that we can make a determination that currently unoccupied areas above dams are essential for conservation. We will revise the designation if ongoing recovery planning indicates that specific areas above these dams warrant designation as critical habitat.

ESU Specific Comments—Upper Columbia River Spring-Run Chinook Salmon

Comment 67: In the proposed rule we requested comments on the potential designation of unoccupied areas upstream of Enloe Dam. We noted that the CHART believed that these unoccupied areas may be essential for the conservation of this ESU. One commenter supported the designation of critical habitat above this dam, citing the area's historic use and potential recovery opportunities. Another commenter questioned whether salmon or steelhead ever occurred upstream of the dam, citing in particular a report by Chapman *et al.* (1995) that did not find evidence of historic occupation.

Response: The CHART maintained that habitat areas upstream of Enloe Dam may be essential for the conservation of this ESU, and noted that while there are some uncertainties regarding the ESU's historical distribution in this area, that the extensive habitat would likely be productive for this species. However, as described in the general comments above (see ''Identification of Critical Habitat Areas'' section), at the present time we do not have information allowing us to determine that the specific areas within the geographical area occupied by the species are inadequate for conservation, such that we can make a determination that currently unoccupied areas above dams are essential for conservation. We will revise the designation if ongoing recovery planning indicates that specific areas above this dam warrant designation as critical habitat.

ESU Specific Comments—Hood Canal Summer-Run Chum Salmon

Comment 68: One commenter strongly supported our designation of several creeks and streams in Hood Canal, but they and another commenter disagreed with the exclusion of the Skokomish River and noted that this large stream likely has the highest production potential of any Hood Canal summer-run chum stream.

Response: The CHART reviewed these comments and maintained that this watershed is of medium conservation value to this ESU relative to other occupied watersheds. All habitat areas in the Skokomish River watershed had been proposed for exclusion due to economic impacts, and they still exceed these economic thresholds (NMFS, 2005c). However, after reviewing these comments the CHART now concludes that excluding habitat areas in this watershed would significantly impede the conservation of the ESU. The CHART noted that the watershed contains the largest intact estuary in Hood Canal and that designation was warranted given the limited amount of habitat available to these fish throughout the ESU's range and our earlier determination that several unoccupied streams/reaches in other watersheds were essential for the ESU's conservation. The resultant changes are summarized below under ''Summary of Revisions.''

Comment 69: Several commenters objected to the potential exclusion of all nearshore zones for this ESU and noted these areas have been identified by Puget Sound watershed planners and scientists as crucial for juvenile salmon. One noted that excluding these zones would run contrary to our 4(b)(2) approach since all of the Puget Sound nearshore areas were identified as high-conservation value areas. One commenter requested that we extend the designated nearshore zone westward to include all shallow waters in the Strait of Juan de Fuca.

Response: We agree with the commenters' concerns and are going forward with designating nearshore areas as critical habitat for this ESU. The CHART also noted that additional nearshore areas west of the Elwha River may be essential for the conservation of this ESU, but based on the best information available at this time, we cannot conclude that the area is either occupied and contains the PCEs, or is unoccupied and is essential for conservation. If we determine that these or other nearshore areas warrant designation or revision we will do so under subsequent rulemaking.

Comment 70: One commenter questioned whether areas above Elwha Dam had been proposed for designation, but believed that we should nonetheless designate these unoccupied areas for this ESU.

Response: The areas above Elwha Dam were not proposed for designation and the CHART did not identify these areas as essential for the conservation of the ESU.

Comment 71: One commenter provided an update and edits pertaining to three hatchery programs that have been discontinued consistent with the provisions of the Hood Canal Summer Chum Restoration Initiative (WDFW and PNPTT, 2000).

Response: We appreciate receiving the updates and have made corrections to the CHART report for this ESU to reflect this information.

ESU Specific Comments—Columbia River Chum Salmon

Comment 72: One commenter believed that we should designate unoccupied areas for this ESU above Condit Dam on the Big White Salmon River. Two commenters believed that we should designate unoccupied areas for this ESU on the Wind River up to Shipherd Falls.

Response: The CHART agreed that each of these unoccupied areas may be essential for the conservation of this ESU, especially given the limited amount of habitat in the Columbia River Gorge region for this ESU (McElhany *et al.*, 2003). However, as described in the general comments above (see

''Identification of Critical Habitat Areas'' section), we did not have information presently available to allow us to determine that the currently unoccupied areas are inadequate to support conservation, such that designation of these unoccupied areas is essential for conservation. We will revise the designation for this ESU if ongoing recovery planning efforts indicate that specific areas above these dams warrant designation as critical habitat.

Comment 73: Two commenters believed that we should designate unoccupied areas for this ESU above Merwin Dam on the Lewis River while one opposed it.

Response: The CHART considered these comments but concluded that these unoccupied areas are not essential for conservation of this ESU. They noted that there is a significant amount of extant habitat accessible and occupied by this ESU in other major tributaries to the Lower Columbia River (*e.g.*, lowermost portions of the Lewis River, and the Cowlitz, Washougal, and Grays Rivers) and that the historic areas above Merwin Dam are presently, and will likely continue to be, inundated and unsuitable for this species.

ESU Specific Comments—Ozette Lake Sockeye Salmon

Comment 74: One commenter agreed with the CHART finding that the Ozette Lake watershed was a high conservation value, but argued that the assessment was incomplete and inaccurate. This commenter provided data regarding spawning and rearing locations throughout the watershed. They also urged us to designate all fluvial waters in the watershed due to their influence on sockeye habitat downstream, and, in particular, feeder streams adjacent to spawning beaches in the lake, and asserted that restricting the designations to only occupied areas will not recover this ESU.

Response: The CHART reviewed these comments and has updated the references and made corrections in its final report (NMFS, 2005a). These corrections include edits to the species' life history and habitat use descriptions, and distribution changes to incorporate more recent spawning surveys (Makah Tribe, 2005). The CHART appreciated the commenter's concern for the entire fluvial hydrosystem in this basin (including sediment feeder streams, riparian zones, floodplains, and alluvial aquifers), but concluded that most of the areas identified therein were not occupied at the time of listing nor were they likely to have been occupied historically. In addition, the CHART did not identify areas that could be occupied and are essential for the conservation of this ESU. Based on this assessment we believe that the specific areas identified in this final designation are those that meet the ESA's definition of critical habitat (see also Comment 7).

ESU Specific Comments—Upper Columbia River Steelhead

Comment 75: In the proposed rule we requested comments on the potential designation of unoccupied areas upstream of Enloe Dam. We noted that the CHART believed that these unoccupied areas may be essential to the conservation of this ESU. One commenter supported the designation of critical habitat above this dam, citing the area's historic use and potential recovery opportunities, while another commenter cited several references that suggest the areas above Enloe Dam were not historically occupied by steelhead.

Response: The CHART maintained that habitat areas upstream of Enloe Dam may be essential for the conservation of this ESU, and noted that while there are some uncertainties regarding the ESU's historical distribution in this area, the extensive habitat would likely be productive for this species. However, as described in the general comments above (see ''Identification of Critical Habitat Areas'' section), at the present time we do not have information allowing us to determine that the specific areas within the geographical area occupied by the species are inadequate for conservation, such that we can make a determination that currently unoccupied areas above dams are essential for conservation. We will revise the designation if ongoing recovery planning indicates that specific areas above this dam warrant designation as critical habitat.

Comment 76: Two commenters questioned whether upper Salmon Creek in the Okanogan subbasin was occupied by steelhead, citing flow conditions that they believed may limit access. One of these commenters also questioned whether upper Chumstick Creek in the Wenatchee subbasin was occupied by steelhead.

Response: The CHART confirmed that both Salmon and Chumstick creeks are occupied by steelhead based on information from the Colville Confederated Tribes (2003 and 2005) and USFWS (2004). The CHART acknowledged that flow conditions may occasionally limit access to some habitat areas in the lower Okanogan River but underscored that the relatively few remaining tributary habitats in this area are crucial for the conservation of this ESU. For both watersheds the CHART considered the quality of the PCEs and factored their condition into the overall medium conservation value assigned to each watershed.

As a result of reviewing the best available information for these and other areas occupied by this ESU the CHART determined that Henry Creek was not occupied by the species and that the Entiat River (Entiat River watershed, proposed for designation) contained spawning PCEs downstream from the vicinity of Marical Canyon. The resultant changes are summarized below under ''Summary of Revisions.''

Comment 77: Three commenters asserted that it was inappropriate to designate critical habitat in the Sand Hollow wasteway (Columbia River/Sand Hollow watershed) and in Crab Creek (Lower Crab Creek watershed). These commenters argued that habitat conditions make these areas unsuitable for salmonids.

Response: The CHART reviewed these comments and concluded that these areas are occupied based on area surveys described in NMFS'' 2000 FCRPS biological opinion (NMFS, 2000). The CHART acknowledged that flow and temperature conditions may occasionally limit access to some habitat areas in these watersheds but underscored that the relatively few remaining tributary habitats are important to steelhead. The CHART also maintained that it was reasonable to conclude that steelhead originating from this watershed may be uniquely adapted to the high temperatures cited by the commenters. Also, the CHART noted that NMFS has maintained that when fish are found here that the BOR should pursue an appropriate course of action when fish are present (*i.e.* ensuring flows), not necessarily just minimizing attraction to the area (as suggested by the commenter).

ESU Specific Comments—Snake River Steelhead

Comment 78: In the proposed rule we requested comments on the potential designation of unoccupied areas upstream of Dworshak Dam. We noted that the CHART believed that this area (presently unoccupied by anadromous *O. mykiss*) may be essential to the conservation of this ESU. One commenter did not believe it was appropriate to designate these areas to protect resident *O. mykiss*.

Response: Dworshak Dam on the North Fork Clearwater River is a barrier to the upstream migration of steelhead. The CHART reviewed these areas as part of its habitat assessment for this ESU and concluded that they may be essential for conservation. Although many areas are now inundated, the

CHART concluded that most of the blocked watersheds are still in good condition. The CHART also noted that the Interior Columbia Basin TRT identified these areas as part of a historically independent population and underscored that the resident *O. mykiss* above Dworshak Dam are genetically unique relative to other *O. mykiss* in the Clearwater River Basin. A recently completed status review update of this ESU (NMFS, 2003) noted that ''recent genetic data suggest that native resident *O. mykiss* above Dworshak Dam on the North Fork Clearwater should be considered part of this ESU, but hatchery rainbow trout that have been introduced to that and other areas would not.'' Given these considerations, the CHART concluded that these blocked watersheds may be essential for ESU conservation, but it was uncertain which specific areas within them may warrant consideration as critical habitat. Because the areas above the dam are unoccupied by steelhead (but do support resident *O. mykiss* which were not part of the steelhead ESU listed in 1997), and the status of all proposed *O. mykiss* ESUs is still under review (70 FR 37219, June 28, 2005), there is considerable uncertainty regarding whether these areas will be considered essential for the conservation of this ESU and we are not designating critical habitat in these areas at this time.

In addition, the CHART further assessed the occupied stream reaches immediately downstream of Dworshak Dam (Lower North Fork Clearwater) and determined that this short (approximately 2 miles (3.2 km)) segment does not contain PCEs for steelhead. The CHART cited the fact that this area is primarily a tailrace of the dam and that juvenile steelhead probably have little chance of survival in this reach of the river. The resultant changes are summarized below under ''Summary of Revisions.''

Comment 79: In the proposed rule we requested comments on the potential designation of unoccupied reaches of the Pahsimeroi River subbasin, specifically in the following watersheds: Big Creek, Pahsimeroi River/Goldberg Creek, and Upper Pahsimeroi River. Similarly, we requested comments on unoccupied reaches in the Lemhi River subbasin in the Big Timber Creek, Eighteen Mile Creek, Hawley Creek, and Texas Creek watersheds. We noted that the CHART believed that these unoccupied areas may be essential to the conservation of this ESU. One commenter supported the designation of these streams while another stated that these areas have been disconnected from the lower Pahsimeroi River and mainstem Lemhi River for as long as 100 years (due to irrigation dewatering and/or natural dewatering), were not occupied at the time of listing, and should not be considered essential for the conservation of this ESU.

Response: The areas in question consist of the upper Pahsimeroi and Lemhi Rivers and adjacent tributaries in the watersheds identified above. These areas may support resident *O. mykiss*, but this life form (for reasons discussed previously in this document) was not part of the steelhead ESU listed in 1997. Comments received from the USFS indicate that the upper Pahsimeroi River naturally sinks above Furey Lane (near river mile 24) for a distance of several miles upstream. In most years this creates a natural barrier to fish migration (although upstream areas are occasionally accessible to steelhead during extreme flow events). The CHART reviewed the conservation value of unoccupied areas within the Lemhi and Pahsimeroi River subbasins and determined that they may be essential for conservation but that the sporadic access to these areas does not support a conclusion that they are occupied or that they are unoccupied but essential for conservation.

In the case of the Texas Creek watershed the CHART did review new information from the U.S. Bureau of Land Management (BLM, 2005) identifying occupied habitat areas with spawning and rearing PCEs and that may require special management consideration or protection (NMFS, 2005a). The CHART noted that this is the only remaining unfragmented headwater stream serving as a primary tributary of origin for the upper Lemhi River and that steelhead have been observed returning to Purcell Springs (a spring-fed tributary to Texas Creek) about ten miles upstream from the Lemhi River's origin at Leadore. This watershed was considered to be of high conservation value to the ESU, and occupied habitat areas within this watershed are now being designated as critical habitat. The resultant changes are summarized below under ''Summary of Revisions.''

The CHART also noted that the Agency Creek watershed (tributary to the lower Lemhi River) warranted elevation from a low to a medium conservation value based on recent model watershed rankings (Upper Salmon Basin Watershed Project, 2002 and 2004) that place this as a high priority tributary with important juvenile rearing PCEs and thermal refugia. This watershed was proposed for designation and is designated in this final rule.

Comment 80: One commenter believed that Sweetwater and Webb creeks (Upper Sweetwater Creek watershed) should be excluded from designation. They contended that the construction and subsequent operation of the Lewiston Orchards Project diverts flows from most of the habitat that may once have been potentially accessible to steelhead in Sweetwater and Webb creeks during the summer. The existing diversions result in summer/fall dewatering of these streams and thus strongly influence the current quality and extent of PCEs.

Response: The CHART maintained that this watershed warrants a medium conservation value. The CHART noted that Sweetwater and Webb creeks flow into Lapwai Creek (in a high conservation value watershed) and provide the best spawning and rearing habitat for A-run steelhead in the Lapwai Creek drainage. As one of the few remaining drainages in the Clearwater River basin that produces A-run steelhead, the CHART concluded that these watersheds are of high or medium conservation value to this ESU. Therefore, we found that the benefits of exclusion of this area did not outweigh the benefits of its inclusion.

Comment 81: One commenter believed that Big Mallard Creek and Wind River should not be excluded from designation. This commenter also contended that the South Fork Clearwater River and tributaries (*e.g.*, the Potlatch River) were erroneously classified as unoccupied and excluded. They concluded that all streams in the Clearwater and Salmon River basins should be designated critical habitat.

Response: These watersheds were classified as occupied and as containing PCEs that may require special management considerations or protection, but they received a low conservation value rating because they have very limited amounts of PCEs (approximately 2 miles (3.2 km) total). Accordingly they were proposed for exclusion. We received no new information to change the CHART's assessment, and the CHART maintained that the exclusion of these watersheds would not significantly impede conservation of the ESU. This finding includes an implicit determination that exclusion will not lead to extinction of the species concerned.

Comment 82: One commenter believed that steelhead occupy the mainstem of Morgan Creek (Upper Salmon River subbasin) upstream of the confluence with the West Fork Morgan Creek. The commenter noted that a biologist from the Salmon-Challis National Forest has documented the

presence of steelhead in the upstream habitat areas.

Response: The CHART reviewed documentation from the Salmon-Challis National Forest and found additional occupied habitat areas upstream of the areas identified in the proposed rule for critical habitat (Salmon Challis National Forest, 2001–2004). The CHART reviewed the new data and determined that the areas are occupied and contain rearing PCEs (and likely spawning PCEs) which may require special management considerations or protection. All of the streams are either tributary to or upstream extensions of other occupied habitat areas. The resultant changes are summarized below under ''Summary of Revisions.''

Comment 83: One peer reviewer agreed with the designations identified in the Grande Ronde and Imnaha River basins and another identified several locations where ODFW biologists had recently identified additional occupied reaches in the Grande Ronde River subbasin.

Response: The CHART reviewed the new data and determined that the areas are occupied and contain rearing PCEs (and likely spawning PCEs) which may require special management considerations or protection. All of the streams are either tributary to or upstream extensions of other occupied habitat areas. The resultant changes are summarized below under ''Summary of Revisions.''

Comment 84: During its final deliberations the CHART reviewed recent information from the BLM (BLM, 2005) that included steelhead survey data for several watersheds in the following subbasins: Hells Canyon, Lower Salmon, Little Salmon River, South Fork Clearwater, and Clearwater. These data were not available for review prior to issuance of our proposed rule last year.

Response: The CHART reviewed the new data and determined that the areas are occupied and contain rearing PCEs (and likely spawning PCEs) which may require special management considerations or protection. Most of the streams are either tributary to or upstream extensions of other occupied habitat areas. In a few cases the survey data identified occupied stream reaches in three watersheds in the Clearwater subbasin previously thought to be unoccupied, specifically Upper Big Bear Creek, Upper Lapwai Creek, and Mission Creek. These areas are expanded accordingly and the resultant changes are summarized below under ''Summary of Revisions.''

ESU Specific Comments—Middle Columbia River Steelhead

Comment 85: In the proposed rule we requested comments on the potential designation of unoccupied upper reaches of Wilson and Naneum creeks and areas upstream of Bumping, Cle Elum, Keechelus, Kachess, and Tieton Dams. We noted that the CHART believed that these unoccupied areas may be essential for the conservation of this ESU. One commenter did not support designating critical habitat above these dams, citing concerns regarding the feasibility of providing passage and potential habitat limitations. In contrast, another commenter supported designations above all of the dams except Tieton Dam, citing the recovery potential afforded by these habitats. Two commenters believed that unoccupied areas above Pelton Dam in the Deschutes River basin should be designated as critical habitat for this ESU, citing agency statements regarding FERC relicensing at this project. Several commenters supported the designation of areas above Condit Dam on the Big White Salmon River (erroneously ascribed to the Lower Columbia ESU in our proposed rule) while one opposed it. One commenter requested that we designate critical habitat on the lower White Salmon River below Condit Dam, noting that this area provides cold-water refuge for summer-run steelhead migrating to areas within and upstream of this ESU.

Response: The CHART maintained their earlier findings that unoccupied areas in the upper reaches of Wilson and Naneum creeks and areas upstream of Bumping, Cle Elum, Kacheelus, Kachess, Tieton, and Condit Dams may be essential to the conservation of the ESU. The comment that did not support this conclusion did not provide compelling information that the CHART's conclusion was in error. Also, the CHART agreed with the comments that areas upstream of Pelton Dam may be essential for this ESU as well, citing recent efforts to re-establish steelhead into historical habitat above this dam. However, as described in the general comments above (see ''Identification of Critical Habitat Areas'' section), at the present time we do not have information allowing us to determine that the specific areas within the geographical area occupied by the species are inadequate for conservation, such that we can make a determination that currently unoccupied areas above dams are essential for conservation. We will revise the designation if ongoing recovery planning indicates that specific areas above these dams warrant designation as critical habitat.

The CHART agreed with the comments regarding the importance of the habitat areas downstream of Condit Dam and these occupied stream reaches are being designated as critical habitat for this ESU.

Comment 86: One commenter noted an error in the base map used to depict the location and confluence of several streams (Caribou Creek, Park Creek, and Cooke Creek) near their property in the Yakima River basin.

Response: We note the error, which is based on a separate hydrography data set from the State of Washington. The CHART concluded that the extent of steelhead distribution in Cooke Creek was accurate and noted that the confluence error cited did not affect the delineation of critical habitat in this stream.

Comment 87: One commenter questioned whether areas on the Little Klickitat River above a waterfall at RM 6.1 warrant designation as critical habitat, contending that PCEs are not present in this area.

Response: The CHART reviewed these comments, as well as its own observations of the falls, and concluded that it is not impassable to steelhead, although it acknowledges that it can be a partial barrier under certain flow conditions (*i.e.*, when flows are extremely low or high). They noted that the commenters acknowledge that steelhead might be able to pass under certain flow conditions and cited evidence of recent spawning activity above the falls to confirm the CHART's conclusion (NMFS, 2005a).

Comment 88: One commenter questioned whether areas on Swale Creek (a tributary to the Klickitat River) warrant designation as critical habitat, contending that PCEs are not present in this area due to warm water conditions.

Response: The CHART reviewed the information submitted by the commenter and agreed that at certain times the low flow and thermal conditions in this creek can make the PCEs unsuitable for steelhead. The CHART did not believe that this was always the case throughout the drainage but concluded that the PCEs could be considered nonexistent in the uppermost reaches, in particular above the upper end of Swale Canyon. Therefore, we have removed approximately 1 stream mile previously considered for designation. The resultant changes are summarized below under ''Summary of Revisions.''

Comment 89: One commenter requested that we not designate critical habitat in the Sulphur Creek, Spring

Creek, Snipes Creek, and Corral Creek wasteways in the Yakima River/Spring Creek watershed, contending there is limited fish use and that PCEs are not suitable or present in these areas.

Response: The CHART reviewed these comments and maintained that these areas are occupied and contain PCEs, noting that the occupied lowermost portions of these tributaries provide important year-round thermal refugia for this ESU. However, the CHART also noted that PCEs in two of these streams are likely more limited than originally proposed for the reasons cited by the commenter, *e.g.*, substrate embeddedness and flow conditions. Therefore, we have revised our maps to reflect the lack of PCEs in Snipes and Sulphur creeks. The resultant changes are summarized below under ''Summary of Revisions.''

Comment 90: One commenter questioned the designation of critical habitat in the McKay Creek watershed in the Umatilla River basin, contending there is limited fish use due to lack of fish passage and insufficient flows. This commenter also questioned the extent and quality of PCEs in the Stanfield Drain (Stage Gulch watershed). The commenter also suggested corrections to the list of management activities identified in the CHART report for this and other watersheds in the range of this ESU.

Response: The CHART reviewed and disagreed with these comments, noting that a weir at the river mouth is not an effective barrier for adults (*e.g.*, debris jams create passage) and cited evidence in a recent NMFS biological opinion regarding minimum flows in Mckay Creek (Confederated Tribes of the Umatilla Indian Reservation, 2001). The CHART also noted that cold water temperatures in this creek underscore its classification as a high conservation value HUC5. We appreciate the comments and corrections to the list of management activities and have made corresponding changes to the CHART report (NMFS, 2005a).

Comment 91: One commenter questioned whether Bachelor Creek, a side channel/irrigation conveyance to Ahtanum Creek, warranted designation as critical habitat since it had been screened to prevent fish access.

Response: The CHART reviewed this comment and, based on its own field observations of the site, agreed that this creek is not likely to be occupied by the ESU and that regardless, the PCEs would not likely be suitable here for steelhead. We have revised our maps accordingly and the resultant changes are summarized below under ''Summary of Revisions.''

Comment 92: One peer reviewer agreed with the designations identified in the John Day River basin, and another commenter recommended designating tributaries to the lower John Day River and identified several locations where ODFW biologists had recently identified additional occupied reaches in the Upper and North Fork John Day River subbasins.

Response: The CHART reviewed these data and determined that the areas are occupied and contain spawning and rearing PCEs which may require special management considerations or protection (NMFS, 2005a). All of the streams are either tributary to or upstream extensions of other occupied habitat areas. The CHART also concluded that in light of comments from ODFW, as well as the importance and uniqueness of low-elevation spawning habitat in tributaries to the lower John Day River, that two watersheds (Lower John Day River/Ferry Canyon and Lower John Day River/Scott Canyon) should be elevated from low to medium conservation value. The resultant changes are summarized below under ''Summary of Revisions.''

ESU Specific Comments—Lower Columbia River Steelhead

Comment 93: In the proposed rule we requested comments on the potential designation of unoccupied areas upstream of Bull Run, Condit, Merwin, Swift, and Yale Dams. We noted that the CHART believed that each of these unoccupied areas may be essential to the conservation of this ESU. One commenter opposed the designation of areas upstream of Bull Run Dam in the Sandy River basin. Four commenters supported the designation of areas above Merwin, Swift, and Yale Dams in the Lewis River basin while one opposed it.

Response: We note that in the proposed rule we erred in identifying Condit Dam as within the range of this ESU when in fact it should have been noted for the Middle Columbia River steelhead ESU. The CHART maintained that unoccupied areas above all of these dams, except Bull Run Dam, may be essential for the conservation of this ESU. In the latter case the CHART concurred with the information provided by the commenter and believed that these areas were not likely to be as important to the conservation of the ESU as unoccupied areas in the upper Lewis River above Merwin, Swift and Yale Dams. Moreover, the CHART noted that a recent interim recovery plan supports the reintroduction of fish to areas above the Lewis River dams (Lower Columbia Fish Recovery Board, 2004). However, as described in the general comments above (see ''Identification of Critical Habitat Areas'' section), at the present time we do not have information allowing us to determine that the specific areas within the geographical area occupied by the species are inadequate for conservation, such that we can make a determination that currently unoccupied areas above dams are essential for conservation. We will revise the designation if ongoing recovery planning indicates that specific areas above these dams warrant designation as critical habitat.

Comment 94: Two commenters disagreed with the exclusion of the lower Gorge tributaries noting that they were deemed important in a recent interim recovery plan for this region of the lower Columbia River (Lower Columbia Fish Recovery Board, 2004). Another commenter identified several locations where ODFW biologists had recently identified additional occupied reaches in the Columbia Gorge tributaries.

Response: The CHART reviewed these comments, as well as information contained in the cited interim recovery plan, and maintained that both watersheds in this area (*i.e.*, the Columbia Gorge Tributaries and Middle Columbia/Eagle Creek watersheds) were of medium conservation value relative to other watersheds in the range of this ESU. All habitat areas in both watersheds had been proposed for exclusion due to economic impacts, but only the former watershed still exceeds these thresholds (NMFS, 2005c). After reviewing these and other comments for this ESU received on the proposed rule, the CHART now concludes that excluding habitat areas in the Columbia Gorge Tributaries watershed would significantly impede the conservation of the ESU. As support for this conclusion the CHART noted that the interim recovery plan (Lower Columbia Fish Recovery Board, 2004) specifies that the lower Gorge tributaries winter-run population is targeted to achieve a high viability level, and there are a small number of demographically independent populations in this region and each will be important for recovery (McElhany *et al.*, 2003).

The CHART reviewed the data from ODFW and determined that the areas are occupied and contain spawning and rearing PCEs which may require special management considerations or protection. All of the streams are either tributary to or upstream extensions of other occupied habitat areas. The resultant changes are summarized below under ''Summary of Revisions.''

Comment 95: One commenter disagreed with the exclusion of habitat areas in the Salmon Creek watershed.

Response: The CHART reviewed these comments as well as the information in the interim recovery plan for this area ((Lower Columbia Fish Recovery Board, 2004) and maintained that this watershed still warrants a medium conservation value and that exclusion would not significantly impede the conservation of the ESU. The CHART noted that this population is targeted for ''stabilizing,'' which underscores that it is not presently considered as high a conservation concern as others in this ESU. Given that finding and the relatively high economic impacts associated with this watershed, we conclude that exclusion is warranted for this watershed.

Comment 96: One commenter identified several locations where ODFW biologists had recently identified additional occupied reaches in the Lower, Upper and North Fork John Day River subbasins.

Response: The CHART reviewed these data and determined that the areas are occupied and contain spawning and rearing PCEs which may require special management considerations or protection (NMFS, 2005a). All of the streams are either tributary to or upstream extensions of other occupied habitat areas. The resultant changes are summarized below under ''Summary of Revisions.''

Comment 97: One commenter noted mapping errors in Boody Creek and that natural barriers on their property prevent fish from occupying some areas proposed for designation on their property. This commenter noted that our data conflict with maps contained in the recent subbasin plan by the Lower Columbia River Fish Recovery Board (Lower Columbia Fish Recovery Board, 2004).

Response: The CHART reviewed the comments and maps and information in the cited report and concluded that the species' distribution was in error. The CHART noted that a gradient barrier does exist at the site indicated by the landowner/commenter. The resultant changes are summarized below under ''Summary of Revisions.''

Comment 98: One commenter disagreed with the designation of Riffe Lake in the Cowlitz River basin, contending that it is unoccupied by this ESU because fish are trapped and hauled around the lake, and the lake is not essential for recovery of the ESU.

Response: The CHART disagreed that Riffe Lake is unoccupied and noted a recent report (Tacoma Public Utilities, 2003) noting that juvenile fish do escape capture at the upstream dam and transit the lake on their downstream migration. Furthermore, the CHART underscored that the designation of Riffe Lake maintains the connectivity of a high value rearing and migration corridor for Chinook salmon spawning in five high-value watersheds upstream.

ESU Specific Comments—Upper Willamette River Steelhead

Comment 99: One commenter believed that unoccupied areas above Big Cliff, Detroit and Green Peter Dams should be designated as critical habitat for this ESU, noting that the TRT viability assessments indicate a relatively high risk of extinction for this ESU and thereby support designating, and regaining access to, unoccupied historical areas upstream of these dams as well as Green Peter Dam on the South Santiam River.

Response: The CHART concurred that areas above the North Santiam dams may be essential for the conservation of this ESU and agreed that the Willamette/Lower Columbia TRT's viability assessment (McElhany *et al.*, 2003) strongly suggests that these areas may warrant designation. The CHART also agreed that areas upstream of Green Peter Dam may be essential for the conservation of this ESU, especially given the limited number of populations in this ESU and the likely productivity of that historical habitat. However, as described in the general comments above (see ''Identification of Critical Habitat Areas'' section), at the present time we do not have information allowing us to determine that the specific areas within the geographical area occupied by the species are inadequate for conservation, such that we can make a determination that currently unoccupied areas above dams are essential for conservation. We will revise the designation if ongoing recovery planning indicates that specific areas above these dams warrant designation as critical habitat.

Comment 100: One peer reviewer agreed with the designations identified in the Willamette River basin. Another commenter disagreed with the designations identified in westside tributaries of the Willamette River basin, in particular the Luckiamute and Yamhill Rivers, noting that the CHART and TRT acknowledged that it was questionable whether these streams supported a historically independent population of steelhead.

Response: The CHART disagreed with these comments, noting that the information cited in the comments does not provide compelling evidence that these westside tributaries are unoccupied. The CHART acknowledged that there is some longstanding uncertainty regarding whether these tributaries ever supported a demographically independent population (Fulton, 1970; McElhany *et al.*, 2003; Myers *et al.*, 2003), and this factored into their conclusion that most westside watersheds were only of low conservation value to the ESU. However, the CHART maintained that the areas do contain PCEs that support steelhead (Fulton, 1970; ODFW, 1990 and 1995; and Busby *et al.*, 1996) and that the rearing habitat in these tributaries is important to juvenile fish from elsewhere in the Willamette River Basin because of the loss of rearing areas in the mainstem Willamette River. The CHART also noted that westside tributaries may be important to protect the ESU against catastrophes (*e.g.*, earthquake events, see McElhany *et al.* 2003) that would affect eastside populations. Given that concern, the CHART maintained that of the westside tributaries, the Luckiamute River, Upper Yamhill, and Gales Creek watersheds were of higher (medium) conservation value to this ESU, especially since they had habitat that was relatively widespread compared to other westside tributaries (NMFS, 2005a).

Comment 101: One commenter disagreed with the designation of the Spring Hill Pumping Station intake canal off of Gales Creek in the Tualatin River subbasin. This commenter contended that there was no biological basis for the designation and noted the CHART and TRT acknowledged that it was questionable whether this area supported a historically independent population of steelhead (Myers *et al.*, 2003). The commenter also asserted that the steelhead present are most likely non-listed hatchery fish.

Response: The CHART disagreed and maintained that the Gales Creek watershed is still of medium conservation value to this ESU and pointed out that data submitted by the commenter demonstrates that listed steelhead are known to spawn and rear in the Tualatin River drainage and to use this canal.

Comment 102: The CHART received and reviewed new information from the Molalla River basin indicating that its initial watershed ratings may need revision.

Response: The CHART received recent data from a watershed assessment underway in this basin (NMFS, 2005a). As a result, the CHART believed that the Abiqua Creek watershed should be elevated from a low to a medium conservation value, and the Butte Creek and Rock Creek watersheds should be

reduced from a medium to a low conservation. The CHART believed that these changes more accurately reflect the best scientific data available regarding the distribution, quality, and utilization of PCEs by steelhead in this subbasin.

III. Summary of Revisions

We evaluated the comments and new information received on the proposed rule to ensure that they represented the best scientific data available and made a number of general types of changes to the critical habitat designations, including:

(1) We revised habitat maps and related biological assessments based on a final CHART assessment (NMFS, 2005a) of information provided by commenters, peer reviewers, and agency biologists (including CHART members). We also evaluated watersheds to determine how well the conservation value rating corresponded to the benefit of designation, in particular the likelihood of a section 7 consultation occurring in that area and whether the consultation would yield conservation benefits if it was likely to occur. Where appropriate, we adjusted our consideration of these ''low section 7 leverage watersheds'' in the final 4(b)(2) analysis (NMFS, 2005c). In addition, we consulted with the DOD regarding the delineation of nearshore marine areas in Puget Sound and revised the designations to include a narrow nearshore zone within some Navy security/restricted zones.

(2) We revised our economic analysis based on information provided by commenters and peer reviewers as well as our own efforts as referenced in the proposed rule and described in the final economic analysis (NMFS, 2005d). Major changes included assessing new impacts associated with pesticide consultations, revising Federal land consultation costs to take into account wilderness areas, and modifying the analysis of Federal grazing land impacts to more accurately reflect the likely geographic extent of ESA section 7 implementation. We also documented the economic costs of changes in flow regimes for some hydropower projects.

(3) We conducted a new ESA section 4(b)(2) analysis based on economic impacts to take into account the above revisions. This resulted in the final exclusion of many of the same watersheds proposed for exclusion. It also resulted in some areas originally proposed for exclusion not being excluded and some areas proposed for designations now being excluded. The analysis is described further in the 4(b)(2) report (NMFS, 2005c).

(4) We conducted a 4(b)(2) analysis of lands covered by three approved HCPs—WDNR, Green Diamond Resources Company, and West Fork Timber Company. Our analysis concluded that the benefits of excluding these lands outweigh the benefits of designating them, based in part upon evidence received during the comment period that exclusion would strengthen our relationship with these landowners. Critical habitat within lands covered by these HCPs is excluded in the final designation. We did not receive sufficient information to make similar conclusions about the benefits of exclusion for other areas, beyond those proposed for exclusion in the proposed rule, with the modifications noted in number 3.

(5) In the regulations, we've removed reference to ''units'' to avoid possible confusion with the concept of ''recovery units'' as described in the agency's section 7 handbook.

The following sections summarize the ESU-specific changes to the proposed critical habitat rule. These changes are also reflected in final agency reports pertaining to the biological, economic, and policy assessments supporting these designations (NMFS, 2005a; NMFS, 2005c; and NMFS, 2005d). We conclude that these changes are warranted based on new information and analyses that constitute the best scientific data available.

ESU Specific Changes—Puget Sound Chinook Salmon

The CHART did not change conservation value ratings for any watershed or nearshore zone within the geographical area occupied by this ESU. However, based on public comments and new information reviewed by the CHART, we have identified changes to the delineation of occupied habitat areas in several watersheds. Also, after consulting with the DOD, we are now designating a narrow nearshore zone in some marine areas within Navy security/restricted zones (see *''Exclusions Based on National Security Impacts''* section). Additionally, as a result of revised economic data for this ESU and our final 4(b)(2) assessment, we are excluding tributaries in one watershed that were previously proposed for designation and excluding habitat areas overlapping with the WDNR and Green Diamond Company HCP lands. Table 1 summarizes the specific changes made for this ESU (not including the HCP-related exclusions which are identified along with all other types of exclusions in Table 13).

TABLE 1.—ESU SPECIFIC CHANGES—PUGET SOUND CHINOOK SALMON

Subbasin	Watershed code	Watershed/Area name	Changes from Proposed Rule
Nooksack	1711000402	Middle Fork Nooksack	Added 12 miles (19.2 km) of occupied habitat areas.
Stillaguamish	1711000802	South Fork Stillaguamish	Added 47 miles (75.6 km) of occupied habitat areas.
Snoqualmie	1711001004	Lower Snoqualmie River	Removed 6 miles (9.6 km) of unoccupied stream reaches.
Lake Washington	1711001201	Cedar River	Added 12 miles (19.2 km) of occupied habitat areas.
Lake Washington	1711001203	Lake Washington	Excluded tributaries from final designation.
		Marine Nearshore Zones	Included the narrow nearshore zone from extreme high tide to mean lower low tide within several Navy security/restricted zones.

ESU Specific Changes—Lower Columbia River Chinook Salmon

The CHART did not change conservation value ratings for any watershed within the geographical area occupied by this ESU, and there were no changes to the delineation of occupied habitat areas. However, as a result of revised economic data for this ESU and our final 4(b)(2) assessment, we are excluding tributary habitat areas in one watershed and all habitat areas in two watersheds that were previously proposed for designation. Also, we are designating occupied habitat areas in one watershed that were previously proposed for exclusion, designating the connectivity corridor in another (North Fork Toutle River—erroneously excluded in the proposed rule) and excluding habitat areas overlapping with the WDNR and West Fork Timber Company HCP lands. Table 2

summarizes the specific changes made for this ESU (not including the HCP-related exclusions which are identified along with all other types of exclusions in Table 14).

TABLE 2.—ESU SPECIFIC CHANGES—LOWER COLUMBIA CHINOOK SALMON

Subbasin	Watershed code	Watershed name	Changes from Proposed Rule
Middle Columbia/Hood	1707010512	Middle Columbia/Grays Creek	Excluded tributaries from final designation.
Lower Columbia/Sandy	1708000106	Washougal River	Included all occupied habitat areas in final designation.
Cowlitz	1708000501	Tilton River	Excluded all habitat areas from final designation.
Cowlitz	1708000504	North Fork Toutle River	Excluded tributaries only from the final designation.

ESU Specific Changes—Upper Willamette River Chinook Salmon

The CHART changed the conservation value rating for one watershed within the geographical area occupied by this ESU, but there were no changes to the delineation of occupied habitat areas. Also, as a result of revised economic data for this ESU and our final 4(b)(2) assessment, we are excluding tributary habitat areas in four watersheds and all habitat areas in two watersheds that were previously proposed for designation. Table 3 summarizes the specific changes made for this ESU.

TABLE 3.—ESU SPECIFIC CHANGES—UPPER WILLAMETTE CHINOOK SALMON

Subbasin	Watershed code	Watershed name	Changes from Proposed Rule
Upper Willamette	1709000304	Oak Creek	Excluded tributaries from final designation.
Mckenzie	1709000406	Mohawk River	Excluded all habitat areas from final designation.
Middle Willamette	1709000701	Mill Creek/Willamette River	Excluded tributaries from final designation.
Molalla/Pudding	1709000901	Abiqua Creek/Pudding River	Changed conservation rating value from Low to Medium.
Molalla/Pudding	1709000902	Butte Creek/Pudding River	Excluded tributaries from final designation.
Molalla/Pudding	1709000903	Rock Creek/Pudding River	Excluded all habitat areas from final designation.
Molalla/Pudding	1709000904	Senecal Creek/Mill Creek	Excluded tributaries from final designation.

ESU Specific Changes—Upper Columbia River Spring-Run Chinook Salmon

The CHART changed the conservation value rating for one watershed within the geographical area occupied by this ESU, but there were no changes to the delineation of occupied habitat areas. Also, as a result of revised economic data for this ESU and our final 4(b)(2) assessment, we did not make any changes to the areas that were previously proposed for designation. Table 4 summarizes the specific changes made for this ESU.

TABLE 4.—ESU SPECIFIC CHANGES—UPPER COLUMBIA RIVER SPRING-RUN CHINOOK SALMON

Subbasin	Watershed code	Watershed name	Changes from Proposed Rule
Chief Joseph	1702000505	Upper Columbia/Swamp Creek.	Changed conservation rating from Medium to High.

ESU Specific Changes—Hood Canal Summer-Run Chum Salmon

The CHART did not change conservation value ratings for any watershed or nearshore zone within the geographical area occupied by this ESU, and there were no changes to the delineation of occupied habitat areas. However, after consulting with the DOD, we are now designating a narrow nearshore zone in some marine areas within Navy security/restricted zones (see *''Exclusions Based on National Security Impacts''* section). Also, as a result of revised economic data for this ESU and our final 4(b)(2) assessment, we are designating all occupied habitat areas in one watershed that were previously proposed for exclusion and excluding habitat areas overlapping with the WDNR HCP lands. Table 5 summarizes the specific changes made for this ESU (not including the HCP-related exclusions which are identified along with all other types of exclusions in Table 17).

TABLE 5.—ESU SPECIFIC CHANGES—HOOD CANAL SUMMER-RUN CHUM SALMON

Subbasin	Watershed code	Watershed/Area name	Changes from Proposed Rule
Skokomish	1711001701	Skokomish River	Included all occupied habitat areas.
		Marine Nearshore Zones	Included the narrow nearshore zone from extreme high tide to mean lower low tide within several Navy security/restricted zones.

ESU Specific Changes—Columbia River Chum Salmon

The CHART did not change conservation value ratings for any watershed within the geographical area occupied by this ESU, and there were no changes to the delineation of occupied habitat areas. However, as a result of revised economic data for this ESU and our final 4(b)(2) assessment, we are excluding all habitat areas in one watershed that were previously proposed for designation and excluding habitat areas overlapping with the WDNR HCP lands. Table 6 summarizes the specific changes made for this ESU (not including the HCP-related exclusions which are identified along with all other types of exclusions in Table 18).

TABLE 6.—ESU SPECIFIC CHANGES—COLUMBIA RIVER CHUM SALMON

Subbasin	Watershed code	Watershed name	Changes from Proposed Rule
Cowlitz	1708000505	Green River	Excluded all habitat areas from final designation.

ESU Specific Changes—Ozette Lake Sockeye Salmon

The CHART did not change the conservation value rating for the lone watershed within the geographical area occupied by this ESU, and there were only minor changes (approximately 4 miles (6.6 km)) to the delineation of occupied habitat areas based on new information submitted by the Makah Tribe. Also, as a result of revised economic data for this ESU and our final 4(b)(2) assessment, we are now excluding habitat areas overlapping with the WDNR HCP lands (which are identified along with all other types of exclusions in Table 19).

ESU Specific Changes—Upper Columbia River Steelhead

The CHART changed the conservation value rating for one watershed within the geographical area occupied by this ESU. Additionally, based on public comments and new information reviewed by the CHART, we have identified changes to the delineation of occupied habitat areas in one watershed. Also, as a result of revised economic data for this ESU and our final 4(b)(2) assessment, we are designating all habitat areas in one watershed that were previously proposed for exclusion. Table 7 summarizes the specific changes made for this ESU.

TABLE 7.—ESU SPECIFIC CHANGES—UPPER COLUMBIA RIVER STEELHEAD

Subbasin	Watershed cod	Watershed name	Changes from Proposed Rule
Chief Joseph	1702000504	Jordan/Tumwater	Included all habitat areas in final designation.
Chief Joseph	1702000505	Upper Columbia/Swamp Creek.	Changed conservation rating from Medium to High.
Wenatchee	1702001103	Nason/Tumwater	Removed 1 mile (1.6 km) of unoccupied stream reach.

ESU Specific Changes—Snake River Steelhead

The CHART changed the conservation value rating for one watershed within the geographical area occupied by this ESU. Additionally, based on public comments and new information reviewed by the CHART, we have identified changes to the delineation of occupied habitat areas (including reductions associated with areas lacking PCEs) in numerous watersheds and identified four watersheds that were previously considered to be unoccupied. As a result of revised economic data for this ESU and our final 4(b)(2) assessment, we are designating habitat areas in two watersheds that were previously proposed for exclusion. Also, we are excluding habitat areas in four watersheds that were previously proposed for designation. Table 8 summarizes the specific changes made for this ESU.

TABLE 8.—ESU SPECIFIC CHANGES—SNAKE RIVER STEELHEAD

Subbasin	Watershed code	Watershed name	Changes from Proposed Rule
Hells Canyon	1706010101	Snake River/Granite Creek	Added 1 mile (1.6 km) of occupied habitat areas.
Hells Canyon	1706010102	Snake River/Getta Creek	Added 1 mile (1.6 km) of occupied habitat areas.
Hells Canyon	1706010104	Snake River/Divide Creek	Added 1 mile (1.6 km) of occupied habitat areas.
Upper Grande Ronde River	1706010408	Phillips Creek/Willow Creek	Added 10 miles (16.1 km) of occupied habitat areas.
Lower Snake/Tucannon	1706010704	Flat Creek	Excluded all habitat areas from final designation.
Palouse River	1706010808	Lower Palouse River	Excluded all habitat areas from final designation.
Upper Salmon	1706020118	Salmon River/Fourth of July Creek.	Added 4 miles (6.4 km) of occupied habitat areas.
Upper Salmon	1706020132	Morgan Creek	Added 15 miles (24.1 km) of occupied habitat areas.
Middle Salmon-Panther	1706020321	Big Deer Creek	Included all habitat areas in final designation.
Lemhi	1706020404	Agency Creek	Excluded all habitat areas from final designation. Changed conservation rating from Low to Medium.
Lemhi	1706020408	Big Eight Mile Creek	Added 6 miles (9.6 km) of occupied habitat areas.
Lemhi	1706020412	Texas Creek	Added 14 miles (22.5 km) of occupied habitat areas. This watershed was considered to be unoccupied in the proposed designation.

TABLE 8.—ESU SPECIFIC CHANGES—SNAKE RIVER STEELHEAD—Continued

Subbasin	Watershed code	Watershed name	Changes from Proposed Rule
Middle Salmon-Chamberlain	1706020702	Wind River	Included all habitat areas in final designation.
Lower Salmon	1706020911	Slate Creek	Added 1 mile (1.6 km) of occupied habitat areas.
Little Salmon	1706021001	Lower Little Salmon River	Added 3 miles (4.8 km) of occupied habitat areas.
South Fork Clearwater	1706030503	South Fork Clearwater River/ Peasley Creek.	Added 1 mile (1.6 km) of occupied habitat areas.
South Fork Clearwater	1706030507	Red River	Added 3 miles (4.8 km) of occupied habitat areas.
South Fork Clearwater	1706030508	Crooked River	Added 4 miles (6.4 km) of occupied habitat areas.
South Fork Clearwater	1706030510	John's Creek	Added 10 miles (16.1 km) of occupied habitat areas.
South Fork Clearwater	1706030511	Mill Creek	Added 8 miles (12.9 km) of occupied habitat areas.
South Fork Clearwater	1706030513	Cottonwood Creek	Added 11 miles (17.7 km) of occupied habitat areas.
Clearwater	1706030602	Clearwater River/Lower Potlatch River.	Added 11 miles (17.7 km) of occupied habitat areas.
Clearwater	1706030604	Lower Big Bear Creek	Added 22 miles (35.4 km) of occupied habitat areas.
Clearwater	1706030605	Upper Big Bear Creek	Added 12 miles (19.3 km) of occupied habitat areas. This watershed was considered to be unoccupied in the proposed designation.
Clearwater	1706030606	Potlatch River/Pine Creek	Added 5 miles (8.0 km) of occupied habitat areas.
Clearwater	1706030607	Upper Potlatch River	Added 7 miles (11.3 km) of occupied habitat areas.
Clearwater	1706030608	Clearwater River/Bedrock Creek.	Added 8 miles (12.9 km) of occupied habitat areas.
Clearwater	1706030610	Big Canyon Creek	Added 9 miles (14.5 km) of occupied habitat areas.
Clearwater	1706030613	Upper Orofino Creek	Excluded all habitat areas from final designation. Added 1 mile (1.6 km) of occupied habitat areas.
Clearwater	1706030614	Jim Ford Creek	Added 6 miles (9.6 km) of occupied habitat areas.
Clearwater	1706030615	Lower Lolo Creek	Added 1 mile (1.6 km) of occupied habitat areas.
Clearwater	1706030620	Clearwater River/Fivemile Creek.	Added 2 miles (3.2 km) of occupied habitat areas.
Clearwater	1706030623	Lower Lawyer Creek	Added 4 miles (6.4 km) of occupied habitat areas.
Clearwater	1706030627	Cottonwood Creek	Added 2 miles (3.2 km) of occupied habitat areas.
Clearwater	1706030628	Upper Lapwai Creek	Added 12 miles (19.3 km) of occupied habitat areas. This watershed was considered to be unoccupied in the proposed designation.
Clearwater	1706030629	Mission Creek	Added 14 miles (22.5 km) of occupied habitat areas. This watershed was considered to be unoccupied in the proposed designation.
Clearwater	1706030630	Upper Sweetwater Creek	Added 1 mile (1.6 km) of occupied habitat areas.
Clearwater	1706030801	Lower North Fork Clearwater River.	Removed 2 miles (3.2 km) of occupied stream reaches lacking PCEs.
Clearwater	1706030631	Lower Sweetwater	Added 2 miles (3.2 km) of occupied habitat areas.

ESU Specific Changes—Middle Columbia River Steelhead

The CHART changed the conservation value rating for two watersheds within the geographical area occupied by this ESU. Based on public comments and new information reviewed by the CHART, we have identified changes to the delineation of occupied habitat areas in several watersheds (including reductions associated with areas lacking PCEs). Also, as a result of revised economic data for this ESU and our final 4(b)(2) assessment, we are including habitat areas in two watersheds that were previously proposed for exclusion. Additionally, we are excluding habitat areas in six watersheds that were previously proposed for designation. Table 9 summarizes the specific changes made for this ESU.

TABLE 9.—ESU SPECIFIC CHANGES—MIDDLE COLUMBIA RIVER STEELHEAD

Subbasin	Watershed code	Watershed name	Changes from Proposed Rule
Upper Yakima	1703000102	Teanaway River	Added 6 miles (9.6 km) of occupied habitat areas.
Upper Yakima	1703000103	Middle Upper Yakima River	Added 1 mile (1.6 km) of occupied habitat areas.
Naches	1703000201	Little Naches	Added less than 1 mile (1.6 km) of occupied habitat areas.
Lower Yakima	1703000301	Ahtanum Creek	Removed 17 miles (27.4 km) of occupied stream reaches lacking PCEs.
Lower Yakima	1703000306	Yakima River/Spring Creek	Removed 23 miles (37.0 km) of occupied stream reaches lacking PCEs.
Walla Walla	1707010211	Lower Walla Walla River	Excluded tributaries from final designation.
Umatilla	1707010308	Stage Gulch	Exclude all habitat areas from final designation.
Umatilla	1707010310	Lower Butter Creek	Excluded all habitat areas from final designation.
Middle Columbia/Hood	1707010512	Middle Columbia/Grays Creek	Excluded tributaries from final designation.
Klickitat	1707010604	Little Klickitat River	Removed 1 mile (1.6 km) of occupied stream reaches lacking PCEs.

TABLE 9.—ESU SPECIFIC CHANGES—MIDDLE COLUMBIA RIVER STEELHEAD—Continued

Subbasin	Watershed code	Watershed name	Changes from Proposed Rule
Upper John Day	1707020103	Middle South Fork John Day River.	Added 4 miles (6.4 km) of occupied habitat areas.
North Fork John Day	1707020201	Upper North Fork John Day River.	Added 2 miles (3.2 km) of occupied habitat areas.
North Fork John Day	1707020203	North Fork John Day River/Big Creek.	Added 2 miles (3.2 km) of occupied habitat areas.
North Fork John Day	1707020206	Lower Camas Creek	Added 15 miles (24.1 km) of occupied habitat areas.
North Fork John Day	1707020207	North Fork John Day River/ Potamus Creek.	Added 3 miles (4.8 km) of occupied habitat areas.
Middle Fork John Day	1707020305	Lower Middle Fork John Day River.	Excluded tributaries from final designation.
Lower John Day	1707020409	Lower John Day River/Ferry Canyon.	Included all habitat areas in final designation. Changed conservation rating from Low to Medium.
Lower John Day	1707020410	Lower John Day River/Scott Canyon.	Included all habitat areas in final designation. Changed conservation rating from Low to Medium.
Trout	1707030704	Mud Springs Creek	Excluded all habitat areas from final designation.

ESU Specific Changes—Lower Columbia River Steelhead

The CHART did not change conservation value ratings for any watershed within the geographical area occupied by this ESU. However, based on public comments and new information reviewed by the CHART, we have identified changes to the delineation of occupied habitat areas in two watersheds. As a result of revised economic data for this ESU and our final 4(b)(2) assessment, we are designating habitat areas in two watersheds that were previously proposed for exclusion. Additionally, we are excluding all habitat areas in one watershed that were previously proposed for designation and excluding habitat areas overlapping with the WDNR and West Fork Timber Company HCP lands. Table 10 summarizes the specific changes made for this ESU (not including the HCP-related exclusions which are identified along with all other types of exclusions in Table 23).

TABLE 10.—ESU SPECIFIC CHANGES—LOWER COLUMBIA RIVER STEELHEAD

Subbasin	Watershed code	Watershed name	Changes from Proposed Rule
Middle Columbia/Hood	1707010512	Middle Columbia/Grays Creek	Added 4 miles (6.4 km) of occupied habitat areas.
Middle Columbia/Hood	1707010513	Middle Columbia/Eagle Creek	Included all habitat areas in final designation.
Lower Columbia/Sandy	1708000107	Columbia Gorge Tributaries	Included all habitat areas in final designation.
Lewis	1708000206	Lower Lewis River	Removed 1 mile (1.6 km) of unoccupied stream reach.
Cowlitz	1708000501	Tilton River	Excluded all habitat areas from final designation.

ESU Specific Changes—Upper Willamette River Steelhead

The CHART changed conservation value ratings for three watersheds within the geographical area occupied by this ESU. There were no public comments or new information to indicate changes in the delineation of occupied habitat areas for this ESU. However, as a result of revised economic data for this ESU and our final 4(b)(2) assessment, we are designating habitat areas in one watershed that were previously proposed for exclusion. Also, we are excluding habitat areas in six watersheds that were previously proposed for designation. Table 11 summarizes the specific changes made for this ESU.

TABLE 11.—ESU SPECIFIC CHANGES—UPPER WILLAMETTE RIVER STEELHEAD

Subbasin	Watershed code	Watershed name	Changes from Proposed Rule
Middle Willamette	1709000701	Mill Creek/Willamette River	Excluded tributaries from final designation.
Yamhill	1709000803	Mill Creek/South Yamhill River	Excluded all habitat areas from final designation.
Yamhill	1709000804	Lower South Yamhill River	Excluded tributaries from final designation.
Molalla/Pudding	1709000901	Abiqua Creek/Pudding River	Included all habitat areas in final designation. Changed conservation rating from Low to Medium.
Molalla/Pudding	1709000902	Butte Creek/Pudding River	Excluded tributaries from final designation. Changed conservation rating from Medium to Low.
Molalla/Pudding	1709000903	Rock Creek/Pudding River	Excluded all habitat areas from final designation. Changed conservation rating from Medium to Low.
Molalla/Pudding	1709000904	Senecal Creek/Mill Creek	Excluded tributaries from final designation.

IV. Methods and Criteria Used To Designate Critical Habitat

The following sections describe the relevant definitions and guidance found in the ESA and our implementing regulations, and the key methods and criteria we used to make these final critical habitat designations after incorporating, as appropriate, comments and information received on the proposed rule. Section 4 of the ESA (16 U.S.C. 1533 (b)(2) and our regulations at 50 CFR 424.12(a) require that we designate critical habitat, and make revisions thereto, ''on the basis of the best scientific data available.''

Section 3 of the ESA (16 U.S.C. 1532(5)) defines critical habitat as ''(i) the specific areas within the geographical area occupied by the species, at the time it is listed * * * on which are found those physical or biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protection; and (ii) specific areas outside the geographical area occupied by the species at the time it is listed upon a determination by the Secretary that such areas are essential for the conservation of the species.'' Section 3 of the ESA (16 U.S.C. 1532(3)) also defines the terms ''conserve,'' ''conserving,'' and ''conservation'' to mean ''to use, and the use of, all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to this chapter are no longer necessary.''

Pursuant to our regulations, when identifying physical or biological features essential to conservation, we consider the following requirements of the species: (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 of offspring; and, generally, (5) habitats that are protected from disturbance or are representative of the historical geographical and ecological distributions of the species (see 50 CFR 424.12(b)). In addition to these factors, we also focus on the known physical and biological features (primary constituent elements or PCEs) within the occupied areas that are essential to the conservation of the species. The regulations identify PCEs as including, but not limited to: ''roost sites, nesting grounds, spawning sites, feeding sites, seasonal wetland or dryland, water quality or quantity, host species or plant pollinator, geological formation, vegetation type, tide, and specific soil types.'' For an area containing PCEs to meet the definition of critical habitat, we must conclude that the PCEs in that area ''may require special management considerations or protection.'' Our regulations define special management considerations or protection as ''any methods or procedures useful in protecting physical and biological features of the environment for the conservation of listed species.'' Both the ESA and our regulations, in recognition of the divergent biological needs of species, establish criteria that are fact specific rather than a ''one size fits all'' approach.

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

Section 4 of the ESA (16 U.S.C. 1533 (b)(2)) requires that before designating critical habitat we must consider the economic impacts, impacts on national security and other relevant impacts of specifying any particular area as critical habitat, and the Secretary may exclude any area from critical habitat if the benefits of exclusion outweigh the benefits of designation, unless excluding an area from critical habitat will result in the extinction of the species. This exercise of discretion must be based upon the best scientific and commercial data. Once critical habitat for a salmon or steelhead ESU is designated, section 7(a)(2) of the ESA requires that each Federal agency shall, in consultation with and with the assistance of NMFS, ensure that any action they authorize, fund or carry out is not likely to result in the destruction or adverse modification of critical habitat.

Salmon Life History

Pacific salmon are anadromous fish, meaning adults migrate from the ocean to spawn in freshwater lakes and streams where their offspring hatch and rear prior to migrating back to the ocean to forage until maturity. The migration and spawning times vary considerably across and within species and populations (Groot and Margolis, 1991). At spawning, adults pair to lay and fertilize thousands of eggs in freshwater gravel nests or ''redds'' excavated by females. Depending on lake/stream temperatures, eggs incubate for several weeks to months before hatching as ''alevins'' (a larval life stage dependent on food stored in a yolk sac). Following yolk sac absorption, alevins emerge from the gravel as young juveniles called ''fry'' and begin actively feeding. Depending on the species and location, juveniles may spend from a few hours to several years in freshwater areas before migrating to the ocean. The physiological and behavioral changes required for the transition to salt water result in a distinct ''smolt'' stage in most species. On their journey juveniles must migrate downstream through every riverine and estuarine corridor between their natal lake or stream and the ocean. For example, smolts from Idaho will travel as far as 900 miles (1,448 km) from the inland spawning grounds. En route to the ocean the juveniles may spend from a few days to several weeks in the estuary, depending on the species. The highly productive estuarine environment is an important feeding and acclimation area for juveniles preparing to enter marine waters.

Juveniles and subadults typically spend from 1 to 5 years foraging over thousands of miles in the North Pacific Ocean before returning to spawn. Some species, such as coho and Chinook salmon, have precocious life history types (primarily male fish known as ''jacks'') that mature and spawn after only several months in the ocean. Spawning migrations known as ''runs'' occur throughout the year, varying by species and location. Most adult fish return or ''home'' with great fidelity to spawn in their natal stream, although some do stray to non-natal streams. Salmon species die after spawning, except anadromous *O. mykiss* (steelhead), which may return to the ocean and make one or more repeat spawning migrations. This complex life cycle gives rise to complex habitat needs, particularly during the freshwater phase (see review by Spence *et al.*, 1996). Spawning gravels must be of a certain size and free of sediment to allow successful incubation of the eggs. Eggs also require cool, clean, and well-oxygenated waters for proper development. Juveniles need abundant food sources, including insects, crustaceans, and other small fish. They need places to hide from predators (mostly birds and bigger fish) in the stream, estuary and nearshore zone, such as under logs, root wads and boulders, and beneath overhanging vegetation. In the stream they also need places to seek refuge from periodic high

flows (side channels and off channel areas) and from warm summer water temperatures (coldwater springs and deep pools). In the estuary and nearshore zone, juveniles need freshwater mixing that allows them to make the transition from fresh to salt water. Returning adults generally do not feed in fresh water but instead rely on limited energy stores to migrate, mature, and spawn. Like juveniles, they also require cool water and places to rest and hide from predators. During all life stages salmon require cool water that is free of contaminants. They also require rearing and migration corridors with adequate passage conditions (water quality and quantity available at specific times) to allow access to the various habitats required to complete their life cycle.

The homing fidelity of salmon has created a metapopulation structure with distinct populations distributed among watersheds (McElhany *et al.*, 2000). Low levels of straying result in regular genetic exchange among populations, creating genetic similarities among populations in adjacent watersheds. Maintenance of the metapopulation structure requires a distribution of populations among watersheds where environmental risks (*e.g.*, from landslides or floods) are likely to vary. It also requires migratory connections among the watersheds to allow for periodic genetic exchange and alternate spawning sites in the case that natal streams are inaccessible due to natural events such as a drought or landslide. More detailed information describing life history characteristics of the ESUs and the requisite habitat needs is contained in the proposed rule (69 FR 74572; December 14, 2005), agency status reviews (Busby *et al.*, 1996; Gustafson, *et al.*, 1997; Johnson *et al.*, 1997; Myers *et al.*, 1998; NMFS, 2003), technical recovery team products (McElhany *et al.*, 2000; NMFS, 2001; Interior Columbia Basin Technical Recovery Team, 2003; McElhany *et al.*, 2003; Myers *et al.*, 2003; McClure *et al.*, 2005), and in a biological report supporting these designations (NMFS, 2005a).

Identifying the Geographical Area Occupied by the Species and Specific Areas Within the Geographical Area

In past critical habitat designations, we had concluded that the limited availability of species distribution data prevented mapping salmonid critical habitat at a scale finer than occupied river basins (65 FR 7764; February 16, 2000). Therefore, the 2000 designations defined the ''geographical area occupied by the species, at the time of listing'' as all accessible river reaches within the current range of the listed species.

In the proposed rule we described in greater detail that since the previous designations in 2000, we can now be more precise about the ''geographical area occupied by the species'' because Federal, state, and tribal fishery biologists have made progress documenting and mapping actual species distribution at the level of stream reaches. Moreover, much of the available data can now be accessed and analyzed using GIS to produce consistent and fine-scale maps (NMFS, 2005a; StreamNet, 2005). The current mapping documents fish presence by identifying occupied stream reaches where the species has been observed. It also identifies stream reaches where the species is presumed to occur based on the professional judgment of biologists familiar with the watershed (although in some cases there are streams classified as occupied based on professional judgment when in fact the species has been observed but the GIS data have not been updated). We made use of these finer-scale data for the current critical habitat designations, and we now believe that they enable a more accurate delineation of the ''geographical area occupied by the species'' referred to in the ESA definition of critical habitat. We received some comments on this approach, some in support and some against it. However, none of the latter describe a specific methodology that would yield a better approach than what we used.

We are now also able to identify ''specific areas'' (ESA section 3(5)(a)) and ''particular areas'' (ESA section 4(b)(2)) at a finer scale than in 2000. Since 2000, various Federal agencies have mapped fifth field hydrologic units (referred to as ''HUC5s'' or ''watersheds'') throughout the Pacific Northwest using U.S. Geological Survey (USGS) mapping conventions (Seaber *et al.*, 1986). This information is now generally available via the internet (NMFS, 2005a), and we have expanded our GIS resources to use these data. As in the 2000 designations (in which we used larger fourth field hydrologic units), we used the HUC5s to organize critical habitat information systematically and at a scale that is applicable to the spatial distribution of salmon. Organizing information at this scale is especially relevant to salmonids, since their innate homing ability allows them to return to the watersheds where they were born. Such site fidelity results in spatial aggregations of salmonid populations that generally correspond to the area encompassed by subbasins or HUC5 watersheds (Washington Department of Fisheries *et al.*, 1992; Kostow, 1995; McElhany *et al.*, 2000). As noted above regarding our use of finer scale data, none of the comments received provided us with a specific alternative methodology that would yield a better approach than the watershed-scale approach we adopted.

The USGS maps watershed units as polygons, bounding a drainage area from ridge-top to ridge-top, encompassing streams, riparian areas and uplands. Within the boundaries of any watershed, there are stream reaches not occupied by the species. Land areas within the HUC5 boundaries are also generally not ''occupied'' by the species (though certain areas such as flood plains or side channels may be occupied at some times of some years). We used the watershed boundaries as a basis for aggregating occupied stream reaches, for purposes of delineating ''specific'' areas at a scale that often corresponds well to salmonid population structure and ecological processes. Although we are designating only the streams and not the entire watershed, our documents frequently refer to the ''specific areas'' as ''watersheds'' because that is the term often used as a convenient shorthand. We also refer to the stream reaches as ''habitat areas.'' Each watershed was reviewed by the CHARTs to verify occupation, PCEs, and special management considerations (see ''Critical Habitat Analytical Review Teams'' section below).

The watershed-scale aggregation of stream reaches also allowed us to analyze the impacts of designating a ''particular area,'' as required by ESA section 4(b)(2). As a result of watershed processes, many activities occurring in riparian or upland areas and in non-fish-bearing streams may affect the physical or biological features essential to conservation in the occupied stream reaches. The watershed boundary thus describes an area in which Federal activities have the potential to affect critical habitat (Spence *et al.*, 1996). Using watershed boundaries for the economic analysis ensured that all potential economic impacts were considered. Section 3(5) defines critical habitat in terms of ''specific areas,'' and section 4(b)(2) requires the agency to consider certain factors before designating ''particular areas.'' In the case of West Coast salmon and steelhead, the biology of the species, the characteristics of its habitat, the nature of the impacts, and the limited information currently available at finer geographic scales made it appropriate to consider ''specific areas'' and ''particular areas'' as the same unit.

Occupied estuarine and marine areas were also considered in the context of defining ''specific areas.'' In our proposed rule we noted that estuarine areas are crucial for juvenile salmonids, given their multiple functions as areas for rearing/feeding, freshwater-saltwater acclimation, and migration (Simenstad *et al.*, 1982; Marriott *et al.*, 2002). In most cases estuaries fall within the boundaries of a HUC5 and so were assessed along with upstream freshwater habitats within the watershed. In the case of the Columbia River estuary (which was not part of an identified HUC5) we assessed it as part of a lower Columbia River habitat area extending from the mouth at the Pacific Ocean upstream to its confluence with the Sandy and Washougal rivers. In all occupied estuarine areas we were able to identify physical or biological features essential to the conservation of the species, and that may require special management considerations or protection. For those estuarine areas designated as critical habitat we are again delineating them in similar terms to our past designations, as being defined by a line connecting the furthest land points at the estuary mouth.

Marine areas also provide important habitat for rearing/feeding and migrating salmon and steelhead. As noted in our proposed rule, Puget Sound is a unique marine area in that it is a sheltered fjord containing abundant nearshore areas that are used year round by the listed ESUs. Specifically, we reviewed information regarding habitat use by Puget Sound Chinook and Hood Canal summer-run chum salmon (Bakkala, 1970; Healey, 1982; Simenstad *et al.*, 1982; Salo, 1991, as cited in Johnson *et al.*, 1997; Beamish *et al.*, 1998; Pacific Fishery Management Council, 1999; WDFW and Point No Point Treaty Tribes (PNPTT), 2000; Batelle Marine Sciences Laboratory *et al.*, 2001; Nightingale and Simenstad, 2001; Williams and Thom, 2001; Puget Sound Nearshore Ecosystem Restoration Program, 2003; Williams *et al.*, 2003; Brennan *et al.*, 2004; Washington State Conservation Commission, 1999–2003) within 19 nearshore marine zones (*i.e.*, areas beyond estuary mouths) adjacent to water resource inventory areas defined by the State of Washington (NMFS, 2005a; Washington Department of Ecology, 2004). Based on this review we determined that waters adjacent to the shoreline and extending out to the maximum depth of the photic zone (*i.e.*, from the line of extreme high tide out to a depth no greater than 30 m relative to the mean lower low water) are occupied and contain essential features that may require special management considerations or protection.

In previous designations of salmonid critical habitat we did not designate offshore marine areas (with the exception of deep waters in Puget Sound (65 FR 7764; February 16, 2000). In the Pacific Ocean, we concluded that there may be essential habitat features, but we could not identify any special management considerations or protection associated with them as required under section 3(5)(A)(i) of the ESA (65 FR 7776; February 16, 2000). Since that time we have carefully considered the best available scientific information, and related agency actions, such as the designation of Essential Fish Habitat under the Magnuson-Stevens Fishery Conservation and Management Act. We believe that forage species are a feature in the Pacific Ocean or deep water of Puget Sound that are essential for salmon conservation and that may require special management considerations or protection, at least for those forage species that are a target of human harvest. However, because salmonids are opportunistic feeders we could not identify ''specific areas'' beyond the nearshore marine zone where these or other essential features are found within this vast geographic area occupied by salmon and steelhead. Moreover, prey species move or drift great distances throughout the ocean and would be difficult to link to any ''specific'' areas. In contrast to estuarine and nearshore areas, we conclude that it is not possible to identify ''specific areas'' in the Pacific Ocean or deep water of Puget Sound that contain essential features for salmonids and, therefore, we are not designating critical habitat in offshore marine areas. We requested comment on this issue in our proposed rule but did not receive comments or information that would change our conclusion.

Primary Constituent Elements

In determining what areas are critical habitat, agency regulations at 50 CFR 424.12(b) require that we must ''consider those physical or biological features that are essential to the conservation of a given species * * *, including space for individual and population growth and for normal behavior; food, water, air, light, minerals, or other nutritional or physiological requirements; cover or shelter; sites for breeding, reproduction, and rearing of offspring; and habitats that are protected from disturbance or are representative of the historical geographical and ecological distribution of a species.'' The regulations further direct us to ''focus on the principal biological or physical constituent elements * * * that are essential to the conservation of the species,'' and specify that the ''known primary constituent elements shall be listed with the critical habitat description.'' The regulations identify primary constituent elements (PCEs) as including, but not limited to: ''roost sites, nesting grounds, spawning sites, feeding sites, seasonal wetland or dryland, water quality or quantity, host species or plant pollinator, geological formation, vegetation type, tide, and specific soil types.''

NMFS biologists developed a list of PCEs that are essential to the species' conservation and based on the unique life history of salmon and steelhead and their biological needs (Hart, 1973; Beauchamp *et al.*, 1983; Laufle *et al.*, 1986; Pauley *et al.*, 1986, 1988, and 1989; Groot and Margolis, 1991; Spence *et al.*, 1996). Guiding the identification of PCEs was a decision matrix we developed for use in ESA section 7 consultations (NMFS, 1996) which describes general parameters and characteristics of most of the essential features under consideration in this critical habitat designation. We identified these PCEs and requested comment on them in the ANPR (68 FR 55931; September 29, 2003) and proposed rule (69 FR 74636; December 14, 2005) but did not receive information to support changing them. The ESUs addressed in this final rule share many of the same rivers and estuaries and have similar life history characteristics and, therefore, many of the same PCEs. These PCEs include sites essential to support one or more life stages of the ESU (sites for spawning, rearing, migration and foraging). These sites in turn contain physical or biological features essential to the conservation of the ESU (for example, spawning gravels, water quality and quantity, side channels, forage species). The specific PCEs include:

1. Freshwater spawning sites with water quantity and quality conditions and substrate supporting spawning, incubation and larval development. These features are essential to conservation because without them the species cannot successfully spawn and produce offspring.

2. Freshwater rearing sites with water quantity and floodplain connectivity to form and maintain physical habitat conditions and support juvenile growth and mobility; water quality and forage supporting juvenile development; and natural cover such as shade, submerged and overhanging large wood, log jams and beaver dams, aquatic vegetation, large rocks and boulders, side channels,

and undercut banks. These features are essential to conservation because without them juveniles cannot access and use the areas needed to forage, grow, and develop behaviors (*e.g.*, predator avoidance, competition) that help ensure their survival.

3. Freshwater migration corridors free of obstruction with water quantity and quality conditions and natural cover such as submerged and overhanging large wood, aquatic vegetation, large rocks and boulders, side channels, and undercut banks supporting juvenile and adult mobility and survival. These features are essential to conservation because without them juveniles cannot use the variety of habitats that allow them to avoid high flows, avoid predators, successfully compete, begin the behavioral and physiological changes needed for life in the ocean, and reach the ocean in a timely manner. Similarly, these features are essential for adults because they allow fish in a non-feeding condition to successfully swim upstream, avoid predators, and reach spawning areas on limited energy stores.

4. Estuarine areas free of obstruction with water quality, water quantity, and salinity conditions supporting juvenile and adult physiological transitions between fresh-and saltwater; natural cover such as submerged and overhanging large wood, aquatic vegetation, large rocks and boulders, and side channels; and juvenile and adult forage, including aquatic invertebrates and fishes, supporting growth and maturation. These features are essential to conservation because without them juveniles cannot reach the ocean in a timely manner and use the variety of habitats that allow them to avoid predators, compete successfully, and complete the behavioral and physiological changes needed for life in the ocean. Similarly, these features are essential to the conservation of adults because they provide a final source of abundant forage that will provide the energy stores needed to make the physiological transition to fresh water, migrate upstream, avoid predators, and develop to maturity upon reaching spawning areas.

5. Nearshore marine areas free of obstruction with water quality and quantity conditions and forage, including aquatic invertebrates and fishes, supporting growth and maturation; and natural cover such as submerged and overhanging large wood, aquatic vegetation, large rocks and boulders, and side channels. As in the case with freshwater migration corridors and estuarine areas, nearshore marine features are essential to conservation because without them juveniles cannot successfully transition from natal streams to offshore marine areas. We have focused our designation on nearshore areas in Puget Sound because of its unique and relatively sheltered fjord-like setting (as opposed to the more open coastlines of Washington and Oregon).

6. Offshore marine areas with water quality conditions and forage, including aquatic invertebrates and fishes, supporting growth and maturation. These features are essential for conservation because without them juveniles cannot forage and grow to adulthood. However, for the reasons stated previously in this document, it is difficult to identify specific areas containing this PCE as well as human activities that may affect the PCE condition in those areas. Therefore, we have not designated any specific areas based on this PCE but instead have identified it because it is essential to the species' conservation and specific offshore areas may be identified in the future (in which case any designation would be subject to separate rulemaking).

The occupied habitat areas designated in this final rule contain PCEs required to support the biological processes for which the species use the habitat. The CHARTs verified this for each watershed/nearshore zone by relying on the best available scientific data (including species distribution maps, watershed analyses, and habitat surveys) during their review of occupied areas and resultant assessment of area conservation values (NMFS, 2005a). The contribution of the PCEs varies by site and biological function such that the quality of the elements may vary within a range of acceptable conditions. The CHARTs took this variation into account when they assessed the conservation value of an area. In this final designation we have identified some areas that, while occupied, have PCEs that are so severely degraded as to be non-existent. They therefore do not meet the statutory definition of critical habitat and are not being designated as critical habitat (see ''Summary of Revisions'').

Special Management Considerations or Protections

An occupied area meets the definition of critical habitat only if it contains physical and biological features that ''may require special management considerations or protection.'' Agency regulations at 50 CFR 424.02(j) define ''special management considerations or protection'' to mean ''any methods or procedures useful in protecting physical and biological features of the environment for the conservation of listed species.''

As part of the biological assessment described below under ''Critical Habitat Analytical Review Teams,'' teams of biologists examined each habitat area to determine whether the physical or biological features may require special management consideration. These determinations are identified for each area in the CHART report (NMFS, 2005a). In the case of salmon and steelhead, the CHARTs identified a variety of activities that threaten the physical and biological features essential to listed salmon and steelhead (see review by Spence *et al.*, 1996), including: (1) Forestry; (2) grazing; (3) agriculture; (4) road building/maintenance; (5) channel modifications/diking; (6) urbanization; (7) sand and gravel mining; (8) mineral mining; (9) dams; (10) irrigation impoundments and withdrawals; (11) river, estuary, and ocean traffic; (12) wetland loss/removal; (13) beaver removal; (14) exotic/invasive species introductions. In addition to these, the harvest of salmonid prey species (*e.g.*, forage fishes such as herring, anchovy, and sardines) may present another potential habitat-related management activity (Pacific Fishery Management Council, 1999). In response to our proposed designation we received one set of comments specific to the CHART determinations of activities (and based on the list above), and we have incorporated the needed revisions into the final CHART report (NMFS, 2005a).

Unoccupied Areas

ESA section 3(5)(A)(ii) defines critical habitat to include ''specific areas outside the geographical area occupied'' if the areas are determined by the Secretary to be ''essential for the conservation of the species.'' NMFS regulations at 50 CFR 424.12(e) emphasize that we ''shall designate as critical habitat areas outside the geographical area presently occupied by a species only when a designation limited to its present range would be inadequate to ensure the conservation of the species.'' With one exception, we are not designating unoccupied areas at this time. For the Hood Canal summer-run chum salmon ESU, we are proposing approximately 8 miles (12.9 km) of unoccupied (but historically utilized) stream reaches determined to be essential for the conservation of this ESU. However, the CHARTs did identify several areas that may be essential for the conservation of specific ESUs, including:

- Areas upstream of Elwha Dam in Washington's Elwha River drainage (Puget Sound Chinook salmon ESU)
- Areas upstream of Merwin, Swift, and Yale Dams in Washington's Lewis River drainage (Lower Columbia River Chinook salmon and steelhead ESUs)
- Areas upstream of Condit Dam in Washington's White Salmon River drainage (Lower Columbia River Chinook salmon and Middle Columbia River steelhead ESUs)
- Areas upstream of Keechelus, Kachess, Cle Elum, Bumping, and Tieton Dams in Washington's Yakima River drainage (Middle Columbia River steelhead ESU)
- Areas upstream of Enloe Dam in Washington's Similkameen River drainage (Upper Columbia River steelhead ESU)
- Areas upstream of Pelton Dam in Oregon's Deschutes River drainage (Middle Columbia River steelhead ESU)
- Areas upstream of Big Cliff and Detroit Dams in Oregon's North Santiam River drainage (Upper Willamette River Chinook salmon and steelhead ESUs)
- Areas upstream of Green Peter Dam in Oregon's South Santiam River drainage (Upper Willamette River Chinook salmon and steelhead ESUs)
- Historically occupied areas in Washington's Wind River (Columbia River chum salmon ESU) and Wilson and Naneum Creeks (Middle Columbia River steelhead ESU)
- Historically occupied areas in Idaho's Lemhi River drainage (Snake River steelhead ESU)

While it is not possible to conclude at this time that any of these historically occupied areas warrant designation, we believe it is useful to signal to the public that these specific areas may be considered for possible designation in the future. Throughout the range of these ESUs a number of technical recovery teams are evaluating the conservation needs of these ESUs and providing guidance on what will be needed for their conservation. We will revise critical habitat designations as new information is developed through this process. Any designation of unoccupied areas would be based on the required determination that such area is essential for the conservation of an ESU and would be subject to separate rulemaking with the opportunity for notice and comment.

Lateral Extent of Critical Habitat

In past designations we have described the lateral extent of critical habitat in various ways, ranging from fixed distances to ''functional'' zones defined by important riparian functions (65 FR 7764; February 16, 2000). Both approaches presented difficulties, and this was highlighted in several comments (most of which requested that we focus on aquatic areas only) received in response to the ANPR (68 FR 55926; September 29, 2003). Designating a set riparian zone width will (in some places) accurately reflect the distance from the stream on which PCEs might be found, but in other cases may over- or understate the distance. Designating a functional buffer avoids that problem, but makes it difficult for Federal agencies to know in advance what areas are critical habitat. To address these issues we are proposing to define the lateral extent of designated critical habitat as the width of the stream channel defined by the ordinary high-water line as defined by the U.S. Army Corps of Engineers (COE) in 33 CFR 329.11. This approach is consistent with the specific mapping requirements described in agency regulations at 50 CFR 424.12(c). In areas for which ordinary high-water has not been defined pursuant to 33 CFR 329.11, the width of the stream channel shall be defined by its bankfull elevation. Bankfull elevation is the level at which water begins to leave the channel and move into the floodplain (Rosgen, 1996) and is reached at a discharge which generally has a recurrence interval of 1 to 2 years on the annual flood series (Leopold *et al.*, 1992). Such an interval is commensurate with nearly all of the juvenile freshwater life phases of most salmon and steelhead ESUs. Therefore, it is reasonable to conclude that for an occupied stream reach this lateral extent is regularly ''occupied''. Moreover, the bankfull elevation can be readily discerned for a variety of stream reaches and stream types using recognizable water lines (*e.g.*, marks on rocks) or vegetation boundaries (Rosgen, 1996).

As underscored in previous critical habitat designations, the quality of aquatic habitat within stream channels is intrinsically related to the adjacent riparian zones and floodplain, to surrounding wetlands and uplands, and to non-fish-bearing streams above occupied stream reaches. Human activities that occur outside the stream can modify or destroy physical and biological features of the stream. In addition, human activities that occur within and adjacent to reaches upstream (*e.g.*, road failures) or downstream (*e.g.*, dams) of designated stream reaches can also have demonstrable effects on physical and biological features of designated reaches.

In the relatively few cases where we are designating lake habitats (*e.g.*, Lake Ozette), we believe that the lateral extent may best be defined as the perimeter of the water body as displayed on standard 1:24,000 scale topographic maps or the elevation of ordinary high water, whichever is greater. In estuarine and nearshore marine areas we believe that extreme high water is the best descriptor of lateral extent. For nearshore marine areas we focused particular attention on the geographical area occupied by the Puget Sound ESUs (Chinook and Hood Canal summer-run chum salmon) because of the unique ecological setting and well-documented importance of the area's nearshore habitats to these species. We are designating the area inundated by extreme high tide because it encompasses habitat areas typically inundated and regularly occupied during the spring and summer when juvenile salmon are migrating in the nearshore zone and relying heavily on forage, cover, and refuge qualities provided by these occupied habitats. As noted above for stream habitat areas, human activities that occur outside the area inundated by extreme or ordinary high water can modify or destroy physical and biological features of the nearshore habitat areas, and Federal agencies must be aware of these important habitat linkages as well.

Military Lands

The Sikes 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, by November 17, 2001, an INRMP. An INRMP integrates implementation of the military mission of the installation with stewardship of the natural resources found there. Each INRMP includes: an assessment of the ecological needs on the installation, including the need to provide for the conservation of listed species; a statement of goals and priorities; a detailed description of management actions to be implemented to provide for these ecological needs; and a monitoring and adaptive management plan. Among other things, each INRMP must, to the extent appropriate and applicable, provide for fish and wildlife management, fish and wildlife habitat enhancement or modification, wetland protection, enhancement, and restoration where necessary to support fish and wildlife and enforcement of applicable natural resource laws.

The National Defense Authorization Act for Fiscal Year 2004 (Pub. L. 108–136) amended the ESA to limit areas eligible for designation as critical habitat. Specifically, section 4(a)(3)(B)(i) of the ESA (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.''

To address this new provision we contacted the DOD and requested information on all INRMPs that might benefit salmon and steelhead. (In response to the ANPR (68 FR 55926; September 29, 2003) we had already received a letter from the U.S. Marine Corps regarding this and other issues associated with a possible critical habitat designation on its facilities in the range of the Southern California steelhead ESU, which is not addressed in this notice). The military services identified 16 installations in Washington, Oregon, and Idaho with INRMPs in place or under development. We determined that the following 11 facilities with final INRMPs overlap with habitat areas under consideration for critical habitat designation: (1) Naval Submarine Base, Bangor; (2) Naval Undersea Warfare Center, Keyport; (3) Naval Ordnance Center, Port Hadlock (Indian Island); (4) Naval Radio Station, Jim Creek; (5) Naval Fuel Depot, Manchester; (6) Naval Air Station Whidbey Island; (7) Naval Air Station, Everett; (8) Bremerton Naval Hospital; (9) Fort Lewis (Army); (10) Pier 23 (Army); and (11) Yakima Training Center (Army). The first ten facilities are located within the range of the Puget Sound chinook salmon ESU, and two of these sites—Bangor and Port Hadlock (Indian Island)—are also within the range of the Hood Canal summer-run chum salmon ESU. The Army's Yakima Training Center is located within the range of the Upper Columbia River steelhead ESU.

We identified habitat of value to listed salmonids in each INRMP and reviewed these plans, as well as other information available regarding the management of these military lands. Our review indicates that each of these INRMPs addresses habitat for salmonids, and all contain measures that provide benefits to ESA-listed salmon and steelhead (NMFS, 2005f). Examples of the types of benefits include actions that control erosion, protect riparian zones, minimize stormwater and construction impacts, reduce contaminants, and monitor listed species and their habitats. Also, we have received information from the DOD identifying national security impacts at all of their affected sites if designated as critical habitat. Our consideration of such impacts is separate from our assessment of INRMPs, but serves as an independent and sufficient basis for our determination not to designate critical habitats.

Critical Habitat Analytical Review Teams

To assist in the designation of critical habitat, we convened several CHARTs organized by major geographic domains that roughly correspond to salmon recovery planning domains. The CHARTs consisted of Federal biologists and habitat specialists from NMFS, the USFWS, USFS, and BLM, with demonstrated expertise regarding salmonid habitat and related protective efforts within the domain. The CHARTs were tasked with assessing biological information pertaining to areas under consideration for designation as critical habitat. The CHARTs also reconvened to review the public comments and any new information regarding the ESUs and habitat in their domain. Their work and determinations are documented in a final CHART report (NMFS, 2005a).

The CHARTs examined each habitat area within the watershed to determine whether the stream reaches or lakes occupied by the species contain the physical or biological features essential to conservation. As noted previously, the CHARTs also relied on their experience conducting ESA section 7 consultations and existing management plans and protective measures to determine whether these features may require special management considerations or protection.In addition to occupied areas, the definition of critical habitat also includes unoccupied areas if we determine the area is essential for conservation. Accordingly, the CHARTs were next asked whether there were any unoccupied areas within the historical range of the ESUs that may be essential for conservation. Where information was currently available to make this determination, the CHARTs identified those currently unoccupied areas essential for conservation (*i.e.*, in Hood Canal for the summer-run chum salmon ESU). In most cases, the CHARTs did not have information available that would allow them to draw that conclusion. Information important to making these determinations is currently being developed through the recovery planning processes. The CHARTs nevertheless identified several areas they believe may be determined essential through future recovery planning efforts (see ''Unoccupied Areas'' section above).

The CHARTs were next asked to determine the relative conservation value of each area for each ESU. The CHARTs scored each habitat area based on several factors related to the quantity and quality of the physical and biological features. They next considered each area in relation to other areas and with respect to the population occupying that area. Based on a consideration of the raw scores for each area, and a consideration of that area's contribution in relation to other areas and in relation to the overall population structure of the ESU, the CHARTs rated each habitat area as having a ''high,'' ''medium,'' or ''low'' conservation value. The preliminary CHART ratings were reviewed by several state and tribal comanagers in advance of the proposed rule, and the CHARTs made needed changes prior to that rule. State and tribal comanagers also evaluated our proposed rule and provided comments and new information which were also reviewed and incorporated as needed by the CHARTs in the preparation of the final designations.

The rating of habitat areas as having a high, medium or low conservation value provided information useful to inform the Secretary's exercise of discretion in determining whether the benefits of exclusion outweigh the benefits of designation in ESA section 4(b)(2). The higher the conservation value for an area, the greater the likely benefit of the ESA section 7 protections. We recognized that the ''benefit of designation'' would also depend on the likelihood of a consultation occurring and the improvements in species' conservation that may result from changes to proposed Federal actions. To address this concern, we asked the CHARTs to develop a profile for a ''low leverage'' watershed—that is, a watershed where it was unlikely there would be a section 7 consultation, or where a section 7 consultation, if it did occur, would yield few conservation benefits (cite CHART report). For watersheds not meeting the ''low leverage'' profile, we considered their conservation rating to be a fair assessment of the benefit of designation. For watersheds meeting the ''low leverage'' profile, we considered the benefit of designation to be an increment lower than the conservation rating. For example, a watershed with a ''high'' conservation value but ''low leverage'' was considered to have a ''medium'' benefit of designation, and so forth (NMFS, 2005a; NMFS, 2005c).

As discussed earlier, the scale chosen for the ''specific area'' referred to in section 3(5)(a) was a watershed, as delineated by USGS methodology.

There were some complications with this delineation that required us to adapt the CHARTs' approach for some areas. In particular, a large stream or river might serve as a rearing and migration corridor to and from many watersheds, yet be embedded itself in a watershed. In any given watershed through which it passes, the stream may have a few or several tributaries. For rearing/migration corridors embedded in a watershed, the CHARTs were asked to rate the conservation value of the watershed based on the tributary habitat. We assigned the rearing/migration corridor the rating of the highest-rated watershed for which it served as a rearing/migration corridor. The reason for this treatment of migration corridors is the role they play in the salmon's life cycle. Salmon are anadromous—born in fresh water, migrating to salt water to feed and grow, and returning to fresh water to spawn. Without a rearing/migration corridor to and from the sea, salmon cannot complete their life cycle. It would be illogical to consider a spawning and rearing area as having a particular conservation value and not consider the associated rearing/migration corridor as having a similar conservation value.

V. Application of ESA Section 4(b)(2) (16 U.S.C. 1533 (b)(2))

The foregoing discussion describes those areas that are eligible for designation as critical habitat—the specific areas that fall within the ESA section 3(5)(A) definition of critical habitat, minus those lands owned or controlled by the DOD, or designated for its use, that are covered by an INRMP that we have determined in writing provides a benefit to the species.

Specific areas eligible for designation are not automatically designated as critical habitat. Section 4(b)(2) of the ESA requires the Secretary to first consider the economic impact, impact on national security, and any other relevant impact of designation. The Secretary has the discretion to exclude an area from designation if he determines the benefits of exclusion (that is, avoiding the impact that would result from designation), outweigh the benefits of designation based upon best scientific and commercial data. The Secretary may not exclude an area from designation if exclusion will result in the extinction of the species. Because the authority to exclude is discretionary, exclusion is not required for any areas. In this rulemaking, the Secretary has applied his statutory discretion to exclude areas from critical habitat for several different reasons (NMFS, 2005c).

In this exercise of discretion, the first issue we must address is the scope of impacts relevant to the 4(b)(2) evaluation. As discussed in the Background and Previous Federal Action section, we are redesignating critical habitat for these 12 ESUs because the previous designations were vacated. (*National Association of Homebuilders* v. *Evans*, 2002 WL 1205743 No. 00–CV–2799 (D.D.C.) (*NAHB*)). The *NAHB* court had agreed with the reasoning of the Court of Appeals for the Tenth Circuit in *New Mexico Cattle Growers Association* v. *U.S. Fish and Wildlife Service*, 248 F.3d 1277 (10th Cir. 2001). In that decision, the Tenth Circuit stated ''[t]he statutory language is plain in requiring some kind of consideration of economic impact in the critical habitat designation phase.'' The court concluded that, given the USFWS' failure to distinguish between ''adverse modification'' and ''jeopardy'' in its 4(b)(2) analysis, the USFWS must analyze the full impacts of critical habitat designation, regardless of whether those impacts are coextensive with other impacts (such as the impact of the jeopardy requirement).

In redesignating critical habitat for these salmon ESUs, we have followed the Tenth Circuit Court's directive regarding the statutory requirement to consider the economic impact of designation. Areas designated as critical habitat are subject to ESA section 7 requirements, which provide that Federal agencies ensure that their actions are not likely to destroy or adversely modify critical habitat. To evaluate the economic impact of critical habitat we first examined our voluminous section 7 consultation record for these as well as other ESUs of salmon. (For thoroughness, we examined the consultation record for other ESUs to see if it shed light on the issues.) That record includes consultations on habitat-modifying Federal actions both where critical habitat has been designated and where it has not. We could not discern a distinction between the impacts of applying the jeopardy provision versus the adverse modification provision in occupied critical habitat. Given our inability to detect a measurable difference between the impacts of applying these two provisions, the only reasonable alternative seemed to be to follow the recommendation of the Tenth Circuit, approved by the *NAHB* court—to measure the coextensive impacts; that is, measure the entire impact of applying the adverse modification provision of section 7, regardless of whether the jeopardy provision alone would result in the identical impact.

The Tenth Circuit's opinion only addressed ESA section 4(b)(2)'s requirement that economic impacts be considered. The court did not address how ''other relevant impacts'' were to be considered, nor did it address the benefits of designation. Because section 4(b)(2) requires a consideration of other relevant impacts of designation, and the benefits of designation, and because our record did not support a distinction between impacts resulting from application of the adverse modification provision versus the jeopardy provision, we are uniformly considering coextensive impacts and coextensive benefits, without attempting to distinguish the benefit of a critical habitat consultation from the benefit that would otherwise result from a jeopardy consultation that would occur even if critical habitat were not designated. To do otherwise would distort the balancing test contemplated by section 4(b)(2).

The principal benefit of designating critical habitat is that Federal activities that may affect such habitat are subject to consultation pursuant to section 7 of the ESA. Such consultation requires every Federal agency to ensure that any action it authorizes, funds or carries out is not likely to result in the destruction or adverse modification of critical habitat. This complements the section 7 provision that Federal agencies ensure that their actions are not likely to jeopardize the continued existence of a listed species. Another benefit is that the designation of critical habitat can serve to educate the public regarding the potential conservation value of an area and thereby focus and contribute to conservation efforts by clearly delineating areas of high conservation value for certain species. It is unknown to what extent this process actually occurs, and what the actual benefit is, as there are also concerns, noted above, that a critical habitat designation may discourage such conservation efforts.

The balancing test in ESA section 4(b)(2) contemplates weighing benefits that are not directly comparable—the benefit associated with species conservation balanced against the economic benefit, benefit to national security, or other relevant benefit that results if an area is excluded from designation. Section 4(b)(2) does not specify a method for the weighing process. Agencies are frequently required to balance benefits of regulations against impacts; E.O. 12866 established this requirement for Federal agency regulation. Ideally such a balancing would involve first translating

the benefits and impacts into a common metric. Executive branch guidance from the OMB suggests that benefits should first be monetized (*i.e.*, converted into dollars). Benefits that cannot be monetized should be quantified (for example, numbers of fish saved). Where benefits can neither be monetized nor quantified, agencies are to describe the expected benefits (OMB, 2003).

It may be possible to monetize benefits of critical habitat designation for a threatened or endangered species in terms of willingness-to-pay (OMB, 2003). However, we are not aware of any available data that would support such an analysis for salmon. In addition, ESA section 4(b)(2) requires analysis of impacts other than economic impacts that are equally difficult to monetize, such as benefits to national security of excluding areas from critical habitat. In the case of salmon designations, impacts to Northwest tribes are an ''other relevant impact'' that also may be difficult to monetize.

An alternative approach, approved by OMB (OMB, 2003), is to conduct a cost-effectiveness analysis. A cost-effectiveness analysis ideally first involves quantifying benefits, for example, percent reduction in extinction risk, percent increase in productivity, or increase in numbers of fish. Given the state of the science, it would be difficult to quantify reliably the benefits of including particular areas in the critical habitat designation. Although it is difficult to monetize or quantify benefits of critical habitat designation, it is possible to differentiate among habitat areas based on their relative contribution to conservation. For example, habitat areas can be rated as having a high, medium, or low conservation value. The qualitative ordinal evaluations can then be combined with estimates of the economic costs of critical habitat designation in a framework that essentially adopts that of cost-effectiveness. Individual habitat areas can then be assessed using both their biological evaluation and economic cost, so that areas with high conservation value and lower economic cost might be considered to have a higher priority for designation, while areas with a low conservation value and higher economic cost might have a higher priority for exclusion. While this approach can provide useful information to the decision-maker, there is no rigid formula through which this information translates into exclusion decisions. Every geographical area containing habitat eligible for designation is different, with a unique set of ''relevant impacts'' that may be considered in the exclusion process. Regardless of the analytical approach, ESA section 4(b)(2) makes clear that what weight the agency gives various impacts and benefits, and whether the agency excludes areas from the designation, is discretionary.

Exclusions Based on Impacts to Tribes

The principal benefit of designating critical habitat is that Federal activities that may affect such habitat are subject to consultation pursuant to section 7 of the ESA. There is a broad array of activities on Indian lands that may trigger section 7. For this analysis, we considered what those activities may be and what the likely effect would be on conservation of each ESU if the activities were not subject to section 7 consultation. (We realize that the activities in question would still be subject to section 7 consultation and to the requirement that Federal agencies not jeopardize species' continued existence. However, as described above, because we cannot discern a difference in the application of the jeopardy and adverse modification requirements in our consultations for salmon and steelhead, we are considering coextensive impacts and coextensive benefits.) To determine the benefit of designation, we considered the number of stream miles within Indian lands, whether those stream miles were located in high, medium, or low conservation value areas, and the number of expected section 7 consultations in those areas (NMFS, 2005g).

In addition, in more than 20 letters to NMFS—several in response to the agency's ANPR (68 FR 55926; September 29, 2003) and proposed rule (69 FR 74572; December 14, 2004)—the tribes have documented how they are already working to address the habitat needs of the species on these lands as well as in the larger ecosystem, and are fully aware of the conservation value of their lands.

There are several benefits to excluding Indian lands. The longstanding and distinctive relationship between the Federal and tribal governments is defined by treaties, statutes, executive orders, judicial decisions, and agreements, which differentiate tribal governments from the other entities that deal with, or are affected by, the Federal government. This relationship has given rise to a special Federal trust responsibility involving the legal responsibilities and obligations of the United States toward Indian Tribes and the application of fiduciary standards of due care with respect to Indian lands, tribal trust resources, and the exercise of tribal rights. Pursuant to these authorities, Indian lands are recognized as unique and have been retained by Indian Tribes or have been set aside for tribal use. These lands are managed by Indian Tribes in accordance with tribal goals and objectives within the framework of applicable treaties and laws.

In addition to the distinctive trust relationship, for salmon and steelhead in the Northwest, there is a unique partnership between the Federal government and Indian tribes regarding salmon management. Northwest Indian tribes are regarded as ''co-managers'' of the salmon resource, along with Federal and state managers. This co-management relationship evolved as a result of numerous court decisions clarifying the tribes' treaty right to take fish in their usual and accustomed places.

The tribes have stated in letters and meetings that designation of Indian lands as critical habitat will undermine long-term working relationships and reduce the capacity of tribes to participate at current levels in the many and varied forums across four states addressing ecosystem management and conservation of fisheries resources.

The benefits of excluding Indian lands from designation include: (1) The furtherance of established national policies, our Federal trust obligations and our deference to the tribes in management of natural resources on their lands; (2) the maintenance of effective long-term working relationships to promote the conservation of salmonids on an ecosystem-wide basis across four states; (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 believe that the current co-manager process addressing activities on an ecosystem-wide basis across three states is currently beneficial for the conservation of the listed ESUs. Because the co-manager process provides for coordinated ongoing focused action through a variety of forums, we find the benefits of this process to be greater than the benefits of applying ESA section 7 to Federal activities on Indian lands (NMFS, 2005g). Additionally, we have determined that the exclusion of tribal lands will not result in the extinction of the species concerned. We also believe that maintenance of our

current co-manager relationship consistent with existing policies is an important benefit to continuation of our tribal trust responsibilities and relationship. Based upon our consultation with the Tribes, we believe that designation of Indian lands as critical habitat would adversely impact our working relationship and the benefits resulting from this relationship.

Based upon these considerations, we have decided to exercise agency discretion under ESA section 4(b)(2) and exclude Indian lands from the critical habitat designation for these ESUs of salmonids. The Indian lands specifically excluded from critical habitat are those defined in the Secretarial Order, including: (1) Lands held in trust by the United States for the benefit of any Indian tribe; (2) land held in trust by the United States for any Indian Tribe or individual subject to restrictions by the United States against alienation; (3) fee lands, either within or outside the reservation boundaries, owned by the tribal government; and (4) fee lands within the reservation boundaries owned by individual Indians. We have determined that these exclusions, together with the other exclusions described in this rule, will not result in extinction of the species (NMFS, 2005c).

Impacts to Landowners With Contractual Commitments to Conservation

Conservation agreements with non-Federal landowners (*e.g.*, HCPs) enhance species conservation by extending species' protections beyond those available through section 7 consultations. In the past decade we have encouraged 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 coercive methods (61 FR 63854; December 2, 1996).

Section 10(a)(1)(B) of the ESA authorizes us to issue to non-Federal entities a permit for the incidental take of endangered and threatened species. This permit allows a non-Federal landowner to proceed with an activity that is legal in all other respects, but that results in the incidental taking of a listed species (*i.e.*, take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity). The ESA specifies that an application for an incidental take permit must be accompanied by a conservation plan, and specifies the content of such a plan. The purpose of such an HCP is to describe and ensure that the effects of the permitted action on covered species are adequately minimized and mitigated, and that the action does not appreciably reduce the survival and recovery of the species.

To date we have not excluded critical habitat on lands covered by an HCP, but we acknowledged in our proposed rule that this was an emerging issue and that the benefits of such exclusions may outweigh the benefits of designation (69 FR 74623; December 14, 2004). As described in greater detail above (see Comment 42) and in our assessment of HCPs associated with this final rulemaking (NMFS, 2005e), the analysis required for these types of exclusions requires careful consideration of the benefits of designation versus the benefits of exclusion to determine whether benefits of exclusion outweigh benefits of designation. The benefits of designation typically arise from additional section 7 protections as well as enhanced public awareness once specific areas are identified as critical habitat. The benefits of exclusion generally relate to relieving regulatory burdens on existing conservation partners, maintaining good working relationships with them, and encouraging the development of new partnerships.

Based on comments received on our proposed rule, we could not conclude that all landowners view designation of critical habitat as imposing a burden, and exclusion from designation as removing that burden and thereby strengthening the ongoing relationship. Where an HCP partner affirmatively requests designation, exclusion is likely to harm rather than benefit the relationship. Where an HCP partner has remained silent on the benefit of exclusion of its land, we do not believe the record supports a presumption that exclusion will enhance the relationship. Similarly, we do not believe it provides an incentive to other landowners to seek an HCP if our exclusions are not in response to an expressed landowner preference. We anticipate further rulemaking in the near future to refine these designations, for example, in response to developments in recovery planning. As part of future revisions, we will consider information we receive from those with approved HCPs regarding the effect of designation on our ongoing partnership. We did not consider pending HCPs for exclusion, both because we do not want to prejudge the outcome of the ongoing HCP process, and because we expect to have future opportunities to refine the designation and consider whether exclusion will outweigh the benefit of designation in a particular case.

During the comment period we received comments from only three landowners with current HCPs that they would consider exclusion as a benefit to our ongoing relationship—WDNR, Green Diamond Resources Company, and West Fork Timber Company. For those HCPs, we analyzed the activities covered by the HCPs, the protections afforded by the HCP agreement, and the Federal activities that are likely to occur on the affected lands. We considered the number of stream miles within these lands, whether those stream miles were located in high, medium, or low conservation value areas, and the number of expected section 7 consultations in those areas. From this information we determined the benefit of designation, which we then weighed against the benefit of exclusion. We concluded that the conservation benefits to the species outweigh the conservation benefits of designation and therefore have excluded lands covered by these agreements in this final designation. The analysis is described in further detail in NMFS (2005e). We have determined that these exclusions, together with the other exclusions described in this rule, will not result in extinction of the species (NMFS, 2005c).

Exclusions Based on National Security Impacts

As noted previously (see *Military Lands* section), we evaluated 11 DOD sites with draft or final INRMPs and determined that each INRMP provides a benefit to the listed salmon or steelhead ESUs under consideration at the site. Therefore, we conclude that those areas subject to final INRMPs are not eligible for designation pursuant to section 4(a)(3)(B)(i) of the ESA (16 U.S.C. 1533(a)(3)(B)(i)). At the request of the DOD (and in the case that an INRMP might not provide a benefit to the species), we also assessed the impacts on national security that may result from designating these and other DOD sites as critical habitat.

We contacted the DOD by letter and requested information about the impacts to national security that may result from designating critical habitat at the following 24 military sites in Washington: (1) Naval Submarine Base, Bangor; (2) Naval Undersea Warfare Center, Keyport; (3) Naval Ordnance Center, Port Hadlock (Indian Island); (4) Naval Radio Station, Jim Creek; (5) Naval Fuel Depot, Manchester; (6) Naval Air Station Whidbey Island; (7) Naval Air Station, Everett; (8) Bremerton Naval Hospital; (9) Fort Lewis (Army); (10) Pier 23 (Army); (11) Yakima Training Center (Army); (12) Puget Sound Naval Shipyard; (13) Naval Submarine Base

Bangor security zone; (14) Strait of Juan de Fuca naval air-to-surface weapon range, restricted area; (15) Hood Canal and Dabob Bay naval non-explosive torpedo testing area; (16) Strait of Juan de Fuca and Whidbey Island naval restricted areas; (17) Admiralty Inlet naval restricted area; (18) Port Gardner Naval Base restricted area; (19) Hood Canal naval restricted areas; (20) Port Orchard Passage naval restricted area; (21) Sinclair Inlet naval restricted areas; (22) Carr Inlet naval restricted areas; (23) Dabob Bay/Whitney Point naval restricted area; and (24) Port Townsend/Indian Island/Walan Point naval restricted area. All of these sites overlap with habitat areas occupied by one or more of the 12 ESUs and under consideration for critical habitat designation. A number of other sites (primarily armories and small Army facilities) were also assessed and were determined to be outside the areas under consideration.

In response to our letter, both the Army and Navy provided information clarifying site locations and describing the types of military activities that occur at these sites. They also listed the potential changes in these activities and consequent national security impacts that critical habitat designation would cause in these areas. Both military agencies concluded that critical habitat designation at any of these sites would likely impact national security by diminishing military readiness. The possible impacts include: Preventing, restricting, or delaying training or testing exercises or access to such sites; restricting or delaying activities associated with vehicle/vessel/facility maintenance and ordnance loading; delaying response times for ship deployments and overall operations; and creating uncertainties regarding ESA consultation (*e.g.*, reinitiation requirements) or imposing compliance conditions that would divert military resources. Also, both military agencies cited their ongoing and positive consultation history with NMFS and underscored cases where they are implementing best management practices to reduce impacts on listed salmonids.

Most of the affected DOD sites overlap habitat areas in nearshore zones occupied by Puget Sound Chinook or Hood Canal summer-run chum salmon. The overlap consists of approximately 64 miles (103 km) of shoreline out of the 2,376 miles (3,824 km) of total occupied shoreline for these two ESUs. Freshwater and estuarine overlap areas include approximately 20 miles (32 km) of stream used by Puget Sound Chinook salmon and 10 miles (16 km) used by Upper Columbia River steelhead, representing less than one percent of the total freshwater and estuarine habitat area for these two ESUs. The CHARTs assessing conservation values for these overlap areas concluded that all of them were of high conservation value to the respective ESUs. However, the overlap areas are a small percentage of the total area for the affected ESUs. Designating these DOD sites will likely reduce the readiness capability of the Army and Navy, both of which are actively engaged in training, maintaining, and deploying forces in the current war on terrorism. Therefore we conclude that the benefits of exclusion outweigh the benefits of designation and are not designating these DOD sites as critical habitat.

Between the time of the proposed rule and this final rule we discussed with the DOD the importance of the nearshore areas to these ESUs (especially for juvenile chum and Chinook salmon) and asked whether national security impacts could still be avoided adjacent to Navy security zones in Puget Sound if critical habitat was confined to a narrow nearshore zone from the line of extreme high tide down to the line of mean lower low water (except in areas associated with an approved INRMP or in areas with related DOD easements or right-of-ways). The DOD concurred that limiting the designation in this way will avoid the national security concerns associated with these sites while retaining critical habitat in tidal areas important to juvenile salmon in areas with lesser security restrictions. The final designation accordingly includes these tidal areas. We have determined that these exclusions, together with the other exclusions described in this rule, will not result in extinction of the species (NMFS, 2005c).

Exclusions Based on Economic Impacts

Our assessment of economic impact generated considerable interest from commenters on the ANPR (68 FR 55926; September 29, 2003) and the proposed rule (69 FR 74572; December 14, 2004). Based on new information and comments received on the proposed rule we have updated our estimates of economic impacts of designating each of the particular areas found to meet the definition of critical habitat (NMFS, 2005d). This report is available from NMFS (see **ADDRESSES**).

The first step in the overall economic analysis was to identify existing legal and regulatory constraints on economic activity that are independent of critical habitat designation, such as Clean Water Act (CWA) requirements. Coextensive impacts of the ESA section 7 requirement to avoid jeopardy were not considered part of the baseline. Also, we have stated our intention to revisit the existing critical habitat designations for Snake River Chinook and sockeye salmon ESUs (58 FR 68543; December 28, 1993), if appropriate, following completion of related rulemaking (67 FR 6215; February 11, 2002). Given the uncertainty that these designations will remain in place in their current configuration, we decided not to consider them as part of the baseline for the ESA section 4(b)(2) analysis.

Next, from the consultation record, we identified Federal activities that might affect habitat and that might result in an ESA section 7 consultation. (We did not consider Federal actions, such as the approval of a fishery, that might affect the species directly but not affect its habitat.) We identified ten types of activities including: Hydropower dams; non-hydropower dams and other water supply structures; Federal lands management, including grazing (considered separately); transportation projects; utility line projects; instream activities, including dredging (considered separately); activities permitted under EPA's National Pollution Discharge Elimination System; sand & gravel mining; residential and commercial development; and agricultural pesticide applications. Based on our consultation record and other available information, we determined the modifications each type of activity was likely to undergo as a result of section 7 consultation (regardless of whether the modification might be required by the jeopardy or the adverse modification provision). We developed an expected direct cost for each type of action and projected the likely occurrence of each type of project in each watershed, using existing spatial databases (*e.g.*, the COE 404(d) permit database). Finally, we aggregated the costs from the various types of actions and estimated an annual impact, taking into account the probability of consultation occurring and the likely rate of occurrence of that project type.

This analysis allowed us to estimate the coextensive economic impact of designating each ''particular area'' (that is, each habitat area, or aggregated occupied stream reaches in a watershed). Expected annual economic impacts ranged from zero to $15.3 million per habitat area, with a median of $163.3 thousand. Where a watershed included both tributaries and a migration corridor that served other watersheds, we estimated the separate impacts of designating the tributaries and the migration corridor. We did this

by identifying those categories of activities most likely to affect tributaries and those most likely to affect larger migration corridors.

Because of the methods we selected and the data limitations, portions of our analysis both under-and over-estimate the coextensive economic impact of ESA section 7 requirements. For example, we lacked complete data on the likely impact on flows at non-Federal hydropower projects, which would increase economic impacts. In addition, operation and maintenance of the FCRPS has changed in response to ESA section 7 requirements. Federal agencies estimate direct costs of the FCRPS fish and wildlife program and other conservation measures have averaged almost $250 million annually over the period 1995–2004, while the power costs during that same period have averaged approximately $320 million annually. Many of these costs would occur without the requirements of section 7, but there is currently no estimate available of what portion of these costs are attributable to section 7. Finally, we did not have information about potential changes in irrigation flows associated with section 7 consultation. These impacts would increase the estimate of coextensive costs. On the other hand, we estimated an impact on all activities occurring within the geographic boundaries of a watershed, even though in some cases activities would be far removed from occupied stream reaches and so might not require modification (or even consultation).

In addition, we were unable to document significant costs of critical habitat designation that occur outside the section 7 consultation process, including costs resulting from state or local regulatory burdens imposed on developers and landowners as a result of a Federal critical habitat designation.

In determining whether the economic benefit of excluding a habitat area might outweigh the benefit of designation to the species, we took into account the many data limitations described above. The ESA requires that we make critical habitat designations within a short time frame ''with such data as may be available'' at the time. Moreover, the cost-effectiveness approach we adopted accommodated many of these data limitations by considering the relative benefits of designation and exclusion, giving priority to excluding habitat areas with a relatively lower benefit of designation and a relatively higher economic impact (NMFS, 2005c).

The circumstances of most of the listed ESUs seem well suited to a cost-effectiveness approach. West Coast salmon are wide-ranging species and occupy numerous habitat areas with thousands of stream miles. Not all occupied areas, however, are of equal importance to conserving an ESU. Within the currently occupied range there are areas that support highly productive populations, areas that support less productive populations, and areas that support production in only some years. Some populations within an ESU may be more important to long-term conservation of the ESU than other populations. Therefore, in many cases it may be possible to construct different scenarios for achieving conservation. Scenarios might have more or less certainty of achieving conservation, and more or less economic impact.

Our first step in constructing an exclusion scenario was to identify all areas we would consider for an economic exclusion, based on dollar thresholds. The next step was to examine the overall picture and consider whether any of the areas eligible for exclusion make an important contribution to conservation, in the context of what areas remained (that is, those areas not identified as eligible for exclusion). We did not consider habitat areas for exclusion if they had a high conservation value rating. Based on the rating process used by the CHARTs, we judged that all of the high value areas make an important contribution to conservation.

In developing criteria for the first step, we chose dollar thresholds that we anticipated would lead most directly to a cost-effective scenario. We considered for exclusion low value habitat areas with an economic impact greater than $85,000 and medium value habitat areas with an economic impact greater than $300,000. (These amounts were adjusted for habitat areas within the range of the Snake River steelhead ESU to account for the smaller-sized watersheds.)

The criteria we selected for identifying habitat areas eligible for exclusion do not represent an objective judgment that, for example, a low value area is worth a certain dollar amount and no more. The statute directs us to balance dissimilar values with a limited amount of time (and, therefore, information). It emphasizes the discretionary nature of the balancing task. Moreover, while our approach follows the Tenth Circuit's direction to consider coextensive economic impacts, we nevertheless must acknowledge that not all of the costs will be avoided by exclusion from designation. Finally, the cost estimates developed by our economic analysis do not have obvious break points that would lead to a logical division between ''high,'' ''medium,'' and ''low'' costs. Given these factors, a judgment that any particular dollar threshold is objectively ''right,'' would be neither necessary nor possible. Rather, what economic impact is ''high'' and, therefore, might outweigh the benefit of designating a medium or low value habitat area is a matter of discretion and depends on the policy context. The policy context in which we carry out this task led us to select dollar thresholds that would likely lead to a cost-effective designation in a limited amount of time with a relatively simple process.

In the second step of the process, we asked the CHARTs whether any of the habitat areas eligible for exclusion make an important contribution to conservation. The CHARTs considered this question in the context of all of the areas eligible for exclusion as well as the information they had developed in providing the initial conservation ratings. The following section describes the results of applying the two-step process to each ESU. The results are discussed in greater detail in a separate report that is available for public review and comment (NMFS, 2005c). We have determined that these exclusions, together with the other exclusions described in this rule, will not result in extinction of the species (NMFS, 2005c).

VI. Critical Habitat Designation

We are designating approximately 20,630 mi (33,201 km) of lake, riverine, and estuarine habitat in Washington, Oregon, and Idaho, and 2,312 mi (3,721 km) of nearshore marine habitat in Puget Sound within the geographical areas presently occupied by the 12 ESUs. Some of the areas designated overlap with two or more ESUs (Table 12), and approximately 906 mi (1,458 km) overlap with Indian lands. Some of these areas also overlap with military lands (described in the *Military Lands* section), which are not designated either because they are subject to INRMPs that benefit listed species (NMFS, 2005f) or were determined to have national security impacts that outweigh the benefit of designation. The annual net economic impacts (coextensive with ESA section 7) associated with the areas designated for all ESUs are estimated to be approximately $201.2 million.

TABLE 12.—APPROXIMATE QUANTITY OF HABITAT* AND OWNERSHIP WITHIN WATERSHEDS CONTAINING HABITAT AREAS DESIGNATED AS CRITICAL HABITAT.

ESU	Streams (mi) (km)	Lakes (sq mi) (sq km)	Nearshore Marine (m) (km)	Ownership (percent)			
				Federal	Tribal	State	Private
Puget Sound, Chinook Salmon	1,683 2,709	41 106	2,182 3,512	46.4	1.0	10.0	42.6
Lower Columbia, River Chinook, Salmon	1,311 2,110	33 85.5	.....	37.3	0.0	8.0	54.7
Upper Willamette, River Chinook, Salmon	1,472 2,369	18 46.6	.....	38.6	0.4	0.9	60.1
Upper Columbia, River Spring-run, Chinook Salmon	974 1,568	4 10.4	.....	53.4	0.0	7.3	39.2
Hood Canal, Summer-run Chum, Salmon	79 127	....	377 607	49.1	0.7	11.9	37.6
Columbia River, Chum Salmon	708 1,139	.....	.....	15.8	0.0	14.0	69.8
Ozette Lake, Sockeye Salmon	42 68	12 31	.....	19.0	1.2	7.0	71.5
Upper Columbia, River Steelhead	1,262 2,031	7 18.1	.....	45.3	5.7	8.3	40.7
Snake River Basin, Steelhead	8,049 12,954	4 10	.....	65.7	3.9	2.1	28.3
Middle Columbia, River Steelhead	5,815 9,358	.....	.....	26.0	13.2	3.7	57.1
Lower Columbia, River Steelhead	2,324 3,740	27 70	.....	44.5	0.5	5.9	49.2
Upper Willamette, River Steelhead	1,276 2,054	2 5.2	.....	9.7	0.3	1.9	88.1

*These estimates are the total amount for each ESU. They do not account for overlapping areas (e.g., the Columbia River corridor) designated for multiple ESUs.

These areas designated, summarized below by ESU, are either (1) occupied and contain physical and biological features essential to the conservation of the species and that may require special management considerations or protection, or (2) are not presently occupied but are considered essential for the conservation of the species.

Puget Sound Chinook Salmon

There are 61 watersheds within the range of this ESU. Twelve watersheds received a low rating, 9 received a medium rating, and 40 received a high rating of conservation value to the ESU (NMFS, 2005a). Nineteen nearshore marine areas also received a rating of high conservation value.

Habitat areas for this ESU include 2,216 mi (3,566 km) of stream and 2,376 mi (3,824 km) of nearshore marine areas. Of these, 19 stream miles (31 km) and 48 nearshore miles (175 km) are not being designated because they are within lands controlled by the military that contain qualifying INRMPs or they would result in national security impacts that outweigh the benefits of designation. Fifty-two miles (85 km) of stream and 146 mi (237 km) of nearshore marine areas are being excluded because they overlap with Indian lands (see *Government-to-Government Relationship With Tribes*). Also, we are excluding approximately 98 miles (158 km) of stream covered by two HCPs because the benefits of exclusion outweigh the benefits of designation.

As a result of the balancing process for economic impacts described above, the Secretary is excluding from the designation the habitat areas shown in Table 13. Of the habitat areas eligible for designation, approximately 377 stream miles (606 km) are being excluded because the economic benefits of exclusion outweigh the benefits of designation. Total potential estimated economic impact, with no exclusions, would be $93.2 million. The exclusions identified in Table 13 would reduce the total estimated economic impact to $71.3 million (NMFS, 2005c).

TABLE 13.—HABITAT AREAS WITHIN THE GEOGRAPHICAL RANGE OF THE PUGET SOUND CHINOOK SALMON ESU AND EXCLUDED FROM CRITICAL HABITAT

Watershed code	Watershed name	Area excluded
1711000201	Bellingham Bay	Entire watershed.
1711000202	Samish River	Entire watershed.
1711000204	Birch Bay	Entire watershed.
1711000401	Upper North Fork Nooksack River	WDNR HCP lands.
1711000402	Middle Fork Nooksack River	WDNR HCP lands.
1711000403	South Fork Nooksack River	WDNR HCP lands, Indian lands.
1711000404	Lower North Fork Nooksack River	WDNR HCP lands, Indian lands.
1711000405	Nooksack River	Indian lands.

TABLE 13.—HABITAT AREAS WITHIN THE GEOGRAPHICAL RANGE OF THE PUGET SOUND CHINOOK SALMON ESU AND EXCLUDED FROM CRITICAL HABITAT—Continued

Watershed code	Watershed name	Area excluded
1711000506	Cascade River	WDNR HCP lands.
1711000507	Skagit River/Illabot Creek	WDNR HCP lands.
1711000508	Baker River	Entire watershed.
1711000603	Lower Suiattle River	WDNR HCP lands.
1711000604	Lower Sauk River	WDNR HCP lands, Indian lands.
1711000701	Middle Skagit River/Finney Creek	WDNR HCP lands.
1711000702	Lower Skagit River/Nookachamps Creek	WDNR HCP lands.
1711000801	North Fork Stillaguamish River	WDNR HCP lands.
1711000802	South Fork Stillagaumish River	DOD lands, WDNR HCP lands.
1711000901	Tye and Beckler Rivers	WDNR HCP lands.
1711000903	Skykomish River/Wallace River	WDNR HCP lands.
1711000904	Sultan River	WDNR HCP lands.
1711000905	Skykomish River/Woods Creek	WDNR HCP lands.
1711001003	Middle Fork Snoqualmie River	WDNR HCP lands.
1711001004	Lower Snoqualmie River	WDNR HCP lands.
1711001101	Pilchuck River	WDNR HCP lands.
1711001102	Snohomish River	Indian lands.
1711001202	Lake Sammamish	Entire watershed.
1711001203	Lake Washington	Tributaries only.
1711001204	Sammamish River	Entire watershed.
1711001301	Upper Green River	WDNR HCP lands.
1711001302	Middle Green River	WDNR HCP lands.
1711001303	Lower Green River	WDNR HCP lands.
1711001401	Upper White River	WDNR HCP lands.
1711001402	Lower White River	Indian lands.
1711001405	Lower Puyallup River	Indian lands.
1711001503	Lowland	DOD lands, Indian lands.
1711001601	Prairie	Entire watershed.
1711001602	Prairie	Entire watershed.
1711001701	Skokomish River	WDNR HCP lands, Green Diamond HCP lands, Indian lands.
1711001802	Lower West Hood Canal Frontal	Entire watershed.
1711001804	Duckabush River	WDNR HCP lands.
1711001806	Big Quilcene River	Entire watershed.
1711001808	West Kitsap	Entire watershed.
1711001900	Kennedy/Goldsborough	Entire watershed.
1711001901	Puget	Entire watershed.
1711001902	Prairie	Entire watershed.
1711001904	Puget Sound/East Passage	Entire watershed.
1711002003	Dungeness River	WDNR HCP lands.
1711002004	Port Angeles Harbor	Entire watershed.
1711002007	Elwha River	Indian lands.
N01	Nearshore Marine Area #1	Indian lands.
N03	Nearshore Marine Area #3	Indian lands.
N04	Nearshore Marine Area #4	Indian lands.
N05	Nearshore Marine Area #5	DOD lands.
N06	Nearshore Marine Area #6	DOD lands, Indian lands.
N09	Nearshore Marine Area #9	DOD lands, Indian lands.
N11	Nearshore Marine Area #11	DOD lands.
N13	Nearshore Marine Area #13	Indian lands.
N14	Nearshore Marine Area #14	DOD lands, Indian lands.
N15	Nearshore Marine Area #15	DOD lands, Indian lands.
N17	Nearshore Marine Area #17	Indian lands.
N18	Nearshore Marine Area #18	DOD lands.

Lower Columbia River Chinook Salmon ESU

There are 48 watersheds within the range of this ESU. Four watersheds received a low rating, 13 received a medium rating, and 31 received a high rating of conservation value to the ESU (NMFS, 2005a). The lower Columbia River rearing/migration corridor downstream of the spawning range is considered to have a high conservation value and is the only habitat area designated in one of the high value watersheds.

As a result of the balancing process for economic impacts described above, the Secretary is excluding from the designation the habitat areas shown in Table 14. Of the 1,655 miles (2,663 km) of habitat areas eligible for designation, approximately 228 stream miles (367 km) are being excluded because the economic benefits of exclusion outweigh the benefits of designation. Also, we are excluding approximately 162 miles (261 km) of stream covered by one HCP because the benefits of exclusion outweigh the benefits of designation. Total potential estimated economic impact, with no exclusions, would be $37.6 million. The exclusions identified in Table 14 would reduce the total estimated economic impact to $28.2 million (NMFS, 2005c).

TABLE 14.—HABITAT AREAS WITHIN THE GEOGRAPHICAL RANGE OF THE LOWER COLUMBIA RIVER CHINOOK SALMON ESU AND EXCLUDED FROM CRITICAL HABITAT

Watershed code	Watershed name	Area excluded
1707010510	Little White Salmon River	Entire watershed.
1707010511	Wind River	WDNR HCP lands.
1707010512	Middle Columbia/Grays Creek	Tributaries only.
1708000106	Washougal River	WDNR HCP lands.
1708000109	Salmon Creek	Entire watershed.
1708000302	Beaver Creek/Columbia River	Entire watershed.
1708000304	Germany/Abernathy	Entire watershed.
1708000305	Skamokawa/Elochoman	WDNR HCP lands.
1708000403	Cowlitz Valley Frontal	WDNR and West Fork Timber. Company HCP lands.
1708000501	Tilton River	Entire watershed.
1708000504	North Fork Toutle River	Tributaries only.
1708000506	South Fork Toutle River	WDNR HCP lands.
1708000507	East Willapa	WDNR HCP lands.
1708000601	Youngs River	Entire watershed.
1708000603	Grays Bay	WDNR HCP lands.
1709000704	Abernethy Creek	Entire watershed.
1709001105	Eagle Creek	Entire watershed.

Upper Willamette River Chinook Salmon ESU

There are 60 watersheds within the range of this ESU. Nineteen watersheds received a low rating, 18 received a medium rating, and 23 received a high rating of conservation value to the ESU (NMFS, 2005a). The lower Willamette/Columbia River rearing/migration corridor downstream of the spawning range is also considered to have a high conservation value and is the only habitat designated in four of the high value watersheds.

As a result of the balancing process for economic impacts described above, the Secretary is excluding from the designation the habitat areas shown in Table 15. Of the 1,796 miles (2,890 km) of habitat areas eligible for designation, approximately 324 stream miles (521 km) are being excluded because the economic benefits of exclusion outweigh the benefits of designation. Total potential estimated economic impact, with no exclusions, would be $32.2 million. The exclusions identified in Table 15 would reduce the total estimated economic impact to $25.6 million (NMFS, 2005c).

TABLE 15.—HABITAT AREAS WITHIN THE GEOGRAPHICAL RANGE OF THE UPPER WILLAMETTE RIVER CHINOOK SALMON ESU AND EXCLUDED FROM CRITICAL HABITAT

Watershed code	Watershed name	Area excluded
1709000104	Salmon Creek	Entire watershed.
1709000201	Row River	Entire watershed.
1709000202	Mosby Creek	Entire watershed.
1709000203	Upper Coast Fork Willamette River	Entire watershed.
1709000205	Lower Coast Fork Willamette River	Entire watershed.
1709000301	Long Tom River	Entire watershed.
1709000302	Muddy Creek	Tributaries only.
1709000304	Oak Creek	Tributaries only.
1709000404	Blue River	Entire watershed.
1709000406	Mohawk River	Entire watershed.
1709000701	Mill Creek/Willamette River	Tributaries only.
1709000702	Rickreall Creek	Tributaries only.
0709000703	Willamette River/Chehalem Creek	Tributaries only.
1709000704	Abernethy Creek	Tributaries only.
1709000804	Lower South Yamhill River	Entire watershed.
1709000805	Salt Creek/South Yamhill River	Entire watershed.
1709000806	North Yamhill River	Entire watershed.
1709000807	Yamhill River	Entire watershed.
1709000901	Abiqua Creek/Pudding River	Entire watershed.
1709000902	Butter Creek/Pudding River	Tributaries only.
1709000903	Rock Creek/Pudding River	Entire watershed.
1709000904	Senecal Creek/Mill Creek	Tributaries only.
1709001105	Eagle Creek	Entire watershed.

Upper Columbia River Spring-Run Chinook Salmon ESU

There are 31 watersheds within the range of this ESU. Five watersheds received a medium rating and 26 received a high rating of conservation value to the ESU (NMFS, 2005a). The Columbia River rearing/migration corridor downstream of the spawning range is considered to have a high conservation value and is the only habitat area designated in 15 of the high value watersheds identified above.

As a result of the balancing process for economic impacts described above,

the Secretary is excluding from the designation the habitat areas shown in Table 16. Of the 1,002 miles (1,613 km) of habitat areas eligible for designation, approximately 28 stream miles (45 km) are being excluded because the economic benefits of exclusion outweigh the benefits of designation. Total potential estimated economic impact, with no exclusions, would be $17.6 million. The exclusions identified in Table 16 would reduce the total estimated economic impact to $14.2 million (NMFS, 2005c).

TABLE 16.—HABITAT AREAS WITHIN THE GEOGRAPHICAL RANGE OF THE UPPER COLUMBIA RIVER SPRING-RUN CHINOOK SALMON ESU AND EXCLUDED FROM CRITICAL HABITAT

Watershed code	Watershed name	Area excluded
1702000807	Lower Methow River	Tributaries only.
1702001002	Lake Entiat	Tributaries only.
1702001104	Icicle/Chumstick	Tributaries only.
1702001105	Lower Wenatchee River	Tributaries only.

Hood Canal Summer-Run Chum Salmon ESU

There are 12 watersheds within the range of this ESU. Three watersheds received a medium rating and nine received a high rating of conservation value to the ESU (NMFS, 2005a). Five nearshore marine areas also received a rating of high conservation value.

Habitat areas for this ESU include 88 mi (142 km) of stream and 402 mi (647 km) of nearshore marine areas. Of these, 16 nearshore miles (26 km) are not being designated because they are within lands controlled by the military that contain qualifying INRMPs or they would result in national security impacts that outweigh the benefits of designation. Four miles (6 km) of stream and 9 mi (14 km) of nearshore marine areas are being excluded because they overlap with Indian lands (see *Government-to-Government Relationship With Tribes*). Also, we are excluding approximately 5 miles (8 km) of stream covered by one HCP because the benefits of exclusion outweigh the benefits of designation.

As a result of the balancing process for economic impacts described above, the Secretary is excluding from the designation the habitat areas shown in Table 17. Total potential estimated economic impact, with no exclusions, would be $7.1 million. The exclusions identified in Table 17 would reduce the total estimated economic impact to $6.8 million (NMFS, 2005c).

TABLE 17.—HABITAT AREAS WITHIN THE GEOGRAPHICAL RANGE OF THE HOOD CANAL SUMMER-RUN CHUM SALMON ESU AND EXCLUDED FROM CRITICAL HABITAT

Watershed code	Watershed name	Area excluded
1711001701	Skokomish River	Indian lands.
1711001802	Lower West Hood Canal Frontal	WDNR HCP lands.
1711001808	West Kitsap	WDNR HCP lands.
1711002003	Dungeness River	WDNR HCP lands.
N15	Nearshore Marine Area #15	DOD lands, Indian lands.
N17	Nearshore Marine Area #17	Indian lands.
N18	Nearshore Marine Area #18	DOD lands.

Columbia River Chum Salmon ESU

There are 20 watersheds within the range of this ESU. Three watersheds received a medium rating and 17 received a high rating of conservation value to the ESU (NMFS, 2005a). The lower Columbia River rearing/migration corridor downstream of the spawning range is considered to have a high conservation value and is the only habitat area designated in one of the high value watersheds identified above.

As a result of the balancing process for economic impacts described above, the Secretary is excluding from the designation the habitat areas shown in Table 18. Of the 725 miles (1,167 km) of habitat areas eligible for designation, approximately 3 stream miles (5 km) are being excluded because the economic benefits of exclusion outweigh the benefits of designation. Also, we are excluding approximately 4 miles (6 km) of stream covered by one HCP because the benefits of exclusion outweigh the benefits of designation. Total potential estimated economic impact, with no exclusions, would be $17.1 million. The exclusions identified in Table 18 would reduce the total estimated economic impact to $16.5 million (NMFS, 2005c).

TABLE 18.—HABITAT AREAS WITHIN THE GEOGRAPHICAL RANGE OF THE COLUMBIA RIVER CHUM SALMON ESU AND EXCLUDED FROM CRITICAL HABITAT

Watershed code	Watershed name	Area excluded
1708000106	Washougal River	WDNR HCP lands.
1708000305	Skamokawa/Elochoman	WDNR HCP lands.
1708000504	North Fork Toutle River	Entire Watershed.
1708000505	Green River	Entire Watershed.
1708000507	East Willapa	WDNR HCP lands.
1708000603	Grays Bay	WDNR HCP lands.

Ozette Lake Sockeye Salmon ESU

There is one watershed supporting the Ozette Lake sockeye ESU and it was rated as having a high conservation value (NMFS, 2005a). As a result of the balancing process described above, no habitat is being excluded due to economic impacts. However, we are excluding approximately <1 mile (1.6 km) of stream because it overlaps with Indian lands (see *Government-to-Government Relationship With Tribes*). Also, we are excluding approximately 2 miles (3 km) of stream covered by one HCP because the benefits of exclusion outweigh the benefits of designation. Total potential estimated economic impact, with no exclusions, would be $2.7 thousand. The exclusions identified in Table 19 would not reduce the total estimated economic impact (NMFS, 2005c).

TABLE 19.—HABITAT AREAS WITHIN THE GEOGRAPHICAL RANGE OF THE OZETTE LAKE SOCKEYE SALMON ESU AND EXCLUDED FROM CRITICAL HABITAT

Watershed code	Watershed name	Area excluded
1710010102	Hoh/Quillayute	WDNR HCP lands, Indian Lands.

Upper Columbia River Steelhead ESU

There are 42 watersheds within the range of this ESU. Three watersheds received a low rating, 8 received a medium rating, and 31 received a high rating of conservation value to the ESU (NMFS, 2005a). The Columbia River rearing/migration corridor downstream of the spawning range is considered to have a high conservation value and is the only habitat area designated in 11 of the high value watersheds identified above.

Habitat areas for this ESU include 1,332 miles (2,144 km) of stream. Of these, 10 stream miles (17 km) are not being designated because they are within lands controlled by the military that contain qualifying INRMPs or they would result in national security impacts that outweigh the benefits of designation. Approximately 6 stream miles (10 km) are being excluded because the economic benefits of exclusion outweigh the benefits of designation. Also, we are excluding approximately 54 miles (87 km) of stream because they overlap with Indian lands (see *Government-to-Government Relationship With Tribes*).

As a result of the balancing process for economic impacts described above, the Secretary is excluding from the designation the habitat areas shown in Table 20. Total potential estimated economic impact, with no exclusions, would be $27.1 million. The exclusions identified in Table 20 would reduce the total estimated economic impact to $20.7 million (NMFS, 2005c).

TABLE 20.—HABITAT AREAS WITHIN THE GEOGRAPHICAL RANGE OF THE UPPER COLUMBIA RIVER STEELHEAD ESU AND EXCLUDED FROM CRITICAL HABITAT

Watershed code	Watershed name	Area excluded
1702000503	Foster Creek	Entire watershed.
1702000504	Jordan/Tumwater	Indian lands.
1702000505	Upper Columbia/Swamp Creek	Indian lands.
1702000603	Salmon Creek	Indian lands.
1702000604	Okanogan River/Omak Creek	Indian lands.
1702000605	Lower Okanogan River	Indian lands.
1702000903	Lower Chelan	Entire watershed.
1702001002	Lake Entiat	Tributaries only.
1702001004	Columbia River/Sand Hollow	DOD lands.
1702001204	Rattlesnake Creek	Entire watershed.
1702001604	Yakima River/Hanson Creek	DOD lands.

Snake River Basin Steelhead ESU

There are 289 watersheds within the range of this ESU. Fourteen watersheds received a low rating, 44 received a medium rating, and 231 received a high rating of conservation value to the ESU (NMFS, 2005a). The lower Snake/Columbia River rearing/migration corridor downstream of the spawning range is considered to have a high conservation value and is the only habitat area designated in 15 of the high value watersheds identified above.

As a result of the balancing process for economic impacts described above, the Secretary is excluding from the designation the habitat areas shown in Table 21. Of the 8,225 miles (13,237 km) of habitat areas eligible for designation, approximately 134 miles (216 km) of stream are being excluded because the economic benefits of exclusion outweigh the benefits of designation. Also, we are excluding approximately 39 miles (63 km) of stream because they overlap with Indian lands (see *Government-to-Government Relationship With Tribes*). Total potential estimated economic impact, with no exclusions, would be $30.0 million. The exclusions identified in Table 21 would reduce the total estimated economic impact to $29.2 million (NMFS, 2005c).

TABLE 21.—HABITAT AREAS WITHIN THE GEOGRAPHICAL RANGE OF THE SNAKE RIVER STEELHEAD ESU AND EXCLUDED FROM CRITICAL HABITAT

Watershed code	Watershed name	Area excluded
1706010402	Meadow Creek	Indian lands.
1706010704	Flat Creek	Entire watershed.

TABLE 21.—HABITAT AREAS WITHIN THE GEOGRAPHICAL RANGE OF THE SNAKE RIVER STEELHEAD ESU AND EXCLUDED FROM CRITICAL HABITAT—Continued

Watershed code	Watershed name	Area excluded
1706010705	Pataha Creek	Entire watershed.
1706010808	Lower Palouse River	Entire watershed.
1706020107	Road Creek	Entire watershed.
1706020202	Pahsimeroi River/Falls Creek	Entire watershed.
1706020319	Napias Creek	Entire watershed.
1706020404	Agency Creek	Entire watershed.
1706020707	Big Mallard Creek	Entire watershed.
1706020904	Salmon River/Cottonwood Creek	Indian lands.
1706020917	Rice Creek	Entire watershed.
1706030401	Middle Fork Clearwater River/Maggie Creek	Indian lands.
1706030402	Clear Creek	Indian lands.
1706030501	Lower South Fork Clearwater River	Indian lands.
1706030503	South Fork Clearwater River/Peasley Creek	Tributaries only.
1706030512	Three Mile Creek	Entire watershed.
1706030513	Cottonwood Creek	Indian lands.
1706030601	Lower Clearwater River	Tributaries only.
1706030602	Clearwater River/Lower Potlatch River	Indian lands.
1706030603	Potlatch River/Middle Potlatch Creek	Indian lands.
1706030608	Clearwater River/Bedrock Creek	Indian lands.
1706030610	Big Canyon Creek	Indian lands.
1706030613	Upper Orofino Creek	Entire watershed.
1706030614	Jim Ford Creek	Indian lands.
1706030620	Clearwater River/Fivemile Creek	Indian lands.
1706030621	Clearwater River/Sixmile Creek	Indian lands.
1706030622	Clearwater River/Tom Taha Creek	Indian lands.
1706030623	Lower Lawyer Creek	Indian lands.
1706030627	Cottonwood Creek	Indian lands.
1706030628	Upper Lapwai Creek	Indian lands.
1706030629	Mission Creek	Indian lands.
1706030630	Upper Sweetwater Creek	Indian lands.
1706030631	Lower Sweetwater Creek	Indian lands.

Middle Columbia River Steelhead ESU

There are 114 watersheds within the range of this ESU. Nine watersheds received a low rating, 24 received a medium rating, and 81 received a high rating of conservation value to the ESU (NMFS, 2005a). The lower Columbia River rearing/migration corridor downstream of the spawning range is considered to have a high conservation value and is the only habitat area designated in three of the high value watersheds identified above.

As a result of the balancing process for economic impacts described above, the Secretary is excluding from the designation the habitat areas shown in Table 22. Of the 6,529 miles (10,507 km) of habitat areas eligible for designation, approximately 115 miles (185 km) of stream are being excluded because the economic benefits of exclusion outweigh the benefits of designation. Also, we are excluding approximately 599 miles (964 km) of stream because they overlap with Indian lands (see *Government-to-Government Relationship With Tribes*). Total potential estimated economic impact, with no exclusions, would be $43.1 million. The exclusions identified in Table 22 would reduce the total estimated economic impact to $38.4 million (NMFS, 2005c).

TABLE 22.—HABITAT AREAS WITHIN THE GEOGRAPHICAL RANGE OF THE MIDDLE COLUMBIA RIVER STEELHEAD ESU AND EXCLUDED FROM CRITICAL HABITAT

Watershed code	Watershed name	Area excluded
1703000301	Ahtanum Creek	Indian lands.
1703000303	Upper Toppenish Creek	Indian lands.
1703000304	Lower Toppenish Creek	Indian lands.
1703000305	Satus Creek	Indian lands.
1703000306	Yakima River/Spring Creek	Indian lands.
1707010209	Pine Creek	Entire watershed.
1707010211	Lower Walla Walla River	Tributaries only.
1707010301	Upper Umatilla River	Indian lands.
1707010302	Meacham Creek	Indian lands.
1707010303	Umatilla River/Mission Creek	Indian lands.
1707010304	Wildhorse Creek	Entire watershed.
1707010308	Stage Gulch	Entire watershed.
1707010310	Lower Butter Creek	Entire watershed.
1707010502	Fifteenmile Creek	Indian lands.
1707010510	Little White Salmon River	Entire watershed.
1707010512	Middle Columbia/Grays Creek	Tributaries only
1707010601	Upper Klickitat River	Indian lands.

TABLE 22.—HABITAT AREAS WITHIN THE GEOGRAPHICAL RANGE OF THE MIDDLE COLUMBIA RIVER STEELHEAD ESU AND EXCLUDED FROM CRITICAL HABITAT—Continued

Watershed code	Watershed name	Area excluded
1707010602	Middle Klickitat River	Indian lands.
1707020305	Lower Middle Fork John Day River	Tributaries only.
1707020405	Lower John Day River/Clarno	Tributaries only.
1707020410	Lower John Day River/Scott Canyon	Indian lands.
1707020414	Lower John Day River/McDonald Ferry	Indian lands.
1707030603	Upper Deschutes River	Indian lands.
1707030604	Mill Creek	Indian lands.
1707030605	Beaver Creek	Indian lands.
1707030606	Warm Springs River	Indian lands.
1707030607	Middle Deschutes River	Indian lands.
1707030610	White River	Entire watershed.
1707030704	Mud Springs Creek	Entire watershed.
1707030705	Lower Trout Creek	Indian lands.

Lower Columbia River Steelhead ESU

There are 32 watersheds within the range of this ESU. Two watersheds received a low rating, 11 received a medium rating, and 29 received a high rating of conservation value to the ESU (NMFS, 2005a). The lower Columbia River rearing/migration corridor downstream of the spawning range is considered to have a high conservation value and is the only habitat area designated in one of the high value watersheds identified above.

As a result of the balancing process for economic impacts described above, the Secretary is excluding from the designation the habitat areas shown in Table 23. Of the 2,673 miles (4,302 km) of habitat areas eligible for designation, approximately 227 stream miles (365 km) are being excluded because the economic benefits of exclusion outweigh the benefits of designation. Also, we are excluding approximately 110 miles (177 km) of stream covered by one HCP because the benefits of exclusion outweigh the benefits of designation. Total potential estimated economic impact, with no exclusions, would be $36.6 million. The exclusions identified in Table 23 would reduce the total estimated economic impact to $29.3 million (NMFS, 2005c).

TABLE 23.—HABITAT AREAS WITHIN THE GEOGRAPHICAL RANGE OF THE LOWER COLUMBIA RIVER STEELHEAD ESU AND EXCLUDED FROM CRITICAL HABITAT

Watershed code	Watershed name	Area excluded
1707010511	Wind River	WDNR HCP lands.
1707010512	Middle Columbia/Grays Creek	Tributaries only.
1707010513	Middle Columbia/Eagle Creek	WDNR HCP lands.
1708000105	Bull Run River	Entire watershed
1708000106	Washougal River	WDNR HCP lands.
1708000107	Columbia Gorge Tributaries	WDNR HCP lands.
1708000109	Salmon Creek	Entire Watershed.
1708000205	East Fork Lewis River	WDNR HCP lands.
1708000206	Lower Lewis River	WDNR HCP lands.
1708000301	Kalama River	WDNR HCP lands.
1708000402	Upper Cowlitz River	WDNR HCP lands.
1708000403	Cowlitz Valley Frontal	WDNR HCP and West Fork Timber Company lands.
1708000501	Tilton River	Entire Watershed.
1708000503	Jackson Prairie	WDNR HCP lands.
1708000504	North Fork Toutle River	WDNR HCP lands.
1708000505	Green River	WDNR HCP lands.
1708000506	South Fork Toutle River	WDNR HCP lands.
1708000507	East Willapa	WDNR HCP lands.
1708000508	Coweeman	WDNR HCP lands.
1709000704	Abernethy Creek	Entire Watershed.

Upper Willamette River Steelhead ESU

There are 38 watersheds within the range of this ESU. Seventeen watersheds received a low rating, 6 received a medium rating, and 15 received a high rating of conservation value to the ESU (NMFS, 2005a). The lower Willamette/Columbia River rearing/migration corridor downstream of the spawning range is also considered to have a high conservation value and is the only habitat area designated in four of the high value watersheds identified above.

As a result of the balancing process for economic impacts described above, the Secretary is excluding from the designation the habitat areas shown in Table 24. Of the 1,830 miles (2,945 km) of habitat areas eligible for designation, approximately 545 stream miles (877 km) are being excluded because the economic benefits of exclusion outweigh the benefits of designation. Also, we are excluding approximately 11 miles (18 km) of stream because they overlap with Indian lands. (see *Government-to-Government Relationship With Tribes*). Total potential estimated economic impact, with no exclusions, would be $15.2 million. The exclusions identified in Table 24 would reduce the total

estimated economic impact to $10.7 million (NMFS, 2005c).

TABLE 24.—HABITAT AREAS WITHIN THE GEOGRAPHICAL RANGE OF THE UPPER WILLAMETTE RIVER STEELHEAD ESU AND EXCLUDED FROM CRITICAL HABITAT

Watershed code	Watershed name	Area excluded
1709000701	Mill Creek/Willamette River	Tributaries only.
1709000702	Rickreall Creek	Tributaries only.
1709000703	Willamette River/Chehalem Creek	Tributaries only.
1709000704	Abernethy Creek	Tributaries only.
1709000801	Upper South Yamhill River	Indian lands.
1709000802	Willamina Creek	Entire watershed.
1709000803	Mill Creek/South Yamhill River	Entire watershed.
1709000804	Lower South Yamhill River	Tributaries only.
1709000805	Salt Creek/South Yamhill River	Entire watershed.
1709000806	North Yamhill River	Entire watershed.
1709000807	Yamhill River	Tributaries only.
1709000902	Butte Creek/Pudding River	Tributaries only.
1709000903	Rock Creek/Pudding River	Entire watershed.
1709000904	Senecal Creek/Mill Creek	Tributaries only.
1709001001	Dairy Creek	Entire watershed.
1709001003	Scoggins Creek	Entire watershed.
1709001004	Rock Creek/Tualatin River	Entire watershed.
1709001005	Lower Tualatin River	Entire watershed.

VII. Effects of Critical Habitat Designation

ESA Section 7 Consultation

Section 7(a) of the ESA requires Federal agencies, including NMFS, to evaluate their actions with respect to any species that is proposed or listed as endangered or threatened and with respect to its critical habitat, if any is proposed or designated. Regulations implementing this provision of the ESA are codified at 50 CFR 402. Section 7(a)(4) of the ESA requires Federal agencies to confer with us on any action that is likely to jeopardize the continued existence of a proposed species or result in the destruction or adverse modification of proposed critical habitat. Conference reports provide conservation recommendations to assist the agency in eliminating conflicts that may be caused by the proposed action. The conservation recommendations in a conference report are advisory.

We may issue a formal conference report if requested by a Federal agency. Formal conference reports include an opinion that is prepared according to 50 CFR 402.14, as if the species were listed or critical habitat designated. We may adopt the formal conference report as the biological opinion when the species is listed or critical habitat designated, if no substantial new information or changes in the action alter the content of the opinion (see 50 CFR 402.10(d)).

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

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

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

Activities on Federal lands that may affect these ESUs or their critical habitat will require ESA section 7 consultation. Activities on private or state lands requiring a permit from a Federal agency, such as a permit from the COE under section 404 of the CWA, a section 10(a)(1)(B) permit from NMFS, or some other Federal action, including funding (*e.g.*, Federal Highway Administration (FHA) or Federal Emergency Management Agency (FEMA) funding), will also be subject to the section 7 consultation process. Federal actions not affecting listed species or critical habitat and actions on non-Federal and private lands that are not Federally funded, authorized, or permitted do not require section 7 consultation.

Activities Affected by Critical Habitat Designation

Section 4(b)(8) of the ESA requires that we evaluate briefly and describe, in any proposed or final regulation that designates critical habitat, those activities involving a Federal action that may adversely modify such habitat or that may be affected by such designation. A wide variety of activities may affect critical habitat and, when carried out, funded, or authorized by a Federal agency, require that an ESA

section 7 consultation be conducted. Generally these include water and land management actions of Federal agencies (*e.g.*, USFS, BLM, COE, BOR, the FHA, NRCS, National Park Service (NPS), Bureau of Indian Affairs (BIA), and the Federal Energy Regulatory Commission (FERC)) and related or similar actions of other Federally regulated projects and lands, including livestock grazing allotments by the USFS and BLM; hydropower sites licensed by the FERC; dams built or operated by the COE or BOR; timber sales and other vegetation management activities conducted by the USFS, BLM, and BIA; irrigation diversions authorized by the USFS and BLM; road building and maintenance activities authorized by the FHA, USFS, BLM, NPS, and BIA; and mining and road building/maintenance activities authorized by the states of Washington, Oregon, and Idaho. Other actions of concern include dredge and fill, mining, diking, and bank stabilization activities authorized or conducted by the COE, habitat modifications authorized by the FEMA, and approval of water quality standards and pesticide labeling and use restrictions administered by the EPA.

The Federal agencies that will most likely be affected by this critical habitat designation include the USFS, BLM, BOR, COE, FHA, NRCS, NPS, BIA, FEMA, EPA, and the FERC. This designation will provide these agencies, private entities, and the public with clear notification of critical habitat designated for listed salmonids and the boundaries of the habitat. This designation will also assist these agencies and others in evaluating the potential effects of their activities on listed salmon and their critical habitat and in determining if ESA section 7 consultation with NMFS is needed.

As noted above, numerous private entities also may be affected by this critical habitat designation because of the direct and indirect linkages to an array of Federal actions, including Federal projects, permits, and funding. For example, private entities may harvest timber or graze livestock on Federal land or have special use permits to convey water or build access roads across Federal land; they may require Federal permits to armor stream banks, construct irrigation withdrawal facilities, or build or repair docks; they may obtain water from Federally funded and operated irrigation projects; or they may apply pesticides that are only available with Federal agency approval. These activities will need to be analyzed with respect to their potential to destroy or adversely modify critical habitat. In some cases, proposed activities may require modifications that may result in decreases in activities such as timber harvest and livestock and crop production. The transportation and utilities sectors may need to modify the placement of culverts, bridges and utility conveyances (*e.g.*, water, sewer and power lines) to avoid barriers to fish migration. Developments occurring in or near salmon streams (*e.g.*, marinas, residential, or industrial facilities) that require Federal authorization or funding may need to be altered or built in a manner that ensures that critical habitat is not destroyed or adversely modified as a result of the construction, or subsequent operation, of the facility. These are just a few examples of potential impacts, but it is clear that the effects will encompass numerous sectors of private and public activities. If you have questions regarding whether specific activities will constitute destruction or adverse modification of critical habitat, contact NMFS (see **ADDRESSES** and **FOR FURTHER INFORMATION CONTACT**).

VIII. Required Determinations

Administrative Procedure Act

This rulemaking covers over 20,000 miles of streams across three states. Unlike the previous critical habitat designations it contains several thousand geographic points identifying the extent of the designations. The proposed rule generated substantial public interest. In addition to comments received during four public hearings we received a total of 5,230 written comments (5,111 of these in the form of email with nearly identical language). Many commenters expressed concerns about how the rule would be implemented. Additionally, our experience in implementing the 2000 critical habitat designations suggests that the Administrative Procedure Act (APA) and critical habitat regulations' minimum 30-day delay in effective date nor the 60-day delay required by the Congressional Review Act for a ''major rule'' such as this are sufficient for this rule. In view of the geographic scope of this rule, our prior experience with a rule of this scope, the current level of public interest in this rule, and in order to provide for efficient administration of the rule once effective, we are providing a 120-day delay in effective date. As a result this rule will be effective on January 2, 2006. This will allow us the necessary time to provide for outreach to and interaction with the public, to minimize confusion and educate the public about activities that may be affected by the rule, and to work with Federal agencies and applicants to provide for an orderly transition in implementing the rule.

Regulatory Planning and Review

In accordance with E.O. 12866, this document is a significant rule and has been reviewed by the OMB. As noted above, we have prepared several reports to support the exclusion process under section 4(b)(2) of the ESA. The economic costs of the critical habitat designations are described in our economic report (NMFS, 2005d). The benefits of the designations are described in the CHART report (NMFS, 2005a) and the 4(b)(2) report (NMFS, 2005c). The CHART report uses a biologically-based ranking system for gauging the benefits of applying section 7 of the ESA to particular watersheds. Because data are not available to express these benefits in monetary terms, we have adopted a cost-effectiveness framework, as outlined in the 4(b)(2) report (NMFS, 2005c). This approach is in accord with OMB's guidance on regulatory analysis (U.S. Office of Management and Budget. Circular A–4, Regulatory Analysis, September 17, 2003). By taking this approach, we seek to designate sufficient critical habitat to meet the biological goal of the ESA while imposing the least burden on society, as called for by E.O. 12866.

In assessing the overall cost of critical habitat designation for the 12 salmon and steelhead ESUs addressed in this rule, the annual total impact figures given in the final economic analysis (NMFS, 2005d) cannot be added together to obtain an aggregate annual impact. Because some watersheds are included in more than one ESU, a simple summation would entail duplication, resulting in an overestimate. Accounting for this duplication, the aggregate annual coextensive economic impact of the 12 critical habitat designations is $201.7 million (in contrast to a $243.6 million aggregate annual economic impact from designating *all* areas considered in the 4(b)(2) process for these ESUs). These amounts include impacts that are coextensive with the implementation of the jeopardy requirement of section 7 (NMFS, 2005d).

In addition, there are approximately $500–700 million in annual costs related to salmon and steelhead conservation borne by the FCRPS and other major hydropower projects in the Pacific Northwest. The proportion of these costs attributable to ESA section 7 implementation is unknown, but the share of incremental costs from critical habitat designation alone is unlikely to be significant.

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

Under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*, as amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA) of 1996), whenever an agency is required to publish a notice of rulemaking for any proposed or final rule, it must prepare and make available for public comment a regulatory flexibility analysis that describes the effects of the rule on small entities (*i.e.*, small businesses, small organizations, and small government jurisdictions). We have prepared a final regulatory flexibility analysis, and this document is available upon request (see **ADDRESSES**). This analysis estimates that the number of regulated small entities potentially affected by this rulemaking ranges from zero to 2,945 depending on the ESU. The estimated coextensive costs of section 7 consultation incurred by small entities is estimated to range from $2,375 to $59.4 million depending on the ESU. As described in the analysis, we considered various alternatives for designating critical habitat for these 12 ESUs. We considered and rejected the alternative of not designating critical habitat for any of the ESUs because such an approach did not meet the legal requirements of the ESA. We also examined and rejected an alternative in which all the potential critical habitat of the 12 salmon and steelhead ESUs is designated (*i.e.*, no areas are excluded) because many of the areas considered to have a low conservation value also had relatively high economic impacts that might be mitigated by excluding those areas from designation. A third alternative we examined and rejected would exclude all habitat areas with a low or medium conservation value. While this alternative furthers the goal of reducing economic impacts, we could not make a determination that the benefits of excluding all habitat areas with low and medium conservation value outweighed the benefits of designation. Moreover, for some habitat areas the incremental economic benefit from excluding that area is relatively small. Therefore, after considering these alternatives in the context of the section 4(b)(2) process of weighing benefits of exclusion against benefits of designation, we determined that the current approach to designation (*i.e.*, designating some but not all areas with low or medium conservation value) provides an appropriate balance of conservation and economic mitigation and that excluding the areas identified in this rulemaking would not result in extinction of the ESUs. It is estimated that small entities will save from zero to $18.0 million in compliance costs, depending on the ESU, due to the exclusions made in these final designations.

As noted above, we will continue to study alternative approaches in future rulemakings designating critical habitat. As part of that assessment, we will examine alternative methods for analyzing the economic impacts of designation on small business entities, which will inform our Regulatory Flexibility Analysis as well as our analysis under section 4(b)(2) of the ESA.

E.O. 13211

On May 18, 2001, the President issued an Executive Order (E.O.) on regulations that significantly affect energy supply, distribution, and use. E.O. 13211 requires agencies to prepare Statements of Energy Effects when undertaking certain actions. This rule may be a significant regulatory action under E.O. 12866. We have determined, however, that the energy effects of the regulatory action are unlikely to exceed the energy impact thresholds identified in E.O. 13211.

In the final rule we note that nine of the ESUs addressed in these critical habitat designations occupy the Columbia River and four of these migrate through one or more of the hydropower dams comprising the FCRPS, as well as through other major hydropower projects on the Columbia River. While the annual impacts of salmon and steelhead conservation measures on these projects is in the range of $500–700 million, the proper focus under E.O. 13211 is on the incremental impacts of critical habitat designation. The available data do not allow us to separate precisely these incremental impacts from the impacts of all conservation measures on energy production and costs. There is historical evidence, however, that the ESA section 7 jeopardy standard alone is capable of imposing all of these costs (NMFS, 2005h). While this evidence is indirect, it is sufficient to draw the conclusion that the designation of critical habitat for the 12 West Coast salmon and steelhead ESUs does not significantly affect energy supply, distribution, or use.

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

In accordance with the Unfunded Mandates Reform Act, we make the following findings:

(a) This final rule will not produce a Federal mandate. In general, a Federal mandate is a provision in legislation, statute or regulation that would impose an enforceable duty upon state, local, tribal governments, or the private sector and includes both ''Federal intergovernmental mandates'' and ''Federal private sector mandates.'' These terms are defined in 2 U.S.C. 658(5)–(7). ''Federal intergovernmental mandate'' includes a regulation that ''would impose an enforceable duty upon State, local, or tribal governments'' with two exceptions. It excludes ''a condition of Federal assistance.'' It also excludes ''a duty arising from participation in a voluntary Federal program,'' unless the regulation ''relates to a then-existing Federal program under which $500,000,000 or more is provided annually to State, local, and tribal governments under entitlement authority,'' if the provision would ''increase the stringency of conditions of assistance'' or ''place caps upon, or otherwise decrease, the Federal Government's responsibility to provide funding'' and the state, local, or tribal governments ''lack authority'' to adjust accordingly. (At the time of enactment, these entitlement programs were: Medicaid; 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 ESA, the only regulatory effect is that Federal agencies must ensure that their actions do not destroy or adversely modify critical habitat under section 7. While non-Federal entities who receive Federal funding, assistance, permits or otherwise require approval or authorization from a Federal agency for an action may be indirectly impacted by the designation of critical habitat, the legally binding duty to avoid destruction or adverse modification of critical habitat rests squarely on the Federal agency. Furthermore, to the extent that non-Federal entities are indirectly impacted because they receive Federal assistance or participate in a voluntary Federal aid program, the Unfunded Mandates Reform Act would not apply; nor would critical habitat shift the costs of the large entitlement

programs listed above to state governments.

(b) Due to current public knowledge of salmon protection and the prohibition against take of these species both within and outside of the designated areas, we do not anticipate that this final rule will significantly or uniquely affect small governments. As such, a Small Government Agency Plan is not required.

Takings

In accordance with E.O. 12630, this final rule does not have significant takings implications. A takings implication assessment is not required. The designation of critical habitat affects only Federal agency actions. This final rule will not increase or decrease the current restrictions on private property concerning take of salmon. As noted above, due to widespread public knowledge of salmon protection and the prohibition against take of the species both within and outside of the designated areas, we do not anticipate that property values will be affected by these critical habitat designations. While real estate market values may temporarily decline following designation, due to the perception that critical habitat designation may impose additional regulatory burdens on land use, we expect any such impacts to be short term (NMFS, 2005d). Additionally, critical habitat designation does not preclude development of HCPs and issuance of incidental take permits. Owners of areas that are included in the designated critical habitat will continue to have the opportunity to use their property in ways consistent with the survival of listed salmon.

Federalism

In accordance with E.O. 13132, this final rule does not have significant Federalism effects. A Federalism assessment is not required. In keeping with Department of Commerce policies, we requested information from, and coordinated development of, this critical habitat designation with appropriate state resource agencies in Washington, Oregon, and Idaho. These designations may have some benefit to the states and local resource agencies in that the areas essential to the conservation of the species are more clearly defined, and the PCEs of the habitat necessary to the survival of the species are specifically identified. While making these clarifications does not alter where and what Federally sponsored activities may occur, it may assist local governments in long-range planning (rather than waiting for case-by-case section 7 consultations to occur).

Civil Justice Reform

One commenter asserted that we failed to properly conduct and provide a Civil Justice Reform analysis pursuant to E.O. 12988, the Department of Commerce has determined that this final rule does not unduly burden the judicial system and meets the requirements of sections 3(a) and 3(b)(2) of the E.O. We are designating critical habitat in accordance with the provisions of the ESA. This final rule uses standard property descriptions and identifies the PCEs within the designated areas to assist the public in understanding the habitat needs of the 12 salmon and steelhead ESUs.

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

This final rule does not contain new or revised information collection for which OMB approval is required under the Paperwork Reduction Act. This final 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

We have determined that we need not prepare environmental analyses as provided for under the NEPA of 1969 for critical habitat designations made pursuant to the ESA. See *Douglas County* v. *Babbitt,* 48 F.3d 1495 (9th Cir. 1995), cert. denied, 116 S.Ct. 698 (1996).

Government-to-Government Relationship With Tribes

As a means of recognizing the responsibilities and relationship between the United States and Indian tribes, the Secretaries of Commerce and Interior issued the June 5, 1997, Secretarial Order entitled ''American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act'' (Secretarial Order). The Secretarial Order clarifies the responsibilities of NMFS and the USFWS when carrying out authorities under the ESA and requires that they consult with, and seek participation of, the affected Indian tribes to the maximum extent practicable. The Secretarial Order further provides that the Services * * * ''shall consult with the affected Indian tribe(s) when considering the designation of critical habitat in an area that may impact tribal trust resources, tribally owned fee lands, or the exercise of tribal rights. Critical habitat shall not be designated in such areas unless it is determined essential to conserve a listed species.'' Pursuant to the Secretarial Order and in response to written and verbal comments provided by various tribes in Washington, Oregon, and Idaho, we met and corresponded with many of the affected tribes concerning the inclusion of Indian lands in final critical habitat designations. These discussions resulted in significant clarifications regarding the tribes' general position to exclude their lands, as well as specific issues regarding our interpretation of Indian lands under the Secretarial Order.

As described above (see Exclusions Based on Impacts to Tribes) and in our assessment of Indian lands associated with this final rulemaking (NMFS, 2005g), we have determined that Indian lands should be excluded from the final critical habitat designations for these 12 ESUs of salmon and steelhead. The Indian lands specifically excluded from critical habitat are those defined in the Secretarial Order, including: (1) Lands held in trust by the United States for the benefit of any Indian tribe; (2) land held in trust by the United States for any Indian Tribe or individual subject to restrictions by the United States against alienation; (3) fee lands, either within or outside the reservation boundaries, owned by the tribal government; and (4) fee lands within the reservation boundaries owned by individual Indians. We have determined that these exclusions, together with the other exclusions described in this rule, will not result in extinction of the species (NMFS, 2005c).

IX. References Cited

A complete list of all references cited in this rulemaking can be found on our website at *http://www.nwr.noaa.gov/1salmon/salmesa/crithab/CHsite.htm* and is available upon request from the NMFS office in Portland, OR (see **ADDRESSES** section).

List of Subjects in 50 CFR Part 226

Endangered and threatened species.

Dated: August 12, 2005.

William T. Hogarth,

Assistant Administrator for Fisheries, National Marine Fisheries Service.

■ For the reasons set out in the preamble, we amend part 226, title 50 of the Code of Federal Regulations as set forth below:

PART 226–[AMENDED]

■ 1. The authority citation of part 226 continues to read as follows:

Authority: 16 U.S.C. 1533.

■ 2. Add § 226.212 to read as follows:

§ 226.212 Critical habitat for 12 Evolutionarily Significant Units (ESUs) of salmon and steelhead (Oncorhynchus spp.) in Washington, Oregon and Idaho.

Critical habitat is designated in the following states and counties for the following ESUs as described in paragraph (a) of this section, and as further described in paragraphs (b) through (g) of this section. The textual descriptions of critical habitat for each ESU are included in paragraphs (i) through (t) of this section, and these descriptions are the definitive source for determining the critical habitat boundaries. General location maps are provided at the end of each ESU description (paragraphs (i) through (t) of this section) and are provided for general guidance purposes only, and not as a definitive source for determining critical habitat boundaries.

(a) Critical habitat is designated for the following ESUs in the following states and counties:

ESU	State—Counties
(1) Puget Sound chinook salmon	*WA*—Clallam, Jefferson, King, Mason, Pierce, Skagit, Snohomish, Thurston, and Whatcom.
(2) Lower Columbia River chinook salmon	(i) *OR*—Clackamas, Clatsop, Columbia, Hood River, and Multnomah. (ii) *WA*—Clark, Cowlitz, Klickitat, Lewis, Pacific, Skamania, and Wahkiakum.
(3) Upper Willamette River chinook salmon	(i) *OR*—Benton, Clackamas, Clatsop, Columbia, Lane, Linn, Marion, Multnomah, Polk, and Yamhill. (ii) *WA*—Clark, Cowlitz, Pacific, and Wahkiakum.
(4) Upper Columbia River spring-run chinook salmon	(i) *OR*—Clatsop, Columbia, Gilliam, Hood River, Morrow, Multnomah, Sherman, Umatilla, and Wasco. (ii) *WA*—Benton, Chelan, Clark, Cowlitz, Douglas, Franklin, Grant, Kittitas, Klickitat, Okanogan, Pacific, Skamania, Wahkiakum, Walla Walla, and Yakima.
(5) Hood Canal summer-run chum salmon	*WA*—Clallam, Jefferson, Kitsap, and Mason.
(6) Columbia River chum salmon	(i) *OR*—Clatsop, Columbia, Hood River, and Multnomah. (ii) *WA*—Clark, Cowlitz, Klickitat, Lewis, Pacific, Skamania, and Wahkiakum.
(7) Ozette Lake sockeye salmon	*WA*—Clallam.
(8) Upper Columbia River steelhead	(i) *OR*—Clatsop, Columbia, Gilliam, Hood River, Morrow, Multnomah, Umatilla, and Wasco. (ii) *WA*—Adams, Benton, Chelan, Clark, Cowlitz, Douglas, Franklin, Grant, Kittitas, Klickitat, Okanogan, Pacific, Skamania, Wahkiakum, Walla Walla, and Yakima.
(9) Snake River Basin steelhead	(i) *ID*—Adams, Blaine, Clearwater, Custer, Idaho, Latah, Lemhi, Lewis, Nez Perce, and Valley. (ii) *OR*—Clatsop, Columbia, Gilliam, Hood River, Morrow, Multnomah, Sherman, Umatilla, Union, Wallowa, and Wasco. (iii) *WA*—Asotin, Benton, Clark, Columbia, Cowlitz, Franklin, Garfield, Klickitat, Pacific, Skamania, Walla Walla, Wahkiakum, and Whitman.
(10) Middle Columbia River steelhead	(i) *OR*—Clatsop, Columbia, Crook, Gilliam, Grant, Hood River, Jefferson, Morrow, Multnomah, Sherman, Umatilla, Union, Wallowa, Wasco, and Wheeler. (ii) *WA*—Benton, Clark, Cowlitz, Columbia, Franklin, King, Kittitas, Klickitat, Lewis, Pacific, Pierce, Skamania, Wahkiakum, Walla Walla, and Yakima.
(11) Lower Columbia River steelhead	(i) *OR*—Clackamas, Clatsop, Columbia, Hood River, Marion, and Multnomah. (ii) *WA*—Clark, Cowlitz, Klickitat, Lewis, Pacific, Skamania, and Wahkiakum.
(12) Upper Willamette River steelhead	(i) *OR*—Benton, Clackamas, Clatsop, Columbia, Linn, Marion, Multnomah, Polk, Tillamook, Washington, and Yamhill. (ii) *WA*—Clark, Cowlitz, Pacific, and Wahkiakum.

(b) *Critical habitat boundaries.* Critical habitat includes the stream channels within the designated stream reaches, and includes a lateral extent as defined by the ordinary high-water line (33 CFR 319.11). In areas where ordinary high-water line has not been defined, the lateral extent will be defined by the bankfull elevation. Bankfull elevation is the level at which water begins to leave the channel and move into the floodplain and is reached at a discharge which generally has a recurrence interval of 1 to 2 years on the annual flood series. Critical habitat in lake areas is defined by the perimeter of the water body as displayed on standard 1:24,000 scale topographic maps or the elevation of ordinary high water, whichever is greater. In estuarine and nearshore marine areas critical habitat includes areas contiguous with the shoreline from the line of extreme high water out to a depth no greater than 30 meters relative to mean lower low water.

(c) *Primary constituent elements.* Within these areas, the primary constituent elements essential for the conservation of these ESUs are those sites and habitat components that support one or more life stages, including:

(1) Freshwater spawning sites with water quantity and quality conditions and substrate supporting spawning, incubation and larval development;

(2) Freshwater rearing sites with:

(i) Water quantity and floodplain connectivity to form and maintain physical habitat conditions and support juvenile growth and mobility;

(ii) Water quality and forage supporting juvenile development; and

(iii) Natural cover such as shade, submerged and overhanging large wood, log jams and beaver dams, aquatic

vegetation, large rocks and boulders, side channels, and undercut banks.

(3) Freshwater migration corridors free of obstruction and excessive predation with water quantity and quality conditions and natural cover such as submerged and overhanging large wood, aquatic vegetation, large rocks and boulders, side channels, and undercut banks supporting juvenile and adult mobility and survival;

(4) Estuarine areas free of obstruction and excessive predation with:

(i) Water quality, water quantity, and salinity conditions supporting juvenile and adult physiological transitions between fresh- and saltwater;

(ii) Natural cover such as submerged and overhanging large wood, aquatic vegetation, large rocks and boulders, side channels; and

(iii) Juvenile and adult forage, including aquatic invertebrates and fishes, supporting growth and maturation.

(5) Nearshore marine areas free of obstruction and excessive predation with:

(i) Water quality and quantity conditions and forage, including aquatic invertebrates and fishes, supporting growth and maturation; and

(ii) Natural cover such as submerged and overhanging large wood, aquatic vegetation, large rocks and boulders, and side channels.

(6) Offshore marine areas with water quality conditions and forage, including aquatic invertebrates and fishes, supporting growth and maturation.

(d) *Exclusion of Indian lands.* Critical habitat does not include habitat areas on Indian lands. The Indian lands specifically excluded from critical habitat are those defined in the Secretarial Order, including:

(1) Lands held in trust by the United States for the benefit of any Indian tribe;

(2) Land 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.

(e) *Land owned or controlled by the Department of Defense.* Critical habitat does not include any areas subject to an approved Integrated Natural Resource Management Plan or associated with Department of Defense easements or right-of-ways. In areas within Navy security zones identified at 33 CFR 334 that are outside the areas described above, critical habitat is only designated within a narrow nearshore zone from the line of extreme high tide down to the line of mean lower low water. The specific sites addressed include:

(1) Naval Submarine Base, Bangor;

(2) Naval Undersea Warfare Center, Keyport;

(3) Naval Ordnance Center, Port Hadlock (Indian Island);

(4) Naval Radio Station, Jim Creek;

(5) Naval Fuel Depot, Manchester;

(6) Naval Air Station Whidbey Island;

(7) Naval Air Station, Everett;

(8) Bremerton Naval Hospital;

(9) Fort Lewis (Army);

(10) Pier 23 (Army);

(11) Yakima Training Center (Army);

(12) Puget Sound Naval Shipyard;

(13) Naval Submarine Base Bangor security zone;

(14) Strait of Juan de Fuca naval air-to-surface weapon range, restricted area;

(15) Hood Canal and Dabob Bay naval non-explosive torpedo testing area;

(16) Strait of Juan de Fuca and Whidbey Island naval restricted areas;

(17) Admiralty Inlet naval restricted area;

(18) Port Gardner Naval Base restricted area;

(19) Hood Canal naval restricted areas;

(20) Port Orchard Passage naval restricted area;

(21) Sinclair Inlet naval restricted areas;

(22) Carr Inlet naval restricted areas;

(23) Dabob Bay/Whitney Point naval restricted area; and

(24) Port Townsend/Indian Island/Walan Point naval restricted area.

(f) *Land subject to the Washington Department of Natural Resources Habitat Conservation Plan.* Critical habitat is excluded on lands covered by the incidental take permit issued by NMFS under section 10(a)(1)(B) of the ESA to the Washington Department of Natural Resources.

(g) *Land subject to the Green Diamond Company Habitat Conservation Plan.* Critical habitat is excluded on lands covered by the incidental take permit issued by NMFS under section 10(a)(1)(B) of the ESA to the Green Diamond Resources Company (formerly Simpson Timber Company).

(h) *Land subject to the West Fork Timber Company Habitat Conservation Plan.* Critical habitat is excluded on lands covered by the incidental take permit issued by NMFS under section 10(a)(1)(B) of the ESA to the West Fork Timber Company (formerly Murray Pacific Corporation).

(i) Puget Sound Chinook Salmon (Oncorhynchus tshawytscha). Critical habitat is designated to include the areas defined in the following subbasins:

(1) Nooksack Subbasin 17110004—(i) *Upper North Fork Nooksack River Watershed 1711000401.* Outlet(s) = North Fork Nooksack River (Lat 48.9055, Long –121.9886) upstream to endpoint(s) in: Boyd Creek (48.8998, –121.8640); Canyon Creek (48.9366, –121.9451); Cascade Creek (48.8996, –121.8621); Cornell Creek (48.8882, –121.9594); Deadhorse Creek (48.9024, –121.8359); Gallop Creek (48.8849, –121.9447); Glacier Creek (48.8197, –121.8931); Hedrick Creek (48.8953, –121.9705); Thompson Creek (48.8837, –121.9028); Wells Creek (48.8940, –121.7976).

(ii) *Middle Fork Nooksack River Watershed 1711000402.* Outlet(s) = Middle Fork Nooksack River (Lat 48.8342, Long –122.1540) upstream to endpoint(s) in: Canyon Creek (48.8374, –122.1198); Clearwater Creek (48.7841, –122.0293); Middle Fork Nooksack River (48.7249, –121.8999); Porter Creek (48.7951, –122.1098); Sister Creek (48.7492, –121.9736); Unnamed (48.7809, –122.1157); Unnamed (48.7860, –122.1214); Warm Creek (48.7559, –121.9741).

(iii) *South Fork Nooksack River Watershed 1711000403.* Outlet(s) = South Fork Nooksack River (Lat 48.8095, Long –122.2026) upstream to endpoint(s) in: Black Slough (48.7715, –122.1931); Cavanaugh Creek (48.6446, –122.1094); Deer Creek (48.6041, –122.0912); Edfro Creek (48.6607, –122.1206); Fobes Creek (48.6230, –122.1139); Hard Scrabble Falls Creek (48.7601, –122.2273); Howard Creek (48.6118, –121.9639); Hutchinson Creek (48.7056, –122.1663); Jones Creek (48.7186, –122.2130); McCarty Creek (48.7275, –122.2188); Plumbago Creek (48.6088, –122.0949); Pond Creek (48.6958, –122.1651); Skookum Creek (48.6871, –122.1029); South Fork Nooksack River (48.6133, –121.9000); Standard Creek (48.7444, –122.2191); Sygitowicz Creek (48.7722, –122.2269); Unnamed (48.6048, –121.9143); Unnamed (48.6213, –122.1039); Unnamed (48.7174, –122.1815); Unnamed (48.7231, –122.1968); Unnamed (48.7843, –122.2188).

(iv) *Lower North Fork Nooksack River Watershed 1711000404.* Outlet(s) = Nooksack River (Lat 48.8711, Long –122.3227) upstream to endpoint(s) in: Anderson Creek (48.8088, –122.3410); Boulder Creek (48.9314, –122.0258); Coal Creek (48.8889, –122.1506); Kendall Creek (48.9251, –122.1455); Kenney Creek (48.8510, –122.1368); Macaulay Creek (48.8353, –122.2345); Maple Creek (48.9262, –122.0751); Mitchell Creek (48.8313, –122.2174); North Fork Nooksack River (48.9055, –121.9886); Racehorse Creek (48.8819,

–122.1272); Smith Creek (48.8439, –122.2544); Unnamed (48.8103, –122.1855); Unnamed (48.9002, –122.1205); Unnamed (48.9040, –122.0875); Unnamed (48.9131, –122.0127); Unnamed (48.9158, –122.0091); Unnamed (48.9162, –122.0615); Unnamed (48.9200, –122.0463); Wildcat Creek (48.9058, –121.9995); Deer Creek (48.8439, –122.4839).

(v) *Nooksack River Watershed 1711000405.* Outlet(s) = Lummi River (Lat 48.8010, Long –122.6582); Nooksack River (48.7737, –122.5986); Silver Creek (48.7786, –122.5635); Slater Slough (48.7759, –122.6029); Unnamed (48.7776, –122.5708); Unnamed (48.7786, –122.5677); Unnamed (48.7973, –122.6717); Unnamed (48.8033, –122.6771) upstream to endpoint(s) in: Fishtrap Creek (49.0025, –122.4053); Fourmile Creek (48.8890, –122.4213); Lummi River (48.8198, –122.6049); Nooksack River (48.8711, –122.3227); Pepin Creek (49.0024, –122.4724); Slater Slough (48.7778, –122.6041); Tenmile Creek (48.8457, –122.3661); Unnamed (48.8191, –122.5705); Unnamed (48.8453, –122.6071); Unnamed (48.8548, –122.4749); Unnamed (48.9609, –122.5312); Unnamed (48.9634, –122.3928); Unnamed (49.0024, –122.4730); Unnamed (49.0025, –122.5218).

(2) Upper Skagit Subbasin 17110005—(i) *Skagit River/Gorge Lake Watershed 1711000504.* Outlet(s) = Skagit River (Lat 48.6725, Long –121.2633) upstream to endpoint(s) in: Goodell Creek (48.6890, –121.2718); Skagit River (48.6763, –121.2404).

(ii) *Skagit River/Diobsud Creek Watershed 1711000505.* Outlet(s) = Skagit River (Lat 48.5218, Long –121.4315) upstream to endpoint(s) in: Bacon Creek (48.6456, –121.4244); Diobsud Creek (48.5761, –121.4309); Falls Creek (48.6334, –121.4258); Skagit River (48.6725, –121.2633).

(iii) *Cascade River Watershed 1711000506.* Outlet(s) = Cascade River (Lat 48.5218, Long –121.4315) upstream to endpoint(s) in: Found Creek (48.4816, –121.2437); Kindy Creek (48.4613, –121.2094); Marble Creek (48.5398, –121.2612); North Fork Cascade River (48.4660, –121.1641); South Fork Cascade River (48.4592, –121.1494).

(iv) *Skagit River/Illabot Creek Watershed 1711000507.* Outlet(s) = Skagit River (Lat 48.5333, Long –121.7370) upstream to endpoint(s) in: Illabot Creek (48.4498, –121.4551); Jackman Creek (48.5294, –121.6957); Skagit River (48.5218, –121.4315); Unnamed (48.5013, –121.6598).

(3) Sauk Subbasin 17110006—(i) *Upper Sauk River Watershed 1711000601.* Outlet(s) = Sauk River (Lat 48.1731, Long –121.4714) upstream to endpoint(s) in: Camp Creek (48.1559, –121.2909); North Fork Sauk River (48.0962, –121.3710); Owl Creek (48.1623, –121.2948); South Fork Sauk River (48.0670, –121.4088); Swift Creek (48.1011, –121.3975); Unnamed (48.1653, –121.3288); White Chuck River (48.1528, –121.2645).

(ii) *Upper Suiattle River Watershed 1711000602.* Outlet(s) = Suiattle River (Lat 48.2586, Long –121.2237) upstream to endpoint(s) in: Downey Creek (48.2828, –121.2083); Milk Creek (48.2207, –121.1634); Suiattle River (48.2211, –121.1609); Sulphur Creek (48.2560, –121.1773); Unnamed (48.2338, –121.1792).

(iii) *Lower Suiattle River Watershed 1711000603.* Outlet(s) = Suiattle River (Lat 48.3384, Long –121.5482) upstream to endpoint(s) in: Big Creek (48.3435, –121.4416); Buck Creek (48.2753, –121.3268); Circle Creek (48.2555, –121.3395); Lime Creek (48.2445, –121.2933); Straight Creek (48.2594;–121.4009); Suiattle River (48.2586, –121.2237); Tenas Creek (48.3371, –121.4304).

(iv) *Lower Sauk River Watershed 1711000604.* Outlet(s) = Sauk River (Lat 48.4821, Long –121.6060) upstream to endpoint(s) in: Dan Creek (48.2702, –121.5473); Sauk River (48.1731, –121.4714); Unnamed (48.2247, –121.5826); Unnamed (48.3187, –121.5480).

(4) Lower Skagit Subbasin 17110007—(i) *Middle Skagit River/Finney Creek Watershed 1711000701.* Outlet(s) = Skagit River (Lat 48.4891, Long –122.2178) upstream to endpoint(s) in: Alder Creek (48.5280, –121.9498); Day Creek (48.4689, –122.0216); Finney Creek (48.4655, –121.6858); Grandy Creek (48.5510, –121.8621); Hansen Creek (48.5600, –122.2069); Jims Slough (48.5274, –122.0227); Jones Creek (48.5418, –122.0494); Mannser Creek (48.5260, –122.0430); Muddy Creek (48.5278, –122.0007); Pressentin Creek (48.5099, –121.8449); Skagit River (48.5333, –121.7370); Sorenson Creek (48.4875, –122.1029); Unnamed (48.4887, –122.0747); Unnamed (48.5312, –122.0149); Wiseman Creek (48.5160, –122.1286).

(ii) *Lower Skagit River/Nookachamps Creek Watershed 1711000702.* Outlet(s) = Browns Slough (Lat 48.3305, Long –122.4194); Freshwater Slough (48.3109, –122.3883); Hall Slough (48.3394, –122.4426); Isohis Slough (48.2975, –122.3711); North Fork Skagit River (48.3625, –122.4689); South Fork Skagit River (48.2920, –122.3670); Unnamed (48.3085, –122.3868); Unnamed (48.3831, –122.4842) upstream to endpoint(s) in: Britt Slough (48.3935, –122.3571); Browns Slough (48.3411, –122.4127); East Fork Nookachamps Creek (48.4044, –122.1790); Hall Slough (48.3437, –122.4376); Mundt Creek (48.4249, –122.2007); Skagit River (48.4891, –122.2178); Unnamed (48.3703, –122.3081); Unnamed (48.3827, –122.1893); Unnamed (48.3924, –122.4822); Walker Creek (48.3778, –122.1899).

(5) Stillaguamish Subbasin 17110008—(i) *North Fork Stillaguamish River Watershed 1711000801.* Outlet(s) = North Fork Stillaguamish River (Lat 48.2037, Long –122.1256) upstream to endpoint(s) in: Ashton Creek (48.2545, –121.6708); Boulder River (48.2624, –121.8090); Deer Creek (48.2835, –121.9255); French Creek (48.2534, –121.7856); Furland Creek (48.2624, –121.6749); Grant Creek (48.2873, –122.0118); North Fork Stillaguamish River (48.3041, –121.6360); Rollins Creek (48.2908, –121.8441); Squire Creek (48.2389, –121.6374); Unnamed (48.2393, –121.6285); Unnamed (48.2739, –121.9948).

(ii) *South Fork Stillaguamish River Watershed 1711000802.* Outlet(s) = South Fork Stillaguamish River (Lat 48.2037, Long –122.1256) upstream to endpoint(s) in: Jim Creek (48.2230, –121.9483); North Fork Canyon Creek (48.1697, –121.8194); Siberia Creek (48.1731, –122.0377); South Fork Canyon Creek (48.1540, –121.7840); South Fork Stillaguamish River (48.0454, –121.4819); Unnamed (48.1463, –122.0162).

(iii) *Lower Stillaguamish River Waterhed 1711000803.* Outlet(s) = Stillaguamish River (Lat 48.2385, Long –122.3749); Unnamed (48.1983, –122.3579) upstream to endpoint(s) in: Armstrong Creek (48.2189, –122.1347); Pilchuck Creek (48.2983, –122.1672); Stillaguamish River (48.2037, –122.1256).

(6) Skykomish Subbasin 17110009—(i) *Tye and Beckler River Watershed 1711000901.* Outlet(s) = South Fork Skykomish River (Lat 47.7147, Long –121.3393) upstream to endpoint(s) in: East Fork Foss River (47.6522, –121.2792); Rapid River (47.8131, –121.2470) Tye River (47.7172, –121.2254) Unnamed (47.8241, –121.2979); West Fork Foss River (47.6444, –121.2972).

(ii) *Skykomish River Forks Watershed 1711000902.* Outlet(s) = North Fork Skykomish River (Lat 47.8133, Long –121.5782) upstream to endpoint(s) in: Bridal Veil Creek (47.7987, –121.5597);

Lewis Creek (47.8223, –121.5160); Miller River (47.7018, –121.3950); Money Creek (47.7208, –121.4062); North Fork Skykomish River (47.9183, –121.3073); South Fork Skykomish River (47.7147, –121.3393); Unnamed (47.7321, –121.4176); Unnamed (47.8002, –121.5548).

(iii) *Skykomish River/Wallace River Watershed 1711000903*. Outlet(s) = Skykomish River (Lat 47.8602, Long–121.8190) upstream to endpoint(s) in: Deer Creek (47.8191, –121.5805); Olney Creek (47.8796, –121.7163); Proctor Creek (47.8216, –121.6460); Skykomish River (47.8133, –121.5782); Unnamed (47.8507, –121.8010); Wagleys Creek (47.8674, –121.7972); Wallace River (47.8736, –121.6491).

(iv) *Sultan River Watershed 1711000904*. Outlet(s) = Sultan River (Lat 47.8602, Long –121.8190) upstream to endpoint(s) in: Sultan River (47.9598, –121.7951).

(v) *Skykomish River/Woods Creek Watershed 1711000905*. Outlet(s) = Skykomish River (Lat 47.8303, Long –122.0451) upstream to endpoint(s) in: Elwell Creek (47.8038, –121.8524); Skykomish River (47.8602, –121.8190); Unnamed (47.8890, –121.8637); West Fork Woods Creek (47.9627, –121.9707); Woods Creek (47.8953, –121.8742); Youngs Creek (47.8081, –121.8332).

(7) Snoqualmie Subbasin 17110010—(i) *Middle Fork Snoqualmie River Watershed 1711001003*. Outlet(s) = Snoqualmie River (Lat 47.6407, Long –121.9261) upstream to endpoint(s) in: Canyon Creek (47.5837, –121.9623); Deep Creek (47.4764, –121.8905); Griffin Creek (47.6164, –121.9014); Lake Creek (47.5036, –121.9035); Patterson Creek (47.6276, –121.9855); Raging River (47.4795, –121.8691); Snoqualmie River (47.5415, –121.8362); Tokul Creek (47.5563, –121.8285).

(ii) *Lower Snoqualmie River Watershed 1711001004*. Outlet(s) = Snoqualmie River (Lat 47.8303, Long –122.0451) upstream to endpoint(s) in: Cherry Creek (47.7465, –121.8953); Margaret Creek (47.7547, –121.8933); North Fork Tolt River (47.7060, –121.7957); Snoqualmie River (47.6407, –121.9261); South Fork Tolt River (47.6969, –121.7861); Tuck Creek (47.7442, –122.0032); Unnamed (47.6806, –121.9730); Unnamed (47.6822, –121.9770); Unnamed (47.7420, –122.0084); Unnamed (47.7522, –121.9745); Unnamed (47.7581, –121.9586).

(8) Snohomish Subbasin 17110011—(i) *Pilchuck River Watershed 1711001101*. Outlet(s) = Pilchuck River (Lat 47.9013, Long –122.0917) upstream to endpoint(s) in: Pilchuck River (48.0052, –121.7718).

(ii) *Snohomish River Watershed 1711001102*. Outlet(s) = Quilceda Creek (Lat 48.0556, Long –122.1908); Skykomish River (48.0173, –122.1877); Steamboat Slough (48.0365, –122.1814); Union Slough (48.0299, –122.1794); Unnamed (48.0412, –122.1723) upstream to endpoint(s) in: Allen Creek (48.0767, –122.1404); Quilceda Creek (48.1124, –122.1540); Skykomish River (47.8303, –122.0451); Unnamed (47.9545, –122.1969); Unnamed (47.9777, –122.1632); Unnamed (48.0019, –122.1283); Unnamed (48.0055, –122.1303); Unnamed (48.1330, –122.1472).

(9) Lake Washington Subbasin 17110012—(i) *Cedar River Watershed 1711001201*. Outlet(s) = Cedar River (Lat 47.5003, Long –122.2146) upstream to endpoint(s) in: Cedar River (47.4192, –121.7805); Rock Creek (47.3673, –122.0132); Unnamed (47.4092, –122.0358); Webster Creek (47.3857, –121.9845).

(ii) *Lake Washington Watershed 1711001203*. Outlet(s) = Lake Washington (Lat 47.6654, Long –122.3960) upstream to endpoint(s) in: Cedar River (47.5003, –122.2146); Sammamish River (47.7543, –122.2465).

(10) Duwamish Subbasin 17110013—(i) *Upper Green River Watershed 1711001301*. Outlet(s) = Green River (Lat 47.2234, Long –121.6081) upstream to endpoint(s) in: Friday Creek (47.2204, –121.4559); Intake Creek (47.2058, –121.4049); McCain Creek (47.2093, –121.5292); Sawmill Creek (47.2086, –121.4675); Smay Creek (47.2508, –121.5872); Snow Creek (47.2607, –121.4046); Sunday Creek (47.2587, –121.3659); Tacoma Creek (47.1875, –121.3630); Unnamed (47.2129, –121.4579).

(ii) *Middle Green River Watershed 1711001302*. Outlet(s) = Green River (Lat 47.2911, Long –121.9714) upstream to endpoint(s) in: Bear Creek (47.2774, –121.7990); Cougar Creek (47.2439, –121.6442); Eagle Creek (47.3051, –121.7219); Gale Creek (47.2644, –121.7085); Green River (47.2234, –121.6081); Piling Creek (47.2820, –121.7553); Sylvester Creek (47.2457, –121.6537); Unnamed (47.2360, –121.6333).

(iii) *Lower Green River Watershed 1711001303*. Outlet(s) = Duwamish River (Lat 47.5113, Long –122.2951) upstream to endpoint(s) in: Big Soos Creek (47.4191, –122.1599); Burns Creek (47.2779, –122.1087); Covington Creek (47.3341, –122.0399); Crisp Creek (47.2897, –122.0590); Green River (47.2911, –121.9714); Jenkins Creek (47.3791, –122.0899); Little Soos Creek (47.4031, –122.1235); Mill Creek (47.3263, –122.2455); Newaukum Creek (47.2303, –121.9518); Unnamed (47.2765, –121.9730); Unnamed (47.2891, –122.1557); Unnamed (47.3007, –122.1774); Unnamed (47.3250, –122.1961); Unnamed (47.3464, –122.2397); Unnamed (47.3751, –122.2648); Unnamed (47.4046, –122.2134); Unnamed (47.4525, –122.2354); Unnamed (47.4618, –122.2315); Unnamed (47.4619, –122.2554); Unnamed (47.4876, –122.2781).

(11) Puyallup Subbasin 17110014—(i) *Upper White River Watershed 1711001401*. Outlet(s) = White River (Lat 47.1588, Long –121.6587) upstream to endpoint(s) in: Greenwater River (47.1204, –121.5055); Huckleberry Creek (47.0612, –121.6033); Pinochle Creek (47.0478, –121.7043); Unnamed (46.9935, –121.5295); West Fork White River (47.0483, –121.6916); Wrong Creek (47.0403, –121.6999).

(ii) *Lower White River Watershed 1711001402*. Outlet(s) = White River (Lat 47.2001, Long –122.2579) upstream to endpoint(s) in: Boise Creek (47.1958, –121.9467); Camp Creek (47.1430, –121.7012); Clearwater River (47.0852, –121.7823); Unnamed (47.1509, –121.7236); Unnamed (47.2247, –122.1072); Unnamed (47.2307, –122.1079); Unnamed (47.2383, –122.2234); Unnamed (47.2498, –122.2346); White River (47.1588, –121.6587).

(iii) *Carbon River Watershed 1711001403*. Outlet(s) = Carbon River (Lat 47.1308, Long –122.2315) upstream to endpoint(s) in: Carbon River (46.9965, –121.9198); South Fork South Prairie Creek (47.1203, –121.9963); Voight Creek (47.0751, –122.1285); Wilkeson Creek (47.0972, –122.0245).

(iv) *Upper Puyallup River Watershed 1711001404*. Outlet(s) = Puyallup River (Lat 47.1308, Long –122.2315) upstream to endpoint(s) in: Deer Creek (46.8547, –121.9680); Kapowsin Creek (46.9854, –122.2008); Kellog Creek (46.9164, –122.0652); Mowich River (46.9209, –121.9739); Rushingwater Creek (46.8971, –121.9439); Unnamed (46.8867, –122.0194); Unnamed (46.8899, –121.9657).

(v) *Lower Puyallup River Watershed 1711001405*. Outlet(s) = Hylebos Creek (Lat 47.2611, Long –122.3591); Puyallup River (47.2501, –122.4131) upstream to endpoint(s) in: Canyonfalls Creek (47.1421, –122.2186); Clarks Creek (47.1757.–122.3168); Clear Creek (47.2187, –122.3727); Fennel Creek (47.1495, –122.1849); Puyallup River (47.1308, –122.2315); Unnamed (47.1779, –122.1992); Unnamed (47.1799, –122.3066); Unnamed (47.1928, –122.3371); Unnamed

(47.2723, –122.3216); West Hylebos Creek (47.2736, –122.3289).

(12) Nisqually Subbasin 17110015—(i) *Mashel/Ohop Watershed 1711001502.* Outlet(s) = Nisqually River (Lat 46.8646, Long –122.4776) upstream to endpoint(s) in: Little Mashel River (46.8504, –122.2724); Lynch Creek (46.8760, –122.2625); Mashel River (46.8431, –122.1205); Nisqually River (46.8303, –122.3225); Ohop Creek (46.9264, –122.2603); Powell Creek (46.8528, –122.4505); Tanwax Creek (46.8630, –122.4549); Twentyfive Mile Creek (46.9274, –122.2558).

(ii) *Lowland Watershed 1711001503.* Outlet(s) = McAllister Creek (Lat 47.1120, Long –122.7215); Nisqually River (47.1110, –122.7026); Unnamed (47.0071, –122.6556); Yelm Creek (46.9712, –122.6263) upstream to endpoint(s) in: Horn Creek (46.9042, –122.4776); McAllister Creek (47.0299, –122.7236); Nisqually River (46.8646, –122.4776); Unnamed (46.9108, –122.5032); Unnamed (47.0001, –122.6510); Unnamed (47.0055, –122.6520); Yelm Creek (46.9629, –122.6194). Excluded is that segment of the Nisqually River from Lat 47.0703, Long –122.7017, to Lat 46.9668, Long –122.5640.

(13) Skokomish Subbasin 17110017—*Skokomish River Watershed 1711001701.* Outlet(s) = Skokomish River (Lat 47.3543, Long –123.1122); Unnamed (47.3420, –123.1092); Unnamed (47.3471, –123.1275); Unnamed (47.3509, –123.1101) upstream to endpoint(s) in: Brown Creek (47.4238, –123.3052); Fir Creek (47.3363, –123.3016); McTaggert Creek (47.3749, –123.2318); North Fork Skokomish River (47.5197, –123.3329); Purdy Canyon (47.3021, –123.1803); Unnamed (47.3048, –123.1528); Unnamed (47.3077, –123.2012); Unnamed (47.3146, –123.1353); Unnamed (47.3209, –123.2212); Unnamed (47.3222, –123.3060); Unnamed (47.3237, –123.1467); Unnamed (47.3250, –123.1250); Vance Creek (47.3300, –123.3137); Weaver Creek (47.3097, –123.2384).

(14) Hood Canal Subbasin 17110018—(i) *Hamma Hamma River Watershed 1711001803.* Outlet(s) = Hamma Hamma River (Lat 47.5471, Long –123.0440) upstream to endpoint(s) in: Hamma Hamma River (47.5590, –123.0632); North Fork John Creek (47.5442, –123.0696)

(ii) *Duckabush River Watershed 1711001804.* Outlet(s) = Duckabush River (Lat 47.6502, Long –122.9348) upstream to endpoint(s) in: Duckabush River (47.6825, –123.0675).

(iii) *Dosewallips River Watershed 1711001805.* Outlet(s) = Dosewallips River (Lat 47.6881, Long –122.8945); Unnamed (47.6857, –122.8967) upstream to endpoint(s) in: Dosewallips River (47.7289, –123.1111); Rocky Brook (47.7212, –122.9405); Unnamed (47.6886, –122.8977).

(15) Dungeness/Elwha 17110020—(i) *Dungeness River Watershed 1711002003.* Outlet(s) = Dungeness River (Lat 48.1506, Long –123.1311); Unnamed (48.1537, –123.1267) upstream to endpoint(s) in: Dungeness River (47.9386, –123.0885); Gray Wolf River (47.9168, –123.2409); Matriotti Creek (48.1368, –123.1428); Unnamed (48.1514, –123.1216).

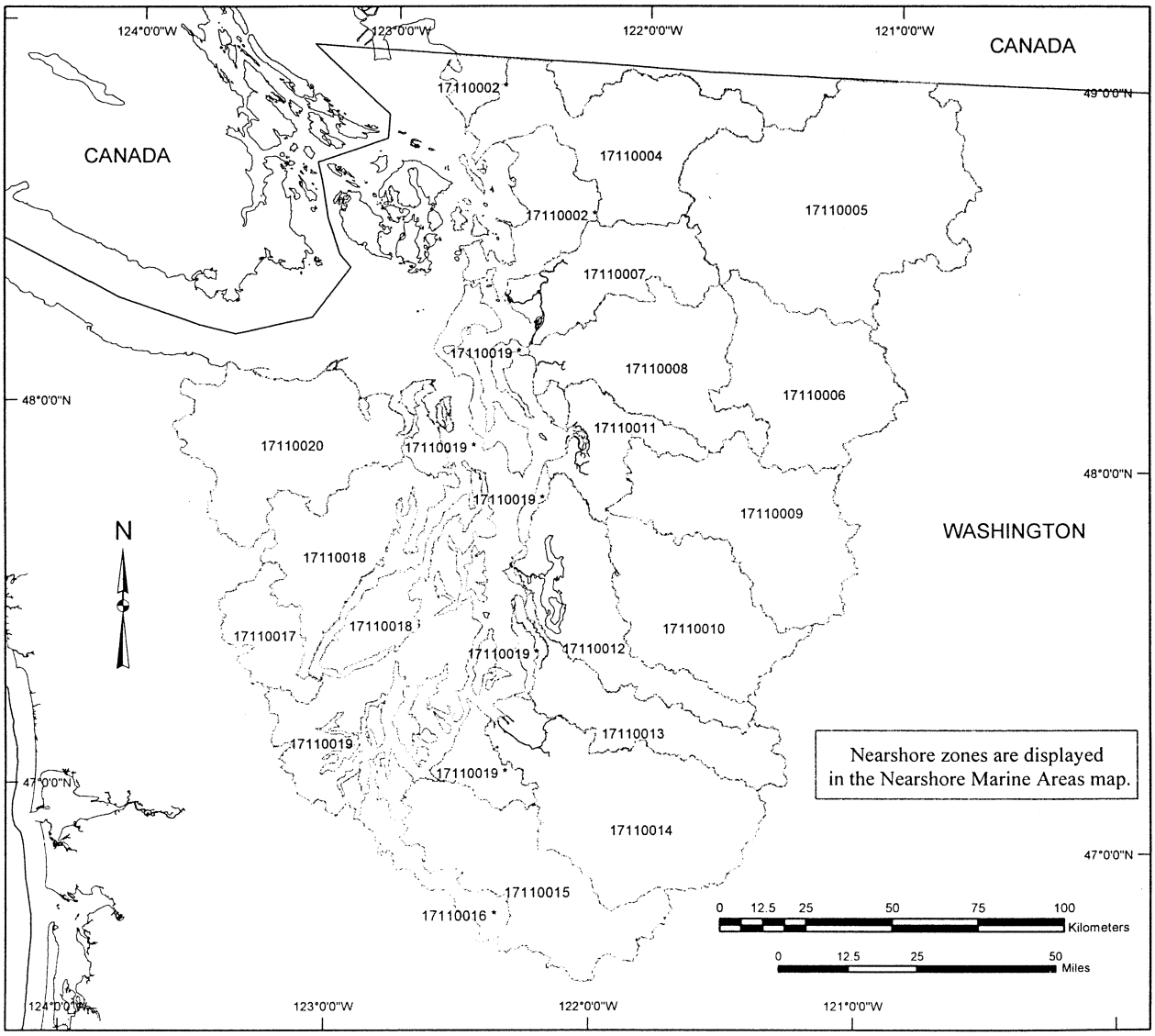
(ii) *Elwha River Watershed 1711002007.* Outlet(s) = Elwha River (Lat 48.1466, Long –123.5671); Unnamed (48.1483, –123.5599) upstream to endpoint(s) in: Elwha River (48.0927, –123.5614).

(16) Nearshore Marine Areas—Except as provided in paragraph (e) of this section, critical habitat includes all nearshore marine areas (including areas adjacent to islands) of the Strait of Georgia (south of the international border), Puget Sound, Hood Canal, and the Strait of Juan de Fuca (to the western end of the Elwha River delta) from the line of extreme high tide out to a depth of 30 meters.

(17) Maps of critical habitat for the Puget Sound chinook salmon ESU follow:

BILLING CODE 3510–22–P

Map of the Puget Sound Chinook Salmon ESU

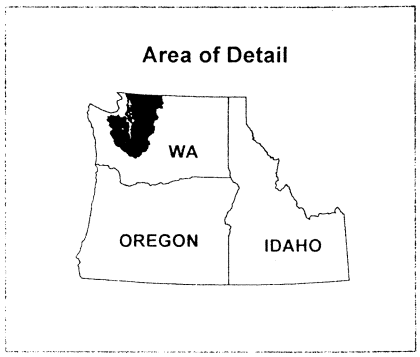


Legend

State Boundaries

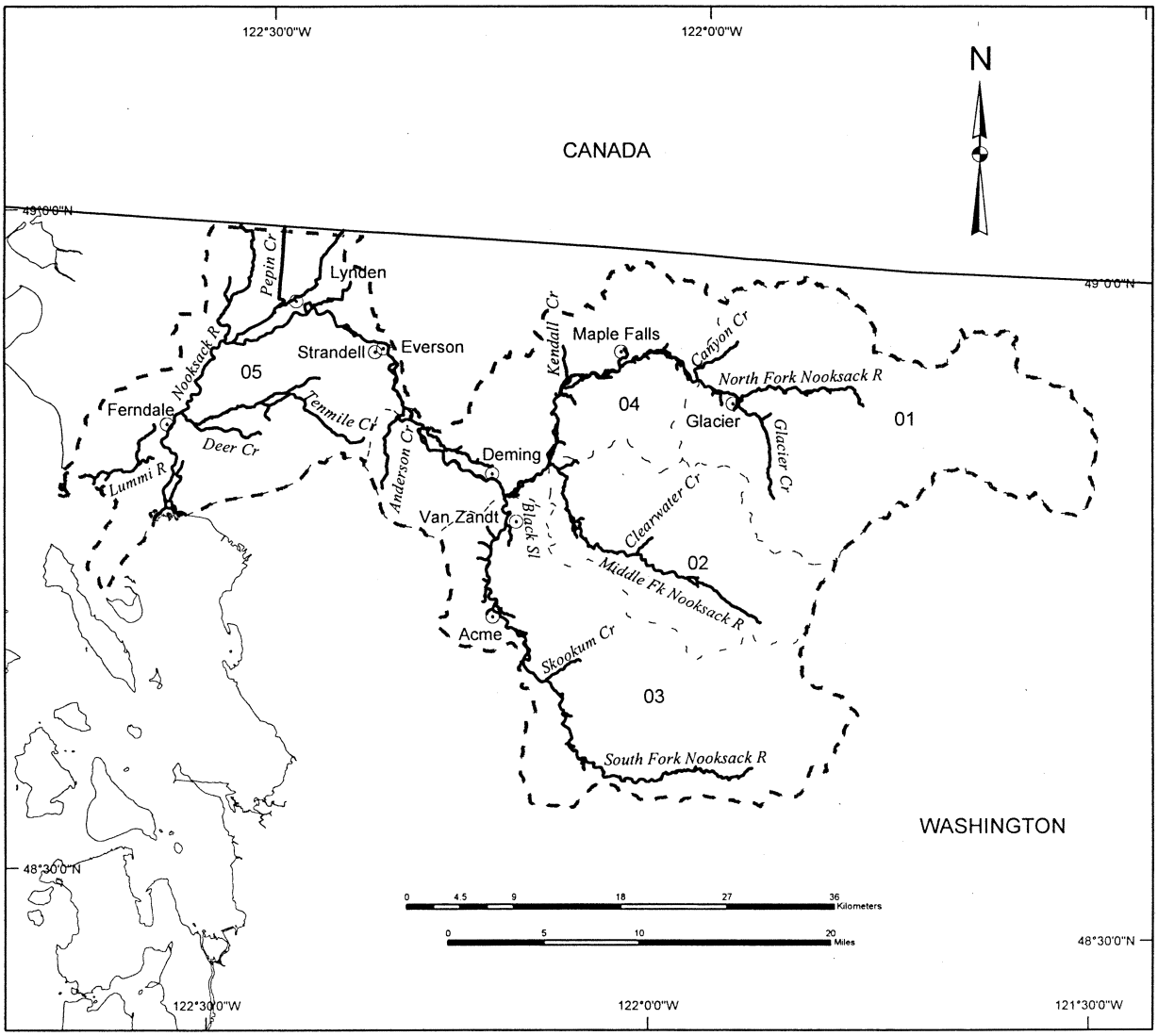
Subbasin Boundaries

* All habitat areas in subbasin are proposed for exclusion



Final Critical Habitat for the Puget Sound Chinook Salmon ESU

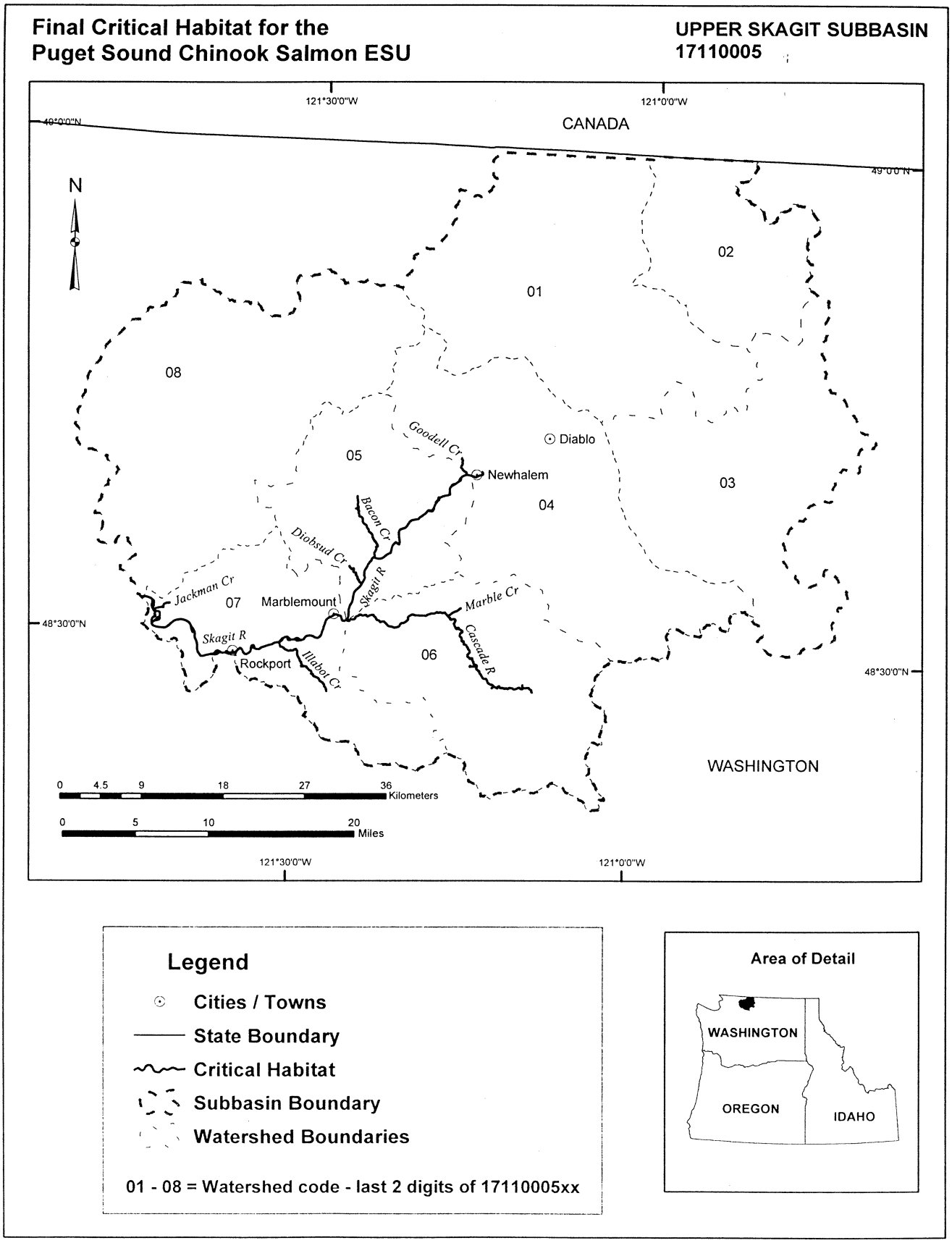
NOOKSACK SUBBASIN 17110004



Legend

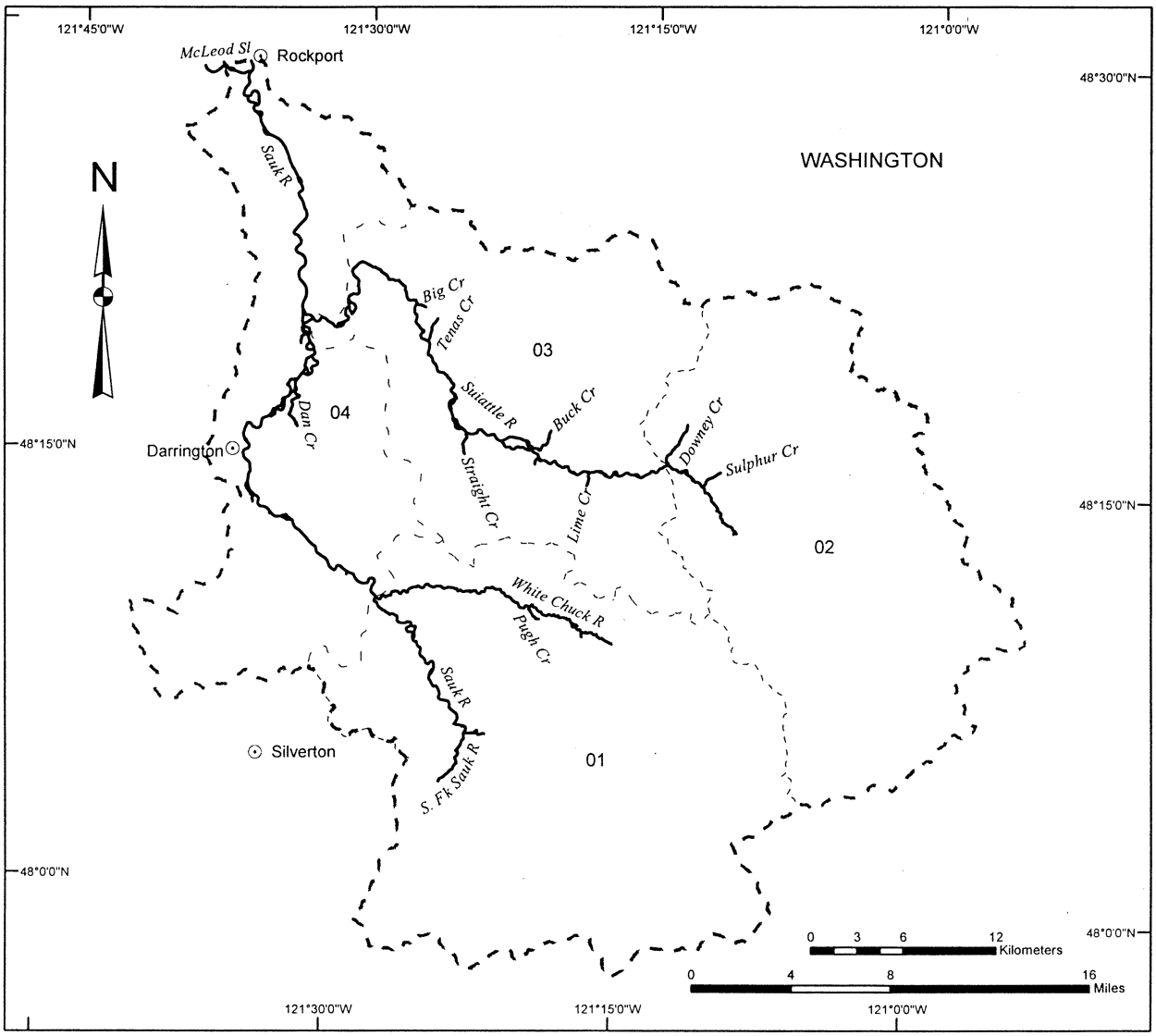
- Cities / Towns
- State Boundary
- Shoreline
- Critical Habitat
- Subbasin Boundary
- Watershed Boundaries

01 - 05 = Watershed code - last 2 digits of 17110004xx


Final Critical Habitat for the
Puget Sound Chinook Salmon ESU
UPPER SKAGIT SUBBASIN
17110005
121°30'0"W
121°0'0"W
49°0'0"N
CANADA
N
01
02
03
04
05
06
07
08
Diablo
Newhalem
Goodell Cr
Bacon Cr
Diobsud Cr
Skagit R
Jackman Cr
Marblemount
Marble Cr
Cascade R
Rockport
Illabot Cr
48°30'0"N
WASHINGTON
0 4.5 9 18 27 36 Kilometers
0 5 10 20 Miles
Legend
Cities / Towns
State Boundary
Critical Habitat
Subbasin Boundary
Watershed Boundaries
01 - 08 = Watershed code - last 2 digits of 17110005xx
Area of Detail
WASHINGTON
OREGON
IDAHO

Final Critical Habitat for the Puget Sound Chinook Salmon ESU

SAUK SUBBASIN 17110006

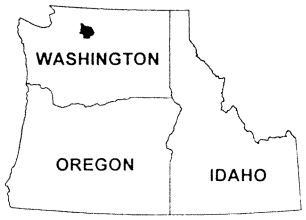


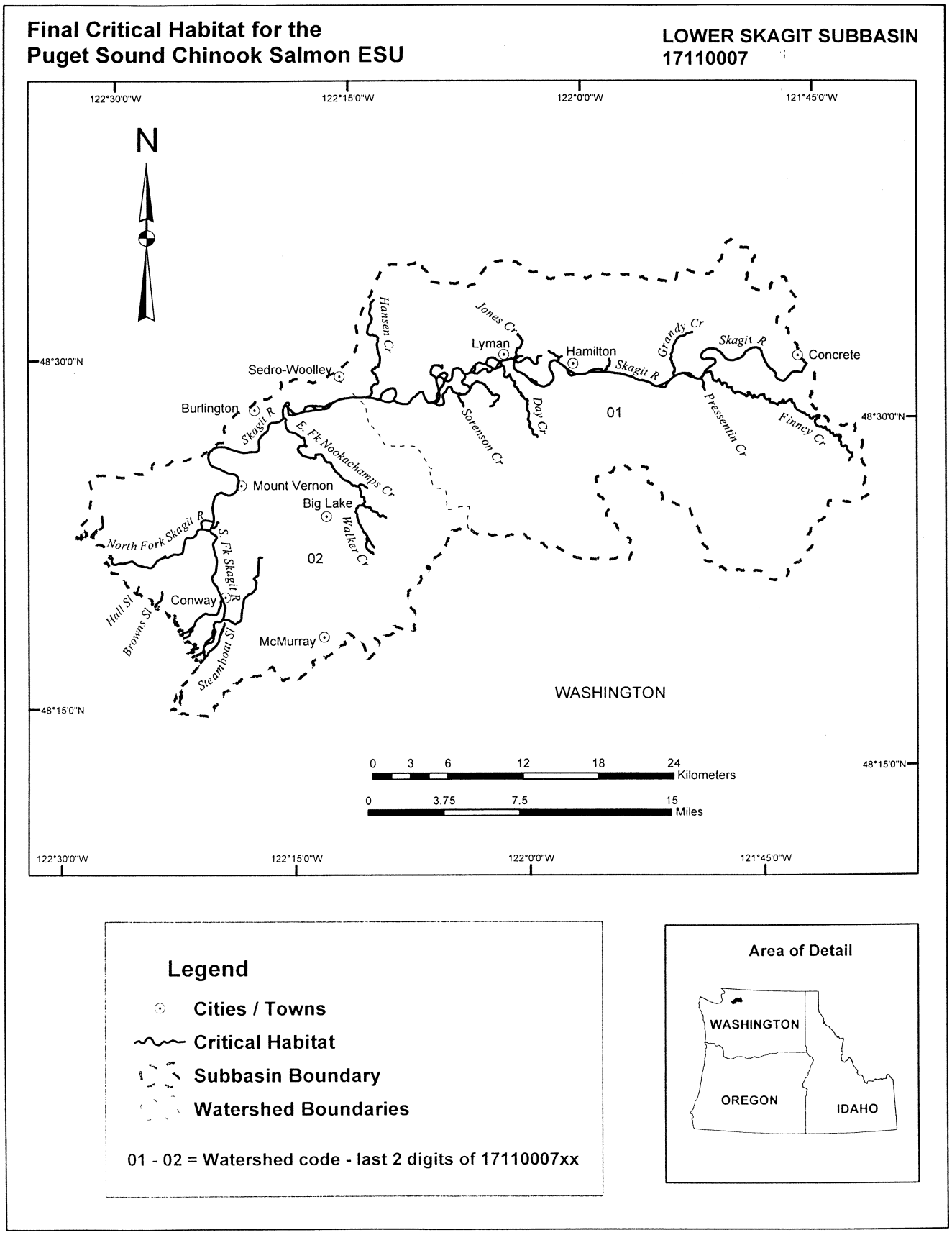
Legend

- Cities / Towns
- Critical Habitat
- Subbasin Boundary
- Watershed Boundaries

01 - 04 = Watershed code - last 2 digits of 17110006xx

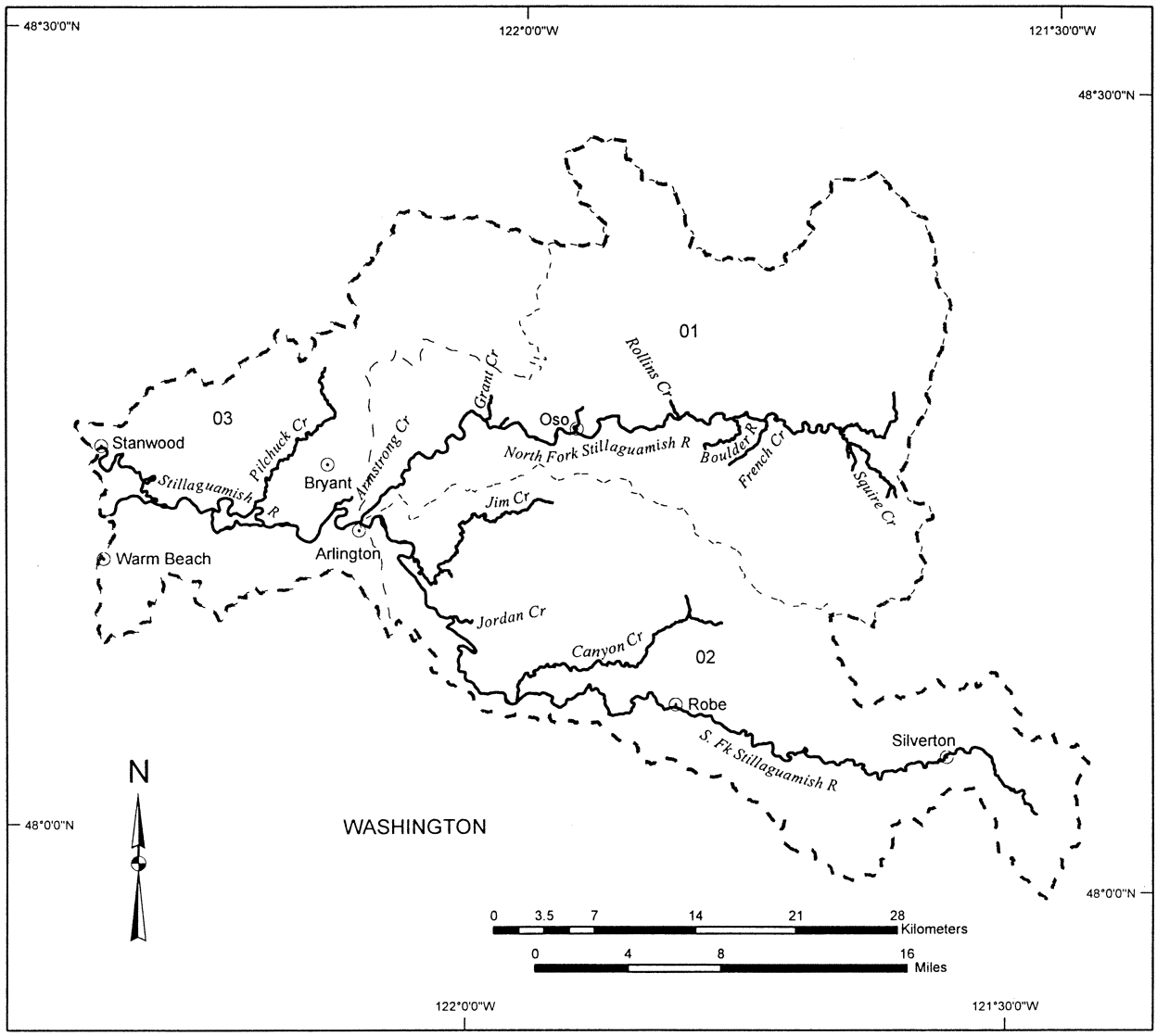
Area of Detail




Final Critical Habitat for the
Puget Sound Chinook Salmon ESU
LOWER SKAGIT SUBBASIN
17110007
122°30'0"W
122°15'0"W
122°0'0"W
121°45'0"W
N
48°30'0"N
48°15'0"N
Hansen Cr
Jones Cr
Lyman
Hamilton
Grandy Cr
Skagit R
Concrete
Sedro-Woolley
Burlington
Skagit R
E. Fk Nookachamps Cr
Sorenson Cr
Day Cr
01
Pressentin Cr
Finney Cr
Mount Vernon
Big Lake
Walker Cr
North Fork Skagit R
S. Fk Skagit R
02
Hall Sl
Browns Sl
Conway
Steamboat Sl
McMurray
WASHINGTON
0 3 6 12 18 24 Kilometers
0 3.75 7.5 15 Miles
Legend
Cities / Towns
Critical Habitat
Subbasin Boundary
Watershed Boundaries
01 - 02 = Watershed code - last 2 digits of 17110007xx
Area of Detail
WASHINGTON
OREGON
IDAHO

Final Critical Habitat for the Puget Sound Chinook Salmon ESU

STILLAGUAMISH SUBBASIN 17110008

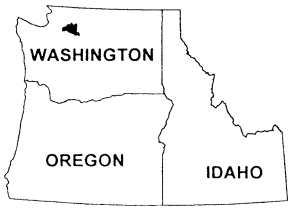


Legend

- Cities / Towns
- Critical Habitat
- Subbasin Boundary
- Watershed Boundaries

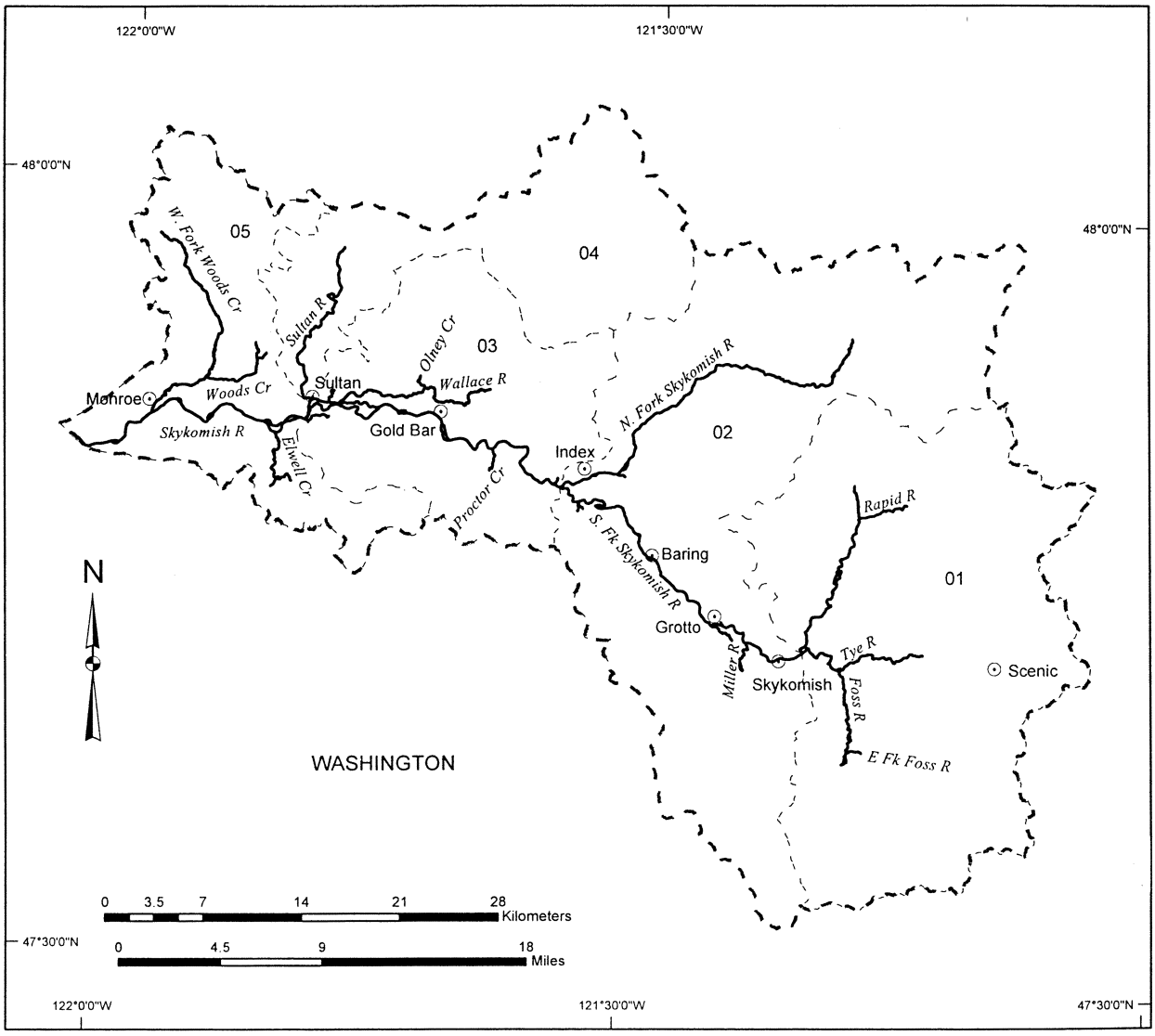
01 - 03 = Watershed code - last 2 digits of 17110008xx

Area of Detail



Final Critical Habitat for the Puget Sound Chinook Salmon ESU

SKYKOMISH SUBBASIN 17110009

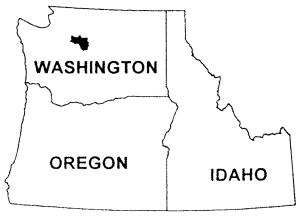


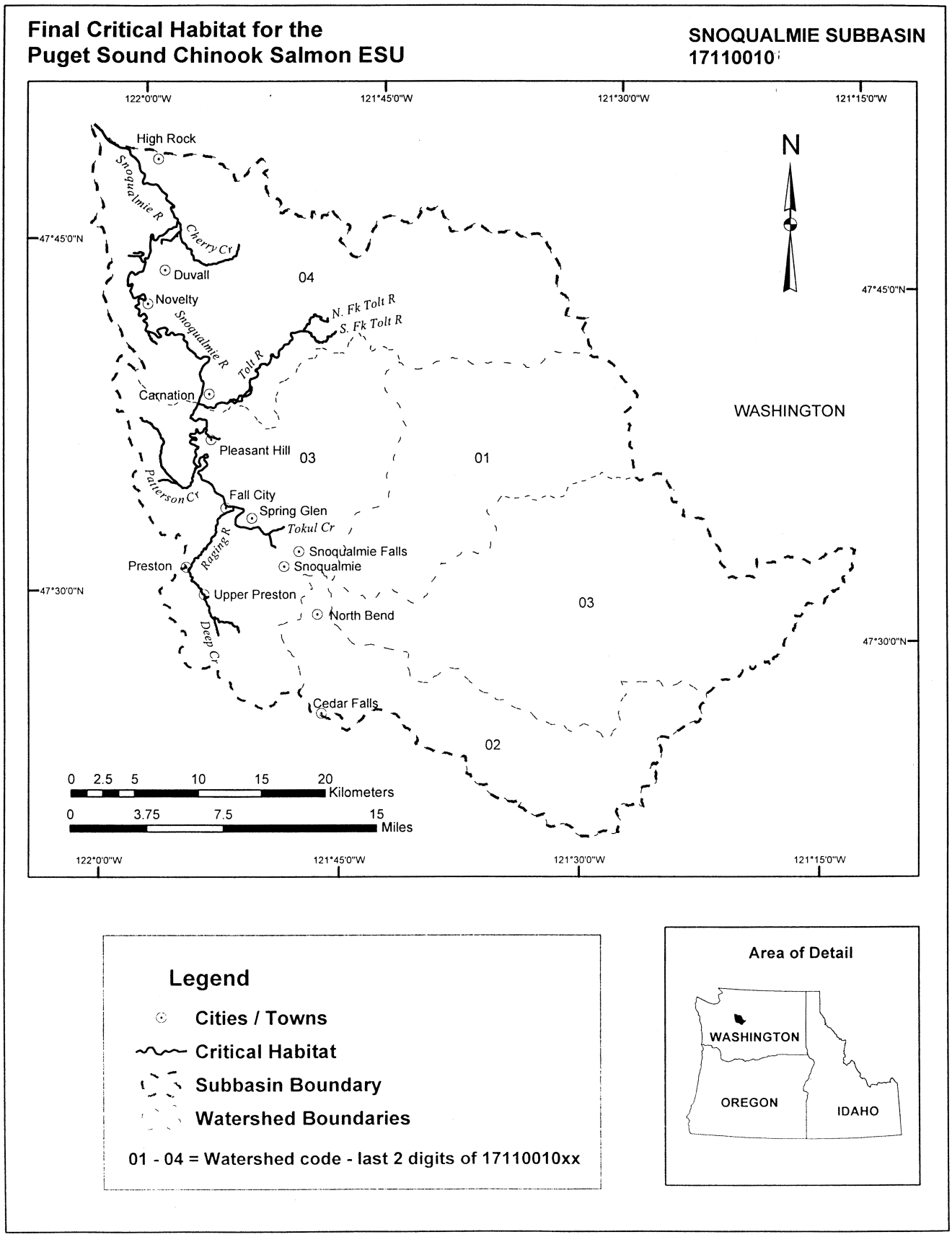
Legend

- Cities / Towns
- Critical Habitat
- Subbasin Boundary
- Watershed Boundaries

01 - 05 = Watershed code - last 2 digits of 17110009xx

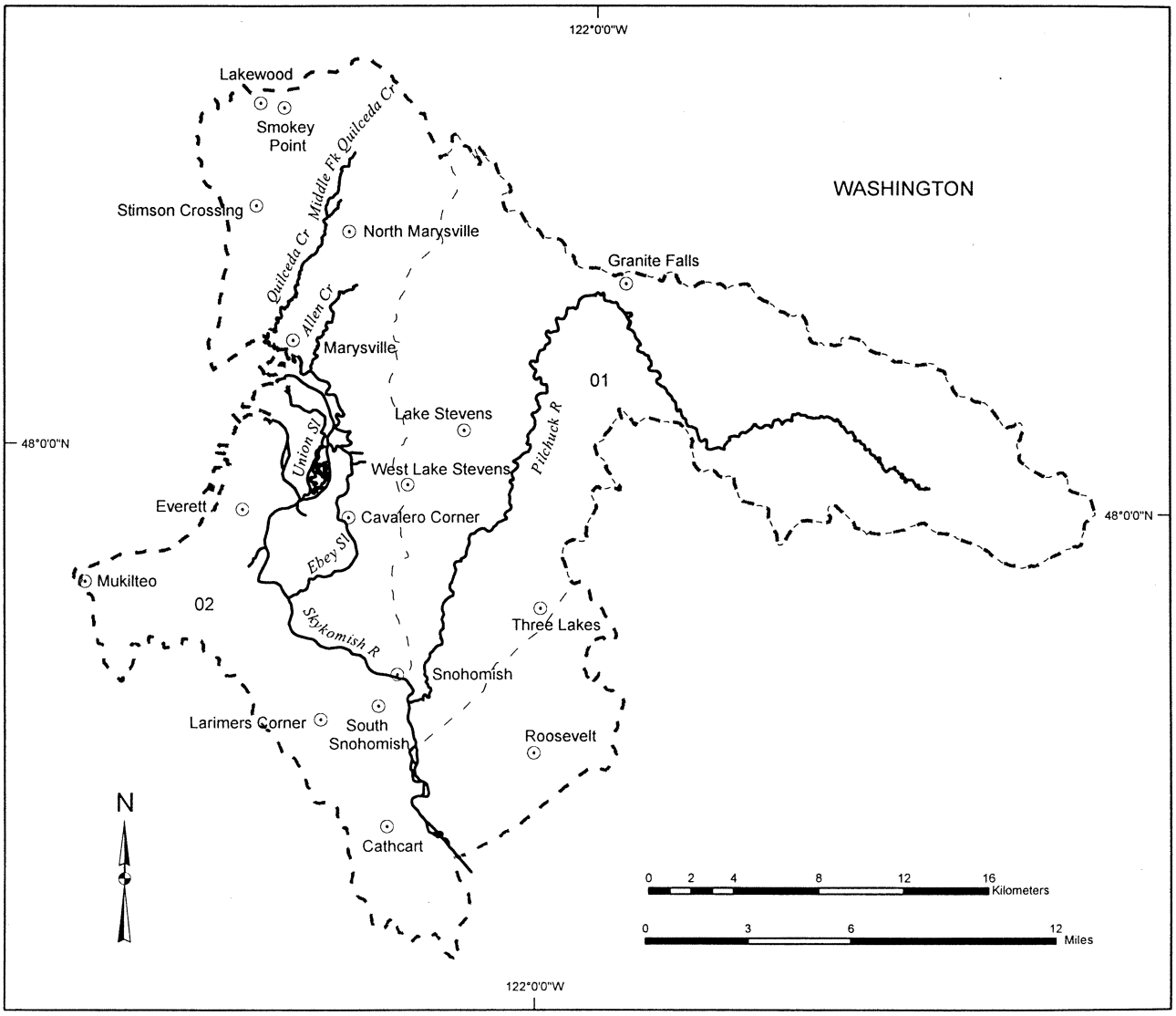
Area of Detail




Final Critical Habitat for the
Puget Sound Chinook Salmon ESU
SNOQUALMIE SUBBASIN
17110010
122°0'0"W
121°45'0"W
121°30'0"W
121°15'0"W
47°45'0"N
47°30'0"N
N
High Rock
Snoqualmie R
Cherry Cr
Duvall
Novelty
Snoqualmie R
N. Fk Tolt R
S. Fk Tolt R
Tolt R
Carnation
Pleasant Hill
Patterson Cr
Fall City
Spring Glen
Tokul Cr
Raging R
Snoqualmie Falls
Snoqualmie
Preston
Upper Preston
North Bend
Deep Cr
Cedar Falls
04
03
01
03
02
WASHINGTON
0 2.5 5 10 15 20 Kilometers
0 3.75 7.5 15 Miles
Legend
Cities / Towns
Critical Habitat
Subbasin Boundary
Watershed Boundaries
01 - 04 = Watershed code - last 2 digits of 17110010xx
Area of Detail
WASHINGTON
OREGON
IDAHO

Final Critical Habitat for the Puget Sound Chinook Salmon ESU

SNOHOMISH SUBBASIN 17110011

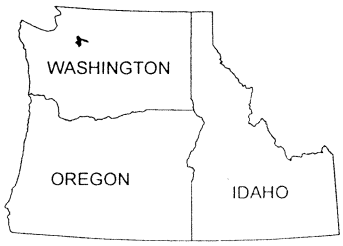


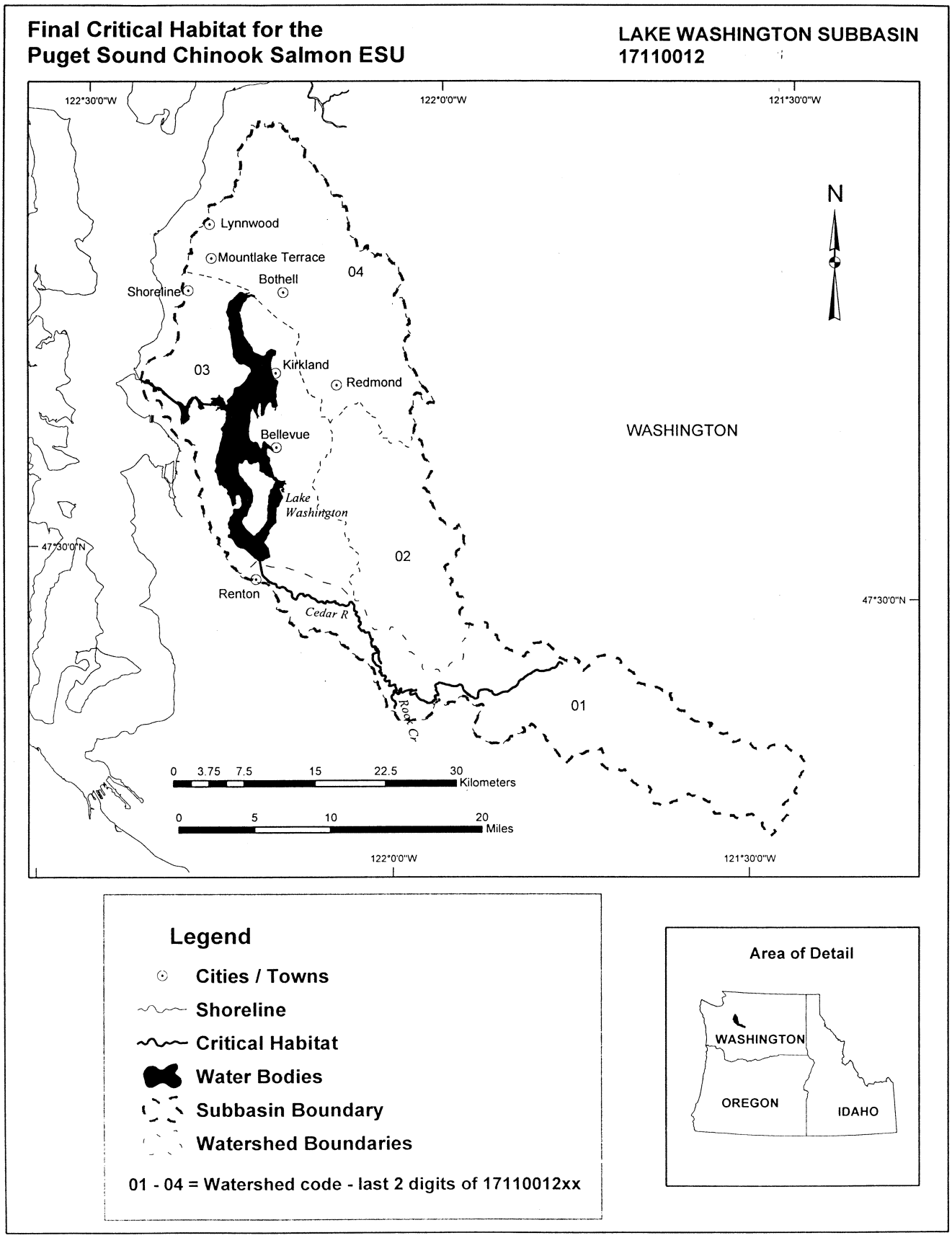
Legend

- Cities / Towns
- Critical Habitat
- Subbasin Boundary
- Watershed Boundaries

01 - 02 = Watershed code - last 2 digits of 17110011xx

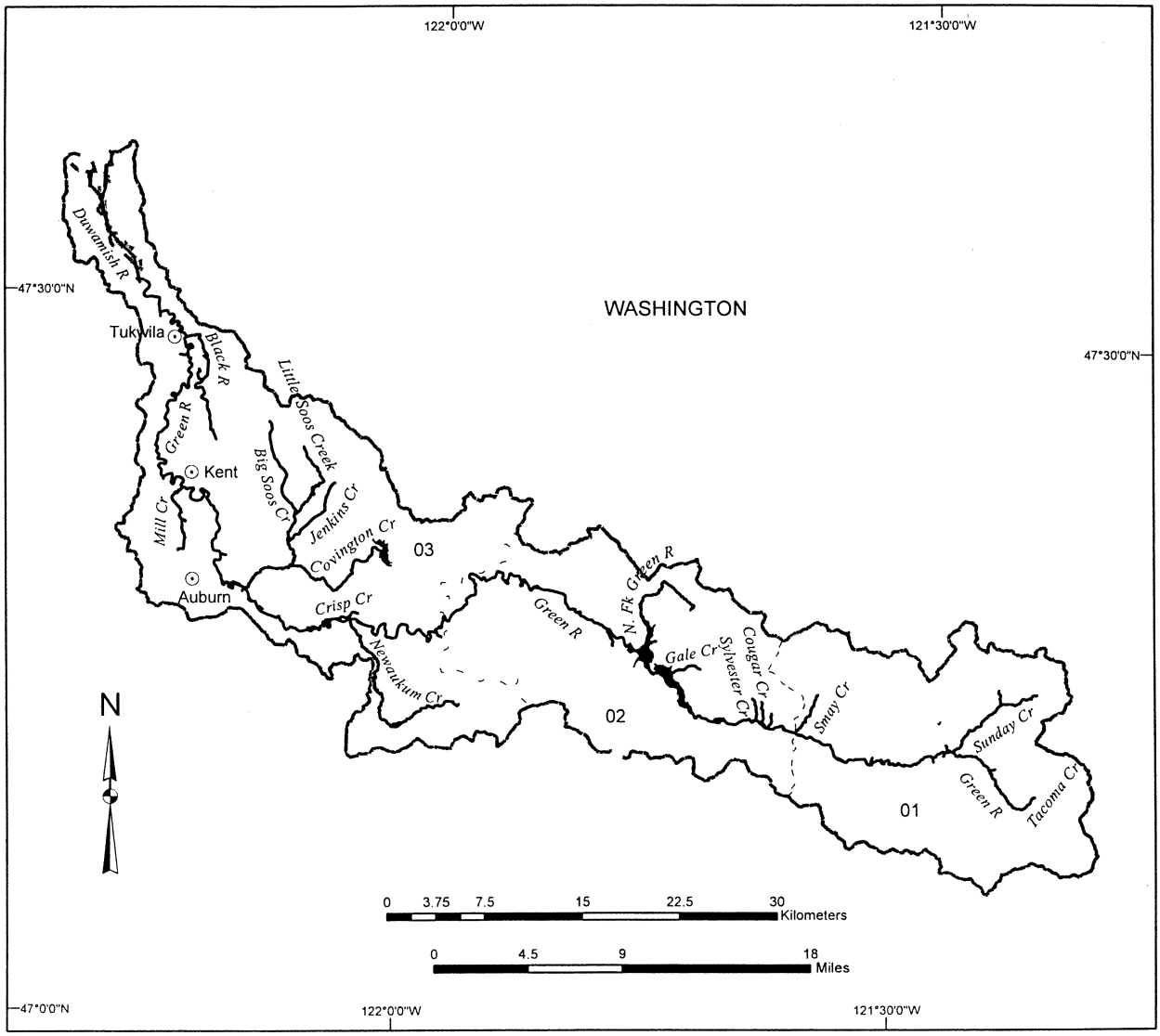
Area of Detail




Final Critical Habitat for the
Puget Sound Chinook Salmon ESU
LAKE WASHINGTON SUBBASIN
17110012
122°30'0"W
122°0'0"W
121°30'0"W
N
Lynnwood
Mountlake Terrace
Bothell
Shoreline
04
03
Kirkland
Redmond
Bellevue
WASHINGTON
Lake Washington
47°30'0"N
02
Renton
Cedar R
Rock Cr
01
0 3.75 7.5 15 22.5 30 Kilometers
0 5 10 20 Miles
Legend
Cities / Towns
Shoreline
Critical Habitat
Water Bodies
Subbasin Boundary
Watershed Boundaries
01 - 04 = Watershed code - last 2 digits of 17110012xx
Area of Detail
WASHINGTON
OREGON
IDAHO

Final Critical Habitat for the Puget Sound Chinook Salmon ESU

DUWAMISH SUBBASIN 17110013

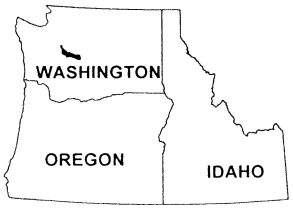


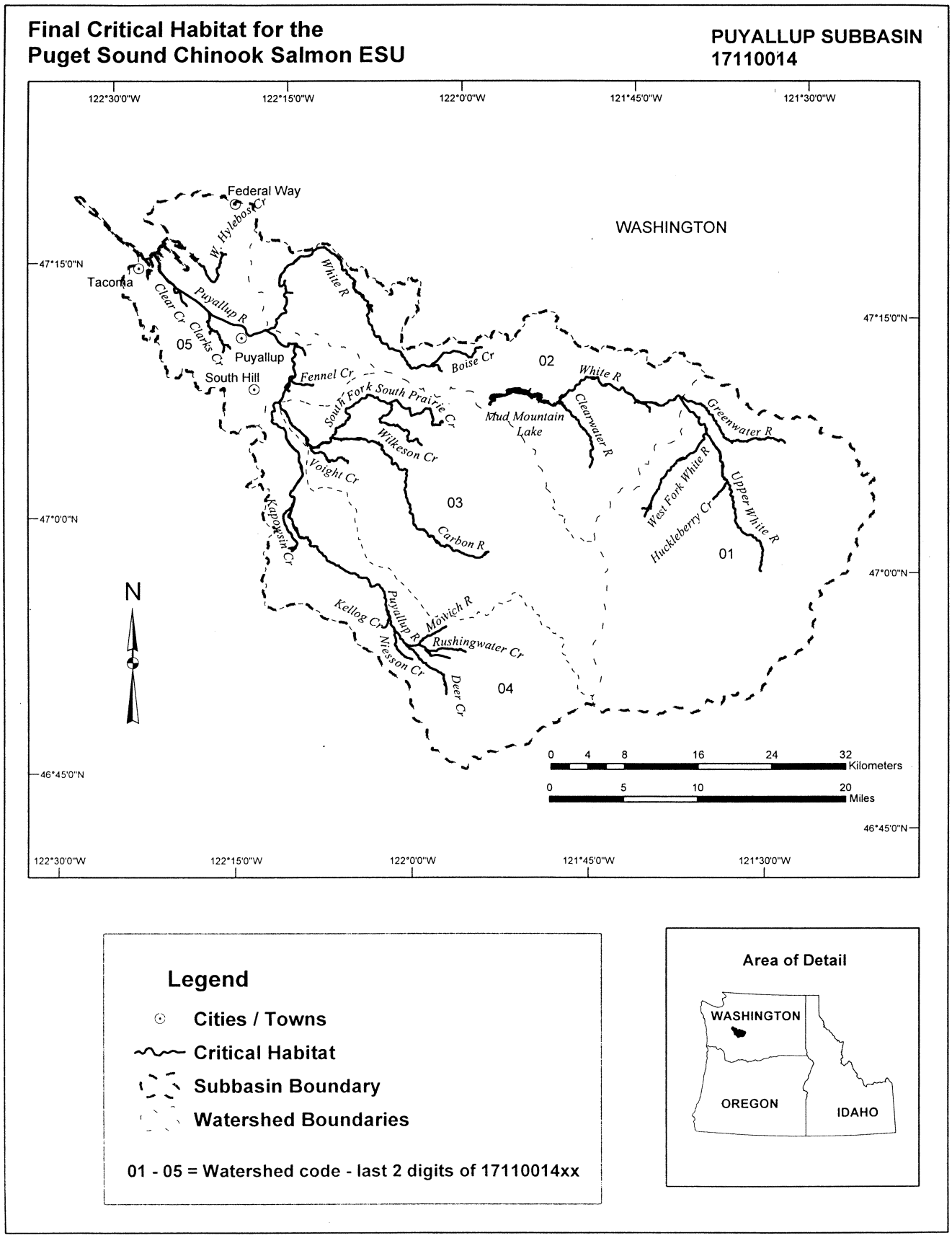
Legend

- Cities / Towns
- Critical Habitat
- Water Bodies
- Subbasin Boundary
- Watershed Boundaries

01 - 03 = Watershed code - last 2 digits of 17110013xx

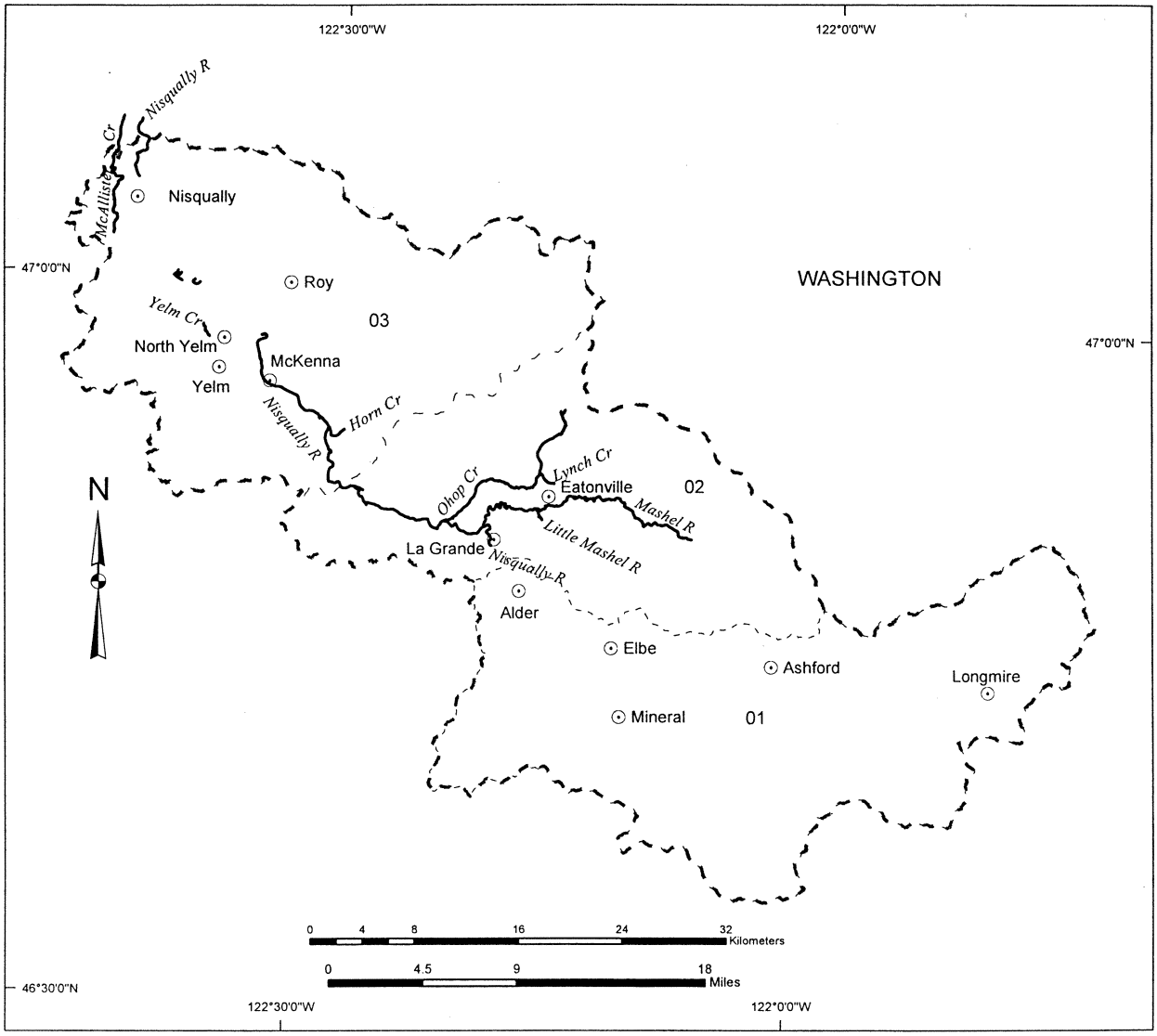
Area of Detail




Final Critical Habitat for the
Puget Sound Chinook Salmon ESU
PUYALLUP SUBBASIN
17110014
122°30'0"W
122°15'0"W
122°0'0"W
121°45'0"W
121°30'0"W
47°15'0"N
47°0'0"N
46°45'0"N
Federal Way
W. Hylebos Cr
WASHINGTON
Tacoma
Clear Cr
Clarks Cr
Puyallup R
05
Puyallup
South Hill
White R
Boise Cr
02
White R
Fennel Cr
South Fork South Prairie Cr
Mud Mountain Lake
Clearwater R
Greenwater R
Wilkeson Cr
Voight Cr
03
West Fork White R
Huckleberry Cr
Upper White R
01
Kapowsin Cr
Carbon R
N
Kellog Cr
Puyallup R
Mowich R
Rushingwater Cr
Nesson Cr
Deer Cr
04
0 4 8 16 24 32 Kilometers
0 5 10 20 Miles
Legend
Cities / Towns
Critical Habitat
Subbasin Boundary
Watershed Boundaries
01 - 05 = Watershed code - last 2 digits of 17110014xx
Area of Detail
WASHINGTON
OREGON
IDAHO

Final Critical Habitat for the Puget Sound Chinook Salmon ESU

NISQUALLY SUBBASIN 17110015

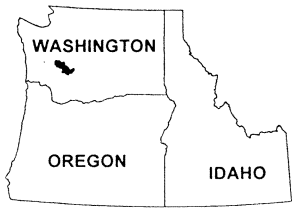


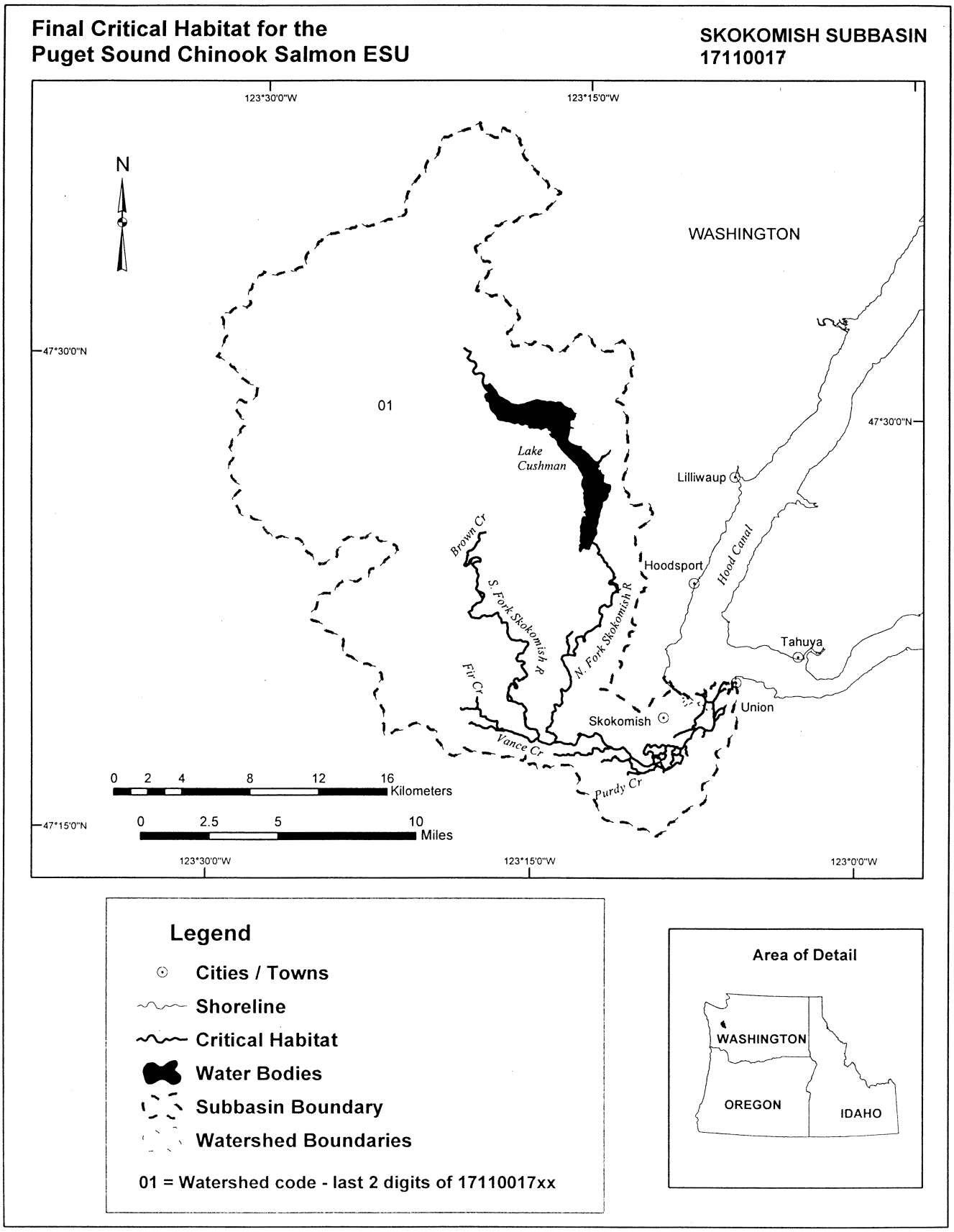
Legend

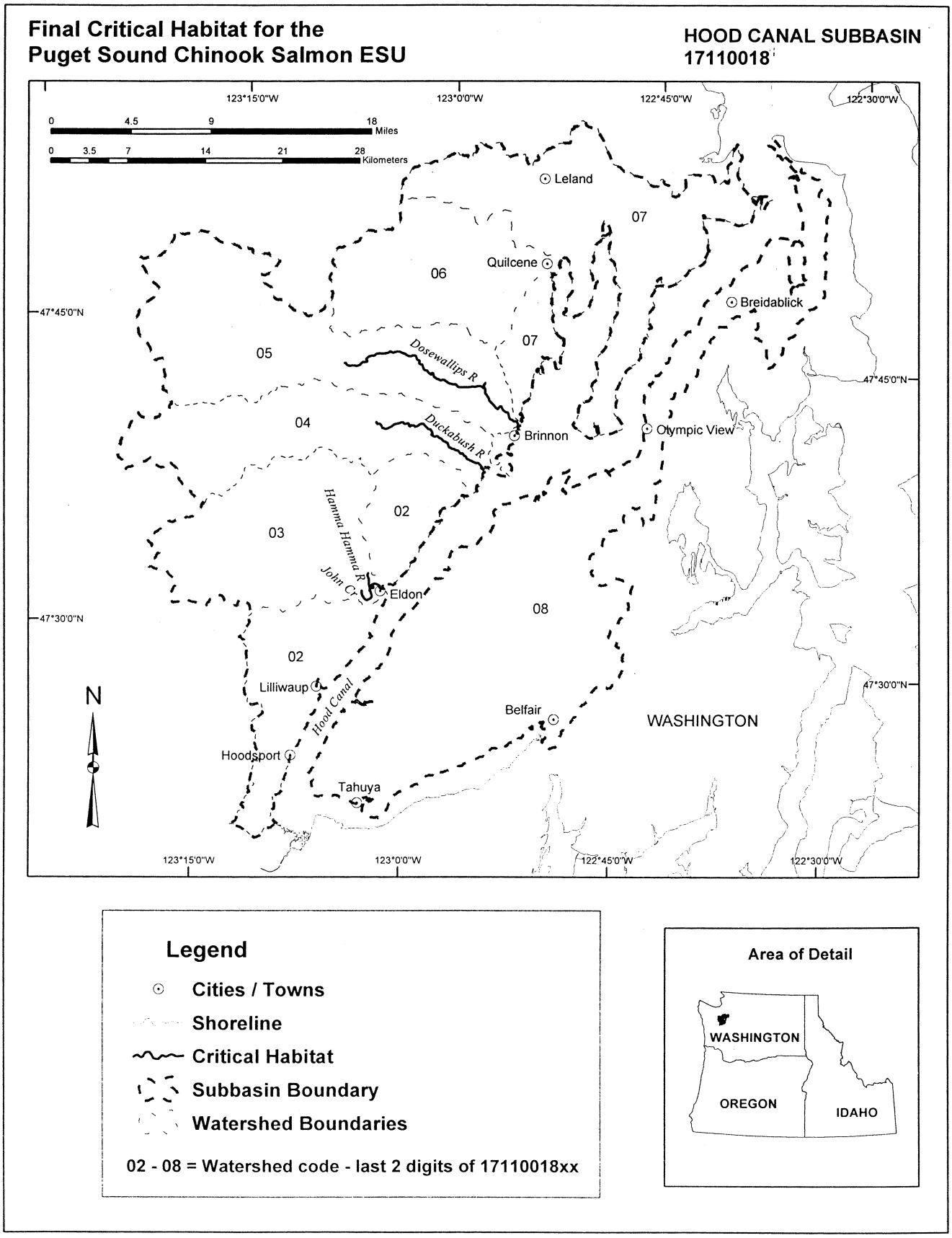
- Cities / Towns
- Critical Habitat
- Subbasin Boundary
- Watershed Boundaries

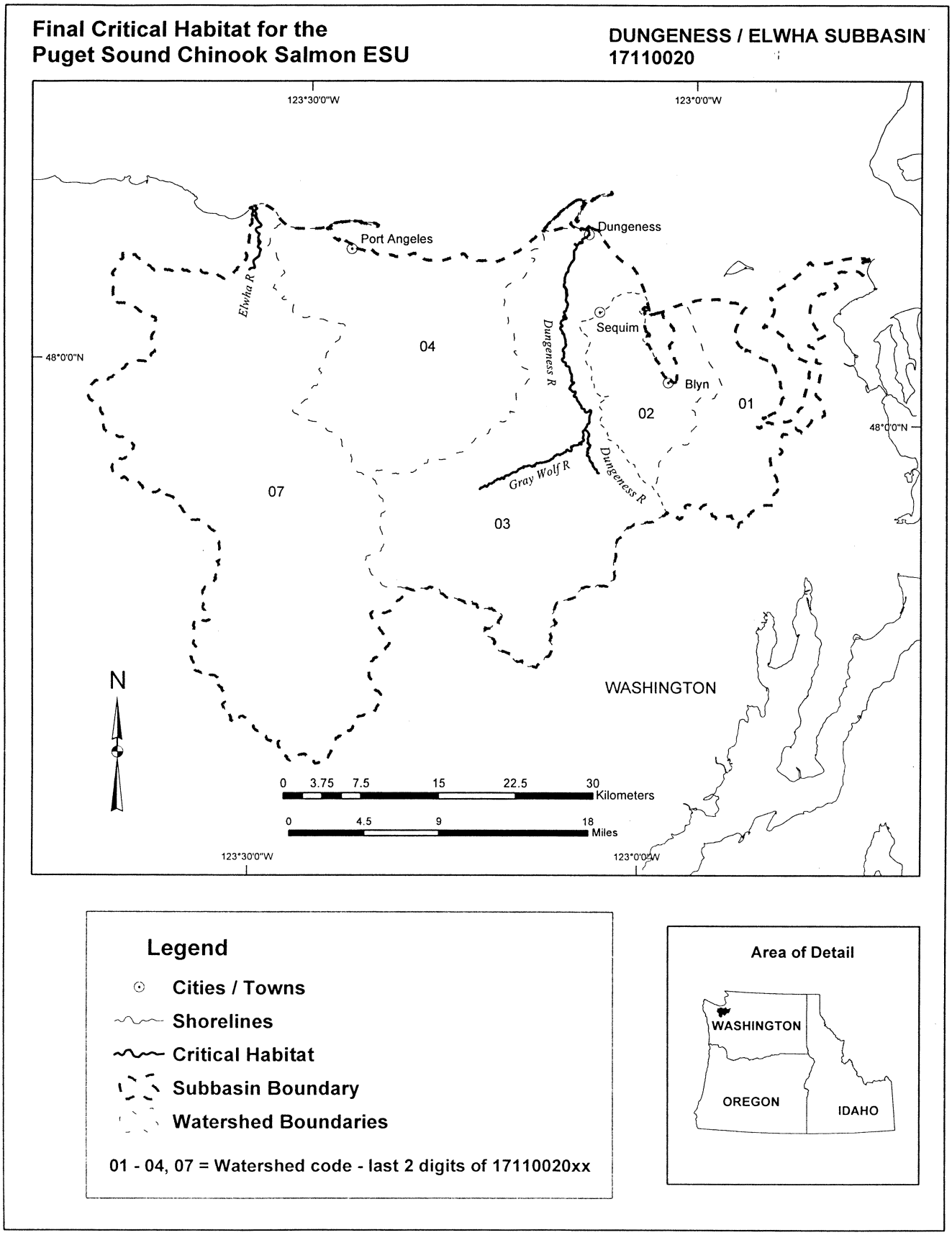
01 - 03 = Watershed code - last 2 digits of 17110015xx

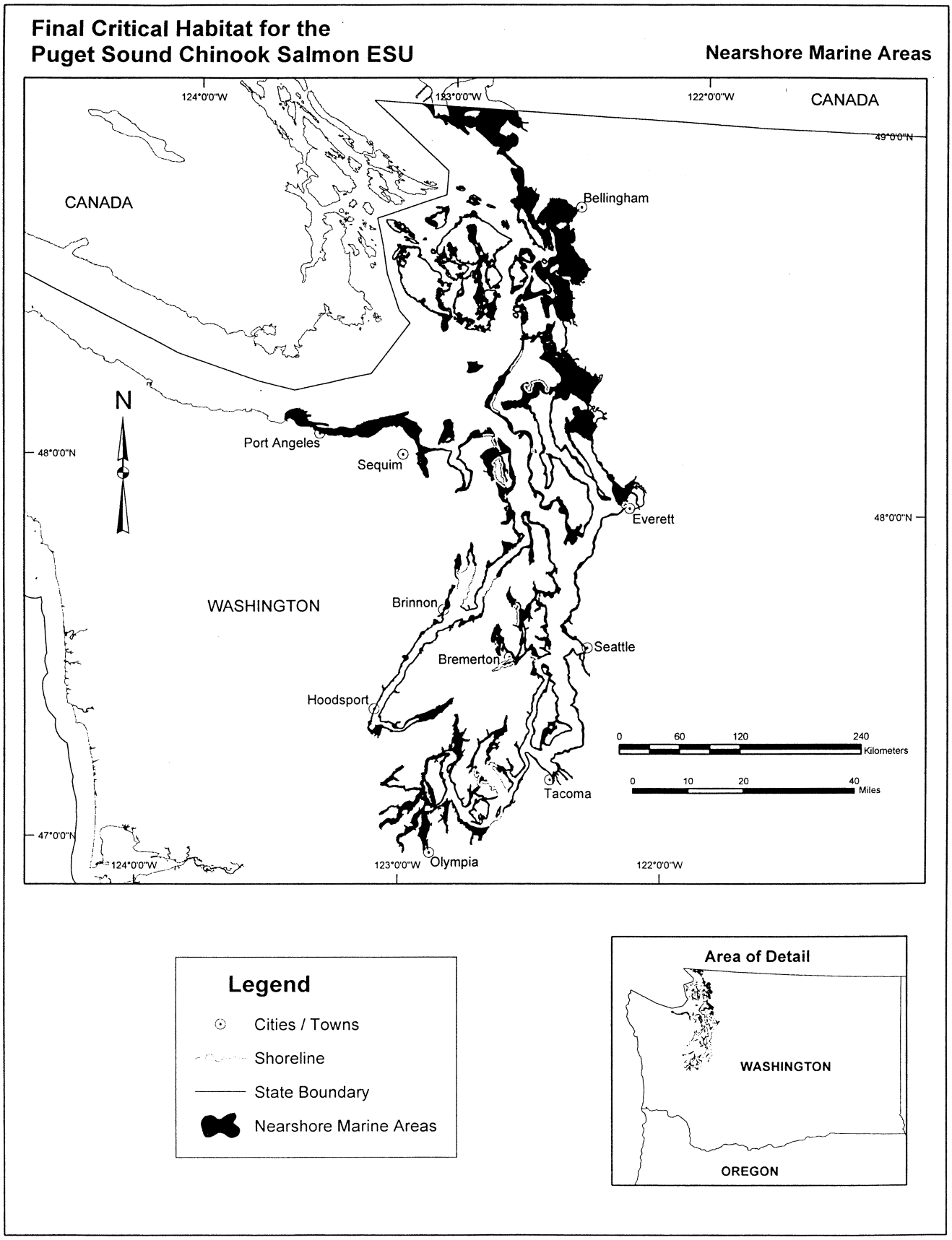
Area of Detail




Final Critical Habitat for the
Puget Sound Chinook Salmon ESU
SKOKOMISH SUBBASIN
17110017
123°30'0"W
123°15'0"W
123°0'0"W
47°30'0"N
47°15'0"N
N
WASHINGTON
01
Lake Cushman
Lilliwaup
Hoodsport
Hood Canal
Tahuya
Union
Skokomish
Brown Cr
S. Fork Skokomish R
N. Fork Skokomish R
Fir Cr
Vance Cr
Purdy Cr
0 2 4 8 12 16 Kilometers
0 2.5 5 10 Miles
Legend
Cities / Towns
Shoreline
Critical Habitat
Water Bodies
Subbasin Boundary
Watershed Boundaries
01 = Watershed code - last 2 digits of 17110017xx
Area of Detail
WASHINGTON
OREGON
IDAHO


Final Critical Habitat for the
Puget Sound Chinook Salmon ESU
HOOD CANAL SUBBASIN
17110018
123°15'0"W
123°0'0"W
122°45'0"W
122°30'0"W
47°45'0"N
47°30'0"N
0 4.5 9 18 Miles
0 3.5 7 14 21 28 Kilometers
Leland
Quilcene
Breidablick
Brinnon
Olympic View
Eldon
Lilliwaup
Belfair
Hoodsport
Tahuya
Dosewallips R
Duckabush R
Hamma Hamma R
John Cr
Hood Canal
WASHINGTON
02
03
04
05
06
07
08
N
Legend
Cities / Towns
Shoreline
Critical Habitat
Subbasin Boundary
Watershed Boundaries
02 - 08 = Watershed code - last 2 digits of 17110018xx
Area of Detail
WASHINGTON
OREGON
IDAHO


Final Critical Habitat for the
Puget Sound Chinook Salmon ESU
DUNGENESS / ELWHA SUBBASIN
17110020
123°30'0"W
123°0'0"W
48°0'0"N
Port Angeles
Dungeness
Sequim
Blyn
Elwha R
Dungeness R
Gray Wolf R
04
02
01
07
03
WASHINGTON
N
0 3.75 7.5 15 22.5 30 Kilometers
0 4.5 9 18 Miles
Legend
Cities / Towns
Shorelines
Critical Habitat
Subbasin Boundary
Watershed Boundaries
01 - 04, 07 = Watershed code - last 2 digits of 17110020xx
Area of Detail
WASHINGTON
OREGON
IDAHO



BILLING CODE 3510–22–C

(j) *Lower Columbia River Chinook Salmon (Oncorhynchus tshawytscha).* Critical habitat is designated to include the areas defined in the following subbasins:

(1) Middle Columbia/Hood Subbasin 17070105—(i) *East Fork Hood River Watershed 1707010506.* Outlet(s) = Hood River (Lat 45.6050, Long –121.6323) upstream to endpoint(s) in: Dog River (45.4655, –121.5656); East Fork Hood River (45.4665, –121.5669); Pinnacle Creek (45.4595, –121.6568); Tony Creek (45.5435, –121.6411).

(ii) *West Fork Hood River Watershed 1707010507.* Outlet(s) = West Fork Hood River (Lat 45.6050, Long –121.6323) upstream to endpoint(s) in: Divers Creek (45.5457, –121.7447); Elk Creek (45.4277, –121.7889); Indian Creek (45.5375, –121.7857); Jones Creek (45.4629, –121.7942); Lake Branch (45.5083, –121.8485); McGee Creek (45.4179, –121.7675); No Name Creek (45.5347, –121.7929); Red Hill Creek (45.4720, –121.7705), Unnamed (45.5502, –121.7014).

(iii) *Hood River Watershed 1707010508.* Outlet(s) = Hood River (Lat 45.7205, Long –121.5055) upstream to endpoint(s) in: Hood River (45.6050, –121.6323).

(iv) *White Salmon River Watershed 1707010509.* Outlet(s) = White Salmon River (Lat 45.7226, Long –121.5214) upstream to endpoint(s) in: White Salmon River (45.7677, –121.5374).

(v) *Wind River Watershed 1707010511.* Outlet(s) = Wind River (Lat 45.7037, Long –121.7946) upstream to endpoint(s) in: Bear Creek (45.7620, –121.8293); Big Hollow Creek (45.9399, –121.9996); Dry Creek (45.9296, –121.9721); Falls Creek (45.9105, –121.9222); Little Wind River (45.7392, –121.7772); Ninemile Creek (45.8929, –121.9526); Paradise Creek (45.9527, –121.9408); Trapper Creek (45.8887, –122.0065); Trout Creek (45.8021, –121.9313); Wind River (45.9732, –121.9031).

(vi) *Middle Columbia/Grays Creek Watershed 1707010512.* Outlet(s) = Columbia River (Lat 45.7044, Long –121.7980) upstream to endpoint(s) in: Columbia River (45.7205, –121.5056).

(vii) *Middle Columbia/Eagle Creek Watershed 1707010513.* Outlet(s) = Columbia River (Lat 45.6447, Long –121.9395) upstream to endpoint(s) in: Camp Creek (45.6676, –121.8167); Carson Creek (45.7206, –121.8184); Columbia River (45.7044, –121.7980); Dry Creek (45.6717, –121.8732); Eagle Creek (45.6365, –121.9171); East Fork Herman Creek (45.6538, –121.8122); Herman Creek (45.6749, –121.8477); Rock Creek (45.6958, –121.8915); Unnamed (45.6654, –121.8164); Unnamed (45.6674, –121.8487); Unnamed (45.6689, –121.8444); Unnamed (45.6762, –121.9350); Unnamed (45.6902, –121.9034); Unnamed (45.6948, –121.9424).

(2) Lower Columbia/Sandy Subbasin 17080001—(i) *Salmon River Watershed 1708000101.* Outlet(s) = Salmon River (Lat 45.3768, Long –122.0293) upstream to endpoint(s) in: Cheeney Creek (45.3104, –121.9561); Copper Creek (45.2508, –121.9053); Salmon River (45.2511, –121.9025); South Fork Salmon River (45.2606, –121.9474); Unnamed (45.3434, –121.9920).

(ii) *Zigzag River Watershed 1708000102.* Outlet(s) = Zigzag River (Lat 45.3489, Long –121.9442) upstream to endpoint(s) in: Henry Creek (45.3328, –121.9110); Still Creek (45.2755, –121.8413); Unnamed (45.3019, –121.8202); Zigzag River (45.3092, –121.8642).

(iii) *Upper Sandy River Watershed 1708000103.* Outlet(s) = Sandy River (Lat 45.3489, Long –121.9442) upstream to endpoint(s) in: Clear Creek (45.3712, –121.9246); Clear Fork Sandy River (45.3994, –121.8525); Horseshoe Creek (45.3707, –121.8936); Lost Creek (45.3709, –121.8150); Sandy River (45.3899, –121.8620).

(iv) *Middle Sandy River Watershed 1708000104.* Outlet(s) = Sandy River (Lat 45.4464, Long –122.2459) upstream to endpoint(s) in: Alder Creek (45.3776, –122.0994); Bear Creek (45.3368, –121.9265); Cedar Creek (45.4087, –122.2617); North Boulder Creek (45.3822, –122.0168); Sandy River (45.3489, –121.9442).

(v) *Bull Run River Watershed 1708000105.* Outlet(s) = Bull Run River (Lat 45.4464, Long –122.2459) upstream to endpoint(s) in: Bull Run River (45.4455, –122.1561); Little Sandy Creek (45.4235, –122.1975).

(vi) *Washougal River (1708000106).* Outlet(s) = Washougal River (Lat 45.5795, Long –122.4022) upstream(s) to endpoint(s) in: Cougar Creek (45.6265, –122.2987); Dougan Creek (45.6770, –122.1522); Lacamas Creek (45.5972, –122.3933); Little Washougal River (45.6315, –122.3767); Washougal River (45.6729, –122.1524); West Fork Washougal River (45.6205, –122.2149).

(vii) *Columbia Gorge Tributaries Watershed 1708000107.* Outlet(s) = Columbia River (Lat 45.5735, Long –122.3945) upstream to endpoint(s) in: Bridal Veil Creek (45.5542, –122.1793); Columbia River (45.6447, –121.9395); Coopey Creek (45.5656, –122.1671); Government Cove (45.5948, –122.0630); Hamilton Creek (45.6414, –121.9764); Hardy Creek (45.6354, –121.9987); Horsetail Creek (45.5883, –122.0675); Latourell Creek (45.5388, –122.2173); McCord Creek (45.6115, –121.9929); Moffett Creek (45.6185, –121.9662); Multnomah Creek (45.5761, –122.1143), Oneonta Creek (45.5821, –122.0718); Tanner Creek (45.6264, –121.9522); Turnaft Creek (45.6101, –122.0284); Unnamed (45.5421, –122.2624); Unnamed (45.5488, –122.3504); Unnamed (45.6025, –122.0443); Unnamed (45.6055, –122.0392); Unnamed (45.6083, –122.0329); Unnamed (45.6118, –122.0216); Unnamed (45.6124, –122.0172); Unnamed (45.6133, –122.0055); Wahkeena Creek (45.5755, –122.1266); Young Creek (45.5480, –122.1997).

(viii) *Lower Sandy River Watershed 1708000108.* Outlet(s) = Sandy River (Lat 45.5680, Long –122.4023) upstream to endpoint(s) in: Beaver Creek (45.5258, –122.3822); Gordon Creek (45.4915, –122.2423); Sandy River (45.4464, –122.2459); Trout Creek (45.4844, –122.2785); Unnamed (45.5542, –122.3768); Unnamed (45.5600, –122.3650).

(3) Lewis Subbasin 17080002—(i) *East Fork Lewis River Watershed 1708000205.* Outlet(s) = East Fork Lewis River (Lat 45.8664, Long –122.7189) upstream to endpoint(s) in: East Fork Lewis River (45.8395, –122.4463).

(ii) *Lower Lewis River Watershed 1708000206.* Outlet(s) = Lewis River (Lat 45.8519, Long –122.7806) upstream to endpoint(s) in: Cedar Creek (45.9049, –122.3684); Chelatchie Creek (45.9169, –122.4130); Johnson Creek (45.9385, –122.6261); Lewis River (45.9570, –122.5550); Pup Creek (45.9391, –122.5440); Unnamed (45.8882, –122.7412); Unnamed (45.9153, –122.4362).

(4) Lower Columbia/Clatskanie Subbasin 17080003—(i) *Kalama River Watershed 1708000301.* Outlet(s) = Burris Creek (45.8926, –122.7892); Kalama River (46.0340, –122.8695) upstream to endpoint(s) in: Arnold Creek (46.0463, –122.5938); Burris Creek (45.9391, –122.7780); Elk Creek (46.0891, –122.5117); Gobar Creek (46.0963, –122.6042); Hatchery Creek (46.0459, –122.8027); Kalama River (46.1109, –122.3579); Little Kalama River (45.9970, –122.6939); North Fork Kalama River (46.1328, –122.4118); Wild Horse Creek (46.0626, –122.6367).

(ii) *Clatskanie River Watershed 1708000303.* Outlet(s) = Clatskanie River (Lat 46.1398, Long –123.2303) upstream to endpoint(s) in: Clatskanie River (46.0435, –123.0829); Merrill Creek (46.0916, –123.1727); Perkins Creek (46.0826, –123.1678).

(iii) *Skamokawa/Elochoman Watershed 1708000305.* Outlet(s) = Elochoman River (Lat 46.2269, Long –123.4040); Skamokawa Creek (46.2677,

–123.4562); Unnamed (46.2243, –123.3975) upstream to endpoint(s) in: Beaver Creek (46.2256, –123.3071); Elochoman River (46.3503, –123.2428); Falk Creek (46.2954, –123.4413); Left Fork Skamokawa Creek (46.3249, –123.4538); McDonald Creek (46.3398, –123.4116); Standard Creek (46.3292, –123.3999); West Fork Elochoman River (46.3211, –123.2605); West Fork Skamokawa Creek (46.2871, –123.4654); Wilson Creek (46.2970, –123.3434).

(iv) *Plympton Creek Watershed 1708000306.* Outlet(s) = Westport Slough (Lat 46.1434, Long –123.3816) upstream to endpoint(s) in: Plympton Creek (46.1261, –123.3842); Westport Slough (46.1195, –123.2797).

(5) Upper Cowlitz Subbasin 17080004—(i) *Headwaters Cowlitz River 1708000401.* Outlet(s) = Cowlitz River (Lat 46.6580, Lat –121.6032) upstream to endpoint(s) in: Clear Fork Cowlitz River (46.6858, –121.5668); Muddy Fork Cowlitz River (46.6994, –121.6169); Ohanapecosh River (46.6883, –121.5809).

(ii) *Upper Cowlitz River Watershed 1708000402.* Outlet(s) = Cowlitz River (Lat 46.5763, Long –121.7051) upstream to endpoint(s) in: Cowlitz River (46.6580, –121.6032).

(iii) *Cowlitz Valley Frontal Watershed 1708000403.* Outlet(s) = Cowlitz River (Lat 46.4765, Long –122.0952) upstream to endpoint(s) in: Cowlitz River (46.5763, –121.7051); Silver Creek (46.5576, –121.9178).

(iv) *Upper Cispus River Watershed 1708000404.* Outlet(s) = Cispus River (Lat 46.4449, Long –121.7954) upstream to endpoint(s) in: Cispus River (46.3410, –121.6709); East Canyon Creek (46.3454, –121.7031); North Fork Cispus River (46.4355, –121.654).

(v) *Lower Cispus River Watershed 1708000405.* Outlet(s) = Cispus River (Lat 46.4765, Long –122.0952) upstream to endpoint(s) in: Cispus River (46.4449, –121.7954); McCoy Creek (46.3892, –121.8190); Yellowjacket Creek (46.3871, –121.8335).

(6) Cowlitz Subbasin 17080005—(i) *Riffe Reservoir Watershed 1708000502.* Outlet(s) = Cowlitz River (Lat 46.5033, Long –122.5870) upstream to endpoint(s) in: Cowlitz River (46.4765, –122.0952).

(ii) *Jackson Prairie Watershed 1708000503.* Outlet(s) = Cowlitz River (Lat 46.3678, Long –122.9337) upstream to endpoint(s) in: Bear Creek (46.4215, –122.9224); Blue Creek (46.4885, –122.7253); Cowlitz River (46.5033, –122.5870); Lacamas Creek (46.5118, –122.8113); Mill Creek (46.4701, –122.8557); Mill Creek (46.5176;–122.6209); Otter Creek (46.4800, –122.6996); Salmon Creek (46.4237, –122.8400); Skook Creek (46.5035, –122.7556).

(iii) *North Fork Toutle River Watershed 1708000504.* Outlet(s) = North Fork Toutle River (Lat 46.3669, Long –122.5859) upstream to endpoint(s) in: North Fork Toutle River (46.3718, –122.5847).

(iv) *Green River Watershed 1708000505.* Outlet(s) = Green River (Lat 46.3718, Long –122.5847) upstream to endpoint(s) in: Cascade Creek (46.3924, –122.3530); Devils Creek (46.3875, –122.5113); Elk Creek (46.3929, –122.3224); Green River (46.3857, –122.1815); Miners Creek (46.3871, –122.2091); Shultz Creek (46.3744, –122.2987); Unnamed (46.3796, –122.3632).

(v) *South Fork Toutle River Watershed 1708000506.* Outlet(s) = South Fork Toutle River (Lat 46.3282, Long –122.7215) upstream to endpoint(s) in: Johnson Creek (46.3100, –122.6338); South Fork Toutle River (46.2306, –122.4439); Studebaker Creek (46.3044, –122.6777).

(vi) *East Willapa Watershed 1708000507.* Outlet(s) = Cowlitz River (Lat 46.2660, Long –122.9154) upstream to endpoint(s) in: Arkansas Creek (46.3275, –123.0123); Baxter Creek (46.3034, –122.9709); Brim Creek (46.4263, –123.0139); Campbell Creek (46.3756, –123.0401); Cowlitz River (46.3678, –122.9337); Delameter Creek (46.2495, –122.9916); Hemlock Creek (46.2585, –122.7269); Hill Creek (46.3724, –122.9211); King Creek (46.5076, –122.9885); Monahan Creek (46.2954, –123.0286); North Fork Toutle River (46.3669, –122.5859); Olequa Creek (46.5174, –122.9042); Stillwater Creek (46.3851, –123.0478); Sucker Creek (46.2628, –122.8116); Unnamed (46.5074, –122.9585); Unnamed (46.5405, –122.9090); Wyant Creek (46.3424, –122.6302).

(vii) *Coweeman Watershed 1708000508.* Outlet(s) = Cowlitz River (Lat 46.0977, Long –122.9141); Owl Creek (46.0771, –122.8676) upstream to endpoint(s) in: Baird Creek (46.1704, –122.6119); Coweeman River (46.1505, –122.5792); Cowlitz River (46.2660, –122.9154); Leckler Creek (46.2092, –122.9206); Mulholland Creek (46.1932, –122.6992); North Fork Goble Creek (46.1209, –122.7689); Ostrander Creek (46.2095, –122.8623); Owl Creek (46.0914, –122.8692); Salmon Creek (46.2547, –122.8839); South Fork Ostrander Creek (46.1910, –122.8600); Unnamed (46.0838, –122.7264).

(7) Lower Columbia Subbasin 17080006—(i) *Big Creek Watershed 1708000602.* Outlet(s) = Bear Creek (Lat 46.1719; Long –123.6642); Big Creek (46.1847, –123.5943); Blind Slough (46.2011, –123.5822); John Day River (46.1820, –123.7392) upstream to endpoint(s) in: Bear Creek (46.1181, –123.6388); Big Creek (46.1475, –123.5819); Gnat Creek (46.1614, –123.4813); John Day River (46.1763, –123.7474).

(ii) *Grays Bay Watershed 1708000603.* Outlet(s) = Crooked Creek (Lat 46.2962, Long –123.6795); Deep River (46.3035, –123.7092); Grays River (46.3035, –123.6867); Sisson Creek (46.3011, –123.7237); Unnamed (46.3042, –123.6870) upstream to endpoint(s) in: Crooked Creek (46.3033, –123.6222); East Fork Grays River (46.4425, –123.4081); Fossil Creek (46.3628, –123.5530); Grays River (46.4910, –123.4334); Hull Creek (46.3725, –123.5866); Johnson Canyon (46.3699, –123.6659); Klints Creek (46.3562, –123.5675); Malone Creek (46.3280, –123.6545); Mitchell Creek (46.4512, –123.4371) South Fork Grays River (46.3813, –123.4581); Sweigiler Creek (46.4195, –123.5375); Unnamed (46.3283, –123.7376); Unnamed (46.3651, –123.6839); Unnamed (46.4701, –123.4515); West Fork Grays River (46.4195, –123.5530).

(8) Clackamas Subbasin 17090011—(i) *Lower Clackamas River Watershed 1709001106.* Outlet(s) = Clackamas River (Lat 45.3719, Long –122.6071) upstream to endpoint(s) in: Clackamas River (45.2440, –122.2798); Clear Creek (45.3568, –122.4781); Deep Creek (45.3916, –122.4028); Richardson Creek (45.3971, –122.4712); Rock Creek (45.4128, –122.5043).

(ii) [Reserved]

(9) Lower Willamette Subbasin 17090012—(i) *Johnson Creek Watershed 1709001201.* Outlet(s) = Willamette River (Lat 45.4423, Long –122.6453) upstream to endpoint(s) in: Crystal Springs Creek (45.4770, –122.6403); Kellogg Creek (45.4344, –122.6314); Tryon Creek (45.4239, –122.6595); Unnamed (45.4002, –122.6423); Willamette River (45.3719, –122.6071).

(ii) *Scappoose Creek Watershed 1709001202.* Outlet(s) = Multnomah Channel (Lat 45.8577, Long –122.7919) upstream to endpoint(s) in: Cunningham Slough (45.8250, –122.8069); Multnomah Channel (45.6188, –122.7921); North Scappoose Creek (45.8014, –122.9340).

(iii) *Columbia Slough/Willamette River Watershed 1709001203.* Outlet(s) = Willamette River (Lat 45.6530, Long –122.7646) upstream to endpoint(s) in: Bybee/Smith Lakes (45.6189, –122.7333); Columbia Slough (45.5979, –122.7137); Willamette River (45.4423, –122.6453).

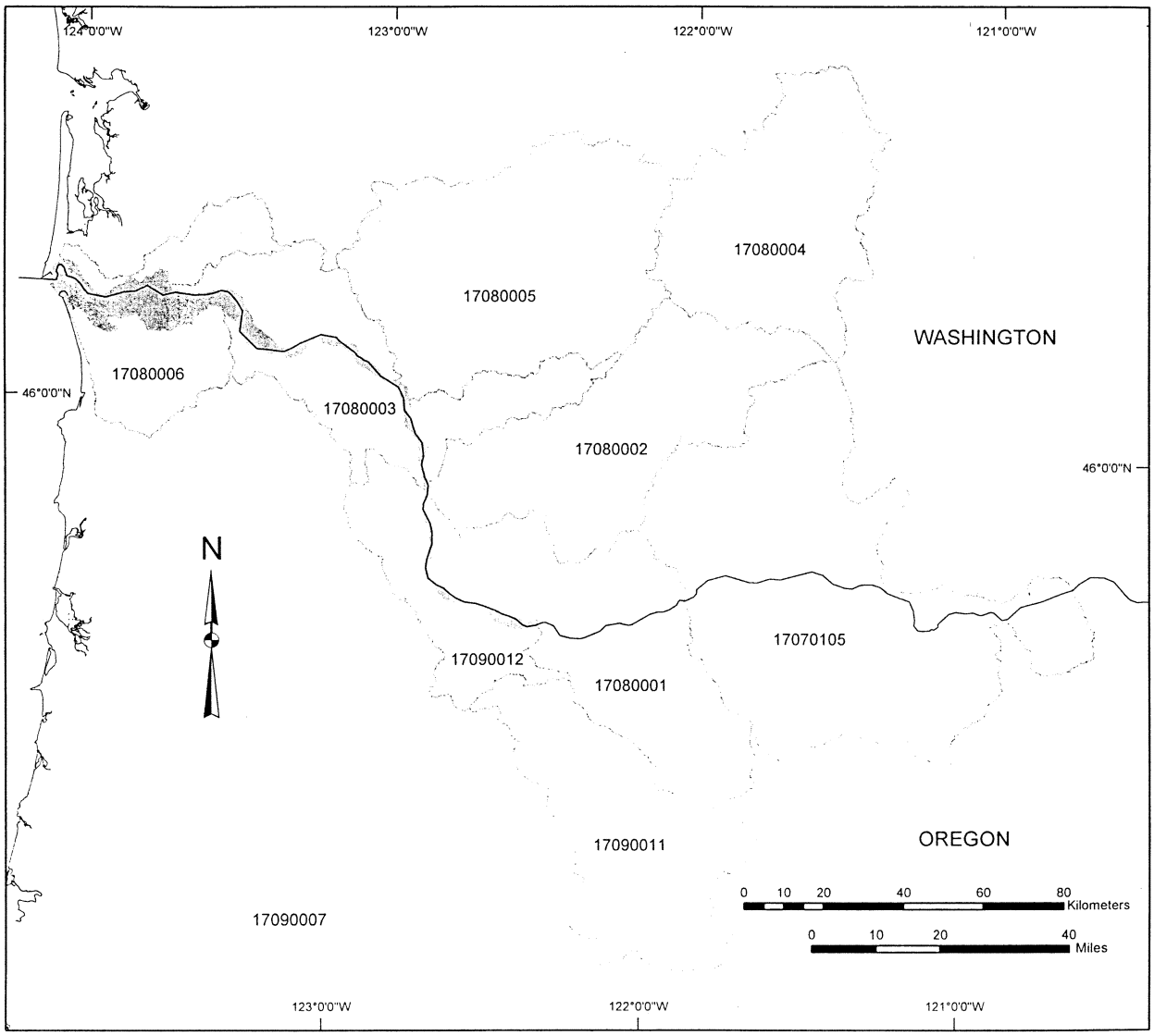
(10) Lower Columbia River Corridor—Lower Columbia River Corridor.

Outlet(s) = Columbia River (Lat 46.2485, Long –124.0782) upstream to endpoint(s) in: Columbia River (45.5709, –122.4021).

(11) Maps of critical habitat for the Lower Columbia River chinook salmon ESU follow:

BILLING CODE 3510–22–P

Map of the Lower Columbia River Chinook Salmon ESU



Legend

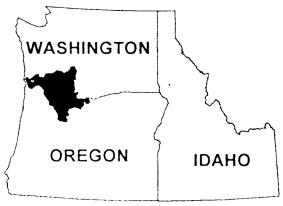
State Boundaries

Water Bodies

Subbasin Boundaries

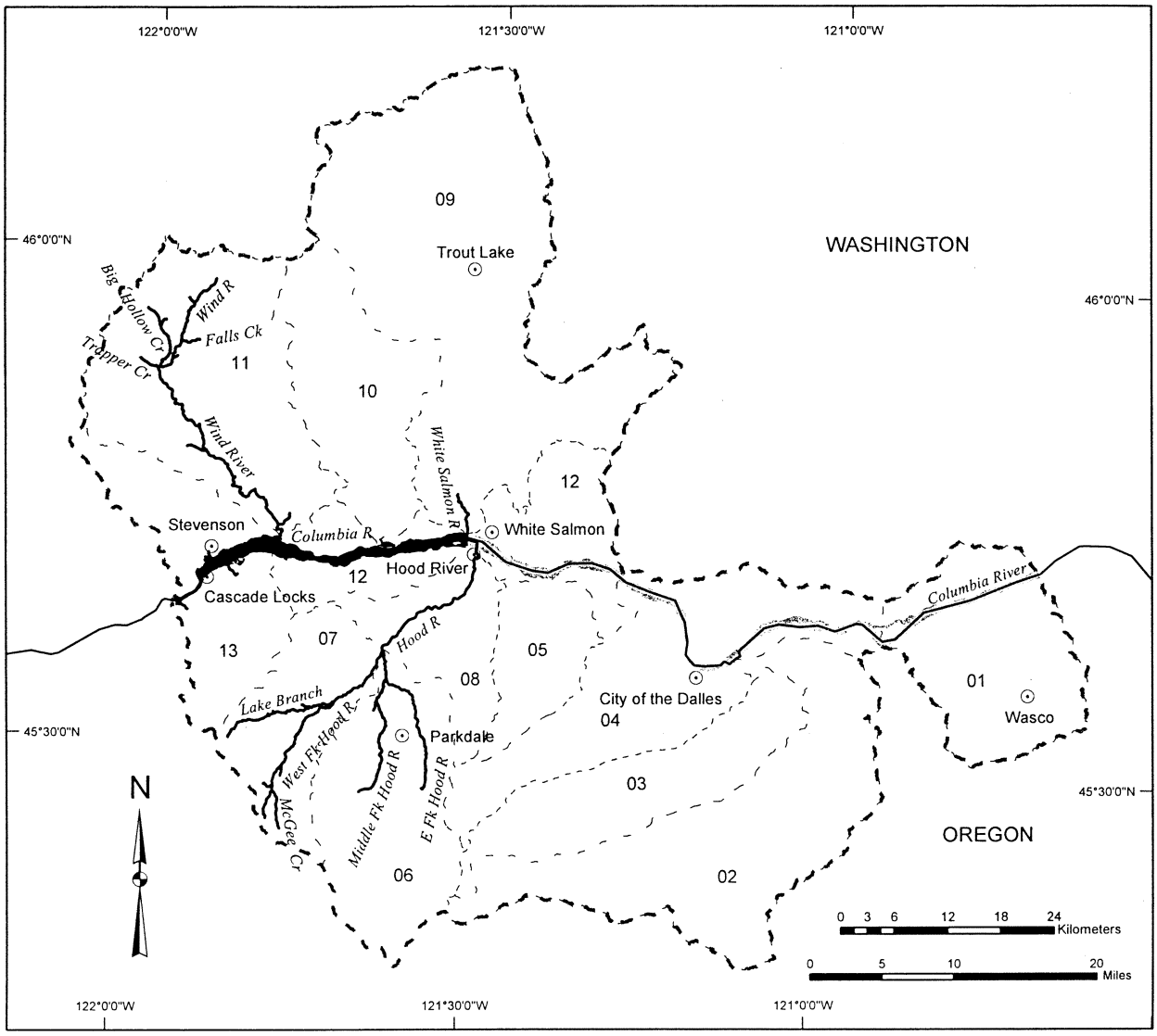
* All habitat areas in subbasin are excluded from designation

Area of Detail



Final Critical Habitat for the Lower Columbia River Chinook Salmon ESU

MIDDLE COLUMBIA / HOOD SUBBASIN 17070105

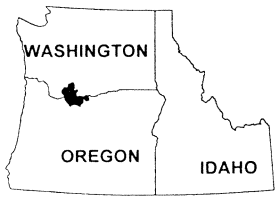


Legend

- Cities / Towns
- Critical Habitat
- State Boundary
- Water Bodies
- Subbasin Boundary
- Watershed Boundaries

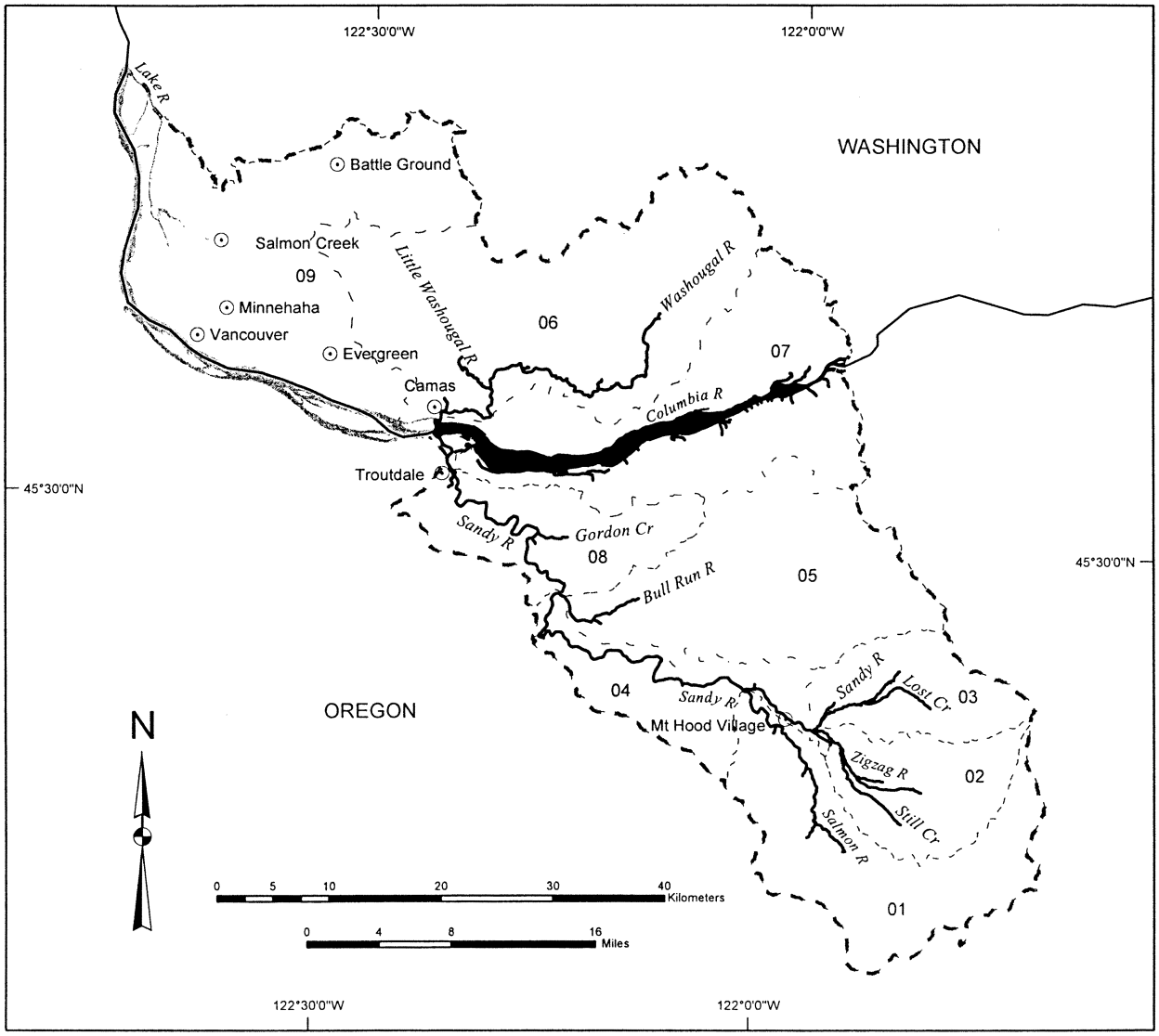
01 - 13 = Watershed code - last 2 digits of 17070105xx

Area of Detail



Final Critical Habitat for the Lower Columbia River Chinook Salmon ESU

LOWER COLUMBIA / SANDY SUBBASIN 17080001

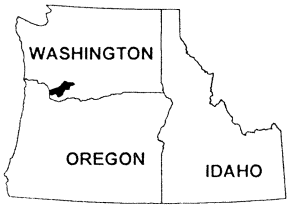


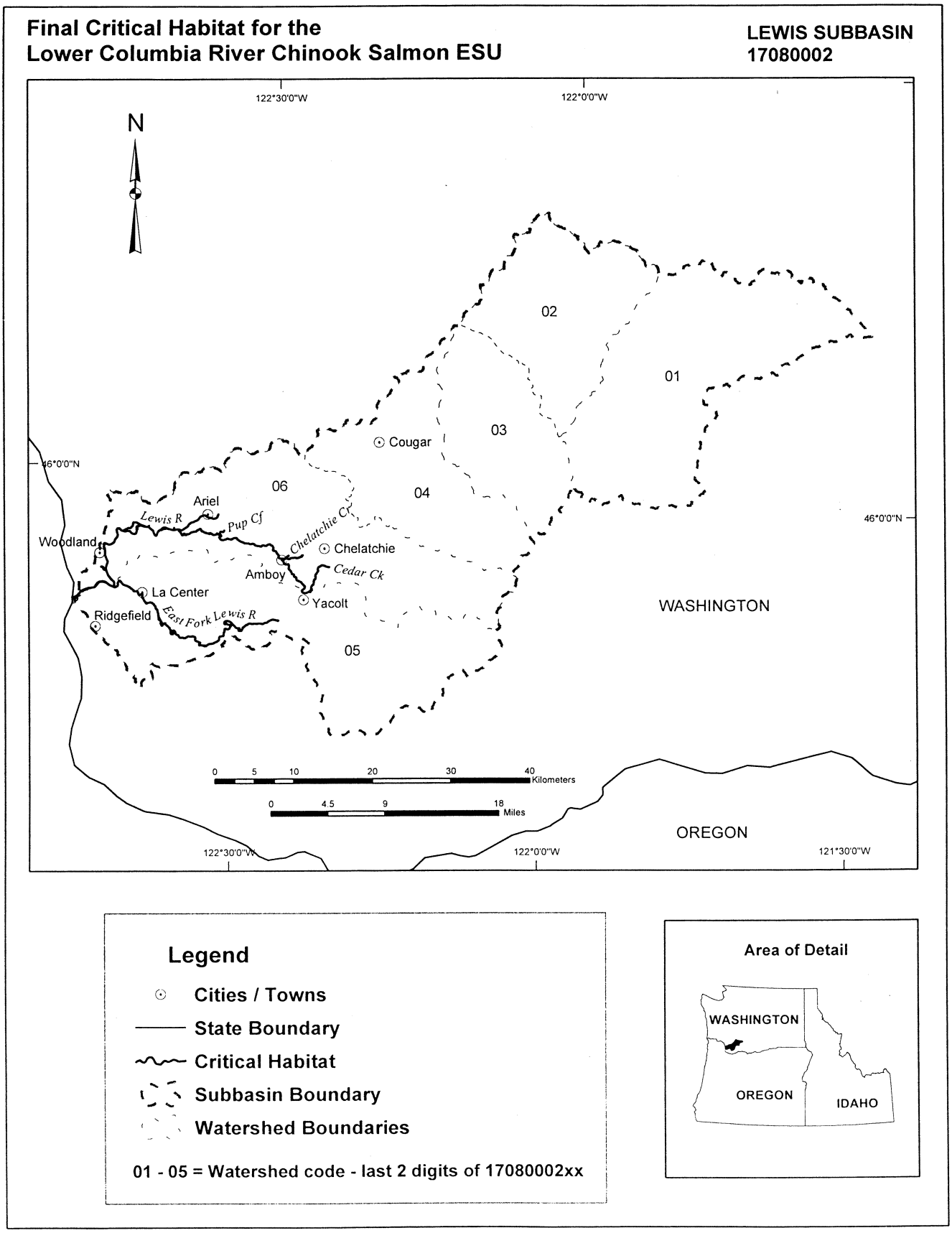
Legend

- Cities / Towns
- Critical Habitat
- State Boundary
- Water Bodies
- Subbasin Boundary
- Watershed Boundaries

01 - 09 = Watershed code - last 2 digits of 17080001xx

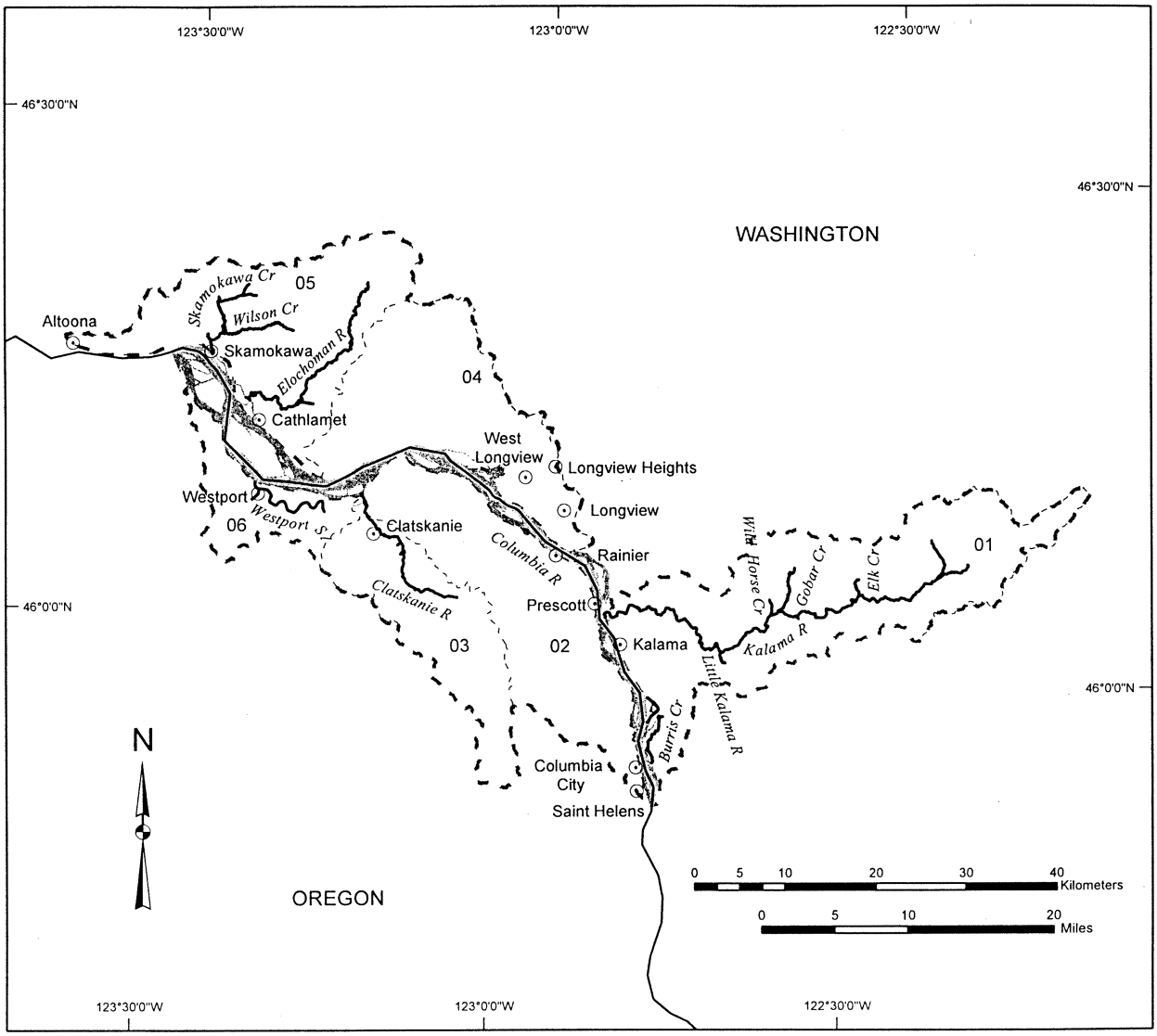
Area of Detail




Final Critical Habitat for the
Lower Columbia River Chinook Salmon ESU
LEWIS SUBBASIN
17080002
122°30'0"W
122°0'0"W
N
02
01
03
Cougar
46°0'0"N
06
04
Ariel
Lewis R
Pup Cf
Chelatchie Cr
Woodland
Chelatchie
Amboy
Cedar Ck
La Center
Yacolt
Ridgefield
East Fork Lewis R
WASHINGTON
05
0 5 10 20 30 40 Kilometers
0 4.5 9 18 Miles
OREGON
121°30'0"W
Legend
Cities / Towns
State Boundary
Critical Habitat
Subbasin Boundary
Watershed Boundaries
01 - 05 = Watershed code - last 2 digits of 17080002xx
Area of Detail
WASHINGTON
OREGON
IDAHO

Final Critical Habitat for the Lower Columbia River Chinook Salmon ESU

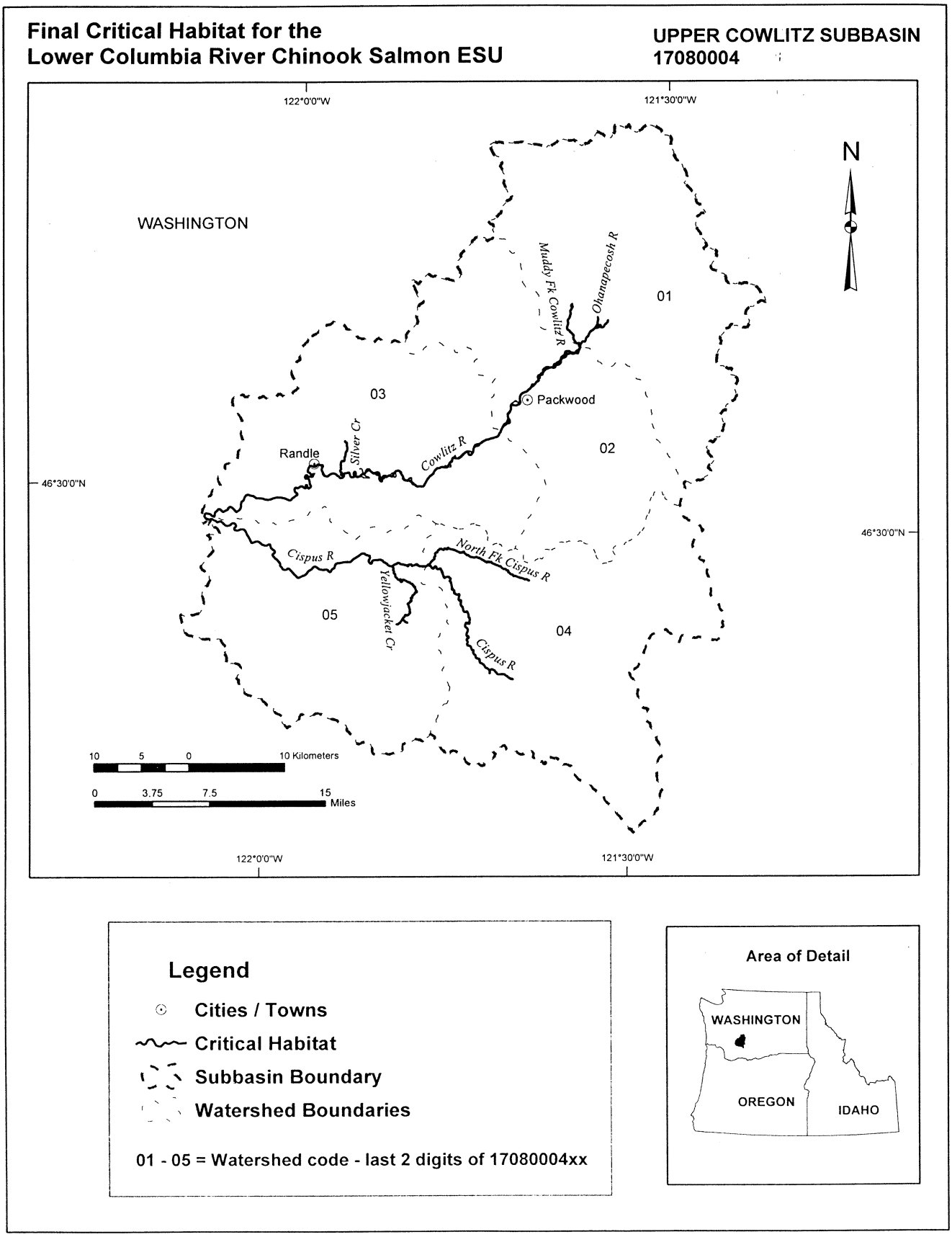
LOWER COLUMBIA / CLATSKANIE SUBBASIN 17080003



Legend

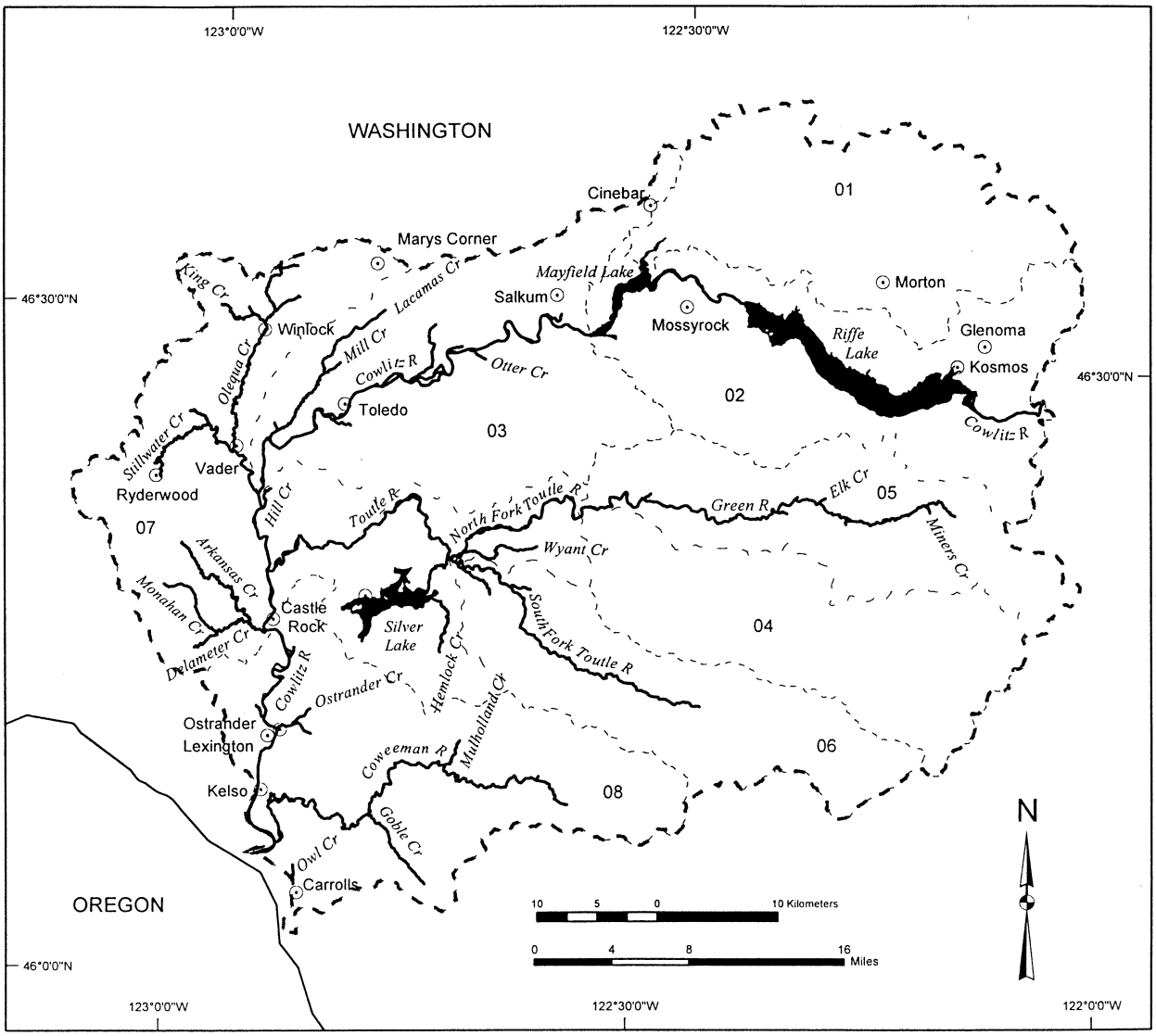
- Cities / Towns
- State Boundary
- Critical Habitat
- Water Bodies
- Subbasin Boundary
- Watershed Boundary

01 - 06 = Watershed code - last 2 digits of 17080003xx


Final Critical Habitat for the
Lower Columbia River Chinook Salmon ESU
UPPER COWLITZ SUBBASIN
17080004
122°0'0"W
121°30'0"W
N
WASHINGTON
Muddy Fk Cowlitz R
Ohanapecosh R
01
03
Packwood
Silver Cr
Randle
Cowlitz R
02
46°30'0"N
Cispus R
North Fk Cispus R
Yellowjacket Cr
05
04
Cispus R
10 5 0 10 Kilometers
0 3.75 7.5 15 Miles
Legend
Cities / Towns
Critical Habitat
Subbasin Boundary
Watershed Boundaries
01 - 05 = Watershed code - last 2 digits of 17080004xx
Area of Detail
WASHINGTON
OREGON
IDAHO

Final Critical Habitat for the Lower Columbia River Chinook Salmon ESU

COWLITZ SUBBASIN 17080005

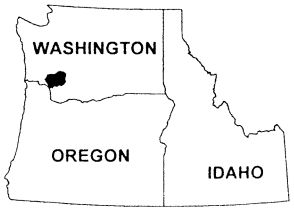


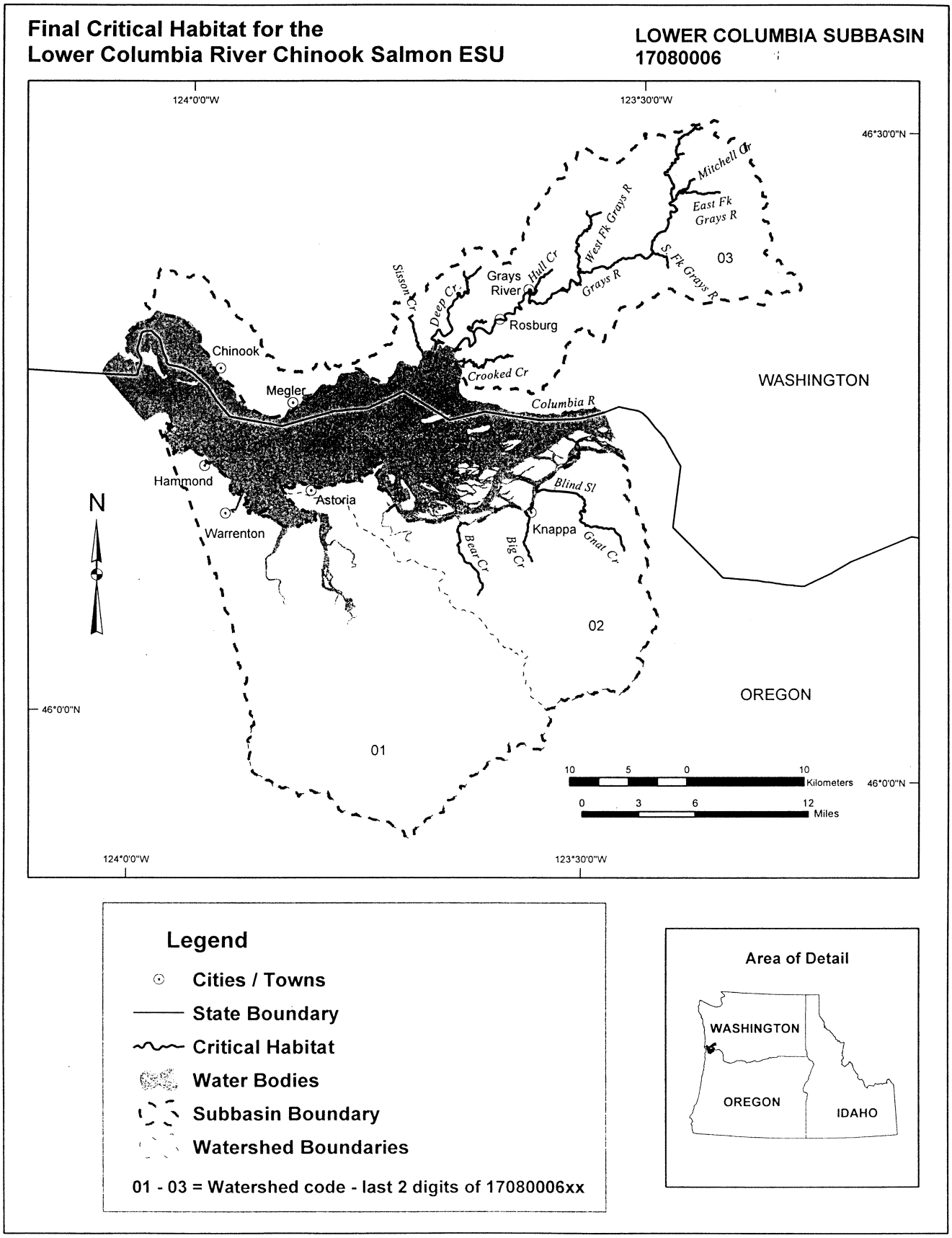
Legend

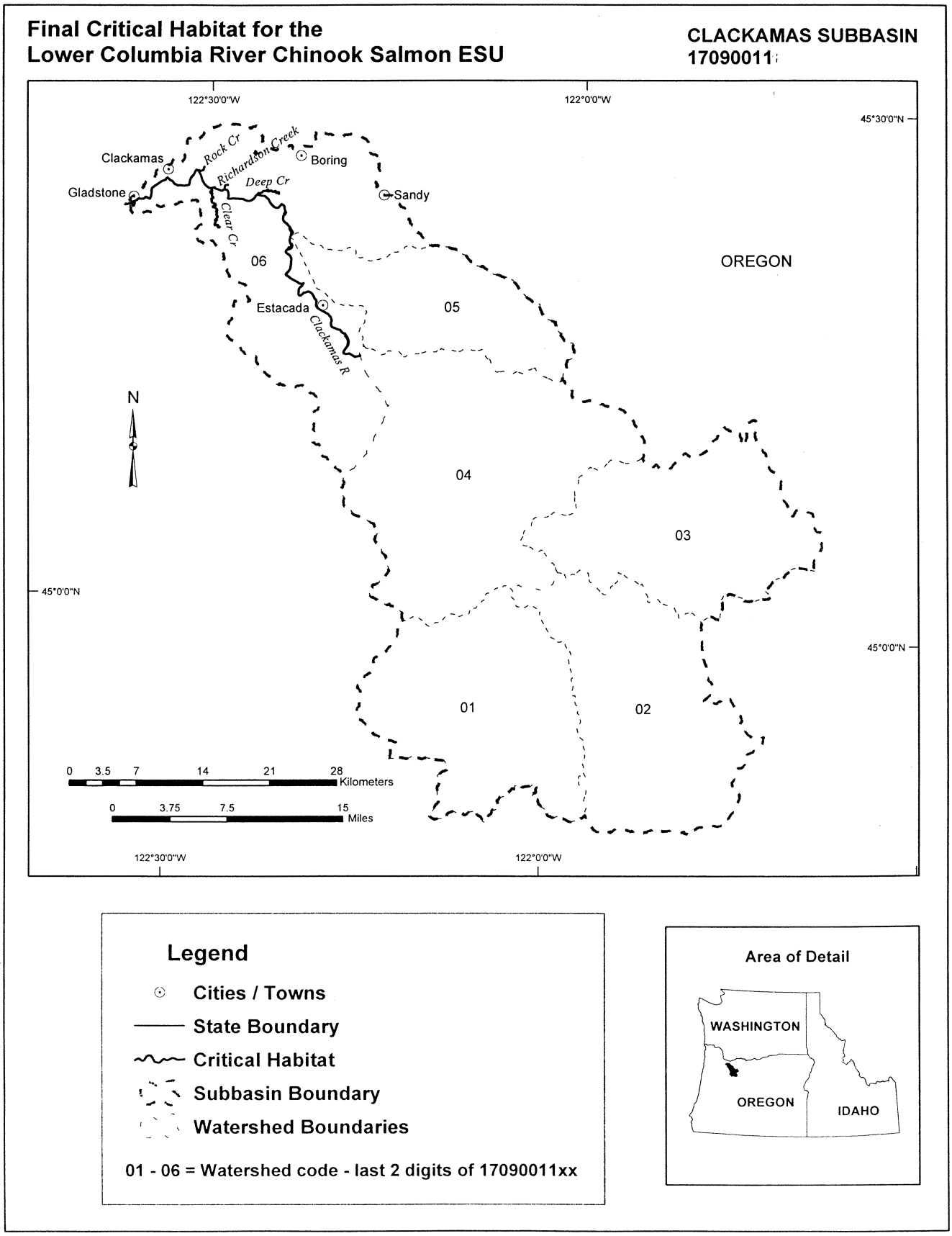
- Cities / Towns
- State Boundary
- Critical Habitat
- Subbasin Boundary
- Watershed Boundaries

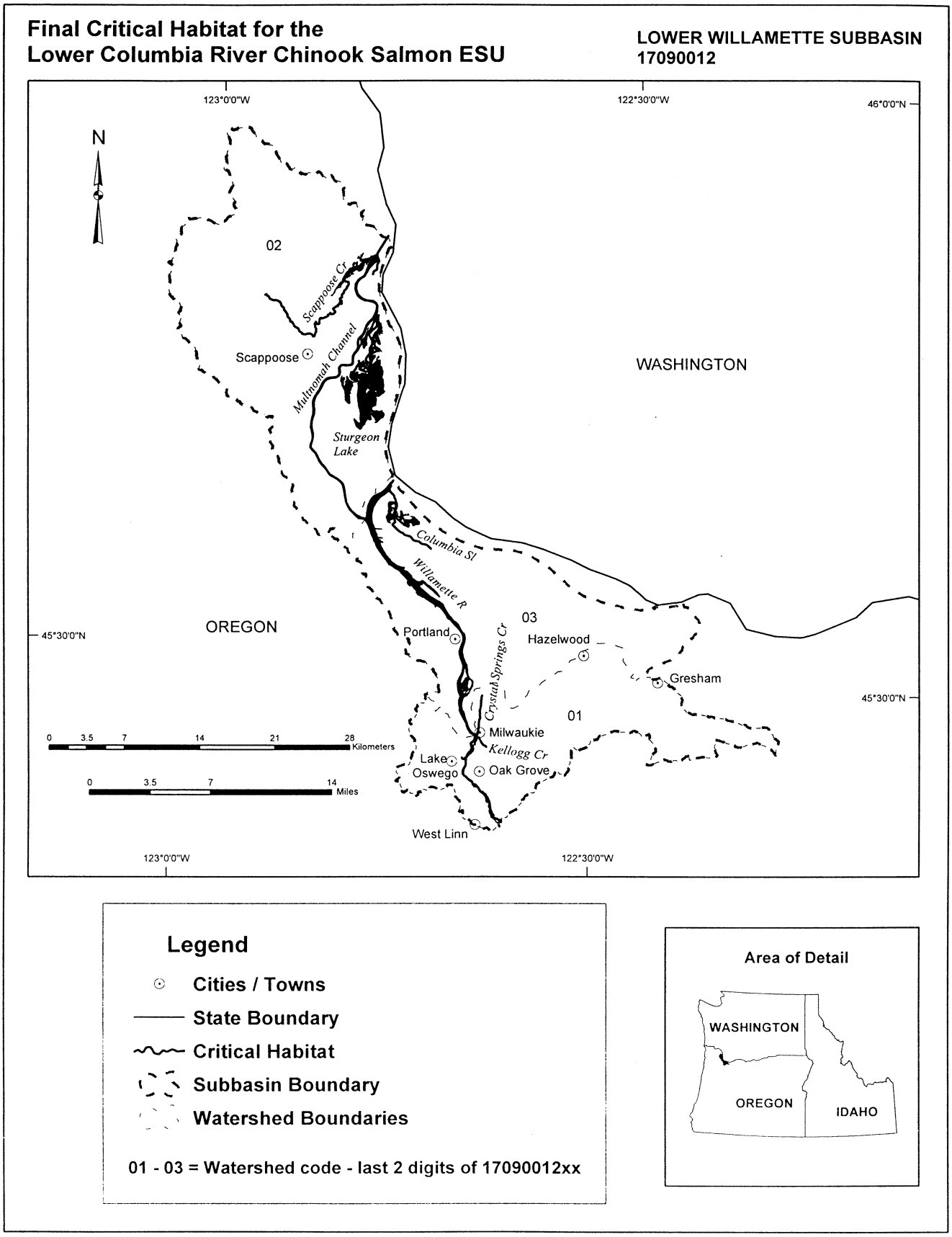
01 - 08 = Watershed code - last 2 digits of 17080005xx

Area of Detail

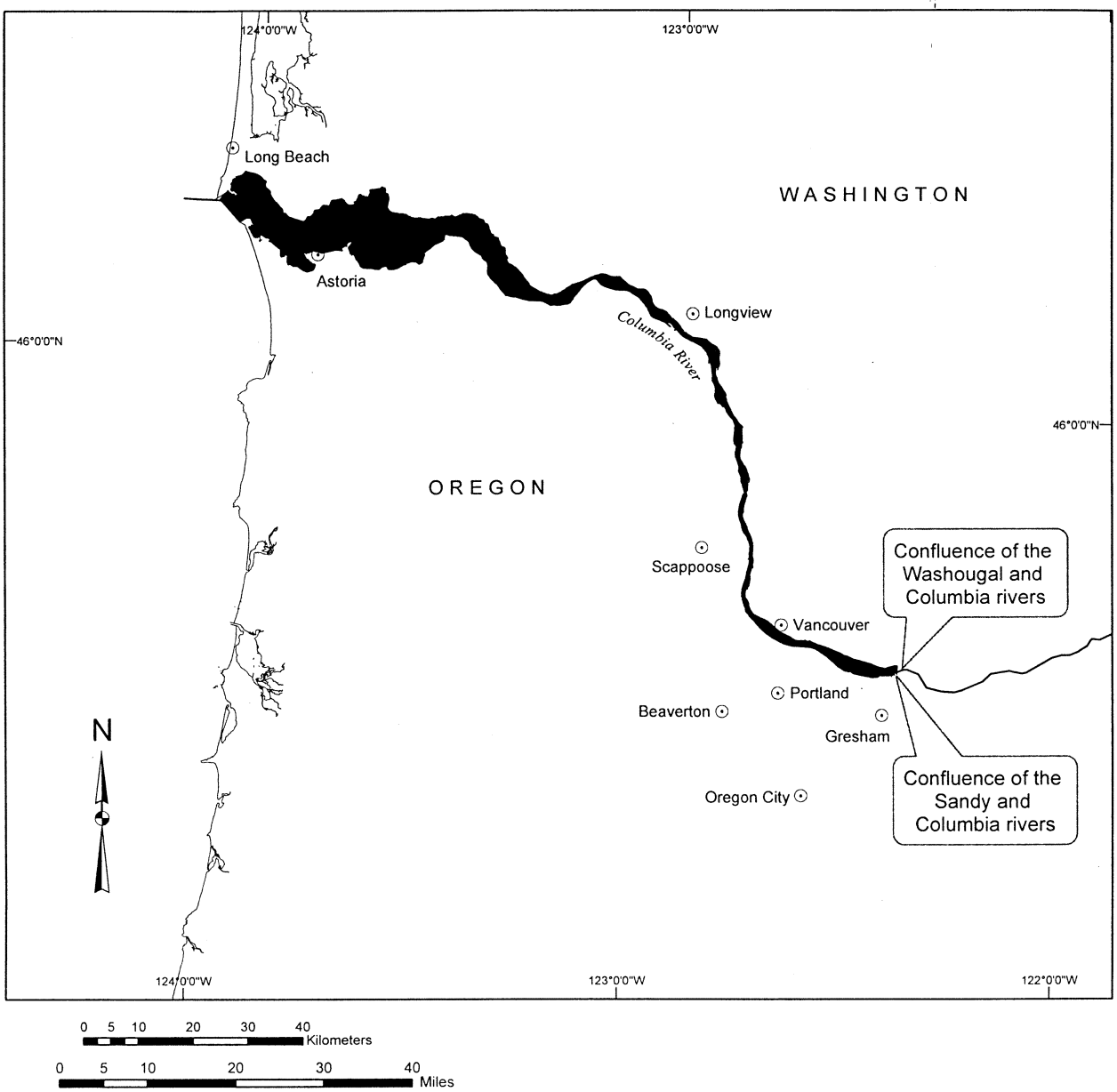



Final Critical Habitat for the
Lower Columbia River Chinook Salmon ESU
LOWER COLUMBIA SUBBASIN
17080006
124°0'0"W
123°30'0"W
46°30'0"N
46°0'0"N
Mitchell Cr
East Fk
Grays R
West Fk Grays R
S. Fk Grays R
Grays R
Hull Cr
Grays
River
Sisson Cr
Deep Cr
Rosburg
Chinook
Megler
Crooked Cr
Columbia R
WASHINGTON
Hammond
Astoria
Warrenton
Blind Sl
Knappa
Gnat Cr
Bear Cr
Big Cr
N
03
02
01
OREGON
10 5 0 10 Kilometers
0 3 6 12 Miles
Legend
Cities / Towns
State Boundary
Critical Habitat
Water Bodies
Subbasin Boundary
Watershed Boundaries
01 - 03 = Watershed code - last 2 digits of 17080006xx
Area of Detail
WASHINGTON
OREGON
IDAHO


Final Critical Habitat for the
Lower Columbia River Chinook Salmon ESU
CLACKAMAS SUBBASIN
17090011
122°30'0"W
122°0'0"W
45°30'0"N
45°0'0"N
Clackamas
Gladstone
Rock Cr
Richardson Creek
Boring
Deep Cr
Sandy
Clear Cr
06
05
OREGON
Estacada
Clackamas R
N
04
03
01
02
0 3.5 7 14 21 28 Kilometers
0 3.75 7.5 15 Miles
Legend
Cities / Towns
State Boundary
Critical Habitat
Subbasin Boundary
Watershed Boundaries
01 - 06 = Watershed code - last 2 digits of 17090011xx
Area of Detail
WASHINGTON
OREGON
IDAHO


Final Critical Habitat for the
Lower Columbia River Chinook Salmon ESU
LOWER WILLAMETTE SUBBASIN
17090012
123°0'0"W
122°30'0"W
46°0'0"N
45°30'0"N
N
02
Scappoose Cr
Scappoose
Multnomah Channel
Sturgeon Lake
WASHINGTON
Columbia Sl
Willamette R
OREGON
Portland
03
Hazelwood
Crystal Springs Cr
Gresham
01
Milwaukie
Kellogg Cr
Lake Oswego
Oak Grove
West Linn
0 3.5 7 14 21 28 Kilometers
0 3.5 7 14 Miles
Legend
Cities / Towns
State Boundary
Critical Habitat
Subbasin Boundary
Watershed Boundaries
01 - 03 = Watershed code - last 2 digits of 17090012xx
Area of Detail
WASHINGTON
OREGON
IDAHO

Rearing / Migration Corridor for the Lower Columbia River Chinook Salmon ESU



Legend

- Cities / Towns
- State Boundary
- Rearing / Migration Corridor

Lower Columbia River Chinook ESU

Lower Columbia River Corridor
The lower Columbia River corridor is that segment from the mouth of the Columbia River at the Pacific Ocean upstream to a line connecting the confluences of the Sandy River (Oregon) and Washougal River (Washington).

BILLING CODE 3510–22–C

(k) *Upper Willamette River Chinook Salmon (Oncorhynchus tshawytscha).* Critical habitat is to include the areas defined in the following subbasins:

(1) Middle Fork Willamette Subbasin 17090001—(i) *Upper Middle Fork Willamette River Watershed 1709000101.* Outlet(s) = Middle Fork Willamette River (Lat 43.4961, Long –122.3989) upstream to endpoint(s) in: Echo Creek (43.4670, –122.3172); Found Creek (43.5048, –122.2831); Middle Fork Willamette River (43.4801, –122.2534); Noisy Creek (43.5083, –122.3016); Simpson Creek (43.5031, –122.3801); Skunk Creek (43.5069, –122.2866); Staley Creek (43.4527, –122.3650); Swift Creek (43.5438, –122.2431); Tumblebug Creek (43.4740, –122.2549); Unnamed (43.4967, –122.2645); Unnamed (43.4986, –122.2686); Unnamed (43.5020, –122.2764).

(ii) *Hills Creek Watershed 1709000102.* Outlet(s) = Hills Creek (Lat 43.7071, Long –122.4195) upstream to endpoint(s) in: Hills Creek (43.6718, –122.3502).

(iii) *Salt Creek/Willamette River Watershed 1709000103.* Outlet(s) = Salt Creek (Lat 43.7261, Long –122.4381) upstream to endpoint(s) in: Coyote Creek (43.6682, –122.2378); Eagle Creek (43.6795, –122.2293); Salt Creek (43.6204, –122.1413); South Fork Salt Creek (43.6518, –122.2261).

(iv) *Hills Creek Reservoir Watershed 1709000105.* Outlet(s) = Middle Fork Willamette River (Lat 43.7589, Long –122.5242) upstream to endpoint(s) in: Big Willow Creek (43.6341, –122.4139); Buck Creek (43.5945, –122.4272); Bull Creek (43.6598, –122.4014); Coal Creek (43.4882, –122.4246); Coffeepot Creek (43.6182, –122.4160); Gold Creek (43.5860, –122.4768); Indian Creek (43.5034, –122.4638); Larison Creek (43.6851, –122.4760); Middle Fork Willamette River (43.4961, –122.3989); Packard Creek (43.6516, –122.4904); Snake Creek (43.5388, –122.4554) Snow Creek (43.6061, –122.4585); Windfall Creek (43.5984, –122.4638).

(v) *North Fork of Middle Fork Willamette River Watershed 1709000106.* Outlet(s) = North Fork Middle Fork Willamette River (Lat 43.7589, Long –122.5242) upstream to endpoint(s) in: Cayuse Creek (43.8651, –122.1856); Chalk Creek (43.8750, –122.4044); Christy Creek (43.9079, –122.3796); Fisher Creek (43.8699, –122.1551); North Fork Middle Fork Willamette River (43.8671, –122.0711).

(vi) *Middle Fork Willamette/Lookout Point Watershed 1709000107.* Outlet(s) = Middle Fork Willamette River (Lat 43.9495, Long –122.8471) upstream to endpoint(s) in: Anthony Creek (43.8799, –122.8498); Bannister Creek (43.8743, –122.6538); Buckhead Creek (43.7753, –122.5253); Burnt Bridge Creek (43.7900, –122.5334); Carr Creek (43.8558, –122.8177); Deception Creek (43.7551, –122.5541); East Fork Minnow Creek (43.8902, –122.7342); Goodman Creek (43.8309, –122.6940); Gosage Creek (43.8446, –122.8129); Guiley Creek (43.8419, –122.7962); Hazel Creek (43.8637, –122.6891); Lost Creek (43.8427, –122.7781); Middle Creek (43.8624, –122.8323); Middle Fork Willamette River (43.7589, –122.5242); Minnow Creek (43.8872, –122.7458); North Creek (43.8247, –122.6236); Rolling Riffle Creek (43.8750, –122.7052); School Creek (43.8604, –122.6099); South Creek (43.8230, –122.6216); Unnamed (43.8329, –122.6775); Unnamed (43.8427, –122.6643); Unnamed (43.8433, –122.6950).

(vii) *Little Fall Creek Watershed 1709000108.* Outlet(s) = Little Fall Creek (Lat 43.9577, Long –122.8166) upstream to endpoint(s) in: Little Fall Creek (44.0579, –122.5440); Norton Creek (44.0006, –122.7044); Sturdy Creek (44.0196, –122.6475).

(viii) *Fall Creek Watershed 1709000109.* Outlet(s) = Fall Creek (Lat 43.9707, Long –122.8677) upstream to endpoint(s) in: Alder Creek (44.0000, –122.4993); Fall Creek (43.9922, –122.3758); Gold Creek (43.9772, –122.4051); Logan Creek (43.9447, –122.4504); Nelson Creek (43.9285, –122.6850); Portland Creek (43.9331, –122.4655); Sunshine Creek (43.9943, –122.4672); Winberry Creek (43.9142, –122.6890).

(ix) *Lower Middle Fork Willamette River Wateshed 1709000110.* Outlet(s) = Middle Fork Willamette River (Lat 44.0226, Long –123.0169) upstream to endpoint(s) in: Hills Creek (43.9945, –122.8651); Middle Fork Willamette River (43.9495, –122.8471); Mill Race (44.0407, –123.0004); Pudding Creek (44.0173, –122.9501); Rattlesnake Creek (43.9352, –122.8608); Wallace Creek (44.0074, –122.8984).

(2) Upper Willamette Subbasin 17090003—(i) *Muddy Creek Watershed 1709000302.* Outlet(s) = Willamette River (Lat 44.6400, Long –123.1096) upstream to endpoint(s) in: Willamette River (44.0226, –123.0169).

(ii) *Calapooia River Watershed 1709000303.* Outlet(s) = Calapooia River (Lat 44.5088, Long –123.1101) upstream to endpoint(s) in: Calapooia River (44.2354, –122.4128).

(iii) *Oak Creek Watershed 1709000304.* Outlet(s) = Willamette River (Lat 44.7504, Long –123.1421) upstream to endpoint(s) in: Calapooia River (44.5088, –123.1101); Willamette River (44.6400, –123.1096).

(iv) *Marys River Watershed 1709000305.* Outlet(s) = Marys River (Lat 44.5566, Long –123.2597) upstream to endpoint(s) in: Beaver Creek (44.4554, –123.3748); Marys River (44.5373, –123.3762); Oak Creek (44.5636, –123.2932).

(v) *Luckiamute River Watershed 1709000306.* Outlet(s) = Luckiamute River (Lat 44.7561, Long –123.1468) upstream to endpoint(s) in: Soap Creek (44.7317, –123.2151); Unnamed (44.7661, –123.2011).

(3) McKenzie Subbasin 17090004—(i) *Upper McKenzie River Watershed 1709000401.* Outlet(s) = McKenzie River (Lat 44.1721, Long –122.2058) upstream to endpoint(s) in: Deer Creek (44.2677, –122.0712); Frissell Creek (44.2288, –122.0699); Lost Creek (44.1729, –122.0401); McKenzie River (44.3109, –122.0199); Scott Creek (44.1981, –122.0195); Smith River (44.2824, –122.0506).

(ii) *Horse Creek Watershed 1709000402.* Outlet(s) = West Fork Horse Creek (Lat 44.1721, Long –122.2058) upstream to endpoint(s) in: Cedar Swamp Creek (44.1563, –122.1132); Horse Creek (44.0602, –122.0087); King Creek (44.1635, –122.1693); Separation Creek (44.1274, –122.0077).

(iii) *South Fork McKenzie River Watershed 1709000403.* Outlet(s) = South Fork McKenzie River (Lat 44.1595, Long –122.2946) upstream to endpoint(s) in: Augusta Creek (43.9562, –122.1632); Cougar Creek (44.1397, –122.2437); East Fork South Fork McKenzie (44.0850, –122.0997); Elk Creek (43.9455, –122.0384); French Pete Creek (44.0402, –122.1854); Hardy Creek (44.0345, –122.2047); Rebel Creek (44.0167, –122.1505); Roaring River (43.9479, –122.0811); South Fork McKenzie River (43.9533, –121.9995).

(iv) *McKenzie River/Quartz Creek Watershed 1709000405.* Outlet(s) = McKenzie River (Lat 44.1112, Long –122.4209) upstream to endpoint(s) in: Cone Creek (44.1528, –122.3649); McKenzie River (44.1721, –122.2058); Quartz Creek (44.0188, –122.3015); Wycoff Creek (44.0846, –122.3143).

(v) *Lower McKenzie River Watershed 1709000407.* Outlet(s) = McKenzie River (Lat 44.1255, Long –123.1059) upstream to endpoint(s) in: Boulder Creek (44.0601, –122.7825); Camp Creek (44.0896, –122.8544); Deer Creek (44.0895, –122.4234); Ennis Creek (44.0804, –122.3754); Finn Creek (44.1471, –122.5972); Forest Creek (44.0861, –122.7153); Haagen Creek (44.0880, –122.7126); Hatchery Creek (44.1449, –122.6056); Holden Creek

(44.1056, –122.7061); Indian Creek (44.1526, –122.5816); Lane Creek (44.0928, –122.7323); Marten Creek (44.1075, –122.5046); McKenzie River (44.1112, –122.4209); North Fork Gate Creek (44.1718, –122.5248); Osborn Creek (44.0565, –122.7880); Ritchie Creek (44.1028, –122.6567); South Fork Gate Creek (44.1667, –122.4980); Taylor Creek (44.0783, –122.7481); Toms Creek (44.1316, –122.5586); Unnamed (44.0646, –122.9399); Walterville Canal (44.0765, –122.7537).

(4) North Santiam Subbasin 17090005—(i) *Middle North Santiam River Watershed 1709000504.* Outlet(s) = North Santiam River (Lat 44.7852, Long –122.6079) upstream to endpoint(s) in: Mad Creek (44.7453, –122.3898); North Santiam River (44.7510, –122.2821); Rock Creek (44.7077, –122.4171); Snake Creek (44.7477, –122.4905).

(ii) *Little North Santiam River Watershed 1709000505.* Outlet(s) = Little North Santiam River (Lat 44.7852, Long –122.6079) upstream to endpoint(s) in: Elkhorn Creek (44.8134, –122.3561); Little North Santiam River (44.8390, –122.3364); Little Sinker Creek (44.8191, –122.4111); Sinker Creek (44.8166, –122.4174).

(iii) *Lower North Santiam River Watershed 1709000506.* Outlet(s) = Santiam River (Lat 44.7504, Long –123.1421) upstream to endpoint(s) in: Bear Branch (44.7559, –122.7974); Cold Creek (44.7522, –122.8848); Morgan Creek (44.7500, –123.0376); North Santiam River (44.7852, –122.6079); Salem Ditch (44.8000, –122.8120); Smallman Creek (44.7300, –122.9098); Stout Creek (44.7930, –122.6177); Trask Creek (44.7725, –122.6152); Unnamed (44.7672, –123.0517); Valentine Creek (44.8013, –122.7176).

(5) South Santiam Subbasin 17090006—(i) *Hamilton Creek/South Santiam River Watershed 1709000601.* Outlet(s) = South Santiam River (Lat 44.6869, Long –123.0052) upstream to endpoint(s) in: Hamilton Creek (44.5037, –122.7667); McDowell Creek (44.4580, –122.7128); Mill Creek (44.6750, –122.9721); Noble Creek (44.4519, –122.7976); South Santiam River (44.4163, –122.6693); Spring Branch (44.6821, –122.9811); Unnamed (44.6703, –122.9870); Unnamed (44.6801, –122.9786).

(ii) *Crabtree Creek Watershed 1709000602.* Outlet(s) = Crabtree Creek (Lat 44.6756, Long –122.9557) upstream to endpoint(s) in: Bald Peter Creek (44.5682, –122.5825); Beaver Creek (44.6271, –122.8504); Crabtree Creek (44.6058, –122.5405); Roaring River (44.6251, –122.7283); South Fork Crabtree Creek (44.5741, –122.5744).

(iii) *Thomas Creek Watershed 1709000603.* Outlet(s) = Thomas Creek (Lat 44.6778, Long –122.9654) upstream to endpoint(s) in: Jordan Creek (44.7531, –122.6595); Mill Creek (44.7055, –122.7842); Neal Creek (44.7101, –122.6912); South Fork Neal Creek (44.7033, –122.7078); Thomas Creek (44.6776, –122.4650).

(iv) *South Santiam River Watershed 1709000606.* Outlet(s) = South Santiam River (Lat 44.3977, Long –122.4491) upstream to endpoint(s) in: Falls Creek (44.4007, –122.3828); South Santiam River (44.3980, –122.2610).

(v) *South Santiam River/Foster Reservoir Watershed 1709000607.* Outlet(s) = South Santiam River (Lat 44.4163, Long –122.6693) upstream to endpoint(s) in: Middle Santiam River (44.4498, –122.5479); South Santiam River (44.3977, –122.4491).

(vi) *Wiley Creek Watershed 1709000608.* Outlet(s) = Wiley Creek (Lat 44.4140, Long –122.6752) upstream to endpoint(s) in: Little Wiley Creek (44.3673, –122.5916); Wiley Creek (44.3488, –122.5900).

(6) Middle Willamette Subbasin 17090007—(i) *Mill Creek/Willamette River Watershed 1709000701.* Outlet(s) = Mill Creek (Lat 44.9520, Long –123.0381) upstream to endpoint(s) in: Mill Creek (44.8255, –122.8226).

(ii) *Rickreall Creek Watershed 1709000702.* Outlet(s) = Willamette River (Lat 44.9288, Long –123.1124) upstream to endpoint(s) in: Willamette River (44.7504, –123.1421).

(iii) *Willamette River/Chehalem Creek Watershed 1709000703.* Outlet(s) = Willamette River (Lat 45.2552, Long –122.8806) upstream to endpoint(s) in: Willamette River (44.9288, –123.1124).

(iv) *Abernethy Creek Watershed 1709000704.* Outlet(s) = Willamette River (Lat 45.3719, Long –122.6071) upstream to endpoint(s) in: Willamette River (45.2552, –122.8806).

(7) Molalla/Pudding Subbasin 17090009—(i) *Butte Creek/Pudding River Watershed 1709000902.* Outlet(s) = Pudding River (Lat 45.1907, Long –122.7527) upstream to endpoint(s) in: Pudding River (45.0740, –122.8525).

(ii) *Senecal Creek/Mill Creek Watershed 1709000904.* Outlet(s) = Pudding River (Lat 45.2843, Long –122.7149) upstream to endpoint(s) in: Pudding River (45.1907, –122.7527).

(iii) *Upper Molalla River Watershed 1709000905.* Outlet(s) = Molalla River (Lat 45.1196, Long –122.5342) upstream to endpoint(s) in: Molalla River (44.9124, –122.3228); North Fork Molalla River (45.0872, –122.3849); Table Rock Fork Molalla River (44.9876, –122.2741).

(iv) *Lower Molalla River Watershed 1709000906.* Outlet(s) = Molalla River (Lat 45.2979, Long –122.7141) upstream to endpoint(s) in: Gribble Creek (45. 2146, –122.6988); Milk Creek (45.2278, –122.5670); Molalla River (45.1196, –122.5342).

(8) Clackamas Subbasin 17090011—(i) *Collawash River Watershed 1709001101.* Outlet(s) = Collawash River (Lat 45.0321, Long –122.0600) upstream to endpoint(s) in: Blister Creek (44.9594, –122.1590); Collawash River (44.9507, –122.0350); Hot Springs Fk Collawash River (44.9385, –122.1721); Nohorn Creek (44.9442, –122.1957).

(ii) *Upper Clackamas River 1709001102.* Outlet(s) = Clackamas River (Lat 45.0321, Long –122.0600) upstream to endpoint(s) in: Cabin Creek (45.0087, –121.8958); Clackamas River (44.8966, –121.8800); Cub Creek (44.8969, –121.8876); Granite Creek (45.0184, –121.9885); Hunter Creek (44.9086, –121.8929); Last Creek (44.9715, –121.8547); Lowe Creek (44.9487, –121.8983); Pot Creek (45.0149, –121.9084); Unnamed (44.9469, –121.8691); Wall Creek (44.9555, –121.8843).

(iii) *Oak Grove Fork Clackamas River Watershed 1709001103.* Outlet(s) = Oak Grove Fork Clackamas River (Lat 45.0746, Long –122.0520) upstream to endpoint(s) in: Oak Grove Fork Clackamas River (45.0822, –121.9859).

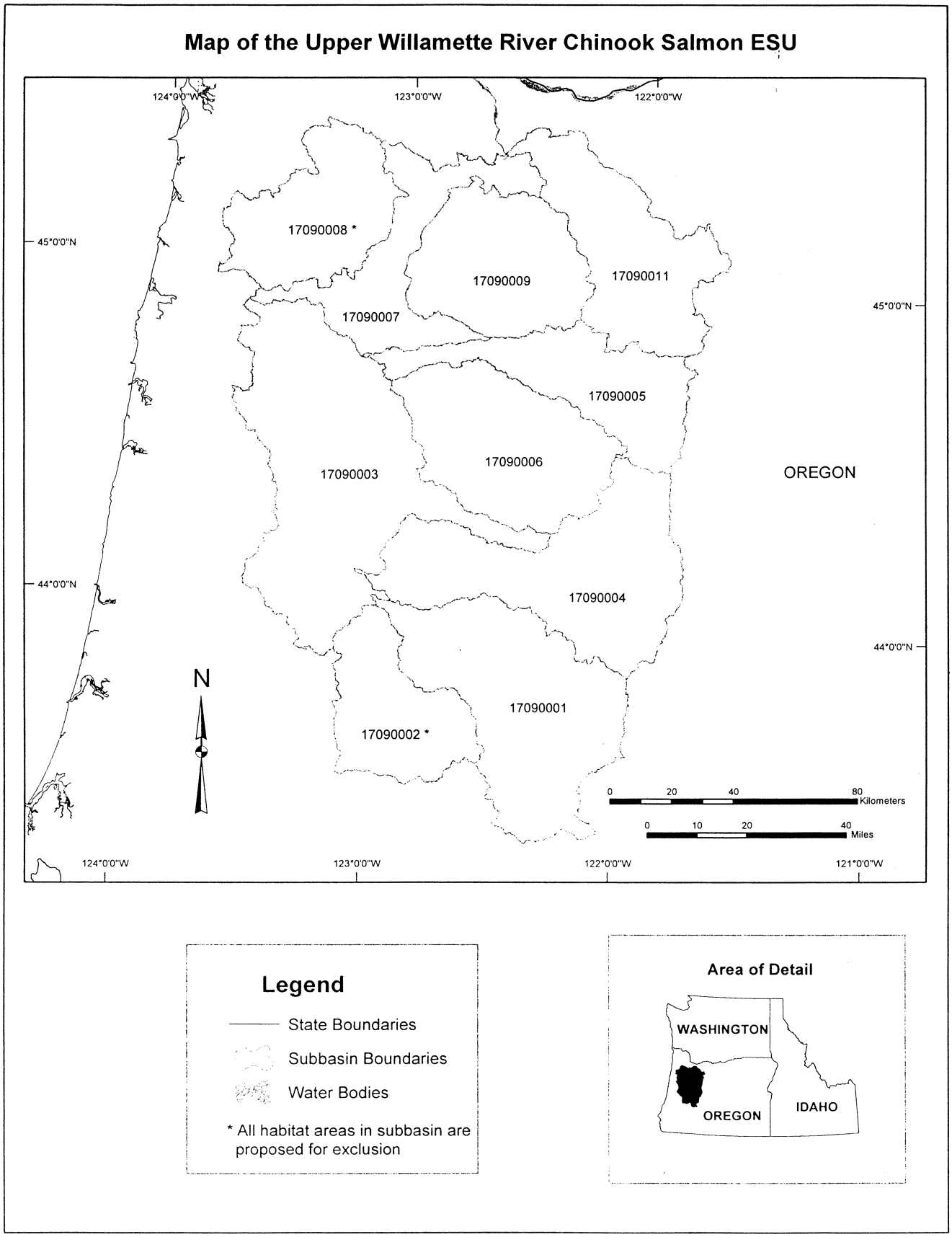
(iv) *Middle Clackamas River Watershed 1709001104.* Outlet(s) = Clackamas River (Lat 45.2440, Long –122.2798) upstream to endpoint(s) in: Clackamas River (45.0321, –122.0600); Fish Creek (45.0962, –122.1683); North Fork Clackamas River (45.2361, –122.2186); Roaring River (45.1773, –122.0650); South Fork Clackamas River (45.1939, –122.2257); Tag Creek (45.0607, –122.0512); Tar Creek (45.0494, –122.0570).

(v) *Lower Clackamas River Watershed 1709001106.* Outlet(s) = Clackamas River (Lat 45.3719, Long –122.6071) upstream to endpoint(s) in: Clackamas River (45.2440, –122.2798); Clear Creek (45.3568, –122.4781); Deep Creek (45.3937, –122.4095); Richardson Creek (45.3971, –122.4712).

(9) Lower Willamette/Columbia River Corridor—*Lower Willamette/Columbia River Corridor.* Outlet(s) = Columbia River (Lat 46.2485, Long –124.0782) upstream to endpoint(s) in: Willamette River (45.3719, –122.6071).

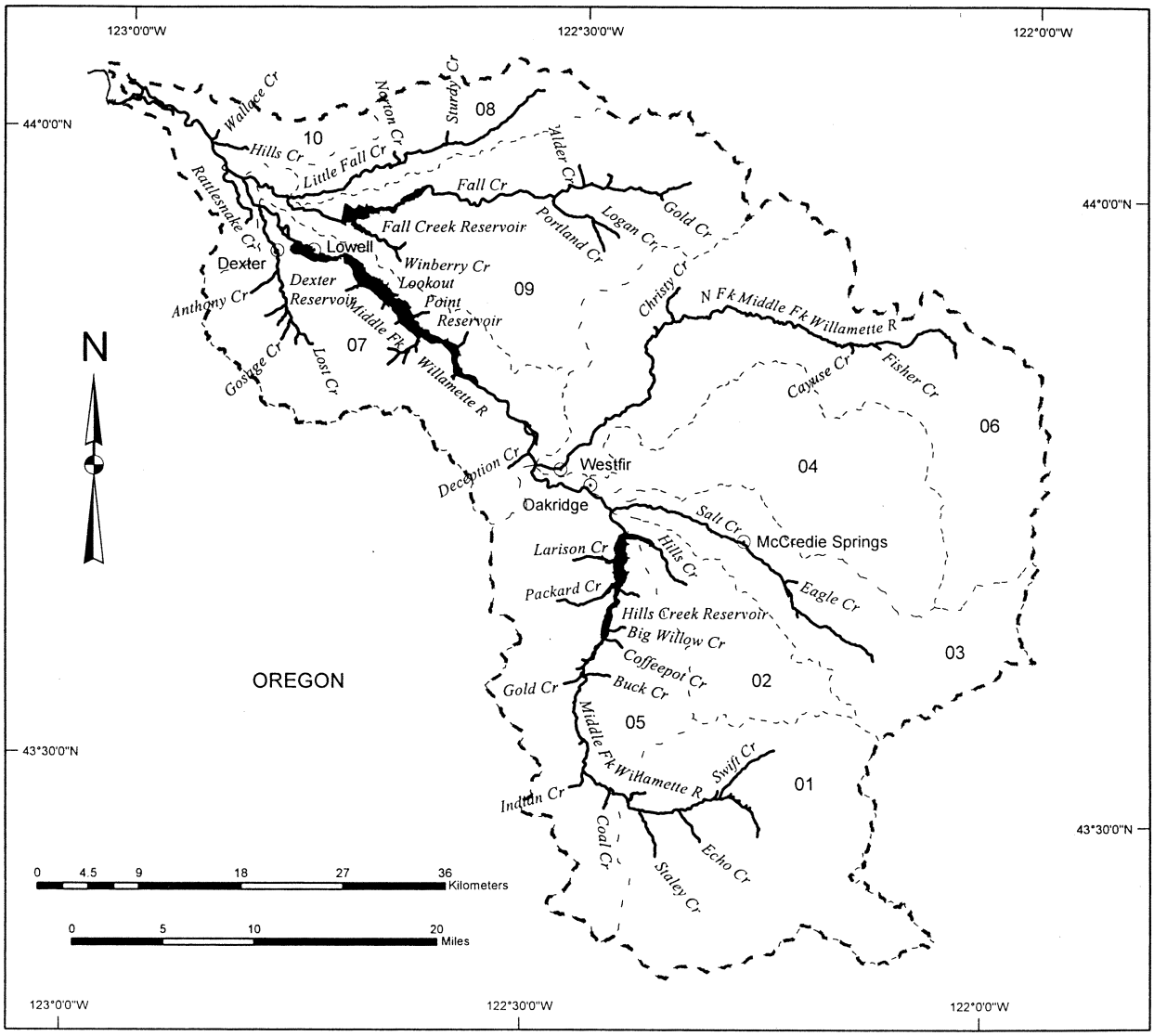
(10) Maps of critical habitat for the Upper Willamette River chinook salmon ESU follow:

BILLING CODE 3510–22–P


Map of the Upper Willamette River Chinook Salmon ESU
124°0'0"W
123°0'0"W
122°0'0"W
121°0'0"W
45°0'0"N
44°0'0"N
17090008 *
17090009
17090011
17090007
17090005
17090006
17090003
17090004
17090001
17090002 *
OREGON
N
0 20 40 80 Kilometers
0 10 20 40 Miles
Legend
State Boundaries
Subbasin Boundaries
Water Bodies
* All habitat areas in subbasin are proposed for exclusion
Area of Detail
WASHINGTON
OREGON
IDAHO

Final Critical Habitat for the Upper Willamette River Chinook Salmon ESU

MIDDLE FORK WILLAMETTE SUBBASIN 17090001

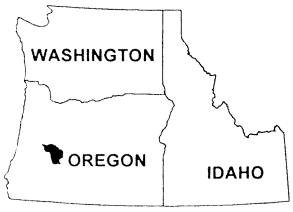


Legend

- Cities / Towns
- Critical Habitat
- Water Bodies
- Subbasin Boundary
- Watershed Boundaries

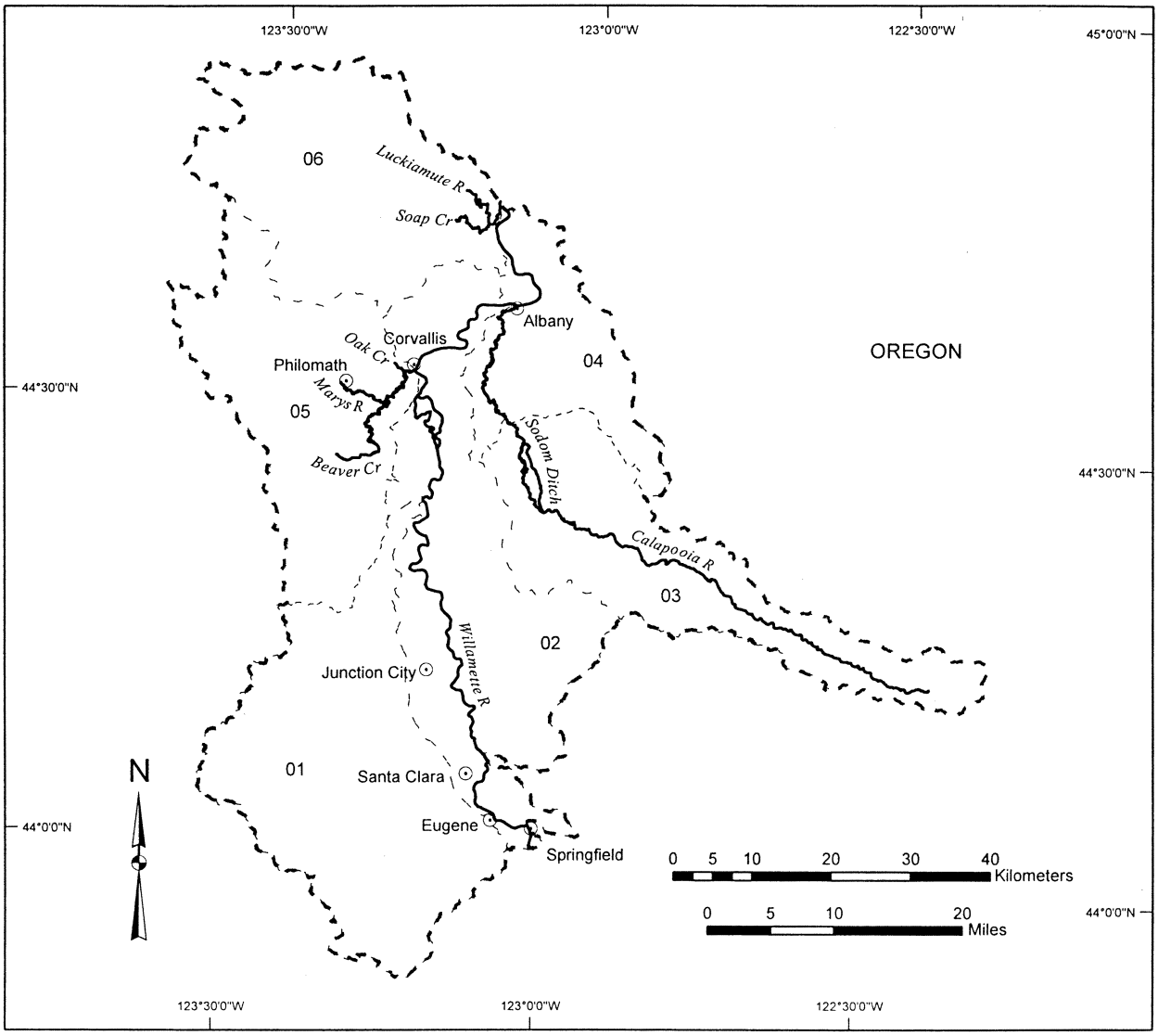
01 - 10 = Watershed code - last 2 digits of 17090001xx

Area of Detail



Final Critical Habitat for the Upper Willamette River Chinook Salmon ESU

UPPER WILLAMETTE SUBBASIN 170900003

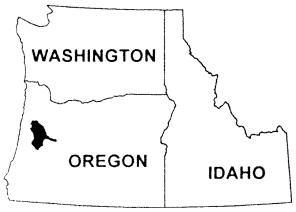


Legend

- Cities / Towns
- Critical Habitat
- Subbasin Boundary
- Watershed Boundaries

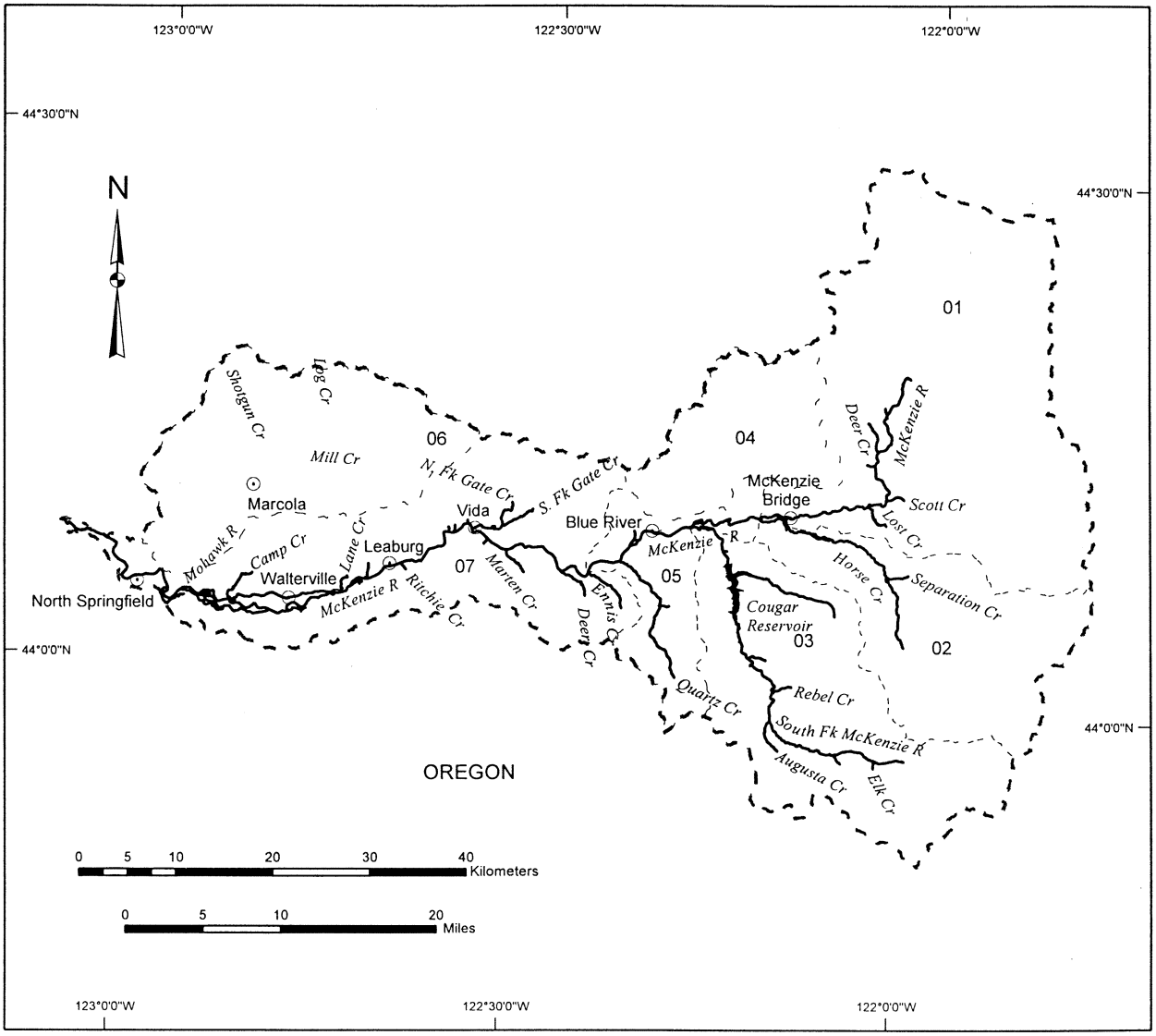
01 - 06 = Watershed code - last 2 digits of 17090003xx

Area of Detail



Final Critical Habitat for the Upper Willamette River Chinook Salmon ESU

MCKENZIE SUBBASIN 17090004

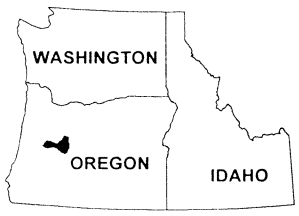


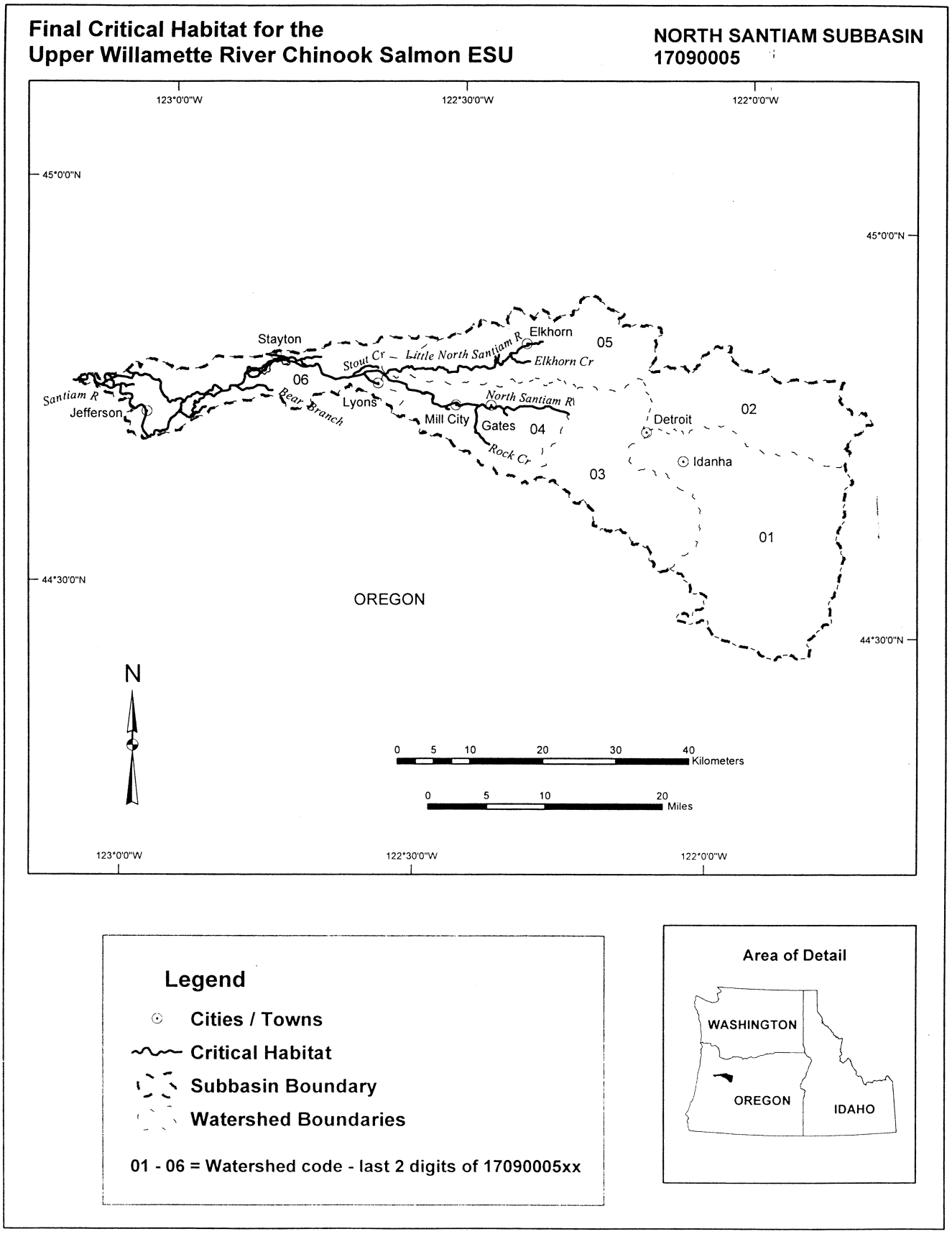
Legend

- Cities / Towns
- Critical Habitat
- Subbasin Boundary
- Watershed Boundaries

01 - 07 = Watershed code - last 2 digits of 17090004xx

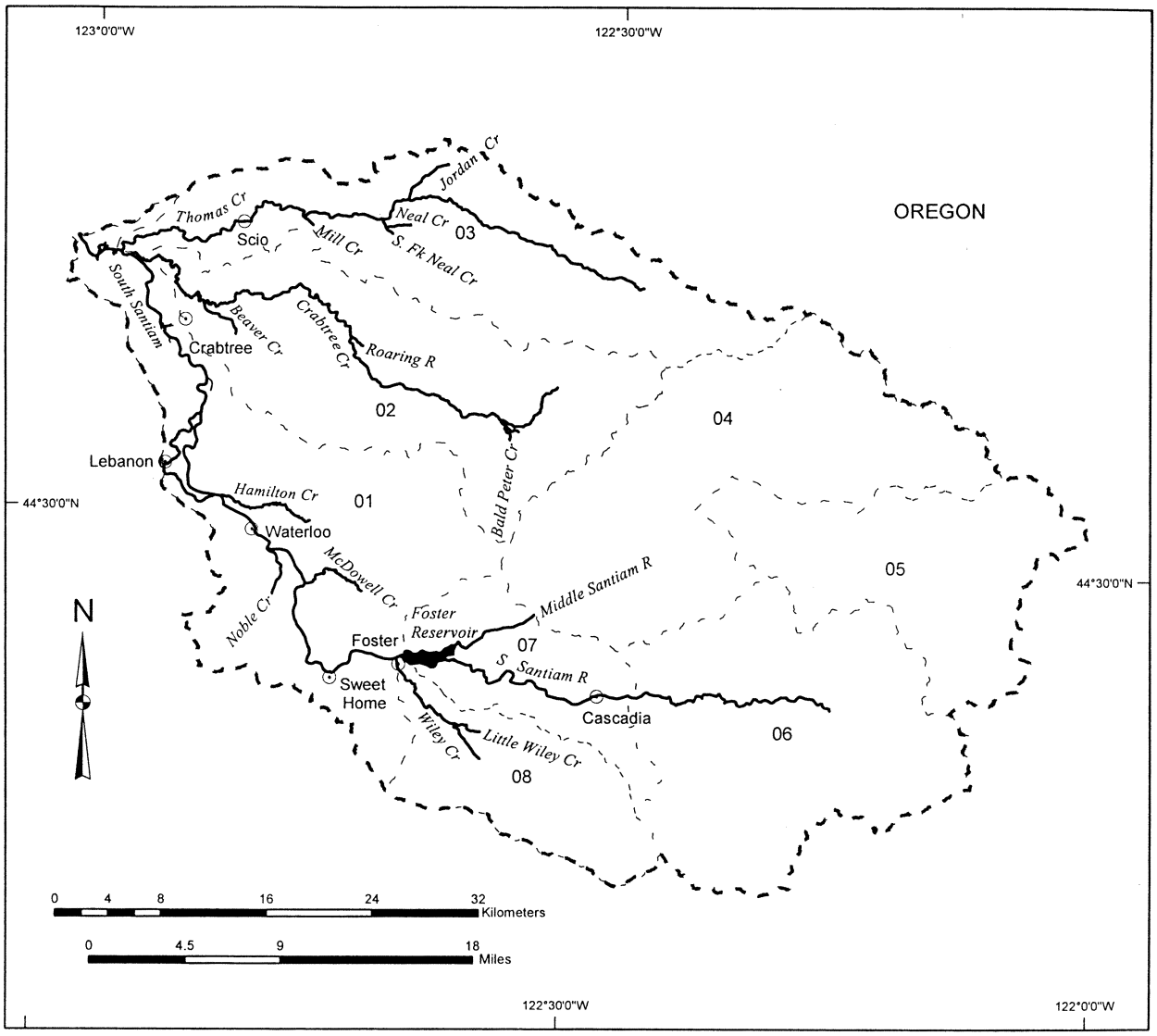
Area of Detail




Final Critical Habitat for the
Upper Willamette River Chinook Salmon ESU
NORTH SANTIAM SUBBASIN
17090005
123°0'0"W
122°30'0"W
122°0'0"W
45°0'0"N
44°30'0"N
Stayton
Elkhorn
05
Stout Cr
Little North Santiam R
Elkhorn Cr
06
Santiam R
Jefferson
Rear Branch
Lyons
North Santiam R
Mill City
Gates
04
Detroit
02
Rock Cr
Idanha
03
01
OREGON
N
0 5 10 20 30 40 Kilometers
0 5 10 20 Miles
Legend
Cities / Towns
Critical Habitat
Subbasin Boundary
Watershed Boundaries
01 - 06 = Watershed code - last 2 digits of 17090005xx
Area of Detail
WASHINGTON
OREGON
IDAHO

Final Critical Habitat for the Upper Willamette River Chinook Salmon ESU

SOUTH SANTIAM SUBBASIN 17090006, Unit 6

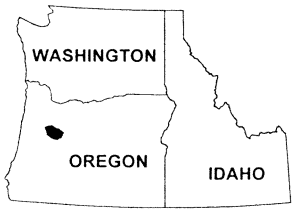


Legend

- Cities / Towns
- Critical Habitat
- Subbasin Boundary
- Watershed Boundaries

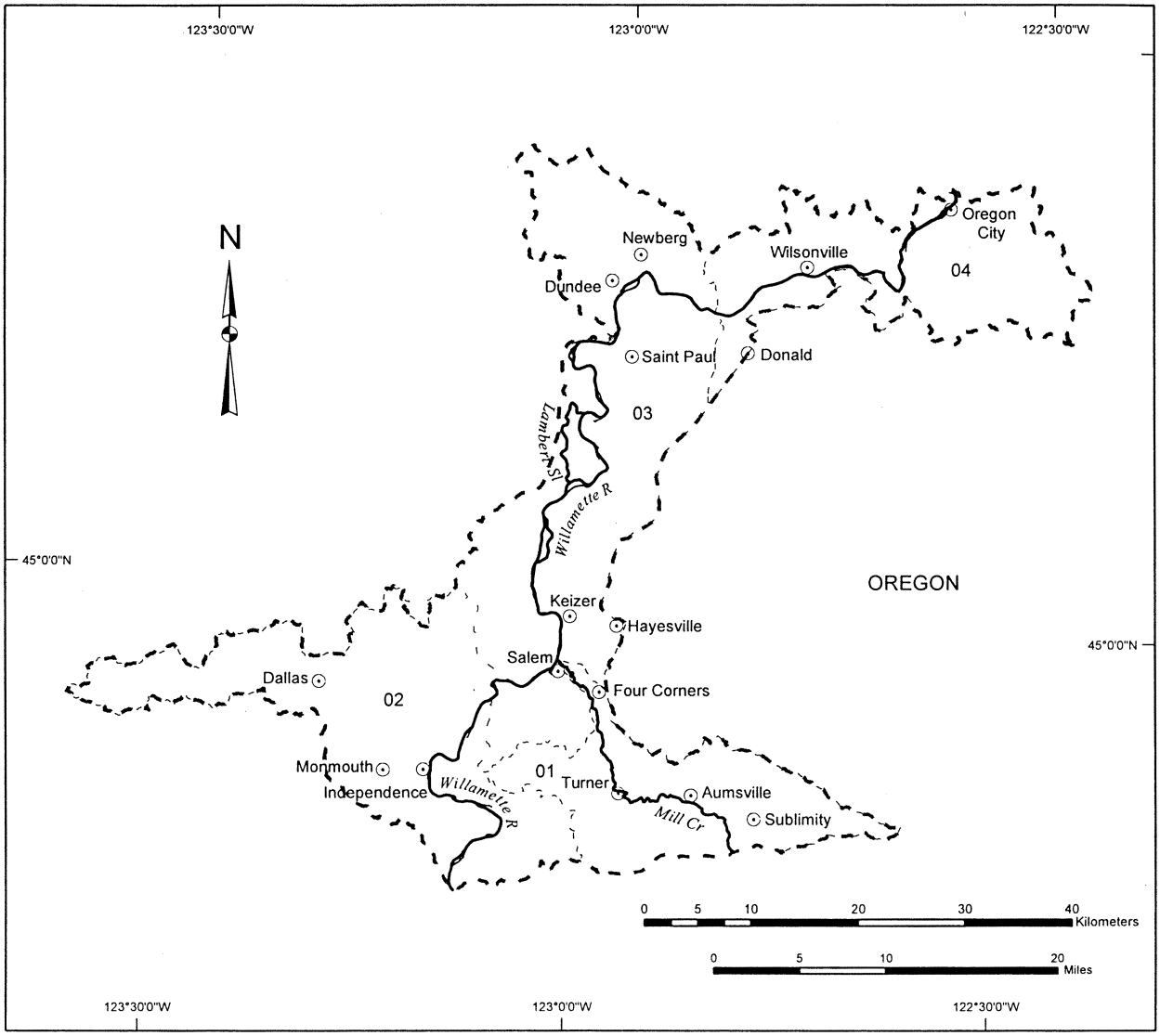
01 - 08 = Watershed code - last 2 digits of 17090006xx

Area of Detail



Final Critical Habitat for the Upper Willamette River Chinook Salmon ESU

MIDDLE WILLAMETTE SUBBASIN 17090007

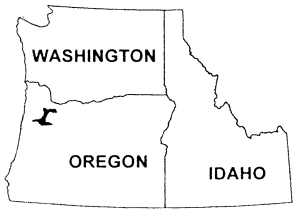


Legend

- Cities / Towns
- Critical Habitat
- Subbasin Boundary
- Watershed Boundaries

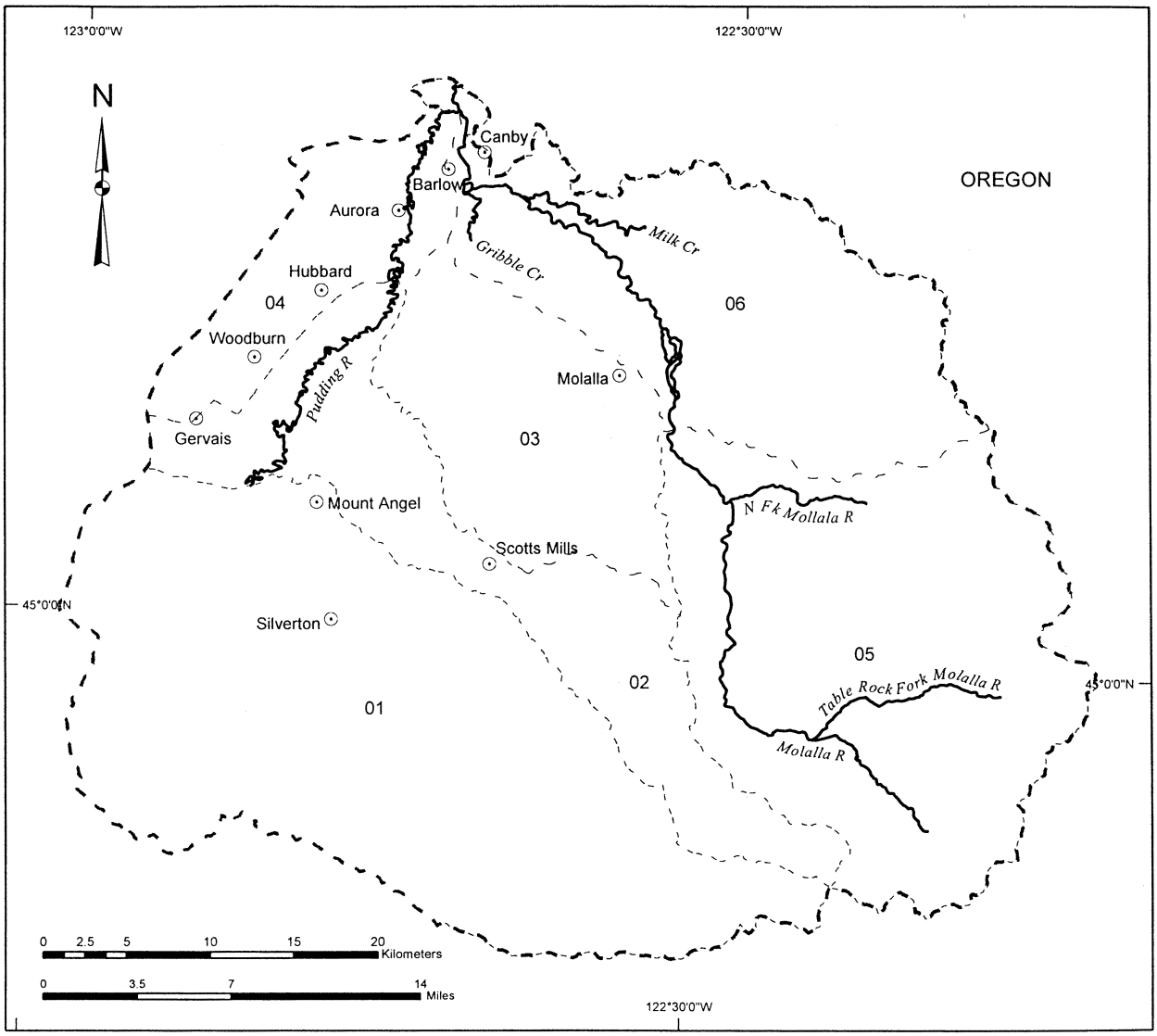
01 - 04 = Watershed code - last 2 digits of 17090007xx

Area of Detail



Final Critical Habitat for the Upper Willamette River Chinook Salmon ESU

MOLALLA / PUDDING SUBBASIN 17090009

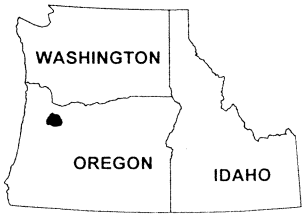


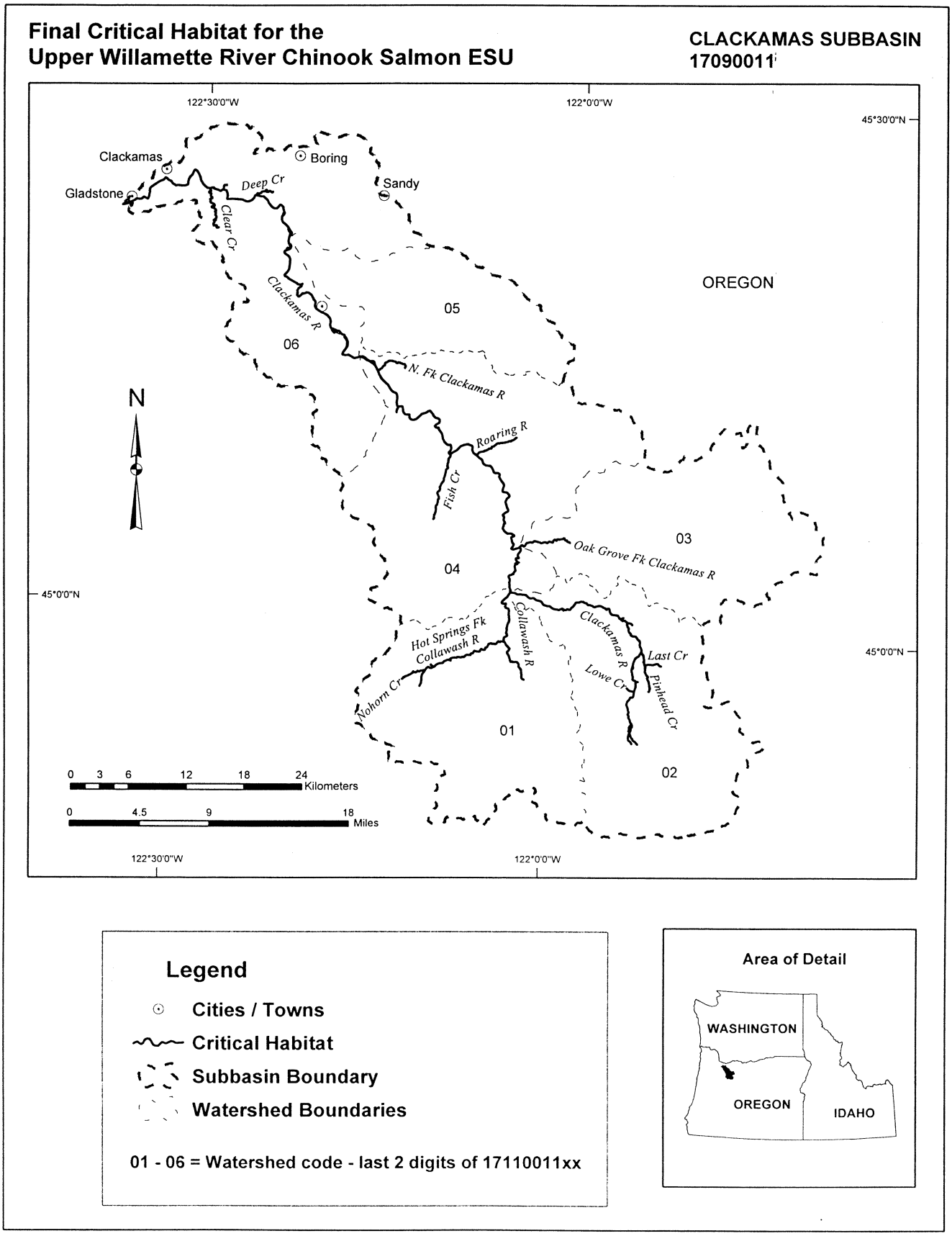
Legend

- Cities / Towns
- Critical Habitat
- Subbasin Boundary
- Watershed Boundaries

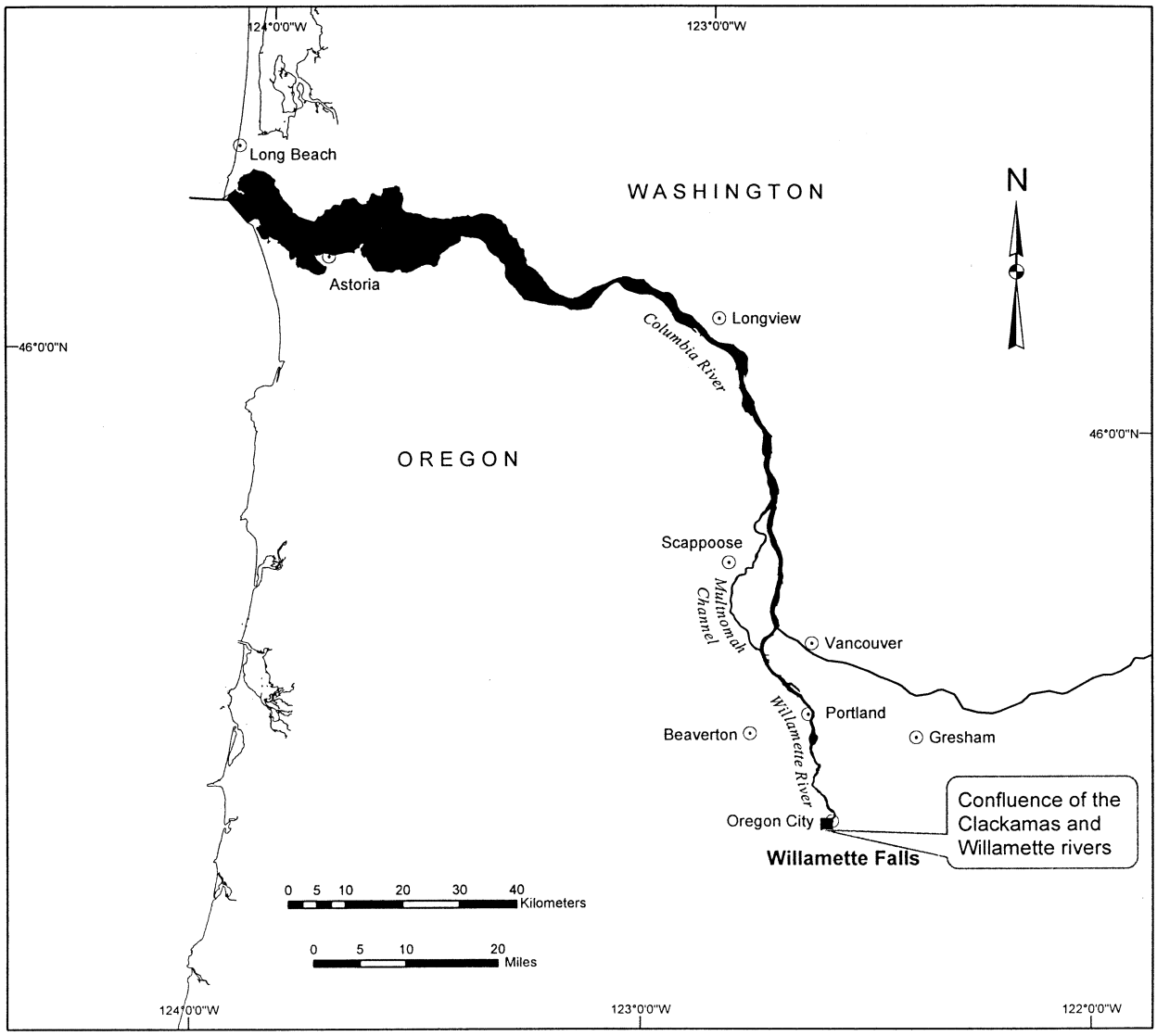
01 - 06 = Watershed code - last 2 digits of 17090009xx

Area of Detail




Final Critical Habitat for the
Upper Willamette River Chinook Salmon ESU
CLACKAMAS SUBBASIN
17090011
122°30'0"W
122°0'0"W
45°30'0"N
45°0'0"N
Clackamas
Boring
Gladstone
Deep Cr
Sandy
Clear Cr
Clackamas R
OREGON
05
06
N. Fk Clackamas R
N
Roaring R
Fish Cr
03
Oak Grove Fk Clackamas R
04
Hot Springs Fk
Collawash R
Collawash R
Clackamas R
Last Cr
Lowe Cr
Pinhead Cr
Mohorn Cr
01
02
0 3 6 12 18 24 Kilometers
0 4.5 9 18 Miles
Legend
Cities / Towns
Critical Habitat
Subbasin Boundary
Watershed Boundaries
01 - 06 = Watershed code - last 2 digits of 17110011xx
Area of Detail
WASHINGTON
OREGON
IDAHO

Rearing / Migration Corridor for the Upper Willamette River Chinook Salmon ESU



Legend

- Cities / Towns
- State Boundary
- Rearing / Migration Corridor

Upper Willamette River Chinook ESU

Lower Willamette / Columbia River Corridor
The lower Willamette / Columbia River corridor is that segment from the mouth of the Columbia River at the Pacific Ocean upstream to the confluence of the Clackamas and Willamette rivers, including the Multnomah Channel portion of the lower Willamette River.

BILLING CODE 3510–22–C

(l) *Upper Columbia River Spring Chinook Salmon (Oncorhynchus tshawytscha).* Critical habitat is to

include the areas defined in the following subbasins:

(1) Chief Joseph Subbasin 17020005—*Upper Columbia/Swamp Creek Watershed 1702000505.* Outlet(s) = Columbia River (Lat 47.8077, Long –119.9754) upstream to endpoint(s) in: Columbia River (48.0502, –119.8942).

(2) Methow Subbasin 17020008—(i) *Lost River Watershed 1702000801* Outlet(s) = Lost River Gorge (Lat 48.6501, Long –120.5103) upstream to endpoint(s) in: Eureka Creek (48.7020, –120.4986); Lost River Gorge (48.7324, –120.4475).

(ii) *Upper Methow River Watershed 1702000802.* Outlet(s) = Methow River (Lat 48.6015, Long –120.4376) upstream to endpoint(s) in: Early Winters Creek (48.5999, –120.5840); Methow River (48.6417, –120.6150); Rattlesnake Creek (48.6523, –120.5733); Robinson Creek (48.6680, –120.5394); South Fork Trout Creek (48.6448, –120.6030).

(iii) *Upper Chewuch River Watershed 1702000803.* Outlet(s) = Chewuch River (Lat 48.7501, Long –120.1356) upstream to endpoint(s) in: Andrews Creek (48.7855, –120.1087); Chewuch River (48.8614, –120.0288); Dog Creek (48.8218, –120.0151); Lake Creek (48.8258, –120.1996); Thirtymile Creek (48.8109, –120.0199).

(iv) *Lower Chewuch River Watershed 1702000804.* Outlet(s) = Chewuch River (Lat 48.4751, Lat –120.1790) upstream to endpoint(s) in: Boulder Creek (48.5797, –120.1538); Chewuch River (48.7501, –120.1356); Cub Creek (48.5513, –120.1899); Eightmile Creek (48.6071, –120.1775); Lake Creek (48.4926, –120.1629); Twentymile Creek (48.7029, –120.1117).

(v) *Twisp River Watershed 1702000805.* Outlet(s) = Twisp River (Lat 48.3682, Long –120.1176) upstream to endpoint(s) in: Buttermilk Creek (48.3528, –120.3239); Eagle Creek (48.3584, –120.3914); North Creek (48.4587, –120.5595); Poorman Creek (48.3674, –120.1997); South Creek (48.4330, –120.5431); Twisp River (48.4615, –120.5764); War Creek (48.3649, –120.4030).

(vi) *Middle Methow River Watershed 1702000806.* Outlet(s) = Methow River (Lat 48.2495, Long –120.1156) upstream to endpoint(s) in: Bear Creek (48.4527, –120.1423); Goat Creek (48.5888, –120.3705); Little Boulder Creek (48.5700, –120.3797); Methow River (48.6015, –120.4376); Wolf Creek (48.4776, –120.2840) Unnamed (48.4896, –120.2116).

(vii) *Lower Methow River Watershed 1702000807.* Outlet(s) = Methow River (Lat 48.0502, Long –119.8942) upstream to endpoint(s) in: Methow River (48.2495, –120.1156).

(3) Upper Columbia/Entiat Subbasin 17020010—(i) *Entiat River Watershed 1702001001.* Outlet(s) = Entiat River (Lat 47.6585, Long –120.2194) upstream to endpoint(s) in: Entiat River (47.9855, –120.5749); Hornet Creek (47.7714, –120.4403); Mad River (47.7804, –120.4403); Tillicum Creek (47.7295, –120.4304).

(ii) *Lake Entiat Watershed 1702001002.* Outlet(s) = Columbia River (Lat 47.3438, Long –120.0929) upstream to endpoint(s) in: Columbia River (47.8077, –119.9754).

(4) Wenatchee Subbasin 17020011—(i) *White River Watershed 1702001101.* Outlet(s) = White River (Lat 47.8088, Long –120.7159) upstream to endpoint(s) in: Little Wenatchee River (47.8526, –120.9541); Napeequa River (47.9285, –120.8829); Panther Creek (47.9355, –120.9482); White River (47.9535, –120.9380).

(ii) *Chiwawa River Watershed 1702001102.* Outlet(s) = Chiwawa River (Lat 47.7880, Long –120.6589) upstream to endpoint(s) in: Alder Creek (47.8483, –120.6587); Chikamin Creek (47.9785, –120.7194); Chiwawa River (48.1048, –120.8773); Goose Creek (47.8392, –120.6461); Minnow Creek (47.9137, –120.7182); Phelps Creek (48.0794, –120.8400); Unnamed (48.0366, –120.7615).

(iii) *Nason/Tumwater Watershed 1702001103.* Outlet(s) = Wenatchee River (Lat 47.5801, Long –120.6660) upstream to endpoint(s) in: Chiwaukum Creek (47.7039, –120.7791); Nason Creek (47.7769, –120.9103); Skinney Creek (47.6894, –120.7351).

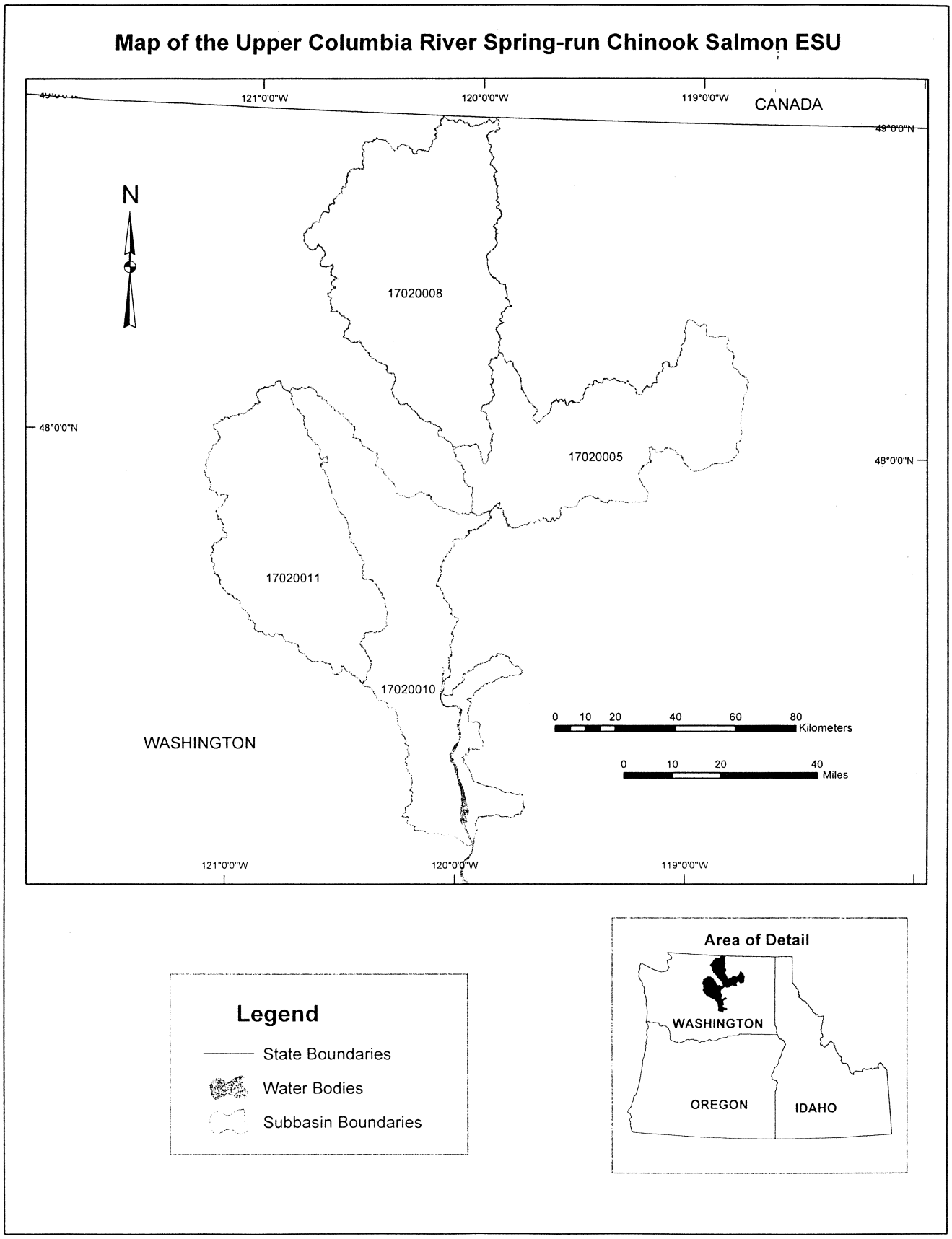
(iv) *Icicle/Chumstick Watershed 1702001104.* Outlet(s) = Wenatchee River (Lat 47.5575, Long –120.5729) upstream to endpoint(s) in: Wenatchee River (47.5801, –120.6660).

(v) *Lower Wenatchee River Watershed 1702001105.* Outlet(s) = Wenatchee River (Lat 47.4553, Long –120.3185) upstream to endpoint(s) in: Wenatchee River (47.5575, –120.5729).

(5) Columbia River Corridor—*Columbia River Corridor* Outlet(s) = Columbia River (Lat 46.2485, Long –124.0782) upstream to endpoint(s) in: Columbia River (47.3438, –120.0929).

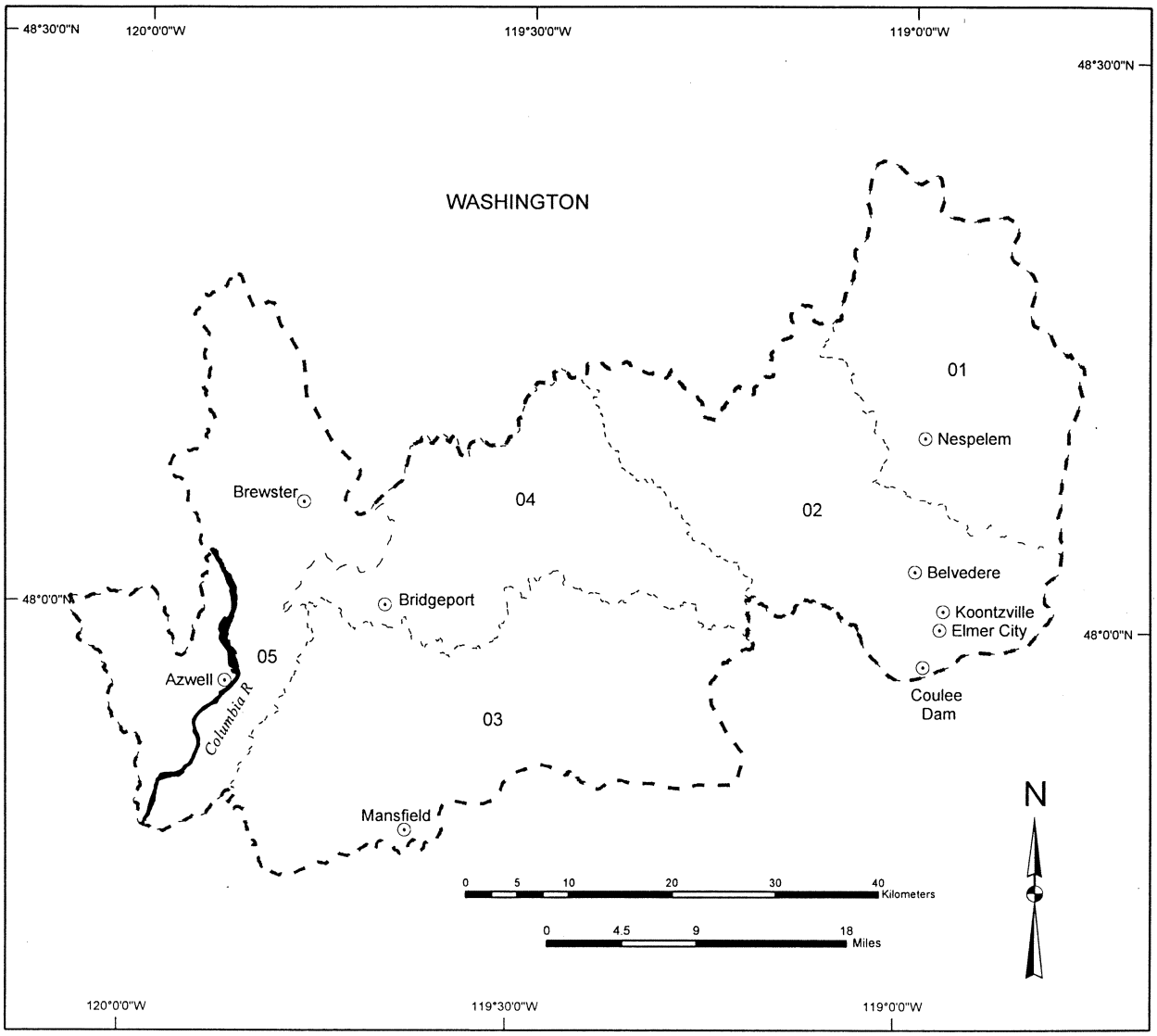
(6) Maps of critical habitat for the Upper Columbia River Spring-run chinook salmon ESU follow:

BILLING CODE 3510–22–P


Map of the Upper Columbia River Spring-run Chinook Salmon ESU
121°0'0"W
120°0'0"W
119°0'0"W
CANADA
49°0'0"N
N
17020008
48°0'0"N
17020005
48°0'0"N
17020011
17020010
WASHINGTON
0 10 20 40 60 80 Kilometers
0 10 20 40 Miles
121°0'0"W
120°0'0"W
119°0'0"W
Legend
State Boundaries
Water Bodies
Subbasin Boundaries
Area of Detail
WASHINGTON
OREGON
IDAHO

Final Critical Habitat for the Upper Columbia River Spring-run Chinook Salmon ESU

CHIEF JOSEPH SUBBASIN 17020005

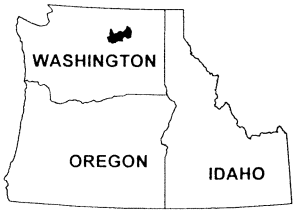


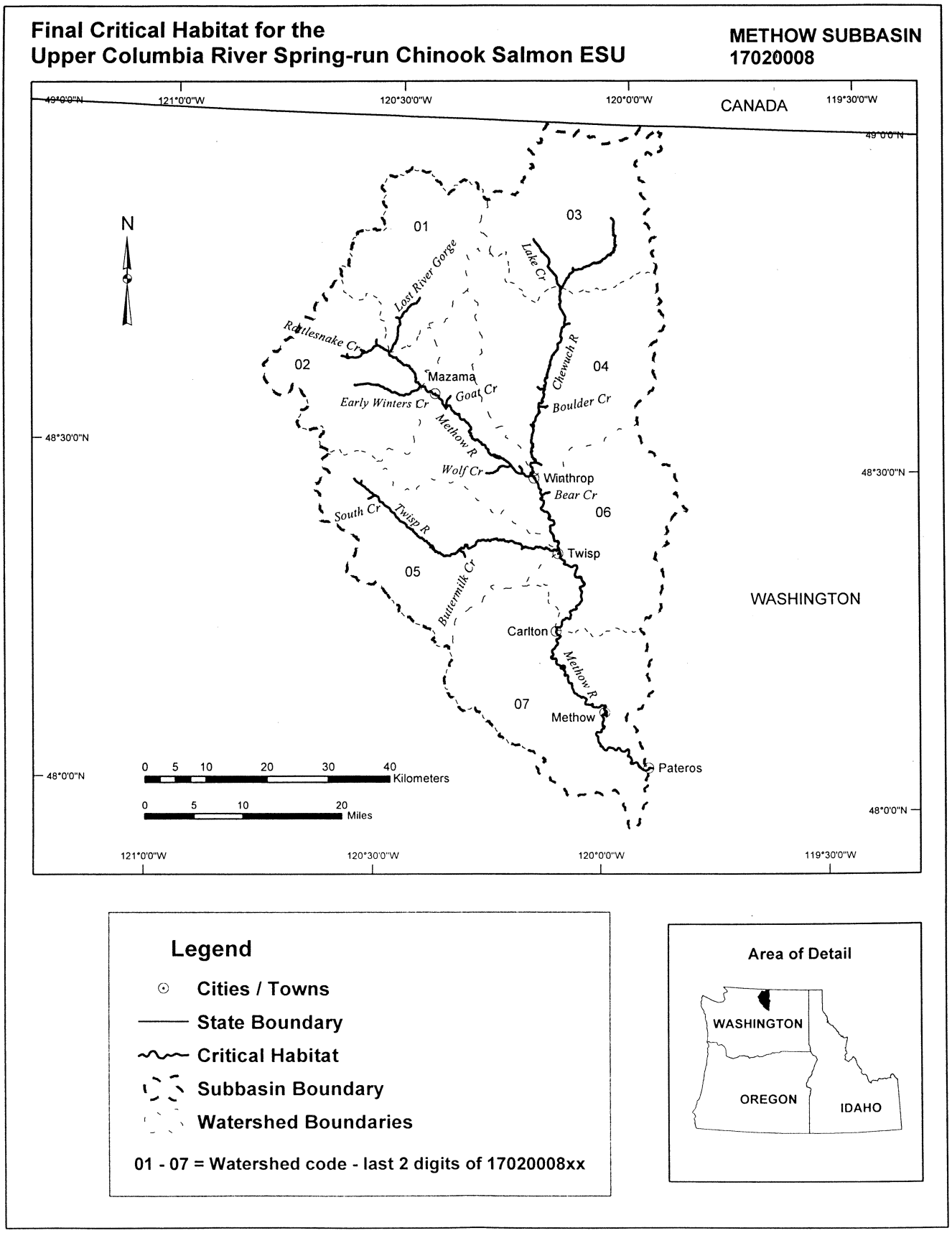
Legend

- Cities / Towns
- Critical Habitat
- Subbasin Boundary
- Watershed Boundaries

01 - 05 = Watershed code - last 2 digits of 17020005xx

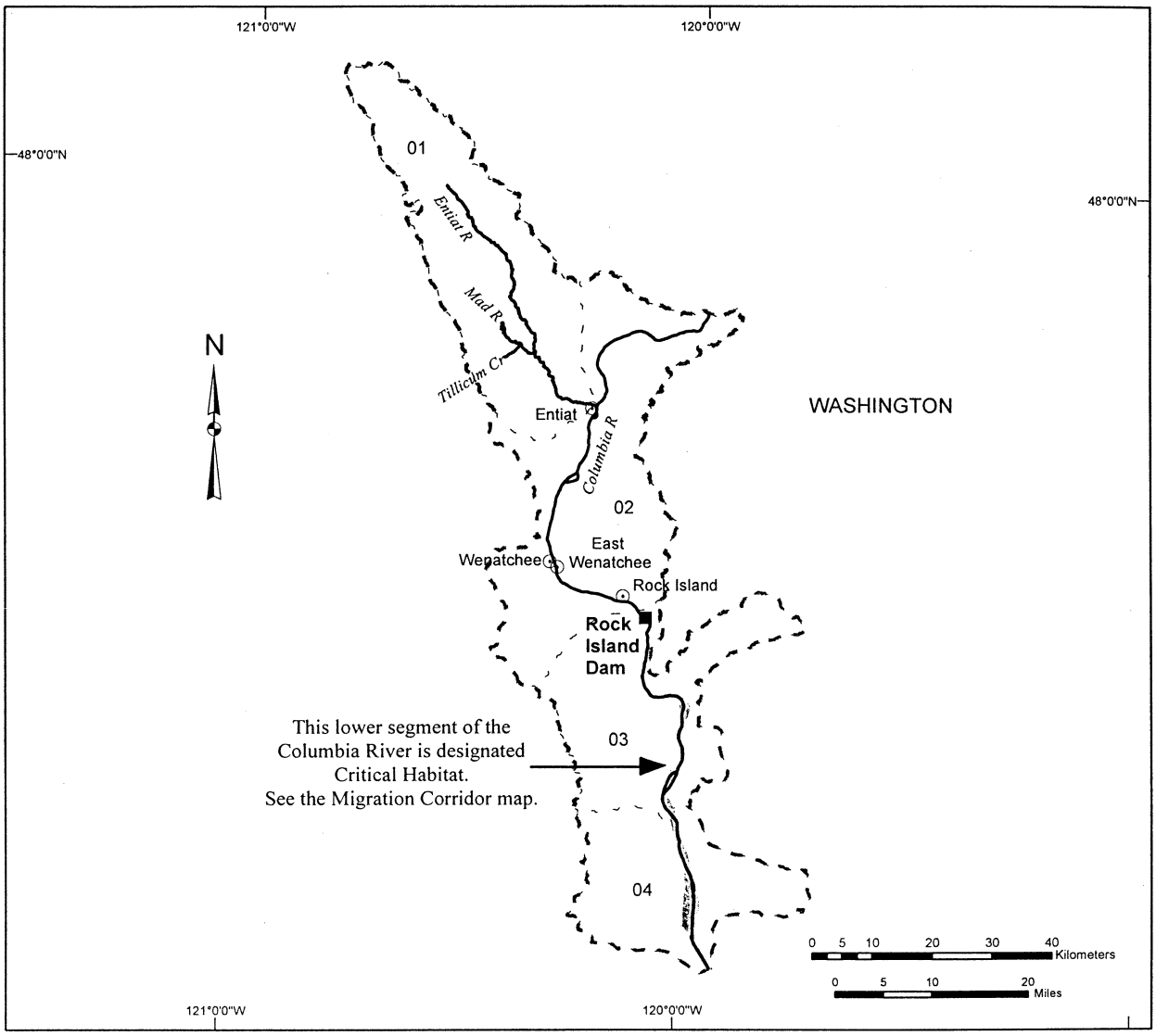
Area of Detail




Final Critical Habitat for the
Upper Columbia River Spring-run Chinook Salmon ESU
METHOW SUBBASIN
17020008
CANADA
WASHINGTON
N
01
02
03
04
05
06
07
Lost River Gorge
Lake Cr
Rattlesnake Cr
Chewuch R
Mazama
Goat Cr
Early Winters Cr
Boulder Cr
Methow R
Wolf Cr
Winthrop
Bear Cr
South Cr
Twisp R
Twisp
Buttermilk Cr
Carlton
Methow R
Methow
Pateros
0 5 10 20 30 40 Kilometers
0 5 10 20 Miles
121°0'0"W
120°30'0"W
120°0'0"W
119°30'0"W
49°0'0"N
48°30'0"N
48°0'0"N
Legend
Cities / Towns
State Boundary
Critical Habitat
Subbasin Boundary
Watershed Boundaries
01 - 07 = Watershed code - last 2 digits of 17020008xx
Area of Detail
WASHINGTON
OREGON
IDAHO

Final Critical Habitat for the Upper Columbia River Spring-run Chinook Salmon ESU

UPPER COLUMBIA / ENTIAT SUBBASIN 17020010

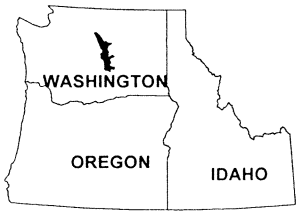


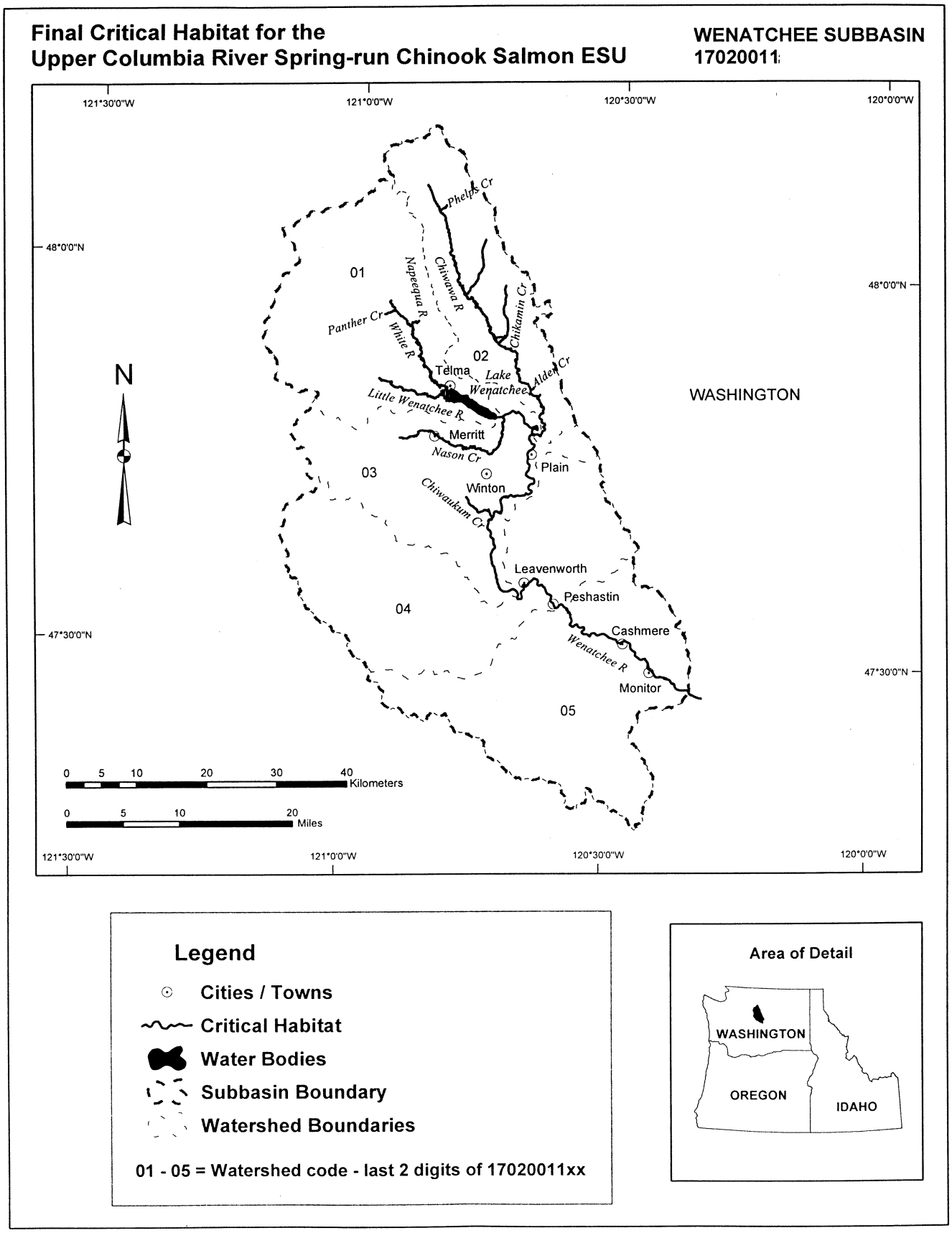
Legend

- Cities / Towns
- Critical Habitat
- Water Body
- Subbasin Boundary
- Watershed Boundaries

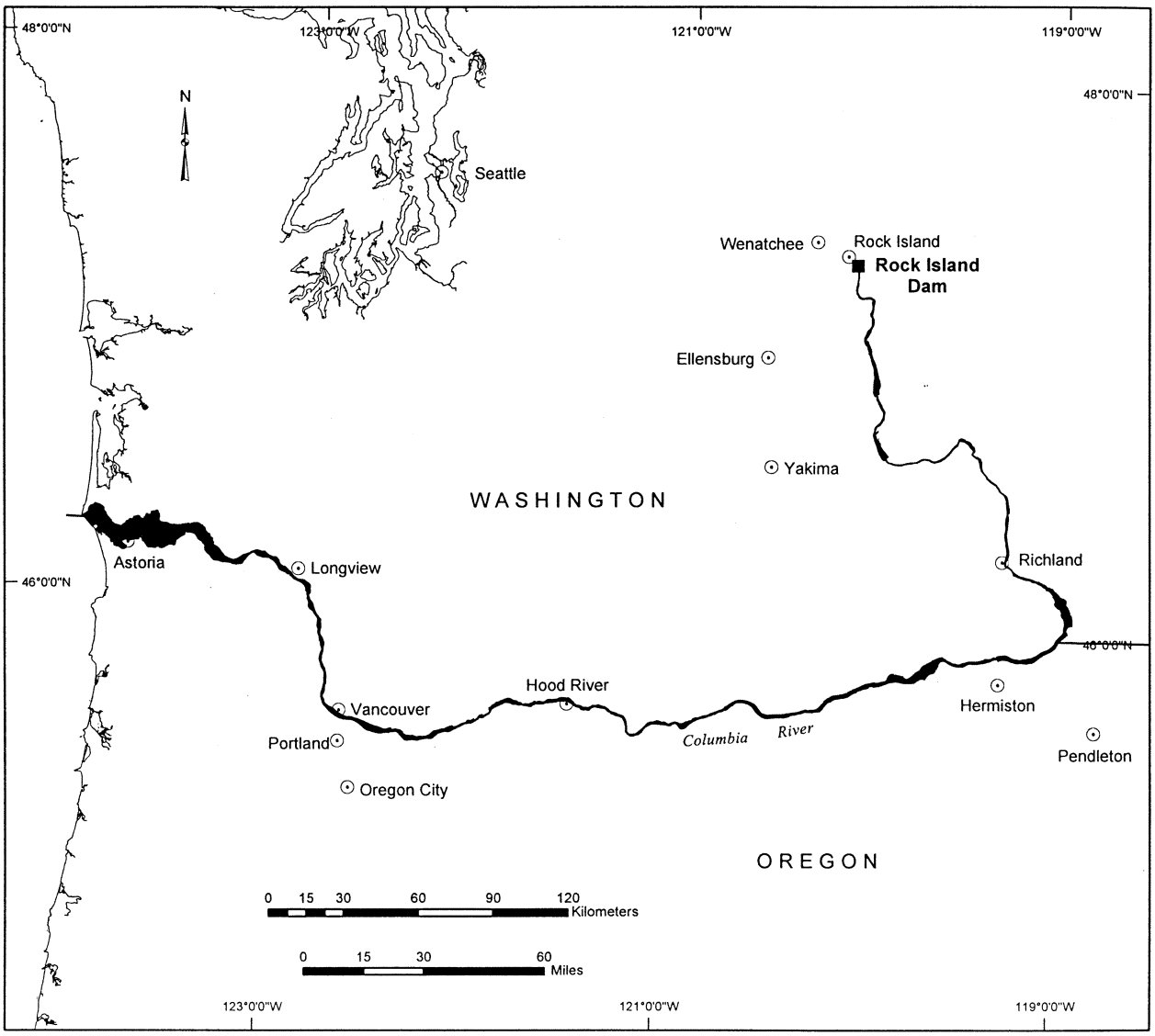
01 - 04 = Watershed code - last 2 digits of 17020010xx

Area of Detail




Final Critical Habitat for the
Upper Columbia River Spring-run Chinook Salmon ESU
WENATCHEE SUBBASIN
17020011
121°30'0"W
121°0'0"W
120°30'0"W
120°0'0"W
48°0'0"N
47°30'0"N
N
01
02
03
04
05
Phelps Cr
Napeequa R
Chiwawa R
Chikamin Cr
Panther Cr
White R
Alder Cr
Telma
Lake Wenatchee
Little Wenatchee R
Merritt
Nason Cr
Plain
Winton
Chiwaukum Cr
Leavenworth
Peshastin
Cashmere
Wenatchee R
Monitor
WASHINGTON
0 5 10 20 30 40 Kilometers
0 5 10 20 Miles
Legend
Cities / Towns
Critical Habitat
Water Bodies
Subbasin Boundary
Watershed Boundaries
01 - 05 = Watershed code - last 2 digits of 17020011xx
Area of Detail
WASHINGTON
OREGON
IDAHO

Rearing / Migration Corridor for the Upper Columbia River Spring-run Chinook Salmon ESU



Legend

- Cities / Towns
- State Boundary
- Rearing / Migration Corridor

Upper Columbia River Spring Chinook ESU

Columbia River Corridor
The Columbia River Corridor is that segment from the mouth of the Columbia River at the Pacific Ocean upstream to Rock Island Dam.

BILLING CODE 3510–22–C

(m) *Hood Canal Summer-run Chum Salmon (Oncorhynchus keta).* Critical habitat is designated to include the areas defined in the following subbasins:

(1) Skokomoish Subbasin 17110017—*Skokomish River 1711001701.* Outlet(s) = Skokomish River (Lat 47.3543, Long –123.1122), Unnamed (47.3420, –123.1092), Unnamed (47.3471, –123.1275), Unnamed (47.3509. –123.1101) upstream to endpoint(s) in: Mussel Sheel Creek (47.3039, –123.1590); Skokomish (47.3199, –123.2198); Unnamed (47.3209, –123.2211).

(2) Hood Canal Subbasin 17110018—(i) *Lower West Hood Canal Frontal Watershed 1711001802.* Outlet(s)= Eagle Creek (Lat 47.4849, Long –123.0766); Finch Creek (47.4067, –123.1377); Fulton Creek (47.6183, –122.9736); Jorsted Creek (47.5263, –123.0489); Lilliwaup Creek (47.4689, –123.1136); Unnamed (47.4576, –123.1117) upstream to endpoint(s) in: Eagle Creek (47.4905, –123.0830); Finch Creek (47.4076, –123.1586); Fulton Creek (47.6275, –122.9805); Jorsted Creek (47.5246, –123.0649); Lilliwaup Creek (47.4704, –123.1166); Unnamed (47.4585, –123.1186).

(ii) *Hamma Hamma River Watershed 1711001803.* Outlet(s) = Hamma Hamma River (Lat 47.5471, Long –123.0440) upstream to endpoint(s) in: Hamma Hamma River (47.5547, –123.0623); John Creek (47.5369, –123.0619).

(iii) *Duckabush River Watershed 1711001804.* Outlet(s) = Duckabush River (Lat 47.6502, Long –122.9348) upstream to endpoint(s) in: Duckabush River (47.6654, –122.9728).

(iv) *Dosewallips River Watershed 1711001805.* Outlet(s) = Dosewallips River (Lat 47.6880, Long –122.8949) upstream to endpoint(s) in: Dosewallips River (47.7157, –122.9396).

(v) *Big Quilcene River Watershed 1711001806.* Outlet(s) = Big Quilcene River (Lat 47.8188, Long –122.8605) upstream to endpoint(s) in: Big Quilcene River (47.8102, –122.9119).

(vi) *Upper West Hood Canal Frontal Watershed 1711001807.* Outlet(s) = Little Quilcene River (Lat 47.8266; Long –122.8608) upstream to endpoint(s) in: Little Quilcene River (47.8374, –122.8854).

(vii) *West Kitsap Watershed 1711001808.* Outlet(s) = Anderson Creek (Lat 47.5670, Long –122.9664); Big Beef Creek (47.6521, –122.7823); Dewatto River (47.4538, –123.0474); Little Anderson Creek (47.6653, –122.7554); Tahuya River (47.3767, –123.0355); Union River (47.4484, –122.8368); Unnamed (47.3767, –123.0372); Unnamed (47.4537, –123.0474) upstream to endpoint(s) in: Anderson Creek (47.5596, –122.9354); Bear Creek (47.4980, –122.8074); Big Beef Creek (47.6385, –122.7868); Dewatto River (47.4937, –122.9914); East Fork Union River (47.5056, –122.7897); Hazel Creek (47.5170, –122.7945); Little Anderson Creek (47.6606, –122.7543); North East Fork Union River (47.4954, –122.7819); Tahuya River (47.4510, –122.9597); Union River (47.5273, –122.7846); Unnamed (47.4492, –122.9229); Unnamed (47.4527, –122.8294); Unnamed (47.4553, –122.8301); Unnamed (47.4594, –122.8396); Unnamed (47.4700, –122.8300); Unnamed (47.4852, –122.8313); Unnamed (47.4966, –122.8393); Unnamed (47.4971, –122.8315); Unnamed (47.6600, –122.7559); Unnamed (47.6642, –122.7534).

(3) Puget Sound Subbasin 17110019—*Port Ludlow/Chimacum Creek Watershed 1711001908.* Outlet(s) = Chimacum Creek (Lat 48.0507, Long –122.7832) upstream to endpoint(s) in: Chimacum Creek (47.9743, –122.7764).

(4) Dungeness/Elwha Subbasin 17110020—(i) *Discovery Bay Watershed 1711002001.* Outlet(s) = Salmon Creek (Lat 47.9895, Long –122.8879); Snow Creek (47.9900, –122.8834) upstream to endpoint(s) in: Salmon Creek (47.9775, –122.9191); Snow Creek (47.9638, –122.8827).

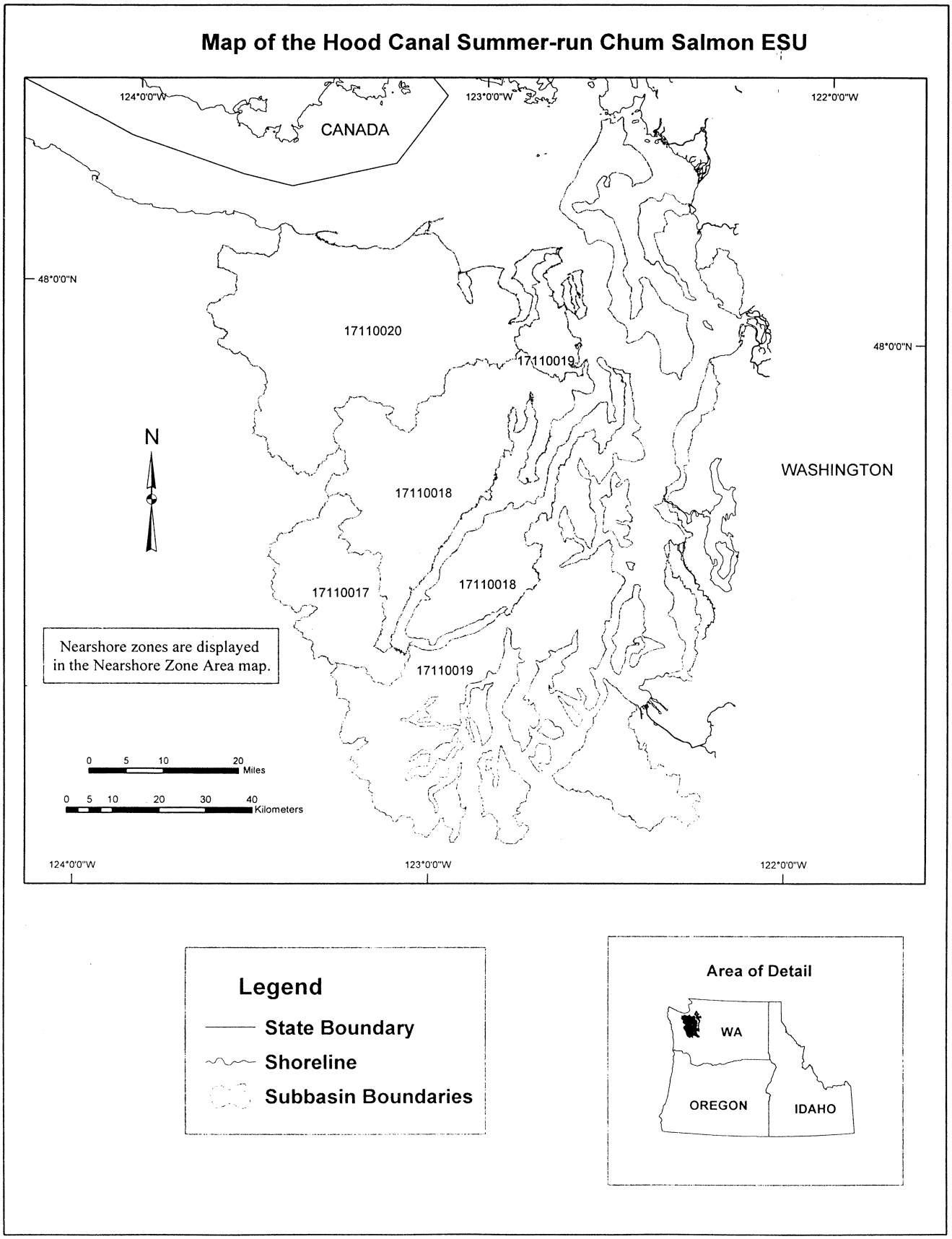
(ii) *Sequim Bay Watershed 1711002002.* Outlet(s) = Jimmycomelately Creek (Lat 48.0235, Long –123.0039) upstream to endpoint(s) in: Jimmycomelately Creek (48.0125, –123.0026).

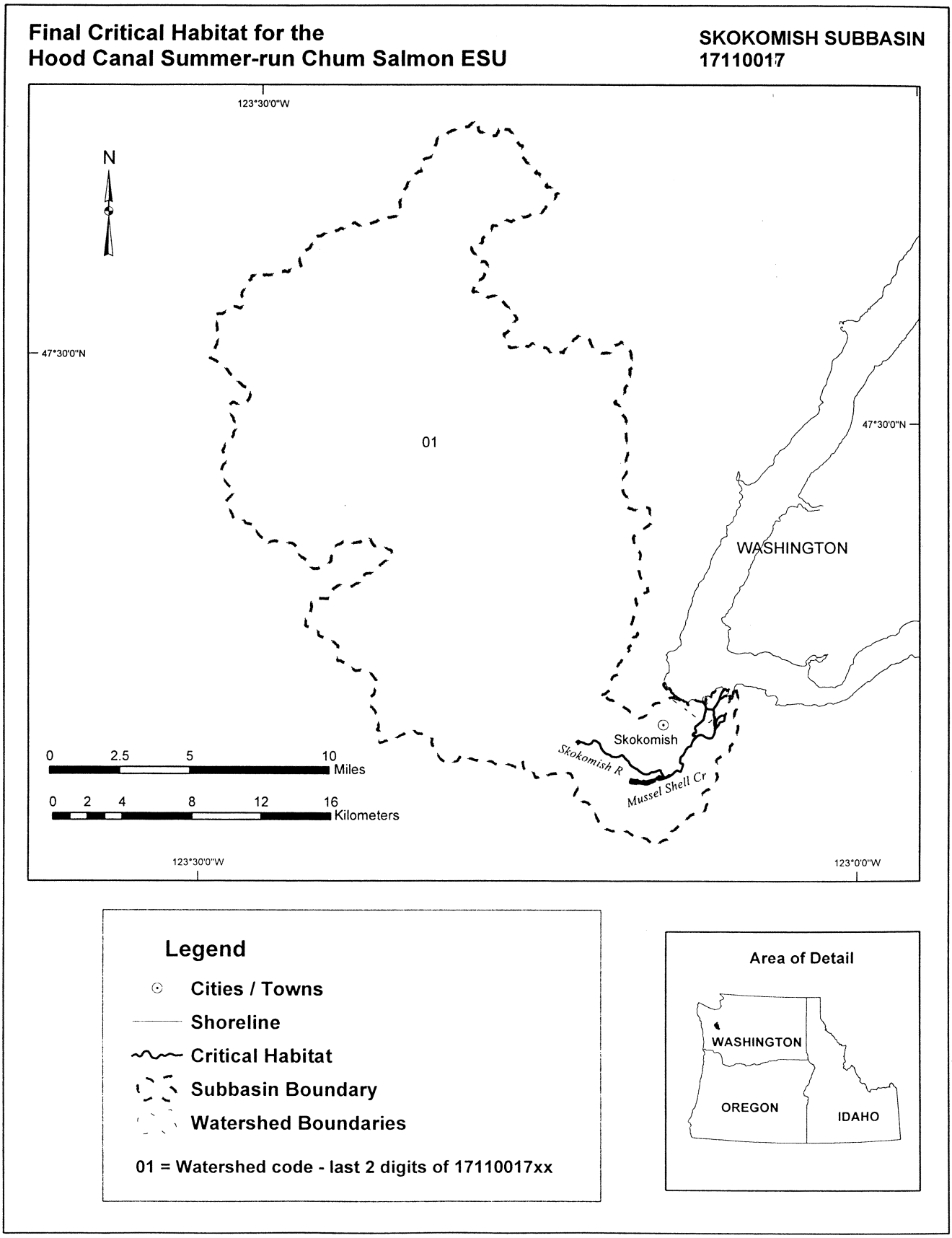
(iii) *Dungeness River Watershed 1711002003.* Outlet(s) = Dungeness River (Lat 48.1506, Long –123.1311); Unnamed (48.1537, –123.1267) upstream to endpoint(s) in: Dungeness River (48.0258, –123.1358); Matriotti Creek (48.1369, –123.1488); Unnamed (48.1167, –123.1403); Unnamed (48.1514, –123.1216).

(5) Nearshore Marine Areas—Except as provided in paragraph (e) of this section, critical habitat includes all nearshore marine areas (including areas adjacent to islands) of Hood Canal and the Strait of Juan de Fuca (to Dungeness Bay) from the line of extreme high tide out to a depth of 30 meters.

(6) Maps of critical habitat for the Hood Canal summer-run chum salmon ESU follow:

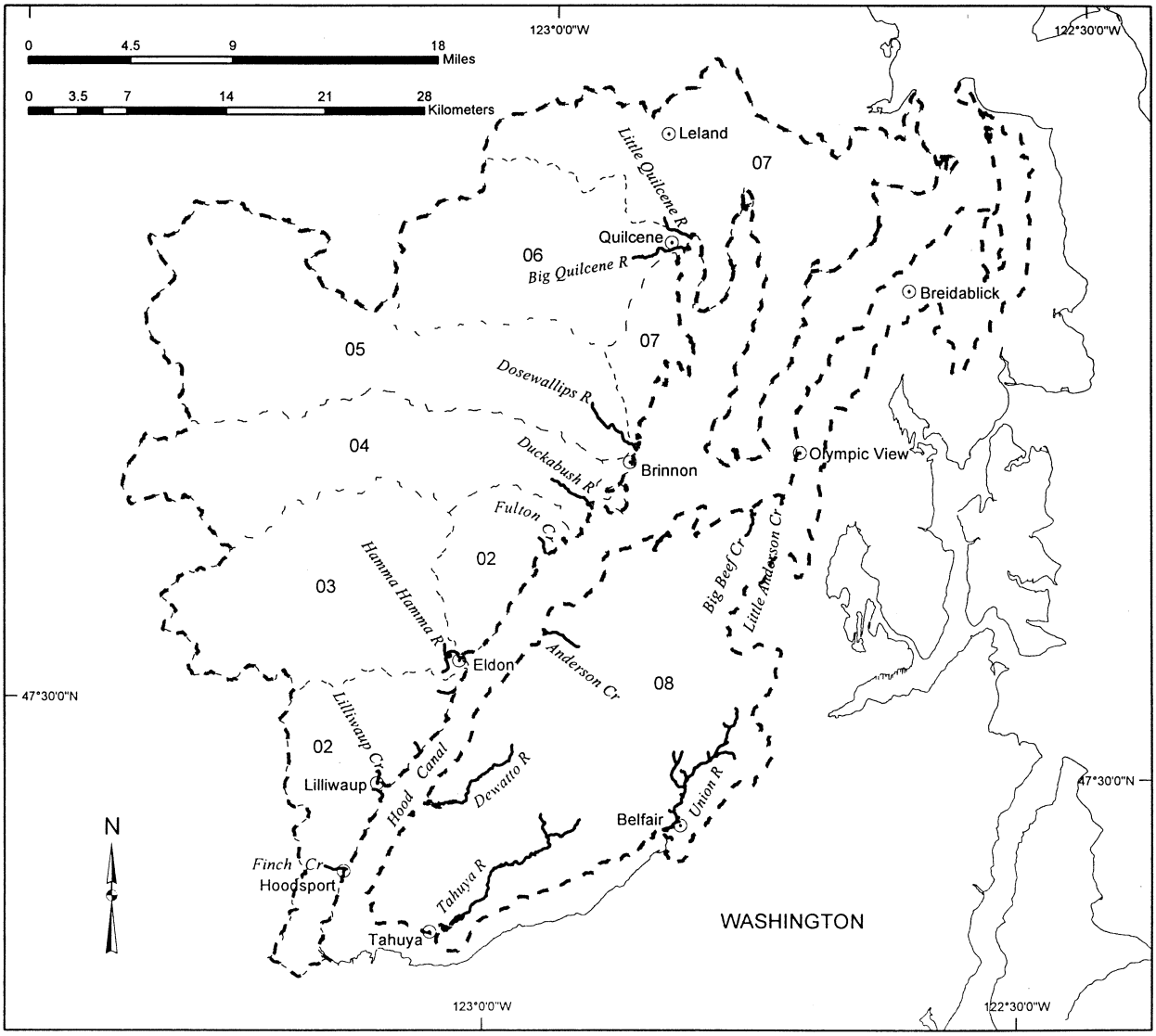
BILLING CODE 3510–22–P


Map of the Hood Canal Summer-run Chum Salmon ESU
124°0'0"W
123°0'0"W
122°0'0"W
CANADA
48°0'0"N
17110020
17110019
WASHINGTON
N
17110018
17110017
17110018
17110019
Nearshore zones are displayed in the Nearshore Zone Area map.
0 5 10 20 Miles
0 5 10 20 30 40 Kilometers
Legend
State Boundary
Shoreline
Subbasin Boundaries
Area of Detail
WA
OREGON
IDAHO


Final Critical Habitat for the
Hood Canal Summer-run Chum Salmon ESU
SKOKOMISH SUBBASIN
17110017
123°30'0"W
N
47°30'0"N
01
WASHINGTON
Skokomish
Skokomish R
Mussel Shell Cr
0 2.5 5 10 Miles
0 2 4 8 12 16 Kilometers
123°0'0"W
Legend
Cities / Towns
Shoreline
Critical Habitat
Subbasin Boundary
Watershed Boundaries
01 = Watershed code - last 2 digits of 17110017xx
Area of Detail
WASHINGTON
OREGON
IDAHO

Final Critical Habitat for the Hood Canal Summer-run Chum Salmon ESU

HOOD CANAL SUBBASIN 17110018

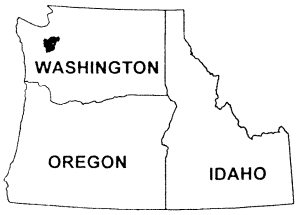


Legend

- Cities / Towns
- Shoreline
- Critical Habitat
- Subbasin Boundary
- Watershed Boundaries

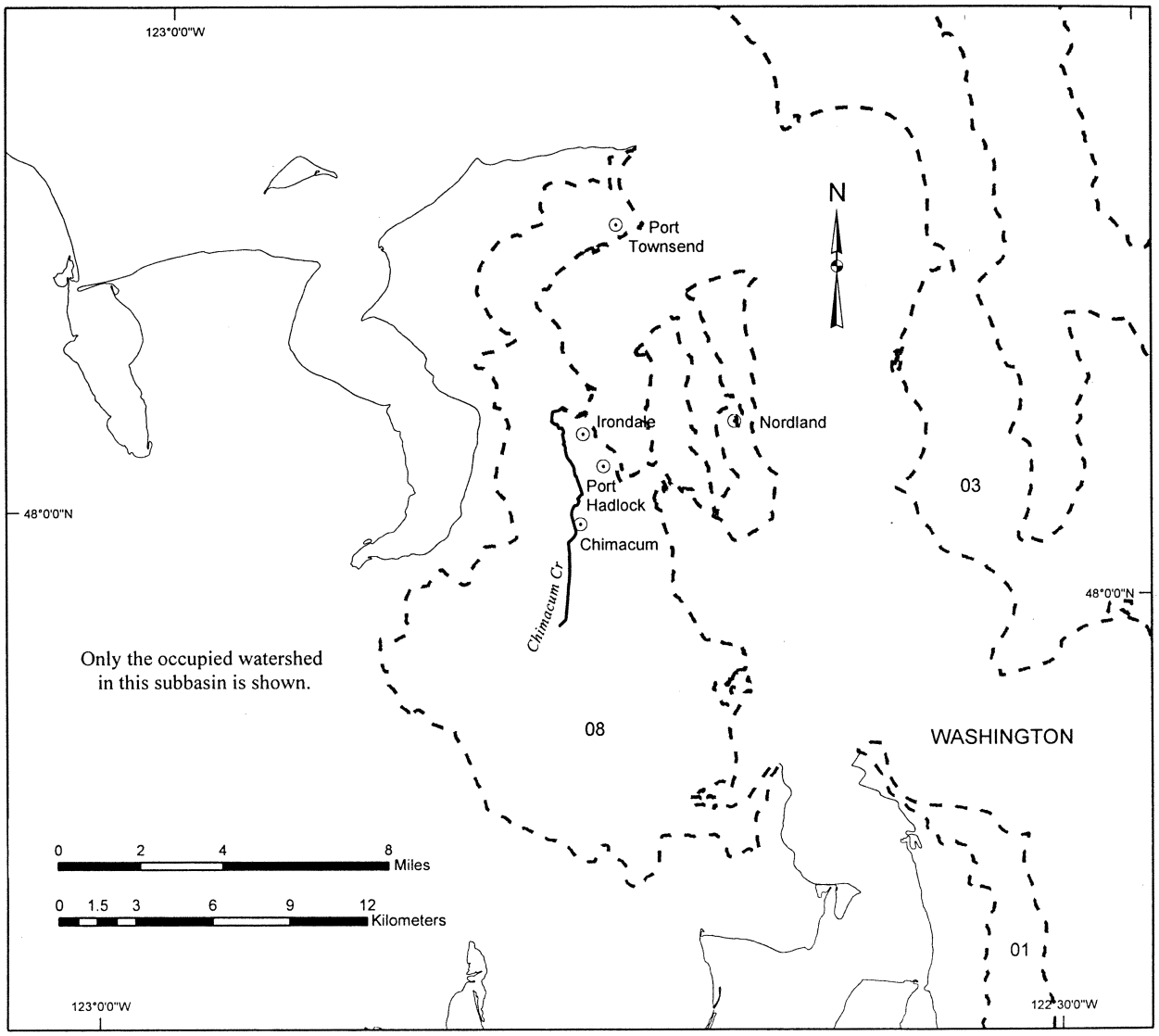
02 - 08 = Watershed code - last 2 digits of 17110018xx

Area of Detail



Final Critical Habitat for the Hood Canal Summer-run Chum Salmon ESU

PUGET SOUND / KITSAP SUBBASIN 17110019

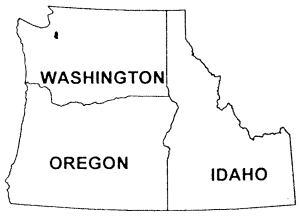


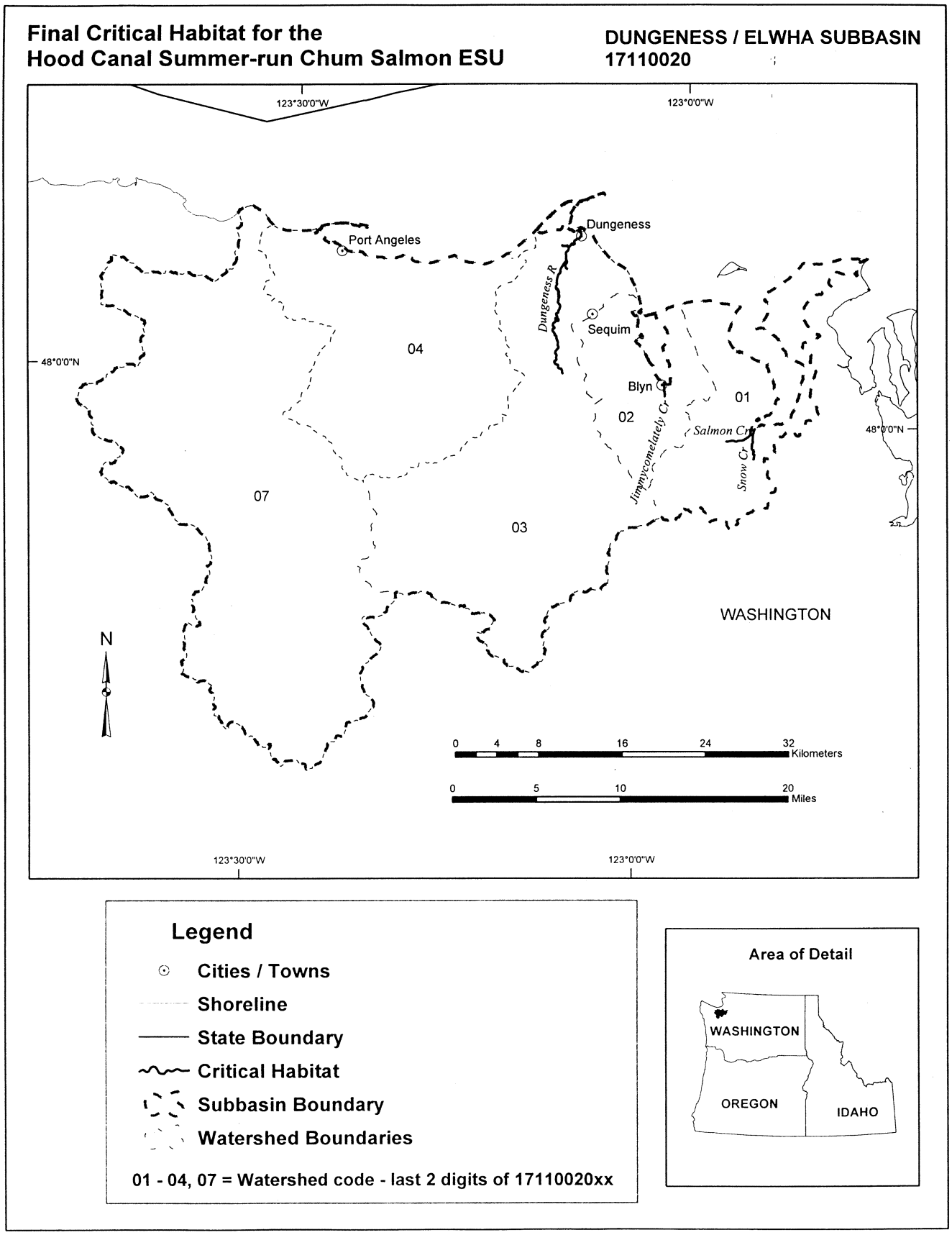
Legend

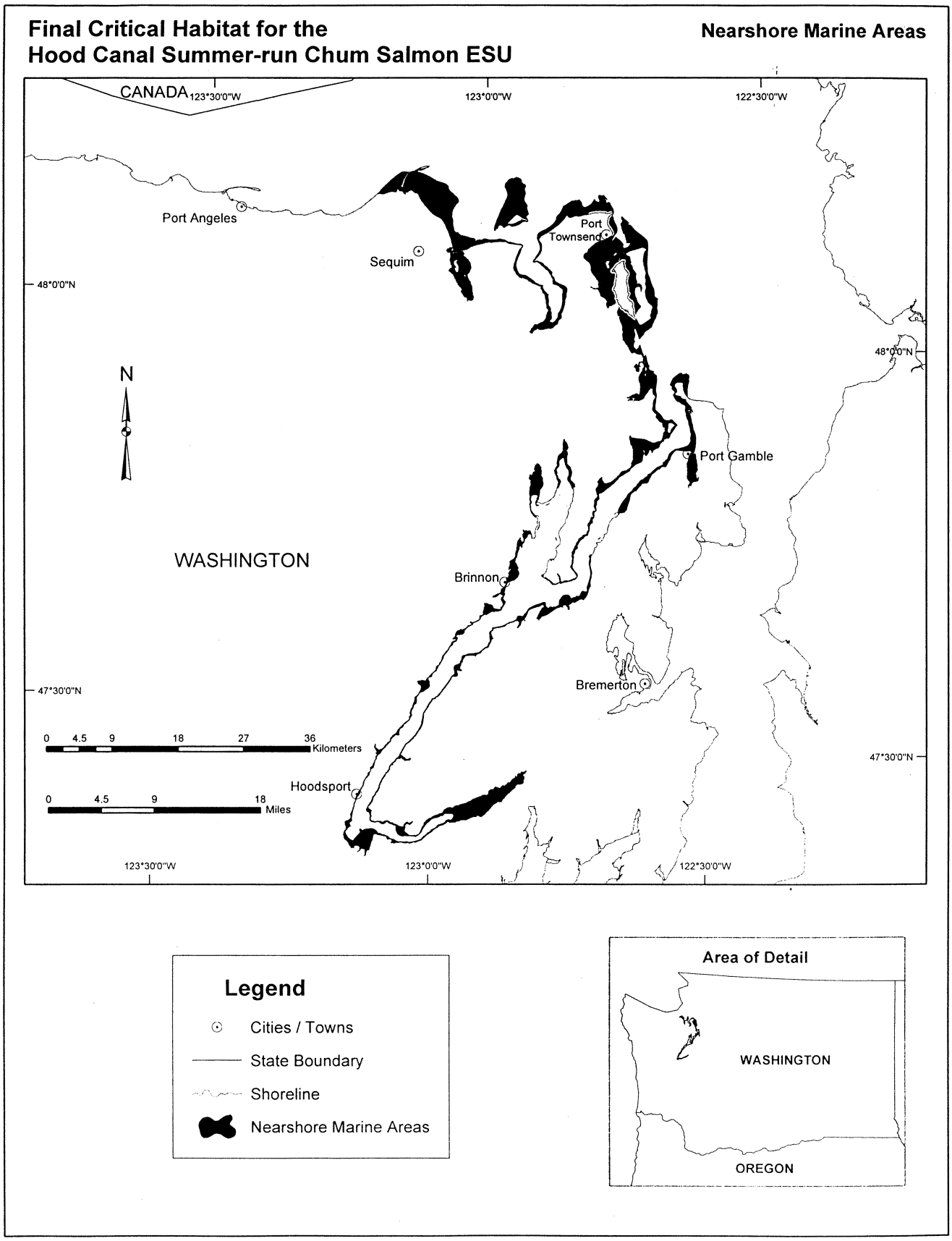
- Cities / Towns
- Shoreline
- Critical Habitat
- Subbasin Boundary
- Watershed Boundaries

01 - 06, 08 = Watershed code - last 2 digits of 17110019xx

Area of Detail




Final Critical Habitat for the
Hood Canal Summer-run Chum Salmon ESU
DUNGENESS / ELWHA SUBBASIN
17110020
123°30'0"W
123°0'0"W
48°0'0"N
Port Angeles
Dungeness
Dungeness R
Sequim
Blyn
Jimmycomelately Cr
Salmon Cr
Snow Cr
04
01
02
07
03
WASHINGTON
N
0 4 8 16 24 32 Kilometers
0 5 10 20 Miles
Legend
Cities / Towns
Shoreline
State Boundary
Critical Habitat
Subbasin Boundary
Watershed Boundaries
01 - 04, 07 = Watershed code - last 2 digits of 17110020xx
Area of Detail
WASHINGTON
OREGON
IDAHO



BILLING CODE 3510–22–C

(n) *Columbia River Chum Salmon (Oncorhynchus keta).* Critical habitat is designated to include the areas defined in the following subbasins:

(1) Middle Columbia/Hood Subbasin 17070105—(i) *White Salmon River Watershed 1707010509.* Outlet(s) = White Salmon River (Lat 45.7267, Long –121.5209) upstream to endpoint(s) in: White Salmon River (45.7677, –121.5374).

(ii) *Middle Columbia/Grays Creek Watershed 1707010512.* Outlet(s) = Columbia River (Lat 45.7074, Long –121.7965) upstream to endpoint(s) in: Columbia River (45.7267, –121.5209).

(iii) *Middle Columbia/Eagle Creek 1707010513.* Outlet(s) = Columbia River (Lat 45.6453, Long –121.9395) upstream to endpoint(s) in: Columbia River (45.7074, –121.7965).

(2) Lower Columbia/Sandy Subbasin 17080001—(i) *Washougal River Watershed 1708000106.* Outlet(s) = Unnamed (Lat 45.5812, Long –122.4077); Washougal River (45.5795, –122.4023) upstream to endpoint(s) in: Lacamas Creek (45.5972, –122.3933); Little Washougal River (45.6210, –122.3750); Unnamed (45.5861, –122.4083); Washougal River (45.6232, –122.2738).

(ii) *Columbia Gorge Tributaries Watershed 1708000107.* Outlet(s) = Columbia River (Lat 45.5709, Long –122.4020) upstream to endpoint(s) in: Columbia River (45.6453, –121.9395); Duncan Creek (45.6136, –122.0539); Gibbons Creek (45.5710, –122.3147); Greenleaf Creek (45.6548, –121.9569); Hamilton Creek (45.6535, –121.9879); Hardy Creek (45.6354, –121.9987); Indian Mary Creek (45.6066, –122.0716); Lawton Creek (45.5746, –122.2501); Unnamed (45.5673, –122.3033); Unnamed (45.6017, –122.1106); Unnamed (45.6017, –122.1087); Unnamed (45.6483, –121.9725); Unnamed (45.6509, –121.9502); Walton Creek (45.5757, –122.2618).

(iii) *Salmon Creek Watershed 1708000109.* Outlet(s) = Lake River (Lat 45.8437, Long –122.7800); Love Creek (45.5976, –122.5443); Unnamed (45.5867, –122.5015); Unnamed (45.5919, –122.5241); Unnamed (45.5952, –122.5366) upstream to endpoint(s) in: Love Creek (45.5981, –122.5444); Salmon Creek (45.7089, –122.6480); Unnamed (45.5873, –122.5015); Unnamed (45.5924, –122.5242); Unnamed (45.5955, –122.5360).

(3) Lewis Subbasin 17080002—(i) *East Fork Lewis River Watershed 1708000205.* Outlet(s) = East Fork Lewis River (Lat 45.8664, Long –122.7189); Gee Creek (45.8462, –122.7803) upstream to endpoint(s) in: Brezee Creek (45.8622, –122.6667); East Fork Lewis River (45.8395, –122.4463); Gee Creek (45.8264, –122.7458); Lockwood Creek (45.8578, –122.6259); Mason Creek (45.8410, –122.5919); McCormick Creek (45.8521, –122.6907); Riley Creek (45.8663, –122.6349); Unnamed (45.8076, –122.5878); Unnamed (45.8076, –122.6286); Unnamed (45.8090, –122.6089); Unnamed (45.8111, –122.5860); Unnamed (45.8149, –122.5654); Unnamed (45.8201, –122.5991); Unnamed (45.8241, –122.6380); Unnamed (45.8280, –122.6431); Unnamed (45.8292, –122.6040); Unnamed (45.8389, –122.6456); Unnamed (45.8439, –122.6478); Unnamed (45.8439, –122.6605).

(ii) *Lower Lewis River Watershed 1708000206.* Outlet(s) = Lewis River (Lat 45.8519, Long –122.7806) upstream to endpoint(s) in: Cedar Creek (45.9383, –122.5818); Colvin Creek (45.9400, –122.6081); Houghton Creek (45.9395, –122.6478); Johnson Creek (45.9385, –122.6261); Lewis River (45.9570, –122.5550); Ross Creek (45.9340, –122.7076).

(4) Lower Columbia/Clatskanie Subbasin 17080003—(i) *Kalama River Watershed 1708000301.* Outlet(s) = Kalama River (Lat 46.0340, Long –122.8696) upstream to endpoint(s) in: Kalama River (46.0449, –122.8034).

(ii) *Germany/Abernathy Watershed 1708000304.* Outlet(s) = Abernethy Creek (Lat 46.1908, Long –123.1661); Germany Creek (46.1895, –123.1244); Mill Creek (46.1888, –123.1745) upstream to endpoint(s) in: Abernethy Creek (46.2263, –123.1467); Germany Creek (46.2221, –123.1353); Mill Creek (46.1932, –123.1834).

(iii) *Skamokawa/Elochoman Watershed 1708000305.* Outlet(s) = Elochoman River (Lat 46.2269, Long –123.4039); Jim Crow Creek (46.2662, –123.5511); Skamokawa Creek (46.2677, –123.4562); Unnamed (46.2243, –123.3975) upstream to endpoint(s) in: Beaver Creek (46.2262, –123.3239); Brooks Slough (46.2502, –123.4094); Clear Creek (46.2611, –123.2996); Duck Creek (46.2517, –123.3159); Eggman Creek (46.3248, –123.4951); Elochoman River (46.2615, –123.2965); Indian Jack Slough (46.2371, –123.3955); Jim Crow Creek (46.2891, –123.5553); Kelly Creek (46.3109, –123.4797); Left Fork Skamokawa Creek (46.3331, –123.4610); Quarry Creek (46.3292, –123.4241); Skamokawa Creek (46.3277, –123.4236); Unnamed (46.2338, –123.3282); Unnamed (46.3293, –123.4534); West Fork Skamokawa Creek (46.3119, –123.4889); West Valley Creek (46.2981, –123.4698); Wilson Creek (46.3006, –123.3787).

(5) Lower Cowlitz Subbasin 17080005—(i) *Jackson Prairie Watershed 1708000503.* Outlet(s) = Cowlitz River (Lat 46.3678, Long –122.9337) upstream to endpoint(s) in: Bear Creek (46.4544, –122.9187); Blue Creek (46.4885, –122.7253); Coon Creek (46.4272, –122.9109); Cowlitz River (46.5033, –122.5871); Lacamas Creek (46.5564, –122.6878); Mill Creek (46.5025, –122.8017); Salmon Creek (46.4130, –122.8165); Skook Creek (46.4708, –122.7594); Unnamed (46.4191, –122.8205); Unnamed (46.4205, –122.8662); Unnamed (46.4280, –122.8380); Unnamed (46.4707, –122.7713); Unnamed (46.4885, –122.8068); Unnamed (46.5076, –122.6675); Unnamed (46.5311, –122.8194); Unnamed (46.5432, –122.7466).

(ii) *South Fork Toutle River Watershed 1708000506.* Outlet(s) = South Fork Toutle River (Lat 46.3282, Long –122.7215) upstream to endpoint(s) in: Johnson Creek (46.3102, –122.6444); South Fork Toutle River (46.2817, –122.6420).

(iii) *East Willapa Watershed 1708000507.* Outlet(s) = Cowlitz River (Lat 46.2660, Long –122.9154) upstream to endpoint(s) in: Arkansas Creek (46.3032, –122.9801); Cowlitz River (46.3678, –122.9337); Delameter Creek (46.2598, –122.9679); Hill Creek (46.3704, –122.9267); McMurphy Creek (46.4082, –122.9520); Monahan Creek (46.2636, –122.9727); North Fork Toutle River (46.3669, –122.5859); Olequa Creek (46.4324, –122.9688); Unnamed (46.2606, –122.9551); Unnamed (46.2642, –122.9291); Unnamed (46.2689, –122.9589); Unnamed (46.2880, –122.9051); Unnamed (46.2892, –122.9626); Unnamed (46.3294, –122.9085); Unnamed (46.3371, –122.8922); Unnamed (46.3491, –122.7052); Unnamed (46.3571, –122.7684); Unnamed (46.3587, –122.7478); Unnamed (46.3683, –122.7503); Unnamed (46.3814, –122.6091); Wyant Creek (46.3314, –122.6768).

(iv) *Coweeman Watershed 1708000508.* Outlet(s) = Cowlitz River (Lat 46.0977, Long –122.9141); Owl Creek (46.0768, –122.8679) upstream to endpoint(s) in: Baird Creek (46.1789, –122.5822); Butler Creek (46.1491, –122.5170); Cowlitz River (46.2660, –122.9154); Goble Creek (46.1074, –122.7068);Leckler Creek (46.2164, –122.9325); Mulholland Creek (46.2004, –122.6484); Nineteen Creek (46.1593, –122.6095); North Fork Goble Creek (46.1208, –122.7691); Owl Creek (46.0914, –122.8692); Salmon Creek (46.2547, –122.8839); Sandy Bend Creek (46.2318, –122.9143); Skipper Creek

(46.1625, –122.5915); Turner Creek (46.1167, –122.8150); Unnamed (46.0719, –122.8607); Unnamed (46.0767, –122.8604); Unnamed (46.0897, –122.7355); Unnamed (46.1295, –122.8993); Unnamed (46.1369, –122.8034); Unnamed (46.1441, –122.5816); Unnamed (46.1478, –122.8649); Unnamed (46.1516, –122.8749); Unnamed (46.1558, –122.7803); Unnamed (46.1727, –122.7716); Unnamed (46.1753, –122.7657); Unnamed (46.1940, –122.7068); Unnamed (46.2021, –122.6941); Unnamed (46.2416, –122.8869).

(6) Lower Columbia Subbasin 17080006—(i) *Big Creek Watershed 1708000602.* Outlet(s) = Big Creek (Lat 46.1848, Long –123.5943) upstream to endpoint(s) in: Big Creek (46.1476, –123.5820); Little Creek (46.1510, –123.6007).

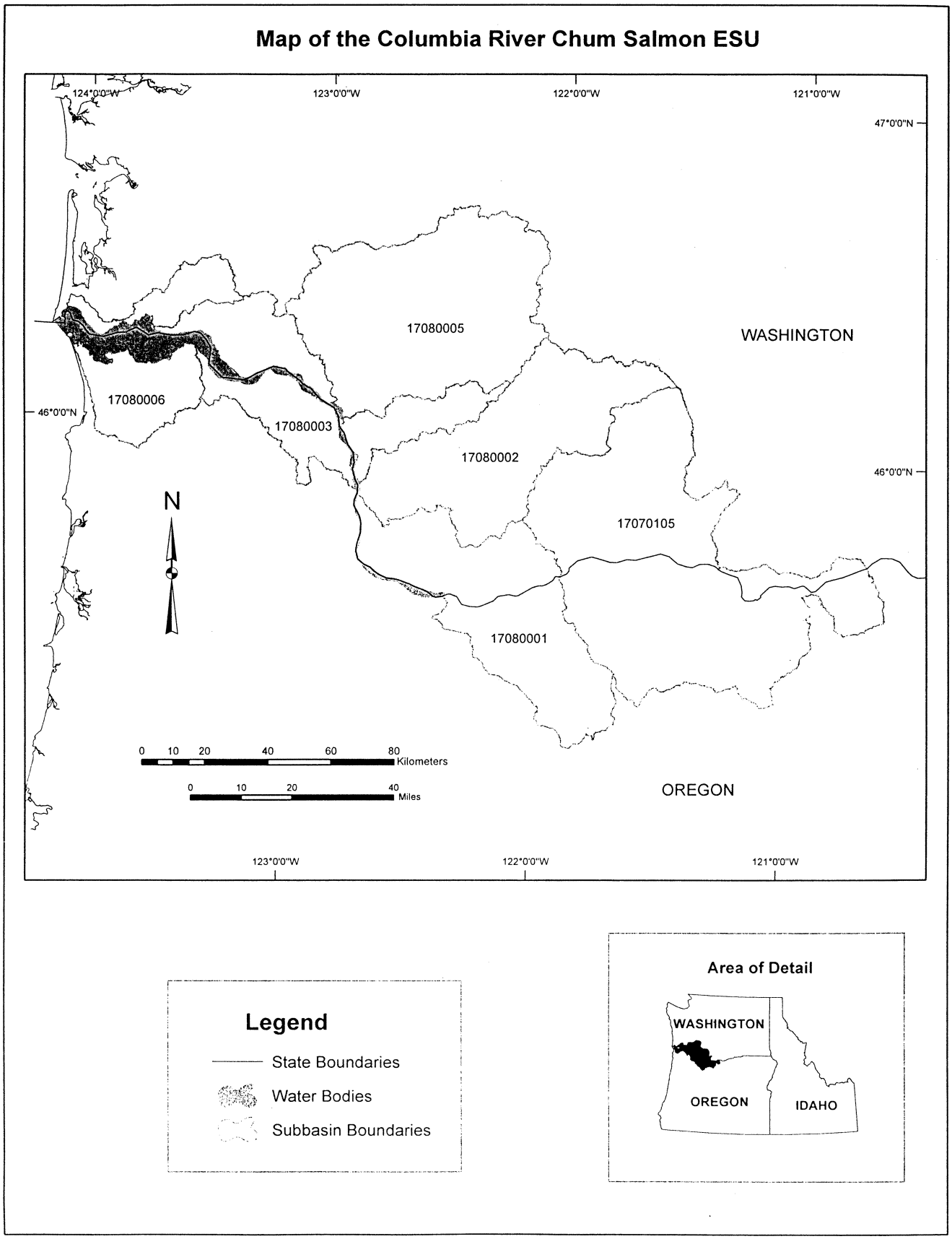
(ii) *Grays Bay Watershed 1708000603.* Outlet(s) = Deep River (Lat 46.3035, Long –123.7092); Grays River (46.3035, –123.6867); Unnamed (46.2419, –123.8842); Unnamed (46.3026, –123.9702) upstream to endpoint(s) in: Alder Creek (46.4279, –123.4621); Blaney Creek (46.3957, –123.4607); Campbell Creek (46.3435, –123.7087); Chinook River (46.2685, –123.9233); Deep River (46.3480, –123.6865); East Fork Grays River (46.4424, –123.4120); Fossil Creek (46.3612, –123.5217); Grays River (46.4628, –123.4602); Johnson Creek (46.4544, –123.4732); Kessel Creek (46.3336, –123.5850); King Creek (46.3444, –123.5774); Lassila Creek (46.3343, –123.7108); Mitchell Creek (46.4512, –123.4269); South Fork Grays River (46.3836, –123.4592); Thadbar Creek (46.3331, –123.6092); Unnamed (46.2502, –123.8833); Unnamed (46.2847, –123.9402); Unnamed (46.2901, –123.9368); Unnamed (46.3605, –123.5228); Unnamed (46.3838, –123.5454); Unnamed (46.4328, –123.4444); West Fork Grays River (46.3942, –123.5611).

(7) Lower Columbia River Corridor—*Lower Columbia River Corridor*

Outlet(s) = Columbia River (Lat 46.2485, Long –124.0782) upstream to endpoint(s) in: Columbia River (45.5709, –122.4020).

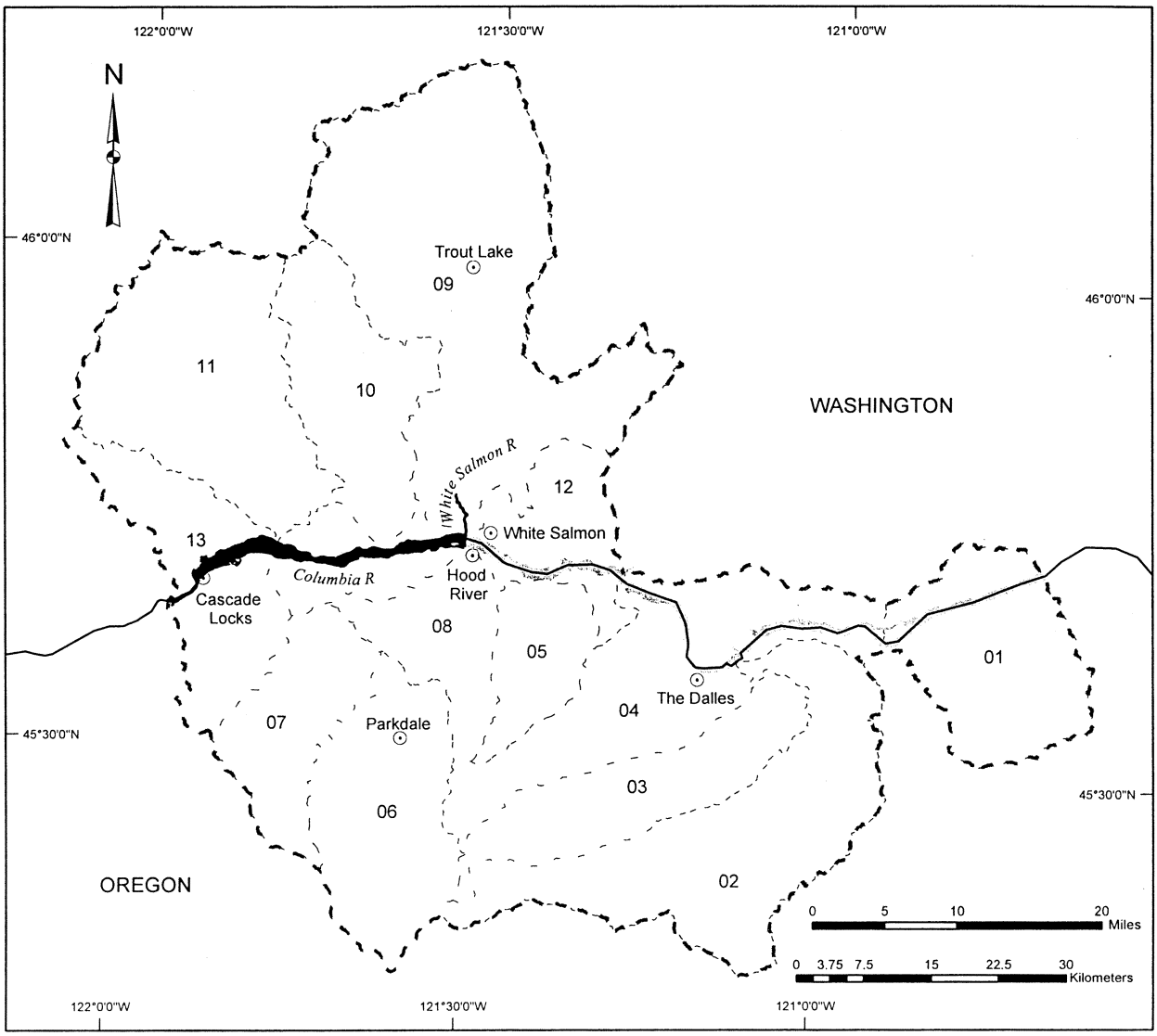
(8) Maps of critical habitat for the Columbia River chum salmon ESU follow:

BILLING CODE 3510–22–P


Map of the Columbia River Chum Salmon ESU
124°0'0"W
123°0'0"W
122°0'0"W
121°0'0"W
47°0'0"N
46°0'0"N
17080005
WASHINGTON
17080006
17080003
17080002
17070105
17080001
N
0 10 20 40 60 80 Kilometers
0 10 20 40 Miles
OREGON
Legend
State Boundaries
Water Bodies
Subbasin Boundaries
Area of Detail
WASHINGTON
OREGON
IDAHO

Final Critical Habitat for the Columbia River Chum Salmon ESU

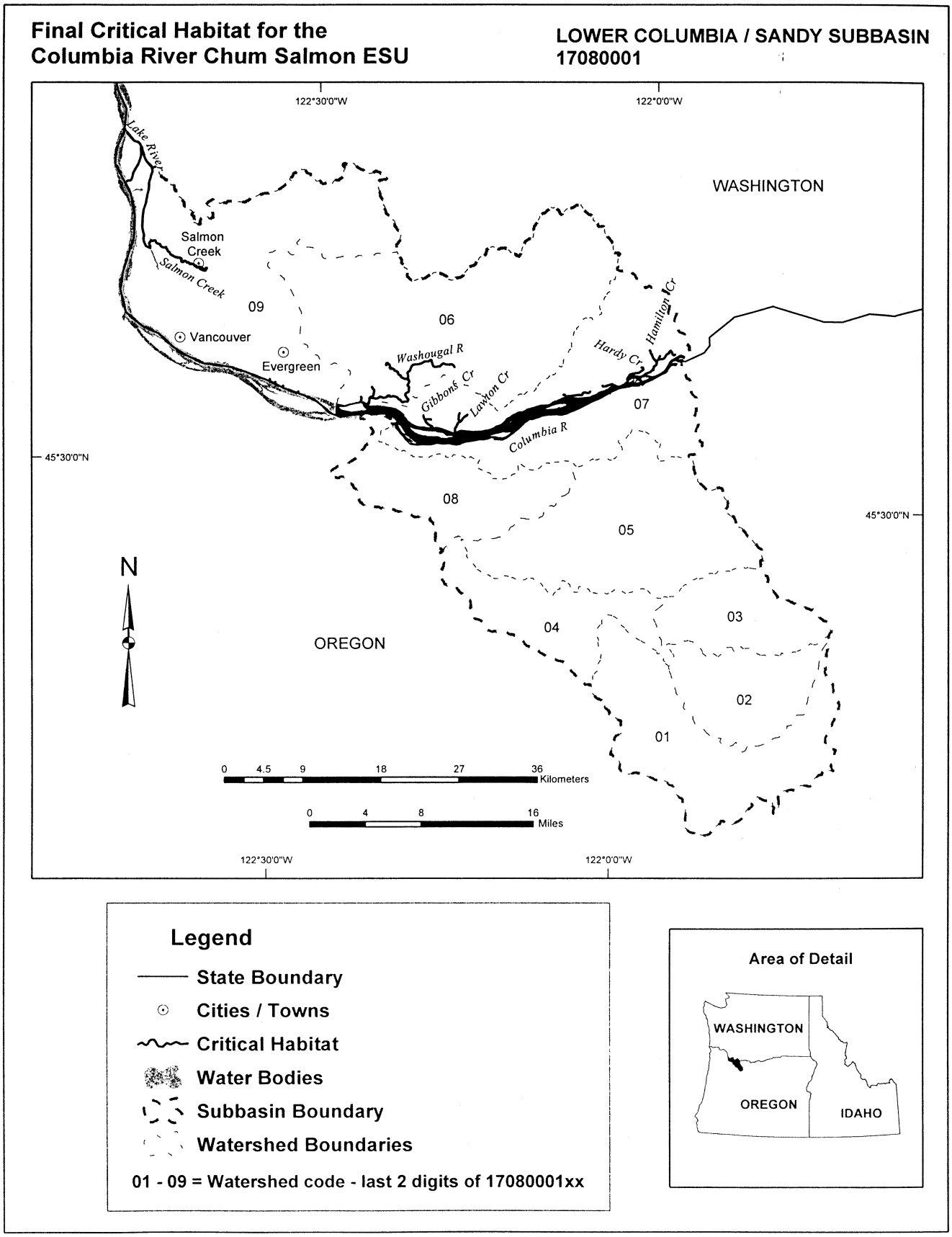
MIDDLE COLUMBIA / HOOD SUBBASIN 17070105

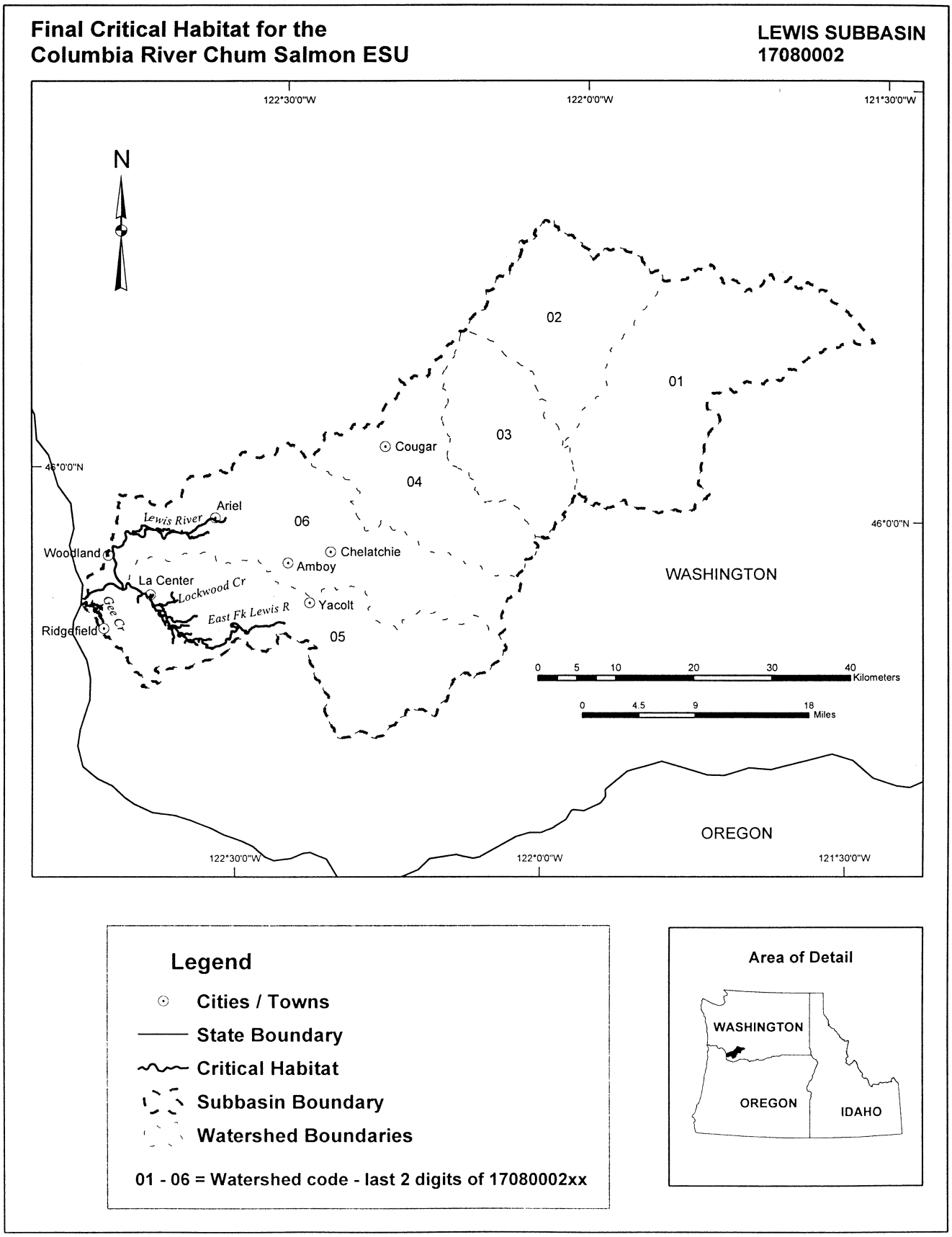


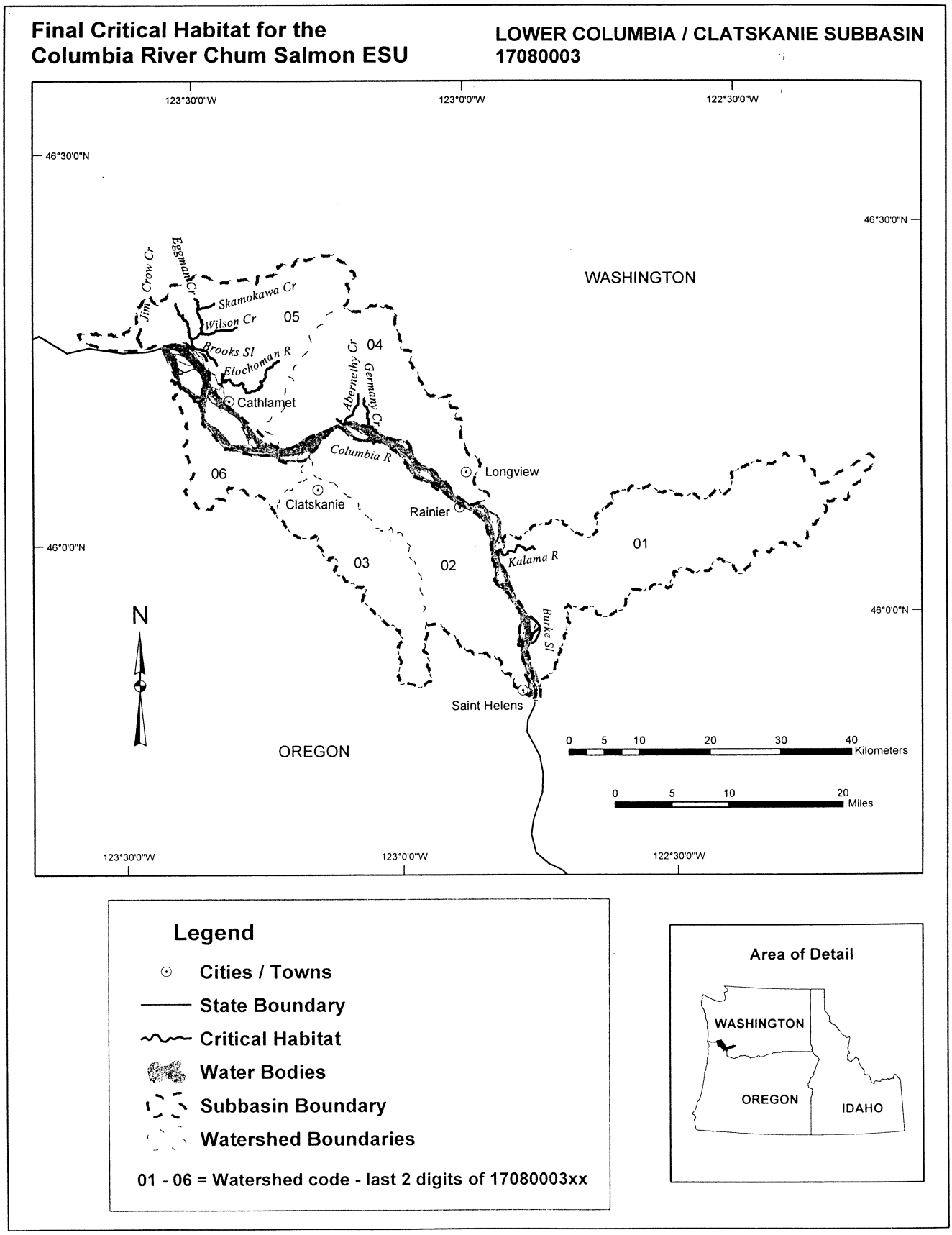
Legend

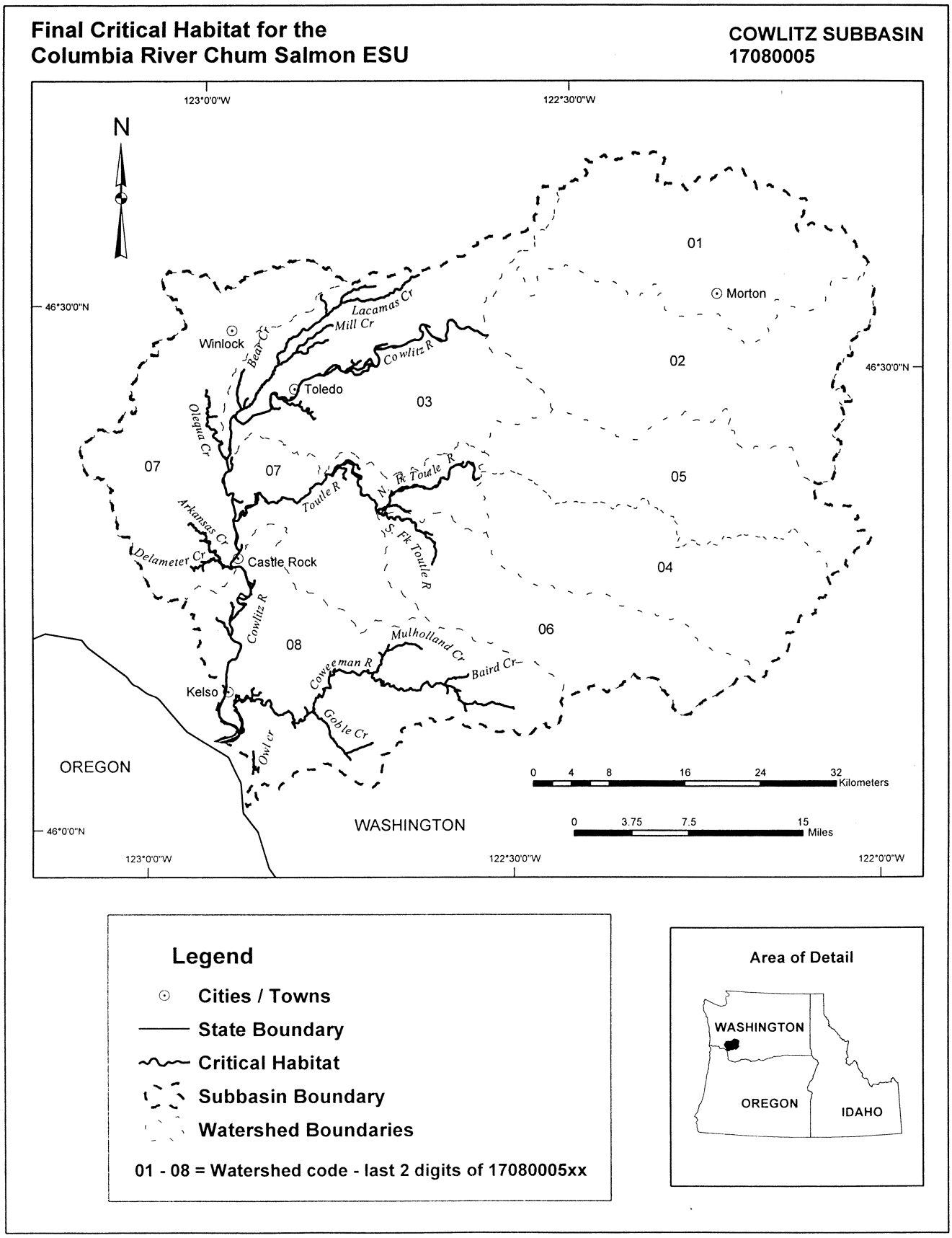
- Cities / Towns
- State Boundary
- Critical Habitat
- Water Bodies
- Subbasin Boundary
- Watershed Boundaries

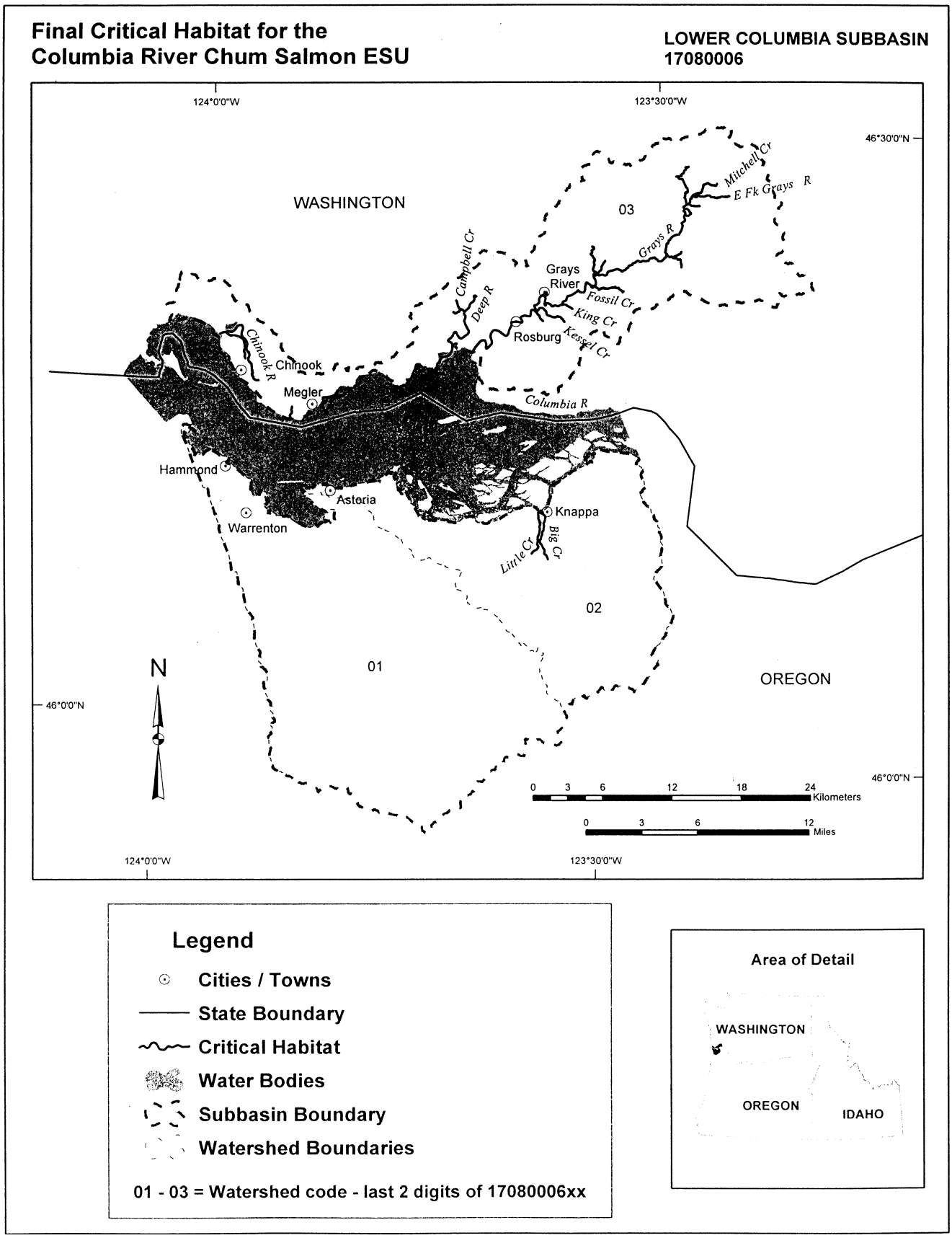
01 - 13 = Watershed code - last 2 digits of 17070105xx


Final Critical Habitat for the
Columbia River Chum Salmon ESU
LOWER COLUMBIA / SANDY SUBBASIN
17080001
122°30'0"W
122°0'0"W
45°30'0"N
Lake River
Salmon Creek
Salmon Creek
Vancouver
Evergreen
Washougal R
Gibbons Cr
Lawton Cr
Columbia R
Hardy Cr
Hamilton Cr
WASHINGTON
OREGON
09
06
07
08
05
04
03
02
01
N
0 4.5 9 18 27 36 Kilometers
0 4 8 16 Miles
Legend
State Boundary
Cities / Towns
Critical Habitat
Water Bodies
Subbasin Boundary
Watershed Boundaries
01 - 09 = Watershed code - last 2 digits of 17080001xx
Area of Detail
WASHINGTON
OREGON
IDAHO

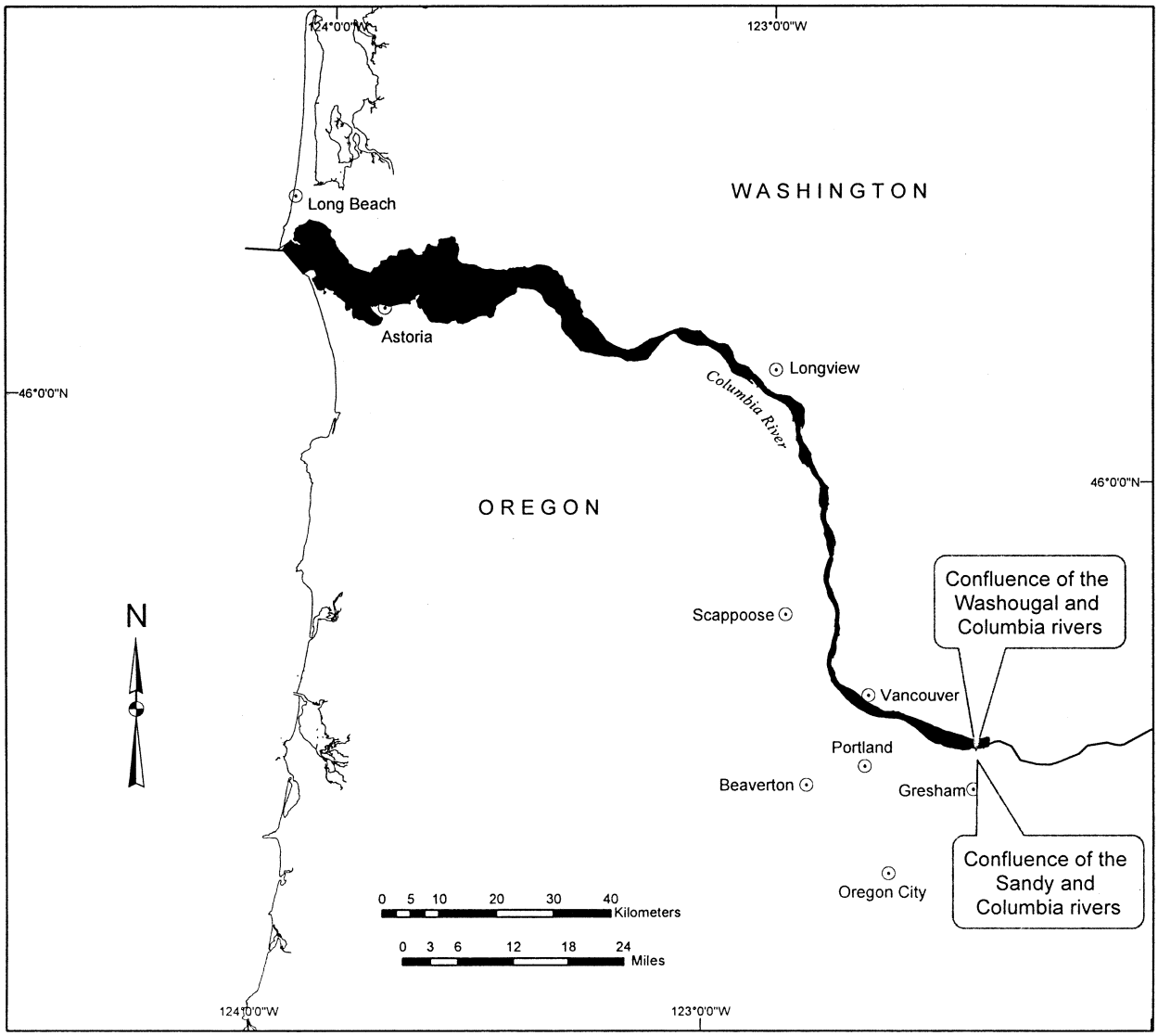

Final Critical Habitat for the
Columbia River Chum Salmon ESU
LEWIS SUBBASIN
17080002
122°30'0"W
122°0'0"W
121°30'0"W
46°0'0"N
N
02
01
03
04
06
05
Cougar
Ariel
Lewis River
Woodland
Chelatchie
Amboy
La Center
Lockwood Cr
Gee Cr
Yacolt
East Fk Lewis R
Ridgefield
WASHINGTON
OREGON
0 5 10 20 30 40 Kilometers
0 4.5 9 18 Miles
Legend
Cities / Towns
State Boundary
Critical Habitat
Subbasin Boundary
Watershed Boundaries
01 - 06 = Watershed code - last 2 digits of 17080002xx
Area of Detail
WASHINGTON
OREGON
IDAHO


Final Critical Habitat for the Columbia River Chum Salmon ESU
LOWER COLUMBIA / CLATSKANIE SUBBASIN 17080003
123°30'0"W
123°0'0"W
122°30'0"W
46°30'0"N
46°0'0"N
WASHINGTON
OREGON
Jim Crow Cr
Eggman Cr
Skamokawa Cr
Wilson Cr
Brooks Sl
Elochoman R
Abernethy Cr
Germany Cr
Columbia R
Kalama R
Burke Sl
Cathlamet
Clatskanie
Longview
Rainier
Saint Helens
01
02
03
04
05
06
N
0 5 10 20 30 40 Kilometers
0 5 10 20 Miles
Legend
Cities / Towns
State Boundary
Critical Habitat
Water Bodies
Subbasin Boundary
Watershed Boundaries
01 - 06 = Watershed code - last 2 digits of 17080003xx
Area of Detail
WASHINGTON
OREGON
IDAHO


Final Critical Habitat for the
Columbia River Chum Salmon ESU
COWLITZ SUBBASIN
17080005
123°0'0"W
122°30'0"W
N
46°30'0"N
46°0'0"N
122°0'0"W
01
02
03
04
05
06
07
07
08
Morton
Winlock
Toledo
Castle Rock
Kelso
Lacamas Cr
Mill Cr
Bear Cr
Cowlitz R
Olequa Cr
Toutle R
N. Fk Toutle R
S. Fk Toutle R
Arkansas Cr
Delameter Cr
Cowlitz R
Mulholland Cr
Coweeman R
Baird Cr
Goble Cr
Owl cr
OREGON
WASHINGTON
0 4 8 16 24 32 Kilometers
0 3.75 7.5 15 Miles
Legend
Cities / Towns
State Boundary
Critical Habitat
Subbasin Boundary
Watershed Boundaries
01 - 08 = Watershed code - last 2 digits of 17080005xx
Area of Detail
WASHINGTON
OREGON
IDAHO


Final Critical Habitat for the
Columbia River Chum Salmon ESU
LOWER COLUMBIA SUBBASIN
17080006
124°0'0"W
123°30'0"W
46°30'0"N
46°0'0"N
WASHINGTON
OREGON
03
02
01
Mitchell Cr
E Fk Grays R
Grays R
Grays River
Fossil Cr
King Cr
Kessel Cr
Rosburg
Campbell Cr
Deep R
Chinook R
Chinook
Megler
Columbia R
Hammond
Asteria
Warrenton
Knappa
Little Cr
Big Cr
N
0 3 6 12 18 24 Kilometers
0 3 6 12 Miles
Legend
Cities / Towns
State Boundary
Critical Habitat
Water Bodies
Subbasin Boundary
Watershed Boundaries
01 - 03 = Watershed code - last 2 digits of 17080006xx
Area of Detail
WASHINGTON
OREGON
IDAHO

Rearing / Migration Corridor for the Columbia River Chum Salmon ESU



Legend

- Cities / Towns
- State Boundary
- Rearing / Migration Corridor

Columbia River Chum ESU

Lower Columbia River Corridor

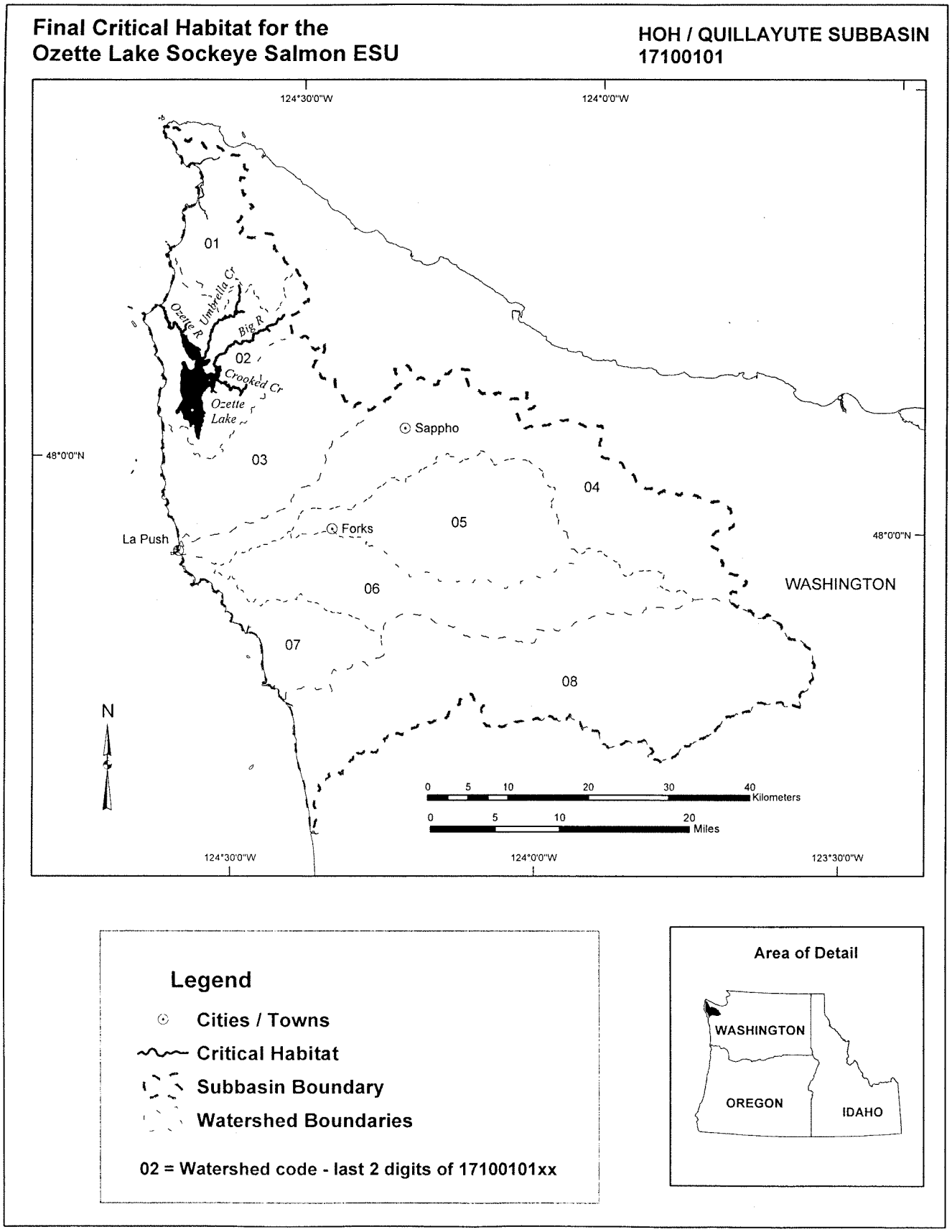
The lower Columbia River corridor is that segment from the mouth of the Columbia River at the Pacific Ocean upstream to a line connecting the confluences of the Sandy River (Oregon) and Washougal River (Washington).

(o) Ozette Lake Sockeye Salmon (Oncorhynchus nerka). Critical habitat is designated to include the areas defined in the following subbasin:

(1) Hoh/Quillayute Subbasin 17100101—(i) Ozette Lake Watershed 1710010102. Outlet(s) = Ozette River (Lat 48.1818, Long –124.7076) upstream to endpoints in: Big River (48.1844, –124.4987); Coal Creek (48.1631, –124.6612); East Branch Umbrella Creek (48.1835, –124.5659); North Fork Crooked Creek (48.1020, –124.5507); Ozette River (48.0370, –124.6218); South Fork Crooked Creek (48.0897, –124.5597); Umbrella Creek (48.2127, –124.5787); Unnamed (48.1771, –124.5967); Unnamed (48.1740, –124.6005); Unnamed (48.1649, –124.5208).

(ii) [Reserved]

(2) A map of critical habitat for the Ozette Lake sockeye salmon ESU follows:



BILLING CODE 3510–22–P

(p) *Upper Columbia River Steelhead (Oncorhynchus mykiss).* Critical habitat is designated to include the areas defined in the following subbasins:

(1) Chief Joseph Subbasin 17020005—*Upper Columbia/Swamp Creek Watershed 1702000505.* Outlet(s) = Columbia River (Lat 47.8077, Long –119.9754) upstream to endpoint(s) in: Columbia River (48.0828, –119.7062).

(2) Okanogan Subbasin 17020006—(i) *Upper Okanogan River Watershed 1702000601.* Outlet(s) = Okanogan River (Lat 48.7350, Long –119.4280) upstream to endpoint(s) in: Antoine Creek (48.7474, –119.3655); Ninemile Creek (48.9755, –119.3834); Okanogan River (49.0002, –119.4409); Similkameen River (48.9345, –119.4411); Tomasket Creek (48.9502, –119.3618); Whitestone Creek (48.7773, –119.4170).

(ii) *Okanogan River/Bonaparte Creek Watershed 1702000602.* Outlet(s) = Okanogan River (Lat 48.5612, Long –119.4863) upstream to endpoint(s) in: Aeneas Creek (48.6629, –119.4953); Bonaparte Creek (48.6824, –119.3947); Okanogan River (48.7350, –119.4280); Tunk Creek (48.5644, –119.4718).

(iii) *Salmon Creek Watershed 1702000603.* Outlet(s) = Salmon Creek (Lat 48.3593, Long –119.5805) upstream to endpoint(s) in: Salmon Creek (48.5374, –119.7465).

(iv) *Okanogan River/Omak Creek Watershed 1702000604.* Outlet(s) = Okanogan River (Lat 48.3593, Long –119.5805) upstream to endpoint(s) in: Okanogan River (48.5612, –119.4863); Omak Creek (48.3698, –119.4365); Unnamed (48.3802, –119.4915).

(v) *Lower Okanogan River Watershed 1702000605.* Outlet(s) = Okanogan River (Lat 48.0976, Long –119.7352) upstream to endpoint(s) in: Chiliwist Creek (48.2643, –119.7304); Loup Loup Creek (48.3080, –119.7128); Okanogan River (48.3593, –119.5805).

(3) Similkameen Subbasin 17020007—*Lower Similkameen River Watershed 1702000704.* Outlet(s) = Similkameen River (Lat 48.9345, Long –119.4411) upstream to endpoint(s) in: Similkameen River (48.9657, –119.5009).

(4) Methow Subbasin 17020008—(i) *Lost River Watershed 1702000801.* Outlet(s) = Lost River Gorge (Lat 48.6501, Long –120.5103) upstream to endpoint(s) in: Lost River Gorge (48.7324, –120.4475).

(ii) *Upper Methow River Watershed 1702000802.* Outlet(s) = Methow River (Lat 48.6015, Long –120.4376) upstream to endpoint(s) in: Early Winters Creek (48.5889, –120.4711); Methow River (48.6597, –120.5368).

(iii) *Upper Chewuch River Watershed 1702000803.* Outlet(s) = Chewuch River (Lat 48.7501, Long –120.1356) upstream to endpoint(s) in: Andrews Creek (48.7855, –120.1087); Chewuch River (48.8614, –120.0288); Lake Creek (48.8258, –120.1996).

(iv) *Lower Chewuch River Watershed 1702000804.* Outlet(s) = Chewuch River (Lat 48.4751, Long –120.1790) upstream to endpoint(s) in: Boulder Creek (48.5804, –120.1521); Chewuch River (48.7501, –120.1356); Eightmile Creek (48.6167, –120.1975); Twentymile Creek (48.7025, –120.1087).

(v) *Twisp River Watershed 1702000805.* Outlet(s) = Twisp River (Lat 48.3682, Long –120.1176) upstream to endpoint(s) in: Buttermilk Creek 48.3414, –120.3034); Eagle Creek (48.3579, –120.3953); Little Bridge Creek (48.4289, –120.3552); South Creek (48.4329, –120.5434); Twisp River (48.4545, –120.5621); War Creek (48.3626, –120.4106).

(vi) *Middle Methow River Watershed 1702000806.* Outlet(s) = Methow River (Lat 48.2495, Long –120.1156) upstream to endpoint(s) in: Goat Creek (48.6101, –120.3692); Hancock Creek (48.5338, –120.3310); Little Boulder Creek (48.5569, –120.3847); Methow River (48.6015, –120.4376); North Fork Beaver Creek (48.4340, –120.0228); Wolf Creek (48.4777, –120.2844).

(vii) *Lower Methow River Watershed 1702000807.* Outlet(s) = Methow River (Lat 48.0502, Long –119.8942) upstream to endpoint(s) in: Black Canyon Creek (48.0721, –120.0168); Foggy Dew Creek (48.1869, –120.2344); Gold Creek (48.2113, –120.2021); Libby Creek (48.2548, –120.1653); Methow River (48.2495, –120.1156); South Fork Gold Creek (48.1468, –120.1650).

(5) Upper Columbia/Entiat Subbasin 17020010—(i) *Entiat River Watershed 1702001001.* Outlet(s) = Entiat River (Lat 47.6585, Long –120.2194) upstream to endpoint(s) in: Entiat River (47.9855, –120.5749); Mad River (47.8254, –120.5301); Potato Creek (47.7944, –120.3889); Roaring Creek (47.6795, –120.4163); Stormy Creek (47.8246, –120.4125); Tamarack Creek (47.6699, –120.4041); Tillicum Creek (47.7295, –120.4303).

(ii) *Lake Entiat Watershed 1702001002.* Outlet(s) = Columbia River (Lat 47.3539, Long –120.1105) upstream to endpoint(s) in: Columbia River (47.8077, –119.9754).

(iii) *Columbia River/Lynch Coulee Watershed 1702001003.* Outlet(s) = Columbia River (Lat 47.0494, Long –120.0241) upstream to endpoint(s) in: Brushy Creek (47.1316, –120.1493); Colockum Creek (47.2919, –120.1592); Columbia River (47.3539, –120.1105); Lynch Coulee (47.2320, –119.9943); Quilomene Creek (47.1105, –120.0379); Tarpiscan Creek (47.2264, –120.0922); Tekison Creek (47.1816, –120.0206).

(iv) *Columbia River/Sand Hollow Watershed 1702001004.* Outlet(s) = Columbia River (Lat 46.8159, Long –119.9255) upstream to endpoint(s) in: Columbia River (47.0494, –120.0241); Sand Hollow (46.9296, –119.9365); Whiskey Dick Creek (47.0302, –120.0331).

(6) Wenatchee Subbasin 17020011—(i) *White River Watershed 1702001101.* Outlet(s) = White River (Lat 47.8088, Long –120.7159) upstream to endpoint(s) in: Little Wenatchee River (47.8526, –120.9541); Napeequa River (47.9359, –120.8712); Panther Creek (47.9375, –120.9408); White River (47.9535, –120.9380).

(ii) *Chiwawa River Watershed 1702001102.* Outlet(s) = Chiwawa River (Lat 47.7880, Long –120.6589) upstream to endpoint(s) in: Alder Creek (47.8565, –120.6564); Alpine Creek (48.0823, –120.8683); Buck Creek (48.1045, –120.8815); Chikamin Creek (47.9111, –120.7165); Chiwawa River (48.1140, –120.8775); Clear Creek (47.8016, –120.6210); James Creek (48.0748, –120.8598); Phelps Creek (48.0743, –120.8484); Unnamed (47.9727, –120.7878).

(iii) *Nason/Tumwater Watershed 1702001103.* Outlet(s) = Wenatchee River (Lat 47.5801, Long –120.6660) upstream to endpoint(s) in: Beaver Creek (47.7649, –120.6553); Chiwaukum Creek (47.7038, –120.7788); Coulter Creek (47.7594, –120.7969); Gill Creek (47.7716, –120.8237); Kahler Creek (47.7691, –120.7558); Mill Creek (47.7744, –121.0117); Nason Creek (47.7825, –121.0464); Roaring Creek (47.7572, –120.8203); Skinney Creek (47.7247, –120.7370).

(iv) *Icicle/Chumstick Watershed 1702001104.* Outlet(s) = Wenatchee River (Lat 47.5575, Long –120.5729) upstream to endpoint(s) in: Chumstick Creek (47.6785, –120.6385); Derby Canyon (47.6036, –120.5623); Eagle Creek (47.6342, –120.6261); Icicle Creek (47.6460, –120.9833); Wenatchee River (47.5801, –120.6660).

(v) *Lower Wenatchee River Watershed 1702001105.* Outlet(s) = Wenatchee River (Lat 47.4553, Long –120.3185) upstream to endpoint(s) in: Brender Creek (47.5214, –120.4844); Ingalls Creek (47.4612, –120.6776); King Canyon (47.3522, –120.4423); Mill Creek (47.5139, –120.6724); Mission Creek (47.3289, –120.4771); Peshastin Creek (47.4380, –120.6590); Sand Creek (47.4321, –120.5307); Wenatchee River (47.5575, –120.5729).

(7) Lower Crab Subbasin 17020015—*Lower Crab Creek Watershed 1702001509.* Outlet(s) = Lower Crab

Creek (Lat 46.8159, Long –119.9255) upstream to endpoint(s) in: Hayes Creek (46.8821, –119.2703); Lower Crab Creek (46.9028, –119.2785); Unnamed (46.8157, –119.4326); Unnamed (46.8243, –119.4429); Unnamed (46.8353, –119.3750); Unnamed (46.8658, –119.3757); Unnamed (46.8770, –119.5863).

(8) Upper Columbia/Priest Rapids Subbasin 17020016—(i) *Yakima River/Hanson Creek Watershed 1702001604.* Outlet(s) = Columbia River (Lat 46.7159, Long –119.5294) upstream to endpoint(s) in: Columbia River (46.8159, –119.9255).

(ii) *Middle Columbia/Priest Rapids Watershed 1702001605.* Outlet(s) = Columbia River (Lat 46.5091, Long –119.2661) upstream to endpoint(s) in: Columbia River (46.7159, –119.5294).

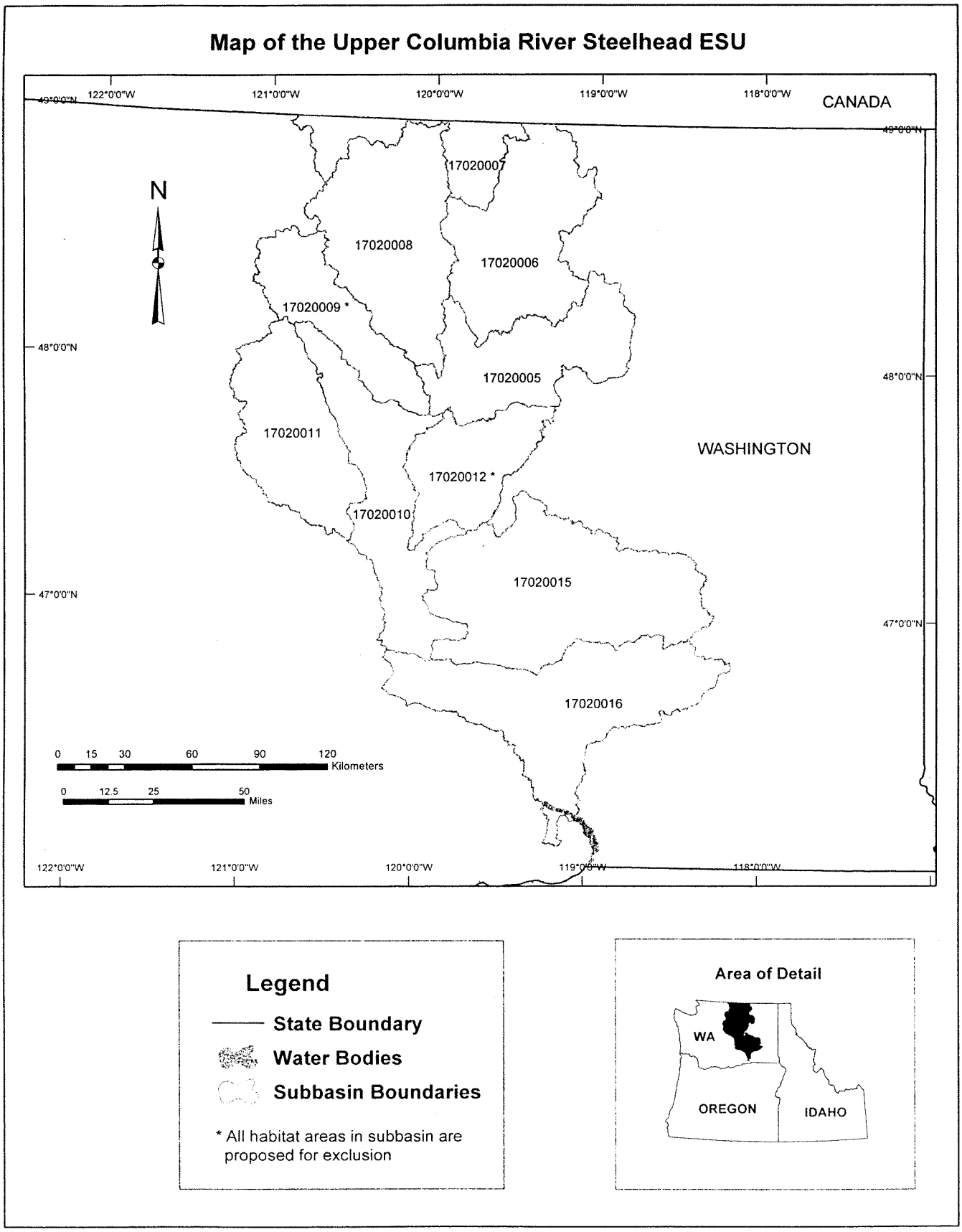
(iii) *Columbia River/Zintel Canyon Watershed 1702001606.* Outlet(s) = Columbia River (Lat 46.2534, Long –119.2268) upstream to endpoint(s) in: Columbia River (46.5091, –119.2661).

(9) Columbia River Corridor—*Columbia River Corridor*

Outlet(s) = Columbia River (Lat 46.2485, Long –124.0782) upstream to endpoint(s) in: Columbia River (46.2534, –119.2268).

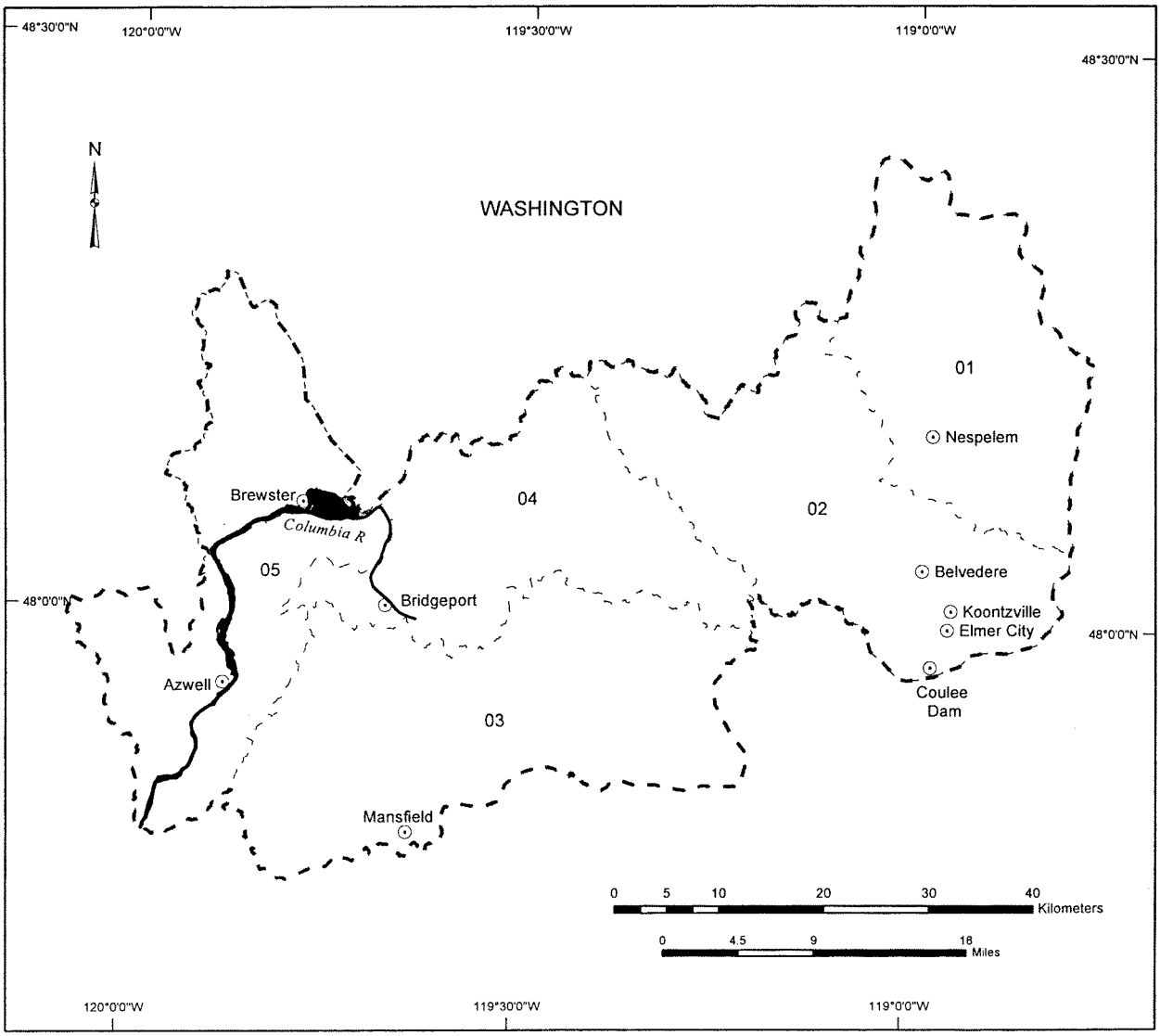
(10) Maps of critical habitat for the Upper Columbia River Steelhead ESU follow:

BILLING CODE 3510–22–P


Map of the Upper Columbia River Steelhead ESU
CANADA
WASHINGTON
N
17020007
17020008
17020006
17020009 *
17020005
17020011
17020012 *
17020010
17020015
17020016
122°0'0"W
121°0'0"W
120°0'0"W
119°0'0"W
118°0'0"W
49°0'0"N
48°0'0"N
47°0'0"N
0 15 30 60 90 120 Kilometers
0 12.5 25 50 Miles
Legend
State Boundary
Water Bodies
Subbasin Boundaries
* All habitat areas in subbasin are proposed for exclusion
Area of Detail
WA
OREGON
IDAHO

Final Critical Habitat for the Upper Columbia River Steelhead ESU

CHIEF JOSEPH SUBBASIN 17020005

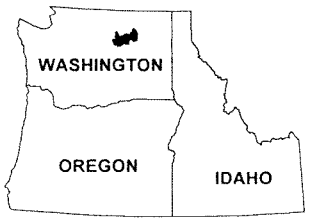


Legend

- Cities / Towns
- Critical Habitat
- Subbasin Boundary
- Watershed Boundaries

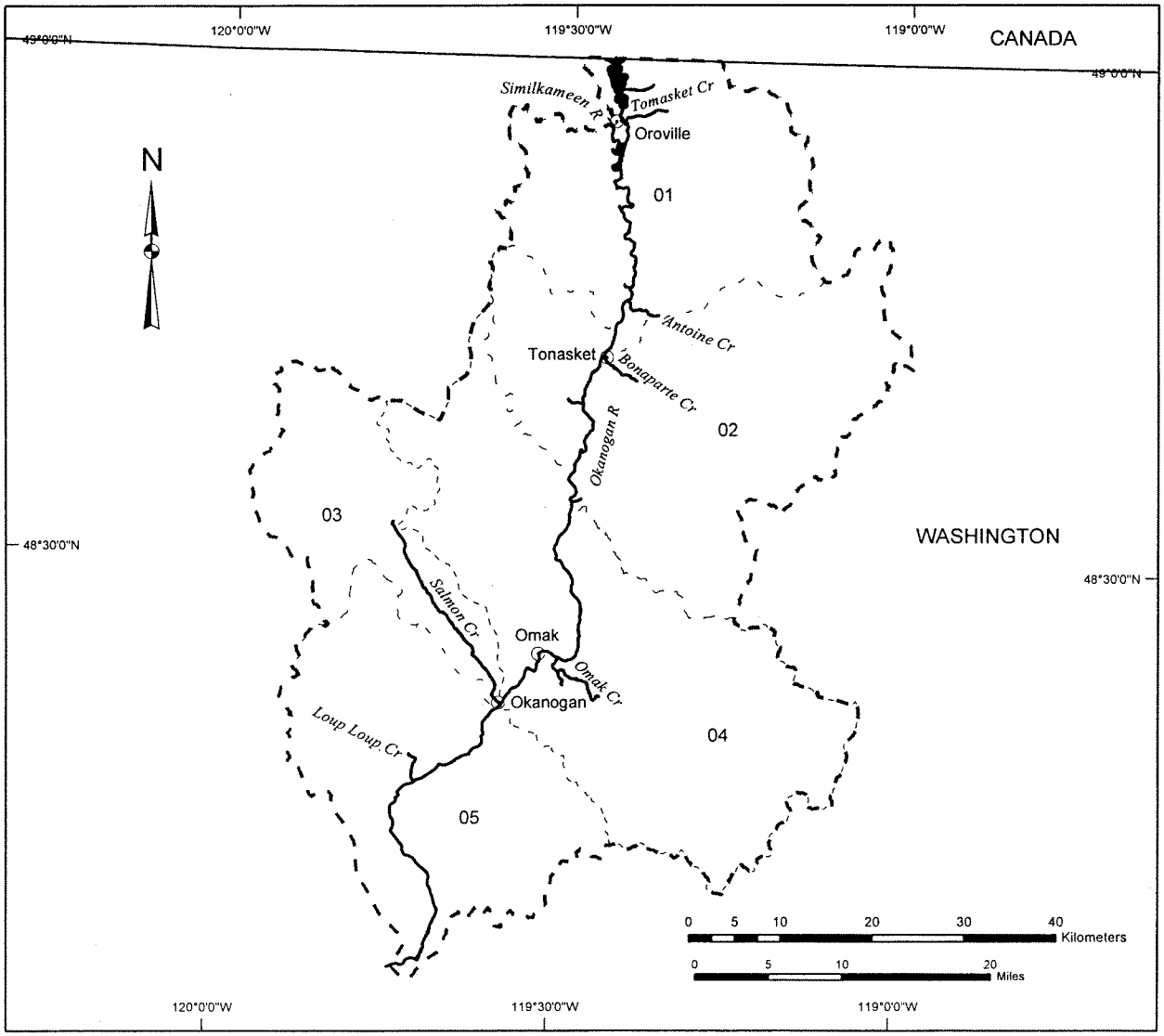
01 - 05 = Watershed code - last 2 digits of 17020005xx

Area of Detail



Final Critical Habitat for the Upper Columbia River Steelhead ESU

OKANOGAN SUBBASIN 17020006

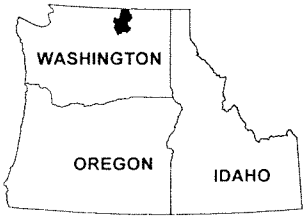


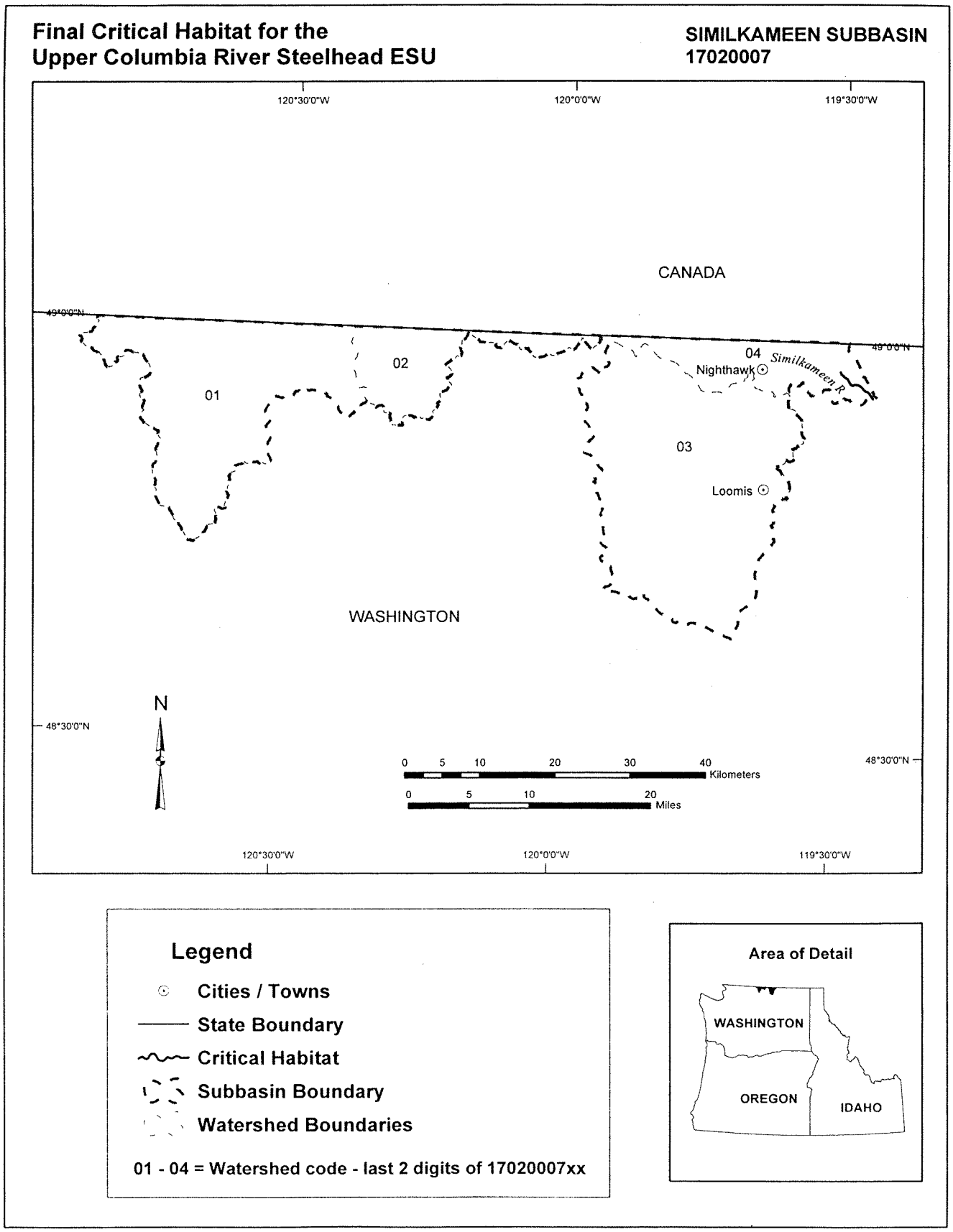
Legend

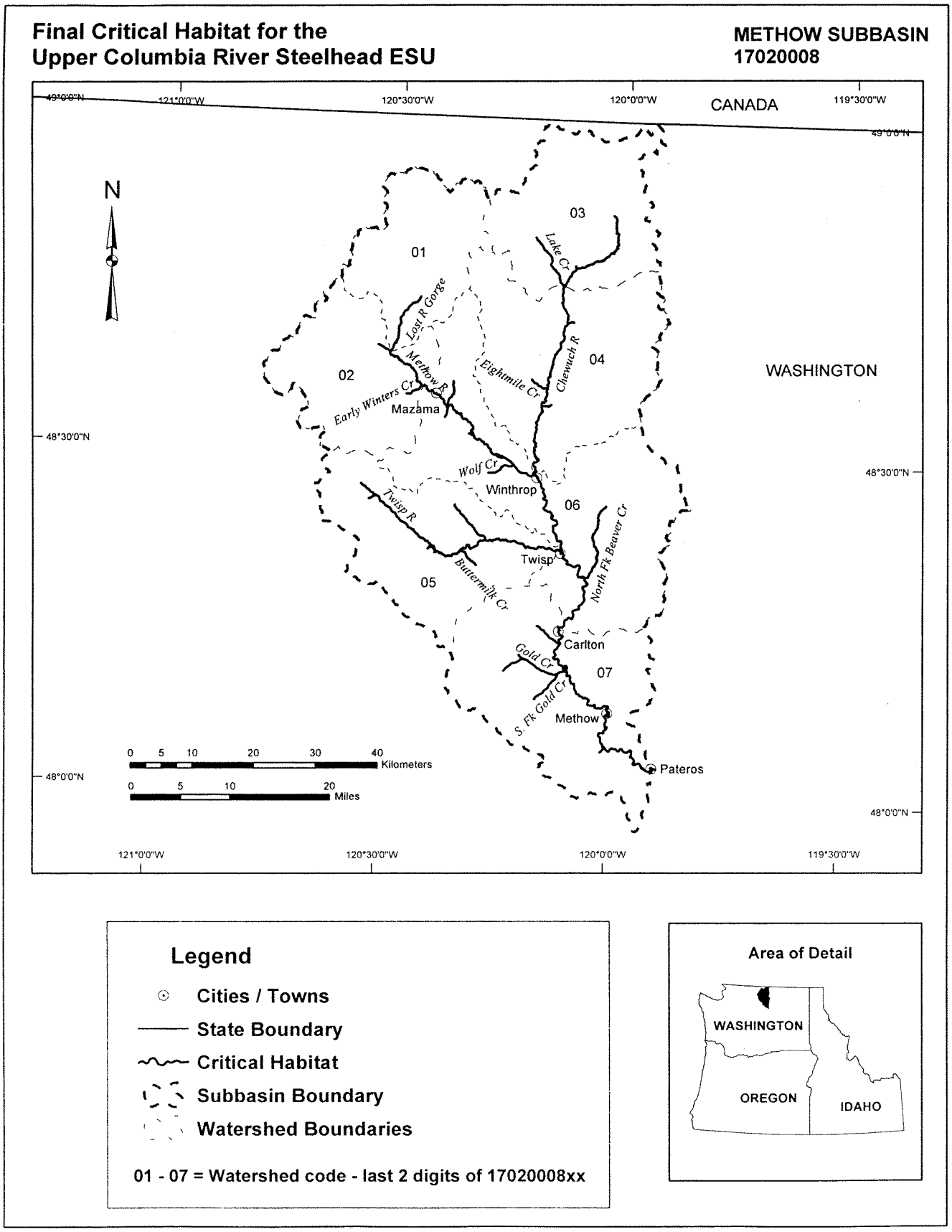
- Cities / Towns
- State Boundary
- Critical Habitat
- Subbasin Boundary
- Watershed Boundaries

01 - 05 = Watershed code - last 2 digits of 17020006xx

Area of Detail

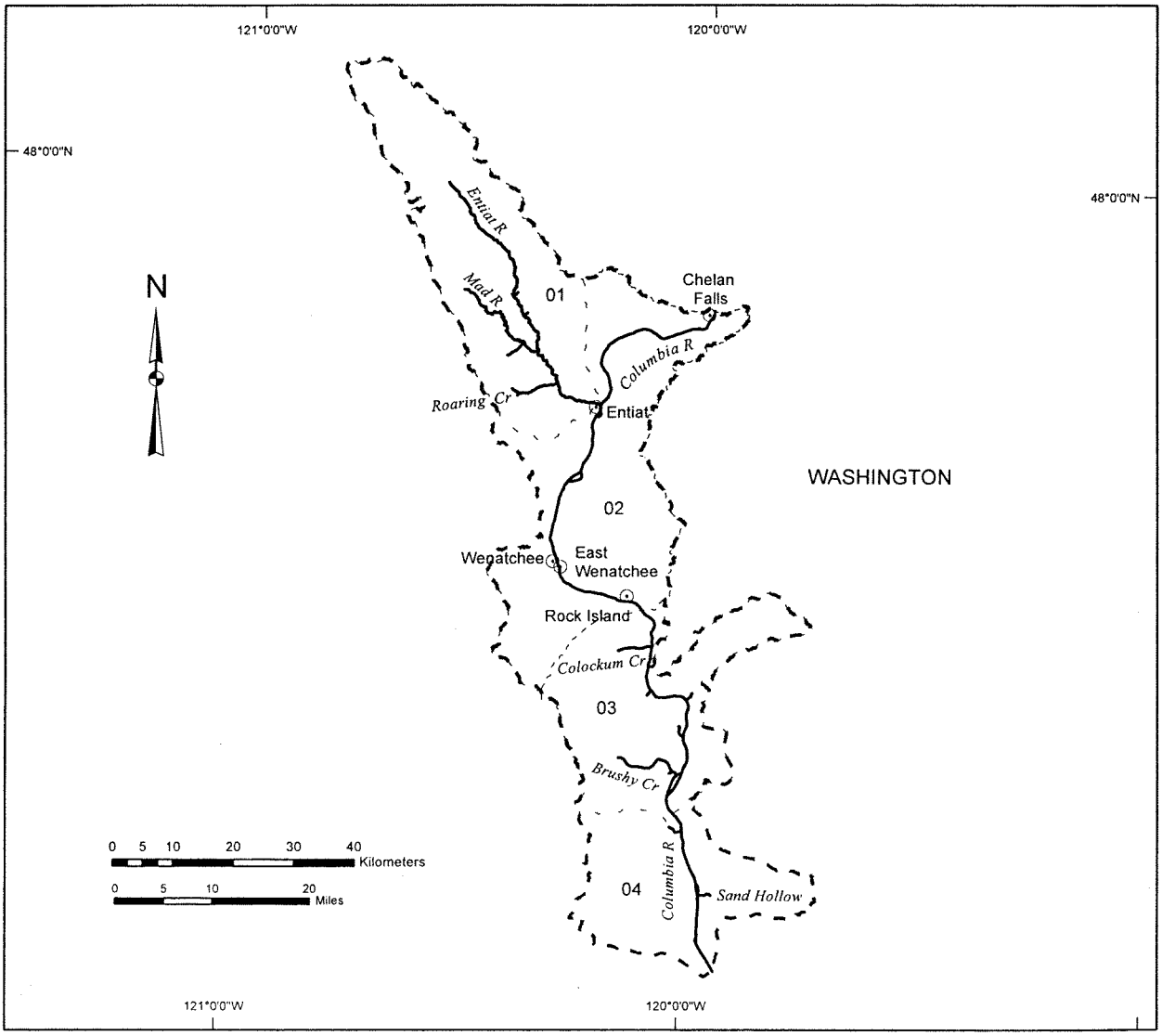



Final Critical Habitat for the
Upper Columbia River Steelhead ESU
SIMILKAMEEN SUBBASIN
17020007
120°30'0"W
120°0'0"W
119°30'0"W
CANADA
49°0'0"N
01
02
03
04
Similkameen R.
Nighthawk
Loomis
WASHINGTON
N
48°30'0"N
0 5 10 20 30 40 Kilometers
0 5 10 20 Miles
Legend
Cities / Towns
State Boundary
Critical Habitat
Subbasin Boundary
Watershed Boundaries
01 - 04 = Watershed code - last 2 digits of 17020007xx
Area of Detail
WASHINGTON
OREGON
IDAHO


Final Critical Habitat for the
Upper Columbia River Steelhead ESU
METHOW SUBBASIN
17020008
CANADA
WASHINGTON
N
01
02
03
04
05
06
07
Lake Cr
Lost R Gorge
Methow R
Early Winters Cr
Mazama
Eightmile Cr
Chewuch R
Wolf Cr
Winthrop
Twisp R
Twisp
Buttermilk Cr
North Fk Beaver Cr
Carlton
Gold Cr
S. Fk Gold Cr
Methow
Pateros
0 5 10 20 30 40 Kilometers
0 5 10 20 Miles
49°0'0"N
48°30'0"N
48°0'0"N
121°0'0"W
120°30'0"W
120°0'0"W
119°30'0"W
Legend
Cities / Towns
State Boundary
Critical Habitat
Subbasin Boundary
Watershed Boundaries
01 - 07 = Watershed code - last 2 digits of 17020008xx
Area of Detail
WASHINGTON
OREGON
IDAHO

Final Critical Habitat for the Upper Columbia River Steelhead ESU

UPPER COLUMBIA / ENTIAT SUBBASIN 17020010

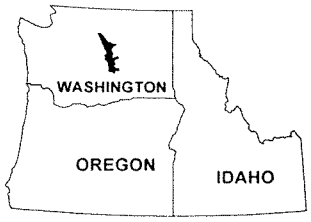


Legend

- Cities / Towns
- Critical Habitat
- Subbasin Boundary
- Watershed Boundaries

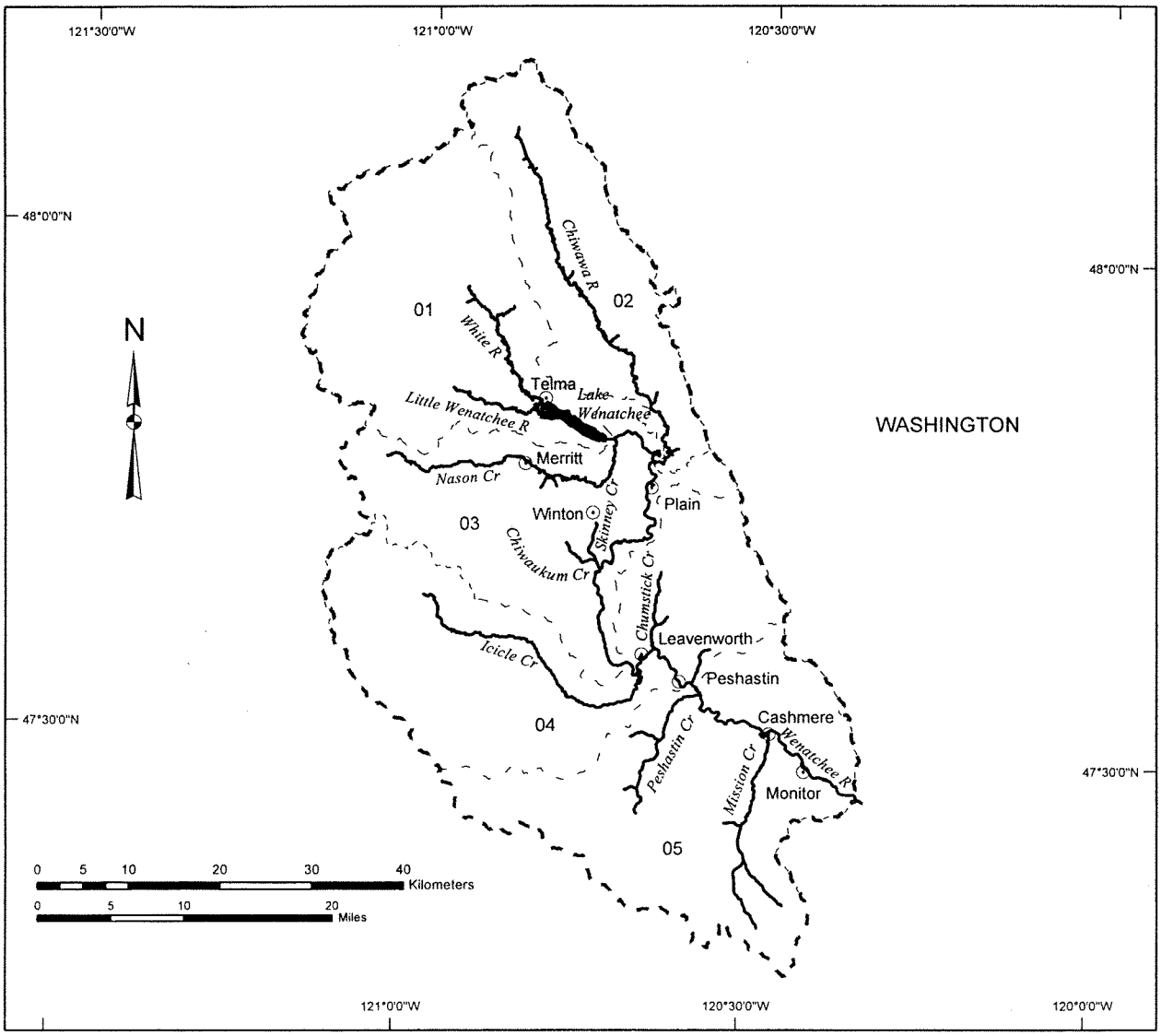
01 - 04 = Watershed code - last 2 digits of 17020010xx

Area of Detail



Final Critical Habitat for the Upper Columbia River Steelhead ESU

WENATCHEE SUBBASIN 17020011

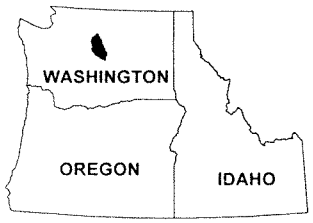


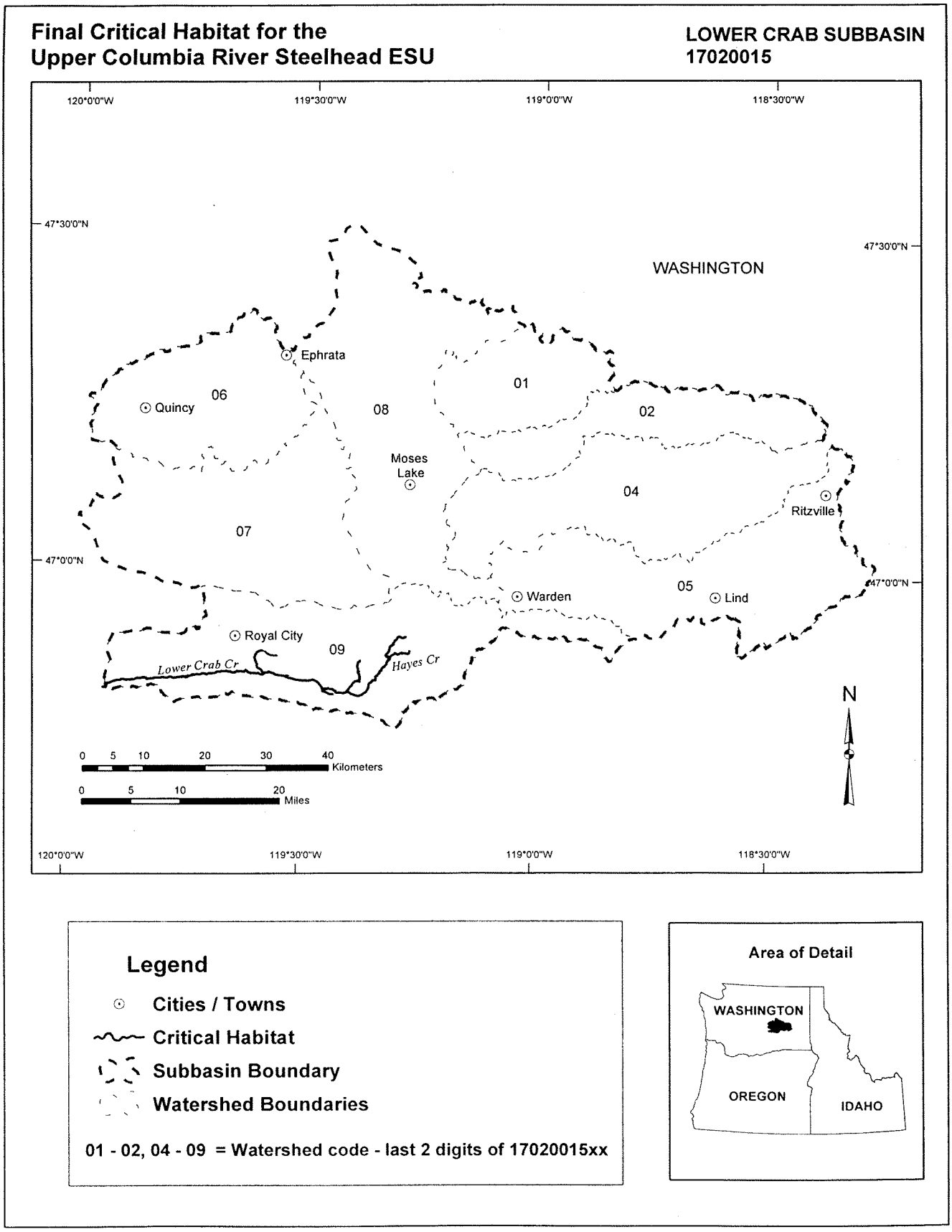
Legend

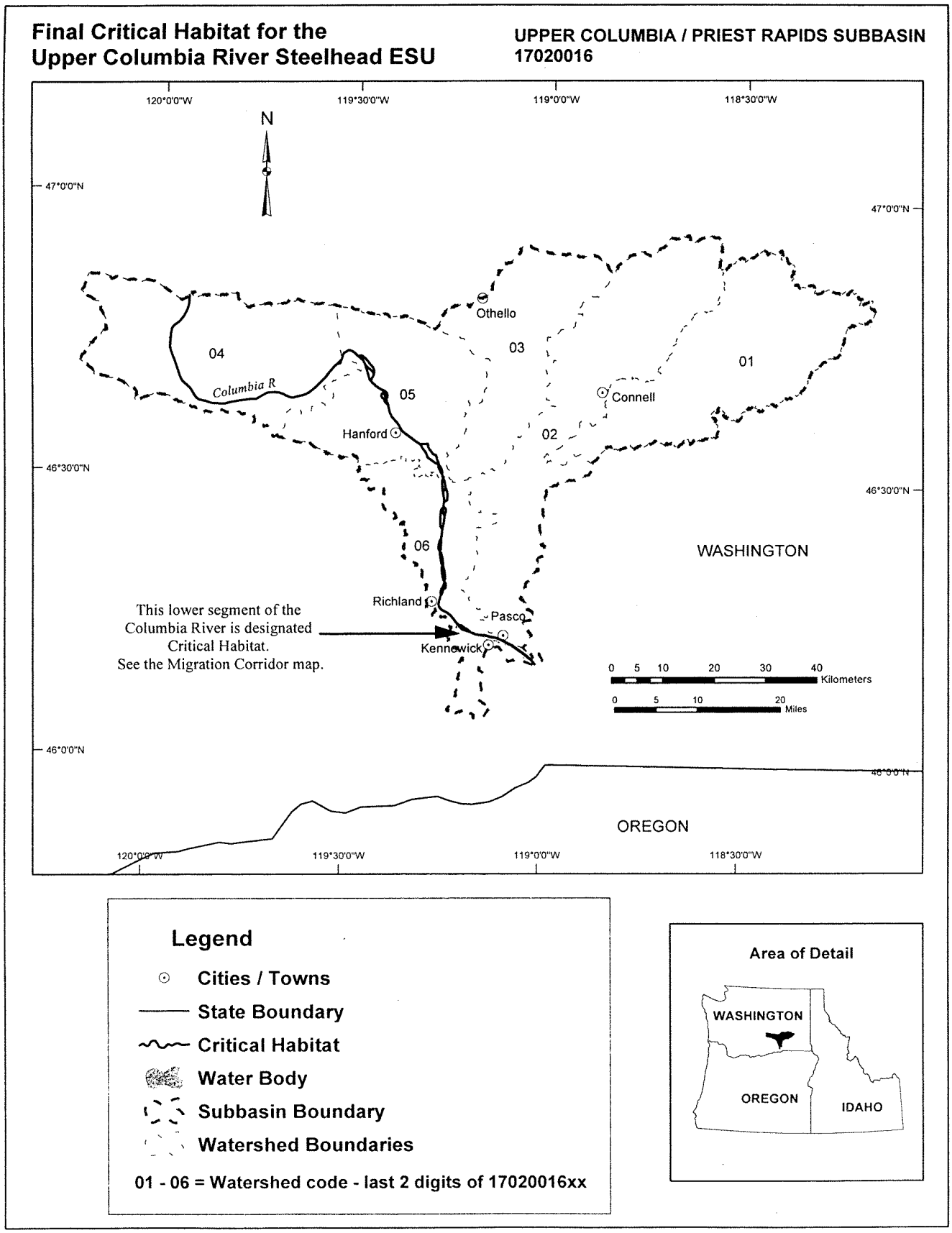
- Cities / Towns
- Critical Habitat
- Subbasin Boundary
- Watershed Boundaries

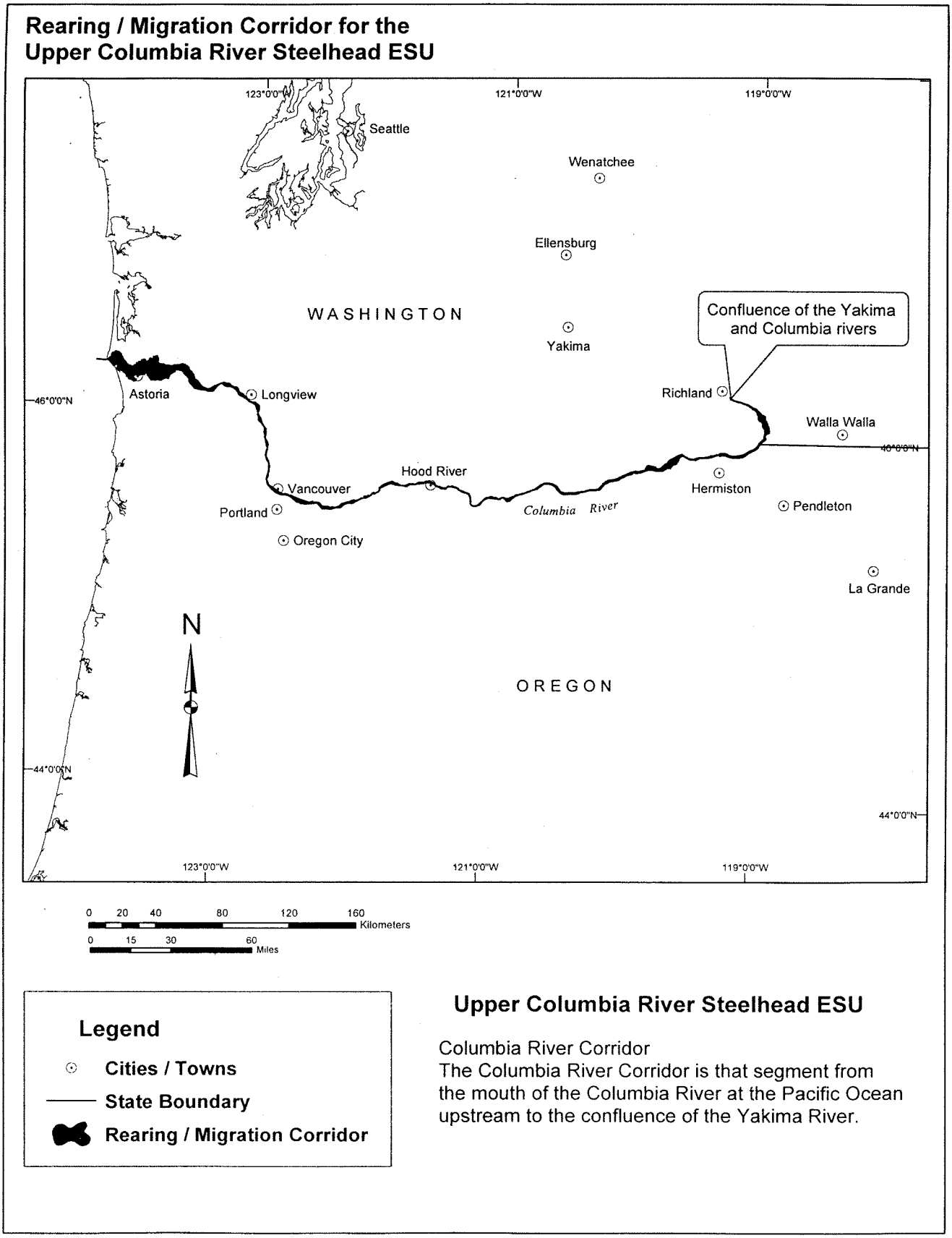
01 - 05 = Watershed code - last 2 digits of 17020011xx

Area of Detail




Final Critical Habitat for the
Upper Columbia River Steelhead ESU
LOWER CRAB SUBBASIN
17020015
120°0'0"W
119°30'0"W
119°0'0"W
118°30'0"W
47°30'0"N
47°0'0"N
WASHINGTON
Ephrata
Quincy
Moses Lake
Ritzville
Warden
Lind
Royal City
Lower Crab Cr
Hayes Cr
01
02
04
05
06
07
08
09
N
0 5 10 20 30 40 Kilometers
0 5 10 20 Miles
Legend
Cities / Towns
Critical Habitat
Subbasin Boundary
Watershed Boundaries
01 - 02, 04 - 09 = Watershed code - last 2 digits of 17020015xx
Area of Detail
WASHINGTON
OREGON
IDAHO


Final Critical Habitat for the
Upper Columbia River Steelhead ESU
UPPER COLUMBIA / PRIEST RAPIDS SUBBASIN
17020016
120°0'0"W
119°30'0"W
119°0'0"W
118°30'0"W
N
47°0'0"N
46°30'0"N
46°0'0"N
Othello
03
04
01
Columbia R
05
Connell
Hanford
02
06
WASHINGTON
Richland
Pasco
Kennewick
This lower segment of the
Columbia River is designated
Critical Habitat.
See the Migration Corridor map.
0 5 10 20 30 40 Kilometers
0 5 10 20 Miles
OREGON
Legend
Cities / Towns
State Boundary
Critical Habitat
Water Body
Subbasin Boundary
Watershed Boundaries
01 - 06 = Watershed code - last 2 digits of 17020016xx
Area of Detail
WASHINGTON
OREGON
IDAHO



BILLING CODE 3510–22–C

(q) *Snake River Basin Steelhead (Oncorhynchus mykiss).* Critical habitat is designated to include the areas defined in the following subbasins:

(1) Hells Canyon Subbasin 17060101—(i) *Snake River/Granite Creek Watershed 1706010101.* Outlet(s) = Snake River (Lat 45.467, Long –116.554) upstream to endpoint(s) in: Battle Creek (45.307, –116.697); Bernard Creek (45.387, –116.569); Brush Creek (45.275, –116.657); Bull Creek (45.329, –116.673); Deep Creek (45.237, –116.674); Devils Farm Creek (45.301, –116.611); Granite Creek (45.277, –116.630); Hells Canyon (45.254, –116.698); Lightning Creek (45.440, –116.500); Little Granite Creek (45.335, –116.636); North Fork Battle Creek (45.316, –116.687); Rattlesnake Creek (45.457, –116.610); Rough Creek (45.397, –116.638); Rush Creek (45.468, –116.596); Saddle Creek (45.375, –116.721); Sheep Creek (45.406, –116.523); Sluice Creek (45.445, –116.622); Snake River (45.243, –116.700); Stud Creek (45.267, –116.693); Three Creek (45.353, –116.610); Unnamed (45.468, –116.610); Unnamed (45.4787, –116.4799); Wild Sheep Creek (45.326, –116.676).

(ii) *Snake River/Getta Creek Watershed 1706010102.* Outlet(s) = Snake River (Lat 45.747, Long –116.543) upstream to endpoint(s) in: Big Canyon Creek (45.689, –116.467); Corral Creek (45.588, –116.433); Cove Creek (45.553, –116.574); Durham Creek (45.595, –116.472); Getta Creek (45.736, –116.421); Highrange Creek (45.738, –116.518); Indian Creek (45.744, –116.449); Jones Creek (45.703, –116.526); Kirby Creek (45.575, –116.454); Kirkwood Creek (45.548, –116.457); Klopton Creek (45.627, –116.434); Kurry Creek (45.656, –116.426); Lookout Creek (45.713, –116.542); Lost Valley Creek (45.550, –116.482); Pleasant Valley Creek (45.647, –116.492); Salt Creek (45.576, –116.554); SCreek (45.491, –116.574); Snake River (45.468, –116.554); Somers Creek (45.645, –116.553); Temperance Creek (45.537, –116.571); Tryon Creek (45.694, –116.540); Two Corral Creek (45.561, –116.526); Unnamed (45.5817, –116.5098); West Creek (45.664, –116.453); West Fork West Creek (45.669, –116.463).

(iii) *Snake River/Divide Creek Watershed 1706010104.* Outlet(s) = Snake River (Lat 45.857 Long –116.794) upstream to endpoint(s) in: Divide Creek (45.859, –116.741); Dry Creek (45.842, –116.598); Snake River (45.747, –116.543); Unnamed (45.7599, –116.6456); Wolf Creek (45.776, –116.567).

(2) Imnaha River Subbasin 17060102—(i) *Upper Imnaha River Watershed 1706010201.* Outlet(s) = Imnaha River (Lat 45.232, Long –116.844) upstream to endpoint(s) in: Crazyman Creek (45.190, –116.811); Dry Creek (45.123, –116.867); Gumboot Creek (45.147, –116.968); Mahogany Creek (45.201, –116.905); North Fork Dry Creek (45.143, –116.850); North Fork Gumboot Creek (45.184, –116.928); North Fork Imnaha River (45.118, –117.129); Skookum Creek (45.117, –116.938); South Fork Imnaha River (45.111, –117.230); Unnamed (45.188, –116.923); Unnamed (45.208, –116.890).

(ii) *Middle Imnaha River Watershed 1706010202.* Outlet(s) = Imnaha River (Lat 45.557, Long –116.834) upstream to endpoint(s) in: Freezeout Creek (45.352, –116.761); Grouse Creek (45.179, –116.976); Imnaha River (45.232, –116.844); Morgan Creek (45.261, –116.948); Rich Creek (45.243, –116.869); Road Creek (45.279, –116.932); Shadow Canyon (45.295, –116.860); Summit Creek (45.228, –116.793); Unnamed (45.203, –116.978); Unnamed (45.203, –116.943); Unnamed (45.250, –116.923).

(iii) *Big Sheep Creek Watershed 1706010203.* Outlet(s) = Big Sheep Creek (Lat 45.520, Long –116.859) upstream to endpoint(s) in: Big Sheep Creek (45.171, –117.086); Carrol Creek (45.240, –117.063); Griffith Creek (45.273, –117.061); Lick Creek (45.133, –117.056); Marr Creek (45.299, –116.949); North Fork Carrol Creek (45.295, –116.993); South Fork Squaw Creek (45.354, –116.872); Tyee Creek (45.188, –116.991); Unnamed (45.164, –117.023); Unnamed (45.239, –117.045); Unnamed (45.297, –116.940).

(iv) *Little Sheep Creek Watershed 1706010204.* Outlet(s) = Big Sheep Creek (Lat 45.557, Long –116.834) upstream to endpoint(s) in: Bear Gulch (45.379, –116.955); Big Sheep Creek (45.520, –116.859); Camp Creek (45.544, –116.959); Canal Creek (45.256, –117.103); Devils Gulch (45.428, –116.962); Downey Gulch (45.405, –116.958); Ferguson Creek (45.267, –117.106); Lightning Creek (45.475, –117.020); Little Sheep Creek (45.236, –117.083); McCully Creek (45.295, –117.107); Redmont Creek (45.250, –117.099); South Fork Lightning Creek (45.473, –117.019); Summit Creek (45.390, –116.930); Threebuck Creek (45.395, –117.012); Trail Creek (45.563, –116.898).

(v) *Lower Imnaha River Watershed 1706010205.* Outlet(s) = Imnaha River (Lat 45.817, Long –116.764) upstream to endpoint(s) in: Corral Creek (45.708, –116.815); Cottonwood Creek (45.659, –116.865); Cow Creek (45.573, –116.628); Dodson Fork (45.725, –116.821); East Fork Fence Creek (45.652, –116.855); Fence Creek (45.655, –116.875); Horse Creek (45.421, –116.725); Imnaha River (45.557, –116.834); Lightning Creek (45.447, –116.682); Prong (45.589, –116.592); Pumpkin Creek (45.517, –116.758); Sleepy Creek (45.604, –116.666); Stubblefield Fork (45.711, –116.815); Tulley Creek (45.743, –116.766).

(3) Lower Snake/Asotin Subbasin 17060103—(i) *Snake River/Rogersburg Watershed 1706010301.* Outlet(s) = Snake River (Lat 46.080, Long –116.978) upstream to endpoint(s) in: Cache Creek (45.976, –116.928); Cave Gulch (46.023, –116.840); Cook Creek (45.901, –116.865); Corral Creek (46.055, –116.875); Cottonwood Creek (45.944, –116.860); Garden Creek (45.972, –116.903); Snake River (45.857, –116.794).

(ii) *Asotin River Watershed 1706010302.* Outlet(s) = Asotin Creek (Lat 46.345, Long –117.053) upstream to endpoint(s) in: Ayers Gulch (46.278, –117.094); Charley Creek (46.271, –117.460); Coombs Canyon (46.128, –117.276); George Creek (46.144, –117.303); Hefflefinger Gulch (46.151, –117.231); Huber Gulch (46.155, –117.188); Kelly Creek (46.251, –117.114); Lick Creek (46.260, –117.358); Middle Branch North Fork Asotin Creek (46.195, –117.439); Nims Gulch (46.178, –117.121); North Fork Asotin Creek (46.207, –117.478); Pintler Creek (46.194, –117.153); South Fork Asotin Creek (46.174, –117.341); South Fork North Fork Asotin Creek (46.192, –117.425).

(iii) *Snake River/Captain John Creek Watershed 1706010303.* Outlet(s) = Snake River (Lat 46.428, Long –117.038) upstream to endpoint(s) in: Captain John Creek (46.145, –116.821); Couse Creek (46.157, –117.032); Edeburn Gulch (46.142, –117.008); Mill Creek (46.157, –117.078); Redbird Creek (46.220, –116.898); Snake River (46.080, –116.978); South Fork Captain John Creek (46.123, –116.864); Tammany Creek (46.362, –117.052); Tenmile Canyon (46.284, –116.976); Tenmile Creek (46.123, –117.086); Unnamed (46.119, –117.100); Unnamed (46.124, –117.111).

(4) Upper Grande Ronde River Subbasin 17060104—(i) *Upper Grande Ronde River Watershed 1706010401.* Outlet(s) = Grande Ronde River (Lat 45.264, Long –118.376) upstream to endpoint(s) in: Chicken Creek (44.987, –118.378); Clear Creek (45.014, –118.329); Dry Creek (45.052, –118.380); East Fork Grande Ronde River (45.060, –118.237); East Sheep Creek (44.987, –118.425); Fly Creek (45.125, –118.596); Grande Ronde River (44.998, –118.273); Limber Jim Creek (45.107, –118.270); Little Clear Creek (45.038, –118.300); Little Fly Creek (45.062, –118.504); Lookout Creek (45.065, –118.543); Muir

Creek (45.066, –118.297); North Fork Limber Jim Creek (45.125, –118.308); Sheep Creek (45.016, –118.507); South Fork Limber Jim Creek (45.088, –118.304); Squaw Creek (45.103, –118.554); Umapine Creek (45.116, –118.571); Unnamed (45.042, –118.269); Unnamed (45.045, –118.417); West Chicken Creek (45.025, –118.404); Winter Canyon (45.215, –118.361).

(ii) *Meadow Creek Watershed 1706010402.* Outlet(s) = Meadow Creek (Lat 45.264, Long –118.376) upstream to endpoint(s) in: Battle Creek (45.216, –118.507); Bear Creek (45.210, –118.577); Burnt Corral Creek (45.159, –118.524); Dark Canyon (45.382, –118.394); East Burnt Corral Creek (45.173, –118.498); Ensign Creek (45.361, –118.554); Little Dark Canyon (45.322, –118.418); Marley Creek (45.177, –118.476); McCoy Creek (45.322, –118.628); McIntyre Creek (45.345, –118.459); Meadow Creek (45.286, –118.716); Peet Creek (45.233, –118.611); Smith Creek (45.295, –118.594); Sullivan Gulch (45.200, –118.515); Syrup Creek (45.296, –118.543); Tybow Canyon (45.214, –118.467); Unnamed (45.206, –118.552); Unnamed (45.275, –118.695); Unnamed (45.295, –118.718); Unnamed (45.330, –118.551); Waucup Creek (45.243, –118.660).

(iii) *Grande Ronde River/Beaver Creek Watershed 1706010403.* Outlet(s) = Grande Ronde River (Lat 45.347, Long –118.221) upstream to endpoint(s) in: Bear Creek (45.283, –118.270); Beaver Creek (45.146, –118.206); Dry Beaver Creek (45.168, –118.316); East Fork Rock Creek (45.166, –118.111); Grande Ronde River (45.264, –118.376); Graves Creek (45.245, –118.161); Hoodoo Creek (45.154, –118.259); Jordan Creek (45.162, –118.187); Little Beaver Creek (45.185, –118.333); Little Whiskey Creek (45.209, –118.178); Rock Creek (45.172, –118.139); Sheep Creek (45.281, –118.130); South Fork Spring Creek (45.346, –118.363); Spring Creek (45.396, –118.372); Unnamed (45.167, –118.144); Unnamed (45.227, –118.262); Unnamed (45.231, –118.279); Unnamed (45.232, –118.091); Unnamed (45.240, –118.257); Watermelon Creek (45.195, –118.277); Whiskey Creek (45.198, –118.181).

(iv) *Grande Ronde River/Five Points Creek Watershed 1706010404.* Outlet(s) = Grande Ronde River (Lat 45.408, Long –117.930) upstream to endpoint(s) in: California Gulch (45.406, –118.335); Conley Creek (45.406, –118.084); Dobbin Ditch (45.377, –118.017); Dry Creek (45.426, –118.379); Fiddlers Hell (45.443, –118.145); Five Points Creek (45.482, –118.143); Grande Ronde River (45.347, –118.221); Little John Day Creek (45.430, –118.192); Middle Fork Five Points Creek (45.485, –118.129); Mt Emily Creek (45.465, –118.125); Pelican Creek (45.438, –118.318); Tie Creek (45.420, –118.129); Unnamed (45.385, –118.043); Unnamed (45.423, –118.243).

(v) *Catherine Creek Watershed 1706010405.* Outlet(s) = Catherine Creek (Lat 45.219, Long –117.915) upstream to endpoint(s) in: Buck Creek (45.132, –117.606); Camp Creek (45.100, –117.596); Collins Creek (45.100, –117.531); Corral Creek (45.113, –117.575); Little Catherine Creek (45.148, –117.716); Middle Fork Catherine Creek (45.155, –117.567); Milk Creek (45.092, –117.717); North Fork Catherine Creek (45.221, –117.610); Pole Creek (45.123, –117.544); Prong Creek (45.096, –117.565); SPass Creek (45.115, –117.528); Scout Creek (45.105, –117.644); South Fork Catherine Creek (45.116, –117.503); Unnamed (45.104, –117.685).

(vi) *Ladd Creek Watershed 1706010406.* Outlet(s) = Ladd Creek (Lat 45.282, Long –117.936) upstream to endpoint(s) in: Catherine Creek (45.219, –117.915); Ladd Creek (45.215, –118.024); Little Creek (45.210, –117.784); Mill Creek (45.263, –118.083); Unnamed (45.259, –118.039).

(vii) *Grande Ronde River/Mill Creek Watershed 1706010407.* Outlet(s) = Grande Ronde River (Lat 45.408, Long –117.930) upstream to endpoint(s) in: Catherine Creek (45.282, –117.936); McAlister Slough (45.315, –117.973); Mill Creek (45.278, –117.728); Unnamed (45.297, –117.806).

(viii) *Phillips Creek/Willow Creek Watershed 1706010408.* Outlet(s) = Willow Creek (Lat 45.492, Long –117.931) upstream to endpoint(s) in: Dry Creek (45.640, –118.114); End Creek (45.4622, –118.0316); Finley Creek (45.625, –118.099); Fir Creek (45.5171, –118.0568); Little Dry Creek (45.5348, –118.0393); McDonald Creek (45.5348, –118.0393); Mill Creek (45.568, –118.025); Slide Creek (45.422, –118.028); Smith Creek (45.5256, –118.0537); Unnamed (45.525, –118.014).

(ix) *Grande Ronde River/Indian Creek Watershed 1706010409.* Outlet(s) = Grande Ronde River (Lat 45.560, Long –117.910) upstream to endpoint(s) in: Camp Creek (45.386, –117.720); Clark Creek (45.409, –117.728); East Fork Indian Creek (45.363, –117.737); Grande Ronde River (45.408, –117.930); Indian Creek (45.332, –117.717); Little Indian Creek (45.375, –117.785); Middle Fork Clark Creek (45.462, –117.764); North Fork Clark Creek (45.502, –117.733); North Fork Indian Creek (45.419, –117.787); Unnamed (45.375, –117.739); Unnamed (45.476, –117.757).

(x) *Lookingglass Creek Watershed 1706010410.* Outlet(s) = Lookingglass Creek (Lat 45.707, Long –117.841) upstream to endpoint(s) in: Buzzard Creek (45.845, –117.939); Eagle Creek (45.723, –118.005); Jarboe Creek (45.776, –117.855); Little Lookingglass Creek (45.848, –117.901); Lookingglass Creek (45.777, –118.070); Mottet Creek (45.827, –117.958); Unnamed (45.835, –117.869); Unnamed (45.844, –117.893).

(xi) *Grande Ronde River/Cabin Creek Watershed 1706010411.* Outlet(s) = Grande Ronde River (Lat 45.726, Long –117.784) upstream to endpoint(s) in: Buck Creek (45.662, –117.919); Duncan Canyon (45.654, –117.776); East Phillips Creek (45.669, –118.066); Gordon Creek (45.665, –118.001); Grande Ronde River (45.560, –117.910); Little Phillips Creek (45.668, –118.036); North Fork Cabin Creek (45.721, –117.929); Pedro Creek (45.676, –118.051); Phillips Creek (45.666, –118.089); Rysdam Canyon (45.633, –117.812); South Fork Cabin Creek (45.698, –117.963); Unnamed (45.661, –117.930); Unnamed (45.672, –117.941); Unnamed (45.682, –117.974); Unnamed (45.695, –117.927); Unnamed (45.707, –117.916).

(5) Wallowa River Subbasin 17060105—(i) *Upper Wallowa River Watershed 1706010501.* Outlet(s) = Wallowa River (Lat 45.427, Long –117.310) upstream to endpoint(s) in: Hurricane Creek (45.337, –117.291); Little Hurricane Creek (45.407, –117.276); Prairie Creek (45.394, –117.189); Spring Creek (45.406, –117.287); Trout Creek (45.455, –117.281); Unnamed (45.387, –117.215); Unnamed (45.392, –117.214); Unnamed (45.411, –117.264); Unnamed (45.412, –117.156); Unnamed (45.424, –117.313); Wallowa River (45.335, –117.222).

(ii) *Lostine River Watershed 1706010502.* Outlet(s) = Lostine River (Lat 45.552, Long –117.489) upstream to endpoint(s) in: Lostine River (45.245, –117.375); Silver Creek (45.394, –117.420).

(iii) *Middle Wallowa River Watershed 1706010503.* Outlet(s) = Wallowa River (Lat 45.584, Long –117.540) upstream to endpoint(s) in: Middle Fork Whisky Creek (45.590, –117.342); North Fork Whisky Creek (45.614, –117.331); Parsnip Creek (45.533, –117.419); South Fork Whisky Creek (45.590, –117.413); Straight Whisky Creek (45.622, –117.396); Wallowa River (45.427, –117.310); Whisky Creek (45.608, –117.397).

(iv) *Bear Creek Watershed 1706010504.* Outlet(s) = Bear Creek (Lat 45.584, Long –117.540) upstream to endpoint(s) in: Bear Creek (45.347,

–117.500); Doc Creek (45.449, –117.572); Fox Creek (45.447, –117.562); Goat Creek (45.413, –117.519); Little Bear Creek (45.456, –117.500).

(v) *Minam River Watershed 1706010505.* Outlet(s) = Minam River (Lat 45.621, Long –117.720) upstream to endpoint(s) in: Cougar Creek (45.517, –117.672); Elk Creek (45.157, –117.480); Little Minam River (45.338, –117.643); Minam River (45.149, –117.392); Murphy Creek (45.414, –117.644); North Minam River (45.275, –117.520); Patrick Creek (45.426, –117.645); Squaw Creek (45.576, –117.706); Trout Creek (45.471, –117.652).

(vi) *Lower Wallowa River Watershed 1706010506.* Outlet(s) = Wallowa River (Lat 45.726, Long –117.784) upstream to endpoint(s) in: Deer Creek (45.452, –117.606); Dry Creek (45.650, –117.439); Fisher Creek (45.666, –117.750); Howard Creek (45.735, –117.695); Reagin Gulch (45.670, –117.559); Rock Creek (45.679, –117.620); Sage Creek (45.486, –117.590); Tamarack Canyon (45.656, –117.518); Unnamed (45.618, –117.629); Unnamed (45.654, –117.442); Unnamed (45.678, –117.556); Wallowa River (45.584, –117.540); Water Canyon (45.589, –117.614); Wise Creek (45.671, –117.705).

(6) Lower Grande Ronde Subbasin 17060106—(i) *Grande Ronde River/Rondowa Watershed 1706010601.* Outlet(s) = Grande Ronde River (Lat 45.896, Long –117.493) upstream to endpoint(s) in: Alder Creek (45.844, –117.750); Bear Creek (45.885, –117.752); Clear Creek (45.775, –117.714); Deep Creek (45.817, –117.651); East Grossman Creek (45.819, –117.625); Elbow Creek (45.927, –117.630); Grande Ronde River (45.726, –117.784); Grossman Creek (45.732, –117.614); Meadow Creek (45.825, –117.760); Sheep Creek (45.756, –117.797); Sickfoot Creek (45.842, –117.567); Unnamed (45.746, –117.656).

(ii) *Grande Ronde River/Mud Creek Watershed 1706010602.* Outlet(s) = Grande Ronde River (Lat 45.946, Long –117.450) upstream to endpoint(s) in: Bishop Creek (45.747, –117.555); Bobcat Creek (45.853, –117.370); Buck Creek (45.758, –117.298); Burnt Creek (45.769, –117.283); Courtney Creek (45.857, –117.314); Grande Ronde River (45.896, –117.493); Little Courtney Canyon (45.903, –117.385); McAllister Creek (45.683, –117.361); McCubbin Creek (45.700, –117.294); Mud Creek (45.633, –117.291); Unnamed (45.867, –117.329); Shamrock Creek (45.828, –117.335); Simmons Draw (45.730, –117.514); Sled Creek (45.730, –117.278); Teepee Creek (45.694, –117.349); Tope Creek (45.634, –117.330); Unnamed (45.710, –117.283); Unnamed (45.856, –117.312); Wallupa Creek (45.765, –117.528); Wildcat Creek (45.732, –117.489).

(iii) *Wenaha River Watershed 1706010603.* Outlet(s) = Wenaha River (Lat 45.946, Long –117.450) upstream to endpoint(s) in: Beaver Creek (46.002, –117.815); Crooked Creek (46.046, –117.624); First Creek (46.071, –117.519); Melton Creek (46.060, –117.566); Milk Creek (45.973, –117.902); North Fork Wenaha River (46.064, –117.912); Rock Creek (45.999, –117.766); Second Creek (46.065, –117.595); Slick Ear Creek (45.983, –117.784); South Fork Wenaha River (45.872, –117.897); Third Creek (46.089, –117.627); Weller Creek (45.989, –117.648); West Fork Butte Creek (46.064, –117.759).

(iv) *Chesnimnus Creek Watershed 1706010604.* Outlet(s) = Chesnimnus Creek (Lat 45.715, Long –117.155) upstream to endpoint(s) in: Alder Creek (45.702, –116.997); Billy Creek (45.815, –117.032); Butte Creek (45.641, –117.096); Chesnimnus Creek (45.718, –116.906); Deadman Gulch (45.659, –117.049); Devils Run Creek (45.775, –116.882); Doe Creek (45.751, –117.029); Dry Salmon Creek (45.663, –117.051); East Fork Peavine Creek (45.830, –117.061); Gooseberry Creek (45.681, –117.110); McCarty Gulch (45.749, –117.064); Peavine Creek (45.795, –117.084); Pine Creek (45.673, –117.029); Poison Creek (45.791, –116.979); Salmon Creek (45.662, –117.038); South Fork Chesnimnus Creek (45.743, –116.861); Sterling Gulch (45.712, –117.000); Summit Creek (45.794, –116.947); Telephone Gulch (45.767, –117.076); TNT Gulch (45.754, –116.919); Unnamed (45.694, –117.013); Unnamed (45.709, –116.878); Unnamed (45.724, –116.867); Unnamed (45.742, –117.090); Unnamed (45.825, –117.004); Unnamed (45.838, –117.009); Unnamed (45.846, –117.029); West Fork Peavine Creek (45.805, –117.100).

(v) *Upper Joseph Creek Watershed 1706010605.* Outlet(s) = Joseph Creek (Lat 45.823, Long –117.231) upstream to endpoint(s) in: Alford Gulch (45.729, –117.165); Cougar Creek (45.806, –117.150); Crow Creek (45.536, –117.115); Davis Creek (45.658, –117.257); Elk Creek (45.598, –117.167); Gould Gulch (45.657, –117.181); Little Elk Creek (45.694, –117.199); Sumac Creek (45.753, –117.148); Swamp Creek (45.543, –117.218); Unnamed (45.597, –117.141).

(vi) *Lower Joseph Creek Watershed 1706010606.* Outlet(s) = Joseph Creek (Lat 46.053, Long –117.005) upstream to endpoint(s) in: Basin Creek (45.910, –117.057); Broady Creek (45.882, –117.076); Cottonwood Creek (45.832, –116.950); Horse Creek (45.945, –116.962); Joseph Creek (45.823, –117.231); Peavine Creek (45.879, –117.162); Rush Creek (45.899, –117.150); Tamarack Creek (45.964, –117.127); Unnamed (45.826, –116.957); West Fork Broady Creek (45.862, –117.102).

(vii) *Lower Grande Ronde River/Menatchee Creek Watershed 1706010607.* Outlet(s) = Grande Ronde River (Lat 46.080, Long –116.978) upstream to endpoint(s) in: Bear Creek (45.973, –117.455); Buford Creek (45.975, –117.276); Cottonwood Creek (46.071, –117.301); Cougar Creek (46.049, –117.327); Deer Creek (45.992, –117.191); East Bear Creek (45.960, –117.307); Grande Ronde River (45.946, –117.450); Grouse Creek (46.031, –117.460); Menatchee Creek (46.018, –117.371); Rattlesnake Creek (46.079, –117.204); Shumaker Creek (46.049, –117.117); West Bear Creek (45.951, –117.337); West Branch Rattlesnake Creek (46.086, –117.258).

(7) Lower Snake/Tucannon Subbasin 17060107—(i) *Alpowa Creek Watershed 1706010701.* Outlet(s) = Alpowa Creek (Lat 46.422, Long –117.203) upstream to endpoint(s) in: Kidwell Gulch (46.338, –117.480); Page Creek (46.402, –117.210); Pow Wah Kee Creek (46.389, –117.288).

(ii) *Snake River/Steptoe Canyon Watershed 1706010702.* Outlet(s) = Snake River (Lat 46.660, Long –117.433) upstream to endpoint(s) in: Offield Canyon (46.648, –117.420); Snake River (46.428, –117.038); Steptoe Canyon (46.455, –117.192); Truax Canyon (46.565, –117.348); Wawawai Canyon (46.636, –117.375).

(iii) *Deadman Creek Watershed 1706010703.* Outlet(s) = Deadman Creek (Lat 46.626, Long –117.799) upstream to endpoint(s) in: Deadman Gulch (46.574, –117.565); Lynn Gulch (46.628, –117.597); North Deadman Creek (46.578, –117.457); North Meadow Creek (46.517, –117.489); South Meadow Creek (46.507, –117.508).

(iv) *Upper Tucannon River Watershed 1706010706.* Outlet(s) = Tucannon River (Lat 46.509, Long –117.995) upstream to endpoint(s) in: Cummings Creek (46.235, –117.610); Little Tucannon River (46.221, –117.758); Meadow Creek (46.163, –117.728); Panjab Creek (46.171, –117.709); Sheep Creek (46.196, –117.623); Tucannon River (46.168, –117.559); Tumalum Creek (46.315, –117.585).

(v) *Lower Tucannon River Watershed 1706010707.* Outlet(s) = Tucannon River (Lat 46.558, Long –118.174) upstream to endpoint(s) in: Kellogg Creek (46.430, –118.067); Smith Hollow (46.463, –118.017); Tucannon River (46.509, –117.995).

(vi) *Snake River/Penawawa Creek Watershed 1706010708.* Outlet(s) = Snake River (Lat 46.589, Long –118.215) upstream to endpoint(s) in: Almota Creek (46.706, –117.363); Little Almota Creek (46.715, –117.465); Penawawa Creek (46.728, –117.625); Snake River (46.660, –117.433); Unnamed (46.698, –117.381).

(8) Upper Salmon Subbasin 17060201—(i) *Salmon River/Challis Watershed 1706020101.* Outlet(s) = Salmon River (Lat 44.692, Long –114.049) upstream to endpoint(s) in: Challis Creek (44.563, –114.246); Salmon River (44.470, –114.192).

(ii) *Salmon River/Bayhorse Creek Watershed 1706020104.* Outlet(s) = Salmon River (Lat 44.470, Long –114.192) upstream to endpoint(s) in: Bayhorse Creek (44.395, –114.308); Salmon River (44.268, –114.326).

(iii) *East Fork Salmon River/ McDonald Creek Watershed 1706020105.* Outlet(s) = East Fork Salmon River (Lat 44.268, Long –114.326) upstream to endpoint(s) in: Big Lake Creek (44.165, –114.394); East Fork Salmon River (44.147, –114.378); McDonald Creek (44.091, –114.318); Pine Creek (44.136, –114.367).

(iv) *Herd Creek Watershed 1706020108.* Outlet(s) = Herd Creek (Lat 44.154, Long –114.300) upstream to endpoint(s) in: East Fork Herd Creek (44.037, –114.203); East Pass Creek (44.009, –114.369); Lake Creek (44.103, –114.194); Taylor Creek (44.067, –114.317); West Fork Herd Creek (44.032, –114.248).

(v) *East Fork Salmon River/Big Boulder Creek Watershed 1706020109.* Outlet(s) = East Fork Salmon River (Lat 44.147, Long –114.378) upstream to endpoint(s) in: Big Boulder Creek (44.131, –114.518); East Fork Salmon River (44.039, –114.461); Little Boulder Creek (44.065, –114.542).

(vi) *Upper East Fork Salmon River Watershed 1706020110.* Outlet(s) = East Fork Salmon River (Lat 44.039, Long –114.461) upstream to endpoint(s) in: Bowery Creek (44.0316, –114.4587); South Fork East Fork Salmon River (43.902, –114.562); West Fork East Fork Salmon River (43.929, –114.575); West Pass Creek (43.922, –114.446).

(vii) *Germania Creek Watershed 1706020111.* Outlet(s) = Germania Creek (Lat 44.039, Long –114.461) upstream to endpoint(s) in: Germania Creek (44.003, –114.532).

(viii) *Salmon River/Kinnikinic Creek Watershed 1706020112.* Outlet(s) = Salmon River (Lat 44.268, Long –114.326) upstream to endpoint(s) in: Kinnikinic Creek (44.2667, –144.4026); Salmon River (44.249, –114.454).

(ix) *Salmon River/Slate Creek Watershed 1706020113.* Outlet(s) = Salmon River (Lat 44.249, Long –114.454) upstream to endpoint(s) in: Holman Creek (44.250, –114.529); Salmon River (44.254, –114.675); Silver Rule Creek (44.198, –114.588); Slate Creek (44.168, –114.626); Thompson Creek (44.318, –114.588).

(x) *Warm Springs Creek Watershed 1706020114.* Outlet(s) = Warm Springs Creek (Lat 44.254, Long –114.675) upstream to endpoint(s) in: Warm Springs Creek (44.151, –114.718).

(xi) *Salmon River/Big Casino Creek Watershed 1706020115.* Outlet(s) = Salmon River (Lat 44.254, Long –114.675) upstream to endpoint(s) in: Big Casino Creek (44.216, –114.830); Little Casino Creek (44.224, –114.861); Lower Harden Creek (44.274, –114.778); Nip Tuck Creek (44.234, –114.929); Salmon River (44.169, –114.898); Upper Harden Creek (44.272, –114.791).

(xii) *Salmon River/Fisher Creek Watershed 1706020117.* Outlet(s) = Salmon River (Lat 44.169, Long –114.898) upstream to endpoint(s) in: Decker Creek (44.072, –114.879); Gold Creek (44.114, –114.846); Huckleberry Creek (44.061, –114.875); Salmon River (44.032, –114.836); Williams Creek (44.096, –114.852).

(xiii) *Salmon River/Fourth of July Creek Watershed 1706020118.* Outlet(s) = Salmon River (Lat 44.032, Long –114.836) upstream to endpoint(s) in: Champion Creek (44.019, –114.825); Fourth of July Creek (44.035, –114.784); Hell Roaring Creek (44.0268, –114.9252); Salmon River (44.004, –114.836); Unnamed (44.017, –114.879).

(xiv) *Upper Salmon River Watershed 1706020119.* Outlet(s) = Salmon River (Lat 44.004, Long –114.836) upstream to endpoint(s) in: Beaver Creek (43.919, –114.813); Camp Creek (43.876, –114.738); Frenchman Creek (43.822, –114.792); Pole Creek (43.940, –114.686); Salmon River (43.837, –114.759); Smiley Creek (43.829, –114.823); Twin Creek (43.935, –114.723); Unnamed (43.843, –114.742); Unnamed (43.990, –114.803).

(xv) *Alturas Lake Creek Watershed 1706020120.* Outlet(s) = Alturas Lake Creek (Lat 44.004, Long –114.836) upstream to endpoint(s) in: Alpine Creek (43.905, –114.923); Alturas Lake Creek (43.895, –114.910); Cabin Creek (43.937, –114.856); Pettit Lake Creek (43.961, –114.916); Unnamed (43.952, –114.858); Vat Creek (43.967, –114.871); Yellowbelly Creek (43.995, –114.847).

(xvi) *Redfish Lake Creek Watershed 1706020121.* Outlet(s) = Redfish Lake Creek (Lat 44.169, Long –114.898) upstream to endpoint(s) in: Fishhook Creek (44.137, –114.966); Redfish Lake Creek (44.097, –114.959).

(xvii) *Valley Creek/Iron Creek Watershed 1706020122.* Outlet(s) = Valley Creek (Lat 44.225, Long –114.927) upstream to endpoint(s) in: Crooked Creek (44.214, –115.034); Goat Creek (44.179, –115.008); Iron Creek (44.191, –115.025); Job Creek (44.242, –115.027); Meadow Creek (44.190, –114.961); Park Creek (44.281, –115.036); Stanley Creek (44.276, –114.938); Valley Creek (44.291, –115.018).

(xviii) *Upper Valley Creek Watershed 1706020123.* Outlet(s) = Valley Creek (Lat 44.291, Long –115.018); Stanley Lake Creek (44.2535, –115.0040) upstream to endpoint(s) in: East Fork Valley Creek (44.347, –114.999); Elk Creek (44.227, –115.145); Hanna Creek (44.314, –115.041); Meadow Creek (44.291, –115.119); Stanley Lake Creek (44.248, –115.045); Trap Creek (44.311, –115.121); Valley Creek (44.392, –114.980).

(xix) *Basin Creek Watershed 1706020124.* Outlet(s) = Basin Creek (Lat 44.264, Long –114.817) upstream to endpoint(s) in: Basin Creek (44.361, –114.902); East Basin Creek (44.314, –114.823).

(xx) *Yankee Fork/Jordan Creek Watershed 1706020125.* Outlet(s) = Yankee Fork (Lat 44.270, Long –114.734) upstream to endpoint(s) in: Eightmile Creek (44.448, –114.639); Fivemile Creek (44.355, –114.615); Jordan Creek (44.457, –114.752); Ramey Creek (44.355, –114.641); Sevenmile Creek (44.423, –114.608); Sixmile Creek (44.394, –114.585); Yankee Fork (44.426, –114.619).

(xxi) *West Fork Yankee Fork Watershed 1706020126.* Outlet(s) = West Fork Yankee Fork (Lat 44.351, Long –114.727) upstream to endpoint(s) in: Cabin Creek (44.428, –114.881); Deadwood Creek (44.356, –114.834); Lightning Creek (44.466, –114.787); Sawmill Creek (44.341, –114.765); West Fork Yankee Fork (44.386, –114.919).

(xxii) *Upper Yankee Fork Watershed 1706020127.* Outlet(s) = Yankee Fork (Lat 44.426, Long –114.619) upstream to endpoint(s) in: Elevenmile Creek (44.436, –114.544); McKay Creek (44.475, –114.491); Ninemile Creek (44.439, –114.590); Tenmile Creek (44.484, –114.646); Twelvemile Creek (44.497, –114.614); Yankee Fork (44.510, –114.588).

(xxiii) *Squaw Creek Watershed 1706020128.* Outlet(s) = Squaw Creek (Lat 44.249, Long –114.454) upstream to endpoint(s) in: Cash Creek (44.353, –114.473); Cinnabar Creek (44.359, –114.503); Squaw Creek (44.420, –114.489).

(xxiv) *Garden Creek Watershed 1706020129.* Outlet(s) = Garden Creek (Lat 44.511, Long –114.203) upstream to endpoint(s) in: Garden Creek (44.468, –114.325).

(xxv) *Challis Creek/Mill Creek Watershed 1706020130.* Outlet(s) = Challis Creek (Lat 44.563, Long –114.246) upstream to endpoint(s) in: Challis Creek (44.573, –114.309); Darling Creek (44.572, –114.252).

(xxvi) *Morgan Creek Watershed 1706020132.* Outlet(s) = Morgan Creek (Lat 44.612, Long –114.168) upstream to endpoint(s) in: Blowfly Creek (44.714, –114.326); Corral Creek (44.8045, –114.2239); Lick Creek (44.7371, –114.2948); Morgan Creek (44.8029, –114.2561); Van Horn Creek (44.7614, –114.2680); West Fork Morgan Creek (44.710, –114.335).

(9) Pahsimeroi Subbasin 17060202—(i) *Lower Pahsimeroi River Watershed 1706020201.* Outlet(s) = Pahsimeroi River (Lat 44.692, Long –114.049) upstream to endpoint(s) in: Pahsimeroi River (44.559, –113.900); Patterson Creek (44.561, –113.897).

(ii) *Paterson Creek Watershed 1706020203.* Outlet(s) = Patterson Creek (Lat 44.534, Long –113.837) upstream to endpoint(s) in: Patterson Creek (44.566, –113.670).

(10) Middle Salmon-Panther Subbasin 17060203—(i) *Salmon River/Colson Creek Watershed 1706020301.* Outlet(s) = Salmon River (Lat 45.297, Long –114.591) upstream to endpoint(s) in: Colson Creek (45.307, –114.531); Owl Creek (45.340, –114.462); Salmon River (45.316, –114.405).

(ii) *Owl Creek Watershed 1706020302.* Outlet(s) = Owl Creek (Lat 45.340, Long –114.462) upstream to endpoint(s) in: East Fork Owl Creek (45.367, –114.430); Owl Creek (45.382, –114.469).

(iii) *Salmon River/Pine Creek Watershed 1706020303.* Outlet(s) = Salmon River (Lat 45.316, Long –114.405) upstream to endpoint(s) in: Boulder Creek (45.385, –114.297); Pine Creek (45.307, –114.186); Salmon River (45.399, –114.168); Spring Creek (45.421, –114.278); Squaw Creek (45.449, –114.215).

(iv) *Indian Creek Watershed 1706020304.* Outlet(s) = Indian Creek (Lat 45.400, Long –114.167) upstream to endpoint(s) in: Indian Creek (45.523, –114.151); McConn Creek (45.519, –114.185); West Fork Indian Creek (45.481, –114.168).

(v) *Salmon River/Moose Creek Watershed 1706020305.* Outlet(s) = Salmon River (Lat 45.399, Long –114.168) upstream to endpoint(s) in: Dump Creek (45.369, –114.035); Fourth of July Creek (45.417, –113.857); Little Fourth of July Creek (45.396, –113.912); Moose Creek (45.346, –114.080); Salmon River (45.320, –113.909); Wagonhammer Creek (45.395, –113.945).

(vi) *North Fork Salmon River Watershed 1706020306.* Outlet(s) = North Fork Salmon River (Lat 45.405, Long –113.994) upstream to endpoint(s) in: Anderson Creek (45.577, –113.918); Dahlonega Creek (45.559, –113.845); Ditch Creek (45.534, –113.994); Hughes Creek (45.541, –114.069); Hull Creek (45.471, –114.016); Moose Creek (45.674, –113.951); Pierce Creek (45.640, –113.937); Sheep Creek (45.502, –113.889); Smithy Creek (45.575, –113.889); Threemile Creek (45.577, –113.866); Twin Creek (45.591, –114.081).

(vii) *Salmon River/Tower Creek Watershed 1706020307.* Outlet(s) = Salmon River (Lat 45.320, Long –113.909) upstream to endpoint(s) in: Salmon River (45.250, –113.899); Tower Creek (45.367, –113.857); Wallace Creek (45.2645, –113.9035).

(viii) *Carmen Creek Watershed 1706020308.* Outlet(s) = Carmen Creek (Lat 45.250, Long –113.899) upstream to endpoint(s) in: Carmen Creek (45.316, –113.800); Freeman Creek (45.269, –113.752).

(ix) *Salmon River/Jesse Creek Watershed 1706020309.* Outlet(s) = Salmon River (Lat 45.250, Long –113.899) upstream to endpoint(s) in: Salmon River (45.109, –113.901); Unnamed (45.180, –113.930).

(x) *Salmon River/Williams Creek Watershed 1706020310.* Outlet(s) = Salmon River (Lat 45.109, Long –113.901) upstream to endpoint(s) in: Salmon River (45.011, –113.932); Williams Creek (45.081, –113.935).

(xi) *Salmon River/Twelvemile Creek Watershed 1706020311.* Outlet(s) = Salmon River (Lat 45.011, Long –113.932) upstream to endpoint(s) in: Lake Creek (45.015, –113.959); Salmon River (44.896, –113.963); Twelvemile Creek (45.011, –113.927).

(xii) *Salmon River/Cow Creek Watershed 1706020312.* Outlet(s) = Salmon River (Lat 44.896, Long –113.963) upstream to endpoint(s) in: Cow Creek (44.730, –113.940); McKim Creek (44.810, –114.008); Poison Creek (44.876, –113.934); Salmon River (44.692, –114.049); Warm Spring Creek (44.913, –113.914).

(xiii) *Hat Creek Watershed 1706020313.* Outlet(s) = Hat Creek (Lat 44.795, Long –114.001) upstream to endpoint(s) in: Hat Creek (44.785, –114.040).

(xiv) *Iron Creek Watershed 1706020314.* Outlet(s) = Iron Creek (Lat 44.887, Long –113.968) upstream to endpoint(s) in: Iron Creek (44.921, –114.124).

(xv) *Upper Panther Creek Watershed 1706020315.* Outlet(s) = Panther Creek (Lat 45.022, Long –114.313) upstream to endpoint(s) in: Cabin Creek (44.957, –114.365); Opal Creek (44.901, –114.307); Panther Creek (44.887, –114.305); Porphyry Creek (45.034, –114.388).

(xvi) *Moyer Creek Watershed 1706020316.* Outlet(s) = Moyer Creek (Lat 45.024, Long –114.311) upstream to endpoint(s) in: Moyer Creek (44.949, –114.265); South Fork Moyer Creek (44.944, –114.305).

(xvii) *Panther Creek/Woodtick Creek Watershed 1706020317.* Outlet(s) = Panther Creek (Lat 45.079, Long –114.251) upstream to endpoint(s) in: Copper Creek (45.060, –114.258); Fawn Creek (45.073, –114.247); Musgrove Creek (45.054, –114.368); Panther Creek (45.022, –114.313); Woodtick Creek (45.008, –114.235).

(xviii) *Deep Creek Watershed 1706020318.* Outlet(s) = Deep Creek (Lat 45.126, Long –114.215) upstream to endpoint(s) in: Deep Creek (45.108, –114.179).

(xix) *Panther Creek/Spring Creek Watershed 1706020320.* Outlet(s) = Panther Creek (45.176, Long –114.314) upstream to endpoint(s) in: Little Deer Creek (45.156, –114.298); Panther Creek (45.079, –114.251); Spring Creek (45.088, –114.223).

(xx) *Big Deer Creek Watershed 1706020321.* Outlet(s) = Big Deer Creek (Lat 45.1763, Long –114.3138) upstream to endpoint(s) in: Big Deer Creek (45.1695, –114.3256).

(xxi) *Panther Creek/Trail Creek Watershed 1706020322.* Outlet(s) = Panther Creek (Lat 45.316, Long –114.405) upstream to endpoint(s) in: Beaver Creek (45.2816, –114.2744); Garden Creek (45.2959, –114.4293); Trail Creek (45.2318, –114.2663); Panther Creek (45.176, –114.314).

(xxii) *Clear Creek Watershed 1706020323.* Outlet(s) = Clear Creek (Lat 45.295, Long –114.351) upstream to endpoint(s) in: Clear Creek (45.210, –114.485).

(11) Lemhi Subbasin 17060204—(i) *Lemhi River/Bohannon Creek Watershed 1706020401.* Outlet(s) = Lemhi River (Lat 45.188, Long –113.889) upstream to endpoint(s) in: Bohannon Creek (45.189, –113.692); Lemhi River (45.098, –113.720).

(ii) *Lemhi River/Whimpey Creek Watershed 1706020402.* Outlet(s) = Lemhi River (Lat 45.098, Long –113.720) upstream to endpoint(s) in: Lemhi River (45.032, –113.662); Wimpey Creek (45.131, –113.678); Withington Creek (45.058, –113.750).

(iii) *Lemhi River/Kenney Creek Watershed 1706020403.* Outlet(s) =

Lemhi River (Lat 45.032, Long –113.662) upstream to endpoint(s) in: Kenney Creek (45.087, –113.551); Lemhi River (44.940, –113.639).

(iv) *Lemhi River/McDevitt Creek Watershed 1706020405.* Outlet(s) = Lemhi River (Lat 44.940, Long –113.639) upstream to endpoint(s) in: Lemhi River (44.870, –113.626).

(v) *Lemhi River/Yearian Creek Watershed 1706020406.* Outlet(s) = Lemhi River (Lat 44.867, Long –113.626) upstream to endpoint(s) in: Lemhi River (44.778, –113.535).

(vi) *Peterson Creek Watershed 1706020407.* Outlet(s) = Lemhi River (Lat 44.778, Long –113.535) upstream to endpoint(s) in: Lemhi River (44.739, –113.459).

(vii) *Big Eight Mile Creek Watershed 1706020408.* Outlet(s) = Lemhi River (Lat 44.739, Long –113.459) upstream to endpoint(s) in: Lemhi River (44.692, –113.366).

(viii) *Canyon Creek Watershed 1706020409.* Outlet(s) = Lemhi River (Lat 44.692, Long –113.366) upstream to endpoint(s) in: Lemhi River (44.682, –113.355).

(ix) *Texas Creek Watershed 1706020412.* Outlet(s) = Texas Creek (Lat 44.6822, Long –113.3545) upstream to endpoint(s) in: Purcell Creek (44.5726, –113.3459), Texas Creek (44.5348, –113.3018).

(x) *Hayden Creek Watershed 1706020414.* Outlet(s) = Hayden Creek (Lat 44.870, Long –113.626) upstream to endpoint(s) in: Bear Valley Creek (44.796, –113.790); East Fork Hayden Creek (44.708, –113.661); Hayden Creek (44.726, –113.769); Kadletz Creek (44.761, –113.767); West Fork Hayden Creek (44.706, –113.768); Wright Creek (44.759, –113.794).

(12) Upper Middle Fork Salmon Subbasin 17060205—(i) *Lower Loon Creek Watershed 1706020501.* Outlet(s) = Loon Creek (Lat 44.808, Long –114.811) upstream to endpoint(s) in: Cabin Creek (44.742, –114.708); Loon Creek (44.552, –114.849).

(ii) *Warm Springs Watershed 1706020502.* Outlet(s) = Warm Spring Creek (Lat 44.653, Long –114.736) upstream to endpoint(s) in: Trapper Creek (44.504, –114.617); Warm Spring Creek (44.609, –114.481).

(iii) *Upper Loon Creek Watershed 1706020503.* Outlet(s) = Loon Creek (Lat 44.552, Long –114.849) upstream to endpoint(s) in: Cottonwood Creek (44.593, –114.679); East Fork Mayfield Creek (44.494, –114.700); Loon Creek (44.469, –114.923); Pioneer Creek (44.466, –114.873); South Fork Cottonwood Creek (44.563, –114.780); Trail Creek (44.506, –114.959); West Fork Mayfield Creek (44.473, –114.730).

(iv) *Little Loon Creek Watershed 1706020504.* Outlet(s) = Little Loon Creek (Lat 44.731, Long –114.940) upstream to endpoint(s) in: Little Loon Creek (44.615, –114.963).

(v) *Rapid River Watershed 1706020505.* Outlet(s) = Rapid River (Lat 44.680, Long –115.152) upstream to endpoint(s) in: Float Creek (44.546, –115.148); North Fork Sheep Creek (44.656, –114.997); Rapid River (44.551, –115.007); South Fork Sheep Creek (44.628, –114.988); Vanity Creek (44.500, –115.072).

(vi) *Marsh Creek Watershed 1706020506.* Outlet(s) = Marsh Creek (Lat 44.449, Long –115.230) upstream to endpoint(s) in: Asher Creek (44.374, –115.126); Banner Creek (44.291, –115.187); Bear Creek (44.490, –115.098); Beaver Creek (44.494, –114.964); Camp Creek (44.384, –115.144); Cape Horn Creek (44.333, –115.287); Knapp Creek (44.424, –114.915); Marsh Creek (44.329, –115.091); Swamp Creek (44.300, –115.175); Winnemucca Creek (44.479, –114.972).

(vii) *Middle Fork Salmon River/ Soldier Creek Watershed 1706020507.* Outlet(s) = Middle Fork Salmon River (Lat 44.680, Long –115.152) upstream to endpoint(s) in: Boundary Creek (44.507, –115.328); Dagger Creek (44.498, –115.307); Elkhorn Creek (44.582, –115.369); Greyhound Creek (44.626, –115.158); Middle Fork Salmon River (44.449, –115.230); Soldier Creek (44.528, –115.201).

(viii) *Bear Valley Creek Watershed 1706020508.* Outlet(s) = Bear Valley Creek (Lat 44.449, Long –115.230) upstream to endpoint(s) in: Ayers Creek (44.454, –115.330); Bear Valley Creek (44.236, –115.499); Bearskin Creek (44.331, –115.528); Cache Creek (44.286, –115.409); Cold Creek (44.371, –115.317); Cook Creek (44.389, –115.438); East Fork Elk Creek (44.481, –115.359); Fir Creek (44.354, –115.296); Little Beaver Creek (44.415, –115.504); Little East Fork Elk Creek (44.479, –115.407); Mace Creek (44.289, –115.443); North Fork Elk Creek (44.527, –115.458); Poker Creek (44.444, –115.345); Pole Creek (44.361, –115.366); Porter Creek (44.466, –115.529); Sack Creek (44.320, –115.351); Sheep Trail Creek (44.360, –115.451); West Fork Elk Creek (44.485, –115.499); Wyoming Creek (44.362, –115.335).

(ix) *Sulphur Creek Watershed 1706020509.* Outlet(s) = Sulphur Creek (Lat 44.555, Long –115.297) upstream to endpoint(s) in: Blue Moon Creek (44.572, –115.364); Full Moon Creek (44.535, –115.400); Honeymoon Creek (44.605, –115.399); North Fork Sulphur Creek (44.583, –115.467); Sulphur Creek (44.510, –115.518).

(x) *Pistol Creek Watershed 1706020510.* Outlet(s) = Pistol Creek (Lat 44.724, Long –115.149) upstream to endpoint(s) in: Little Pistol Creek (44.721, –115.404); Luger Creek (44.636, –115.386); Pistol Creek (44.644, –115.442).

(xi) *Indian Creek Watershed 1706020511.* Outlet(s) = Indian Creek (Lat 44.770, Long –115.089) upstream to endpoint(s) in: Big Chief Creek (44.817, –115.368); Indian Creek (44.803, –115.383); Little Indian Creek (44.879, –115.226).

(xii) *Upper Marble Creek Watershed 1706020512.* Outlet(s) = Marble Creek (Lat 44.797, Long –114.971) upstream to endpoint(s) in: Big Cottonwood Creek (44.879, –115.206); Canyon Creek (44.822, –114.943); Cornish Creek (44.933, –115.127); Dynamite Creek (44.871, –115.207); Marble Creek (44.983, –115.079); Trail Creek (44.917, –114.930).

(xiii) *Middle Fork Salmon River/ Lower Marble Creek Watershed 1706020513.* Outlet(s) = Middle Fork Salmon River (Lat 44.808, Long –114.811) upstream to endpoint(s) in: Marble Creek (44.797, –114.971); Middle Fork Salmon River (44.680, –115.152).

(13) Lower Middle Fork Salmon Subbasin 17060206—(i) *Lower Middle Fork Salmon River Watershed 1706020601.* Outlet(s) = Middle Fork Salmon River (Lat 45.297, Long –114.591) upstream to endpoint(s) in: Middle Fork Salmon River (45.095, –114.732); Roaring Creek (45.186, –114.574); Stoddard Creek (45.244, –114.702).

(ii) *Wilson Creek Watershed 1706020602.* Outlet(s) = Wilson Creek (Lat 45.033, Long –114.723) upstream to endpoint(s) in: Wilson Creek (45.032, –114.659).

(iii) *Middle Fork Salmon River/Brush Creek Watershed 1706020603.* Outlet(s) = Middle Fork Salmon River (Lat 45.095, Long –114.732) upstream to endpoint(s) in: Brush Creek (44.955, –114.733); Middle Fork Salmon River (44.958, –114.747).

(iv) *Yellow Jacket Creek Watershed 1706020604.* Outlet(s) = Yellowjacket Creek (Lat 44.892, Long –114.644) upstream to endpoint(s) in: Beagle Creek (44.993, –114.466); Hoodoo Creek (44.993, –114.568); Lake Creek (44.967, –114.603); Little Jacket Creek (44.931, –114.505); Meadow Creek (44.984, –114.481); Shovel Creek (45.006, –114.463); Trail Creek (44.939, –114.461); Yellowjacket Creek (45.050, –114.480).

(v) *Silver Creek Watershed 1706020605.* Outlet(s) = Silver Creek (Lat 44.830, Long –114.501) upstream to endpoint(s) in: Silver Creek (44.856, –114.458).

(vi) *Upper Camas Creek Watershed 1706020606.* Outlet(s) = Camas Creek (Lat 44.830, Long –114.501) upstream to endpoint(s) in: Castle Creek (44.825, –114.415); Fly Creek (44.703, –114.509); Furnace Creek (44.767, –114.421); J Fell Creek (44.669, –114.459); South Fork Camas Creek (44.731, –114.553); Spider Creek (44.688, –114.495); White Goat Creek (44.731, –114.460).

(vii) *West Fork Camas Creek Watershed 1706020607.* Outlet(s) = West Fork Camas Creek (Lat 44.831, Long –114.504) upstream to endpoint(s) in: Flume Creek (44.806, –114.526); Martindale Creek (44.822, –114.560); West Fork Camas Creek (44.795, –114.595).

(viii) *Lower Camas Creek Watershed 1706020608.* Outlet(s) = Camas Creek (Lat 44.892, Long –114.722) upstream to endpoint(s) in: Camas Creek (44.830, –114.501); Duck Creek (44.852, –114.521); Woodtick Creek (44.870, –114.636).

(ix) *Middle Fork Salmon River/Sheep Creek Watershed 1706020609.* Outlet(s) = Middle Fork Salmon River (Lat 44.955, Long –114.733) upstream to endpoint(s) in: Middle Fork Salmon River (44.808, –114.811); Sheep Creek (44.923, –114.873).

(x) *Rush Creek Watershed 1706020610.* Outlet(s) = Rush Creek (Lat 45.105, Long –114.861) upstream to endpoint(s) in: Rush Creek (44.958, –114.992); South Fork Rush Creek (45.013, –114.972); Two Point Creek (45.027, –114.947).

(xi) *Monumental Creek Watershed 1706020611.* Outlet(s) = Monumental Creek (Lat 45.160, Long –115.129) upstream to endpoint(s) in: Monumental Creek (44.952, –115.179); Snowslide Creek (45.055, –115.266); West Fork Monumental Creek (45.011, –115.244).

(xii) *Big Creek/Little Marble Creek Watershed 1706020612.* Outlet(s) = Big Creek (Lat 45.163, Long –115.128) upstream to endpoint(s) in: Big Creek (45.153, –115.297); Little Marble Creek (45.062, –115.276).

(xiii) *Upper Big Creek Watershed 1706020613.* Outlet(s) = Big Creek (Lat 45.153, Long –115.297) upstream to endpoint(s) in: Big Creek (45.075, –115.342); Jacobs Ladder Creek (45.063, –115.322); Middle Fork Smith Creek (45.166, –115.411); Smith Creek (45.170, –115.380); Unnamed (45.129, –115.422).

(xiv) *Beaver Creek Watershed 1706020614.* Outlet(s) = Beaver Creek (Lat 45.163, Long –115.242) upstream to endpoint(s) in: Beaver Creek (45.242, –115.314); Coin Creek (45.218, –115.328); HCreek (45.266, –115.270).

(xv) *Big Ramey Creek Watershed 1706020615.* Outlet(s) = Big Ramey Creek (Lat 45.177, Long –115.159) upstream to endpoint(s) in: Big Ramey Creek (45.279, –115.243).

(xvi) *Big Creek/Crooked Creek Watershed 1706020616.* Outlet(s) = Big Creek (Lat 45.127, Long –114.935) upstream to endpoint(s) in: Big Creek (45.163, –115.128); Cave Creek (45.219, –114.916); Coxey Creek (45.181, –115.022); East Fork Crooked Creek (45.250, –114.975); Fawn Creek (45.125, –115.032); West Fork Crooked Creek (45.251, –115.117).

(xvii) *Lower Big Creek Watershed 1706020617.* Outlet(s) = Big Creek (Lat 45.095, Long –114.732) upstream to endpoint(s) in: Big Creek (45.127, –114.935); Cabin Creek (45.195, –114.837); Canyon Creek (45.087, –114.997); Cliff Creek (45.127, –114.857); Cougar Creek (45.138, –114.813); Pioneer Creek (45.066, –114.842).

(14) Middle Salmon-Chamberlain Subbasin 17060207—(i) *Salmon River/Fall Creek Watershed 1706020701.* Outlet(s) = Salmon River (Lat 45.426, Long –116.025) upstream to endpoint(s) in: Carey Creek (45.4242, –115.9343); Fall Creek (45.4153, –115.9755); Salmon River (45.455, –115.941).

(ii) *Wind River Watershed 1706020702.* Outlet(s) = Wind River (Lat 45.4553, Long –115.9411) upstream to endpoint(s) in: Wind River (45.4657, –115.9394).

(iii) *Salmon River/California Creek Watershed 1706020703.* Outlet(s) = Salmon River (Lat 45.455, Long –115.941) upstream to endpoint(s) in: Bear Creek (45.435, –115.852); Bull Creek (45.482, –115.716); California Creek (45.341, –115.850); Cottontail Creek (45.388, –115.752); Maxwell Creek (45.392, –115.841); Salmon River (45.434, –115.666).

(iv) *Sheep Creek Watershed 1706020704.* Outlet(s) = Sheep Creek (Lat 45.468, Long –115.810) upstream to endpoint(s) in: East Fork Sheep Creek (45.546, –115.769); Meadow Creek (45.544, –115.792); Plummer Creek (45.531, –115.807); Porcupine Creek (45.506, –115.817); Sheep Creek (45.591, –115.705).

(v) *Crooked Creek Watershed 1706020705.* Outlet(s) = Crooked Creek (Lat 45.434, Long –115.666) upstream to endpoint(s) in: Arlington Creek (45.491, –115.678); Crooked Creek (45.515, –115.554); Lake Creek (45.616, –115.686).

(vi) *Salmon River/Rabbit Creek Watershed 1706020706.* Outlet(s) = Salmon River (Lat 45.434, Long –115.666) upstream to endpoint(s) in: Indian Creek (45.409, –115.608); Rabbit Creek (45.416, –115.667); Salmon River (45.378, –115.512).

(vii) *Salmon River/Trout Creek Watershed 1706020708.* Outlet(s) = Salmon River (Lat 45.378, Long –115.512) upstream to endpoint(s) in: Big Blowout Creek (45.468, –115.432); Big Elkhorn Creek (45.521, –115.331); Fivemile Creek (45.391, –115.452); Jersey Creek (45.494, –115.531); Little Fivemile Creek (45.416, –115.425); Little Mallard Creek (45.538, –115.317); Rhett Creek (45.483, –115.410); Richardson Creek (45.499, –115.265); Salmon River (45.567, –115.191); Trout Creek (45.396, –115.315).

(viii) *Bargamin Creek Watershed 1706020709.* Outlet(s) = Bargamin Creek (Lat 45.567, Long –115.191) upstream to endpoint(s) in: Bargamin Creek (45.706, –115.046); Cache Creek (45.691, –115.180); Porcupine Creek (45.725, –115.128); Prospector Creek (45.688, –115.153); Rainey Creek (45.617, –115.210); Salt Creek (45.643, –115.189).

(ix) *Salmon River/Rattlesnake Creek Watershed 1706020710.* Outlet(s) = Salmon River (Lat 45.567, Long –115.191) upstream to endpoint(s) in: Rattlesnake Creek (45.560, –115.143); Salmon River (45.511, –115.041).

(x) *Sabe Creek Watershed 1706020711.* Outlet(s) = Sabe Creek (Lat 45.507, Long –115.024) upstream to endpoint(s) in: Center Creek (45.573, –115.040); Hamilton Creek (45.544, –114.826).

(xi) *Salmon River/Hot Springs Creek Watershed 1706020712.* Outlet(s) = Salmon River (Lat 45.511, Long –115.041) upstream to endpoint(s) in: Big Harrington Creek (45.498, –114.895); Hot Springs Creek (45.465, –115.135); Salmon River (45.454, –114.931).

(xii) *Salmon River/Disappointment Creek Watershed 1706020713.* Outlet(s) = Salmon River (Lat 45.454, Long –114.931) upstream to endpoint(s) in: Salmon River (45.395, –114.732).

(xiii) *Horse Creek Watershed 1706020714.* Outlet(s) = Horse Creek (Lat 45.395, Long –114.732) upstream to endpoint(s) in: East Fork Reynolds Creek (45.541, –114.493); Horse Creek (45.498, –114.421); Reynolds Creek (45.555, –114.558); West Horse Creek (45.494, –114.754).

(xiv) *Salmon River/Kitchen Creek Watershed 1706020715.* Outlet(s) = Salmon River (Lat 45.395, Long –114.732) upstream to endpoint(s) in: Corn Creek (45.370, –114.681); Kitchen Creek (45.295, –114.752); Salmon River (45.297, –114.591).

(xv) *Cottonwood Creek Watershed 1706020716.* Outlet(s) = Cottonwood

Creek (Lat 45.394, Long –114.802) upstream to endpoint(s) in: Cottonwood Creek (45.354, –114.823).

(xvi) *Lower Chamberlain/McCalla Creek Watershed 1706020717.* Outlet(s) = Chamberlain Creek (Lat 45.454, Long –114.931) upstream to endpoint(s) in: McCalla Creek (45.321, –115.115); Unnamed (45.433, –114.935); Whimstick Creek (45.241, –115.053).

(xvii) *Upper Chamberlain Creek Watershed 1706020718.* Outlet(s) = Chamberlain Creek (Lat 45.414, Long –114.981) upstream to endpoint(s) in: Flossie Creek (45.384, –115.248); Lodgepole Creek (45.305, –115.254); Moose Creek (45.283, –115.292); South Fork Chamberlain Creek (45.288, –115.342).

(xviii) *Warren Creek Watershed 1706020719.* Outlet(s) = Warren Creek (Lat 45.397, Long –115.592) upstream to endpoint(s) in: Richardson Creek (45.372, –115.625); Slaughter Creek (45.269, –115.648); Steamboat Creek (45.259, –115.722); Warren Creek (45.248, –115.653).

(15) South Fork Salmon Subbasin 17060208—(i) *Lower South Fork Salmon River Watershed 1706020801.* Outlet(s) = South Fork Salmon River (Lat 45.378, Long –115.512) upstream to endpoint(s) in: Big Buck Creek (45.253, –115.554); Pony Creek (45.209, –115.663); Porphyry Creek (45.255, –115.462); Smith Creek (45.265, –115.550); South Fork Salmon River (45.156, –115.585).

(ii) *South Fork Salmon River/Sheep Creek Watershed 1706020802.* Outlet(s) = South Fork Salmon River (Lat 45.156, Long –115.585) upstream to endpoint(s) in: Bear Creek (45.124, –115.643); Contux Creek (45.155, –115.620); Deer Creek (45.162, –115.606); Elk Creek (45.149, –115.506); Sheep Creek (45.039, –115.583); South Fork Salmon River (45.025, –115.706).

(iii) *Lower East Fork South Fork Salmon River Watershed 1706020803.* Outlet(s) = East Fork South Fork Salmon River (Lat 45.015, Long –115.713) upstream to endpoint(s) in: Caton Creek (44.900, –115.584); East Fork South Fork Salmon River (44.963, –115.501); Loosum Creek (44.918, –115.529); Parks Creek (44.969, –115.530).

(iv) *Upper East Fork South Fork Salmon River Watershed 1706020804.* Outlet(s) = East Fork South Fork Salmon River (Lat 44.963, Long –115.501) upstream to endpoint(s) in: East Fork South Fork Salmon River (44.934, –115.336); Profile Creek (45.035, –115.409); Quartz Creek (45.048, –115.496); Salt Creek (44.962, –115.329); Sugar Creek (44.975, –115.245); Tamarack Creek (44.995, –115.318).

(v) *Lower Johnson Creek Watershed 1706020805.* Outlet(s) = Johnson Creek (Lat 44.963, Long –115.501) upstream to endpoint(s) in: Johnson Creek (44.803, –115.518); Riordan Creek (44.898, –115.472); Trapper Creek (44.829, –115.508).

(vi) *Burntlog Creek Watershed 1706020806.* Outlet(s) = Burntlog Creek (Lat 44.803, Long –115.518) upstream to endpoint(s) in: Burntlog Creek (44.718, –115.419).

(vii) *Upper Johnson Creek Watershed 1706020807.* Outlet(s) = Johnson Creek (Lat 44.803, Long –115.518) upstream to endpoint(s) in: Boulder Creek (44.565, –115.595); Johnson Creek (44.550, –115.590); Landmark Creek (44.630, –115.574); Rock Creek (44.600, –115.592); SCreek (44.609, –115.413); Whiskey Creek (44.563, –115.486).

(viii) *Upper South Fork Salmon River Watershed 1706020808.* Outlet(s) = South Fork Salmon River (Lat 44.652, Long –115.703) upstream to endpoint(s) in: Bear Creek (44.607, –115.600); Camp Creek (44.605, –115.633); Curtis Creek (44.593, –115.752); Lodgepole Creek (44.576, –115.610); Mormon Creek (44.499, –115.654); Rice Creek (44.510, –115.644); South Fork Salmon River (44.480, –115.688); Tyndall Creek (44.568, –115.736).

(ix) *South Fork Salmon River/Cabin Creek Watershed 1706020809.* Outlet(s) = South Fork Salmon River (Lat 44.759, Long –115.684) upstream to endpoint(s) in: Cabin Creek (44.713, –115.638); Dollar Creek (44.759, –115.751); North Fork Dollar Creek (44.755, –115.745); Six-Bit Creek (44.684, –115.724); South Fork Salmon River (44.652, –115.703); Two-bit Creek (44.655, –115.747); Warm Lake Creek (44.653, –115.662).

(x) *South Fork Salmon River/ Blackmare Creek Watershed 1706020810.* Outlet(s) = South Fork Salmon River (Lat 44.898, Long –115.715) upstream to endpoint(s) in: Blackmare Creek (44.809, –115.795); Camp Creek (44.889, –115.691); Cougar Creek (44.823, –115.804); Phoebe Creek (44.910, –115.705); South Fork Salmon River (44.759, –115.684).

(xi) [Reserved]

(xii) *Buckhorn Creek Watershed 1706020811.* Outlet(s) = Buckhorn Creek (Lat 44.922, Long –115.736) upstream to endpoint(s) in: Buckhorn Creek (44.881, –115.856); Little Buckhorn Creek (44.902, –115.756); West Fork Buckhorn Creek (44.909, –115.832).

(xiii) *South Fork Salmon River/Fitsum Creek Watershed 1706020812.* Outlet(s) = South Fork Salmon River (Lat 45.025, Long –115.706) upstream to endpoint(s) in: Fitsum Creek (44.996, –115.784); North Fork Fitsum Creek (44.992, –115.870); South Fork Fitsum Creek (44.981, –115.768); South Fork Salmon River (44.898, –115.715).

(xiv) *Lower Secesh River Watershed 1706020813.* Outlet(s) = Secesh River (Lat 45.025, Long –115.706) upstream to endpoint(s) in: Cly Creek (45.031, –115.911); Hum Creek (45.070, –115.903); Lick Creek (45.049, –115.906); Secesh River (45.183, –115.821); Split Creek (45.109, –115.805); Zena Creek (45.057, –115.732).

(xv) *Middle Secesh River Watershed 1706020814.* Outlet(s) = Secesh River (Lat 45.183, Long –115.821) upstream to endpoint(s) in: Grouse Creek (45.289, –115.835); Secesh River (45.257, –115.895); Victor Creek (45.186, –115.831).

(xiv) *Upper Secesh River Watershed 1706020815.* Outlet(s) = Secesh River (Lat 45.257, Long –115.895) upstream to endpoint(s) in: Lake Creek (45.374, –115.867); Threemile Creek (45.334, –115.891).

(16) Lower Salmon Subbasin 17060209—(i) *Salmon River/China Creek Watershed 1706020901.* Outlet(s) = Salmon River (Lat 45.857, Long –116.794) upstream to endpoint(s) in: China Creek (46.004, –116.817); Flynn Creek (45.911, –116.714); Salmon River (45.999, –116.695); Wapshilla Creek (45.945, –116.766).

(ii) *Eagle Creek Watershed 1706020902.* Outlet(s) = Eagle Creek (Lat 45.997, Long –116.700) upstream to endpoint(s) in: Eagle Creek (46.057, –116.814).

(iii) *Deer Creek Watershed 1706020903.* Outlet(s) = Deer Creek (Lat 45.999, Long –116.695) upstream to endpoint(s) in: Deer Creek (46.051, –116.702).

(iv) *Salmon River/Cottonwood Creek Watershed 1706020904.* Outlet(s) = Salmon River (Lat 45.999, Long –116.695) upstream to endpoint(s) in: Billy Creek (45.990, –116.643); Cottonwood Creek (45.932, –116.598); Maloney Creek (46.068, –116.625); Salmon River (46.038, –116.625); West Fork Maloney Creek (46.061, –116.632).

(v) *Salmon River/Deep Creek Watershed 1706020905.* Outlet(s) = Salmon River (Lat 46.038, Long –116.625) upstream to endpoint(s) in: Burnt Creek (45.966, –116.548); Deep Creek (46.005, –116.547); Round Spring Creek (45.972, –116.501); Salmon River (45.911, –116.410); Telcher Creek (45.978, –116.443).

(vi) *Rock Creek Watershed 1706020906.* Outlet(s) = Rock Creek (Lat 45.905, Long –116.396) upstream to endpoint(s) in: Grave Creek (45.978, –116.359); Johns Creek (45.930, –116.245); Rock Creek (45.919, –116.245).

(vii) *Salmon River/Hammer Creek Watershed 1706020907.* Outlet(s) = Salmon River (Lat 45.911, Long –116.410) upstream to endpoint(s) in: Salmon River (45.752, –116.322).

(viii) *White Bird Creek Watershed 1706020908.* White Bird Creek (Lat 45.752, Long –116.322) upstream to endpoint(s) in: Asbestos Creek (45.722, –116.050); Cabin Creek (45.842, –116.110); Chapman Creek (45.841, –116.216); Cold Springs Creek (45.716, –116.037); Fish Creek (45.865, –116.084); Jungle Creek (45.739, –116.063); Little White Bird Creek (45.740, –116.087); North Fork White Bird Creek (45.797, –116.089); Pinnacle Creek (45.779, –116.086); South Fork White Bird Creek (45.772, –116.028); Twin Cabins Creek (45.782, –116.048); Unnamed (45.809, –116.086); Unnamed (45.841, –116.114); Unnamed (45.858, –116.105).

(ix) *Salmon River/McKinzie Creek Watershed 1706020909.* Outlet(s) = Salmon River (Lat 45.752, Long –116.322) upstream to endpoint(s) in: Deer Creek (45.706, –116.332); McKinzie Creek (45.676, –116.260); Salmon River (45.640, –116.284); Sotin Creek (45.725, –116.341).

(x) *Skookumchuck Creek Watershed 1706020910.* Outlet(s) = Skookumchuck Creek (Lat 45.700, Long –116.317) upstream to endpoint(s) in: North Fork Skookumchuck Creek (45.728, –116.114); South Fork Skookumchuck Creek (45.711, –116.197).

(xi) *Slate Creek Watershed 1706020911.* Outlet(s) = Slate Creek (Lat 45.640, Long –116.284) upstream to endpoint(s) in: Deadhorse Creek (45.603, –116.093); Little Slate Creek (45.587, –116.075); North Fork Slate Creek (45.671, –116.095); Slate Creek (45.634, –116.000); Slide Creek (45.662, –116.146); Unnamed (45.5959, –116.1061); Waterspout Creek (45.631, –116.115).

(xii) *Salmon River/John Day Creek Watershed 1706020912.* Outlet(s) = Salmon River (Lat 45.640, Long –116.284) upstream to endpoint(s) in: China Creek (45.547, –116.310); Cow Creek (45.539, –116.330); East Fork John Day Creek (45.575, –116.221); Fiddle Creek (45.495, –116.269); John Day Creek (45.564, –116.220); Race Creek (45.437, –116.316); South Fork Race Creek (45.440, –116.403); West Fork Race Creek (45.464, –116.352).

(xiii) *Salmon River/Lake Creek Watershed 1706020913.* Outlet(s) = Salmon River (Lat 45.437, Long –116.316) upstream to endpoint(s) in: Allison Creek (45.507, –116.156); Berg Creek (45.426, –116.244); Lake Creek (45.294, –116.219); Salmon River (45.418, –116.162); West Fork Allison Creek (45.457, –116.184); West Fork Lake Creek (45.370, –116.241).

(xiv) *Salmon River/Van Creek Watershed 1706020914.* Outlet(s) = Salmon River (Lat 45.418, Long –116.162) upstream to endpoint(s) in: Robbins Creek (45.430, –116.026); Salmon River (45.426, –116.025); Van Creek (45.431, –116.138).

(xv) *French Creek Watershed 1706020915.* Outlet(s) = French Creek (Lat 45.425, Long –116.030) upstream to endpoint(s) in: French Creek (45.375, –116.040).

(xvi) *Partridge Creek Watershed 1706020916.* Outlet(s) = Elkhorn Creek (Lat 45.4043, Long –116.0941); Partridge Creek (45.408, –116.126) upstream to endpoint(s) in: Elkhorn Creek (45.369, –116.092); Partridge Creek (45.369, –116.146).

(17) Little Salmon Subbasin 17060210—(i) *Lower Little Salmon River Watershed 1706021001.* Outlet(s) = Little Salmon River (Lat 45.417, Long –116.313) upstream to endpoint(s) in: Denny Creek (45.306, –116.359); Elk Creek (45.218, –116.311); Hat Creek (45.313, –116.354); Little Salmon River (45.204, –116.310); Lockwood Creek (45.254, –116.366); North Fork Squaw Creek (45.4234, –116.4320); Papoose Creek (45.4078, –116.3920); Rattlesnake Creek (45.268, –116.339); Sheep Creek (45.344, –116.336); South Fork Squaw Creek (45.4093, –116.4356).

(ii) *Little Salmon River/Hard Creek Watershed 1706021002.* Outlet(s) = Little Salmon River (Lat 45.204, Long –116.310) upstream to endpoint(s) in: Bascum Canyon (45.145, –116.248); Hard Creek (45.125, –116.239); Little Salmon River (45.123, –116.298); Trail Creek (45.164, –116.338).

(iii) *Hazard Creek Watershed 1706021003.* Outlet(s) = Hazard Creek (Lat 45.183, Long –116.283) upstream to endpoint(s) in: Hazard Creek (45.201, –116.248).

(iv) *Boulder Creek Watershed 1706021006.* Outlet(s) = Boulder Creek (Lat 45.204, Long –116.310) upstream to endpoint(s) in: Ant Basin Creek (45.128, –116.447); Boulder Creek (45.103, –116.479); Bull Horn Creek (45.159, –116.407); Pollock Creek (45.168, –116.395); Pony Creek (45.190, –116.374); Squirrel Creek (45.198, –116.368); Star Creek (45.152, –116.418); Unnamed (45.095, –116.461); Unnamed (45.116, –116.455); Yellow Jacket Creek (45.141, –116.426).

(v) *Rapid River Watershed 1706021007.* Outlet(s) = Rapid River (Lat 45.375, Long –116.355) upstream to endpoint(s) in: Granite Fork Lake Fork Rapid River (45.179, –116.526); Paradise Creek (45.223, –116.550); Rapid River (45.157, –116.489); Shingle Creek (45.369, –116.409); West Fork Rapid River (45.306, –116.425).

(18) Upper Selway Subbasin 17060301—(i) *Selway River/Pettibone Creek Watershed 1706030101.* Outlet(s) = Selway River (Lat 46.122, Long –114.935) upstream to endpoint(s) in: Ditch Creek (46.022, –114.900); Elk Creek (45.987, –114.872); Pettibone Creek (46.105, –114.745); Selway River (45.962, –114.828).

(ii) *Bear Creek Watershed 1706030102.* Outlet(s) = Bear Creek (Lat 46.019, Long –114.844) upstream to endpoint(s) in: Bear Creek (46.104, –114.588); Brushy Fork Creek (45.978, –114.602); Cub Creek (46.021, –114.662); Granite Creek (46.102, –114.619); Paradise Creek (46.036, –114.710); Wahoo Creek (46.104, –114.633).

(iii) *Selway River/Gardner Creek Watershed 1706030103.* Outlet(s) = Selway River (Lat 45.962, Long –114.828) upstream to endpoint(s) in: Bad Luck Creek (45.899, –114.752); Crooked Creek (45.865, –114.764); Gardner Creek (45.937, –114.772); Magruder Creek (45.702, –114.795); North Star Creek (45.950, –114.806); Selway River (45.707, –114.719); Sheep Creek (45.821, –114.741); Snake Creek (45.855, –114.728).

(iv) *White Cap Creek Watershed 1706030104.* Outlet(s) = White Cap Creek (Lat 45.860, Long –114.744) upstream to endpoint(s) in: Barefoot Creek (45.886, –114.639); Canyon Creek (45.878, –114.422); Cedar Creek (45.895, –114.668); Cooper Creek (45.861, –114.557); Elk Creek (45.928, –114.574); Fox Creek (45.898, –114.597); Granite Creek (45.931, –114.506); Lookout Creek (45.959, –114.626); Paloma Creek (45.918, –114.592); Peach Creek (45.868, –114.607); South Fork Lookout Creek (45.929, –114.649); Unnamed (45.855, –114.557); White Cap Creek (45.947, –114.534).

(v) *Indian Creek Watershed 1706030105.* Outlet(s) = Indian Creek (Lat 45.792, Long –114.764) upstream to endpoint(s) in: Indian Creek (45.786, –114.581); Jack Creek (45.789, –114.681); Saddle Gulch (45.766, –114.641); Schofield Creek (45.818, –114.586).

(vi) *Upper Selway River Watershed 1706030106.* Outlet(s) = Selway River (Lat 45.707, Long –114.719) upstream to endpoint(s) in: Cayuse Creek (45.752, –114.572); Deep Creek (45.703, –114.517); French Creek (45.609, –114.561); Gabe Creek (45.714, –114.666); Hells Half Acre Creek (45.689, –114.708); Lazy Creek (45.670, –114.553); Line Creek (45.590, –114.585); Mist Creek (45.561, –114.629); Pete Creek (45.720,

–114.557); Selway River (45.502, –114.702); Slow Gulch Creek (45.678, –114.520); Storm Creek (45.641, –114.596); Surprise Creek (45.533, –114.672); Swet Creek (45.516, –114.804); Three Lakes Creek (45.620, –114.803); Unnamed (45.569, –114.642); Vance Creek (45.681, –114.594); Wilkerson Creek (45.561, –114.601).

(vii) *Little Clearwater River Watershed 1706030107.* Outlet(s) = Little Clearwater River (Lat 45.754, Long –114.775) upstream to endpoint(s) in: Burnt Knob Creek (45.697, –114.950); FCreek (45.644, –114.847); Little Clearwater River (45.740, –114.949); Lonely Creek (45.727, –114.865); Salamander Creek (45.655, –114.883); Short Creek (45.759, –114.859); Throng Creek (45.736, –114.904).

(viii) *Running Creek Watershed 1706030108.* Outlet(s) = Running Creek (Lat 45.919, Long –114.832) upstream to endpoint(s) in: Eagle Creek (45.844, –114.886); Lynx Creek (45.794, –114.993); Running Creek (45.910, –115.027); South Fork Running Creek (45.820, –115.024).

(ix) *Goat Creek Watershed 1706030109.* Outlet(s) = Goat Creek (Lat 45.962, Long –114.828) upstream to endpoint(s) in: Goat Creek (45.940, –115.038).

(19) Lower Selway Subbasin 17060302—(i) *Selway River/Goddard Creek Watershed 1706030201.* Outlet(s) = Selway River (Lat 46.140, Long –115.599) upstream to endpoint(s) in: Boyd Creek (46.092, –115.431); Glover Creek (46.082, –115.361); Goddard Creek (46.059, –115.610); Johnson Creek (46.139, –115.514); Rackliff Creek (46.110, –115.494); Selway River (46.046, –115.295).

(ii) *Gedney Creek Watershed 1706030202.* Outlet(s) = Gedney Creek (Lat 46.056, Long –115.313) upstream to endpoint(s) in: Gedney Creek (46.111, –115.268).

(iii) *Selway River/Three Links Creek Watershed 1706030203.* Outlet(s) = Selway River (Lat 46.046, Long –115.295) upstream to endpoint(s) in: Mink Creek (46.041, –115.087); Otter Creek (46.042, –115.216); Pinchot Creek (46.120, –115.108); Selway River (46.098, –115.071); Three Links Creek (46.143, –115.093).

(iv) *Upper Three Links Creek Watershed 1706030204.* Outlet(s) = Three Links Creek (Lat 46.143, Long –115.093) upstream to endpoint(s) in: Three Links Creek (46.155, –115.100).

(v) *Rhoda Creek Watershed 1706030205.* Outlet(s) = Rhoda Creek (Lat 46.234, Long –114.960) upstream to endpoint(s) in: Lizard Creek (46.220, –115.136); Rhoda Creek (46.252, –115.164); Wounded Doe Creek (46.299, –115.078).

(vi) *North Fork Moose Creek Watershed 1706030207.* Outlet(s) = North Fork Moose Creek (Lat 46.165, Long –114.897) upstream to endpoint(s) in: North Fork Moose Creek (46.305, –114.853); West Moose Creek (46.322, –114.970).

(vii) *East Fork Moose Creek/Trout Creek Watershed 1706030208.* Outlet(s) = Selway River (Lat 46.098, Long –115.071) upstream to endpoint(s) in: Double Creek (46.230, –114.837); East Fork Moose Creek (46.204, –114.722); Elbow Creek (46.200, –114.716); Fitting Creek (46.231, –114.861); Maple Creek (46.218, –114.785); Monument Creek (46.189, –114.728); Selway River (46.122, –114.935); Trout Creek (46.141, –114.861).

(viii) *Upper East Fork Moose Creek Watershed 1706030209.* Outlet(s) = East Fork Moose Creek (Lat 46.204, Long –114.722) upstream to endpoint(s) in: Cedar Creek (46.291, –114.708); East Fork Moose Creek (46.253, –114.700).

(ix) *Marten Creek Watershed 1706030210.* Outlet(s) = Marten Creek (Lat 46.099, Long –115.052) upstream to endpoint(s) in: Marten Creek (45.988, –115.029).

(x) *Upper Meadow Creek Watershed 1706030211.* Outlet(s) = Meadow Creek (Lat 45.88043738, Long –115.1034371) upstream to endpoint(s) in: Butter Creek (45.804, –115.149); Meadow Creek (45.698, –115.217); Three Prong Creek (45.790, –115.062).

(xi) *Middle Meadow Creek Watershed 1706030212.* Outlet(s) = Meadow Creek (Lat 45.88157325, Long –115.2178401) upstream to endpoint(s) in: East Fork Meadow Creek (45.868, –115.067); Meadow Creek (45.880, –115.103); Sable Creek (45.853, –115.219); Schwar Creek (45.905, –115.108); Simmons Creek (45.856, –115.247).

(xii) *Lower Meadow Creek Watershed 1706030213.* Outlet(s) = Meadow Creek (Lat 46.04563958, Long –115.2953459) upstream to endpoint(s) in: Buck Lake Creek (45.992, –115.084); Butte Creek (45.878, –115.248); Fivemile Creek (45.953, –115.310); Little Boulder Creek (45.935, –115.293); Meadow Creek (45.882, –115.218).

(xiii) *O'Hara Creek Watershed 1706030214.* Outlet(s) = OHara Creek (Lat 46.08603027, Long –115.5170987) upstream to endpoint(s) in: East Fork OHara Creek (45.995, –115.521); West Fork O'Hara Creek (45.995, –115.543).

(20) Lochsa Subbasin 17060303—(i) *Lower Lochsa River Watershed 1706030301.* Outlet(s) = Lochsa River (Lat 46.14004554, Long –115.5986467) upstream to endpoint(s) in: Canyon Creek (46.227, –115.580); Coolwater Creek (46.215, –115.464); Deadman Creek (46.262, –115.517); East Fork Deadman Creek (46.275, –115.505); Fire Creek (46.203, –115.411); Kerr Creek (46.162, –115.579); Lochsa River (46.338, –115.314); Nut Creek (46.180, –115.601); Pete King Creek (46.182, –115.697); Placer Creek (46.196, –115.631); South Fork Canyon Creek (46.211, –115.556); Split Creek (46.207, –115.364); Walde Creek (46.193, –115.662).

(ii) *Fish Creek Watershed 1706030302.* Outlet(s) = Fish Creek (Lat 46.33337703, Long –115.3449332) upstream to endpoint(s) in: Alder Creek (46.319, –115.460); Ceanothus Creek (46.341, –115.470); Fish Creek (46.341, –115.575); Frenchman Creek (46.330, –115.544); Gass Creek (46.390, –115.511); Ham Creek (46.391, –115.365); Hungery Creek (46.377, –115.542); Myrtle Creek (46.343, –115.569); Poker Creek (46.346, –115.447); Willow Creek (46.396, –115.369).

(iii) *Lochsa River/Stanley Creek Watershed 1706030303.* Outlet(s) = Lochsa River (Lat 46.33815653, Long –115.3141495) upstream to endpoint(s) in: Bald Mountain Creek (46.406, –115.254); Dutch Creek (46.377, –115.211); Eagle Mountain Creek (46.428, –115.130); Indian Grave Creek (46.472, –115.103); Indian Meadow Creek (46.450, –115.060); Lochsa River (46.466, –114.985); Lost Creek (46.432, –115.116); Sherman Creek (46.352, –115.320); Stanley Creek (46.387, –115.144); Unnamed (46.453, –115.028); Unnamed (46.460, –115.006); Unnamed (46.502, –115.050); Weir Creek (46.490, –115.035).

(iv) *Lochsa River/Squaw Creek Watershed 1706030304.* Outlet(s) = Lochsa River (Lat 46.4656626, Long –114.9848623) upstream to endpoint(s) in: Badger Creek (46.535, –114.833); Bear Mtn. Creek (46.471, –114.962); Cliff Creek (46.482, –114.708); Colgate Creek (46.455, –114.914); Doe Creek (46.534, –114.914); East Fork Papoose Creek (46.555, –114.743); Jay Creek (46.513, –114.739); Lochsa River (46.508, –114.681); Postoffice Creek (46.529, –114.948); Squaw Creek (46.567, –114.859); Unnamed (46.463, –114.923); Wendover Creek (46.521, –114.788); West Fork Papoose Creek (46.576, –114.758); West Fork Postoffice Creek (46.493, –114.985); West Fork Squaw Creek (46.545, –114.884).

(v) *Lower Crooked Fork Watershed 1706030305.* Outlet(s) = Crooked Fork Lochsa River (Lat 46.50828495, Long –114.680785) upstream to endpoint(s) in: Crooked Fork Lochsa River (46.578, –114.612).

(vi) *Upper Crooked Fork Watershed 1706030306.* Outlet(s) = Crooked Fork Lochsa River (Lat 46.57831788, Long –114.6115072) upstream to endpoint(s) in: Boulder Creek (46.636, –114.703); Crooked Fork Lochsa River (46.653, –114.670); Haskell Creek (46.605, –114.596); Shotgun Creek (46.601, –114.667).

(vii) *Brushy Fork Watershed 1706030307.* Outlet(s) = Brushy Fork (Lat 46.57831788, Long –114.6115072) upstream to endpoint(s) in: Brushy Fork (46.619, –114.450); Pack Creek (46.580, –114.588); Spruce Creek (46.609, –114.433).

(viii) *Lower White Sands Creek Watershed 1706030308.* Outlet(s) = White Sands Creek (Lat 46.50828495, Long –114.680785) upstream to endpoint(s) in: Beaver Creek (46.509, –114.619); Cabin Creek (46.518, –114.641); Walton Creek (46.500, –114.673); White Sands Creek (46.433, –114.540).

(ix) *Storm Creek Watershed 1706030309.* Outlet(s) = Storm Creek (Lat 46.46307502, Long –114.5482819) upstream to endpoint(s) in: Maud Creek (46.495, –114.511); Storm Creek (46.540, –114.424).

(x) *Upper White Sands Creek Watershed 1706030310.* Outlet(s) = White Sands Creek (Lat 46.4330966, Long –114.5395027) upstream to endpoint(s) in: Big FCreek (46.401, –114.475); Big SCreek (46.407, –114.534); Colt Creek (46.403, –114.726); White Sands Creek (46.422, –114.462).

(xi) *Warm Springs Creek Watershed 1706030311.* Outlet(s) = Warm Springs Creek (Lat 46.4733796, Long –114.8872254) upstream to endpoint(s) in: Cooperation Creek (46.453, –114.866); Warm Springs Creek (46.426, –114.868).

(xii) *Fish Lake Creek Watershed 1706030312.* Outlet(s) = Fish Lake Creek (Lat 46.46336343, Long –114.9957028) upstream to endpoint(s) in: Fish Lake Creek (46.405, –115.000); Heslip Creek (46.393, –115.027); Sponge Creek (46.384, –115.048).

(xiii) *Boulder Creek Watershed 1706030313.* Outlet(s) = Boulder Creek (Lat 46.33815653, Long –115.3141495) upstream to endpoint(s) in: Boulder Creek (46.320, –115.199).

(xiv) *Old Man Creek Watershed 1706030314.* Outlet(s) = Old Man Creek (Lat 46.2524595, Long –115.3988563) upstream to endpoint(s) in: Old Man Creek (46.256, –115.343).

(21) Middle Fork Clearwater Subbasin 17060304—(i) *Middle Fork Clearwater River/Maggie Creek Watershed 1706030401.* Outlet(s) = Middle Fork Clearwater River (Lat 46.1459, Long –115.9797) upstream to endpoint(s) in: Maggie Creek (46.195, –115.801); Middle Fork Clearwater River (46.140, –115.599).

(ii) *Clear Creek Watershed 1706030402.* Outlet(s) = Clear Creek (Lat 46.1349, Long –115.9515) upstream to endpoint(s) in: Browns Spring Creek (46.067, –115.658); Clear Creek (46.056, –115.659); Kay Creek (46.005, –115.725); Middle Fork Clear Creek (46.030, –115.739); Pine Knob Creek (46.093, –115.702); South Fork Clear Creek (45.941, –115.769); West Fork Clear Creek (46.013, –115.821).

(22) South Fork Clearwater Subbasin 17060305—(i) *Lower South Fork Clearwater River Watershed 1706030501.* Outlet(s) = South Fork Clearwater River (Lat 46.1459, Long –115.9797) upstream to endpoint(s) in: Butcher Creek (45.945, –116.064); Castle Creek (45.834, –115.966); Earthquake Creek (45.853, –116.005); Green Creek (45.957, –115.937); Lightning Creek (45.936, –115.946); Mill Creek (45.934, –116.010); Rabbit Creek (46.028, –115.877); Sally Ann Creek (46.019, –115.893); Schwartz Creek (45.914, –116.000); South Fork Clearwater River (45.830, –115.931); Wall Creek (45.998, –115.926).

(ii) *South Fork Clearwater River/ Meadow Creek Watershed 1706030502.* Outlet(s) = South Fork Clearwater River (Lat 45.8299, Long –115.9312) upstream to endpoint(s) in: Covert Creek (45.890, –115.933); North Meadow Creek (45.923, –115.890); South Fork Clearwater River (45.824, –115.889); Storm Creek (45.952, –115.848); Whitman Creek (45.914, –115.919).

(iii) *South Fork Clearwater River/ Peasley Creek Watershed 1706030503.* Outlet(s) = South Fork Clearwater River (Lat 45.8239, Long –115.8892) upstream to endpoint(s) in: South Fork Clearwater River (45.795, –115.763).

(iv) *South Fork Clearwater River/ Leggett Creek Watershed 1706030504.* Outlet(s) = South Fork Clearwater River (Lat 45.7952, Long –115.7628) upstream to endpoint(s) in: Allison Creek (45.832, –115.588); Buckhorn Creek (45.807, –115.658); Fall Creek (45.833, –115.696); Leggett Creek (45.862, –115.685); Maurice Creek (45.856, –115.514); Moose Creek (45.835, –115.578); Rabbit Creek (45.822, –115.603); Santiam Creek (45.811, –115.624); South Fork Clearwater River (45.808, –115.474); Twentymile Creek (45.791, –115.765); Whiskey Creek (45.869, –115.544).

(v) *Newsome Creek Watershed 1706030505.* Outlet(s) = Newsome Creek (Lat 45.8284, Long –115.6147) upstream to endpoint(s) in: Baldy Creek (45.944, –115.681); Bear Creek (45.887, –115.580); Beaver Creek (45.943, –115.568); Haysfork Creek (45.953, –115.678); Mule Creek (45.985, –115.606); Newsome Creek (45.972, –115.654); Nuggett Creek (45.897, –115.600); Pilot Creek (45.939, –115.716); Sawmill Creek (45.904, –115.701); Sing Lee Creek (45.898, –115.677); West Fork Newsome Creek (45.880, –115.661).

(vi) *American River Watershed 1706030506.* Outlet(s) = American River (Lat 45.8082, Long –115.4740) upstream to endpoint(s) in: American River (45.996, –115.445); Big Elk Creek (45.902, –115.513); Box Sing Creek (45.850, –115.386); Buffalo Gulch (45.873, –115.522); East Fork American River (45.905, –115.381); Flint Creek (45.913, –115.423); Kirks Fork American River (45.842, –115.385); Lick Creek (45.945, –115.477); Little Elk Creek (45.894, –115.476); Monroe Creek (45.871, –115.495); Unnamed (45.884, –115.510); West Fork American River (45.934, –115.510); West Fork Big Elk Creek (45.883, –115.515).

(vii) *Red River Watershed 1706030507.* Outlet(s) = Red River (Lat 45.8082, Long –115.4740) upstream to endpoint(s) in: Bridge Creek (45.814, –115.163); Campbell Creek (45.792, –115.486); Dawson Creek (45.728, –115.393); Deadwood Creek (45.794, –115.471); Ditch Creek (45.7941, –115.2923); Jungle Creek (45.710, –115.286); Little Campbell Creek (45.801, –115.478); Little Moose Creek (45.710, –115.399); Moose Butte Creek (45.695, –115.365); Otterson Creek (45.803, –115.222); Red Horse Creek (45.822, –115.355); Red River (45.788, –115.174); Siegel Creek (45.800, –115.323); Soda Creek (45.741, –115.257); South Fork Red River (45.646, –115.407); Trail Creek (45.784, –115.265); Trapper Creek (45.672, –115.311); Unnamed (45.788, –115.199); West Fork Red River (45.662, –115.447).

(viii) *Crooked River Watershed 1706030508.* Outlet(s) = Crooked River (Lat 45.8241, Long –115.5291) upstream to endpoint(s) in: American Creek (45.7159, –115.9679); East Fork Crooked River (45.655, –115.562); East Fork Relief Creek (45.7363, –115.4511); Fivemile Creek (45.721, –115.568); Quartz Creek (45.702, –115.536); Relief Creek (45.712, –115.472); Silver Creek (45.713, –115.535); Trout Creek (45.6876, –115.9463); West Fork Crooked River (45.666, –115.596).

(ix) *Ten Mile Creek Watershed 1706030509.* Outlet(s) = Tenmile Creek (Lat 45.8064, Long –115.6833) upstream to endpoint(s) in: Mackey Creek (45.754, –115.683); Morgan Creek (45.731, –115.672); Sixmile Creek (45.762, –115.641); Tenmile Creek (45.694,

–115.694); Williams Creek (45.703, –115.636).

(x) *John's Creek Watershed 1706030510.* Outlet(s) = Johns Creek (Lat 45.8239, Long –115.8892) upstream to endpoint(s) in: American Creek (45.750, –115.961); Frank Brown Creek (45.708, –115.785); Gospel Creek (45.637, –115.915); Johns Creek (45.665, –115.827); Trout Creek (45.750, –115.909); West Fork Gospel Creek (45.657, –115.949).

(xi) *Mill Creek Watershed 1706030511.* Outlet(s) = Mill Creek (Lat 45.8299, Long –115.9312) upstream to endpoint(s) in: Adams Creek (45.6556, –116.0408); Camp Creek (45.6613, –115.9820); Corral Creek (45.6719, –115.9779); Hunt Creek (45.6768, –115.9640); Mill Creek (45.641, –116.008); Unnamed (45.6964, –115.9641).

(xii) *Cottonwood Creek Watershed 1706030513.* Outlet(s) = Cottonwood Creek (Lat 46.0810, Long –115.9764) upstream to endpoint(s) in: Cottonwood Creek (46.0503, –116.1109); Red Rock Creek (46.0807, –116.1579).

(23) Clearwater Subbasin 17060306—

(i) *Lower Clearwater River Watershed 1706030601.* Outlet(s) = Clearwater River (Lat 46.4281, Long –117.0380) upstream to endpoint(s) in: Clearwater River (46.447, –116.837).

(ii) *Clearwater River/Lower Potlatch River Watershed 1706030602.* Outlet(s) = Clearwater River (Lat 46.4467, Long –116.8366) upstream to endpoint(s) in: Catholic Creek (46.489, –116.841); Clearwater River (46.474, –116.765); Howard Gulch (46.4976, –116.7791); Little Potlatch Creek (46.6322, –116.8320); Potlatch River (46.523, –116.728).

(iii) *Potlatch River/Middle Potlatch Creek Watershed 1706030603.* Outlet(s) = Potlatch River (Lat 46.5231, Long –116.7284) upstream to endpoint(s) in: Middle Potlatch Creek (46.669, –116.796); Potlatch River (46.583, –116.700).

(iv) *Lower Big Bear Creek Watershed 1706030604.* Outlet(s) = Big Bear Creek (Lat 46.6180, Long –116.6439) upstream to endpoint(s) in: Big Bear Creek (46.7145, –116.6632); Little Bear Creek (46.7360, –116.7010), West Fork Little Bear Creek (46.7413, –116.7789).

(v) *Upper Big Bear Creek 1706030605.* Outlet(s) = Big Bear Creek (Lat 46.7145, Long –116.6632) upstream to endpoint(s) in: East Fork Big Bear Creek (46.8141, –116.5984).

(vi) *Potlatch River/Pine Creek Watershed 1706030606.* Outlet(s) = Potlatch River (Lat 46.5830, Long –116.6998) upstream to endpoint(s) in: Boulder Creek (46.711, –116.450); Leopold Creek (46.6547, –116.4407); Pine Creek (46.706, –116.554); Potlatch River (46.699, –116.504).

(vii) *Upper Potlatch River Watershed 1706030607.* Outlet(s) = Potlatch River (Lat 46.6987, Long –116.5036) upstream to endpoint(s) in: Corral Creek (46.8012, –116.4746); East Fork Potlatch River (46.876, –116.247); Feather Creek (46.938, –116.411); Head Creek (46.942, –116.366); Little Boulder Creek (46.768, –116.414); Nat Brown Creek (46.911, –116.375); Pasture Creek (46.940, –116.371); Porcupine Creek (46.937, –116.379); Potlatch River (46.941, –116.359); Ruby Creek (46.7992, –116.3037); Unnamed (46.8938, –116.3617); Unnamed (46.922, –116.449); West Fork Potlatch River (46.931, –116.458).

(viii) *Clearwater River/Bedrock Creek Watershed 1706030608.* Outlet(s) = Clearwater River (Lat 46.4741, Long –116.7652) upstream to endpoint(s) in: Bedrock Creek (46.5738, –116.5000); Clearwater River (46.516, –116.590); Louse Creek (46.5380, –116.4411); Pine Creek (46.579, –116.615).

(ix) *Clearwater River/Jack's Creek Watershed 1706030609.* Outlet(s) = Clearwater River (Lat 46.5159, Long –116.5903) upstream to endpoint(s) in: Clearwater River (46.498, –116.433); Jacks Creek (46.435, –116.462).

(x) *Big Canyon Creek Watershed 1706030610.* Outlet(s) = Big Canyon Creek (Lat 46.4984, Long –116.4326) upstream to endpoint(s) in: Big Canyon Creek (46.2680, –116.5396); Cold Springs Creek (46.2500, –116.5210); Posthole Canyon (46.318, –116.450); Sixmile Canyon (46.372, –116.441); Unnamed (46.3801, –116.3750).

(xi) *Little Canyon Creek Watershed 1706030611.* Outlet(s) = Little Canyon Creek (Lat 46.4681, Long –116.4172) upstream to endpoint(s) in: Little Canyon Creek (46.295, –116.279).

(xii) *Clearwater River/Lower Orofino Creek Watershed 1706030612.* Outlet(s) = Clearwater River (Lat 46.4984, Long –116.4326) upstream to endpoint(s) in: Clearwater River (46.476, –116.254); Orofino Creek (46.485, –116.196); Whiskey Creek (46.5214, –116.1753).

(xiii) *Jim Ford Creek Watershed 1706030614.* Outlet(s) = Jim Ford Creek (Lat 46.4394, Long –116.2115) upstream to endpoint(s) in: Jim Ford Creek (46.3957, –115.9570).

(xiv) *Lower Lolo Creek Watershed 1706030615.* Outlet(s) = Lolo Creek (Lat 46.3718, Long –116.1697) upstream to endpoint(s) in: Big Creek (46.392, –116.118); Lolo Creek (46.284, –115.882), Schmidt Creek (46.3617, –116.0426).

(xv) *Middle Lolo Creek Watershed 1706030616.* Outlet(s) = Lolo Creek (Lat 46.2844, Long –115.8818) upstream to endpoint(s) in: Crocker Creek (46.254, –115.859); Lolo Creek (46.381, –115.708); Mud Creek (46.274, –115.759); Nevada Creek (46.322, –115.735); Pete Charlie Creek (46.289, –115.823); Yakus Creek (46.238, –115.763).

(xvi) *Musselshell Creek Watershed 1706030617.* Outlet(s) = Jim Brown Creek (Lat 46.3098, Long –115.7531) upstream to endpoint(s) in: Gold Creek (46.376, –115.735); Jim Brown Creek (46.357, –115.790); Musselshell Creek (46.394, –115.744).

(xvii) *Upper Lolo Creek Watershed 1706030618.* Outlet(s) = Lolo Creek (Lat 46.3815, Long –115.7078) upstream to endpoint(s) in: Camp Creek (46.416, –115.624); Lolo Creek (46.425, –115.648); Max Creek (46.384, –115.679); Relaskon Creek (46.394, –115.647); Siberia Creek (46.384, –115.707); Yoosa Creek (46.408, –115.589).

(xviii) *Eldorado Creek Watershed 1706030619.* Outlet(s) = Eldorado Creek (Lat 46.2947, Long –115.7500) upstream to endpoint(s) in: Cedar Creek (46.298, –115.711); Dollar Creek (46.301, –115.640); Eldorado Creek (46.300, –115.645); Four Bit Creek (46.294, –115.644).

(xix) *Clearwater River/Fivemile Creek Watershed 1706030620.* Outlet(s) = Clearwater River (Lat 46.4759, Long –116.2543) upstream to endpoint(s) in: Clearwater River (46.350, –116.154); Fivemile Creek (46.3473, –116.1859).

(xx) *Clearwater River/Sixmile Creek Watershed 1706030621.* Outlet(s) = Clearwater River (Lat 46.3500, Long –116.1541) upstream to endpoint(s) in: Clearwater River (46.257, –116.067); Sixmile Creek (46.269, –116.213).

(xxi) *Clearwater River/Tom Taha Creek Watershed 1706030622.* Outlet(s) = Clearwater River (Lat 46.2565, Long –116.067) upstream to endpoint(s) in: Clearwater River (46.146, –115.980); Tom Taha Creek (46.244, –115.993).

(xxii) *Lower Lawyer Creek Watershed 1706030623.* Outlet(s) = Lawyer Creek (Lat 46.2257, Long –116.0116) upstream to endpoint(s) in: Lawyer Creek (46.155, –116.190), Sevenmile Creek (46.1498, –116.0838).

(xxiii) *Middle Lawyer Creek Watershed 1706030624.* Outlet(s) = Lawyer Creek (Lat 46.1546, Long –116.1899) upstream to endpoint(s) in: Lawyer Creek (46.188, –116.380).

(xxiv) *Cottonwood Creek Watershed 1706030627.* Outlet(s) = Cottonwood Creek (Lat 46.5023, Long –116.7127) upstream to endpoint(s) in: Cottonwood Creek (46.387, –116.622), Coyote Creek (46.4622, –116.6377), Magpie Creek (46.4814, –116.6643).

(xxv) *Upper Lapwai Creek Watershed 1706030628.* Outlet(s) = Lapwai Creek (Lat 46.3674, Long –116.7352) upstream to endpoint(s) in: Lapwai Creek (46.2961, –116.5955); Unnamed (46.3346, –116.5794).

(xxvi) *Mission Creek Watershed 1706030629.* Outlet(s) = Mission Creek (Lat 46.3674, Long –116.73525) upstream to endpoint(s) in: Mission Creek (46.2724, –116.6949); Rock Creek (46.3048, –116.6250).

(xxvii) *Upper Sweetwater Creek Watershed 1706030630.* Outlet(s) = Webb Creek (Lat 46.3310, Long –116.8369) upstream to endpoint(s) in: Sweetwater Creek (46.2751, –116.8513); Webb Creek (46.2338, –116.7500).

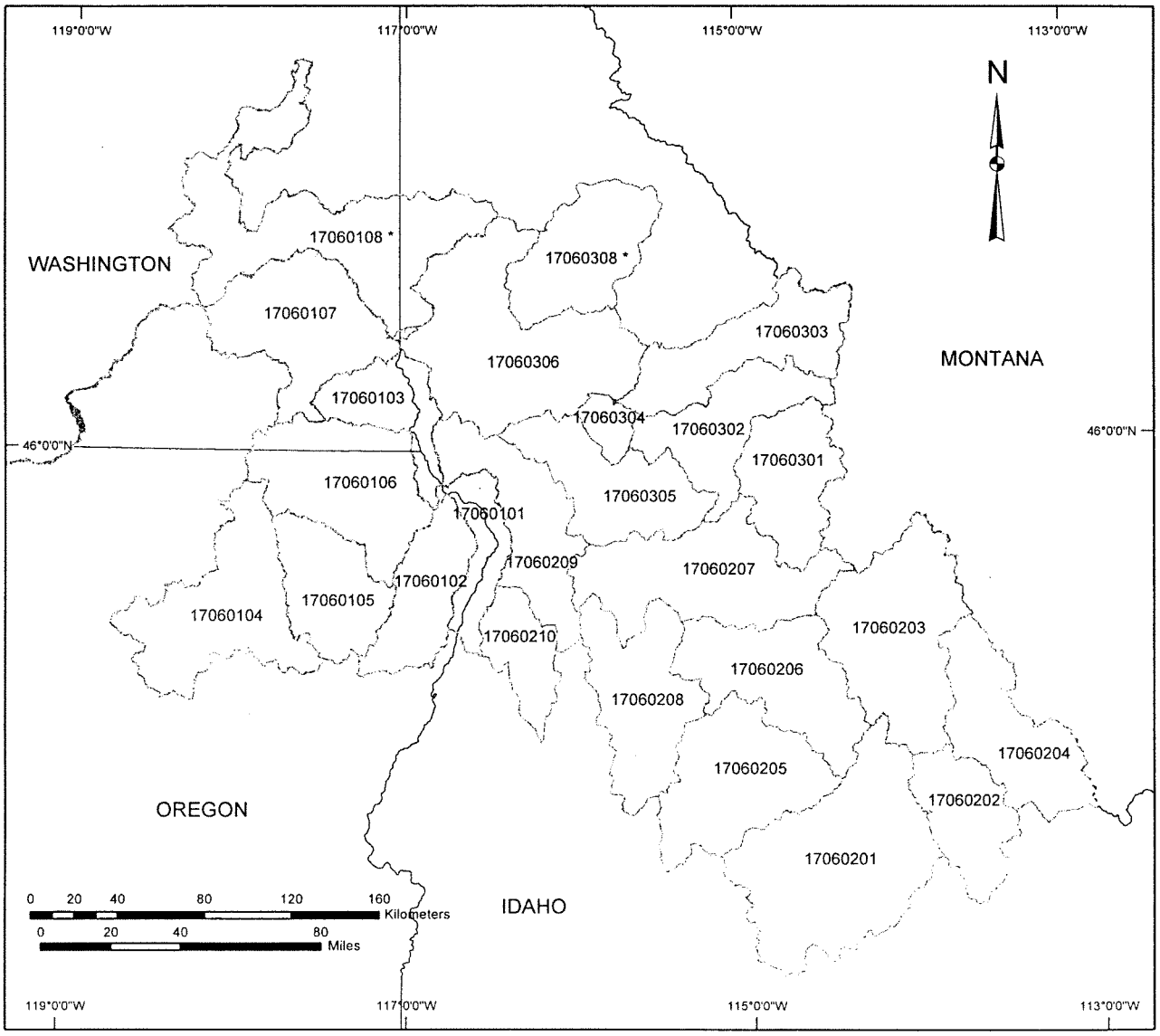
(xxviii) *Lower Sweetwater Creek Watershed 1706030631.* Outlet(s) = Lapwai Creek (Lat 46.4512, Long –116.8182) upstream to endpoint(s) in: Lapwai Creek (46.364, –116.750); Sweetwater Creek (46.331, –116.837); Tom Beall Creek (46.4240, –116.7822).

(24) Lower Snake/Columbia River Corridor—*Lower Snake/Columbia River Corridor.* Outlet(s) = Columbia River mouth (Lat 46.2485, Long –124.0782) upstream to endpoint at the confluence of the Palouse River (46.589, –117.215).

(25) Maps of critical habitat for the Snake River Basin Steelhead ESU follow:

BILLING CODE 3510–22–P

Map of the Snake River Basin Steelhead ESU



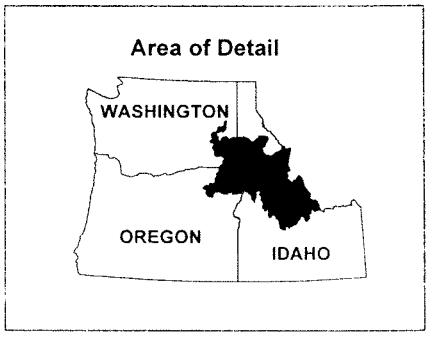
Legend

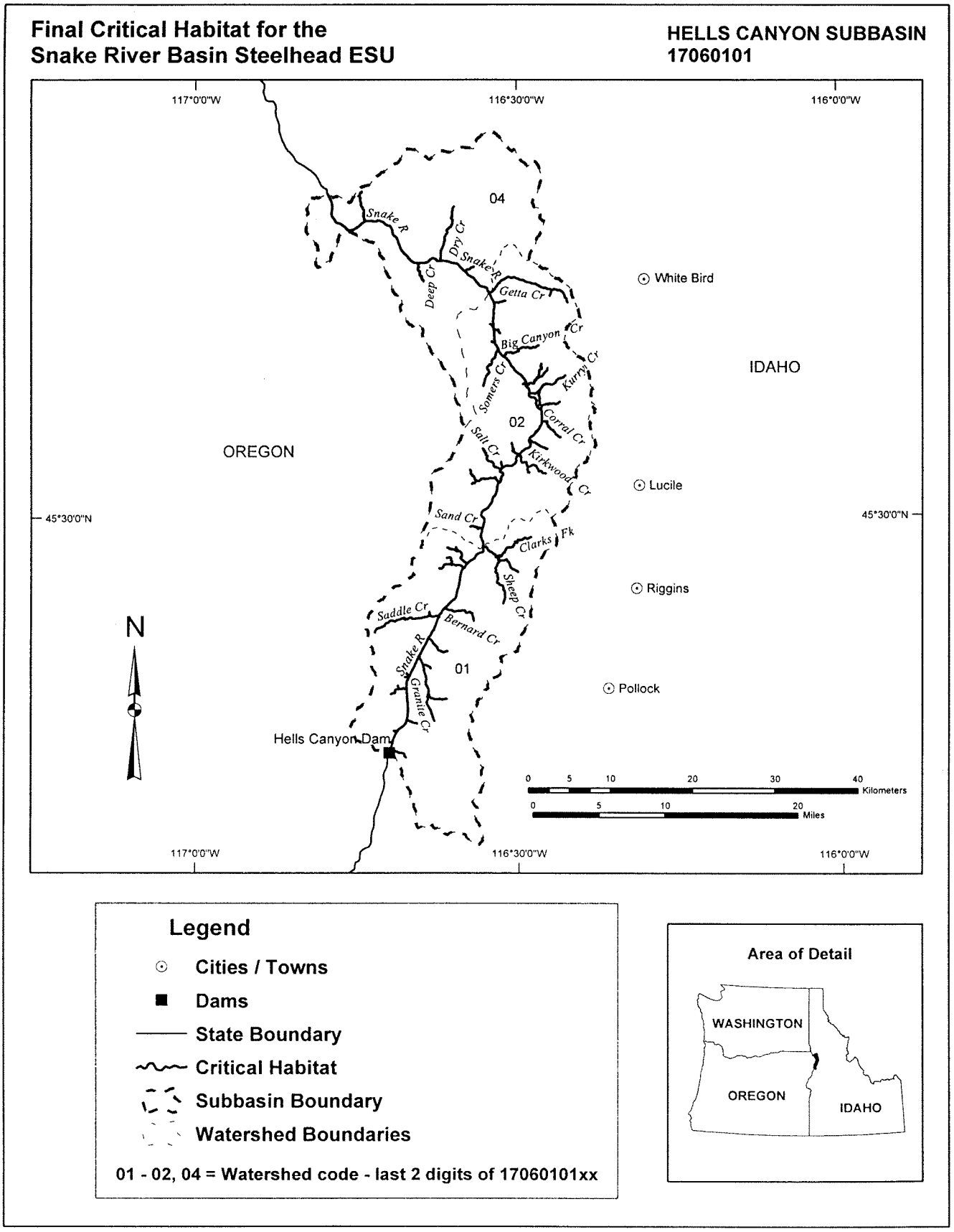
State Boundaries

Water Bodies

Subbasin Boundaries

* All habitat areas in subbasin are excluded from designation




Final Critical Habitat for the
Snake River Basin Steelhead ESU
HELLS CANYON SUBBASIN
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Dry Cr
Deep Cr
Getta Cr
Big Canyon Cr
Kurry Cr
Somers Cr
Corral Cr
Salt Cr
Kirkwood Cr
Sand Cr
Clarks Fk
Sheep Cr
Saddle Cr
Bernard Cr
Granite Cr
White Bird
IDAHO
OREGON
Lucile
Riggins
Pollock
Hells Canyon Dam
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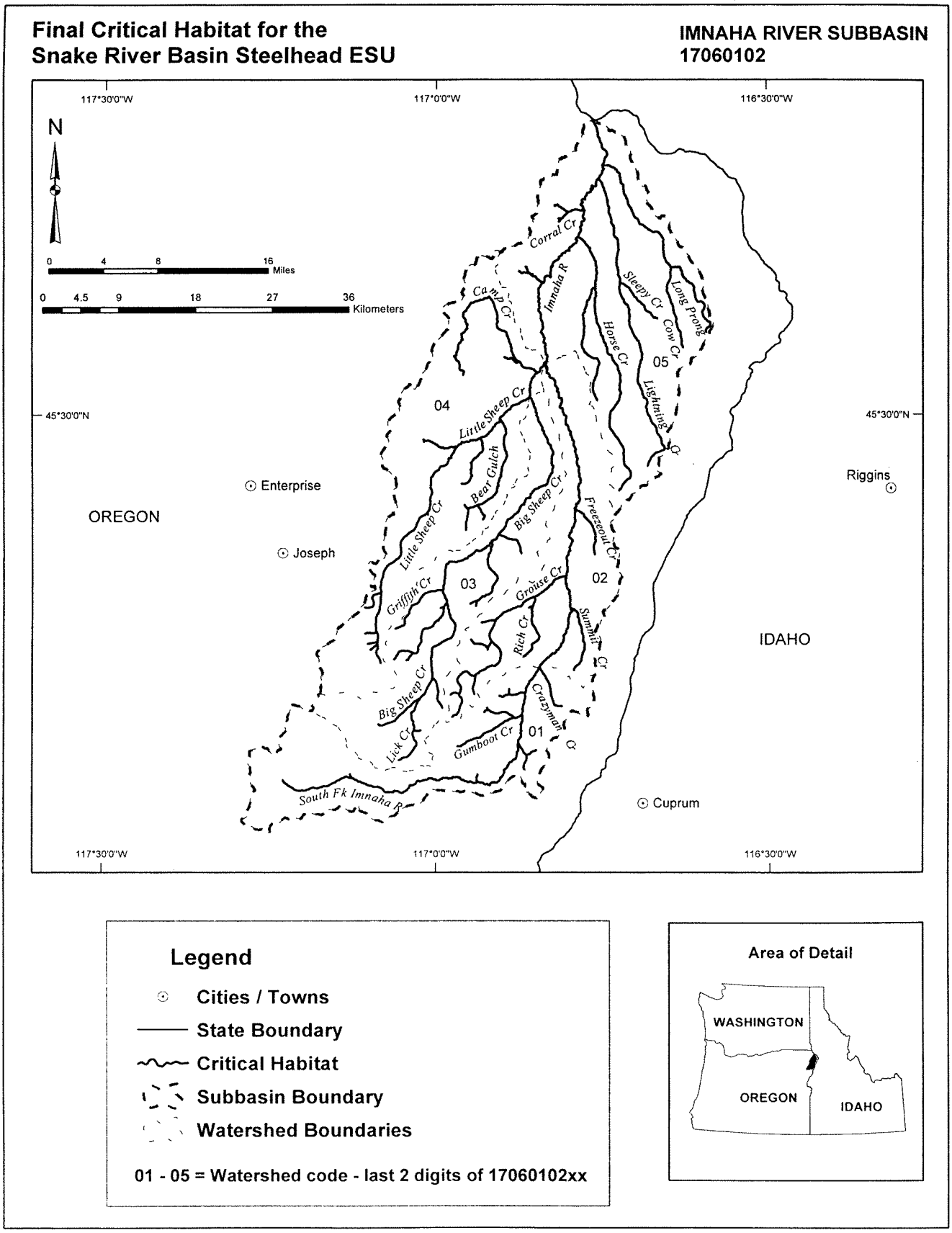
Legend
Cities / Towns
Dams
State Boundary
Critical Habitat
Subbasin Boundary
Watershed Boundaries
01 - 02, 04 = Watershed code - last 2 digits of 17060101xx
Area of Detail
WASHINGTON
OREGON
IDAHO


Final Critical Habitat for the
Snake River Basin Steelhead ESU
IMNAHA RIVER SUBBASIN
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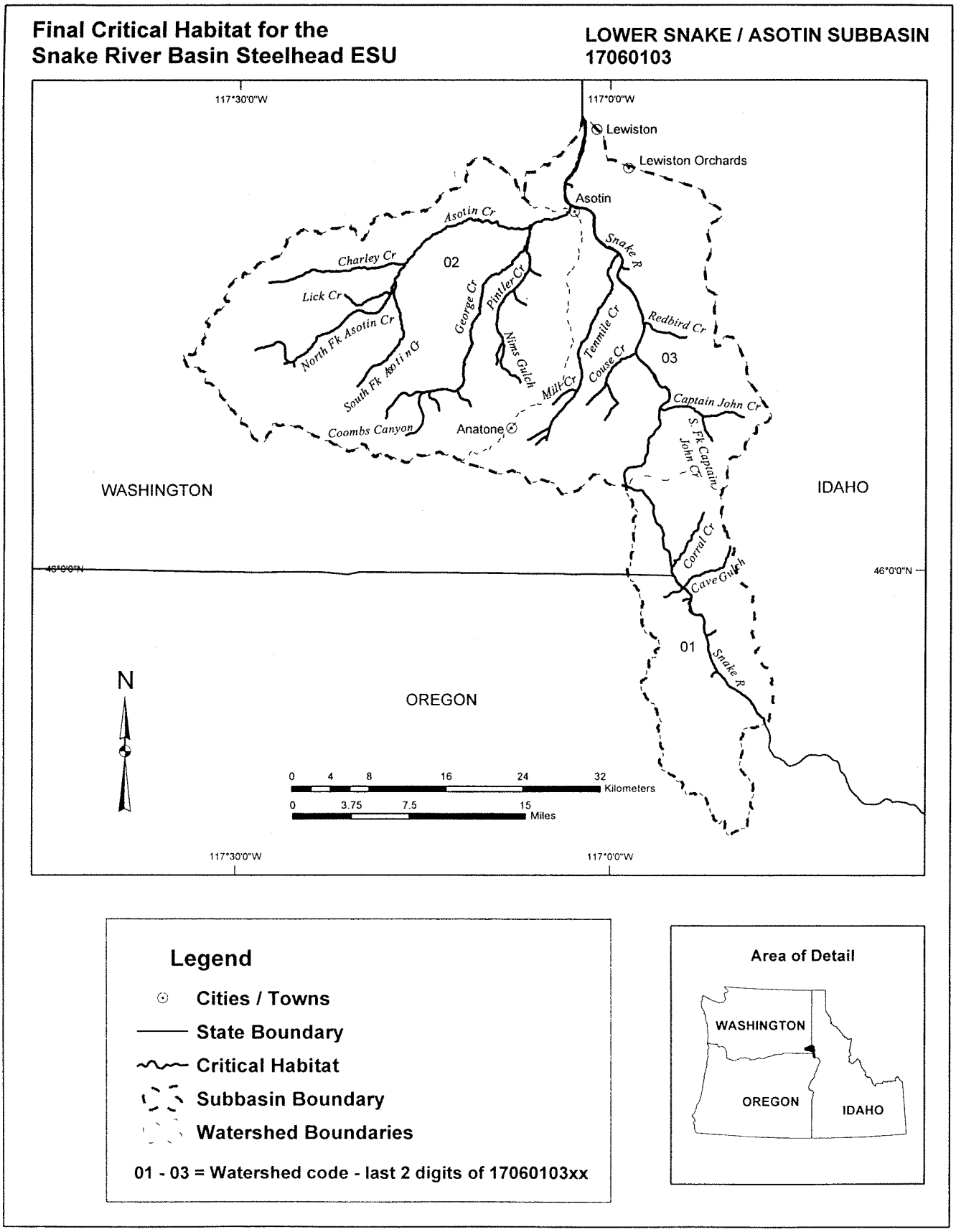
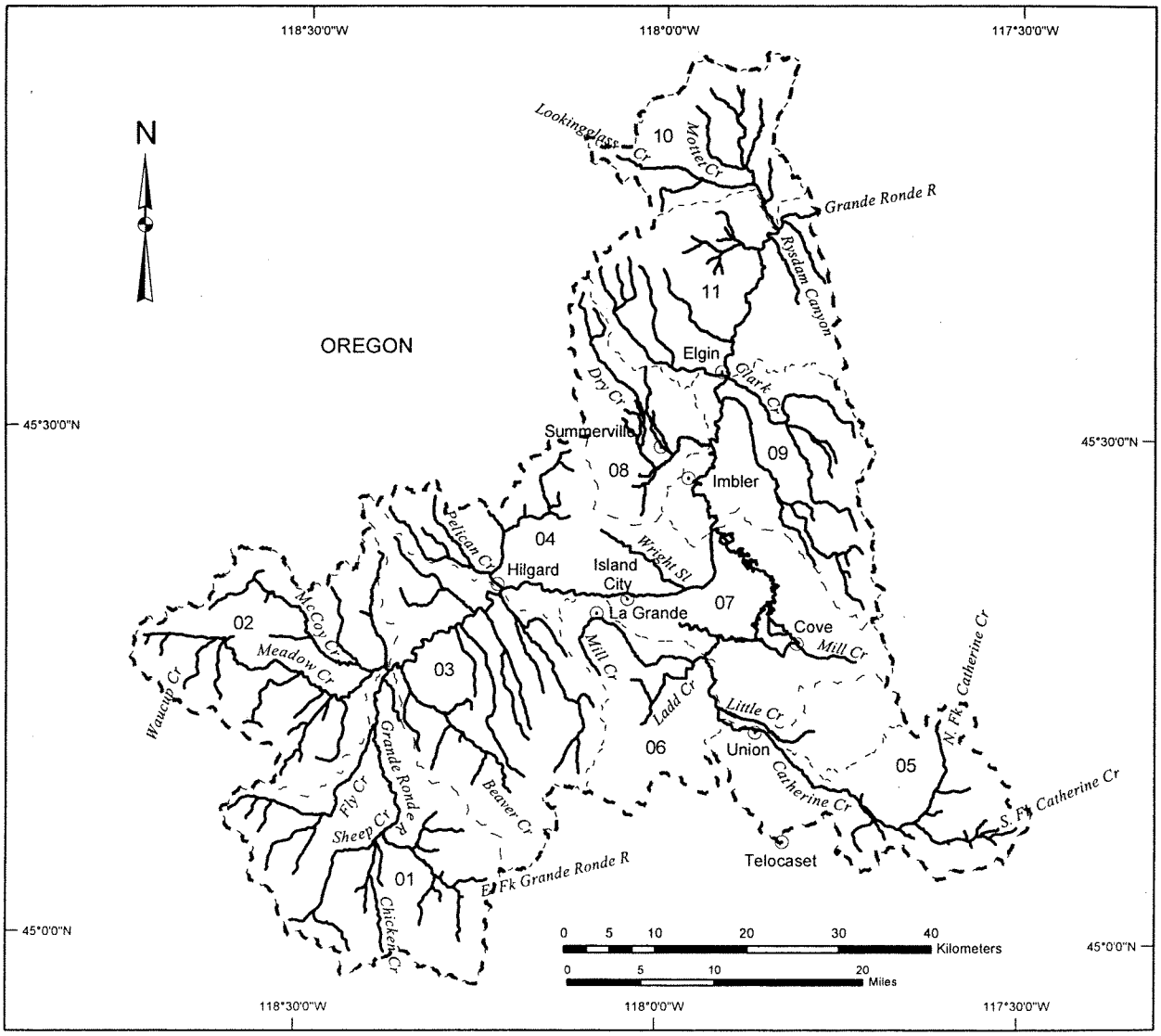
Sleepy Cr
Long Prong
Cow Cr
Horse Cr
Lightning Cr
Little Sheep Cr
Beat Gulch
Big Sheep Cr
Freezeout Cr
Griffith Cr
Grouse Cr
Rich Cr
Summit Cr
Crazyman Cr
Lick Cr
Gumboot Cr
South Fk Imnaha R
01
02
03
04
05
Enterprise
Joseph
Riggins
Cuprum
OREGON
IDAHO
Legend
Cities / Towns
State Boundary
Critical Habitat
Subbasin Boundary
Watershed Boundaries
01 - 05 = Watershed code - last 2 digits of 17060102xx
Area of Detail
WASHINGTON
OREGON
IDAHO


Final Critical Habitat for the
Snake River Basin Steelhead ESU
LOWER SNAKE / ASOTIN SUBBASIN
17060103
117°30'0"W
117°0'0"W
Lewiston
Lewiston Orchards
Asotin
Asotin Cr
Snake R
Charley Cr
02
Lick Cr
George Cr
Pintler Cr
North Fk Asotin Cr
South Fk Asotin Cr
Nims Gulch
Tenmile Cr
Redbird Cr
03
Mill Cr
Couse Cr
Captain John Cr
Coombs Canyon
Anatone
S. Fk Captain John Cr
WASHINGTON
IDAHO
Corral Cr
46°0'0"N
Cave Gulch
01
Snake R
N
OREGON
0 4 8 16 24 32 Kilometers
0 3.75 7.5 15 Miles
Legend
Cities / Towns
State Boundary
Critical Habitat
Subbasin Boundary
Watershed Boundaries
01 - 03 = Watershed code - last 2 digits of 17060103xx
Area of Detail
WASHINGTON
OREGON
IDAHO

Final Critical Habitat for the Snake River Basin Steelhead ESU

UPPER GRANDE RONDE RIVER SUBBASIN 17060104

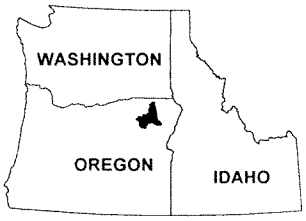


Legend

- Cities / Towns
- State Boundary
- Critical Habitat
- Subbasin Boundary
- Watershed Boundaries

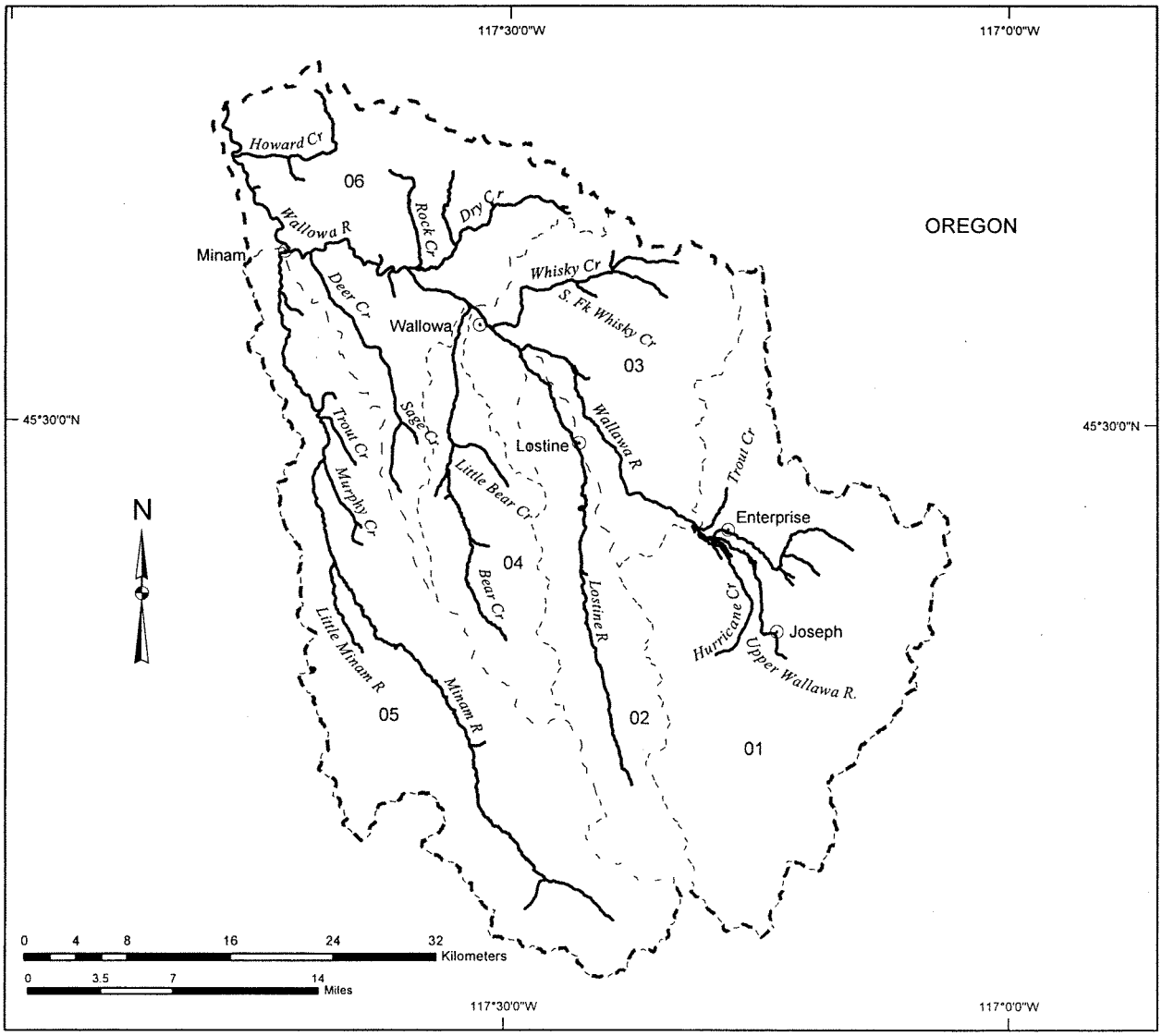
04, 08 - 11 = Watershed code - last 2 digits of 17060104xx

Area of Detail



Final Critical Habitat for the Snake River Basin Steelhead ESU

WALLOWA RIVER SUBBASIN 17060105

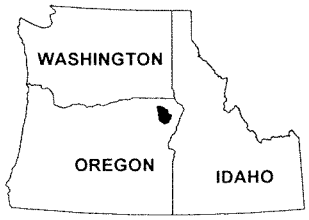


Legend

- Cities / Towns
- Critical Habitat
- Subbasin Boundaries
- Watershed Boundaries

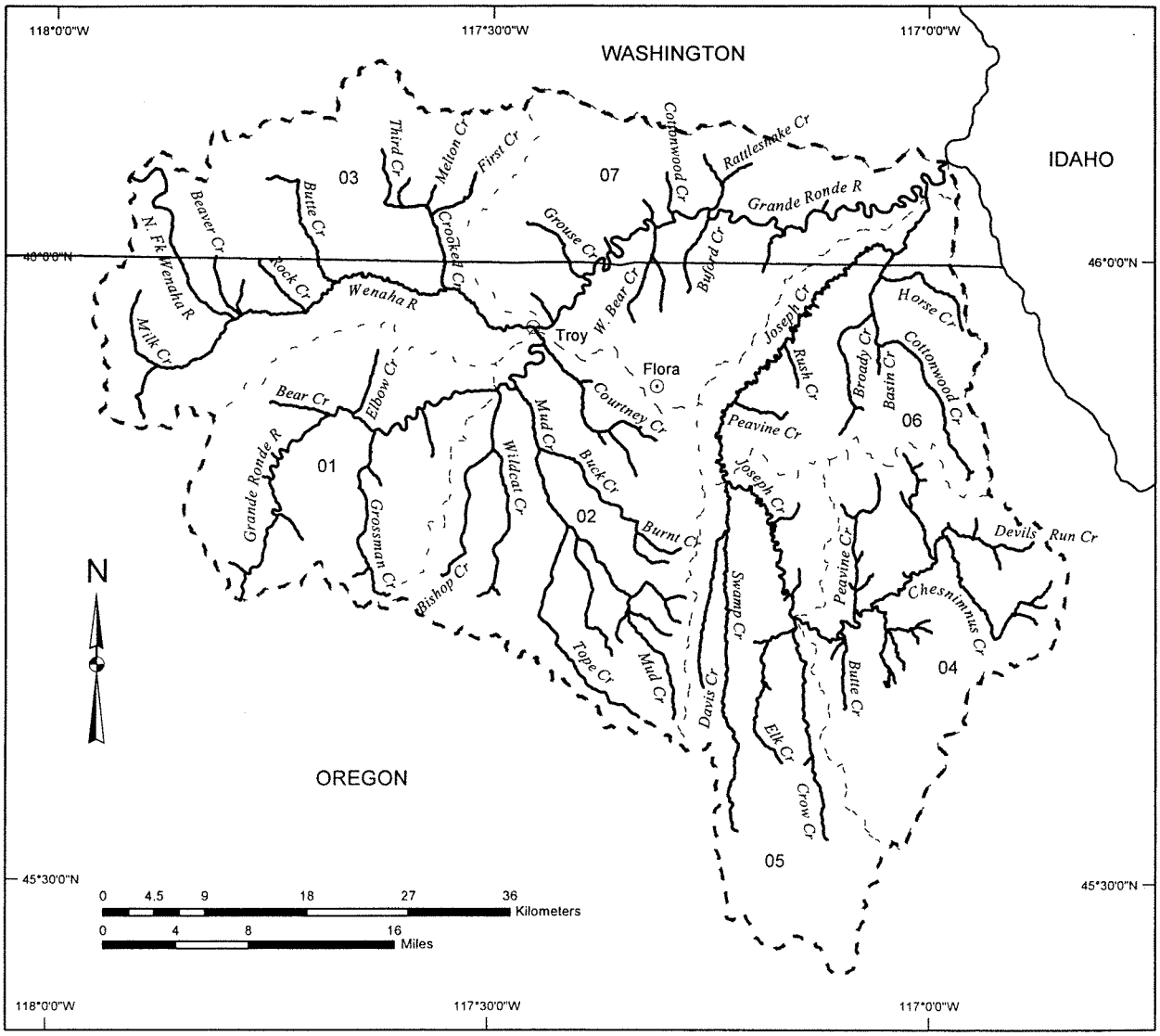
01 - 06 = Watershed code - last 2 digits of 17060105xx

Area of Detail



Final Critical Habitat for the Snake River Basin Steelhead ESU

LOWER GRANDE RONDE SUBBASIN 17060106

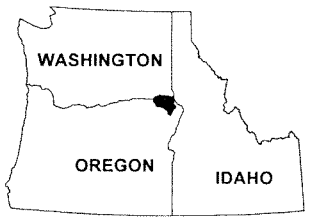


Legend

- Cities / Towns
- State Boundary
- Critical Habitat
- Subbasin Boundary
- Watershed Boundaries

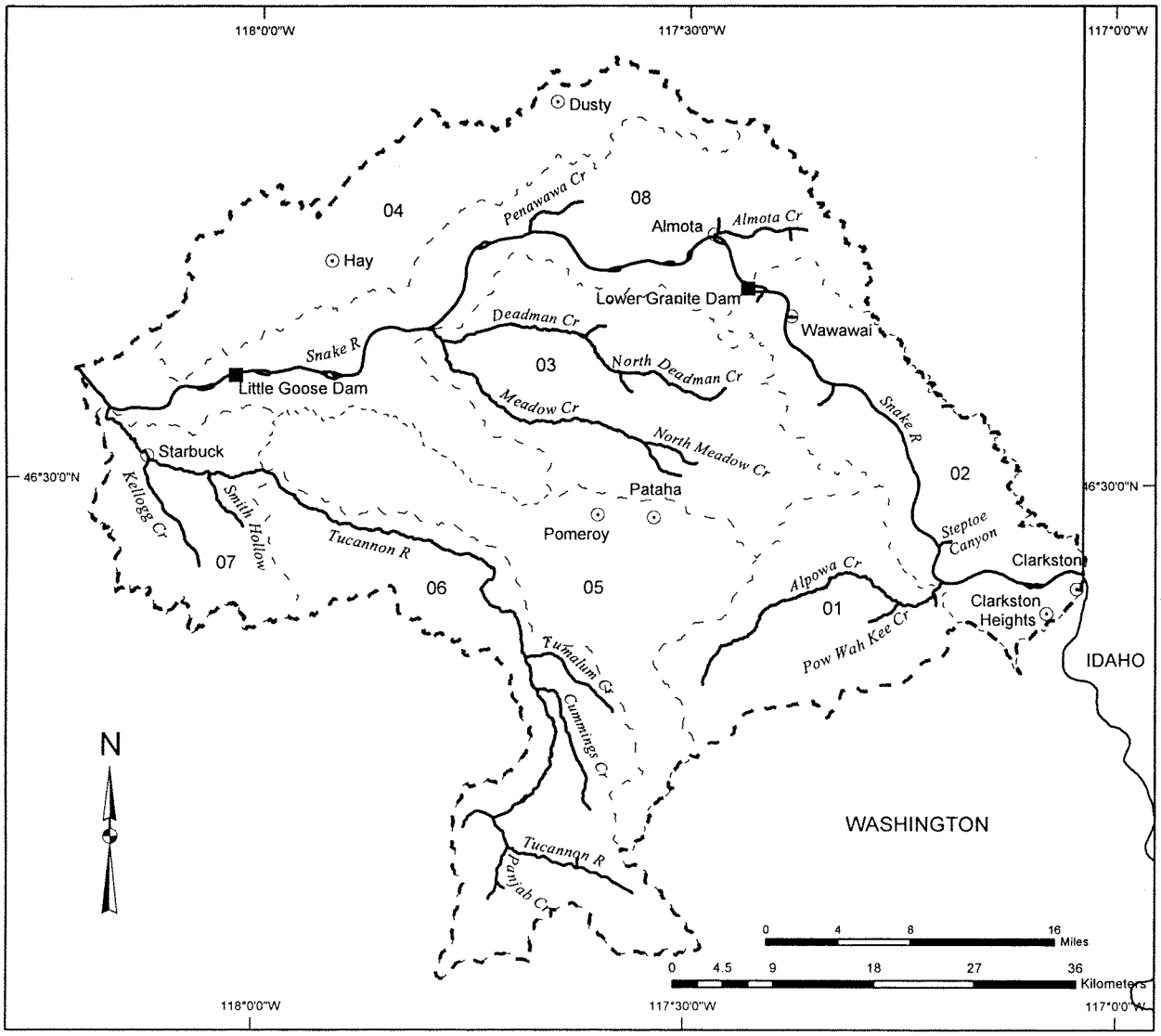
01 - 07 = Watershed code - last 2 digits of 17060106xx

Area of Detail



Final Critical Habitat for the Snake River Basin Steelhead ESU

LOWER SNAKE / TUCANNON SUBBASIN 17060107



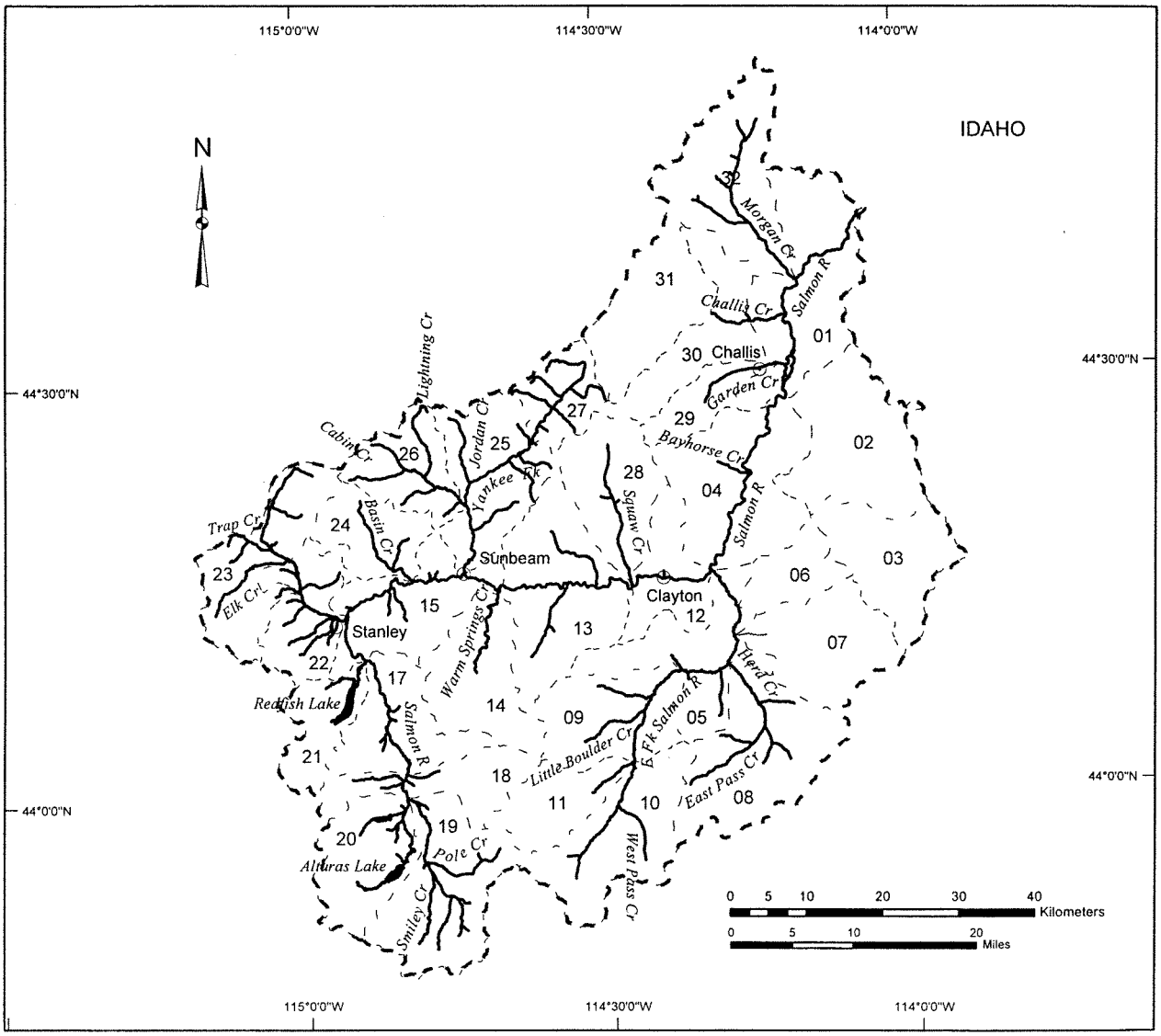
Legend

- Cities / Towns
- Dams
- State Boundary
- Critical Habitat
- Subbasin Boundary
- Watershed Boundaries

01 - 08 = Watershed code - last 2 digits of 17060107xx

Final Critical Habitat for the Snake River Basin Steelhead ESU

UPPER SALMON SUBBASIN 17060201

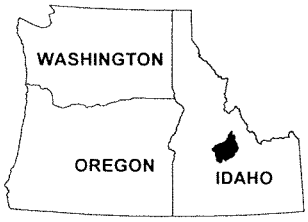


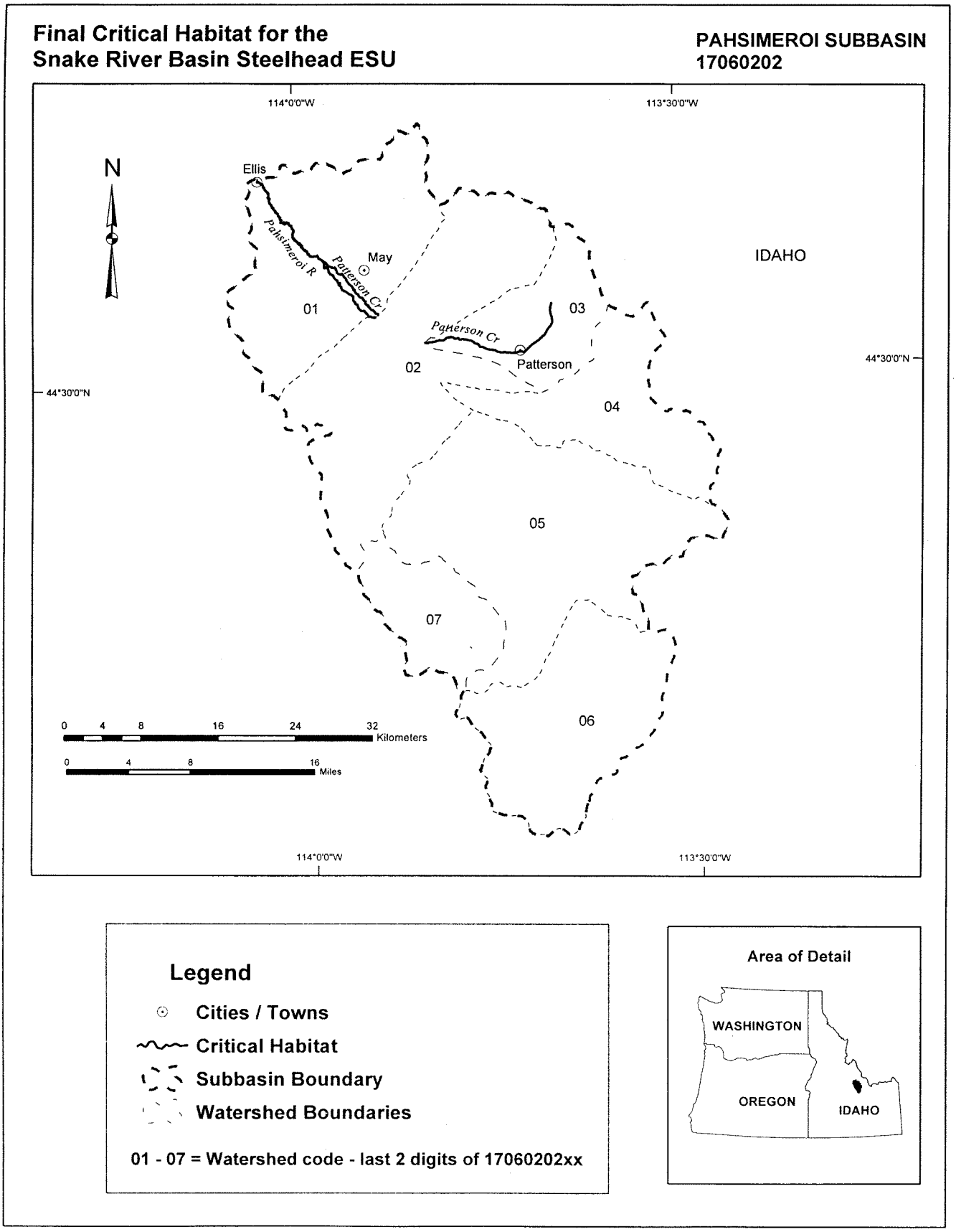
Legend

- Cities / Towns
- Critical Habitat
- Subbasin Boundary
- Watershed Boundaries

01 - 32 = Watershed code - last 2 digits of 17060201xx

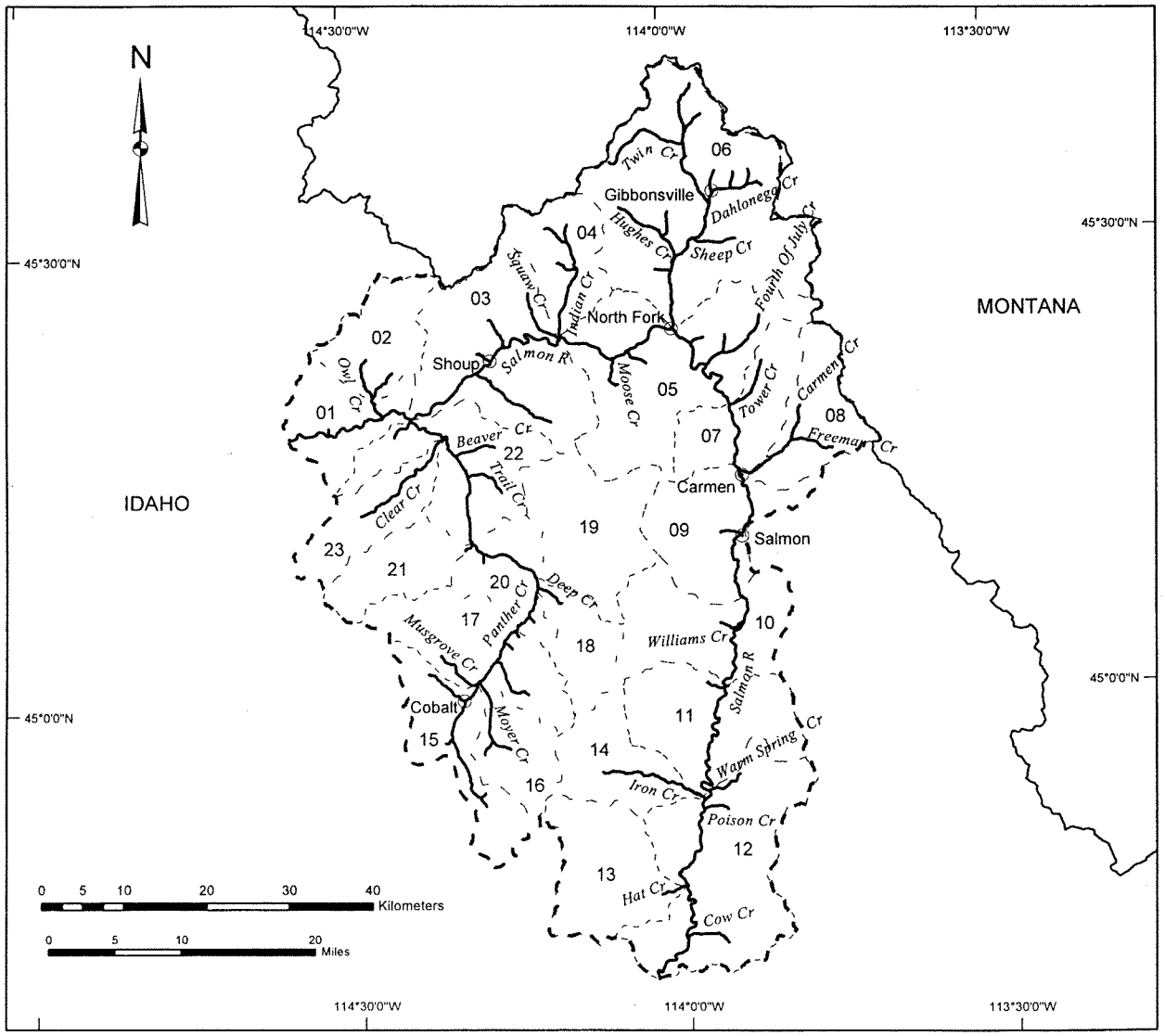
Area of Detail




Final Critical Habitat for the
Snake River Basin Steelhead ESU
PAHSIMEROI SUBBASIN
17060202
114°0'0"W
113°30'0"W
44°30'0"N
N
Ellis
May
Patterson
Pahsimeroi R
Patterson Cr
Patterson Cr
IDAHO
01
02
03
04
05
06
07
0 4 8 16 24 32 Kilometers
0 4 8 16 Miles
Legend
Cities / Towns
Critical Habitat
Subbasin Boundary
Watershed Boundaries
01 - 07 = Watershed code - last 2 digits of 17060202xx
Area of Detail
WASHINGTON
OREGON
IDAHO

Final Critical Habitat for the Snake River Basin Steelhead ESU

MIDDLE SALMON-PANTHER SUBBASIN 17060203

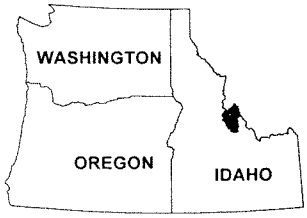


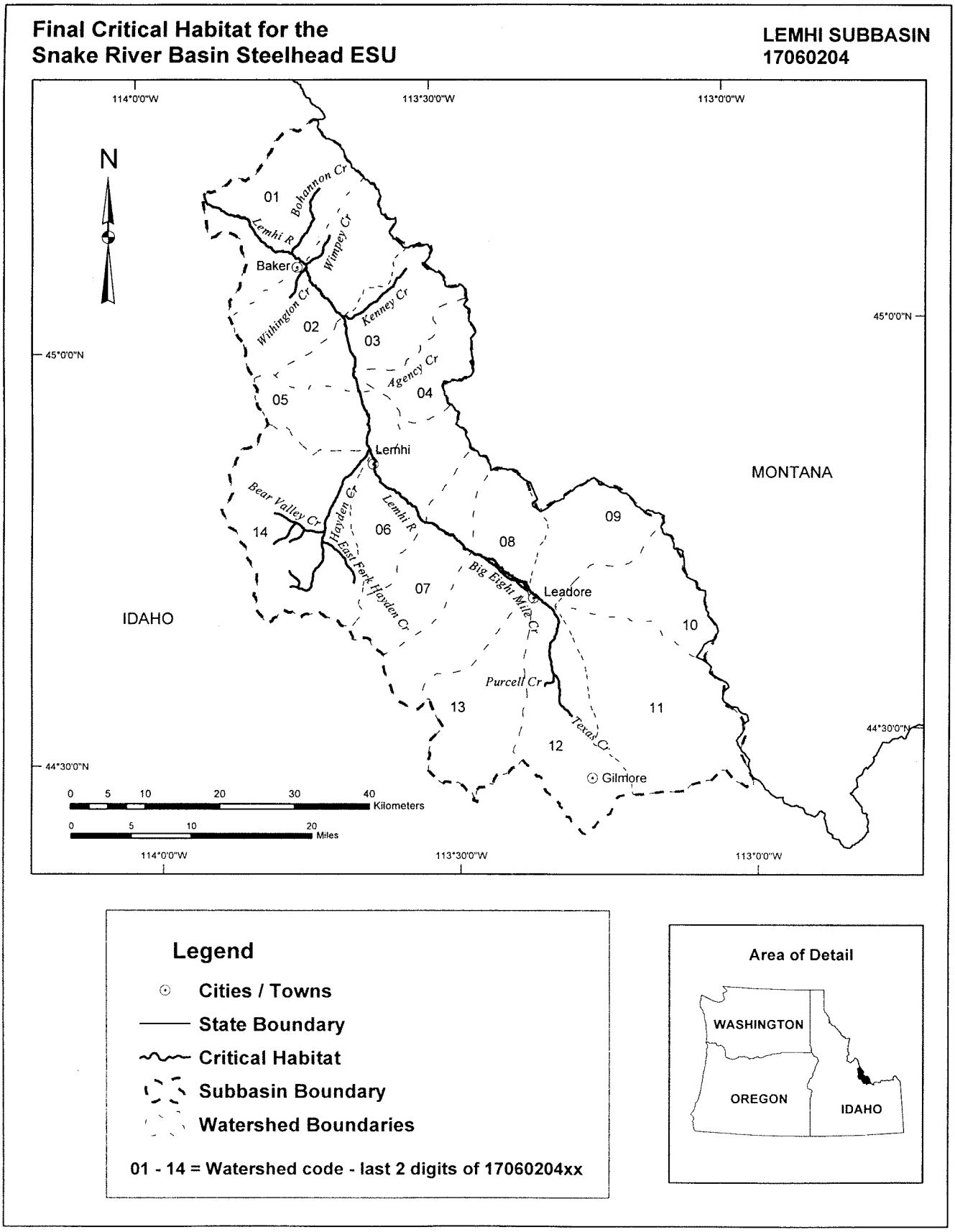
Legend

- Cities / Towns
- State Boundary
- Critical Habitat
- Subbasin Boundary
- Watershed Boundaries

01 - 23 = Watershed code - last 2 digits of 17060203xx

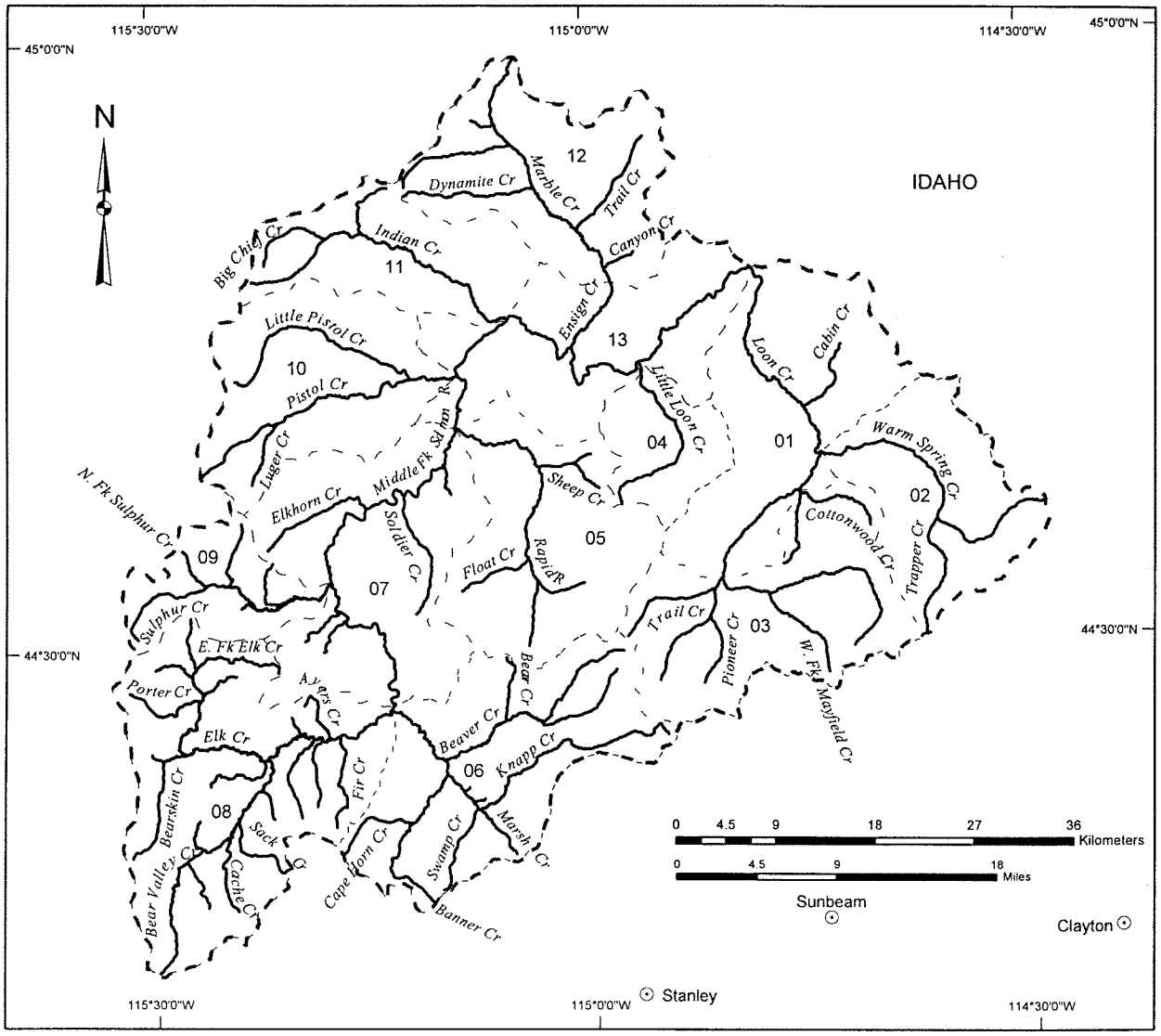
Area of Detail




Final Critical Habitat for the
Snake River Basin Steelhead ESU
LEMHI SUBBASIN
17060204
114°0'0"W
113°30'0"W
113°0'0"W
45°0'0"N
44°30'0"N
N
01
Bohannon Cr
Lemhi R
Wimpey Cr
Baker
Withington Cr
02
Kenney Cr
03
Agency Cr
04
05
Lemhi
MONTANA
Bear Valley Cr
Hayden Cr
Lemhi R
14
06
08
09
East Fork Hayden Cr
07
Big Eight Mile Cr
Leadore
IDAHO
10
Purcell Cr
13
11
Texas Cr
12
Gilmore
0 5 10 20 30 40 Kilometers
0 5 10 20 Miles
Legend
Cities / Towns
State Boundary
Critical Habitat
Subbasin Boundary
Watershed Boundaries
01 - 14 = Watershed code - last 2 digits of 17060204xx
Area of Detail
WASHINGTON
OREGON
IDAHO

Final Critical Habitat for the Snake River Basin Steelhead ESU

UPPER MIDDLE FORK SALMON SUBBASIN 17060205

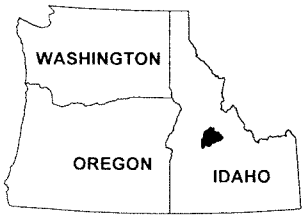


Legend

- Cities / Towns
- Critical Habitat
- Subbasin Boundary
- Watershed Boundaries

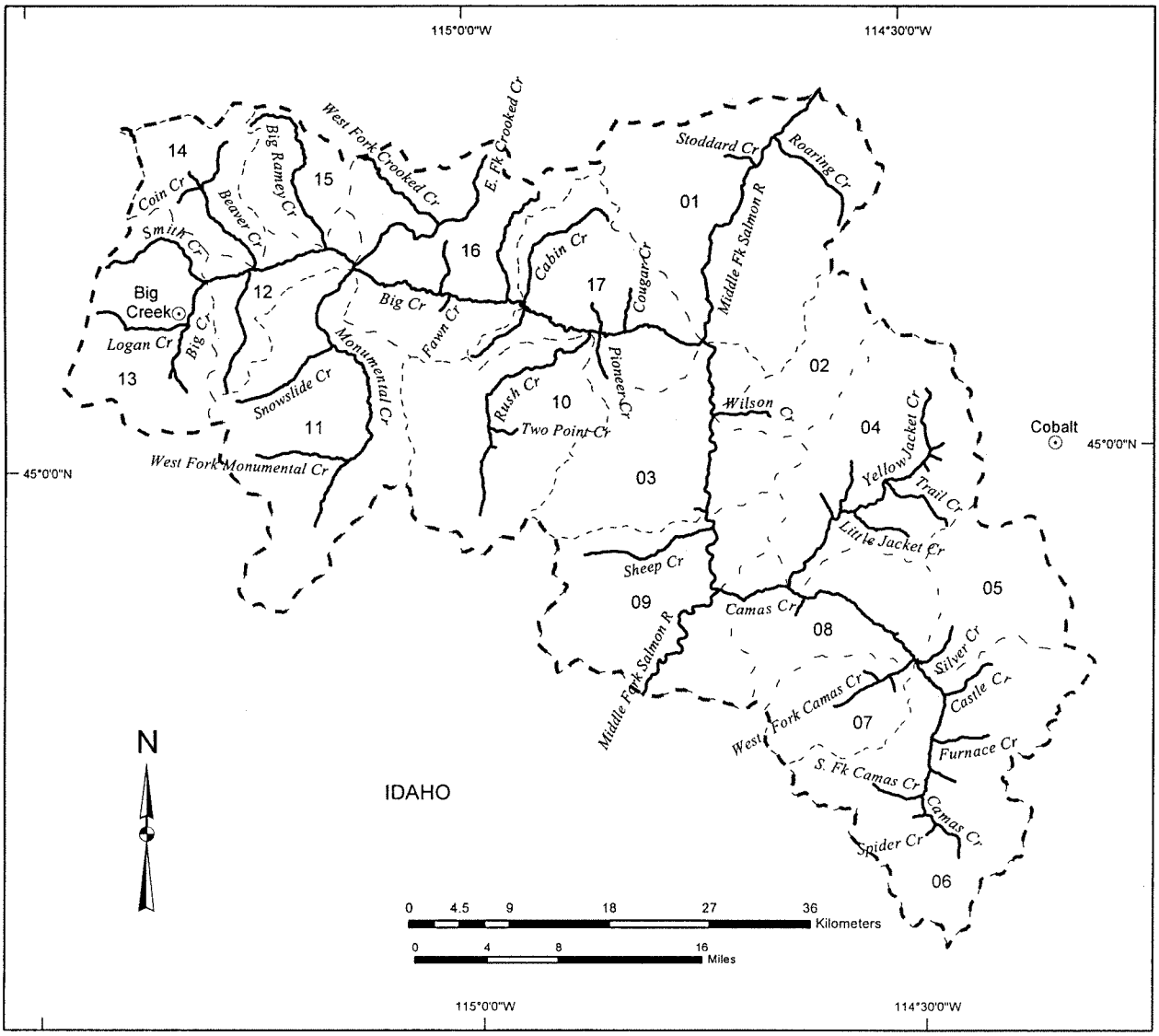
01 - 13 = Watershed code - last 2 digits of 17060205xx

Area of Detail



Final Critical Habitat for the Snake River Basin Steelhead ESU

LOWER MIDDLE FORK SALMON SUBBASIN 17060206

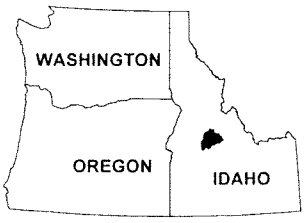


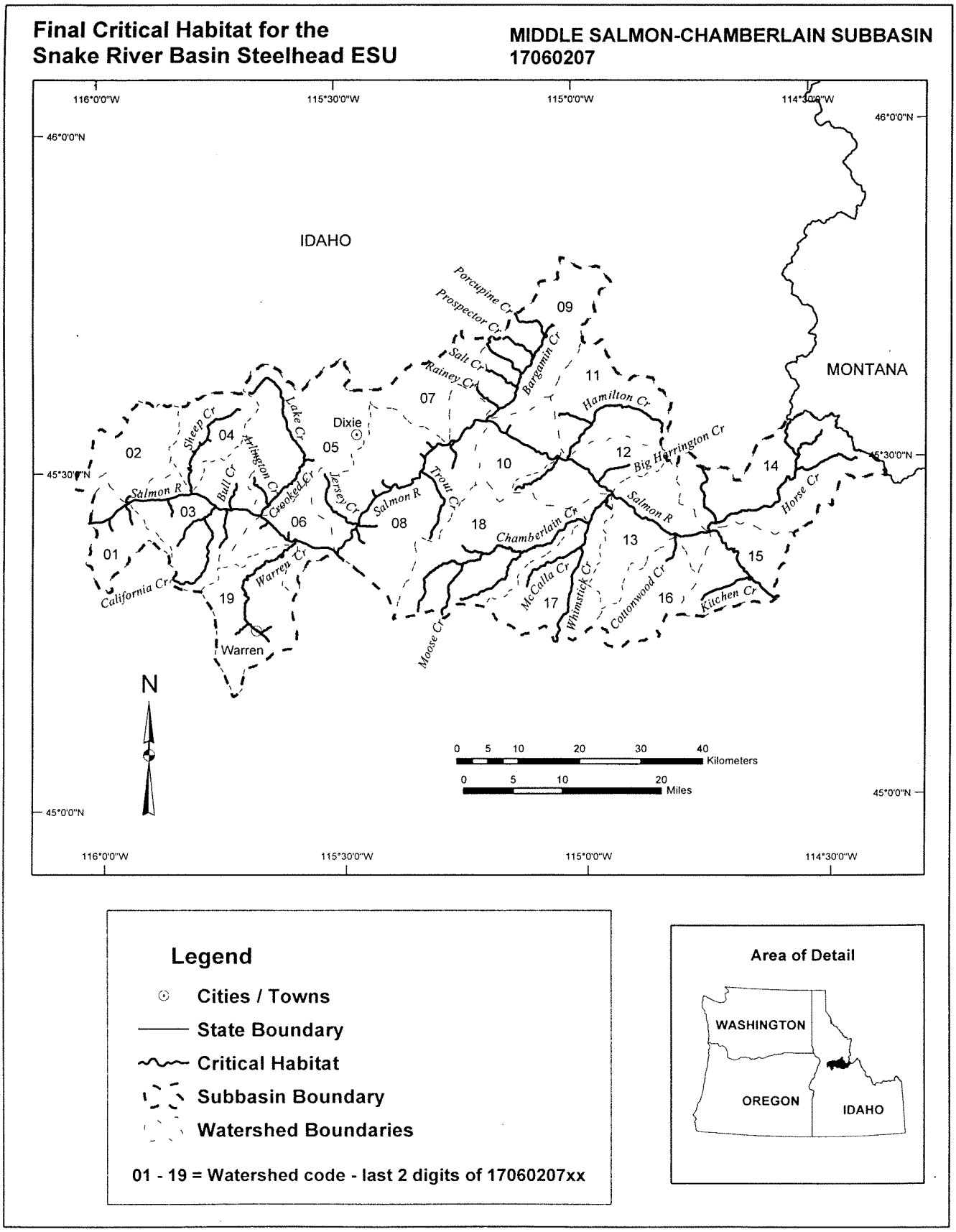
Legend

- Cities / Towns
- Critical Habitat
- Subbasin Boundary
- Watershed Boundaries

01 - 17 = Watershed code - last 2 digits of 17060206xx

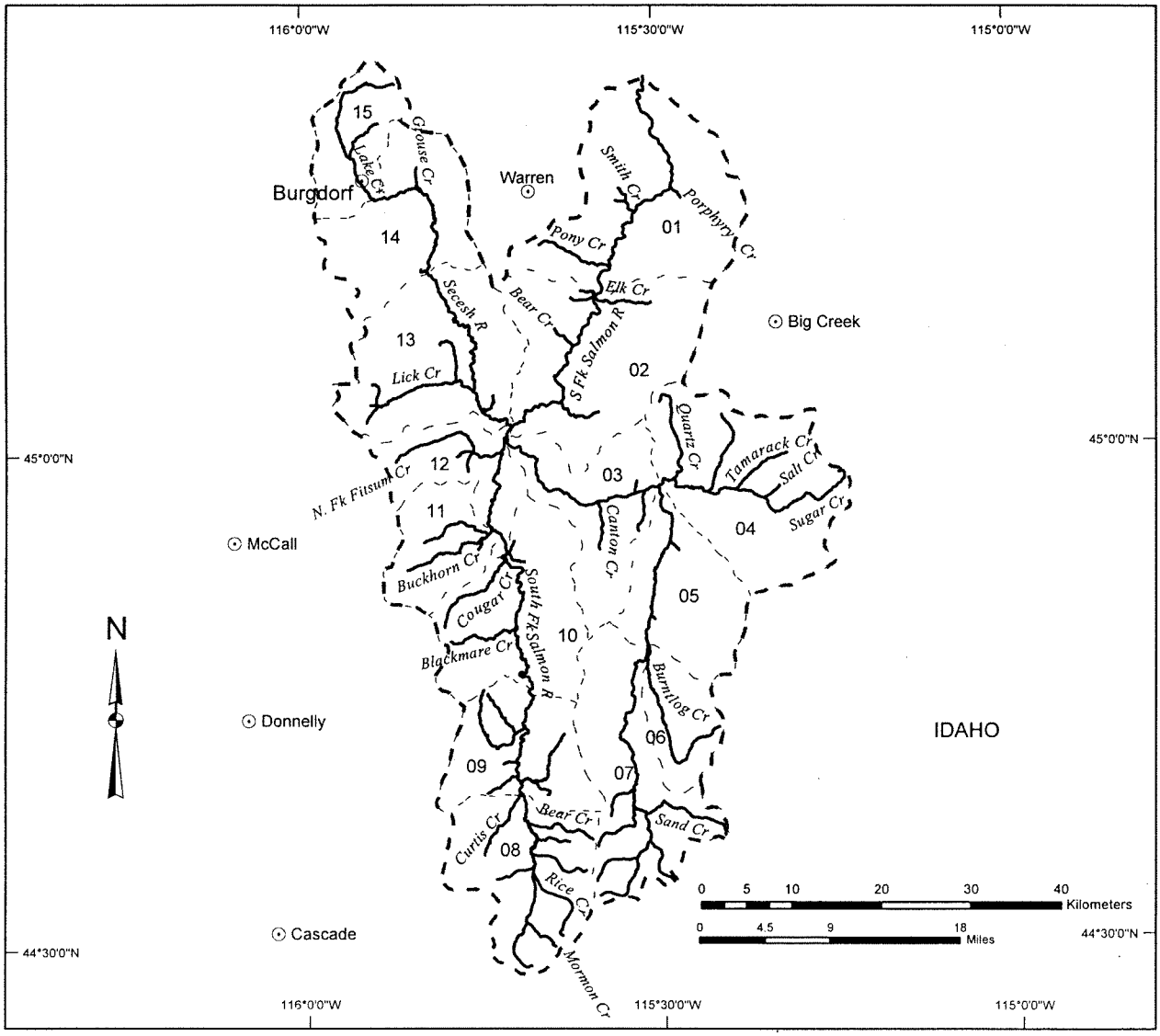
Area of Detail




Final Critical Habitat for the
Snake River Basin Steelhead ESU
MIDDLE SALMON-CHAMBERLAIN SUBBASIN
17060207
116°0'0"W
115°30'0"W
115°0'0"W
114°30'0"W
46°0'0"N
45°30'0"N
45°0'0"N
IDAHO
MONTANA
Porcupine Cr
Prospector Cr
Salt Cr
Rainey Cr
Bargamin Cr
Hamilton Cr
Big Herrington Cr
Sheep Cr
Lake Cr
Dixie
Arrington Cr
Bull Cr
Crooked Cr
Jersey Cr
Salmon R
Trout Cr
Chamberlain Cr
Horse Cr
California Cr
Warren Cr
Warren
Moose Cr
McCalla Cr
Whimstick Cr
Cottonwood Cr
Kitchen Cr
01
02
03
04
05
06
07
08
09
10
11
12
13
14
15
16
17
18
19
N
0 5 10 20 30 40 Kilometers
0 5 10 20 Miles
Legend
Cities / Towns
State Boundary
Critical Habitat
Subbasin Boundary
Watershed Boundaries
01 - 19 = Watershed code - last 2 digits of 17060207xx
Area of Detail
WASHINGTON
OREGON
IDAHO

Final Critical Habitat for the Snake River Basin Steelhead ESU

SOUTH FORK SALMON SUBBASIN 17060208

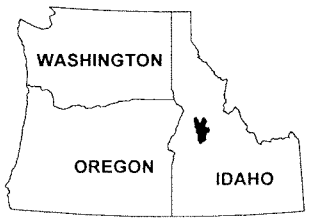


Legend

- Cities / Towns
- Critical Habitat
- Subbasin Boundary
- Watershed Boundaries

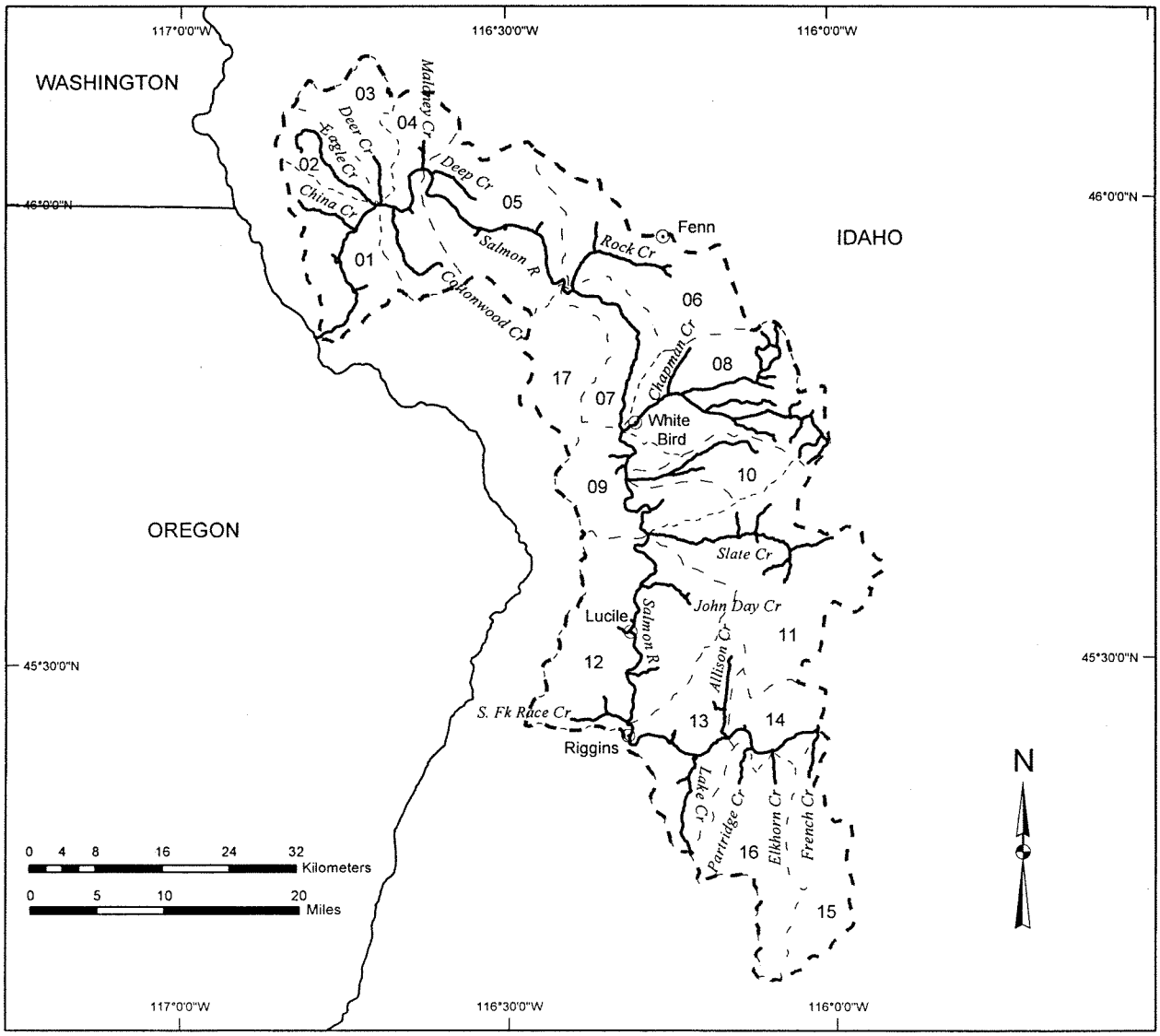
01 - 15 = Watershed code - last 2 digits of 17060208xx

Area of Detail



Final Critical Habitat for the Snake River Basin Steelhead ESU

LOWER SALMON SUBBASIN 17060209

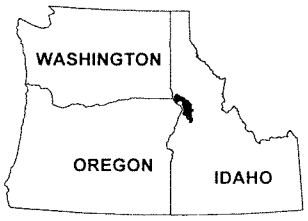


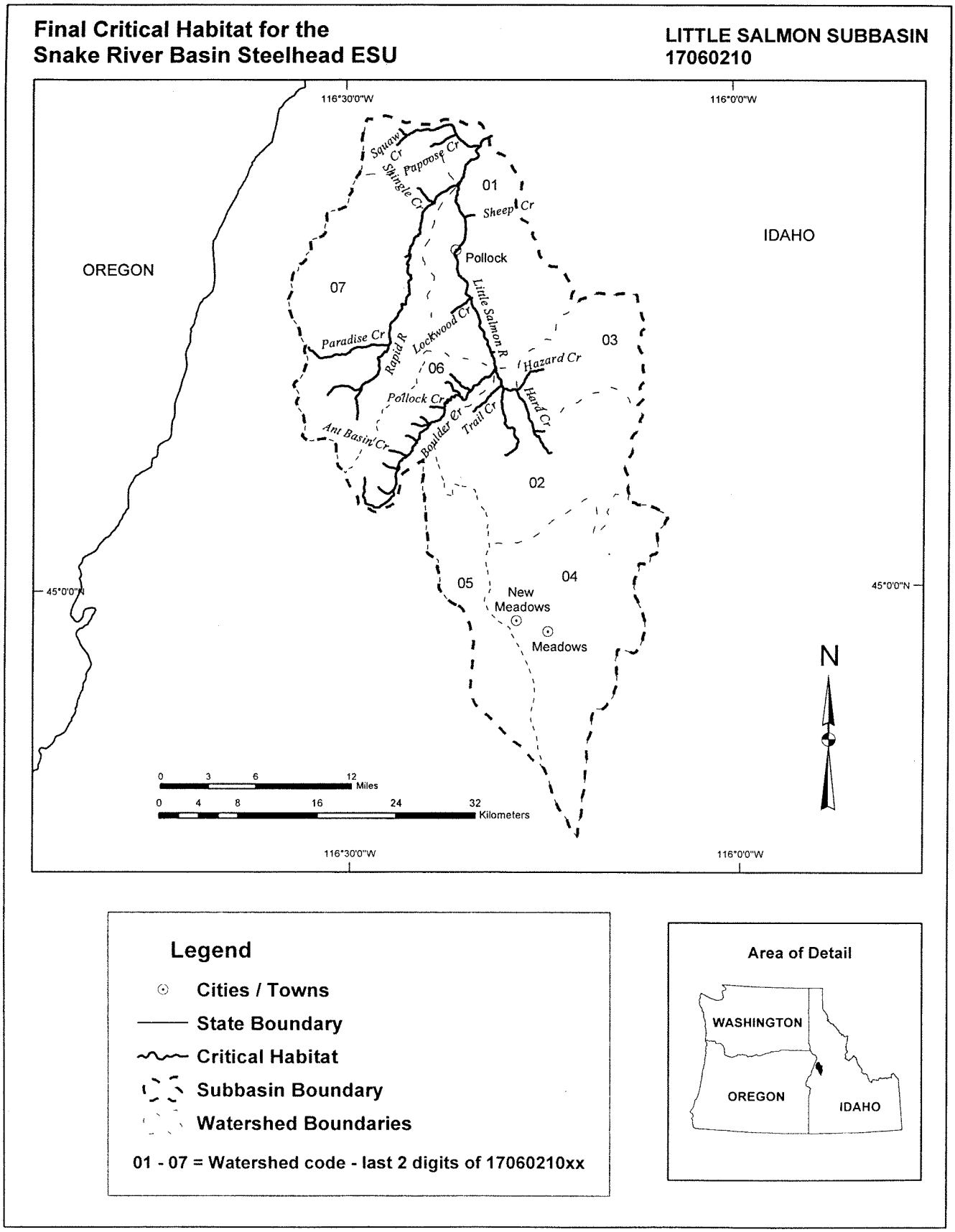
Legend

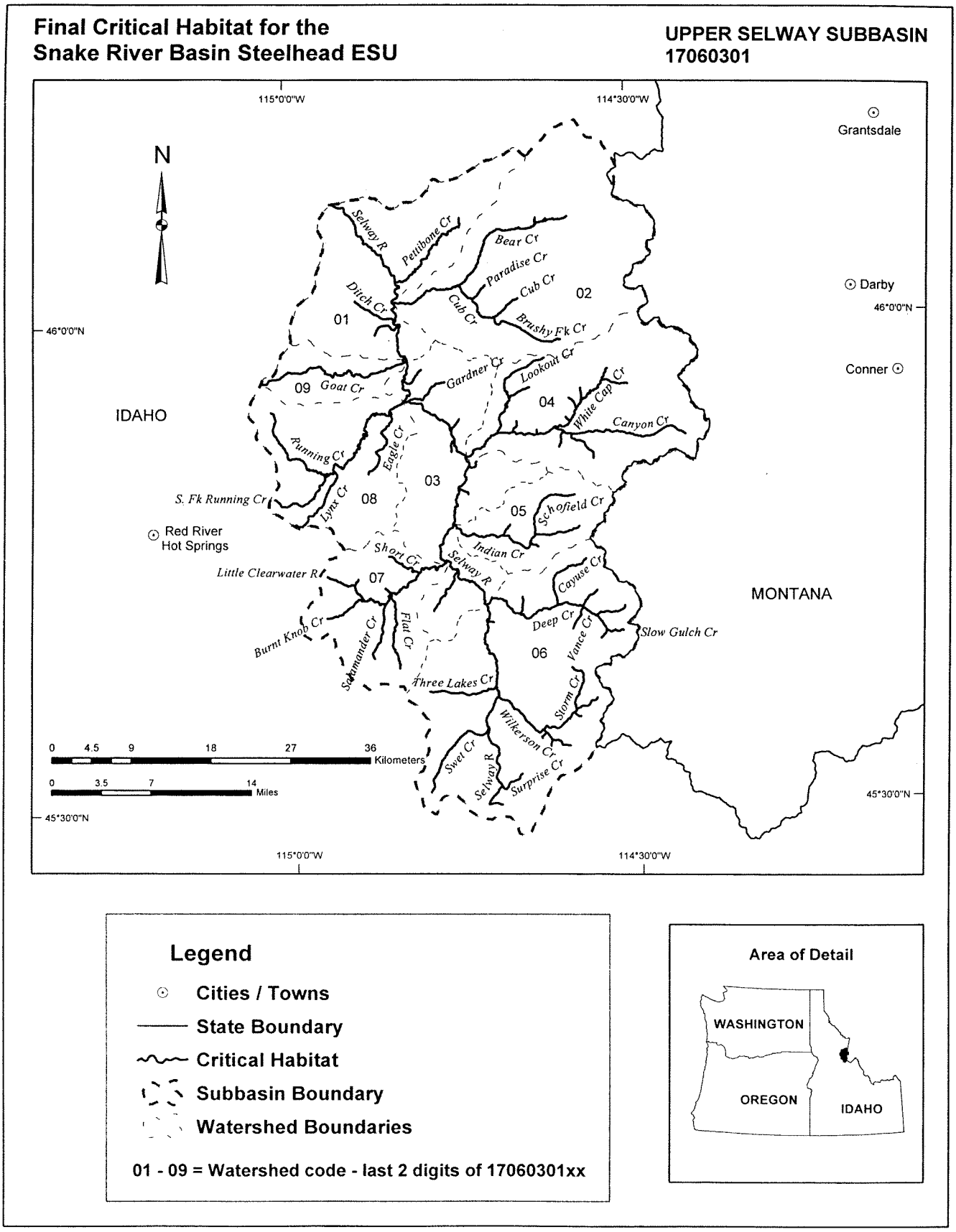
- Cities / Towns
- State Boundary
- Critical Habitat
- Subbasin Boundary
- Watershed Boundaries

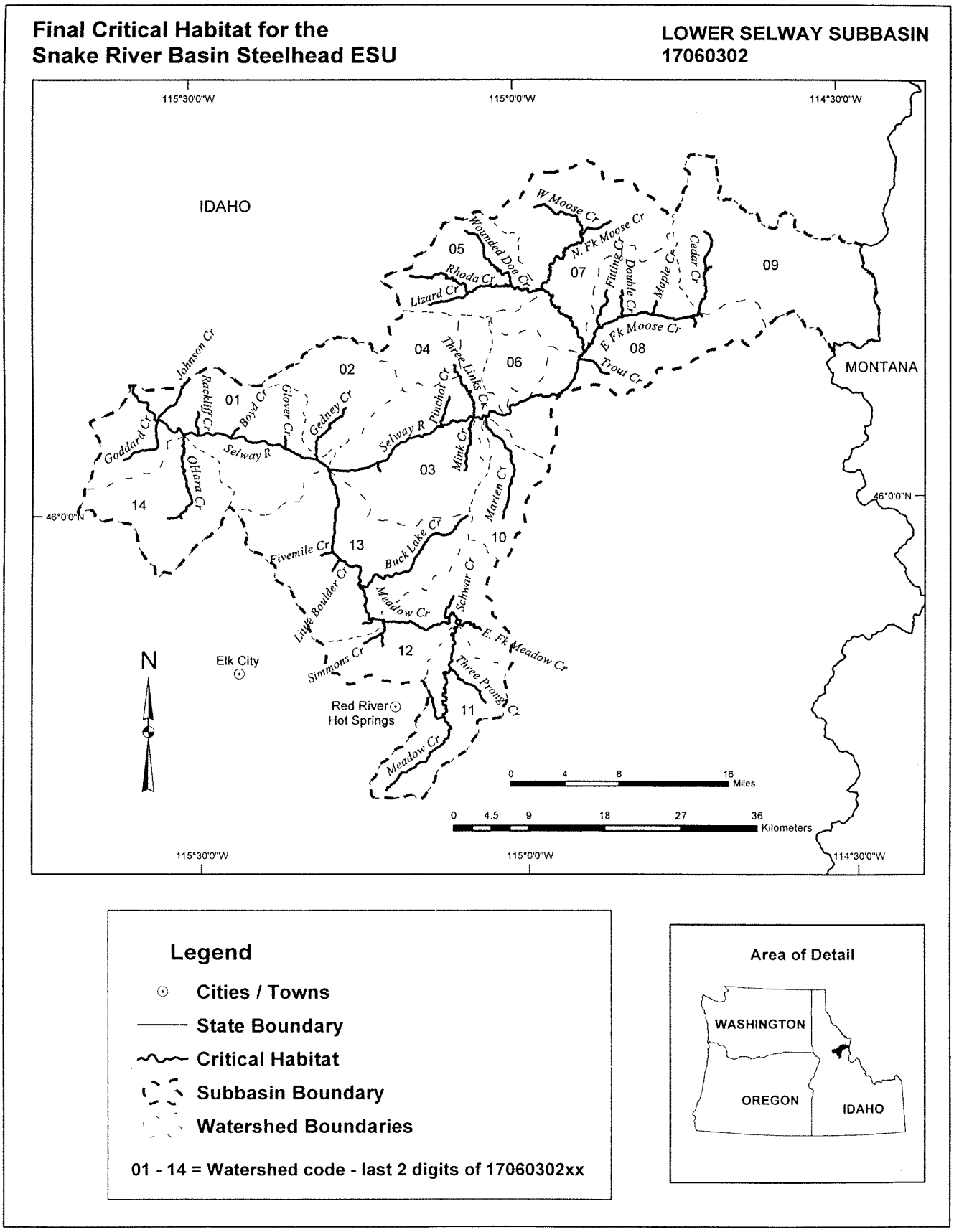
01 - 17 = Watershed code - last 2 digits of 17060209xx

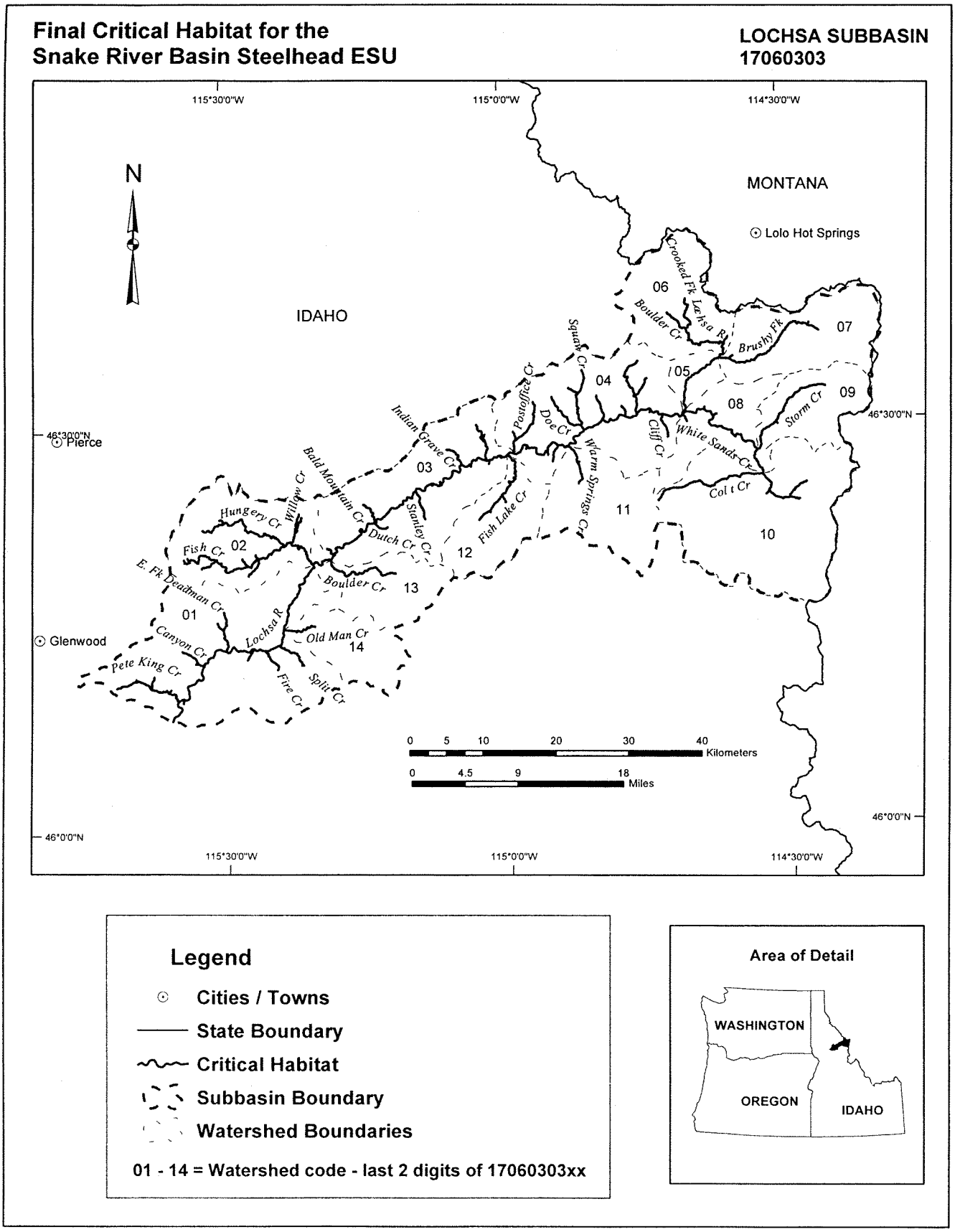
Area of Detail




Final Critical Habitat for the
Snake River Basin Steelhead ESU
LITTLE SALMON SUBBASIN
17060210
116°30'0"W
116°0'0"W
45°0'0"N
OREGON
IDAHO
Squaw Cr
Papoose Cr
Shingle Cr
Sheep Cr
Pollock
Little Salmon R
Lockwood Cr
Paradise Cr
Rapid R
Hazard Cr
Hard Cr
Pollock Cr
Boulder Cr
Trail Cr
Ant Basin Cr
01
02
03
04
05
06
07
New Meadows
Meadows
N
0 3 6 12 Miles
0 4 8 16 24 32 Kilometers
Legend
Cities / Towns
State Boundary
Critical Habitat
Subbasin Boundary
Watershed Boundaries
01 - 07 = Watershed code - last 2 digits of 17060210xx
Area of Detail
WASHINGTON
OREGON
IDAHO

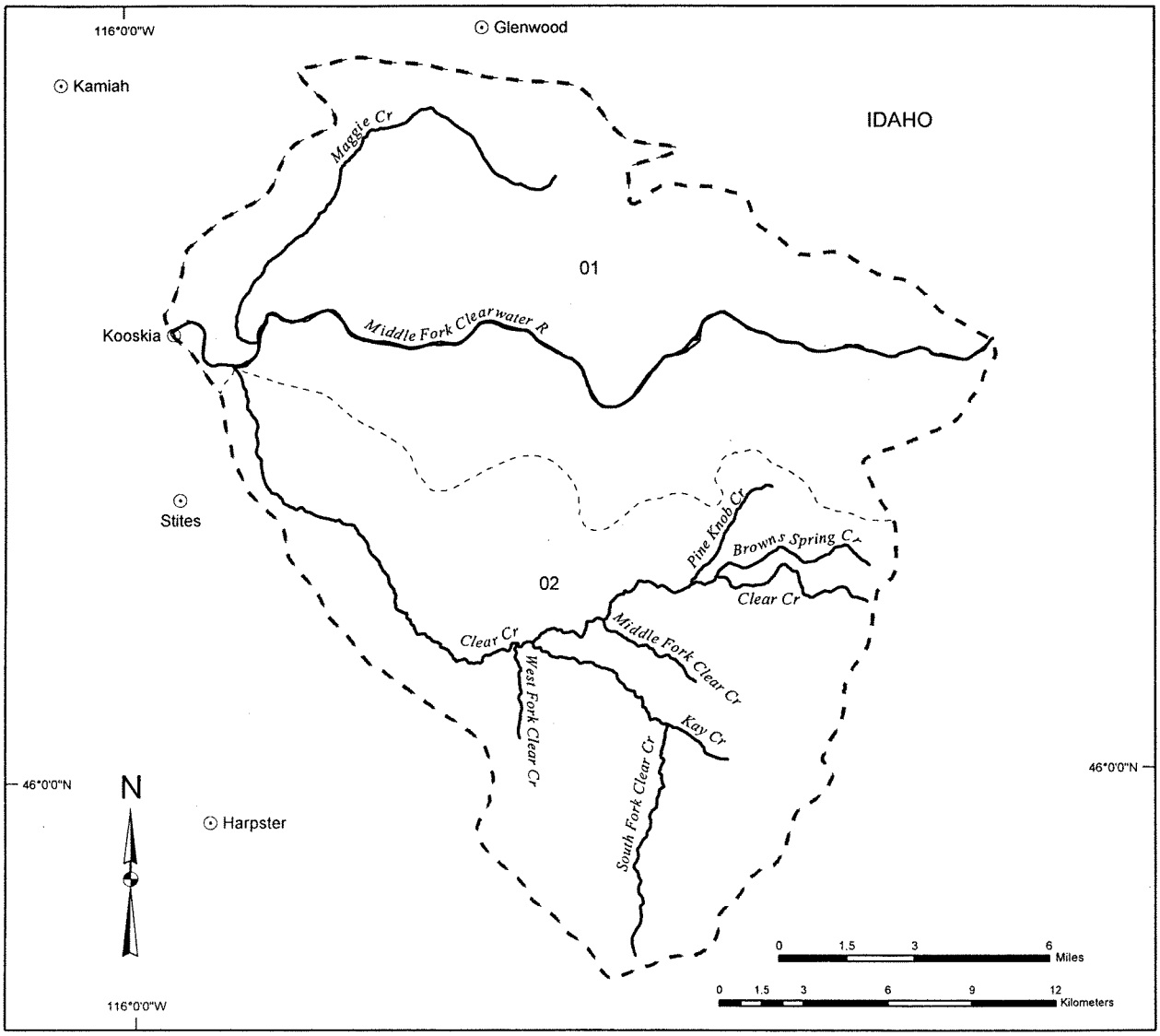

Final Critical Habitat for the
Snake River Basin Steelhead ESU
UPPER SELWAY SUBBASIN
17060301
115°0'0"W
114°30'0"W
46°0'0"N
45°30'0"N
N
Grantsdale
Darby
Conner
IDAHO
MONTANA
Red River
Hot Springs
Selway R
Petitbone Cr
Bear Cr
Paradise Cr
Cub Cr
Brushy Fk Cr
Ditch Cr
Gardner Cr
Lookout Cr
White Cap Cr
Canyon Cr
Goat Cr
Running Cr
Eagle Cr
S. Fk Running Cr
Lynx Cr
Schofield Cr
Short Cr
Indian Cr
Little Clearwater R
Cayuse Cr
Deep Cr
Slow Gulch Cr
Burnt Knob Cr
Salamander Cr
Flat Cr
Vance Cr
Three Lakes Cr
Storm Cr
Wilkerson Cr
Swet Cr
Surprise Cr
01
02
03
04
05
06
07
08
09
0 4.5 9 18 27 36 Kilometers
0 3.5 7 14 Miles
Legend
Cities / Towns
State Boundary
Critical Habitat
Subbasin Boundary
Watershed Boundaries
01 - 09 = Watershed code - last 2 digits of 17060301xx
Area of Detail
WASHINGTON
OREGON
IDAHO


Final Critical Habitat for the
Snake River Basin Steelhead ESU
LOWER SELWAY SUBBASIN
17060302
115°30'0"W
115°0'0"W
114°30'0"W
46°0'0"N
IDAHO
MONTANA
W Moose Cr
N. Fk Moose Cr
Wounded Doe Cr
Rhoda Cr
Lizard Cr
Fitting Cr
Double Cr
Maple Cr
Cedar Cr
E. Fk Moose Cr
Trout Cr
Three Links Cr
Pinchot Cr
Johnson Cr
Racklift Cr
Boyd Cr
Glover Cr
Gedney Cr
Selway R
Goddard Cr
O'Hara Cr
Mink Cr
Marten Cr
Buck Lake Cr
Fivemile Cr
Little Boulder Cr
Meadow Cr
Schwar Cr
E. Fk Meadow Cr
Simmons Cr
Three Prong Cr
01
02
03
04
05
06
07
08
09
10
11
12
13
14
N
Elk City
Red River Hot Springs
0 4 8 16 Miles
0 4.5 9 18 27 36 Kilometers
Legend
Cities / Towns
State Boundary
Critical Habitat
Subbasin Boundary
Watershed Boundaries
01 - 14 = Watershed code - last 2 digits of 17060302xx
Area of Detail
WASHINGTON
OREGON
IDAHO


Final Critical Habitat for the
Snake River Basin Steelhead ESU
LOCHSA SUBBASIN
17060303
115°30'0"W
115°0'0"W
114°30'0"W
N
MONTANA
Lolo Hot Springs
IDAHO
Pierce
Glenwood
46°30'0"N
46°0'0"N
Crooked Fk
Lochsa R
Boulder Cr
Brushy Fk
Squaw Cr
Postoffice Cr
Doe Cr
Indian Grave Cr
Bald Mountain Cr
Willow Cr
Hungery Cr
Fish Cr
E. Fk Deadman Cr
Canyon Cr
Pete King Cr
Lochsa R
Dutch Cr
Stanley Cr
Fish Lake Cr
Warm Springs Cr
Cliff Cr
White Sands Cr
Storm Cr
Colt Cr
Boulder Cr
Old Man Cr
Fire Cr
Split Cr
01
02
03
04
05
06
07
08
09
10
11
12
13
14
0 5 10 20 30 40 Kilometers
0 4.5 9 18 Miles
Legend
Cities / Towns
State Boundary
Critical Habitat
Subbasin Boundary
Watershed Boundaries
01 - 14 = Watershed code - last 2 digits of 17060303xx
Area of Detail
WASHINGTON
OREGON
IDAHO

Final Critical Habitat for the Snake River Basin Steelhead ESU

MIDDLE FORK CLEARWATER SUBBASIN 17060304

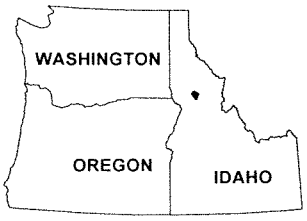


Legend

- Cities / Towns
- Critical Habitat
- Subbasin Boundary
- Watershed Boundaries

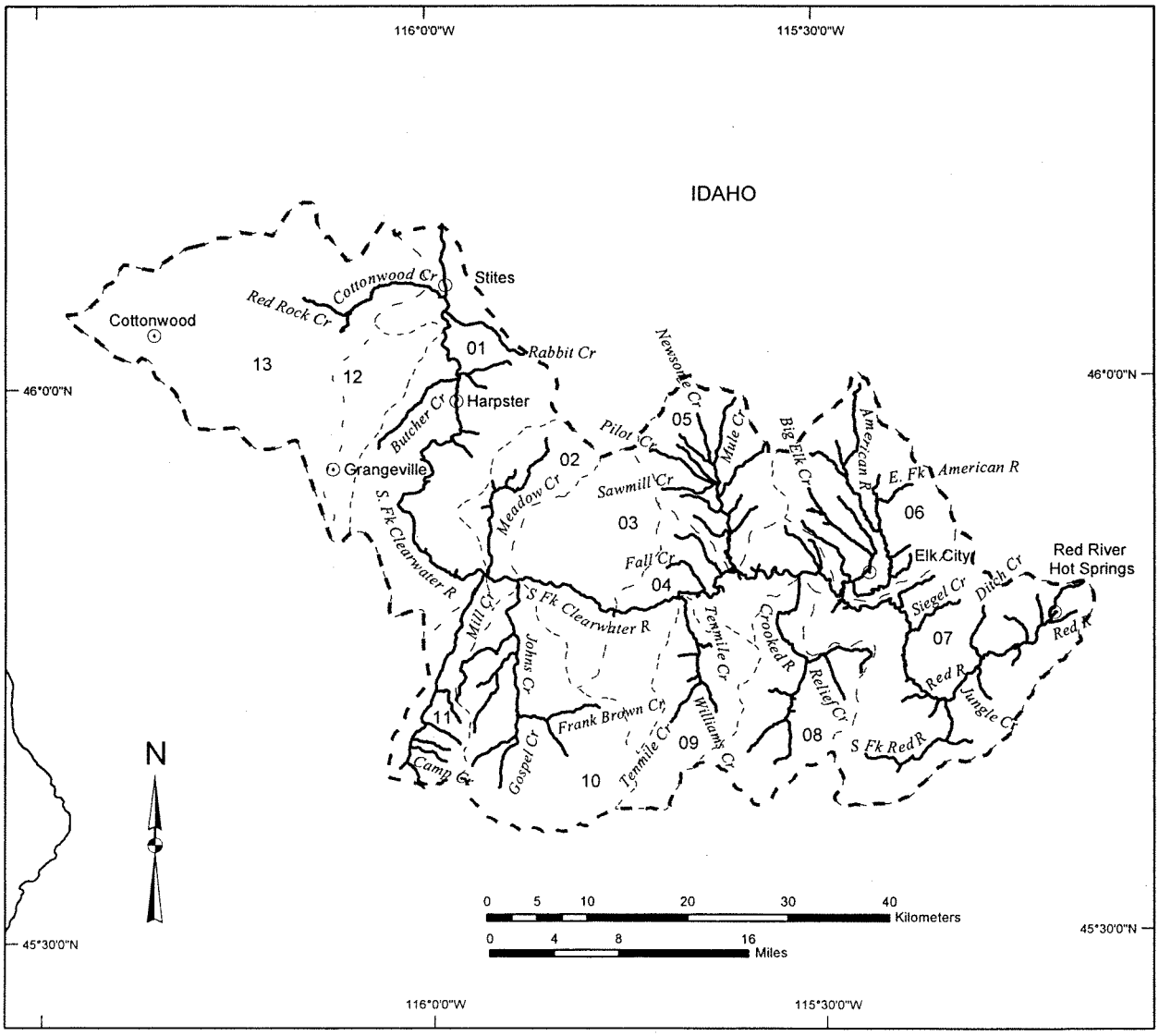
01 - 02 = Watershed code - last 2 digits of 17060304xx

Area of Detail



Final Critical Habitat for the Snake River Basin Steelhead ESU

SOUTH FORK CLEARWATER SUBBASIN 17060305

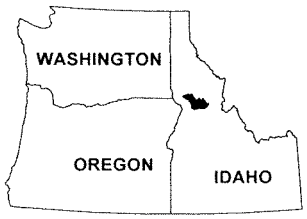


Legend

- Cities / Towns
- State Boundary
- Critical Habitat
- Subbasin Boundary
- Watershed Boundaries

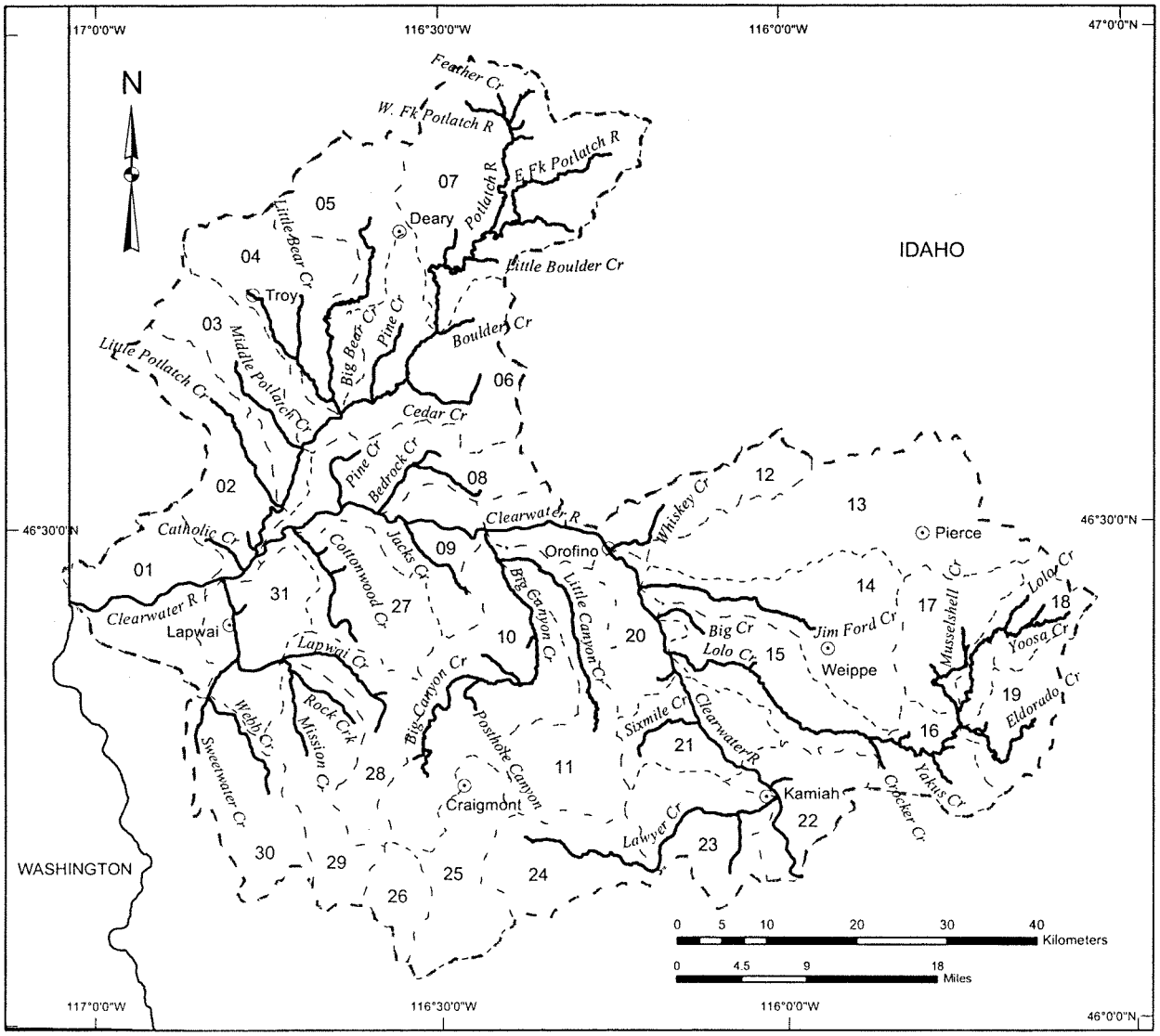
01 - 13 = Watershed code - last 2 digits of 17060305xx

Area of Detail



Final Critical Habitat for the Snake River Basin Steelhead ESU

CLEARWATER SUBBASIN 17060306

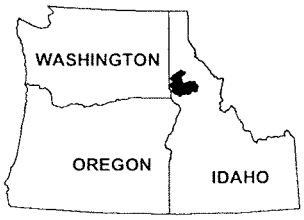


Legend

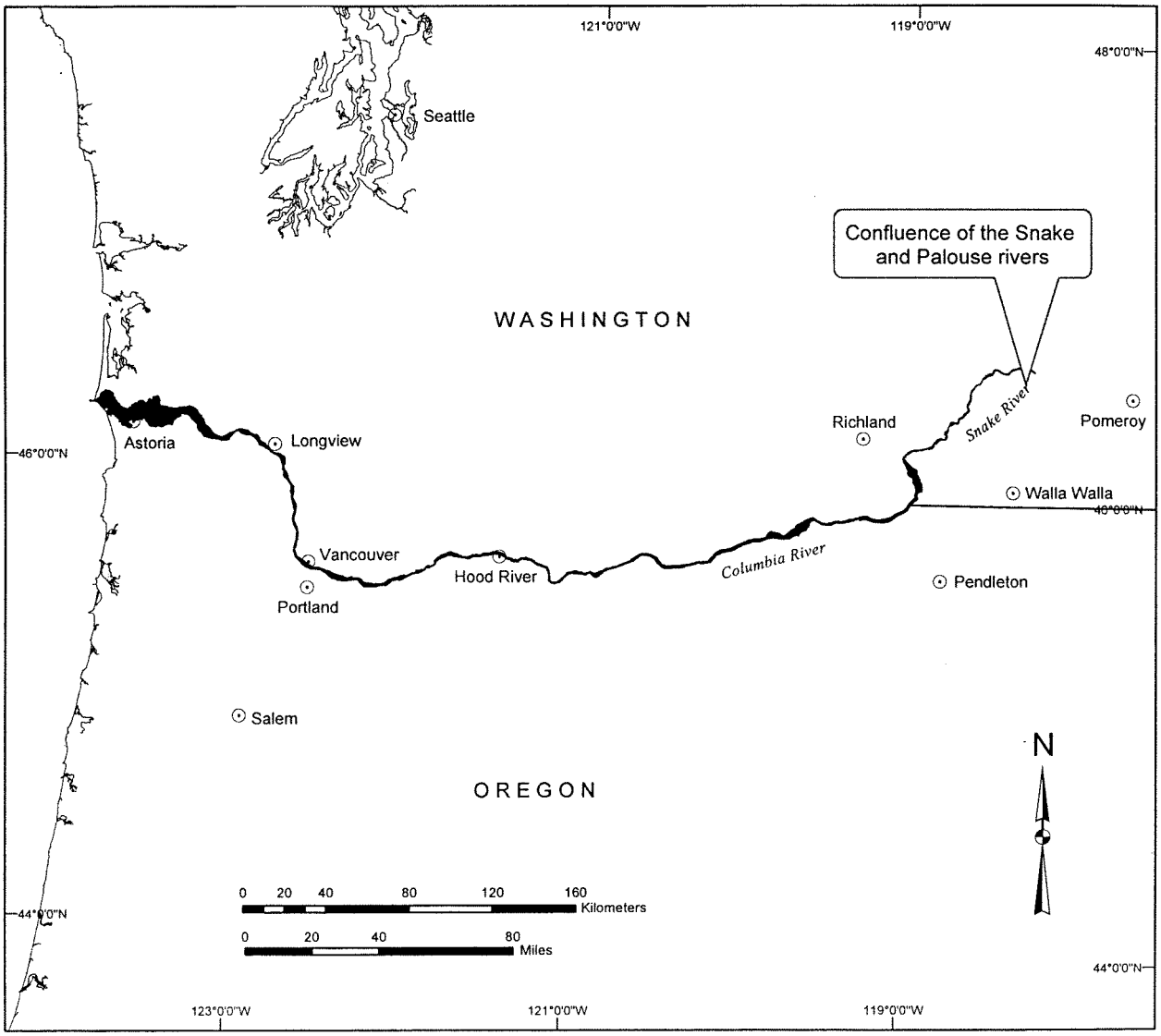
- Cities / Towns
- State Boundary
- Critical Habitat
- Subbasin Boundary
- Watershed Boundaries

01 - 31 = Watershed code - last 2 digits of 17060306xx

Area of Detail



Rearing / Migration Corridor for the Snake River Basin Steelhead ESU



Legend

- Cities / Towns
- State Boundary
- Rearing / Migration Corridor

Snake River Steelhead ESU

Lower Snake / Columbia River corridor
The Lower Snake / Columbia River corridor is that segment from the mouth of the Columbia River at the Pacific Ocean upstream to the confluence of the Snake and Palouse rivers.

BILLING CODE 3510–22–C

(r) Middle Columbia River Steelhead (Oncorhynchus mykiss). Critical habitat is designated to include the areas defined in the following subbasins:

(1) Upper Yakima Subbasin 17030001—(i) *Upper Yakima River Watershed 1703000101.* Outlet(s) = Yakima River (Lat 47.1770, Long –120.9964) upstream to endpoint(s) in: Big Creek (47.1951, –121.1181); Cabin Creek (47.2140, –121.2400); Cle Elum River (47.2457, –121.0729); Kachess River (47.2645, –121.2062); Little Creek (47.2002, –121.0842); Peterson Creek (47.1765, –121.0592); Tucker Creek (47.2202, –121.1639); Yakima River (47.3219, –121.3371).

(ii) *Teanaway River Watershed 1703000102.* Outlet(s) = Yakima River (Lat 47.1673, Long –120.8338) upstream to endpoint(s) in: Bear Creek (47.3684, –120.7902); DeRoux Creek (47.4202, –120.9477); Dickey Creek (47.2880, –120.8322); Indian Creek (47.3216, –120.8145); Jack Creek (47.3414, –120.8130); Jungle Creek (47.3453, –120.8951); Mason Creek (47.2528, –120.7889); Middle Creek (47.2973, –120.8204); Middle Fork Teanaway River (47.3750, –120.9800); Standup Creek (47.3764, –120.8362); Tillman Creek (47.1698, –120.9798); Unnamed (47.2809, –120.8995); West Fork Teanaway River (47.3040, –121.0179); Yakima River (47.1770, –120.9964).

(iii) *Middle Upper Yakima River Watershed 1703000103.* Outlet(s) = Yakima River (Lat 46.8987, Long –120.5035) upstream to endpoint(s) in: Badger Creek (46.9305, –120.4805); Coleman Creek (46.9636, –120.4764); Cooke Creek (46.9738, –120.4381); Dry Creek (47.0366, –120.6122); First Creek (47.2082, –120.6732); Iron Creek (47.3495, –120.7032); Manastash Creek (46.9657, –120.7347); Naneum Creek (46.9561, –120.4987); North Fork Taneum Creek (47.1224, –121.0396); Reecer Creek (47.0066, –120.5817); South Fork Taneum Creek (47.0962, –120.9713); Swauk Creek (47.3274, –120.6586); Unnamed (46.9799, –120.5407); Unnamed (47.0000, –120.5524); Unnamed (47.0193, –120.5676); Williams Creek (47.2638, –120.6513); Wilson Creek (46.9931, –120.5497); Yakima River (47.1673, –120.8338).

(iv) *Umtanum/Wenas Watershed 1703000104.* Outlet(s) = Yakima River (Lat 46.6309, Long –120.5130) upstream to endpoint(s) in: Burbank Creek (46.7663, –120.4238); Lmuma Creek (46.8224, –120.4510); Umtanum Creek (46.8928, –120.6130); Wenas Creek (46.7087, –120.5179); Yakima River (46.8987, –120.5035).

(2) Naches Subbasin 17030002—(i) *Little Naches River Watershed 1703000201.* Outlet(s) = Little Naches River (Lat 46.9854, Long –121.0915) upstream to endpoint(s) in: American River (46.9008, –121.4194); Barton Creek (46.8645, –121.2869); Bear Creek (47.0793, –121.2415); Blowout Creek (47.0946, –121.3046); Crow Creek (47.0147, –121.3241); Goat Creek (46.9193, –121.2269); Kettle Creek (46.9360, –121.3262); Mathew Creek (47.0829, –121.1944); Miner Creek (46.9542, –121.3074); Morse Creek (46.9053, –121.4131); North Fork Little Naches River (47.0958, –121.3141); Parker Creek (46.9589, –121.2900); Pinus Creek (46.9682, –121.2766); Quartz Creek (47.0382, –121.1128); Scab Creek (46.8969, –121.2459); South Fork Little Naches River (47.0574, –121.2760); Sunrise Creek (46.9041, –121.2448); Survey Creek (46.9435, –121.3296); Timber Creek (46.9113, –121.3822); Union Creek (46.9366, –121.3596); Unnamed (46.8705, –121.2809); Unnamed (46.8741, –121.2956); Unnamed (46.8872, –121.2811); Unnamed (46.8911, –121.2816); Unnamed (46.9033, –121.4162); Unnamed (46.9128, –121.2286); Unnamed (46.9132, –121.4058); Unnamed (46.9158, –121.3710); Unnamed (46.9224, –121.2200); Unnamed (46.9283, –121.3484); Unnamed (46.9302, –121.2103); Unnamed (46.9339, –121.1970); Unnamed (46.9360, –121.3482); Unnamed (46.9384, –121.3200); Unnamed (46.9390, –121.1898); Unnamed (46.9396, –121.3404); Unnamed (46.9431, –121.3088); Unnamed (46.9507, –121.2894); Unnamed (47.0774, –121.3092); Wash Creek (46.9639, –121.2810).

(ii) *Naches River/Rattlesnake Creek Watershed 1703000202.* Outlet(s) = Naches River (Lat 46.7467, Long –120.7858) upstream to endpoint(s) in: Glass Creek (46.8697, –121.0974); Gold Creek (46.9219, –121.0464); Hindoo Creek (46.7862, –121.1689); Little Rattlesnake Creek (46.7550, –121.0543); Lost Creek (46.9200, –121.0568); Naches River (46.9854, –121.0915); North Fork Rattlesnake Creek (46.8340, –121.1439); Rattlesnake Creek (46.7316, –121.2339); Rock Creek (46.8847, –120.9718).

(iii) *Naches River/Tieton River Watershed 1703000203.* Outlet(s) = Naches River (Lat 46.6309, Long –120.5130) upstream to endpoint(s) in: Naches River (46.7467, –120.7858); Oak Creek (46.7295, –120.9348); South Fork Cowiche Creek (46.6595, –120.7601); Tieton River (46.6567, –121.1287); Unnamed (46.6446, –120.5923); Wildcat Creek (46.6715, –121.1520).

(3) Lower Yakima Subbasin 17030003—(i) *Ahtanum Creek Watershed 1703000301.* Outlet(s) = Ahtanum Creek (Lat 46.5283, Long –120.4732) upstream to endpoint(s) in: Foundation Creek (46.5349, –121.0134); Middle Fork Ahtanum Creek (46.5075, –121.0225); Nasty Creek (46.5718, –120.9721); North Fork Ahtanum Creek (46.5217, –121.0917); South Fork Ahtanum Creek (46.4917, –120.9590); Unnamed (46.5811, –120.6390).

(ii) *Upper Lower Yakima River Watershed 1703000302.* Outlet(s) = Yakima River (Lat 46.5283, Long –120.4732) upstream to endpoint(s) in: Unnamed (46.5460, –120.4383); Yakima River (46.6309, –120.5130).

(iii) *Upper Toppenish Creek Watershed 1703000303.* Outlet(s) = Toppenish Creek (Lat 46.3767, Long –120.6172) upstream to endpoint(s) in: Agency Creek (46.3619, –120.9646); Branch Creek (46.2958, –120.9969); North Fork Simcoe Creek (46.4548, –120.9307); North Fork Toppenish Creek (46.3217, –120.9985); Old Maid Canyon (46.4210, –120.9349); South Fork Toppenish Creek (46.2422, –121.0885); Toppenish Creek (46.3180, –121.1387); Unnamed (46.3758, –120.9336); Unnamed (46.4555, –120.8436); Wahtum Creek (46.3942, –120.9146); Willy Dick Canyon (46.2952, –120.9021).

(iv) *Lower Toppenish Creek Watershed 1703000304.* Outlet(s) = Yakima River (Lat 46.3246, Long –120.1671) upstream to endpoint(s) in: Toppenish Creek (46.3767, –120.6172); Unnamed (46.3224, –120.4464); Unnamed (46.3363, –120.5891); Unnamed (46.3364, –120.2288); Unnamed (46.3679, –120.2801); Unnamed (46.4107, –120.5582); Unnamed (46.4379, –120.4258); Yakima River (46.5283, –120.4732).

(v) *Satus Creek Watershed 1703000305.* Outlet(s) = Satus Creek (Lat 46.2893, Long –120.1972) upstream to endpoint(s) in: Bull Creek (46.0314, –120.5147); Kusshi Creek (46.0994, –120.6094); Logy Creek (46.1357, –120.6389); Mule Dry Creek (46.0959, –120.3186); North Fork Dry Creek (46.1779, –120.7669); Satus Creek (46.0185, –120.7268); Unnamed (46.0883, –120.5278); Wilson Charley Canyon (46.0419, –120.6479).

(vi) *Yakima River/Spring Creek Watershed 1703000306.* Outlet(s) = Yakima River (Lat 46.3361, Long –119.4817) upstream to endpoint(s) in: Corral Creek (46.2971, –119.5302); Satus Creek (46.2893, –120.1972); Snipes Creek (46.2419, –119.6802); Spring Creek (46.2359, –119.6952); Unnamed (46.2169, –120.0189); Unnamed (46.2426, –120.0993); Unnamed (46.2598, –120.1322); Unnamed

(46.2514, –120.0190); Yakima River (46.3246, –120.1671).

(vii) *Yakima River/Cold Creek Watershed 1703000307.* Outlet(s) = Yakima River (Lat 46.2534, Long –119.2268) upstream to endpoint(s) in: Yakima River (46.3361, –119.4817).

(4) Middle Columbia/Lake Wallula Subbasin 17070101—(i) *Upper Lake Wallula Watershed 1707010101.* Outlet(s) = Columbia River (Lat 46.0594, Long –118.9445) upstream to endpoint(s) in: Columbia River (46.1776, –119.0183).

(ii) *Lower Lake Wallula Watershed 1707010102.* Outlet(s) = Columbia River (Lat 45.9376, Long –119.2969) upstream to endpoint(s) in: Columbia River (46.0594, –118.9445).

(iii) *Glade Creek Watershed 1707010105.* Outlet(s) = Glade Creek (Lat 45.8895, Long –119.6809) upstream to endpoint(s) in: Glade Creek (45.8978, –119.6962).

(iv) *Upper Lake Umatilla Watershed 1707010106.* Outlet(s) = Columbia River (Lat 45.8895, Long –119.6809) upstream to endpoint(s) in: Columbia River (45.9376, –119.2969).

(v) Middle Lake Umatilla Watershed 1707010109. Outlet(s) = Columbia River (Lat 45.8318, Long –119.9069) upstream to endpoint(s) in: Columbia River (45.8895, –119.6809).

(vi) *Alder Creek Watershed 1707010110.* Outlet(s) = Alder Creek (Lat 45.8298, Long –119.9277) upstream to endpoint(s) in: Alder Creek (45.8668, –119.9224).

(vii) *Pine Creek Watershed 1707010111.* Outlet(s) = Pine Creek (Lat 45.7843, Long –120.0823) upstream to endpoint(s) in: Pine Creek (45.8234, –120.1396).

(viii) *Wood Gulch Watershed 1707010112.* Outlet(s) = Wood Creek (Lat 45.7443, Long –120.1930) upstream to endpoint(s) in: Big Horn Canyon (45.8322, –120.2467); Wood Gulch (45.8386, –120.3006).

(ix) *Rock Creek Watershed 1707010113.* Outlet(s) = Rock Creek (Lat 45.6995, Long –120.4597) upstream to endpoint(s) in: Rock Creek (45.8835, –120.5557); Squaw Creek (45.8399, –120.4935).

(x) *Lower Lake Umatilla Watershed 1707010114.* Outlet(s) = Columbia River (Lat 45.7168, Long –120.6927) upstream to endpoint(s) in: Chapman Creek (45.7293, –120.3148); Columbia River (45.8318, –119.9069).

(5) Walla Walla Subbasin 17070102—(i) *Upper Walla Walla River Watershed 1707010201.* Outlet(s) = Walla Walla River (Lat 45.9104, Long –118.3696) upstream to endpoint(s) in: Bear Creek (45.8528, –118.0991); Big Meadow Canyon (45.900, –118.1116); Burnt Cabin Gulch (45.8056, –118.0593); Couse Creek (45.8035, –118.2032); Elbow Creek (45.7999, –118.1462); Kees Canyon (45.8262, –118.0927); Little Meadow Canyon (45.9094, –118.1333); North Fork Walla Walla River (45.9342, –118.0169); Reser Creek (45.8840, –117.9950); Rodgers Gulch (45.8513, –118.0839); Skiphorton Creek (45.8892, –118.0255); South Fork Walla Walla River (45.9512, –117.9647); Swede Canyon (45.8506, –118.0640); Table Creek (45.8540, –118.0546); Unnamed (45.8026, –118.1412); Unnamed (45.8547, –117.9915); Unnamed (45.8787–118.0387); Unnamed (45.8868, –117.9629); Unnamed (45.9095, –117.9621).

(ii) *Mill Creek Watershed 1707010202.* Outlet(s) = Mill Creek (Lat 46.0391, Long –118.4779) upstream to endpoint(s) in: Blue Creek (46.0188, –118.0519); Broken Creek (45.9745, –117.9899); Cold Creek (46.0540, –118.4097); Deadman Creek (46.0421, –117.9503); Doan Creek (46.0437, –118.4353); Green Fork (46.0298, –117.9389); Henry Canyon (45.9554, –118.1104); Low Creek (45.9649, –117.9980); Mill Creek (46.0112, –117.9406); North Fork Mill Creek (46.0322, –117.9937); Paradise Creek (46.0005, –117.9900); Tiger Creek (45.9588, –118.0253); Unnamed (46.0253, –117.9320); Unnamed (46.0383, –117.9463); Webb Creek (45.9800, –118.0875).

(iii) *Upper Touchet River Watershed 1707010203.* Outlet(s) = Touchet River (Lat 46.3196, Long –117.9841) upstream to endpoint(s) in: Burnt Fork (46.0838, –117.9311); Coates Creek (46.1585, –117.8431); Green Fork (46.0737, –117.9712); Griffin Fork (46.1100, –117.9336); Ireland Gulch (46.1894, –117.8070); Jim Creek (46.2156, –117.7959); Lewis Creek (46.1855, –117.7791); North Fork Touchet River (46.0938, –117.8460); North Patit Creek (46.3418, –117.7538); Robinson Fork (46.1200, –117.9006); Rodgers Gulch (46.2813, –117.8411); Spangler Creek (46.1156, –117.7934); Unnamed (46.1049, –117.9351); Unnamed (46.1061, –117.9544); Unnamed (46.1206, –117.9386); Unnamed (46.1334, –117.9512); Unnamed (46.1604, –117.9018); Unnamed (46.2900, –117.7339); Weidman Gulch (46.2359, –117.8067); West Patit Creek (46.2940, –117.7164); Whitney Creek (46.1348, –117.8491); Wolf Fork (46.1035, –117.8797).

(iv) *Middle Touchet River Watershed 1707010204.* Outlet(s) = Touchet River (Lat 46.2952, Long –118.3320) upstream to endpoint(s) in: North Fork Coppei Creek (46.1384, –118.0181); South Fork Coppei Creek (46.1302, –118.0608); Touchet River (46.3196, –117.9841); Whisky Creek (46.2438, –118.0785).

(v) *Lower Touchet River Watershed 1707010207.* Outlet(s) = Touchet River (Lat 46.0340, Long –118.6828) upstream to endpoint(s) in: Touchet River (46.2952, –118.3320).

(vi) *Cottonwood Creek Watershed 1707010208.* Outlet(s) = Walla Walla River (Lat 46.0391, Long –118.4779) upstream to endpoint(s) in: Birch Creek (45.9489, –118.2541); Caldwell Creek (46.0493, –118.3022); East Little Walla Walla River (46.0009, –118.4069); Garrison Creek (46.0753, –118.2726); Middle Fork Cottonwood Creek (45.9566, –118.1776); North Fork Cottonwood Creek (45.9738, –118.1533); Reser Creek (46.0370, –118.3085); Russell Creek (46.0424, –118.2488); South Fork Cottonwood Creek (45.9252, –118.1798); Stone Creek (46.0618, –118.3081); Unnamed (45.9525, –118.2513); Unnamed (46.0022, –118.4070); Walla Walla River (45.9104, –118.3696); Yellowhawk Creek (46.0753, –118.2726).

(vii) *Dry Creek Watershed 1707010210.* Outlet(s) = Dry Creek (Lat 46.0507, Long –118.5932) upstream to endpoint(s) in: Dry Creek (46.0725, –118.0268); Mud Creek (46.1414, –118.1313); South Fork Dry Creek (46.0751, –118.0514); Unnamed (46.1122, –118.1141).

(viii) *Lower Walla Walla River Watershed 1707010211.* Outlet(s) = Walla Walla River (Lat 46.0594, Long –118.9445) upstream to endpoint(s) in: Walla Walla River (46.0391, –118.4779).

(6) Umatilla Subbasin 17070103—(i) *Upper Umatilla River Watershed 1707010301.* Outlet(s) = Umatilla River (Lat 45.7024, Long –118.3593) upstream to endpoint(s) in: Bear Creek (45.7595, –118.1942); Bobsled Creek (45.7268, –118.2503); Buck Creek (45.7081, –118.1059); East Fork Coyote Creek (45.7553, –118.1263); Johnson Creek #4 (45.7239, –118.0797); Lake Creek #2 (45.7040, –118.1297); Lick Creek (45.7400, –118.1880); North Fork Umatilla River (45.7193, –118.0244); Rock Creek (45.7629, –118.2377); Ryan Creek (45.6362, –118.2963); Shimmiehorn Creek (45.6184, –118.1908); South Fork Umatilla River (45.6292, –118.2424); Spring Creek #2 (45.6288, –118.1525); Swamp Creek (45.6978, –118.1356); Thomas Creek (45.6546, –118.1435); Unnamed (45.6548, –118.1371); Unnamed (45.6737, –118.1616); Unnamed (45.6938, –118.3036); Unnamed (45.7060, –118.2123); Unnamed (45.7200, –118.3092); Unnamed (45.7241, –118.3197); Unnamed (45.7281, –118.1604); Unnamed (45.7282, –118.3372); Unnamed

(45.7419, –118.1586); West Fork Coyote Creek (45.7713, –118.1513); Woodward Creek (45.7484, –118.0760).

(ii) *Meacham Creek Watershed 1707010302.* Outlet(s) = Meacham Creek (Lat 45.7024, Long –118.3593) upstream to endpoint(s) in: Bear Creek #3 (45.4882, –118.1993); Beaver Creek (45.4940, –118.4411); Boston Canyon (45.6594, –118.3344); Butcher Creek (45.4558, –118.3737); Camp Creek (45.5895, –118.2800); Duncan Canyon (45.5674, –118.3244); East Meacham Creek (45.4570, –118.2212); Hoskins Creek (45.5188, –118.2059); Line Creek (45.6303, –118.3291); Meacham Creek (45.4364, –118.3963); North Fork Meacham Creek (45.5767, –118.1721); Owsley Creek (45.4349, –118.2434); Pot Creek (45.5036, –118.1438); Sheep Creek (45.5121, –118.3945); Twomile Creek (45.5085, –118.4579); Unnamed (45.4540, –118.2192); Unnamed (45.5585, –118.2064); Unnamed (45.6019, –118.2971); Unnamed (45.6774, –118.3415).

(iii) *Umatilla River/Mission Creek Watershed 1707010303.* Outlet(s) = Umatilla River (Lat 45.6559, Long –118.8804) upstream to endpoint(s) in: Bachelor Canyon (45.6368, –118.3890); Buckaroo Creek (45.6062, –118.5000); Coonskin Creek (45.6556, –118.5239); Cottonwood Creek (45.6122, –118.5704); Little Squaw Creek (45.5969, –118.4095); Mission Creek (45.6256, –118.6133); Moonshine Creek (45.6166, –118.5392); Patawa Creek (45.6424, –118.7125); Red Elk Canyon (45.6773, –118.4431); Saddle Hollow (45.7067, –118.3968); South Patawa Creek (45.6250, –118.6919); Squaw Creek (45.5584, –118.4389); Stage Gulch (45.6533, –118.4481); Thorn Hollow Creek (45.6957, –118.4530); Umatilla River (45.7024, –118.3593); Unnamed (45.5649, –118.4221); Unnamed (45.6092, –118.7603); Unnamed (45.6100, –118.4046); Unnamed (45.6571, –118.7473); Unnamed (45.6599, –118.4641); Unnamed (45.6599, –118.4711); Unnamed (45.6676, –118.6176); Unnamed (45.6688, –118.5575); Unnamed (45.6745, –118.5859).

(iv) *McKay Creek Watershed 1707010305.* Outlet(s) = McKay Creek (Lat 45.6685, Long –118.8400) upstream to endpoint(s) in: McKay Creek (45.6077, –118.7917).

(v) *Birch Creek Watershed 1707010306.* Outlet(s) = Birch Creek (Lat 45.6559, Long –118.8804) upstream to endpoint(s) in: Bear Creek (45.2730, –118.8939); Bridge Creek (45.3603, –118.9039); California Gulch (45.3950, –118.8149); Dark Canyon (45.3119, –118.7572); East Birch Creek (45.3676, –118.6085); Johnson Creek #2 (45.3931, –118.7518); Little Pearson Creek (45.3852, –118.7415); Merle Gulch (45.3450, –118.8136); Owings Creek (45.3864, –118.9600); Pearson Creek (45.2901, –118.7985); South Canyon #2 (45.3444, –118.6949); Unnamed (45.2703, –118.7624); Unnamed (45.3016, –118.7705); Unnamed (45.3232, –118.7264); Unnamed (45.3470, –118.7984); Unnamed (45.3476, –118.6703); Unnamed (45.3511, –118.6328); Unnamed (45.4628, –118.7491); West Birch Creek (45.2973, –118.8341); Willow Spring Canyon (45.3426, –118.9833).

(vi) *Umatilla River/Alkali Canyon Watershed 1707010307.* Outlet(s) = Umatilla River (Lat 45.7831, Long –119.2372) upstream to endpoint(s) in: Umatilla River (45.6559, –118.8804).

(vii) *Lower Umatilla River Watershed 1707010313.* Outlet(s) = Umatilla River (Lat 45.9247, Long –119.3575) upstream to endpoint(s) in: Umatilla River (45.7831, –119.2372); Unnamed (45.8202, –119.3305).

(7) Middle Columbia/Hood Subbasin 17070105—(i) *Upper Middle Columbia/Hood Watershed 1707010501.* Outlet(s) = Columbia River (Lat 45.6426, Long –120.9142) upstream to endpoint(s) in: Columbia River (45.7168, –120.6927); Frank Fulton Canyon (45.6244, –120.8258); Spanish Hollow Creek (45.6469, –120.8069); Unnamed (45.6404, –120.8654).

(ii) *Fifteenmile Creek Watershed 1707010502.* Outlet(s) = Fifteenmile Creek (Lat 45.6197, Long –121.1265) upstream to endpoint(s) in: Cedar Creek (45.3713, –121.4153); Dry Creek (45.4918, –121.0479); Fifteenmile Creek (45.3658, –121.4390); Ramsey Creek (45.3979, –121.4454); Unnamed (45.3768, –121.4410).

(iii) *Fivemile Creek Watershed 1707010503.* Outlet(s) = Eightmile Creek (Lat 45.6064, Long –121.0854) upstream to endpoint(s) in: Eightmile Creek (45.3944, –121.4983); Middle Fork Fivemile Creek (45.4502, –121.4324); South Fork Fivemile Creek (45.4622, –121.3641).

(iv) *Middle Columbia/Mill Creek Watershed 1707010504.* Outlet(s) = Columbia River (Lat 45.6920, Long –121.2937) upstream to endpoint(s) in: Brown Creek (45.5911, –121.2729); Chenoweth Creek (45.6119, –121.2658); Columbia River (45.6426, –120.9142); North Fork Mill Creek (45.4999, –121.4537); South Fork Mill Creek (45.5187, –121.3367); Threemile Creek (45.5598, –121.1747).

(v) *Mosier Creek Watershed 1707010505.* Outlet(s) = Mosier Creek (Lat 45.6950, Long –121.3996) upstream to endpoint(s) in: Mosier Creek (45.6826, –121.3896); Rock Creek (45.6649, –121.4352).

(vi) *White Salmon River Watershed 1707010509.* Outlet(s) = White Salmon River (Lat 45.7267, Long –121.5209) upstream to endpoint(s) in: Unnamed (45.7395, –121.5500); White Salmon River (45.7676, –121.5374).

(vii) *Middle Columbia/Grays Creek Watershed 1707010512.* Outlet(s) = Columbia River (Lat 45.7070, Long –121.7943) upstream to endpoint(s) in: Catherine Creek (45.7448, –121.4206); Columbia River (45.6920, –121.2937); Dog Creek (45.7200, –121.6804); East Fork Major Creek (45.8005, –121.3449); Hanson Creek (45.7472, –121.3143); Jewett Creek (45.7524, –121.4704); Rowena Creek (45.6940, –121.3122); Unnamed (45.7238, –121.7227); Unnamed (45.7248, –121.7322); Unnamed (45.7303, –121.3095); Unnamed (45.7316, –121.3094); Unnamed (45.7445, –121.3309); Unnamed (45.7486, –121.3203); Unnamed (45.7530, –121.4697); Unnamed (45.7632, –121.4795); Unnamed (45.7954, –121.3863); Unnamed (45.8003, –121.4062); West Fork Major Creek (45.8117, –121.3929).

(8) Klickitat Subbasin 17070106—(i) *Upper Klickitat River Watershed 1707010601.* Outlet(s) = Klickitat River (Lat 46.1263, Long –121.2881) upstream to endpoint(s) in: Cedar Creek (46.2122, –121.2042); Coyote Creek (46.4640, –121.1839); Cuitin Creek (46.4602, –121.1662); Diamond Fork (46.4794, –121.2284); Huckleberry Creek (46.4273, –121.3720); Klickitat River (46.4439, –121.3756); McCreedy Creek (46.3319, –121.2529); Piscoe Creek (46.3708, –121.1436); Surveyors Creek (46.2181, –121.1838); Unnamed (46.4476, –121.2575); Unnamed (46.4585, –121.2565); West Fork Klickitat River (46.2757, –121.3267).

(ii) *Middle Klickitat River Watershed 1707010602.* Outlet(s) = Klickitat River (Lat 45.9858, Long –121.1233) upstream to endpoint(s) in: Bear Creek (46.0770, –121.2262); Klickitat River (46.1263, –121.2881); Outlet Creek (46.0178, –121.1740); Summit Creek (46.0035, –121.0918); Trout Creek (46.1166, –121.1968); White Creek (46.1084, –121.0730).

(iii) *Little Klickitat River Watershed 1707010603.* Outlet(s) = Little Klickitat River (Lat 45.8452, Long –121.0625) upstream to endpoint(s) in: Blockhouse Creek (45.8188, –120.9813); Butler Creek (45.9287, –120.7005); Canyon Creek (45.8833, –121.0504); East Prong Little Klickitat River (45.9279, –120.6832); Mill Creek (45.8374, –121.0001); Unnamed (45.8162, –120.9288); West Prong Little Klickitat River (45.9251, –120.7202).

(iv) *Lower Klickitat River Watershed 1707010604.* Outlet(s) = Klickitat River (Lat 45.6920, Long –121.2937) upstream to endpoint(s) in: Dead Canyon (45.9473, –121.1734); Dillacort Canyon (45.7349, –121.1904); Klickitat River (45.9858, –121.1233); Logging Camp Canyon (45.7872, –121.2260); Snyder Canyon (45.8431, –121.2152); Swale Creek (45.7218, –121.0475); Wheeler Canyon (45.7946, –121.1615).

(9) Upper John Day Subbasin 17070201—(i) *Middle South Fork John Day Watershed 1707020103.* Outlet(s) = South Fork John Day River (Lat 44.1918, Long –119.5261) upstream to endpoint(s) in: Blue Creek (44.2183, –119.3679); Corral Creek (44.1688, –119.3573); North Fork Deer Creek (44.2034, –119.3009); South Fork Deer Creek (44.1550, –119.3457); South Fork John Day River (44.1822, –119.5243) Unnamed (44.1824, –119.4210); Vester Creek (44.1794, –1193872).

(ii) *Murderers Creek Watershed 1707020104.* Outlet(s) = Murderers Creek (Lat 44.3146, Long –119.5383) upstream to endpoint(s) in: Bark Cabin Creek (44.2481, –119.3967); Basin Creek (44.2700, –119.1711); Cabin Creek (44.3420, –119.4403); Charlie Mack Creek (44.2708, –119.2344); Crazy Creek (44.2421, –119.4282); Dans Creek (44.2500, –119.2774); Duncan Creek (44.3219, –119.3555); Lemon Creek (44.2528, –119.2500); Miner Creek (44.3237, –119.2416); Orange Creek (44.2524, –119.2613); Oregon Mine Creek (44.2816, –119.2945); South Fork Murderers Creek (44.2318, –119.3221); Sugar Creek (44.2914, –119.2326); Tennessee Creek (44.3041, –119.3029); Thorn Creek (44.3113, –119.3157); Todd Creek (44.3291, –119.3976); Unnamed (44.3133, –119.3533); Unnamed (44.3250, –119.3476); White Creek (44.2747, –119.1866).

(iii) *Lower South Fork John Day Watershed 1707020105.* Outlet(s) = South Fork John Day River (Lat 44.4740, Long –119.5344) upstream to endpoint(s) in: Cougar Gulch (44.2279, –119.4898); Frazier Creek (44.2200, –119.5745); Jackass Creek (44.3564, –119.4958); North Fork Wind Creek (44.3019, –119.6632); Payten Creek (44.3692, –119.6185); Smoky Creek (44.3893, –119.4791); South Fork Black Canyon Creek (44.3789, –119.7293); South Fork John Day River (44.1918, –119.5261); South Fork Wind Creek (44.2169, –119.6192); South Prong Creek (44.3093, –119.6558); Squaw Creek (44.3000, –119.6143); Unnamed (44.2306, –119.6095); Unnamed (44.2358, –119.6013); Unnamed (44.3052, –119.6332); Wind Creek (44.2793, –119.6515).

(iv) *Upper John Day River Watershed 1707020106.* Outlet(s) = John Day River (Lat 44.4534, Long –118.6711) upstream to endpoint(s) in: Bogue Gulch (44.3697, –118.5200); Call Creek (44.2973, –118.5169); Crescent Creek (44.2721, –118.5473); Dads Creek (44.5140, –118.6463); Dans Creek (44.4989, –118.5920); Deardorff Creek (44.3665, –118.4596); Eureka Gulch (44.4801, –118.5912); Graham Creek (44.3611, –118.6084); Isham Creek (44.4649, –118.5626); Jeff Davis Creek (44.4813, –118.6370); John Day River (44.2503, –118.5256); Mossy Gulch (44.4641, –118.5211); North Reynolds Creek (44.4525, –118.4886); Rail Creek #2 (44.3413, –118.5017); Reynolds Creek (44.4185, –118.4507); Roberts Creek (44.3060, –118.5815); Thompson Creek (44.3581, –118.5395); Unnamed (44.2710, –118.5412).

(v) *Canyon Creek Watershed 1707020107.* Outlet(s) = Canyon Creek (Lat 44.4225, Long –118.9584) upstream to endpoint(s) in: Berry Creek (44.3084, –118.8791); Brookling Creek (44.3042, –118.8363); Canyon Creek (44.2368, –118.7775); Crazy Creek #2 (44.2165, –118.7751); East Brookling Creek (44.3029, –118.8082); East Fork Canyon Creek (44.2865, –118.7939); Middle Fork Canyon Creek (44.2885, –118.7500); Skin Shin Creek (44.3036, –118.8488); Tamarack Creek #2 (44.2965, –118.8611); Unnamed (44.2500, –118.8298); Unnamed (44.2717, –118.7500); Unnamed (44.2814, –118.7620); Vance Creek (44.2929, –118.9989); Wall Creek (44.2543, –118.8308).

(vi) *Strawberry Creek Watershed 1707020108.* Outlet(s) = John Day River (Lat 44.4225, Long –118.9584) upstream to endpoint(s) in: Bear Creek (44.5434, –118.7508); Dixie Creek (44.5814, –118.7257); Dog Creek (44.3635, –118.8890); Grub Creek (44.5189, –118.8050); Hall Creek (44.5479, –118.7894); Indian Creek #3 (44.3092, –118.7438); John Day River (44.4534, –118.6711); Little Pine Creek (44.3771, –118.9103); Onion Creek (44.3151, –118.6972); Overholt Creek (44.3385, –118.7196); Pine Creek (44.3468, –118.8345); Slide Creek (44.2988, –118.6583); Standard Creek (44.5648, –118.6468); Strawberry Creek (44.3128, –118.6772); West Fork Little Indian Creek (44.3632, –118.7918).

(vii) *Beech Creek Watershed 1707020109.* Outlet(s) = Beech Creek (Lat 44.4116, Long –119.1151) upstream to endpoint(s) in: Bear Creek (44.5268, –119.1002); Beech Creek (44.5682, –119.1170); Clear Creek (44.5522, –118.9942); Cottonwood Creek (44.5758, –119.0694); East Fork Beech Creek (44.5248, –118.9023); Ennis Creek (44.5409, –119.0207); Hog Creek (44.5484, –119.0379); Little Beech Creek (44.4676, –118.9733); McClellan Creek #2 (44.5570, –118.9490); Tinker Creek (44.5550, –118.8892); Unnamed (44.5349, –119.0827).

(viii) *Laycock Creek Watershed 1707020110.* Outlet(s) = John Day River (Lat 44.4155, Long –119.2230) upstream to endpoint(s) in: Birch Creek #2 (44.4353, –119.2148); East Fork Dry Creek (44.4896, –119.1817); Fall Creek #2 (44.3551, –119.0420); Hanscombe Creek (44.3040, –119.0513); Harper Creek (44.3485, –119.1259); Ingle Creek (44.3154, –119.1153); John Day River (44.4225, –118.9584); Laycock Creek (44.3118, –119.0842); McClellan Creek (44.3510, –119.2004); Moon Creek (44.3483, –119.2389); Riley Creek (44.3450, –119.1664).

(ix) *Fields Creek Watershed 1707020111.* Outlet(s) = John Day River (Lat 44.4740, Long –119.5344) upstream to endpoint(s) in: Belshaw Creek (44.5460, –119.2025); Bridge Creek (44.4062, –119.4180); Buck Cabin Creek (44.3412, –119.3313); Cummings Creek (44.5043, –119.3250); Fields Creek (44.3260, –119.2828); Flat Creek (44.3930, –119.4386); John Day River (44.4155, –119.2230); Marks Creek (44.5162, –119.3886); Wickiup Creek (44.3713, –119.3239); Widows Creek (44.3752, –119.3819); Wiley Creek (44.4752, –119.3784).

(x) *Upper Middle John Day Watershed 1707020112.* Outlet(s) = John Day River (Lat 44.5289, Long –119.6320) upstream to endpoint(s) in: Back Creek (44.4164, –119.6858); Battle Creek (44.4658, –119.5863); Cottonwood Creek (44.3863, –119.7376); Cougar Creek (44.4031, –119.7056); East Fork Cottonwood Creek (44.3846, –119.6177); Ferris Creek (44.5446, –119.5250); Franks Creek (44.5067, –119.4903); John Day River (44.4740, –119.5344); Rattlesnake Creek (44.4673, –119.6953); Unnamed (44.3827, –119.6479); Unnamed (44.3961, –119.7403); Unnamed (44.4082, –119.6916).

(xi) *Mountain Creek Watershed 1707020113.* Outlet(s) = Mountain Creek (Lat 44.5214, Long –119.7138) upstream to endpoint(s) in: Badger Creek (44.4491, –120.1186); Fopiano Creek (44.5899, –119.9429); Fort Creek (44.4656, –119.9253); Fry Creek (44.4647, –119.9940); Keeton Creek (44.4632, –120.0195); Mac Creek (44.4739, –119.9359); Milk Creek (44.4649, –120.1526); Unnamed (44.4700, –119.9427); Unnamed (44.4703, –120.0328); Unnamed (44.4703, –120.0597); Unnamed (44.4827, –119.8970); Willow Creek (44.6027, –119.8746).

(xii) *Rock Creek Watershed 1707020114.* Outlet(s) = Rock Creek (Lat 44.5289, Long –119.6320) upstream to endpoint(s) in: Baldy Creek (44.3906, –119.7651); Bear Creek (44.3676, –119.8401); Fir Tree Creek (44.3902, –119.7893); First Creek (44.4086, –119.8120); Fred Creek (44.4602, –119.8549); Little Windy Creek (44.3751, –119.7595); Pine Hollow #2 (44.5007, –119.8559); Rock Creek (44.3509, –119.7636); Second Creek (44.3984, –119.8075); Unnamed (44.4000, –119.8501); Unnamed (44.4232, –119.7271); West Fork Birch Creek (44.4365, –119.7500).

(xiii) *John Day River/Johnson Creek Watershed 1707020115.* Outlet(s) = John Day River (Lat 44.7554, Long –119.6382) upstream to endpoint(s) in: Buckhorn Creek (44.6137, –119.7382); Burnt Corral Creek (44.6987, –119.5733); Frank Creek (44.6262, –119.7177); Indian Creek (44.5925, –119.7636); John Day River (44.5289, –119.6320); Johnny Creek (44.6126, –119.5534); Johnson Creek (44.6766, –119.7363).

(10) North Fork John Day Subbasin 17070202—(i) *Upper North Fork John Day River Watershed 1707020201.* Outlet(s) = North Fork John Day River (Lat 44.8661, Long –118.5605) upstream to endpoint(s) in: Baldy Creek (44.8687, –118.3172); Bear Gulch (44.8978, –118.5400); Bull Creek (44.8790, –118.2753); Crane Creek (44.8715, –118.3539); Crawfish Creek (44.9424, –118.2608); Cunningham Creek (44.9172, –118.2478); Davis Creek (44.9645, –118.4156); First Gulch (44.8831, –118.5588); Hoodoo Creek (44.9763, –118.3673); Long Meadow Creek (44.9490, –118.2932); McCarty Gulch (44.9131, –118.5114); Middle Trail Creek (44.9513, –118.3185); North Fork John Day River (44.8691, –118.2392); North Trail Creek (44.9675, –118.3219); South Trail Creek (44.9434, –118.2930); Trout Creek (44.9666, –118.4656); Unnamed (44.8576, –118.3169); Unnamed (44.8845, –118.3421); Unnamed (44.9221, –118.5000); Unnamed (44.9405, –118.4093); Unnamed (44.9471, –118.4797); Wagner Gulch (44.9390, –118.5148).

(ii) *Granite Creek Watershed 1707020202.* Outlet(s) = Granite Creek (Lat 44.8661, Long –118.5605) upstream to endpoint(s) in: Beaver Creek (44.7425, –118.3940); Boulder Creek (44.8368, –118.3631); Boundary Creek (44.8106, –118.3420); Bull Run Creek (44.7534, –118.3154); Corral Creek #2 (44.8186, –118.3565); Deep Creek #2 (44.8017, –118.3200); East Ten Cent Creek (44.8584, –118.4253); Granite Creek (44.8578, –118.3736); Lake Creek (44.7875, –118.5929); Lick Creek (44.8503, –118.5065); Lightning Creek (44.7256, –118.5011); Lost Creek (44.7620, –118.5822); North Fork Ruby Creek (44.7898, –118.5073); Olive Creek (44.7191, –118.4677); Rabbit Creek (44.7819, –118.5616); Ruby Creek (44.7797, –118.5237); South Fork Beaver Creek (44.7432, –118.4272); Squaw Creek #5 (44.8552, –118.4705); Unnamed (44.8427, –118.4233); West Fork Clear Creek (44.7490, –118.5440); West Ten Cent Creek (44.8709, –118.4377); Wolesy Creek (44.7687, –118.5540).

(iii) *North Fork John Day River/Big Creek Watershed 1707020203.* Outlet(s) = North Fork John Day River (Lat 44.9976, Long –118.9444) upstream to endpoint(s) in: Backout Creek (44.8560, –118.6289); Basin Creek (44.9081, –118.6671); Big Creek (45.0115, –118.6041); Bismark Creek (44.9548, –118.7020); Corral Creek (44.9592, –118.6368); Cougar Creek (44.9288, –118.6653); Meadow Creek (44.9856, –118.4664); North Fork John Day River (44.8661, –118.5605); Oregon Gulch (44.8694, –118.6119); Oriental Creek (45.0000, –118.7255); Otter Creek (44.9634, –118.7567); Paradise Creek (44.9168, –118.5850); Raspberry Creek (44.9638, –118.7356); Ryder Creek (44.9341, –118.5943); Silver Creek (44.9077, –118.5580); Simpson Creek (44.9383, –118.6794); South Fork Meadow Creek (44.9303, –118.5481); South Martin Creek (44.9479, –118.5281); Trough Creek (44.9960, –118.8499); Unnamed (44.8594, –118.6432); Unnamed (44.9073, –118.5690); Unnamed (45.0031, –118.7060); Unnamed (45.0267, –118.7635); Unnamed (45.0413, –118.8089); White Creek (45.0000, –118.5617); Winom Creek (44.9822, –118.6766).

(iv) *Desolation Creek Watershed 1707020204.* Outlet(s) = Desolation Creek (Lat 44.9977, Long –118.9352) upstream to endpoint(s) in: Battle Creek (44.8895, –118.7010); Beeman Creek (44.8230, –118.7498); Bruin Creek (44.8936, –118.7600); Howard Creek (44.8513, –118.7004); Junkens Creek (44.8482, –118.7994); Kelsay Creek (44.9203, –118.6899); Little Kelsay Creek (44.9127, –118.7124); North Fork Desolation Creek (44.7791, –118.6231); Park Creek (44.9109, –118.7839); Peep Creek (44.9488, –118.8069); South Fork Desolation Creek (44.7890, –118.6732); Sponge Creek (44.8577, –118.7165); Starveout Creek (44.8994, –118.8220); Unnamed (44.8709, –118.7130); Unnamed (44.9058, –118.7689); Unnamed (44.9163, –118.8384); Unnamed (44.9203, –118.8315); Unnamed (44.9521, –118.8141); Unnamed (44.9735, –118.8707).

(v) *Upper Camas Creek Watershed 1707020205.* Outlet(s) = Camas Creek (Lat 45.1576, Long –118.8411) upstream to endpoint(s) in: Bear Wallow Creek (45.2501, –118.7502); Bowman Creek (45.2281, –118.7028); Butcherknife Creek (45.1495, –118.6913); Camas Creek (45.1751, –118.5548); Dry Camas Creek (45.1582, –118.5846); Frazier Creek (45.1196, –118.6152); Hidaway Creek (45.0807, –118.5788); Lane Creek (45.2429, –118.7749); Line Creek (45.1067, –118.6562); North Fork Cable Creek (45.0535, –118.6569); Rancheria Creek (45.2144, –118.6552); Salsbury Creek (45.2022, –118.6206); South Fork Cable Creek (45.0077, –118.6942); Unnamed (45.0508, –118.6536); Unnamed (45.0579, –118.6705); Unnamed (45.0636, –118.6198); Unnamed (45.0638, –118.5908); Unnamed (45.0823, –118.6579); Unnamed (45.1369, –118.6771); Unnamed (45.1513, –118.5966); Unnamed (45.1854, –118.6842); Unnamed (45.1891, –118.6110); Unnamed (45.2429, –118.7575); Warm Spring Creek (45.1386, –118.6561).

(vi) *Lower Camas Creek Watershed 1707020206.* Outlet(s) = Camas Creek (Lat 45.0101, Long –118.9950) upstream to endpoint(s) in: Bridge Creek (45.0395, –118.8633); Camas Creek (45.1576, –118.8411); Cooper Creek (45.2133, –118.9881); Deerlick Creek (45.1489, –119.0229); Dry Fivemile Creek (45.1313, –119.0898); Fivemile Creek (45.1804, –119.2259); Middle Fork Wilkins Creek (45.1193, –119.0439); North Fork Owens Creek (45.1872, –118.9705); Owens Creek (45.2562, –118.8305); Silver Creek (45.1066, –119.1268); Snipe Creek (45.2502, –118.9707); South Fork Wilkins Creek (45.1078, –119.0312); Sugarbowl Creek (45.1986, –119.0999); Taylor Creek (45.1482, –119.1820); Tribble Creek (45.1713, –119.1617); Unnamed (45.0797, –118.7878); Unnamed (45.1198, –118.8514); Unnamed (45.1993, –118.9062); Unnamed (45.2000, –118.8236); Unnamed (45.2141, –118.8079); Unnamed (45.1773, –119.0753); Unnamed (45.2062, –119.0717); Wilkins Creek (45.1239, –119.0094).

(vii) *North Fork John Day River/ Potamus Creek Watershed 1707020207.* Outlet(s) = North Fork John Day River (Lat 44.8832. Long –119.4090) upstream to endpoint(s) in: Buckaroo Creek (45.0245, –119.1187); Butcher Bill Creek (45.1290, –119.3197); Cabin Creek (44.9650, –119.3628); Deep Creek (45.0977, –119.2021); Deerhorn Creek (45.0513, –119.0542); Ditch Creek (45.1584, –119.3153); East Fork Meadow Brook Creek (44.9634, –118.9575); Ellis Creek (45.1197, –119.2167); Graves

Creek (44.9927, –119.3171); Hinton Creek (44.9650, –119.0025); Hunter Creek (45.0114, –119.0896); Jericho Creek (45.0361, –119.0829); Little Potamus Creek (45.0462, –119.2579); Mallory Creek (45.1030, –119.3112); Martin Creek (45.1217, –119.3538); Matlock Creek (45.0762, –119.1837); No Name Creek (45.0730, –119.1459); North Fork John Day River (44.9976, –118.9444); Pole Creek (45.1666, –119.2533); Rush Creek (45.0498, –119.1219); Skull Creek (44.9726, –119.2035); Smith Creek (44.9443, –118.9687); Stalder Creek (45.0655, –119.2844); Stony Creek (45.0424, –119.1489); West Fork Meadow Brook (44.9428, –119.0319); Wickiup Creek (45.0256, –119.2776); Wilson Creek (45.1372, –119.2673).

(viii) *Wall Creek Watershed 1707020208.* Outlet(s) = Big Wall Creek (Lat 44.8832, Long –119.4090) upstream to endpoint(s) in: Alder Creek (45.1049, –119.4170); Bacon Creek (45.0137, –119.4800); Bear Creek (45.0551, –119.4170); Big Wall Creek (44.9369, –119.6055); Bull Prairie Creek (44.9753, –119.6604); Colvin Creek (44.9835, –119.6911); East Fork Alder Creek (45.1028, –119.3929); East Fork Indian Creek (44.9009, –119.4918); Happy Jack Creek (44.8997, –119.5730); Hog Creek (45.0507, –119.4821); Indian Creek (44.8810, –119.5260); Johnson Creek (45.0097, –119.6282); Little Bear Creek (45.0433, –119.4084); Little Wall Creek (45.0271, –119.5235); Little Wilson Creek (44.8979, –119.5531); Lovlett Creek (44.9675, –119.5105); Skookum Creek (45.0894, –119.4725); South Fork Big Wall Creek (44.9315, –119.6167); Swale Creek (45.1162, –119.3836); Three Trough Creek (44.9927, –119.5318); Two Spring Creek (45.0251, –119.3938); Unnamed (44.9000, –119.6213); Unnamed (44.9830, –119.7364); Unnamed (44.9883, –119.7248); Unnamed (45.0922, –119.4374); Unnamed (45.1079, –119.4359); Willow Spring Creek (44.9467, –119.5921); Wilson Creek (44.9861, –119.6623).

(ix) *Cottonwood Creek Watershed 1707020209.* Outlet(s) = Cottonwood Creek (Lat 44.8141, Long –119.4183) upstream to endpoint(s) in: BecK Creek (44.5795, –119.2664); Board Creek (44.5841, –119.3763); Boulder Creek (44.5876, –119.3006); Camp Creek #3 (44.6606, –119.3283); Cougar Creek #2 (44.6230, –119.4133); Day Creek (44.5946, –119.0235); Donaldson Creek (44.5919, –119.3480); Dunning Creek (44.6416, –119.0628); Fox Creek (44.6163, –119.0078); Indian Creek #3 (44.6794, –119.2196); McHaley Creek (44.5845, –119.2234); Mill Creek (44.6080, –119.0878); Mine Creek (44.5938, –119.1756); Murphy Creek (44.6062, –119.1114); Smith Creek (44.6627, –119.0808); Squaw Creek #3 (44.5715, –119.4069); Unnamed (44.6176, –119.0806).

(x) *Lower North Fork John Day River Watershed 1707020210.* Outlet(s) = North Fork John Day River (Lat 44.7554, Long –119.6382) upstream to endpoint(s) in: East Fork Deer Creek (44.7033, –119.2753); Gilmore Creek (44.6744, –119.4875); North Fork John Day River (44.8832, –119.4090); Rudio Creek (44.6254, –119.5026); Straight Creek (44.6759, –119.4687); West Fork Deer Creek (44.6985, –119.3372).

(11) Middle Fork John Day Subbasin 17070203—(i) *Upper Middle Fork John Day River Watershed 1707020301.* Outlet(s) = Middle Fork John Day River (Lat 44.5946, Long –118.5163) upstream to endpoint(s) in: Bridge Creek (44.5326, –118.5746); Clear Creek (44.4692, –118.4615); Crawford Creek (44.6381, –118.3887); Dry Fork Clear Creek (44.5339, –118.4484); Fly Creek (44.6108, –118.3810); Idaho Creek (44.6113, –118.3856); Middle Fork John Day River (44.5847, –118.4286); Mill Creek (44.6106, –118.4809); North Fork Bridge Creek (44.5479, –118.5663); North Fork Summit Creek (44.5878, –118.3560); Squaw Creek (44.5303, –118.4089); Summit Creek (44.5831, –118.3585).

(ii) *Camp Creek Watershed 1707020302.* Outlet(s) = Middle Fork John Day River (Lat 44.6934, Long –118.7947) upstream to endpoint(s) in: Badger Creek (44.7102, –118.6738); Balance Creek (44.6756, –118.7661); Beaver Creek (44.6918, –118.6467); Bennett Creek (44.6095, –118.6432); Big Boulder Creek (44.7332, –118.6889); Blue Gulch (44.6952, –118.5220); Butte Creek (44.5913, –118.6481); Camp Creek (44.5692, –118.8041); Caribou Creek (44.6581, –118.5543); Charlie Creek (44.5829, –118.8277); Cottonwood Creek (44.6616, –118.8919); Cougar Creek (44.6014, –118.8261); Coxie Creek (44.5596, –118.8457); Coyote Creek (44.7040, –118.7436); Davis Creek (44.5720, –118.6026); Deerhorn Creek (44.5984, –118.5879); Dry Creek (44.6722, –118.6962); Eagle Creek (44.5715, –118.8269); Granite Boulder Creek (44.6860, –118.6039); Lemon Creek (44.6933, –118.6169); Lick Creek (44.6102, –118.7504); Little Boulder Creek (44.6661, –118.5807); Little Butte Creek (44.6093, –118.6188); Middle Fork John Day River (44.5946, –118.5163); Myrtle Creek (44.7336, –118.7187); Placer Gulch (44.5670, –118.5593); Ragged Creek (44.6366, –118.7048); Ruby Creek (44.6050, –118.6897); Sulphur Creek (44.6119, –118.6672); Sunshine Creek (44.6424, –118.7437); Tincup Creek (44.6489, –118.6320); Trail Creek (44.6249, –118.8469); Unnamed (44.5535, –118.8139); Unnamed (44.5697, –118.5975); Unnamed (44.6041, –118.6051); Unnamed (44.6471, –118.6869); Unnamed (44.6559, –118.5777); Vincent Creek (44.6663, –118.5345); Vinegar Creek (44.6861, –118.5378); West Fork Lick Creek (44.6021, –118.7891); Whiskey Creek (44.6776, –118.8659); Windlass Creek (44.6653, –118.6030); Wray Creek (44.6978, –118.6588).

(iii) *Big Creek Watershed 1707020303.* Outlet(s) = Middle Fork John Day River (Lat 44.8363, Long –119.0306) upstream to endpoint(s) in: Barnes Creek (44.8911, –118.9974); Bear Creek (44.7068, –118.8742); Big Creek (44.7726, –118.6831); Deadwood Creek (44.7645, –118.7499); Deep Creek (44.7448, –118.7591); East Fork Big Creek (44.7923, –118.7783); Elk Creek (44.7167, –118.7721); Granite Creek (44.8893, –119.0103); Huckleberry Creek (44.8045, –118.8605); Indian Creek (44.8037, –118.7498); Lick Creek (44.8302, –118.9613); Little Indian Creek (44.8743, –118.8862); Lost Creek (44.7906, –118.7970); Middle Fork John Day River (44.6934, –118.7947); Mosquito Creek (44.7504, –118.8021); North Fork Elk Creek (44.7281, –118.7624); Onion Gulch (44.7622, –118.7846); Pizer Creek (44.7805, –118.8102); Slide Creek (44.6950, –118.9124); Swamp Gulch (44.7606, –118.7641); Unnamed (44.8249, –118.8718); Unnamed (44.8594, –118.9018).

(iv) *Long Creek Watershed 1707020304.* Outlet(s) = Long Creek (Lat 44.8878, Long –119.2338) upstream to endpoint(s) in: Basin Creek (44.7458, –119.2452); Everett Creek (44.7106, –119.1063); Jonas Creek (44.6307, –118.9118); Long Creek (44.6076, –118.9402); Pass Creek (44.7681, –119.0414); Paul Creek (44.7243, –119.1304); Pine Creek (44.8125, –119.0859); South Fork Long Creek (44.6360, –118.9756).

(v) *Lower Middle Fork John Day River Watershed 1707020305.* Outlet(s) = Middle Fork John Day River (Lat 44.9168, Long –119.3004) upstream to endpoint(s) in: Middle Fork John Day River (44.8363, –119.0306).

(12) Lower John Day Subbasin 17070204—(i) *Lower John Day River/Kahler Creek 1707020401.* Outlet(s) = John Day River (Lat 44.8080, Long –119.9585) upstream to endpoint(s) in: Alder Creek (44.9575, –119.8621); Camp Creek (44.9005, –119.9505); East Bologna Canyon (44.8484, –119.5842); Henry Creek (44.9609, –119.7683); Horseshoe Creek (44.7076, –119.9465);

John Day River (44.7554, –119.6382); Kahler Creek (44.9109, –119.7030); Lake Creek (44.9012, –119.9806); Left Hand Creek (44.7693, –119.7613); Parrish Creek (44.7207, –119.8369); Tamarack Butte #2 (44.6867, –119.7898); Tamarack Creek (44.9107, –119.7026); Unnamed (44.9334, –119.9164); Unnamed (44.9385, –119.9088); Unnamed (44.9451, –119.8932); Unnamed (44.9491, –119.8696); Unnamed (44.9546, –119.8739); Unnamed (44.9557, –119.7561); West Bologna Canyon (44.8338, –119.6422); Wheeler Creek (44.9483, –119.8447); William Creek (44.7458, –119.9027).

(ii) *Lower John Day River/Service Creek Watershed 1707020402.* Outlet(s) = John Day River (Lat 44.7368, Long –120.3054) upstream to endpoint(s) in: Big Service Creek (44.9286, –120.0428); Girds Creek (44.6681, –120.1234); John Day River (44.8080, –119.9585); Rowe Creek (44.8043, –120.1751); Service Creek (44.8951, –120.0892); Shoofly Creek (44.6510, –120.0207).

(iii) *Bridge Creek Watershed 1707020403.* Outlet(s) = Bridge Creek (Lat 44.7368, Long –120.3054) upstream to endpoint(s) in: Bear Creek (44.5585, –120.4198); Bridge Creek (44.4721, –120.2009); Carroll Creek (44.5460, –120.3322); Dodds Creek (44.5329, –120.3867); Gable Creek (44.5186, –120.2384); Johnson Creek #2 (44.5193, –120.0949); Slide Creek (44.4956, –120.3023); Thompson Creek (44.5270, –120.2489); West Branch Bridge Creek (44.4911, –120.3098).

(iv) *Lower John Day River/Muddy Creek Watershed 1707020404.* Outlet(s) = John Day River (Lat 44.9062, Long –120.4460) upstream to endpoint(s) in: Cherry Creek (44.6344, –120.4543); Clubfoot Hollow (44.8865, –120.1929); Cove Creek (44.9299, –120.3791); Dry Creek (44.6771, –120.5367); John Day River (44.7368, –120.3054); Little Muddy Creek (44.7371, –120.5575); Muddy Creek (44.7491, –120.5071); Pine Creek (44.8931, –120.1797); Robinson Canyon (44.8807, –120.2678); Steers Canyon (44.9247, –120.2013).

(v) *Lower John Day River/Clarno Watershed 1707020405.* Outlet(s) = John Day River (Lat 45.1626, Long –120.4681) upstream to endpoint(s) in: Pine Creek (44.9062, –120.4460); Sorefoot Creek (44.9428, –120.5481).

(vi) *Butte Creek Watershed 1707020406.* Outlet(s) = Butte Creek (Lat 45.0574, Long –120.4831) upstream to endpoint(s) in: Butte Creek (44.9266, –120.1142); Cottonwood Creek (44.9816, –120.2136); Deep Creek (45.0166, –120.4165); Hunt Canyon (45.1050, –120.2838); Straw Fork (44.9536, –120.1024); Unnamed (45.0952, –120.2928); West Fork Butte Creek (44.9883, –120.3332).

(vii) *Pine Hollow Watershed 1707020407.* Outlet(s) = Pine Hollow (Lat 45.1531, Long –120.4757) upstream to endpoint(s) in: Big Pine Hollow (44.9968, –120.7342); Brush Canyon (45.0255, –120.6329); Eakin Canyon (45.1608, –120.5863); Hannafin Canyon (45.1522, –120.6158); Long Hollow Creek (44.9922, –120.5565); West Little Pine Hollow (44.9921, –120.7324).

(viii) *Thirtymile Creek Watershed 1707020408.* Outlet(s) = Thirtymile Creek (Lat 45.1626, Long –120.4681) upstream to endpoint(s) in: Condon Canyon (45.1870, –120.1829); Dry Fork Thirtymile Creek (45.1858, –120.1338); East Fork Thirtymile Creek (45.1575, –120.0556); Lost Valley Creek (45.1062, –119.9916); Patill Canyon (45.1252, –120.1870); Thirtymile Creek (44.9852, –120.0375); Unnamed (44.9753, –120.0469); Wehrli Canyon (45.1539, –120.2137).

(ix) *Lower John Day River/Ferry Canyon Watershed 1707020409.* Outlet(s) = John Day River (Lat 45.3801, Long –120.5117) upstream to endpoint(s) in: Ferry Canyon (45.3424, –120.4388); Jackknife Creek (45.2490, –120.6106); John Day River (45.1626, –120.4681); Lamberson Canyon (45.3099, –120.4147); Little Ferry Canyon (45.3827, –120.5913).

(x) *Lower John Day River/Scott Canyon Watershed 1707020410.* Outlet(s) = John Day River (Lat 45.5769, Long –120.4041) upstream to endpoint(s) in: Cottonwood Canyon (45.4143, –120.4490); Cottonwood Canyon (45.4898, –120.5118); Dry Fork Hay Creek (45.3093, –120.1612); John Day River (45.3801, –120.5117); Scott Canyon (45.4124, –120.1957); Unnamed (45.3407, –120.2299).

(xi) *Upper Rock Creek Watershed 1707020411.* Outlet(s) = Rock Creek (Lat 45.2190, Long –119.9597) upstream to endpoint(s) in: Allen Canyon (45.1092, –119.5976); Allen Spring Canyon (45.0471, –119.6468); Board Creek (45.1120, –119.5390); Brown Creek (45.0365, –119.8296); Buckhorn Creek (45.0272, –119.9186); Chapin Creek (45.0538, –119.6727); Davidson Canyon (45.0515, –119.5952); Hahn Canyon (45.1491, –119.8320); Harris Canyon (45.0762, –119.5856); Hollywood Creek (45.0964, –119.5174); Indian Creek (45.0481, –119.6476); John Z Canyon (45.0829, –119.6058); Juniper Creek (45.0504, –119.7730); Middle Fork Rock Creek (45.0818, –119.7404); Rock Creek (45.0361, –119.5989); Stahl Canyon (45.0071, –119.8683); Tree Root Canyon (45.0626, –119.6314); Tupper Creek (45.0903, –119.4999); Unnamed (45.0293, –119.5907); Unnamed (45.0698, –119.5329); Unnamed (45.0714, –119.5227); West Fork Juniper Creek (45.0192, –119.7786).

(xii) *Lower Rock Creek Watershed 1707020412.* Outlet(s) = Rock Creek (Lat 45.5769, Long –120.4041) upstream to endpoint(s) in: Dry Creek (45.3238, –119.9709); Rock Creek (45.2190, –119.9597); Sixmile Canyon (45.2448, –120.0283); South Fork Rock Creek (45.2770, –120.1232).

(xiii) *Grass Valley Canyon Watershed 1707020413.* Outlet(s) = Grass Valley Canyon (Lat 45.5974, Long –120.4232) upstream to endpoint(s) in: Grass Valley Canyon (45.4071, –120.7226); Hay Canyon (45.5104, –120.6085); Rosebush Creek (45.3395, –120.7159).

(xiv) *Lower John Day River/McDonald Ferry Watershed 1707020414.* Outlet(s) = John Day River (Lat 45.7389, Long –120.6520) upstream to endpoint(s) in: John Day River (45.5769, –120.4041).

(13) Lower Deschutes Subbasin 17070306—(i) *Upper Deschutes River Watershed 1707030603.* Outlet(s) = Deschutes River (Lat 44.8579, Long –121.0668) upstream to endpoint(s) in: Deschutes River (44.7243, –121.2465); Shitike Creek (44.7655, –121.5835); Unnamed (44.7934, –121.3715).

(ii) *Mill Creek Watershed 1707030604.* Outlet(s) = Mill Creek (Lat 44.8792, Long –121.3711) upstream to endpoint(s) in: Boulder Creek (44.8261, –121.4924); Mill Creek (44.8343, –121.6737); Unnamed (44.8330, –121.6756).

(iii) *Beaver Creek Watershed 1707030605.* Outlet(s) = Beaver Creek (Lat 44.8730, Long –121.3405) upstream to endpoint(s) in: Beaver Butte Creek (45.0786, –121.5746); Beaver Creek (45.1306, –121.6468); Indian Creek (45.0835, –121.5113).

(iv) *Warm Springs River Watershed 1707030606.* Outlet(s) = Warm Springs River (Lat 44.8579, Long –121.0668) upstream to endpoint(s) in: Badger Creek #2 (44.9352, –121.5569); South Fork Warm Springs River (44.9268, –121.6995); Warm Springs River (44.9812, –121.7976).

(v) *Middle Deschutes River Watershed 1707030607.* Outlet(s) = Deschutes River (Lat 45.2642, Long –121.0232) upstream to endpoint(s) in: Cove Creek (44.9673, –121.0430); Deschutes River (44.8579, –121.0668); Eagle Creek (44.9999, –121.1688); Nena Creek (45.1030, –121.1653); Oak Creek (44.9336, –121.0981); Paquet Gulch (45.0676, –121.2911); Skookum Creek (44.9171, –121.1251); Stag Canyon (45.1249, –121.0563); Unnamed (45.0186, –121.0464); Unnamed (45.0930, –121.1511); Wapinitia Creek (45.1177, –121.3025).

(vi) *Bakeoven Creek Watershed 1707030608.* Outlet(s) = Bakeoven Creek (Lat 45.1748, Long –121.0728) upstream to endpoint(s) in: Bakeoven Creek (45.1261, –120.9398); Booten Creek (45.1434, –121.0131); Cottonwood Creek (45.0036, –120.8720); Deep Creek (44.9723, –120.9480); Robin Creek (45.1209, –120.9652); Trail Hollow Creek (45.1481, –121.0423).

(vii) *Buck Hollow Creek Watershed 1707030611.* Outlet(s) = Buck Hollow Creek (Lat 45.2642, Long –121.0232) upstream to endpoint(s) in: Buck Hollow Creek (45.0663, –120.7095); Finnegan Creek (45.2231, –120.8472); Macken Canyon (45.1093, –120.7011); Thorn Hollow (45.0450, –120.7386).

(viii) *Lower Deschutes River Watershed 1707030612.* Outlet(s) = Deschutes River (Lat 45.6426, Long –120.9142) upstream to endpoint(s) in: Bull Run Canyon (45.4480, –120.8655); Deschutes River (45.2642, –121.0232); Fall Canyon (45.5222, –120.8538); Ferry Canyon (45.3854, –120.9373); Jones Canyon (45.3011, –120.9404); Macks Canyon (45.3659, –120.8524); Oak Canyon (45.3460, –120.9960); Sixteen Canyon (45.4050, –120.8529).

(14) Trout Subbasin 17070307—(i) *Upper Trout Creek Watershed 1707030701.* Outlet(s) = Trout Creek (Lat 44.8229, Long –120.9193) upstream to endpoint(s) in: Amity Creek (44.6447, –120.5854); Auger Creek (44.5539, –120.5381); Beaver Creek (44.6390, –120.7034); Big Log Creek (44.5436, –120.6997); Big Whetstone Creek (44.6761, –120.7645); Board Hollow (44.6064, –120.7405); Cartwright Creek (44.5404, –120.6535); Clover Creek (44.6523, –120.7358); Dutchman Creek (44.5320, –120.6704); Foley Creek (44.5861, –120.6801); Little Trout Creek (44.7816, –120.7237); Opal Creek (44.5792, –120.5446); Potlid Creek (44.5366, –120.6207); Trout Creek (44.5286, –120.5805); Tub Springs Canyon (44.8155, –120.7888); Unnamed (44.5428, –120.5848); Unnamed (44.6043, –120.7403); Unnamed (44.6510, –120.7337).

(ii) *Antelope Creek Watershed 1707030702.* Antelope Creek (Lat 44.8229, Long –120.9193) upstream to endpoint(s) in: Antelope Creek (44.8564, –120.8574); Boot Creek (44.9086, –120.8864); Pole Creek (44.9023, –120.9108); Ward Creek (44.9513, –120.8341).

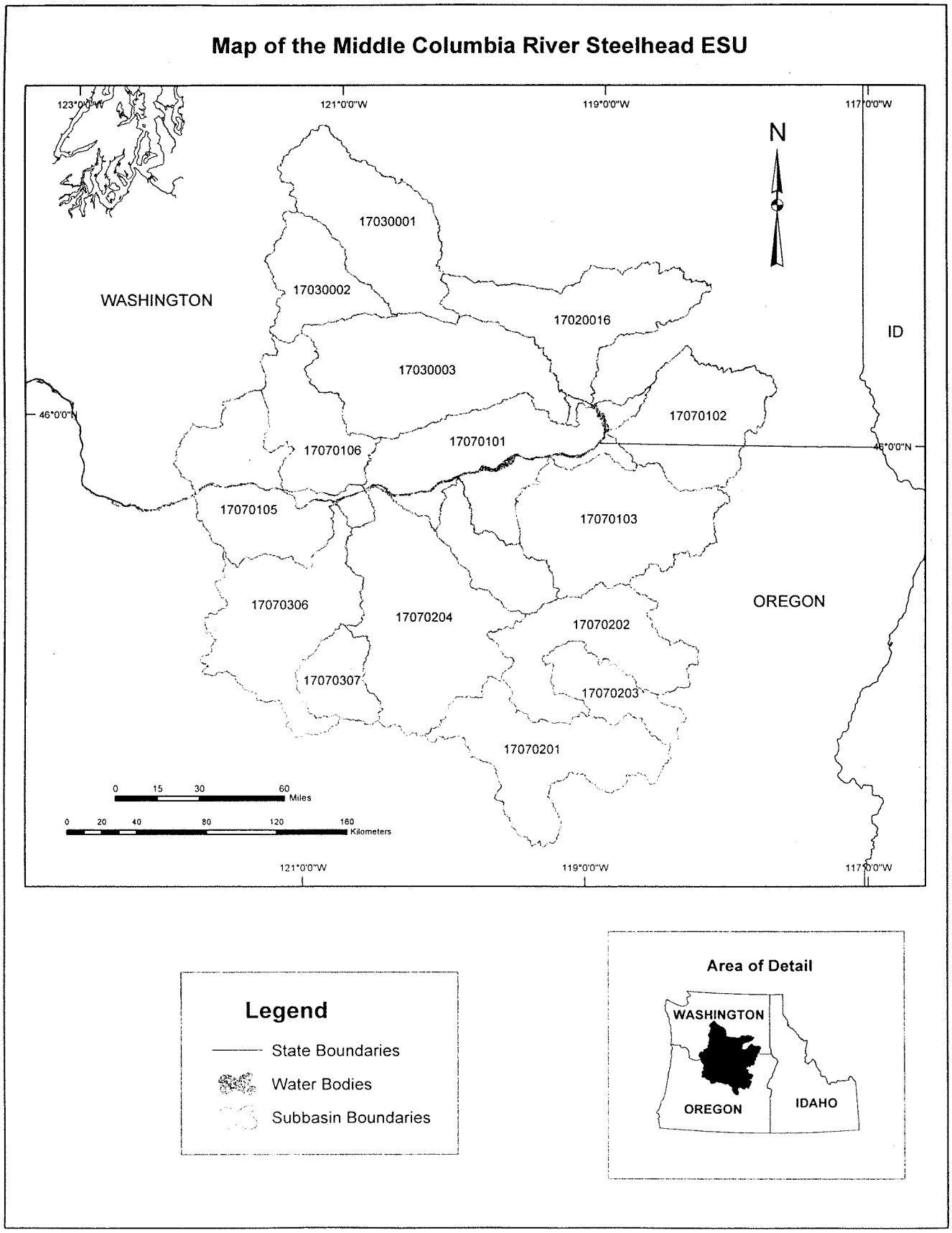
(iii) *Lower Trout Creek Watershed 1707030705.* Outlet(s) = Trout Creek (Lat 44.8214, Long –121.0876) upstream to endpoint(s) in: Brocher Creek (44.8357, –121.0330); Hay Creek (44.7824, –120.9652); Trout Creek (44.8229, –120.9193).

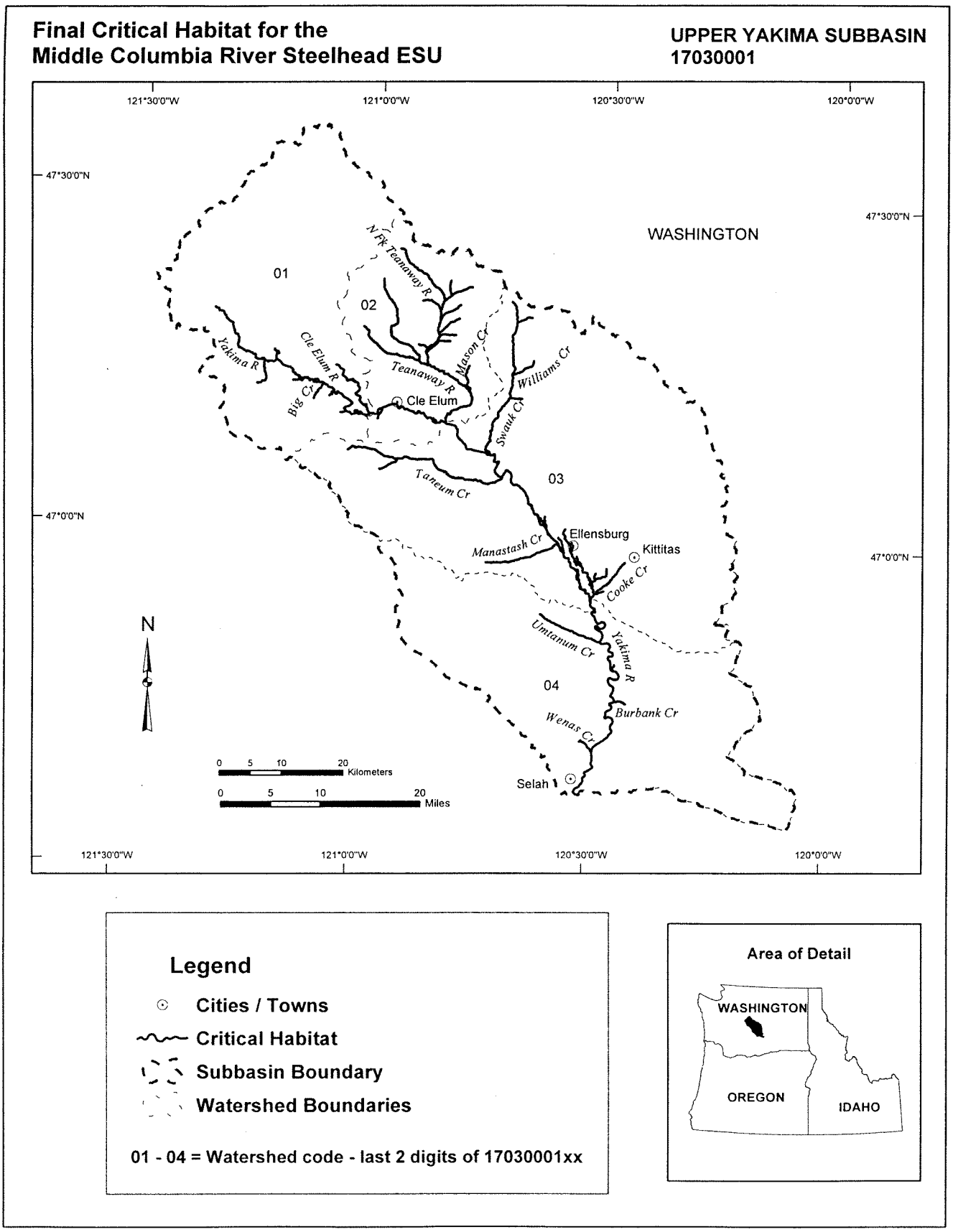
(15) Upper Columbia/Priest Rapids Subbasin 17020016—*Columbia River/Zintel Canyon Watershed 1702001606.* Outlet(s) = Columbia River (Lat 46.1776, Long –119.0183) upstream to endpoint(s) in: Columbia River (46.2534, –119.2268).

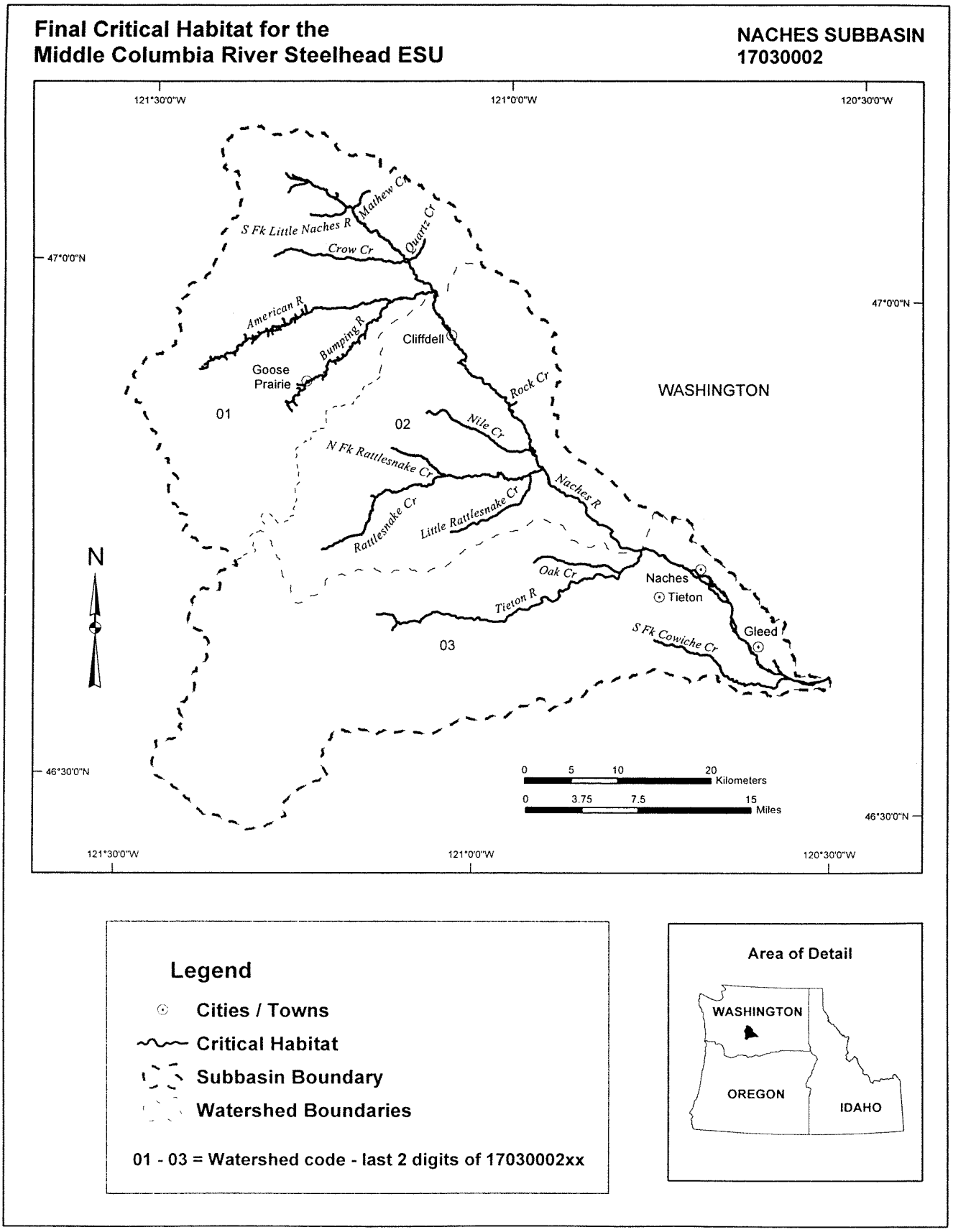
(16) Columbia River Corridor-*Columbia River Corridor* Outlet(s) = Columbia River (Lat 46.2485, Long –124.0782) upstream to endpoint(s) in: Columbia River (45.7070, –121.7943).

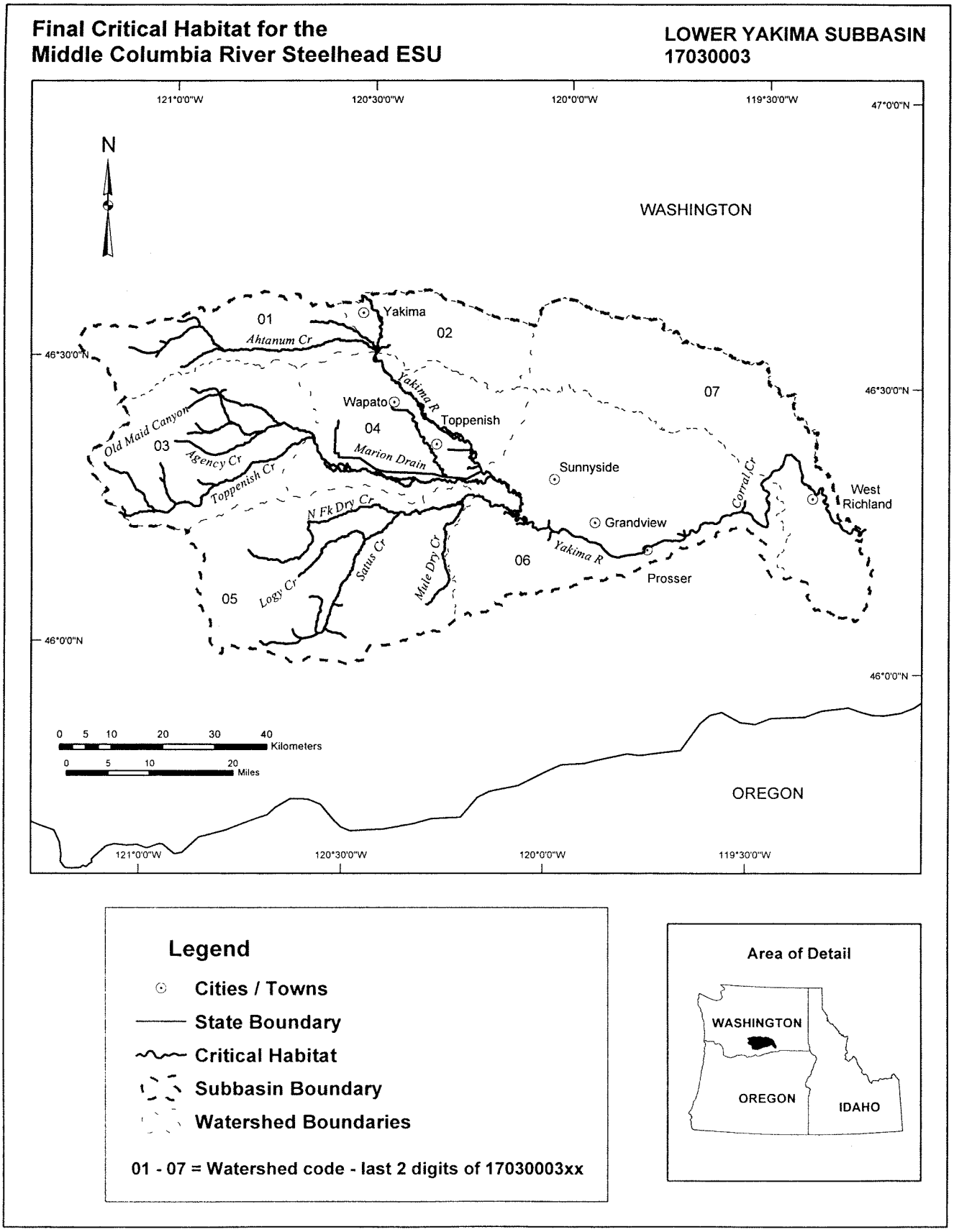
(17) Maps of critical habitat for the Middle Columbia River Steelhead ESU follow:

BILLING CODE 3510–22–P


Map of the Middle Columbia River Steelhead ESU
123°0'0"W
121°0'0"W
119°0'0"W
117°0'0"W
N
WASHINGTON
ID
OREGON
46°0'0"N
17030001
17030002
17020016
17030003
17070102
17070101
17070106
17070105
17070103
17070306
17070204
17070202
17070307
17070203
17070201
0 15 30 60 Miles
0 20 40 80 120 160 Kilometers
Legend
State Boundaries
Water Bodies
Subbasin Boundaries
Area of Detail
WASHINGTON
OREGON
IDAHO

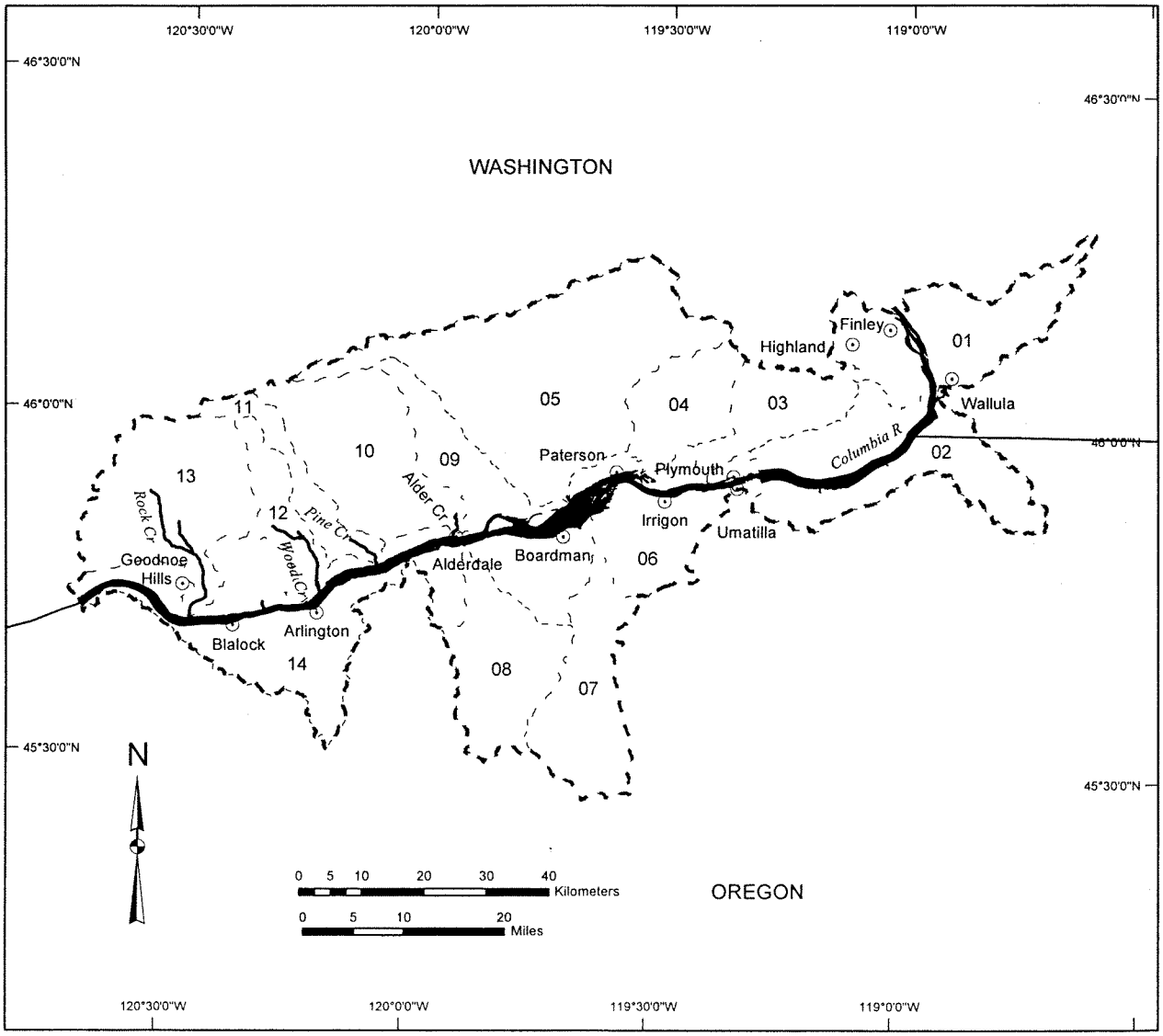

Final Critical Habitat for the
Middle Columbia River Steelhead ESU
UPPER YAKIMA SUBBASIN
17030001
121°30'0"W
121°0'0"W
120°30'0"W
120°0'0"W
47°30'0"N
47°0'0"N
WASHINGTON
01
02
03
04
N Fk Teanaway R
Teanaway R
Mason Cr
Williams Cr
Swauk Cr
Yakima R
Cle Elum R
Big Cr
Cle Elum
Taneum Cr
Manastash Cr
Ellensburg
Kittitas
Cooke Cr
Umtanum Cr
Yakima R
Burbank Cr
Wenas Cr
Selah
N
0 5 10 20 Kilometers
0 5 10 20 Miles
Legend
Cities / Towns
Critical Habitat
Subbasin Boundary
Watershed Boundaries
01 - 04 = Watershed code - last 2 digits of 17030001xx
Area of Detail
WASHINGTON
OREGON
IDAHO


Final Critical Habitat for the
Middle Columbia River Steelhead ESU
NACHES SUBBASIN
17030002
121°30'0"W
121°0'0"W
120°30'0"W
47°0'0"N
46°30'0"N
S Fk Little Naches R
Mathew Cr
Quartz Cr
Crow Cr
American R
Bumping R
Cliffdell
Goose Prairie
Rock Cr
WASHINGTON
01
02
Nile Cr
N Fk Rattlesnake Cr
Naches R
Rattlesnake Cr
Little Rattlesnake Cr
N
Oak Cr
Naches
Tieton
Tieton R
Gleed
S Fk Cowiche Cr
03
0 5 10 20 Kilometers
0 3.75 7.5 15 Miles
Legend
Cities / Towns
Critical Habitat
Subbasin Boundary
Watershed Boundaries
01 - 03 = Watershed code - last 2 digits of 17030002xx
Area of Detail
WASHINGTON
OREGON
IDAHO


Final Critical Habitat for the
Middle Columbia River Steelhead ESU
LOWER YAKIMA SUBBASIN
17030003
121°0'0"W
120°30'0"W
120°0'0"W
119°30'0"W
47°0'0"N
46°30'0"N
46°0'0"N
N
WASHINGTON
OREGON
01
02
03
04
05
06
07
Yakima
Wapato
Toppenish
Sunnyside
Grandview
Prosser
West Richland
Ahtanum Cr
Yakima R
Old Maid Canyon
Agency Cr
Toppenish Cr
Marion Drain
N Fk Dry Cr
Logy Cr
Satus Cr
Mule Dry Cr
Corral Cr
0 5 10 20 30 40 Kilometers
0 5 10 20 Miles
Legend
Cities / Towns
State Boundary
Critical Habitat
Subbasin Boundary
Watershed Boundaries
01 - 07 = Watershed code - last 2 digits of 17030003xx
Area of Detail
WASHINGTON
OREGON
IDAHO

Final Critical Habitat for the Middle Columbia River Steelhead ESU

MIDDLE COLUMBIA / LAKE WALLULA SUBBASIN 17070101

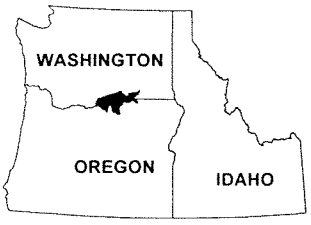


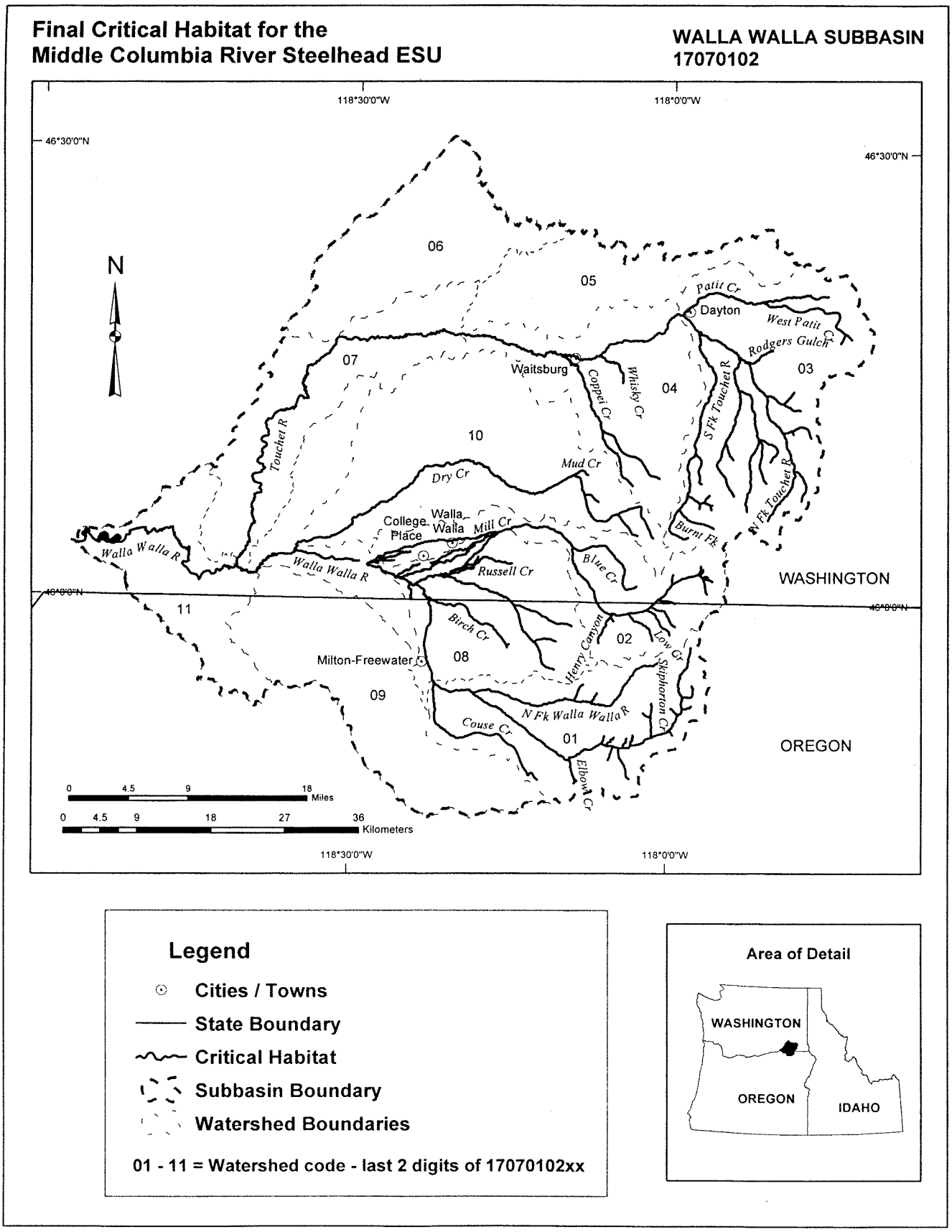
Legend

- Cities / Towns
- State Boundary
- Critical Habitat
- Subbasin Boundary
- Watershed Boundaries

01 - 14 = Watershed code - last 2 digits of 17070101xx

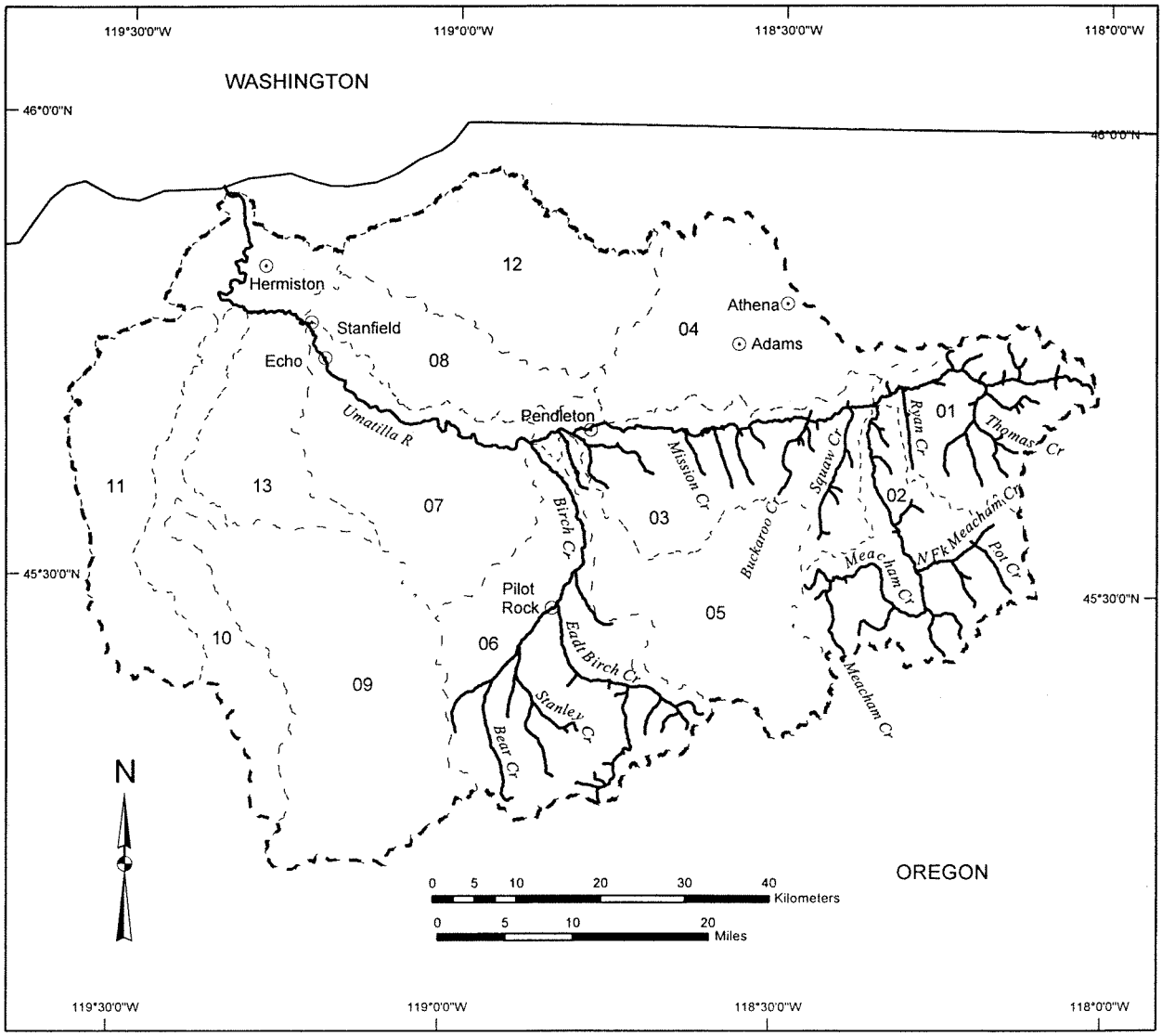
Area of Detail




Final Critical Habitat for the
Middle Columbia River Steelhead ESU
WALLA WALLA SUBBASIN
17070102
118°30'0"W
118°0'0"W
46°30'0"N
46°0'0"N
N
06
05
07
04
03
10
11
08
09
02
01
Dayton
Waitsburg
College Place
Walla Walla
Milton-Freewater
Patit Cr
West Patit
Rodgers Gulch
Coppei Cr
Whisky Cr
S Fk Touchet R
N Fk Touchet R
Touchet R
Mud Cr
Dry Cr
Mill Cr
Burnt Fk
Walla Walla R
Russell Cr
Blue Cr
Birch Cr
Henry Canyon
Low Cr
Skiphorton Cr
N Fk Walla Walla R
Couse Cr
Elbow Cr
WASHINGTON
OREGON
0 4.5 9 18 Miles
0 4.5 9 18 27 36 Kilometers
Legend
Cities / Towns
State Boundary
Critical Habitat
Subbasin Boundary
Watershed Boundaries
01 - 11 = Watershed code - last 2 digits of 17070102xx
Area of Detail
WASHINGTON
OREGON
IDAHO

Final Critical Habitat for the Middle Columbia River Steelhead ESU

UMATILLA SUBBASIN 17070103

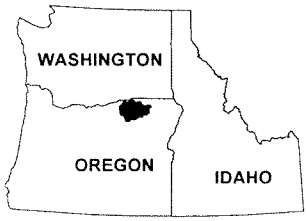


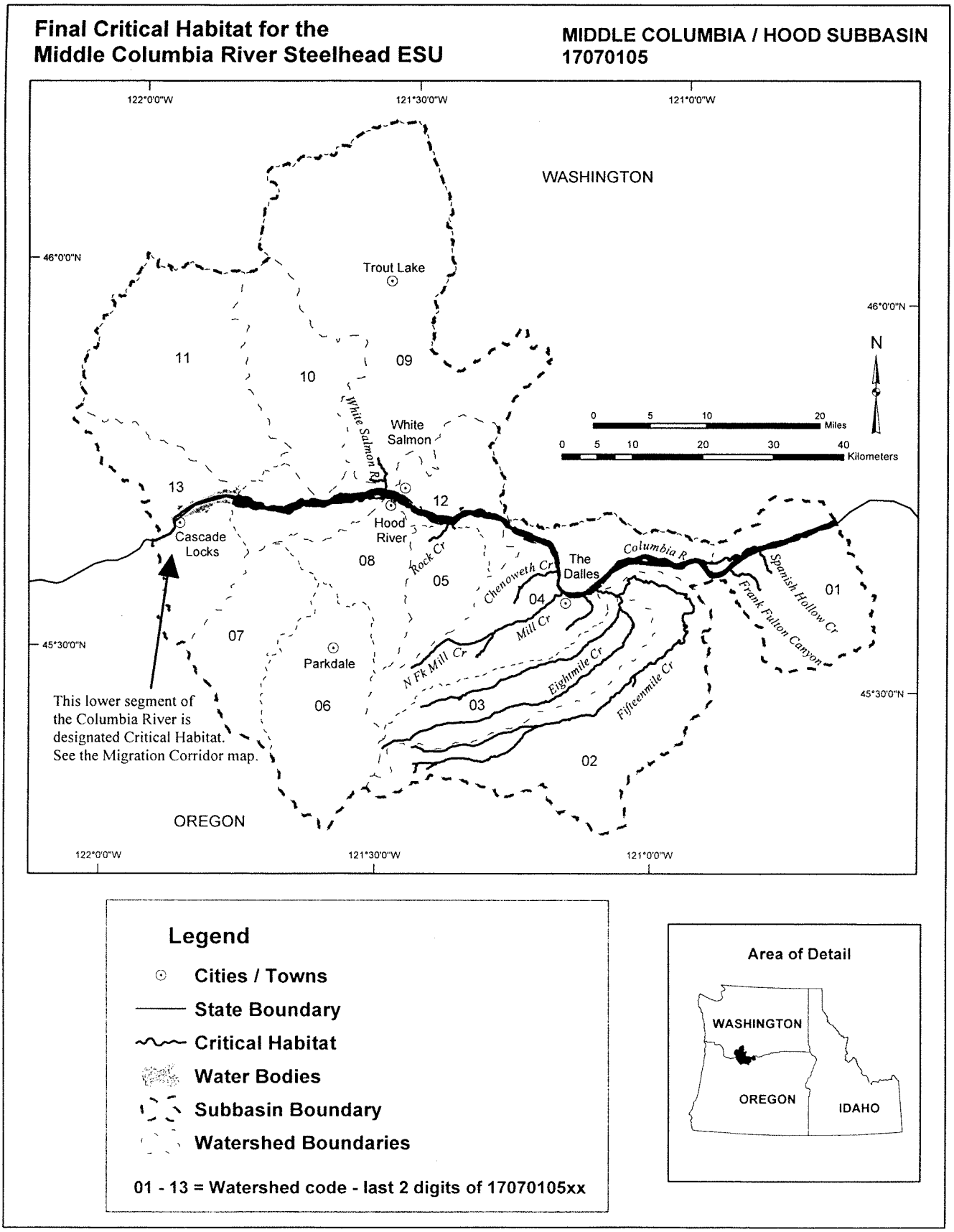
Legend

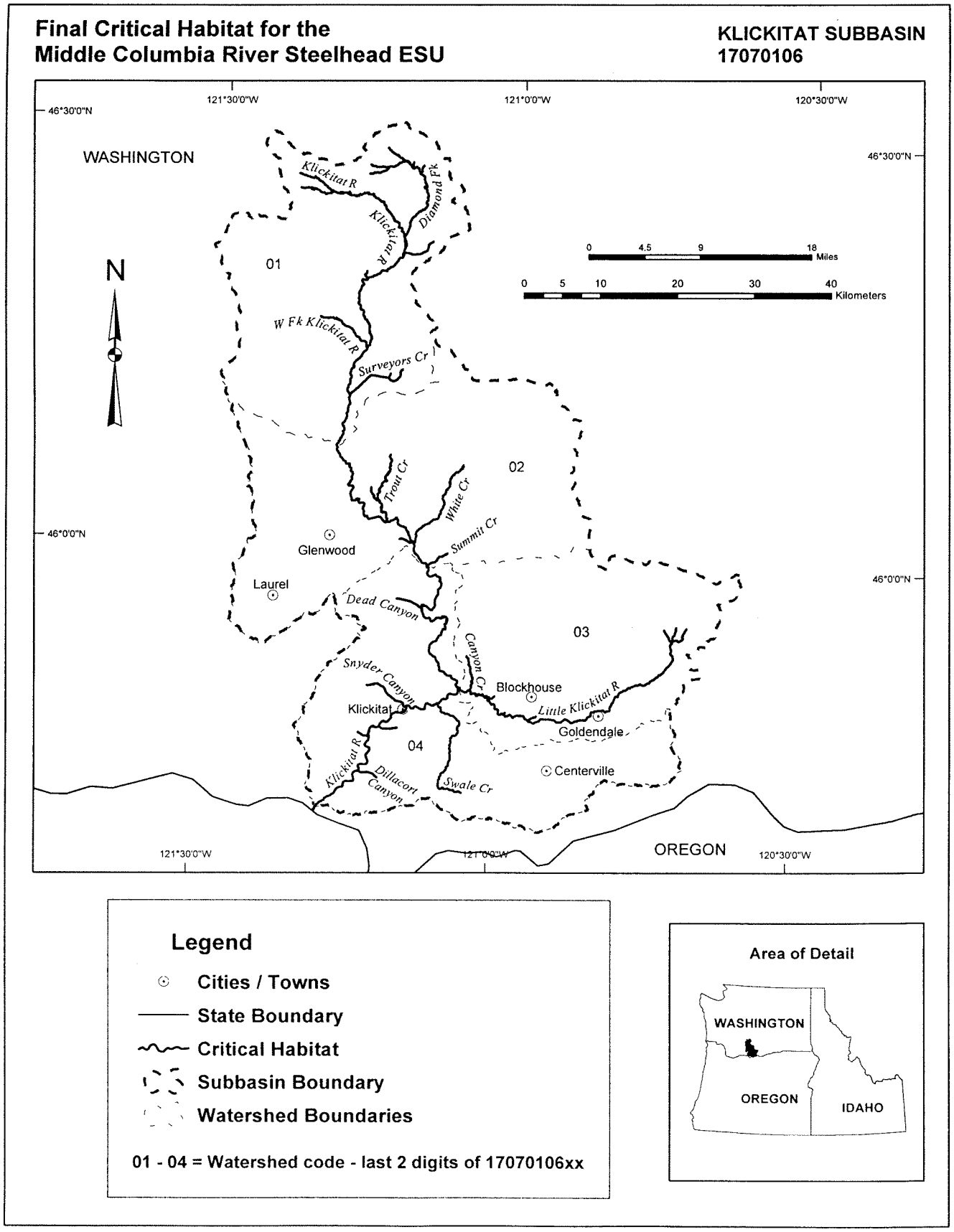
- Cities / Towns
- State Boundary
- Critical Habitat
- Subbasin Boundary
- Watershed Boundaries

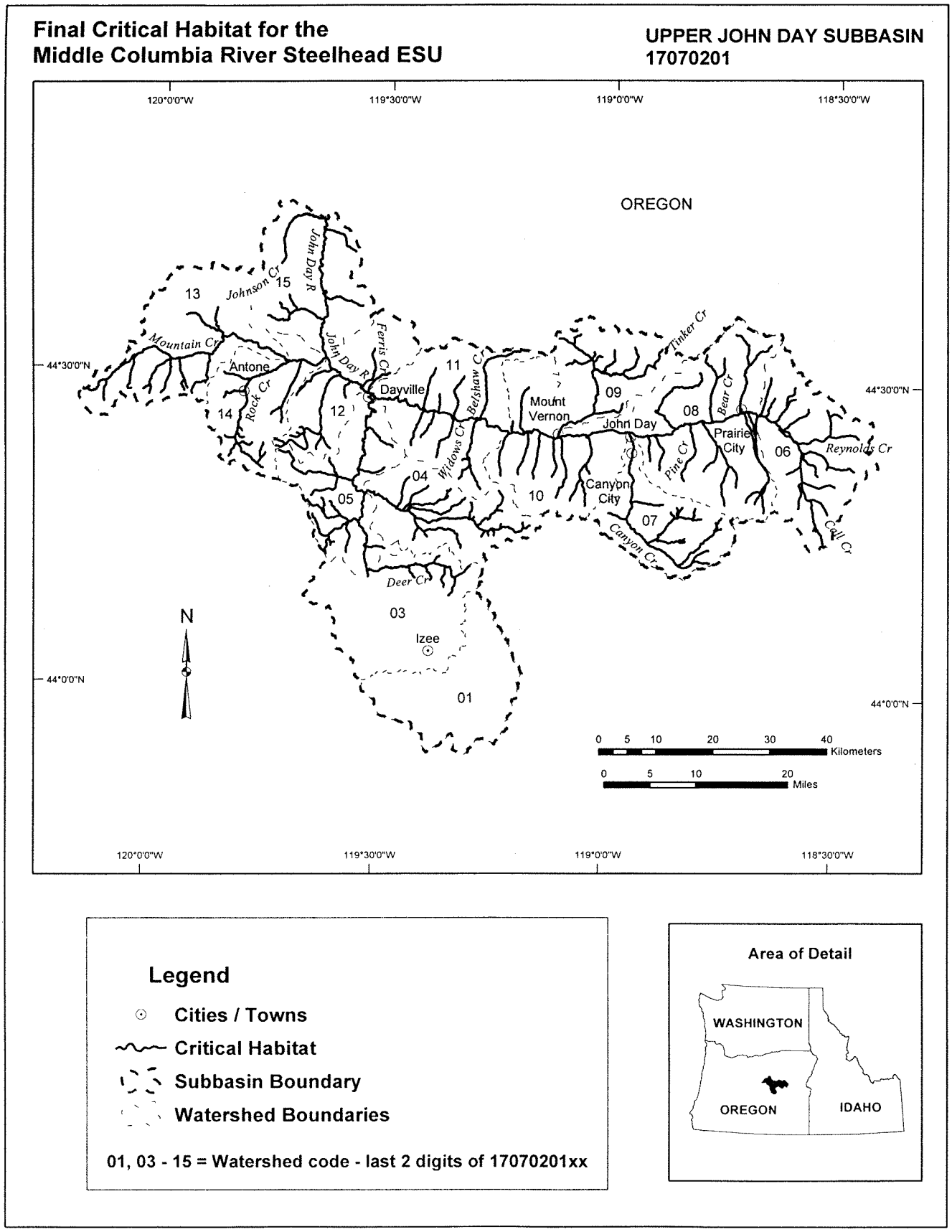
01 - 13 = Watershed code - last 2 digits of 17070103xx

Area of Detail



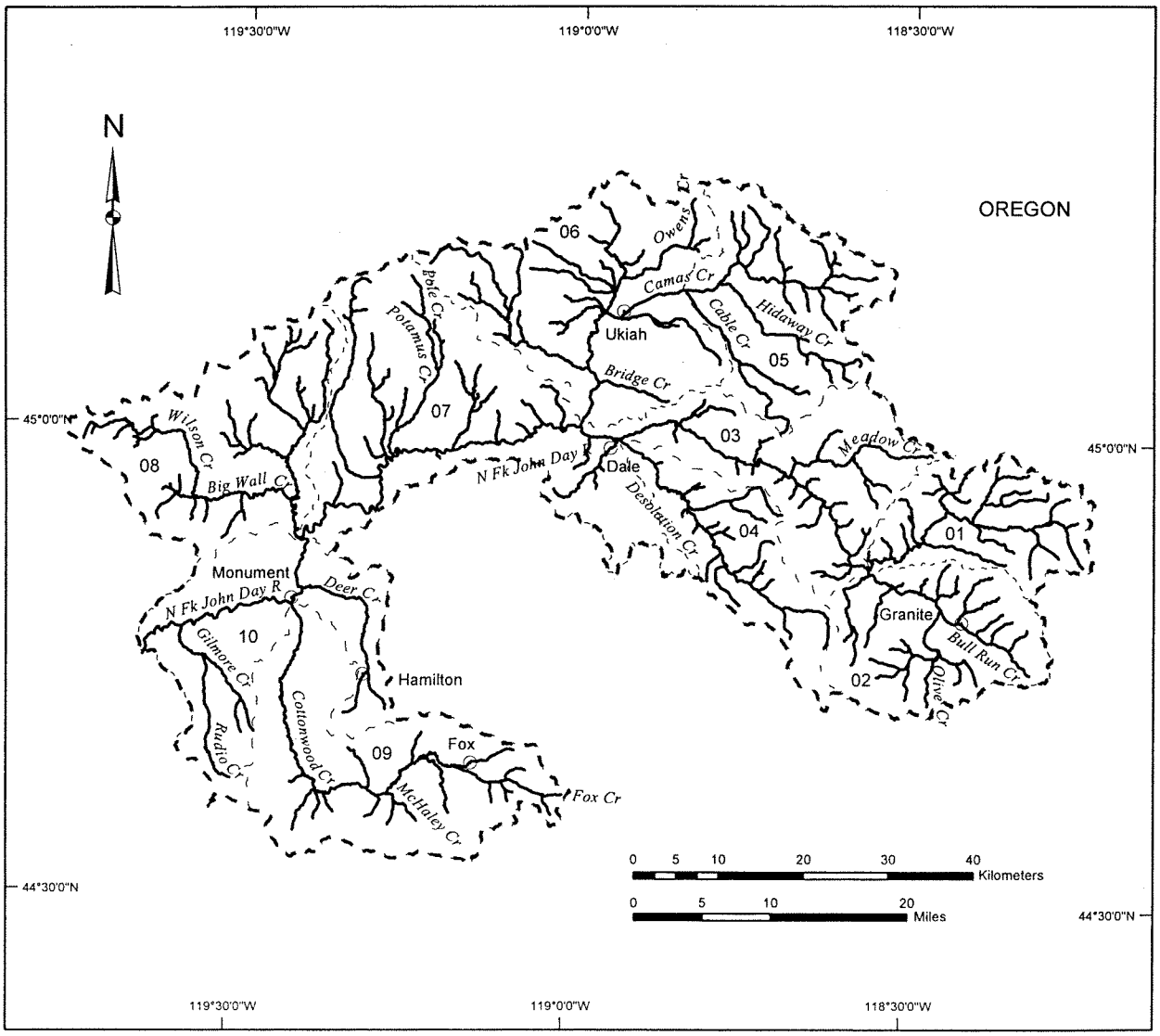

Final Critical Habitat for the
Middle Columbia River Steelhead ESU
MIDDLE COLUMBIA / HOOD SUBBASIN
17070105
122°0'0"W
121°30'0"W
121°0'0"W
46°0'0"N
45°30'0"N
WASHINGTON
OREGON
Trout Lake
White Salmon
Hood River
Cascade Locks
Parkdale
The Dalles
White Salmon R
Rock Cr
Chenoweth Cr
Mill Cr
N Fk Mill Cr
Eightmile Cr
Fifteenmile Cr
Columbia R
Frank Fulton Canyon
Spanish Hollow Cr
01
02
03
04
05
06
07
08
09
10
11
12
13
N
0 5 10 20 Miles
0 5 10 20 30 40 Kilometers
This lower segment of the Columbia River is designated Critical Habitat. See the Migration Corridor map.
Legend
Cities / Towns
State Boundary
Critical Habitat
Water Bodies
Subbasin Boundary
Watershed Boundaries
01 - 13 = Watershed code - last 2 digits of 17070105xx
Area of Detail
WASHINGTON
OREGON
IDAHO


Final Critical Habitat for the
Middle Columbia River Steelhead ESU
KLICKITAT SUBBASIN
17070106
121°30'0"W
121°0'0"W
120°30'0"W
46°30'0"N
46°0'0"N
WASHINGTON
OREGON
N
0 4.5 9 18 Miles
0 5 10 20 30 40 Kilometers
01
02
03
04
Klickitat R
Diamond Fk
W Fk Klickitat R
Surveyors Cr
Trout Cr
White Cr
Summit Cr
Glenwood
Laurel
Dead Canyon
Canyon Cr
Snyder Canyon
Blockhouse
Little Klickitat R
Klickitat
Goldendale
Centerville
Dillacort Canyon
Swale Cr
Legend
Cities / Towns
State Boundary
Critical Habitat
Subbasin Boundary
Watershed Boundaries
01 - 04 = Watershed code - last 2 digits of 17070106xx
Area of Detail
WASHINGTON
OREGON
IDAHO


Final Critical Habitat for the
Middle Columbia River Steelhead ESU
UPPER JOHN DAY SUBBASIN
17070201
120°0'0"W
119°30'0"W
119°0'0"W
118°30'0"W
44°30'0"N
44°0'0"N
OREGON
Johnson Cr
John Day R
Mountain Cr
Antone
Rock Cr
Ferris Cr
Dayville
Belshaw Cr
Widows Cr
Mount Vernon
Tinker Cr
John Day
Bear Cr
Prairie City
Pine Cr
Reynolds Cr
Canyon City
Canyon Cr
Call Cr
Deer Cr
Izee
13
15
14
12
11
09
08
06
05
04
10
07
03
01
N
0 5 10 20 30 40 Kilometers
0 5 10 20 Miles
Legend
Cities / Towns
Critical Habitat
Subbasin Boundary
Watershed Boundaries
01, 03 - 15 = Watershed code - last 2 digits of 17070201xx
Area of Detail
WASHINGTON
OREGON
IDAHO

Final Critical Habitat for the Middle Columbia River Steelhead ESU

NORTH FORK JOHN DAY SUBBASIN 17070202

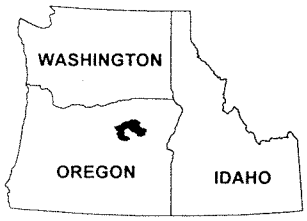


Legend

- Cities / Towns
- Critical Habitat
- Subbasin Boundary
- Watershed Boundaries

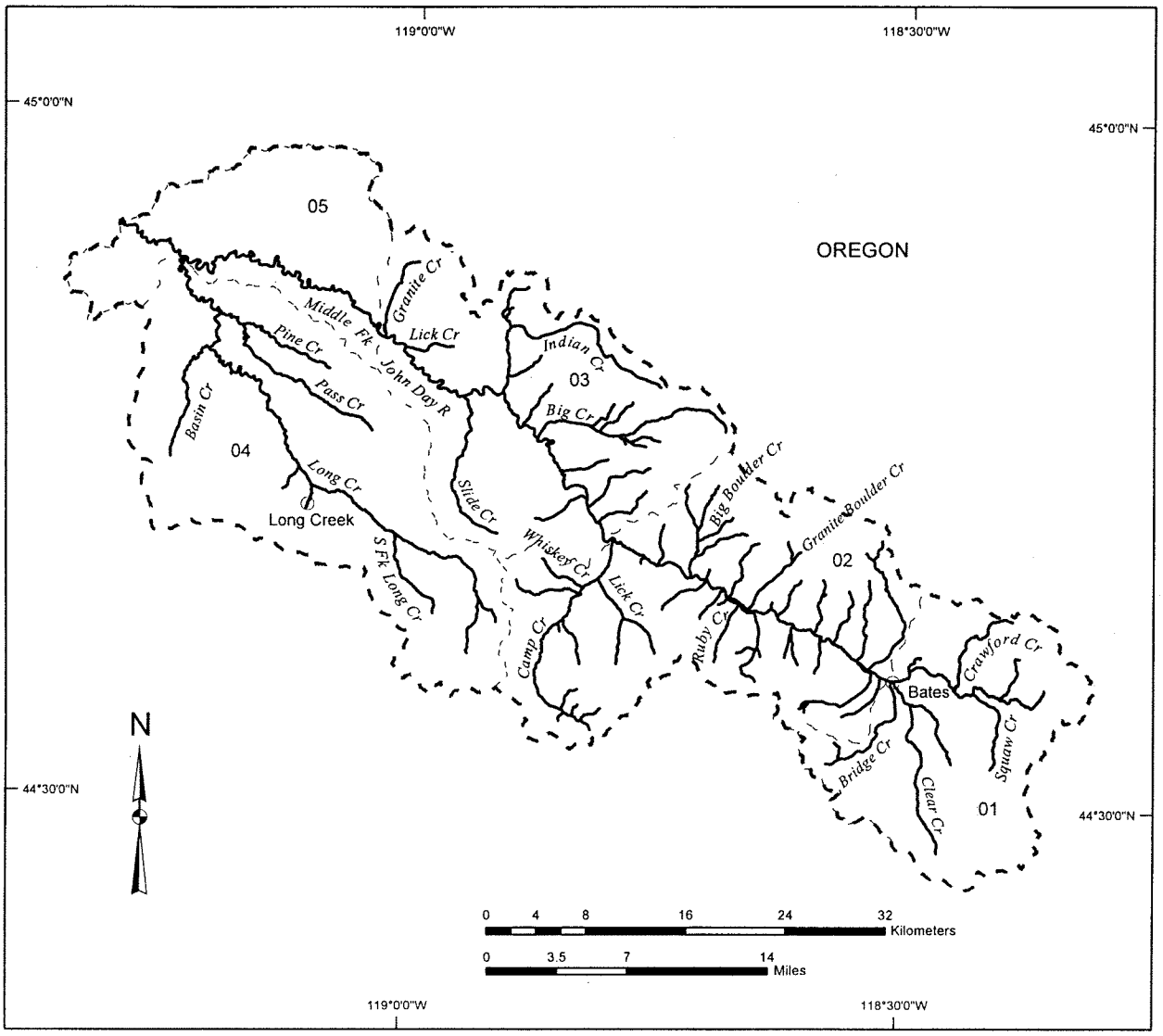
01 - 10 = Watershed code - last 2 digits of 17070202xx

Area of Detail



Final Critical Habitat for the Middle Columbia River Steelhead ESU

MIDDLE FORK JOHN DAY SUBBASIN 17070203

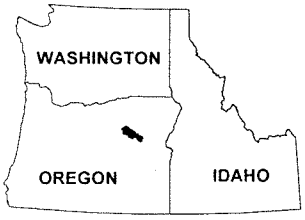


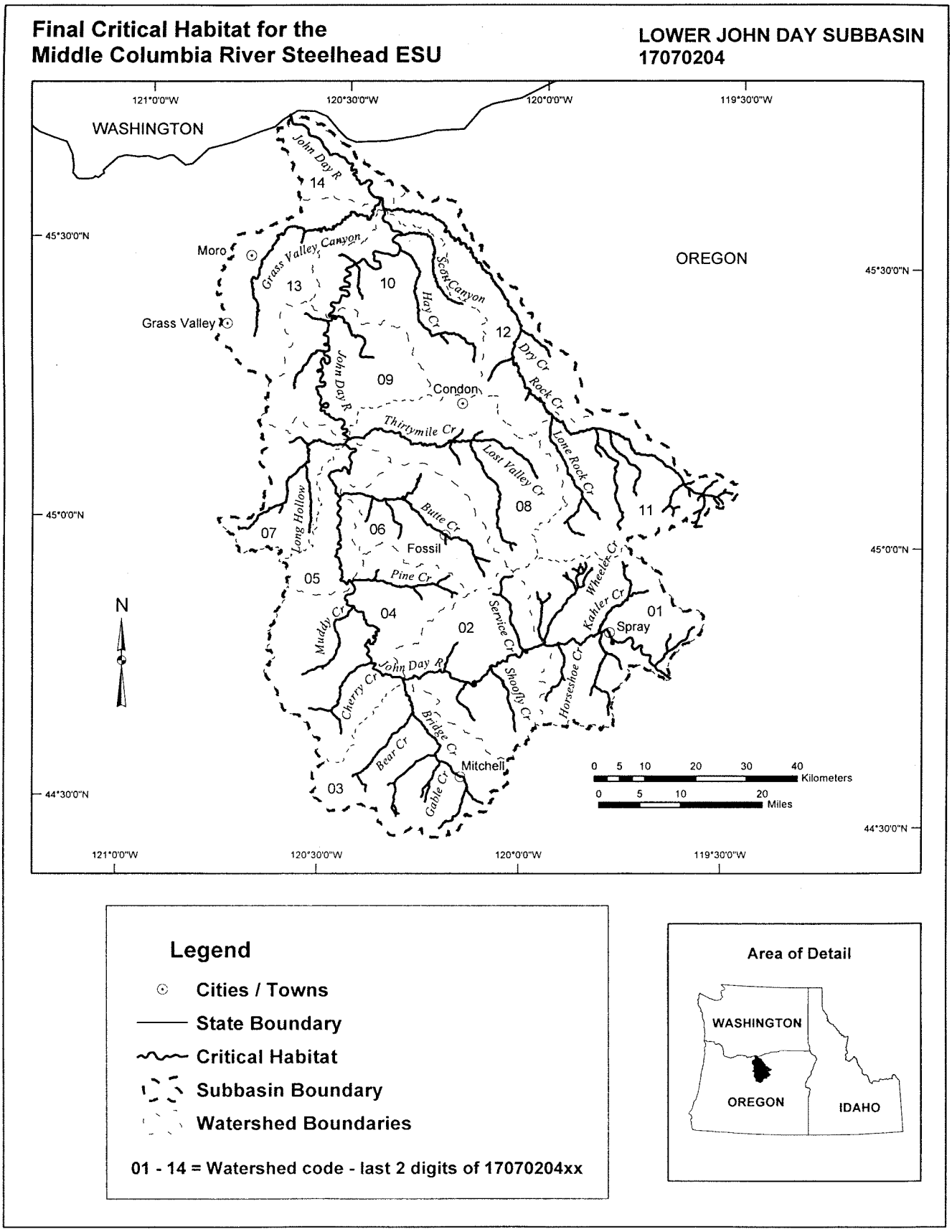
Legend

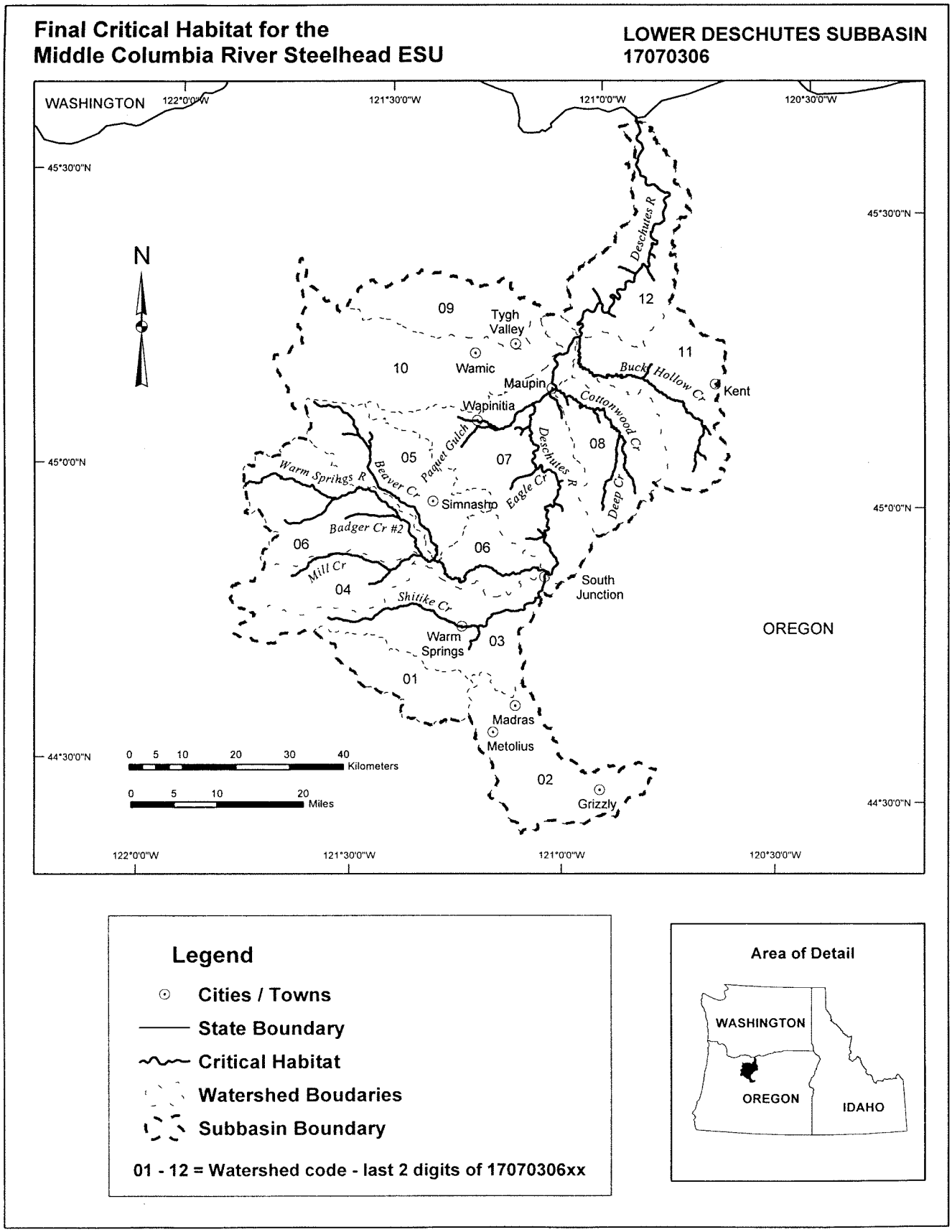
- Cities / Towns
- Critical Habitat
- Subbasin Boundary
- Watershed Boundaries

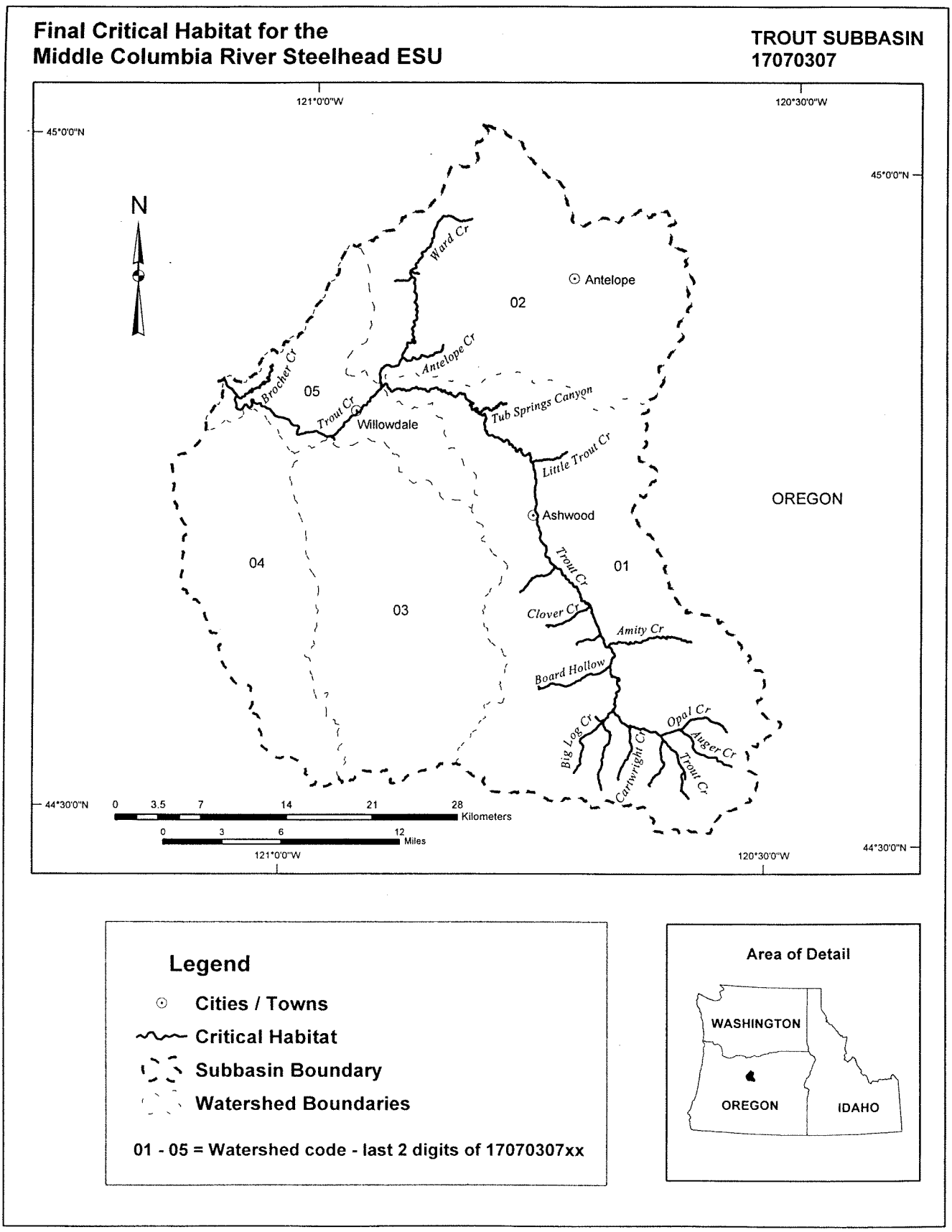
01 - 05 = Watershed code - last 2 digits of 17070203xx

Area of Detail



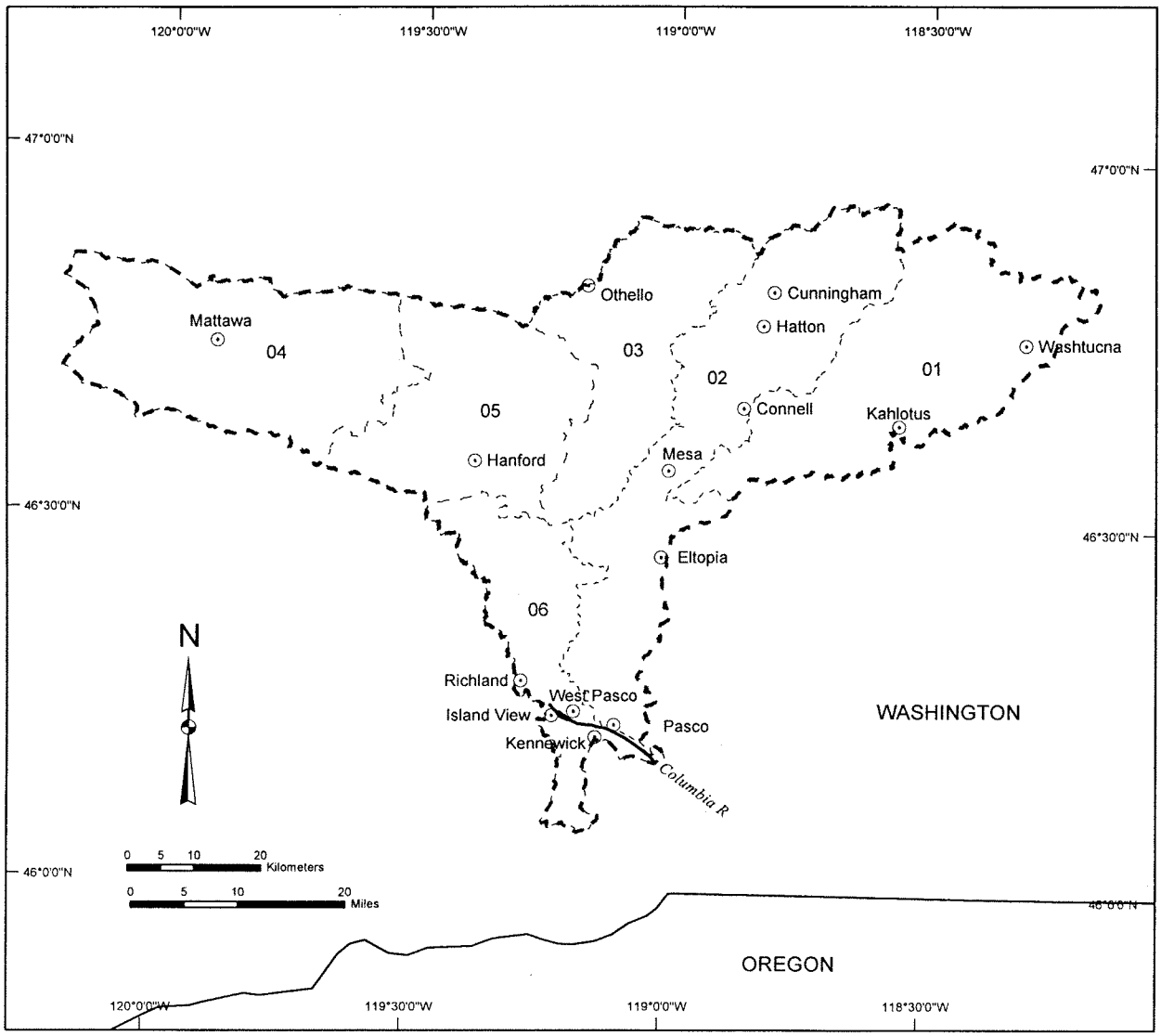

Final Critical Habitat for the
Middle Columbia River Steelhead ESU
LOWER JOHN DAY SUBBASIN
17070204
121°0'0"W
120°30'0"W
120°0'0"W
119°30'0"W
45°30'0"N
45°0'0"N
44°30'0"N
WASHINGTON
OREGON
John Day R
Moro
Grass Valley Canyon
Grass Valley
Scott Canyon
Hay Cr
Dry Cr
Rock Cr
Condon
Thirtymile Cr
Lost Valley Cr
Lone Rock Cr
Long Hollow
Butte Cr
Fossil
Pine Cr
Wheeler Cr
Kahler Cr
Spray
Muddy Cr
Service Cr
Shoofly Cr
Horseshoe Cr
Cherry Cr
Bridge Cr
Bear Cr
Gable Cr
Mitchell
01
02
03
04
05
06
07
08
09
10
11
12
13
14
N
0 5 10 20 30 40 Kilometers
0 5 10 20 Miles
Legend
Cities / Towns
State Boundary
Critical Habitat
Subbasin Boundary
Watershed Boundaries
01 - 14 = Watershed code - last 2 digits of 17070204xx
Area of Detail
WASHINGTON
OREGON
IDAHO


Final Critical Habitat for the
Middle Columbia River Steelhead ESU
LOWER DESCHUTES SUBBASIN
17070306
WASHINGTON
OREGON
122°0'0"W
121°30'0"W
121°0'0"W
120°30'0"W
45°30'0"N
45°0'0"N
44°30'0"N
N
09
10
11
12
05
06
07
08
04
03
01
02
Tygh Valley
Wamic
Maupin
Wapinitia
Kent
Simnasho
South Junction
Warm Springs
Madras
Metolius
Grizzly
Deschutes R
Buck Hollow Cr
Cottonwood Cr
Paquet Gulch
Warm Sprihgs R
Beaver Cr
Eagle Cr
Deep Cr
Badger Cr #2
Mill Cr
Shitike Cr
0 5 10 20 30 40 Kilometers
0 5 10 20 Miles
Legend
Cities / Towns
State Boundary
Critical Habitat
Watershed Boudaries
Subbasin Boundary
01 - 12 = Watershed code - last 2 digits of 17070306xx
Area of Detail
WASHINGTON
OREGON
IDAHO


Final Critical Habitat for the
Middle Columbia River Steelhead ESU
TROUT SUBBASIN
17070307
121°0'0"W
120°30'0"W
45°0'0"N
44°30'0"N
N
Ward Cr
Antelope
02
Antelope Cr
Brocher Cr
05
Trout Cr
Willowdale
Tub Springs Canyon
Little Trout Cr
Ashwood
OREGON
04
01
Trout Cr
03
Clover Cr
Amity Cr
Board Hollow
Big Log Cr
Opal Cr
Auger Cr
Cartwright Cr
Trout Cr
0 3.5 7 14 21 28 Kilometers
0 3 6 12 Miles
Legend
Cities / Towns
Critical Habitat
Subbasin Boundary
Watershed Boundaries
01 - 05 = Watershed code - last 2 digits of 17070307xx
Area of Detail
WASHINGTON
OREGON
IDAHO

Final Critical Habitat for the Middle Columbia River Steelhead ESU

UPPER COLUMBIA / PRIEST RAPIDS SUBBASIN 17020016

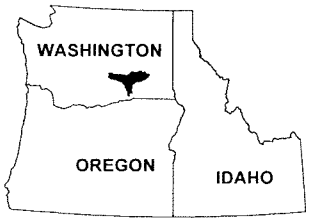


Legend

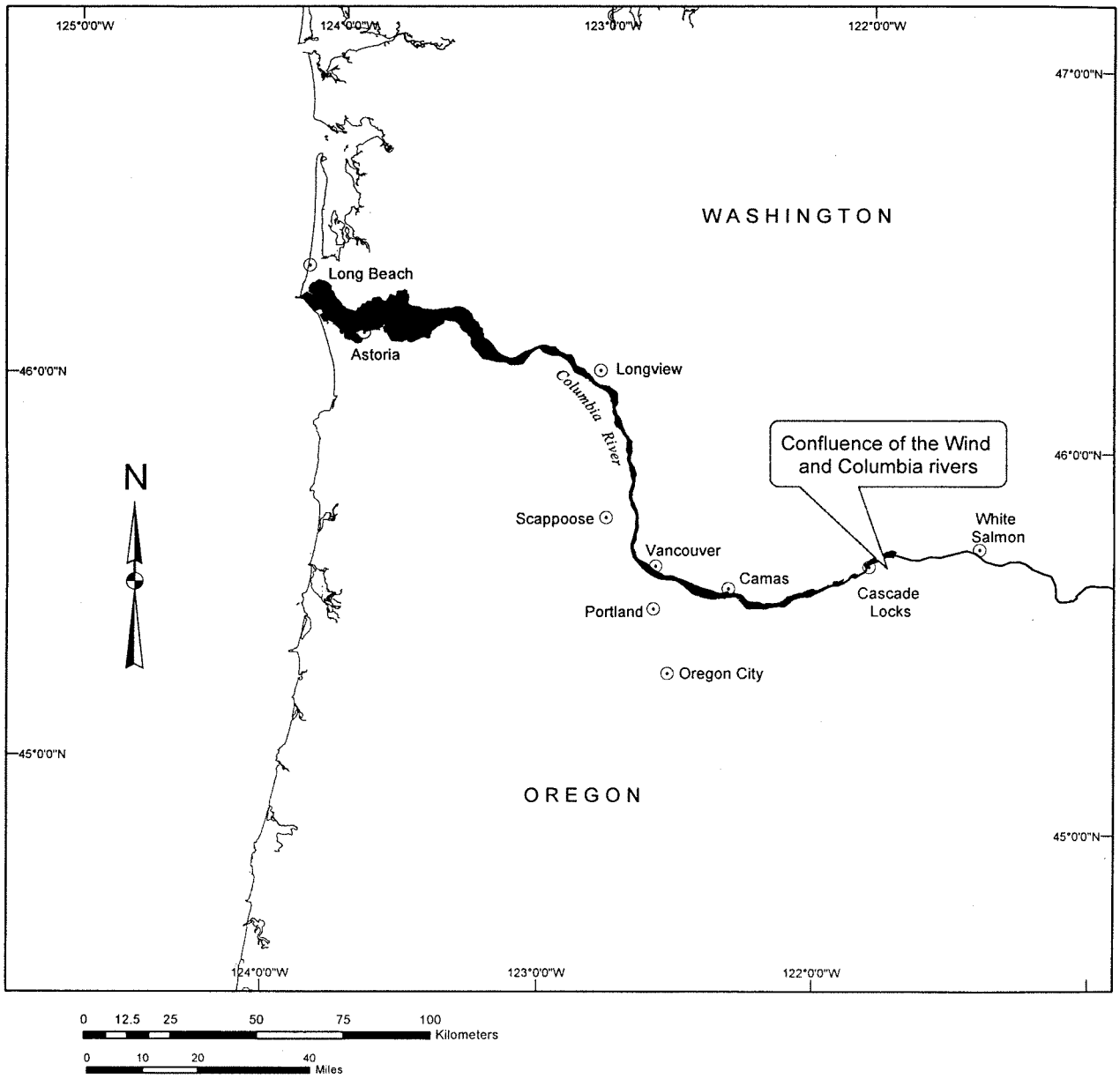
- Cities / Towns
- State Boundary
- Critical Habitat
- Watershed Boundaries
- Subbasin Boundary

01 - 06 = Watershed code - last 2 digits of 17020016xx

Area of Detail



Rearing / Migration Corridor for the Middle Columbia River Steelhead ESU



Legend

- Cities / Towns
- State Boundary
- Rearing / Migration Corridor

Middle Columbia River Steelhead ESU

Columbia River Corridor
The Columbia River Corridor is that segment from the mouth of the Columbia River at the Pacific Ocean upstream to the confluence of the Wind River.

BILLING CODE 3510–22–C

(s) *Lower Columbia River Steelhead (Oncorhynchus mykiss)*. Critical habitat is designated to include the areas defined in the following subbasins:

(1) Middle Columbia/Hood Subbasin 17070105—(i) *East Fork Hood River Watershed 1707010506*. Outlet(s) = Hood River (Lat 45.6050, Long –121.6323) upstream to endpoint(s) in: Baldwin Creek (45.5618, –121.5585); Bear Creek (45.4894, –121.6516); Cat Creek (45.4708, –121.5591); Clark Creek (45.3335, –121.6420); Coe Branch (45.4342, –121.6673); Cold Spring Creek (45.4020, –121.5873);Culvert Creek (45.3770, –121.5660); Dog River (45.4404, –121.5623); East Fork Hood River (45.3172, –121.6390); Eliot Branch, Middle Fork Hood River (45.4534, –121.6362); Emil Creek (45.5223, –121.5886); Evans Creek (45.4872, –121.5894); Graham Creek (45.5463, –121.5639); Meadows Creek (45.3195, –121.6279); Newton Creek (45.3370, –121.6261); Pinnacle Creek (45.4595, –121.6568); Pocket Creek (45.3025, –121.5969); Polallie Creek (45.4132, –121.5826); Tony Creek (45.5254, –121.6584); Unnamed (45.3470, –121.5843); Unnamed (45.4661, –121.5627); Unnamed (45.5208, –121.6198); Unnamed (45.5445, –121.5738).

(ii) *West Fork Hood River Watershed 1707010507*. Outlet(s) = West Fork Hood River (Lat 45.6050, Long –121.6323) upstream to endpoint(s) in: Divers Creek (45.5457, –121.7447); Elk Creek (45.4294, –121.7884); Green Point Creek (45.5915, –121.6981); Indian Creek (45.5375, –121.7857); Jones Creek (45.4673, –121.8020); Lake Branch (45.5083, –121.8485); McGee Creek (45.4120, –121.7598); No Name Creek (45.5347, –121.7929); Red Hill Creek (45.4720, –121.7705); Unnamed (45.5502, –121.7014).

(iii) *Hood River Watershed 1707010508*. Outlet(s) = Hood River (Lat 45.7237, Long –121.5049) upstream to endpoint(s) in: Hood River (45.6050, –121.6323); Lenz Creek (45.6291, –121.5220); Neal Creek (45.5787, –121.4875); West Fork Neal Creek (45.5751, –121.5215); Whiskey Creek (45.6827, –121.5064).

(iv) *Wind River Watershed 1707010511*. Outlet(s) = Wind River (Lat 45.7067, Long –121.7929) upstream to endpoint(s) in: Bear Creek (45.7619, –121.8295); Big Hollow Creek (45.9408, –122.0075); Bourbon Creek (45.9246, –121.9982); Brush Creek (45.7720, –121.7528); Cedar Creek (45.8388, –121.7956); Compass Creek (45.8372, –122.0633); Crater Creek (45.8637, –122.0639); Dry Creek (45.9551, –121.9924); East Fork Trout Creek (45.8503, –122.0096); Eightmile Creek (45.8616, –121.8966); Falls Creek (45.9107, –121.9151); Hollis Creek (45.8524, –121.9304); Jimmy Creek (45.7886, –121.8409); Layout Creek (45.8096, –122.0475); Little Wind River (45.7763, –121.7222); Martha Creek (45.7846, –121.9482); Mouse Creek (45.8415, –121.8428); Ninemile Creek (45.8942, –121.9023); Oldman Creek (45.9856, –121.9369); Panther Creek (45.8605, –121.8422); Pass Creek (45.8555, –122.0133); Planting Creek (45.8071, –122.0010); Proverbial Creek (45.9816, –121.9654); Tenmile Creek (45.8760, –121.8694); Trapper Creek (45.9113, –122.0470); Trout Creek (45.8679, –122.0477); Unnamed (45.7862, –121.9097); Unnamed (45.8008, –121.9881); Unnamed (45.8025, –121.9678); Unnamed (45.8142, –122.0204); Unnamed (45.8149, –122.0532); Unnamed (45.8161, –121.8437); Unnamed (45.8206, –121.8111); Unnamed (45.8218, –121.9470); Unnamed (45.8242, –122.0295); Unnamed (45.8427, –121.9180); Unnamed (45.8509, –121.9190); Unnamed (45.8529, –122.0406); Unnamed (45.8551, –122.0638); Unnamed (45.8610, –121.9635); Unnamed (45.8637, –122.0625); Unnamed (45.8640, –121.9764); Unnamed (45.8682, –121.9714); Unnamed (45.8940, –122.0348); Unnamed (45.8965, –122.0035); Unnamed (45.9652, –121.9517); Unnamed (45.9798, –121.8873); Unnamed (45.9844, –121.9171); Wind River (45.9964, –121.9000).

(v) *Middle Columbia/Grays Creek Watershed 1707010512*. Outlet(s) = Columbia River (Lat 45.7070, Long –121.7943) upstream to endpoint(s) in: Columbia River (45.7237, –121.5049).

(vi) *Middle Columbia/Eagle Creek Watershed 1707010513*. Outlet(s) = Columbia River (Lat 45.6453, Long –121.9395) upstream to endpoint(s) in: Columbia River (45.7070, –121.7943).

(2) Lower Columbia/Sandy Subbasin 17080001—(i) *Salmon River Watershed 17080001*. Outlet(s) = Salmon River (Lat 45.3768, Long –122.0293) upstream to endpoint(s) in: Bighorn Creek (45.2582, –121.9204); Boulder Creek (45.3027, –122.0209); Cheeney Creek (45.2919, –121.9710); Copper Creek (45.2454, –121.9051); Mack Hall Creek (45.2391, –121.9508); Salmon River (45.2511, –121.9025); South Fork Salmon River (45.2500, –121.9770); Unnamed (45.2576, –121.9068); Unnamed (45.2600, –121.9093); Unnamed (45.2633, –121.9153); Unnamed (45.2646, –121.9175); Unnamed (45.2708, –121.9246); Unnamed (45.2946, –121.9388); Unnamed (45.3161, –121.9565); Unnamed (45.3225, –121.9609); Unnamed (45.3254, –121.9582); Unnamed (45.3277, –121.9635); Unnamed (45.3336, –121.9538); Unnamed (45.3383, –121.9768); Unnamed (45.3398, –121.9954).

(ii) *Zigzag River Watershed 1708000102*. Outlet(s) = Zigzag River (Lat 45.3489, Long –121.9442) upstream to endpoint(s) in: Camp Creek (45.3070, –121.7921); Cool Creek (45.2867, –121.8849); Devil Canyon (45.3186, –121.8587); Henry Creek (45.3241, –121.8869); Lady Creek (45.3199, –121.8225); Little Zigzag Canyon (45.3138, –121.8035); Still Creek (45.3167, –121.7228); Unnamed (45.2647, –121.8342); Unnamed (45.2706, –121.8194); Unnamed (45.2793, –121.8529); Unnamed (45.2801, –121.8537); Wind Creek (45.2961, –121.8515); Zigzag River (45.3270, –121.7786).

(iii) *Upper Sandy River Watershed 1708000103*. Outlet(s) = Sandy River (Lat 45.3489, Long –121.9442) upstream to endpoint(s) in: Cast Creek (45.3794, –121.8538); Clear Creek (45.3998, –121.8936); Clear Fork (45.4256, –121.8006); Horseshoe Creek (45.3664, –121.8680); Little Clear Creek (45.3854, –121.9190); Lost Creek (45.3670, –121.8091); Muddy Fork (45.3920, –121.7577); Sandy River (45.3719, –121.7560); Unnamed (45.3813, –121.8954); Unnamed (45.3904, –121.7979); Unnamed (45.4090, –121.8056); Unnamed (45.4164, –121.8342).

(iv) *Middle Sandy River Watershed 1708000104*. Outlet(s) = Sandy River (Lat 45.4464, Long –122.2459) upstream to endpoint(s) in: Alder Creek (45.3459, –122.0875); Bear Creek #2 (45.3368, –121.9265); Cedar Creek (45.4046, –122.2513); Hackett Creek (45.3525, –121.9504); North Boulder Creek (45.3900, –122.0037); Sandy River (45.3489, –121.9442); Unnamed (45.3469, –122.0673); Unnamed (45.3699, –122.0764); Unnamed (45.3808, –122.0325); Unnamed (45.3864, –122.0355); Whisky Creek (45.3744, –122.1202).

(v) *Washougal River Watershed 1708000106*. Outlet(s) = Unnamed (Lat 45.5812, Long –122.4077); Washougal River (45.5795, –122.4023) upstream to endpoint(s) in: Bear Creek (45.7732, –122.1468); Bluebird Creek (45.7486, –122.1717); Cougar Creek (45.6514, –122.2677); Dougan Creek (45.7080, –122.1817); East Fork Little Washougal River (45.6722, –122.2827); Grouse Creek (45.7574, –122.1352); Hagen Creek (45.7154, –122.2518); Jackson Creek (45.6755, –122.2530); Jones Creek (45.6913, –122.2870); Lacamas Creek (45.5972, –122.3933); Little Washougal

River (45.7006, –122.3212); Lookout Creek (45.7806, –122.1006); Meander Creek (45.7708, –122.0848); Prospector Creek (45.7590, –122.0890); Silver Creek (45.7343, –122.1694); Stebbins Creek (45.7285, –122.0683); Texas Creek (45.6946, –122.1873); Timber Creek (45.7236, –122.1001); Unnamed (45.5873, –122.4121); Unnamed (45.6002, –122.3312); Unnamed (45.6132, –122.3238); Unnamed (45.6177, –122.2425); Unnamed (45.6206, –122.3449); Unnamed (45.6213, –122.2807); Unnamed (45.6243, –122.2283); Unnamed (45.6251, –122.3419); Unnamed (45.6279, –122.2549); Unnamed (45.6297, –122.2463); Unnamed (45.6321, –122.2753); Unnamed (45.6328, –122.2574); Unnamed (45.6382, –122.2915); Unnamed (45.6477, –122.3665); Unnamed (45.6487, –122.3336); Unnamed (45.6507, –122.1562); Unnamed (45.6531, –122.2739); Unnamed (45.6594, –122.2062); Unnamed (45.6622, –122.3015); Unnamed (45.6625, –122.3446); Unnamed (45.6675, –122.3415); Unnamed (45.6694, –122.1553); Unnamed (45.6703, –122.3399); Unnamed (45.6721, –122.1725); Unnamed (45.6749, –122.3370); Unnamed (45.6798, –122.2905); Unnamed (45.6835, –122.3336); Unnamed (45.6836, –122.1146); Unnamed (45.6871, –122.2996); Unnamed (45.6934, –122.1063); Unnamed (45.6949, –122.3305); Unnamed (45.6959, –122.3149); Unnamed (45.6965, –122.0837); Unnamed (45.7074, –122.1566); Unnamed (45.7080, –122.2600); Unnamed (45.7092, –122.2510); Unnamed (45.7179, –122.0744); Unnamed (45.7201, –122.1360); Unnamed (45.7249, –122.1067); Unnamed (45.7285, –122.1965); Unnamed (45.7303, –122.1126); Unnamed (45.7458, –122.1328); Unnamed (45.7476, –122.0518); Unnamed (45.7482, –122.1594); Unnamed (45.7624, –122.1308); Unnamed (45.7841, –122.1211); Washougal River (45.7798, –122.1403); West Fork Washougal River (45.7382, –122.2173); Wildboy Creek (45.6712, –122.2172); Winkler Creek (45.6377, –122.2588).

(vi) *Columbia Gorge Tributaries Watershed 1708000107*. Outlet(s) = Columbia River (Lat 45.5710, Long –122.4021) upstream to endpoint(s) in: Columbia River (45.6453, –121.9395).

(vii) *Lower Sandy River Watershed 1708000108*. Outlet(s) = Sandy River (Lat 45.5679, Long –122.4023) upstream to endpoint(s) in: Beaver Creek (45.4959, –122.3643); Big Creek (45.5068, –122.2966); Buck Creek (45.4985, –122.2671); Gordon Creek (45.5021, –122.1805); Kelly Creek (45.5134, –122.3953); Sandy River (45.4464, –122.2459); Smith Creek (45.5136, –122.3339); Trout Creek (45.4819, –122.2769); Unnamed (45.4889, –122.3513); Unnamed (45.5557, –122.3715); Unnamed (45.5600, –122.3650).

(3) Lewis Subbasin 17080002—(i) *East Fork Lewis River Watershed 1708000205*. Outlet(s) = Allen Creek (Lat 45.8641, Long –122.7499); East Fork Lewis River (45.8664, –122.7189); Gee Creek (45.8462, –122.7803) upstream to endpoint(s) in: Allen Creek (45.8279, –122.6968); Anaconda Creek (45.8208, –122.2652); Basket Creek (45.8327, –122.4579); Big Tree Creek (45.8572, –122.3728); Brezee Creek (45.8625, –122.6637); Cedar Creek (45.7226, –122.3290); Cold Creek (45.7493, –122.3252); Copper Creek (45.8177, –122.2637); Coyote Creek (45.7554, –122.2641); East Fork Lewis River (45.8380, –122.0948); Gee Creek (45.7920, –122.6679); Green Fork (45.8462, –122.1274); Grouse Creek (45.7214, –122.2709); King Creek (45.7802, –122.2552); Little Creek (45.8417, –122.1779); Lockwood Creek (45.8986, –122.5953); Mason Creek (45.8661, –122.5430); McCormick Creek (45.8521, –122.6907); McKinley Creek (45.8026, –122.1797); Niccolls Creek (45.8148, –122.3093); Poison Gulch (45.7898, –122.1617); Riley Creek (45.8936, –122.6175); Rock Creek (45.7375, –122.2571); Roger Creek (45.8183, –122.3426); Slide Creek (45.8477, –122.2090); Unnamed (45.7212, –122.3389); Unnamed (45.7623, –122.2727); Unnamed (45.7697, –122.3157); Unnamed (45.7726, –122.6651); Unnamed (45.7770, –122.3539); Unnamed (45.7802, –122.6068); Unnamed (45.7858, –122.3283); Unnamed (45.7916, –122.3780); Unnamed (45.7919, –122.2780); Unnamed (45.7961, –122.1312); Unnamed (45.7980, –122.5650); Unnamed (45.8033, –122.6667); Unnamed (45.8038, –122.3545); Unnamed (45.8075, –122.1120); Unnamed (45.8076, –122.6285); Unnamed (45.8079, –122.2942); Unnamed (45.8146, –122.4818); Unnamed (45.8147, –122.3144); Unnamed (45.8149, –122.5653); Unnamed (45.8172, –122.5742); Unnamed (45.8207, –122.4916); Unnamed (45.8230, –122.7069); Unnamed (45.8242, –122.6390); Unnamed (45.8292, –122.6040); Unnamed (45.8306, –122.3769); Unnamed (45.8353, –122.4842); Unnamed (45.8363, –122.1252); Unnamed (45.8368, –122.6498); Unnamed (45.8381, –122.4685); Unnamed (45.8427, –122.3708); Unnamed (45.8432, –122.1480); Unnamed (45.8434, –122.2292); Unnamed (45.8439, –122.6478); Unnamed (45.8471, –122.7486); Unnamed (45.8475, –122.6486); Unnamed (45.8484, –122.4401); Unnamed (45.8498, –122.7300); Unnamed (45.8502, –122.5228); Unnamed (45.8513, –122.1323); Unnamed (45.8537, –122.5973); Unnamed (45.8600, –122.6112); Unnamed (45.8604, –122.3831); Unnamed (45.8606, –122.3981); Unnamed (45.8662, –122.5772); Unnamed (45.8667, –122.5744); Unnamed (45.8689, –122.4227); Unnamed (45.8698, –122.6777); Unnamed (45.8756, –122.4795); Unnamed (45.8813, –122.4772); Unnamed (45.8899, –122.6256); Unnamed (45.8986, –122.5742); Unnamed (45.8988, –122.6123); Unnamed (45.9055, –122.5187); Yacolt Creek (45.8761, –122.4220).

(ii) *Lower Lewis River Watershed 1708000206*. Outlet(s) = Lewis River (Lat 45.8519, Long –122.7806) upstream to endpoint(s) in: Bitter Creek (45.9133, –122.4593); Brush Creek (45.9280, –122.4674); Cedar Creek (45.9019, –122.3655); Chelatchie Creek (45.9357, –122.3784); Colvin Creek (45.9400, –122.6081); Houghton Creek (45.9559, –122.6348); John Creek (45.9291, –122.4964); Johnson Creek (45.9536, –122.6183); Lewis River (45.9570, –122.5550); Pup Creek (45.9486, –122.5245); Robinson Creek (45.9362, –122.7243); Ross Creek (45.9536, –122.7043); Staples Creek (45.9423, –122.6665); Unnamed (45.8696, –122.7658); Unnamed (45.8878, –122.3688); Unnamed (45.8928, –122.4209); Unnamed (45.8940, –122.4371); Unnamed (45.9001, –122.7226); Unnamed (45.9136, –122.6836); Unnamed (45.9141, –122.5565); Unnamed (45.9172, –122.3591); Unnamed (45.9202, –122.5339); Unnamed (45.9203, –122.4557); Unnamed (45.9245, –122.3731); Unnamed (45.9258, –122.5964); Unnamed (45.9294, –122.6225); Unnamed (45.9396, –122.4097); Unnamed (45.9417, –122.7035); Unnamed (45.9436, –122.6417); Unnamed (45.9438, –122.6190); Unnamed (45.9446, –122.6437); Unnamed (45.9457, –122.3926); Unnamed (45.9474, –122.6695); Unnamed (45.9549, –122.6967).

(4) Lower Columbia/Clatskanie Subbasin 17080003—*Kalama River Watershed 1708000301*. Outlet(s) = Burris Creek (Lat 45.8926, Long

–122.7892); Bybee Creek (45.9667, –122.8150); Kalama River (46.0340, –122.8695); Mill Creek (45.9579, –122.8030); Schoolhouse Creek (45.9785, –122.8282); Unnamed (46.0001, –122.8438); Unnamed (46.0075, –122.8455) upstream to endpoint(s) in: Arnold Creek (46.0206, –122.5638); Bear Creek (46.0951, –122.5772); Burris Creek (45.9506, –122.7428); Bush Creek (46.0828, –122.4611); Bybee Creek (45.9695, –122.8135); Canyon Creek (45.9540, –122.7925); Cedar Creek (46.0333, –122.8110); Dee Creek (45.9953, –122.6525); Elk Creek (46.1154, –122.4796); Hatchery Creek (46.0673, –122.7548); Indian Creek (46.0516, –122.7502); Jacks Creek (46.0400, –122.5014); Kalama River (46.1109, –122.3579); Knowlton Creek (46.0245, –122.6454); Langdon Creek (46.1137, –122.4364); Little Kalama River (45.9745, –122.6604); Lost Creek (46.0692, –122.5292); Mill Creek (45.9741, –122.7756); North Fork Elk Creek (46.1086, –122.5284); North Fork Kalama River (46.1550, –122.4007); Schoolhouse Creek (45.9810, –122.8217); Spencer Creek (46.0253, –122.8285); Summers Creek (46.0357, –122.6529); Unnamed (45.9034, –122.7792); Unnamed (45.9423, –122.7761); Unnamed (45.9683, –122.7751); Unnamed (45.9772, –122.6534); Unnamed (45.9820, –122.7123); Unnamed (45.9830, –122.8249); Unnamed (45.9957, –122.6742); Unnamed (46.0023, –122.8001); Unnamed (46.0034, –122.8330); Unnamed (46.0059, –122.7350); Unnamed (46.0064, –122.7377); Unnamed (46.0238, –122.5834); Unnamed (46.0257, –122.5913); Unnamed (46.0389, –122.6305); Unnamed (46.0437, –122.5713); Unnamed (46.0440, –122.8548); Unnamed (46.0462, –122.5097); Unnamed (46.0473, –122.7668); Unnamed (46.0611, –122.5514); Unnamed (46.0618, –122.4290); Unnamed (46.0634, –122.5630); Unnamed (46.0645, –122.3953); Unnamed (46.0861, –122.6708); Unnamed (46.0882, –122.5729); Unnamed (46.0982, –122.4887); Unnamed (46.0986, –122.6384); Unnamed (46.0998, –122.6089); Unnamed (46.1031, –122.3851); Unnamed (46.1076, –122.5965); Unnamed (46.1086, –122.4399); Unnamed (46.1088, –122.3440); Unnamed (46.1124, –122.6411); Unnamed (46.1153, –122.5646); Unnamed (46.1159, –122.5728); Unnamed (46.1169, –122.3397); Unnamed (46.1242, –122.5932); Unnamed (46.1244, –122.4255); Unnamed (46.1355, –122.4413); Unnamed (46.1451, –122.4279); Unnamed (46.1543, –122.4131); Unnamed (46.1559, –122.4254); Wild Horse Creek (46.1018, –122.6755); Wolf Creek (46.0523, –122.4334).

(5) Upper Cowlitz Subbasin 17080004—(i) *Headwaters Cowlitz River Watershed 1708000401.* Outlet(s) = Cowlitz River (Lat 46.6580, Long –121.6032) upstream to endpoint(s) in: Clear Fork Cowlitz River (46.6846, –121.5668); Muddy Fork Cowlitz River (46.6973, –121.6177); Ohanapecosh River (46.6909, –121.5809); Purcell Creek (46.6722, –121.5877).

(ii) *Upper Cowlitz River Watershed 1708000402.* Outlet(s) = Cowlitz River (Lat 46.5742, Long –121.7059) upstream to endpoint(s) in: Butter Creek (46.6451, –121.6749); Coal Creek (46.6438, –121.6108); Cowlitz River (46.6580, –121.6032); Hall Creek (46.6044, –121.6609); Johnson Creek (46.5546, –121.6373); Lake Creek (46.6227, –121.6093); Skate Creek (46.6850, –121.8052); Unnamed (46.6930, –121.8024).

(iii) *Cowlitz Valley Frontal Watershed 1708000403.* Outlet(s) = Cowlitz River (Lat 46.4765, Long –122.0952) upstream to endpoint(s) in: Burton Creek (46.5423, –121.7505); Cowlitz River (46.5742, –121.7059); Davis Creek (46.5410, –121.8084); Kilborn Creek (46.5081, –121.8007); Oliver Creek (46.5450, –121.9928); Peters Creek (46.5386, –121.9830); Siler Creek (46.4931, –121.9085); Silver Creek (46.5909, –121.9253); Smith Creek (46.5620, –121.6923); Unnamed (46.4913, –122.0820); Unnamed (46.5657, –122.0489); Willame Creek (46.5805, –121.7319).

(iv) *Upper Cispus River Watershed 1708000404.* Outlet(s) = Cispus River (Lat 46.4449, Long –121.7954) upstream to endpoint(s) in: Cispus River (46.3450, –121.6833); East Canyon Creek (46.3472, –121.7028); North Fork Cispus River (46.4362, –121.6479); Timonium Creek (46.4318, –121.6548); Twin Creek (46.3748, –121.7297); Yozoo Creek (46.4363, –121.6637).

(v) *Lower Cispus River Watershed 1708000405.* Outlet(s) = Cispus River (Lat 46.4765, Long –122.0952) upstream to endpoint(s) in: Ames Creek (46.4654, –121.9233); Camp Creek (46.4513, –121.8301); Cispus River (46.4449, –121.7954); Covell Creek (46.4331, –121.8516); Crystal Creek (46.4454, –122.0234); Greenhorn Creek (46.4217, –121.9042); Iron Creek (46.3887, –121.9702); McCoy Creek (46.3891, –121.8190); Quartz Creek (46.4250, –122.0519); Unnamed (46.4633, –121.9548); Woods Creek (46.4741, –121.9473); Yellowjacket Creek (46.3869, –121.8342).

(6) Cowlitz Subbasin 17080005—(i) *Riffe Reservoir Watershed 1708000502.* Outlet(s) = Cowlitz River (Lat 46.5033, Long –122.5870) upstream to endpoint(s) in: Cowlitz River (46.4765, –122.0952).

(ii) *Jackson Prairie Watershed 1708000503.* Outlet(s) = Cowlitz River (Lat 46.3678, Long –122.9337) upstream to endpoint(s) in: Bear Creek (46.4538, –122.9192); Blue Creek (46.4885, –122.7253); Brights Creek (46.5015, –122.6247); Cedar Creek (46.4110, –122.7316); Coon Creek (46.4371, –122.9065); Cougar Creek (46.3937, –122.7945); Cowlitz River (46.5033, –122.5870); Foster Creek (46.4073, –122.8897); Hopkey Creek (46.4587, –122.5533); Jones Creek (46.5125, –122.6825); Lacamas Creek (46.5246, –122.7923); Little Salmon Creek (46.4402, –122.7458); Mill Creek (46.5024, –122.8013); Mill Creek (46.5175, –122.6209); Otter Creek (46.4801, –122.7000); Pin Creek (46.4133, –122.8321); Rapid Creek (46.4320, –122.5465); Skook Creek (46.5031, –122.7561); Unnamed (46.3838, –122.7243); Unnamed (46.3841, –122.6789); Unnamed (46.3849, –122.7043); Unnamed (46.3857, –122.9224); Unnamed (46.3881, –122.6949); Unnamed (46.3900, –122.7368); Unnamed (46.3998, –122.8974); Unnamed (46.4001, –122.7437); Unnamed (46.4015, –122.7327); Unnamed (46.4097, –122.5887); Unnamed (46.4102, –122.6787); Unnamed (46.4106, –122.7075); Unnamed (46.4115, –122.9091); Unnamed (46.4117, –122.7554); Unnamed (46.4143, –122.7823); Unnamed (46.4174, –122.6365); Unnamed (46.4241, –122.8170); Unnamed (46.4269, –122.6124); Unnamed (46.4291, –122.6418); Unnamed (46.4293, –122.8354); Unnamed (46.4412, –122.5192); Unnamed (46.4454, –122.8662); Unnamed (46.4496, –122.5281); Unnamed (46.4514, –122.8699); Unnamed (46.4703, –122.7959); Unnamed (46.4708, –122.7713); Unnamed (46.4729, –122.6850); Unnamed (46.4886, –122.8067); Unnamed (46.5172, –122.6534); Unnamed (46.5312, –122.8196).

(iii) *North Fork Toutle River Watershed 1708000504.* Outlet(s) = North Fork Toutle River (Lat 46.3669, Long –122.5859) upstream to endpoint(s) in: Alder Creek (46.2813, –122.4964); Bear Creek (46.3085, –122.3504); Coldwater Creek (46.2884, –122.2675); Cow Creek (46.3287, –122.4616); Hoffstadt Creek (46.3211,

–122.3324); Maratta Creek (46.2925, –122.2845); Unnamed (46.3050, –122.5416); Unnamed (46.3346, –122.5460); Unnamed (46.3394, –122.3314).

(iv) *Green River Watershed 1708000505.* Outlet(s) = Green River (Lat 46.3718, Long –122.5847) upstream to endpoint(s) in: Beaver Creek (46.4056, –122.5671); Cascade Creek (46.3924, –122.3529); Devils Creek (46.4017, –122.4089); Elk Creek (46.4178, –122.2477); Green River (46.3857, –122.1815); Jim Creek (46.3885, –122.5256); Miners Creek (46.3483, –122.1932); Shultz Creek (46.3684, –122.2848); Tradedollar Creek (46.3769, –122.2411); Unnamed (46.3271, –122.2978); Unnamed (46.3467, –122.2092); Unnamed (46.3602, –122.3257); Unnamed (46.3655, –122.4774); Unnamed (46.3683, –122.3454); Unnamed (46.3695, –122.4132); Unnamed (46.3697, –122.4705); Unnamed (46.3707, –122.5175); Unnamed (46.3734, –122.3883); Unnamed (46.3817, –122.2348); Unnamed (46.3844, –122.4335); Unnamed (46.3876, –122.4870); Unnamed (46.3931, –122.3726); Unnamed (46.4023, –122.5543); Unnamed (46.4060, –122.5415); Unnamed (46.4087, –122.5061); Unnamed (46.4106, –122.4300); Unnamed (46.4143, –122.4463); Unnamed (46.4173, –122.2910); Unnamed (46.4196, –122.2850); Unnamed (46.4226, –122.3029); Unnamed (46.4285, –122.2662).

(v) *South Fork Toutle River Watershed 1708000506.* Outlet(s) = South Fork Toutle River (Lat 46.3282, Long –122.7215) upstream to endpoint(s) in: Bear Creek (46.2219, –122.4620); Big Wolf Creek (46.2259, –122.5662); Disappointment Creek (46.2138, –122.3080); Eighteen Creek (46.2453, –122.5989); Harrington Creek (46.2508, –122.4126); Johnson Creek (46.3047, –122.5923); Sheep Canyon (46.2066, –122.2672); South Fork Toutle River (46.2137, –122.2347); Studebaker Creek (46.2825, –122.6805); Thirteen Creek (46.2374, –122.6230); Trouble Creek (46.1999, –122.3774); Twenty Creek (46.2508, –122.5738); Unnamed (46.1858, –122.2983); Unnamed (46.1953, –122.2881); Unnamed (46.2068, –122.3301); Unnamed (46.2075, –122.3267); Unnamed (46.2082, –122.2591); Unnamed (46.2107, –122.4301); Unnamed (46.2115, –122.2786); Unnamed (46.2117, –122.2378); Unnamed (46.2121, –122.5188); Unnamed (46.2157, –122.3467); Unnamed (46.2215, –122.5318); Unnamed (46.2234, –122.3265); Unnamed (46.2265, –122.3906); Unnamed (46.2271, –122.3367); Unnamed (46.2277, –122.3719); Unnamed (46.2309, –122.3828); Unnamed (46.2357, –122.4802); Unnamed (46.2365, –122.4402); Unnamed (46.2424, –122.4860); Unnamed (46.2444, –122.5427); Unnamed (46.2457, –122.6283); Unnamed (46.2523, –122.5147); Unnamed (46.2587, –122.5333); Unnamed (46.2591, –122.5240); Unnamed (46.2608, –122.5493); Unnamed (46.2618, –122.5705); Unnamed (46.2693, –122.5763); Unnamed (46.2707, –122.6094); Unnamed (46.2932, –122.5890); Unnamed (46.2969, –122.6718); Unnamed (46.2976, –122.6129); Unnamed (46.3035, –122.5952); Unnamed (46.3128, –122.7032); Unnamed (46.3217, –122.6473); Whitten Creek (46.2328, –122.4944).

(vi) *East Willapa Watershed 1708000507.* Outlet(s) = Cowlitz River (Lat 46.2660, Long –122.9154) upstream to endpoint(s) in: Arkansas Creek (46.3345, –123.0567); Baxter Creek (46.3367, –122.9841); Brim Creek (46.4446, –123.0395); Campbell Creek (46.3436, –123.0700); Cline Creek (46.3397, –122.8550); Cowlitz River (46.3678, –122.9337); Delameter Creek (46.2705, –123.0143); Ferrier Creek (46.4646, –122.9374); Hemlock Creek (46.2586.–122.7270); Hill Creek (46.3861, –122.8864); King Creek (46.5304, –123.0203); McMurphy Creek (46.4113, –122.9469); Monahan Creek (46.3041, –123.0614); North Fork Brim Creek (46.4627, –123.0222); North Fork Toutle River (46.3669, –122.5859); Owens Creek (46.3994, –123.0457); Rock Creek (46.3479, –122.8144); Rock Creek (46.3531, –122.9368); Snow Creek (46.4486, –122.9805); Stankey Creek (46.3259, –122.8266); Stillwater Creek (46.3583, –123.1144); Sucker Creek (46.2600, –122.7684); Tucker Creek (46.2565, –123.0162); Unnamed (46.2413, –122.9887); Unnamed (46.2480, –123.0169); Unnamed (46.2480, –122.7759); Unnamed (46.2517, –123.0173); Unnamed (46.2606, –122.9549); Unnamed (46.2629, –123.0188); Unnamed (46.2663, –122.9804); Unnamed (46.2709, –122.7687); Unnamed (46.2711, –122.8159); Unnamed (46.2840, –122.8128); Unnamed (46.2878, –123.0286); Unnamed (46.2883, –122.9051); Unnamed (46.2892, –122.9625); Unnamed (46.2900, –122.8124); Unnamed (46.3030, –123.0645); Unnamed (46.3092, –122.9826); Unnamed (46.3160, –122.7783); Unnamed (46.3161, –123.0123); Unnamed (46.3173, –122.8950); Unnamed (46.3229, –122.8152); Unnamed (46.3245, –122.8609); Unnamed (46.3248, –123.0292); Unnamed (46.3252, –122.9238); Unnamed (46.3294, –122.9084); Unnamed (46.3309, –123.0046); Unnamed (46.3316, –122.8257); Unnamed (46.3346, –123.0167); Unnamed (46.3378, –122.9398); Unnamed (46.3393, –122.9402); Unnamed (46.3415, –122.9208); Unnamed (46.3456, –122.6405); Unnamed (46.3472, –122.9457); Unnamed (46.3488, –123.0519); Unnamed (46.3510, –123.0079); Unnamed (46.3511, –122.7678); Unnamed (46.3584, –122.7902); Unnamed (46.3585, –123.0369); Unnamed (46.3586, –122.7477); Unnamed (46.3599, –123.0992); Unnamed (46.3623, –122.6910); Unnamed (46.3665, –122.6334); Unnamed (46.3667, –122.8953); Unnamed (46.3683, –122.8930); Unnamed (46.3683, –122.7502); Unnamed (46.3718, –122.6202); Unnamed (46.3720, –123.0933); Unnamed (46.3748, –122.6167); Unnamed (46.3818, –122.8822); Unnamed (46.3824, –122.6090); Unnamed (46.3942, –122.9794); Unnamed (46.4015, –123.0272); Unnamed (46.4045, –123.0194); Unnamed (46.4177, –122.9611); Unnamed (46.4200, –123.0403); Unnamed (46.4286, –123.0467); Unnamed (46.4362, –123.0451); Unnamed (46.4379, –122.9985); Unnamed (46.4571, –122.9604); Unnamed (46.4606, –123.0166); Unnamed (46.4724, –122.9989); Unnamed (46.4907, –122.9352); Unnamed (46.5074, –122.8877); Unnamed (46.5089, –122.9291); Unnamed (46.5228, –122.8539); Unnamed (46.5336, –122.9793); Unnamed (46.5371, –122.8214); Unnamed (46.5439, –122.8538); Whittle Creek (46.3122, –122.9501); Wyant Creek (46.3381, –122.6117).

(vii) *Coweeman River Watershed 1708000508.* Outlet(s) = Cowlitz River (Lat 46.0977, Long –122.9141); Owl Creek (46.0771, –122.8676) upstream to endpoint(s) in: Baird Creek (46.1942, –122.5483); Coweeman River (46.1505, –122.5172); Cowlitz River (46.2660, –122.9154); Goble Creek (46.1103, –122.6789); Hill Creek (46.1784, –122.5990); Leckler Creek (46.2317, –122.9470); Little Baird Creek (46.1905, –122.5709); Martin Creek (46.1394, –122.5519); Mulholland Creek (46.2013, –122.6450); Nineteen Creek (46.1437, –122.6146); North Fork Goble Creek (46.1363, –122.6769); Nye Creek (46.1219, –122.8040); O'Neil Creek

(46.1760, –122.5422); Ostrander Creek (46.2103, –122.7623); Owl Creek (46.0913, –122.8644); Salmon Creek (46.2547, –122.8839); Sandy Bend Creek (46.2319, –122.9140); Skipper Creek (46.1639, –122.5887); South Fork Ostrander Creek (46.1875, –122.8240); Turner Creek (46.1167, –122.8149); Unnamed (46.0719, –122.8607); Unnamed (46.0767, –122.8605); Unnamed (46.0824, –122.7200); Unnamed (46.0843, –122.7195); Unnamed (46.1185, –122.7253); Unnamed (46.1289, –122.8968); Unnamed (46.1390, –122.5709); Unnamed (46.1430, –122.8125); Unnamed (46.1433, –122.8084); Unnamed (46.1478, –122.8649); Unnamed (46.1546, –122.6376); Unnamed (46.1562, –122.7808); Unnamed (46.1579, –122.6476); Unnamed (46.1582, –122.5332); Unnamed (46.1605, –122.6681); Unnamed (46.1620, –122.5885); Unnamed (46.1671, –122.6284); Unnamed (46.1688, –122.9215); Unnamed (46.1724, –122.6118); Unnamed (46.1735, –122.8282); Unnamed (46.1750, –122.8428); Unnamed (46.1750, –122.7557); Unnamed (46.1797, –122.7746); Unnamed (46.1803, –122.7801); Unnamed (46.1811, –122.7631); Unnamed (46.1814, –122.7656); Unnamed (46.1840, –122.8191); Unnamed (46.1955, –122.9082); Unnamed (46.1966, –122.5542); Unnamed (46.1971, –122.7118); Unnamed (46.2014, –122.8241); Unnamed (46.2021, –122.6941); Unnamed (46.2027, –122.5593); Unnamed (46.2172, –122.9516); Unnamed (46.2192, –122.6663); Unnamed (46.2199, –122.8375); Unnamed (46.2208, –122.8887); Unnamed (46.2231, –122.9509); Unnamed (46.2257, –122.7667); Unnamed (46.2261, –122.8023); Unnamed (46.2379, –122.8859); Unnamed (46.2430, –122.8842).

(7) Clackamas Subbasin 17090011—(i) *Collawash River Watershed 1709001101.* Outlet(s) = Collawash River (Lat 45.0321, Long –122.0600) upstream to endpoint(s) in: Blister Creek (44.9594, –122.1590); Dickey Creek (44.9335, –122.0469); East Fork Collawash River (44.8789, –121.9850); Elk Lake Creek (44.8886, –122.0128); Fan Creek (44.9926, –122.0735); Farm Creek (44.9620, –122.0604); Hot Springs Fork Collawash River (44.9005, –122.1616); Hugh Creek (44.9226, –122.1978); Pansy Creek (44.9463, –122.1420); Skin Creek (44.9477, –122.2015); Thunder Creek (44.9740, –122.1230).

(ii) *Upper Clackamas River Watershed 1709001102.* Outlet(s) = Clackamas River (Lat 45.0321, Long –122.0600) upstream to endpoint(s) in: Berry Creek (44.8291, –121.9176); Cabin Creek (45.0087, –121.8958); Clackamas River (44.8723, –121.8470); Cub Creek (44.8288, –121.8863); Fawn Creek (44.9089, –121.9226); Hunter Creek (44.8926, –121.9285); Kansas Creek (44.9820, –121.8999); Last Creek (44.9759, –121.8424); Lost Creek (45.0180, –121.9070); Lowe Creek (44.9636, –121.9457); Pinhead Creek (44.9421, –121.8359); Pot Creek (45.0201, –121.9014); Rhododendron Creek (44.9358, –121.9154); Sisi Creek (44.9110, –121.8875); Unnamed (44.8286, –121.9225); Unnamed (44.8343, –121.8778); Unnamed (44.8944, –121.9028); Unnamed (44.9355, –121.8735); Unnamed (44.9661, –121.8894); Unnamed (44.9687, –121.8920); Unnamed (45.0000, –121.8910).

(iii) *Oak Grove Fork Clackamas River Watershed 1709001103.* Outlet(s) = Oak Grove Fork Clackamas River (Lat 45.0746, Long –122.0520) upstream to endpoint(s) in: Oak Grove Fork Clackamas River (45.0823, –121.9861); Pint Creek (45.0834, –122.0355).

(iv) *Middle Clackamas River Watershed 1709001104.* Outlet(s) = Clackamas River (Lat 45.2440, Long –122.2798) upstream to endpoint(s) in: Big Creek (45.0694, –122.0848); Calico Creek (45.0682, –122.1627); Clackamas River (45.0321, –122.0600); Cripple Creek (45.1149, –122.0618); Fish Creek (45.0634, –122.1597); Mag Creek (45.0587, –122.0488); North Fork Clackamas River (45.2371, –122.2181); Pick Creek (45.0738, –122.1994); Pup Creek (45.1451, –122.1055); Roaring River (45.1773, –122.0650); Sandstone Creek (45.0862, –122.0845); Second Creek (45.1081, –122.1601); South Fork Clackamas River (45.1912, –122.2261); Tag Creek (45.0605, –122.0475); Tar Creek (45.0494, –122.0569); Third Creek (45.0977, –122.1649); Trout Creek (45.0379, –122.0720); Wash Creek (45.0473, –122.1893); Whale Creek (45.1102, –122.0849).

(v) *Eagle Creek Watershed 1709001105.* Outlet(s) = Eagle Creek (Lat 45.3535, Long –122.3823) upstream to endpoint(s) in: Bear Creek (45.3369, –122.2331); Currin Creek (45.3369, –122.3555); Delph Creek (45.2587, –122.2098); Eagle Creek (45.2766, –122.1998); Little Eagle Creek (45.3003, –122.1682); North Fork Eagle Creek (45.3142, –122.1135); Trout Creek (45.3305, –122.1187).

(vi) *Lower Clackamas River 1709001106.* Outlet(s) = Clackamas River (Lat 45.3719, Long –122.6071) upstream to endpoint(s) in: Bargfeld Creek (45.3195, –122.4398); Clackamas River (45.2440, –122.2798); Clear Creek (45.2022, –122.3121); Deep Creek (45.3421, –122.2799); Foster Creek (45.3512, –122.4082); Goose Creek (45.3621, –122.3549); Little Clear Creek (45.2803, –122.4055); Mosier Creek (45.2683, –122.4516); North Fork Deep Creek (45.4271, –122.3094); Richardson Creek (45.4097, –122.4484); Rock Creek (45.4157, –122.5013); Tickle Creek (45.3932, –122.2775); Unnamed (45.3502, –122.4861); Unnamed (45.3626, –122.2858); Unnamed (45.3816, –122.3721); Unnamed (45.4057, –122.3223); Unnamed (45.4102, –122.2987); Wade Creek (45.2922, –122.3237).

(8) Lower Willamette Subbasin 17090012—(i) *Johnson Creek Watershed 1709001201.* Outlet(s) = Willamette River (Lat 45.4423, Long –122.6453) upstream to endpoint(s) in: Crystal Springs Creek (45.4811, –122.6381); Crystal Springs Lake (45.4799, –122.6361); Johnson Creek (45.4610, –122.3432); Kellogg Creek (45.4083, –122.5925); Kelly Creek (45.4661, –122.4655); Mount Scott Creek (45.4306, –122.5556); Oswego Creek (45.4105, –122.6666); Phillips Creek (45.4328, –122.5763); Tryon Creek (45.4472, –122.6863); Unnamed (45.4793, –122.4165); Willamette River (45.3719, –122.6071).

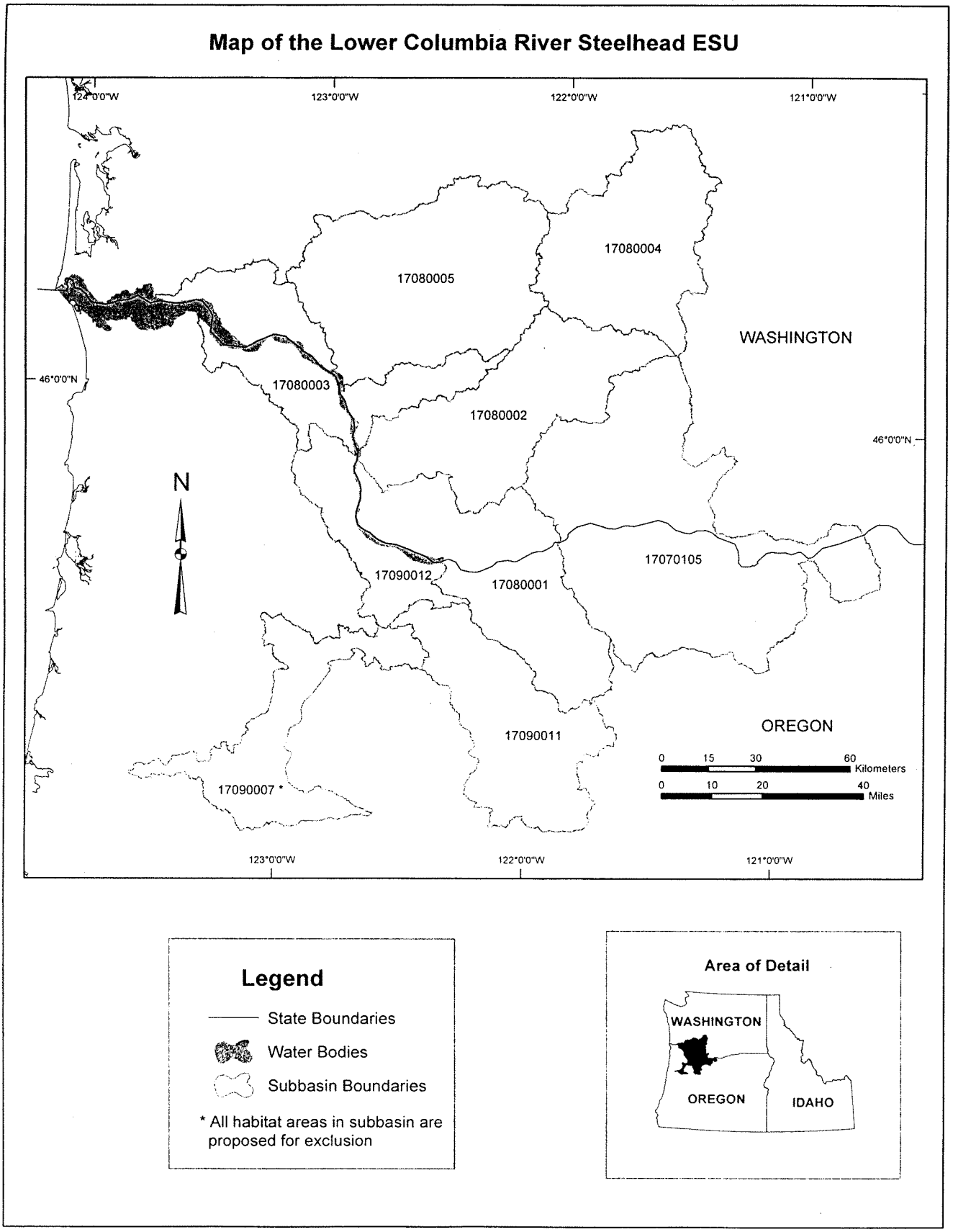
(ii) *Scappoose Creek Watershed 1709001202.* Outlet(s) = Multnomah Channel (Lat 45.8577, Long –122.7919) upstream to endpoint(s) in: Multnomah Channel (45.6188, –122.7921).

(iii) *Columbia Slough/Willamette River Watershed 1709001203.* Outlet(s) = Willamette River (Lat 45.6530, Long –122.7646) upstream to endpoint(s) in: Bybee Lake (45.6266, –122.7523); Bybee/Smith Lakes (45.6105, –122.7285); Columbia Slough #1 (45.6078, –122.7447); Swan Island Basin (45.5652, –122.7120); Unnamed (45.6253, –122.7568); Willamette River (45.4423, –122.6453).

(9) Lower Columbia River Corridor—*Lower Columbia River Corridor* Outlet(s) = Columbia River (Lat 46.2485, Long –124.0782) upstream to endpoint(s) in: Columbia River (45.5710, –122.4021).

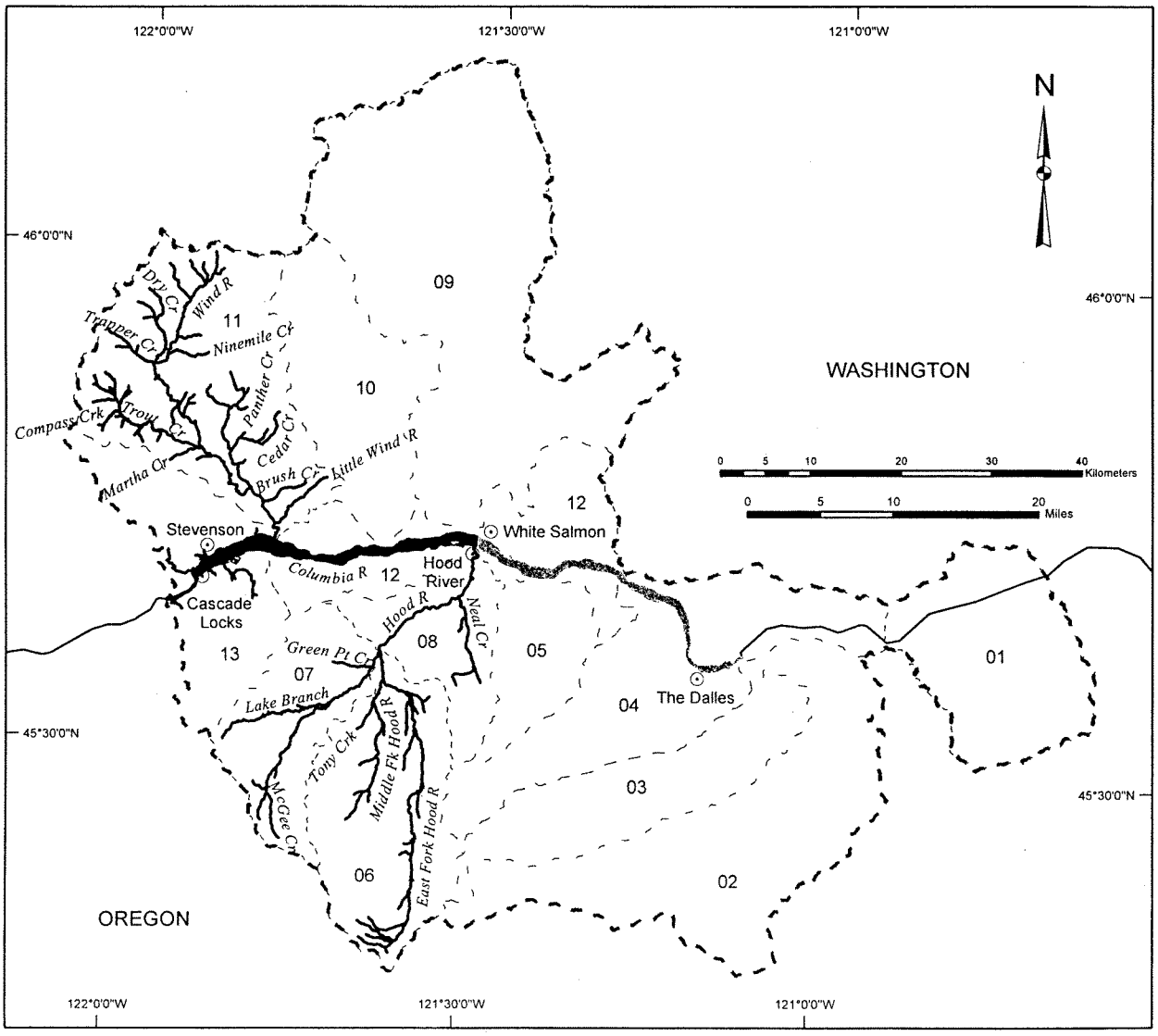
(10) Maps of critical habitat for the Lower Columbia River Steelhead ESU follow:

BILLING CODE 3510–22–P


Map of the Lower Columbia River Steelhead ESU
124°0'0"W
123°0'0"W
122°0'0"W
121°0'0"W
46°0'0"N
17080004
17080005
WASHINGTON
17080003
17080002
N
17070105
17090012
17080001
17090011
OREGON
17090007 *
0 15 30 60 Kilometers
0 10 20 40 Miles
Legend
State Boundaries
Water Bodies
Subbasin Boundaries
* All habitat areas in subbasin are proposed for exclusion
Area of Detail
WASHINGTON
OREGON
IDAHO

Final Critical Habitat for the Lower Columbia River Steelhead ESU

MIDDLE COLUMBIA / HOOD SUBBASIN 17070105

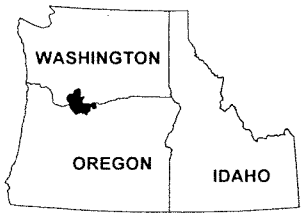


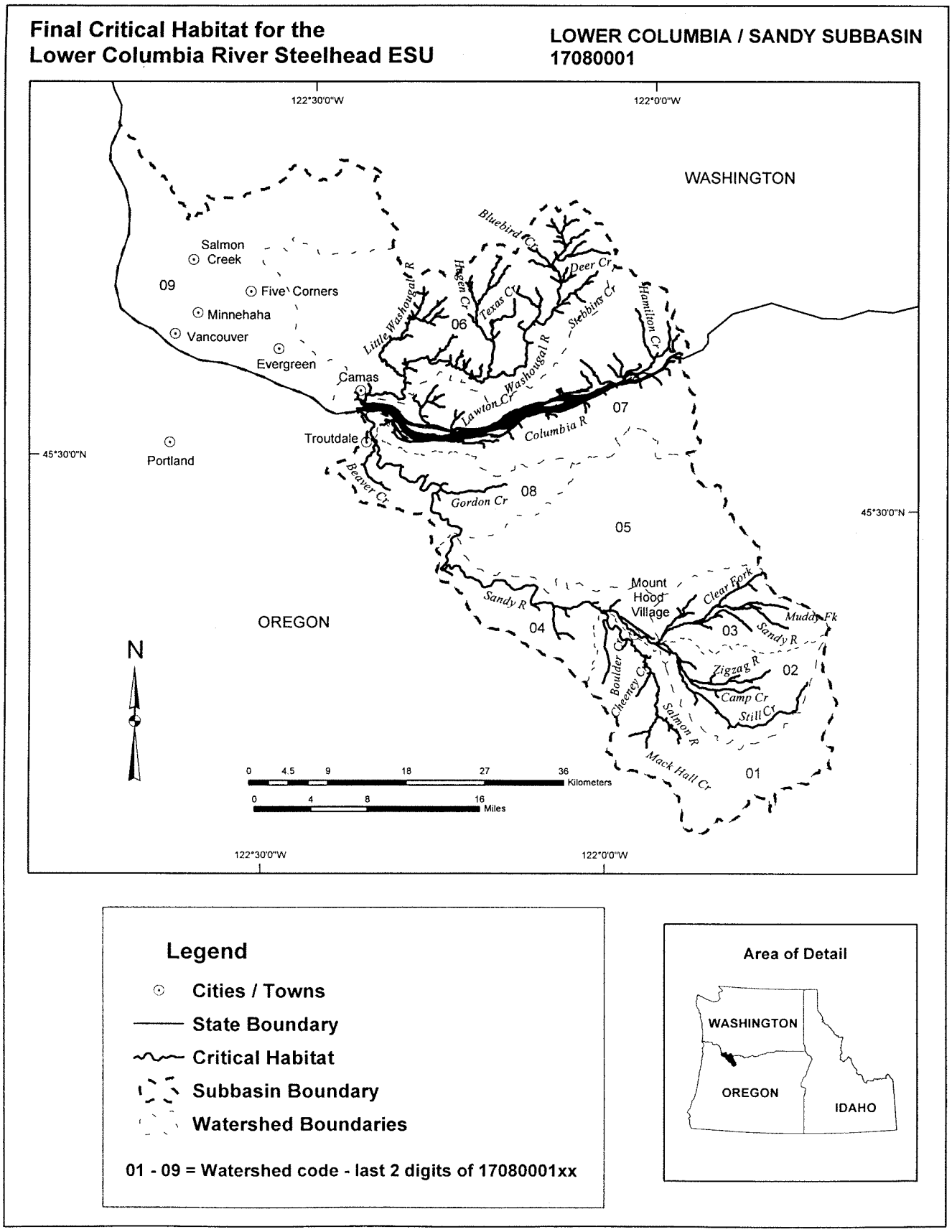
Legend

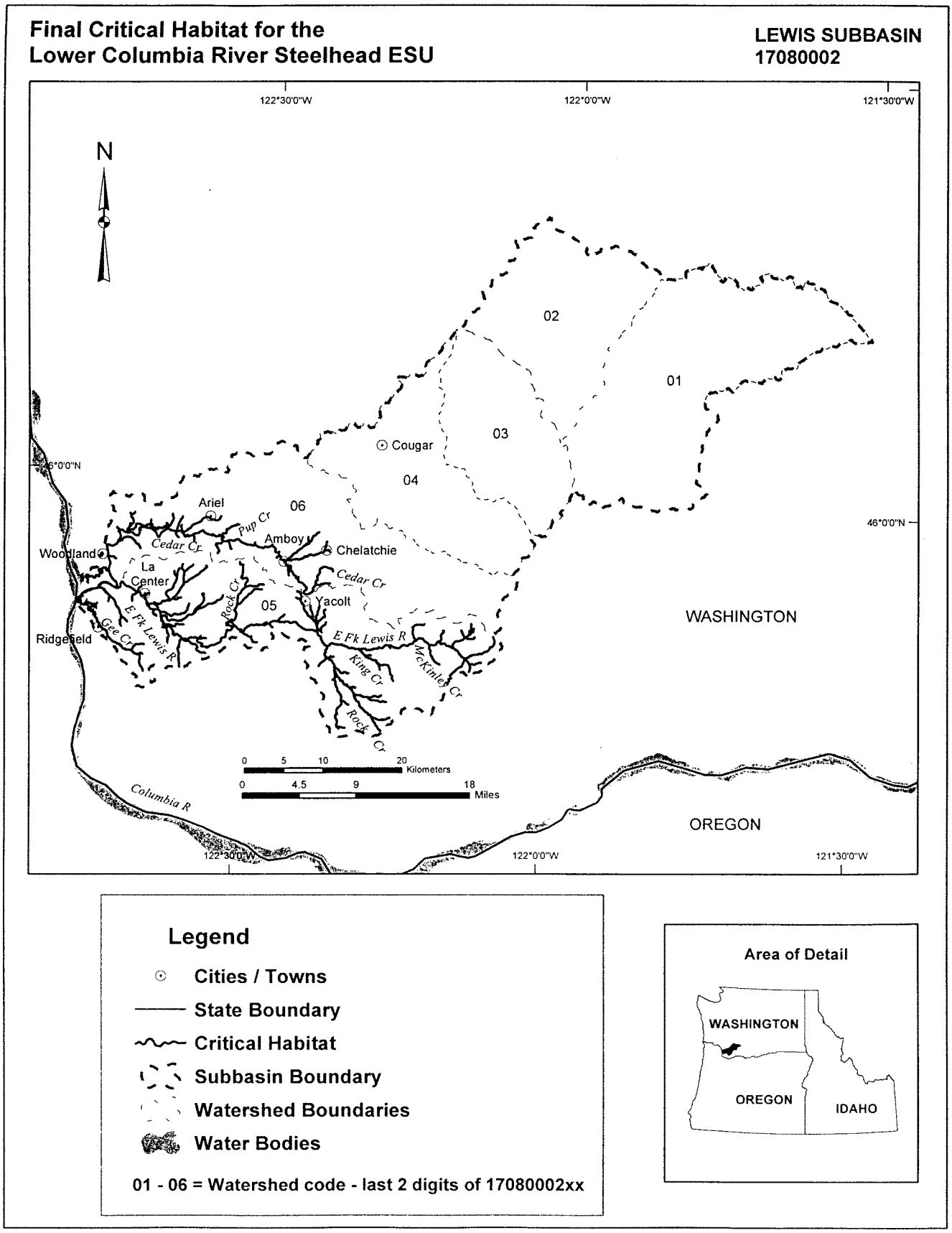
- Cities / Towns
- State Boundary
- Critical Habitat
- Water Bodies
- Subbasin Boundary
- Watershed Boundaries

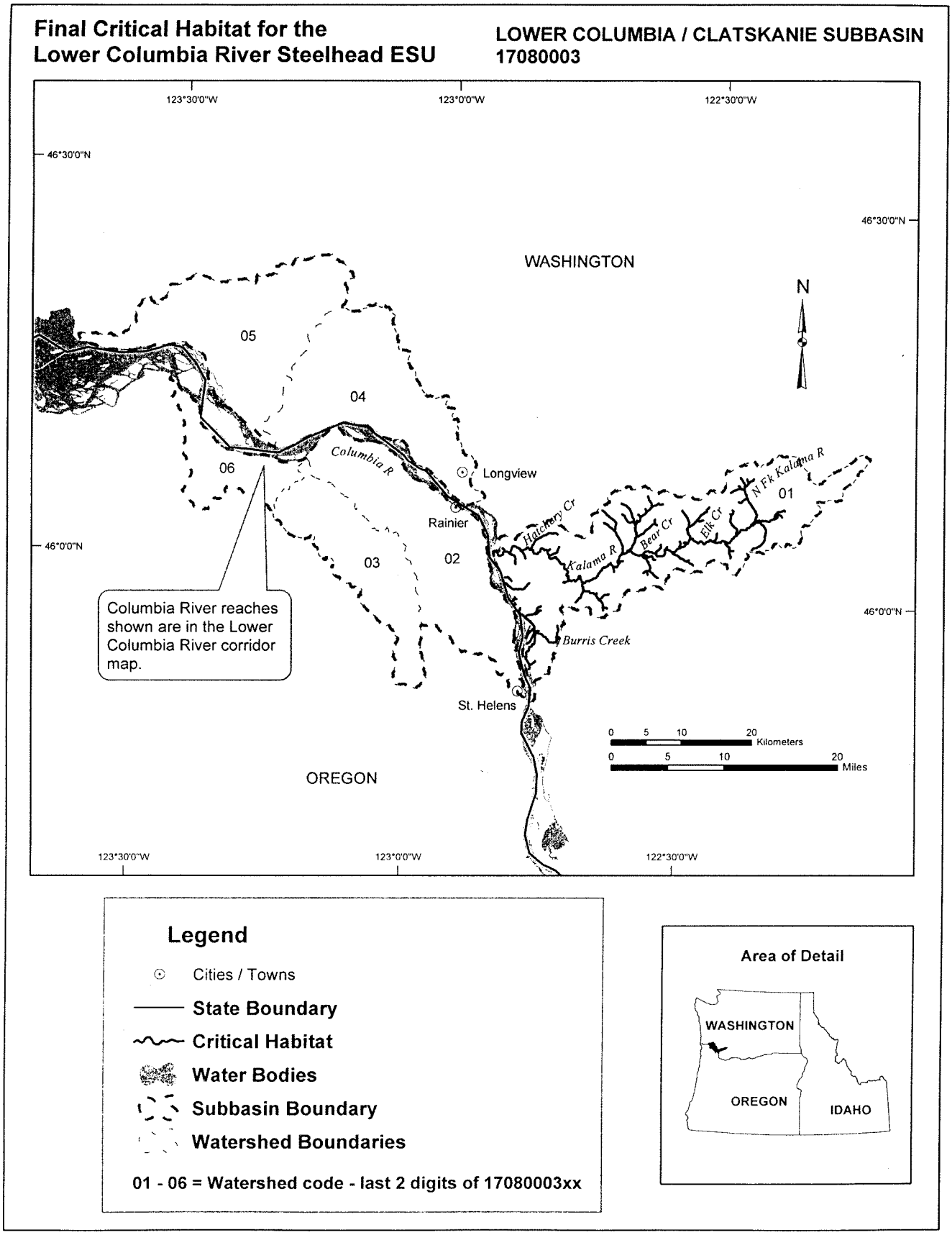
01 - 13 = Watershed code - last 2 digits of 17070105xx

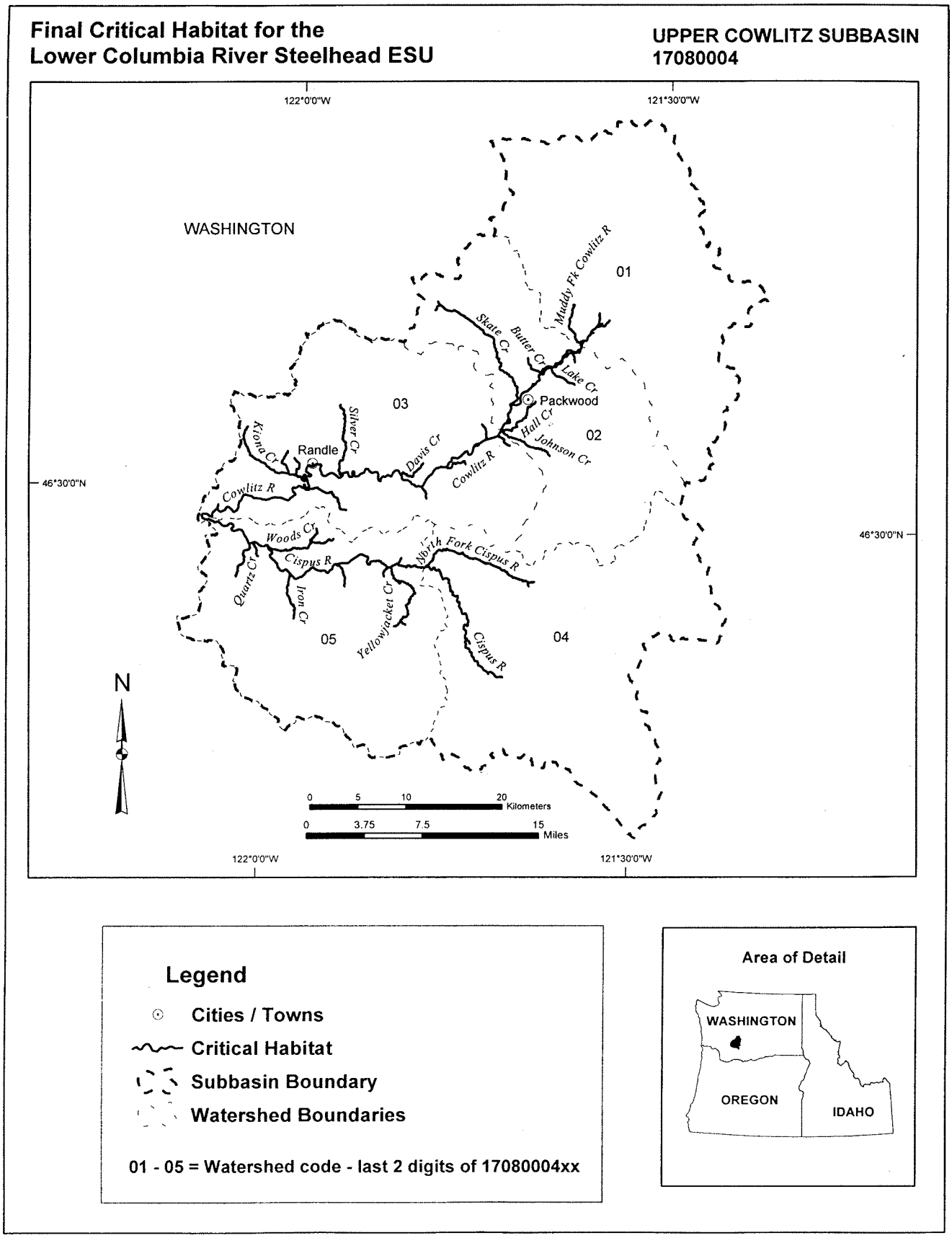
Area of Detail




Final Critical Habitat for the
Lower Columbia River Steelhead ESU
LOWER COLUMBIA / SANDY SUBBASIN
17080001
122°30'0"W
122°0'0"W
WASHINGTON
Salmon Creek
Five Corners
Minnehaha
Vancouver
Evergreen
Camas
Troutdale
Portland
45°30'0"N
09
06
07
08
05
04
03
02
01
Bluebird Cr
Deer Cr
Hamilton Cr
Stebbins Cr
Texas Cr
Hagen Cr
Little Washougal R
Washougal R
Lawton Cr
Columbia R
Beaver Cr
Gordon Cr
Sandy R
Mount Hood Village
Clear Fork
Muddy Fk
Zigzag R
Camp Cr
Still Cr
Boulder Cr
Cheeney Cr
Salmon R
Mack Hall Cr
OREGON
N
0 4.5 9 18 27 36 Kilometers
0 4 8 16 Miles
Legend
Cities / Towns
State Boundary
Critical Habitat
Subbasin Boundary
Watershed Boundaries
01 - 09 = Watershed code - last 2 digits of 17080001xx
Area of Detail
WASHINGTON
OREGON
IDAHO

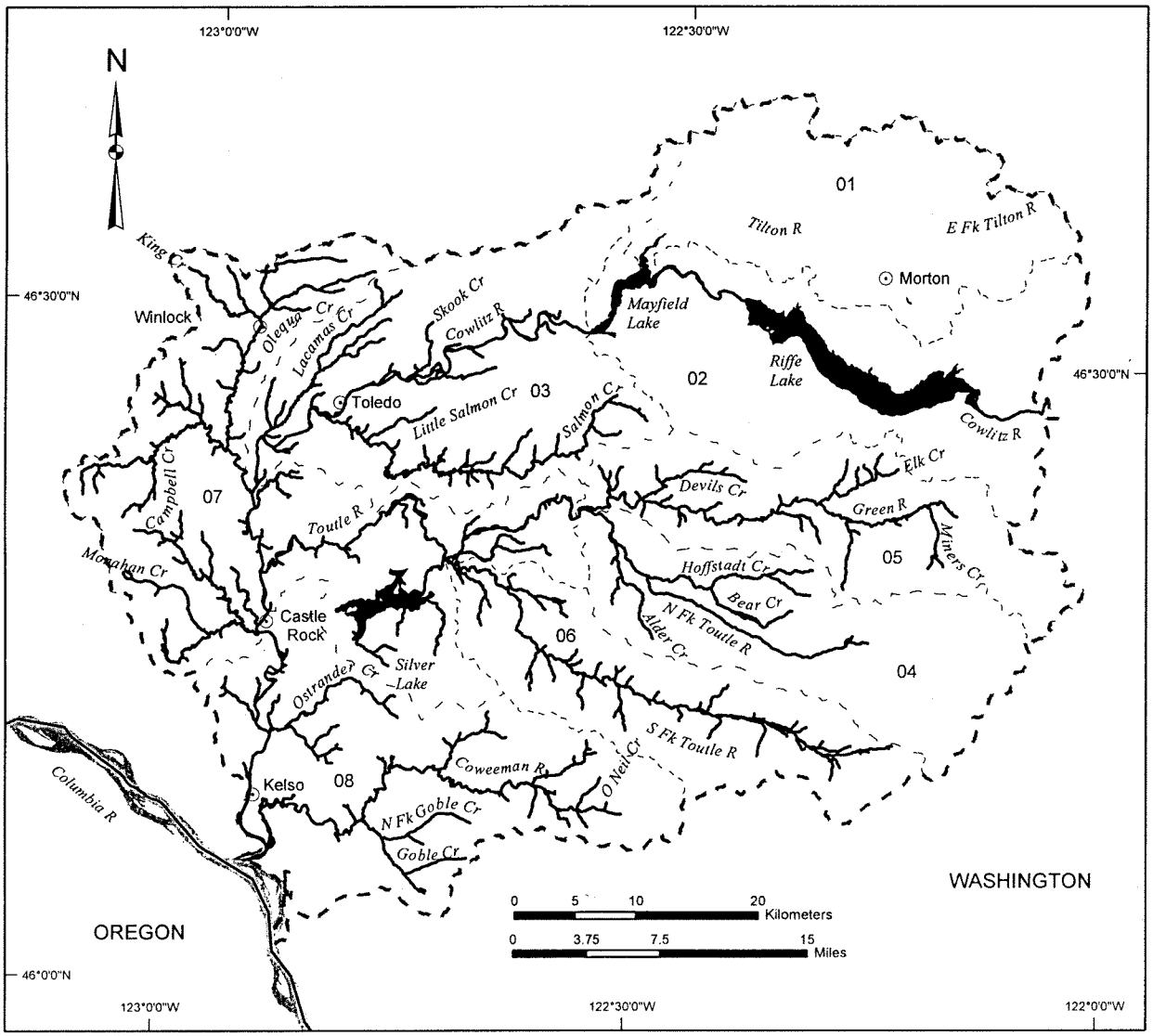

Final Critical Habitat for the
Lower Columbia River Steelhead ESU
LEWIS SUBBASIN
17080002
122°30'0"W
122°0'0"W
121°30'0"W
N
02
01
03
Cougar
04
06
Ariel
Pup Cr
Amboy
Chelatchie
Cedar Cr
Woodland
La Center
Cedar Cr
Rock Cr
05
Yacolt
E Fk Lewis R
Gee Cr
Ridgefield
E Fk Lewis R
King Cr
McKinley Cr
Rock Cr
46°0'0"N
WASHINGTON
0 5 10 20 Kilometers
0 4.5 9 18 Miles
Columbia R
OREGON
Legend
Cities / Towns
State Boundary
Critical Habitat
Subbasin Boundary
Watershed Boundaries
Water Bodies
01 - 06 = Watershed code - last 2 digits of 17080002xx
Area of Detail
WASHINGTON
OREGON
IDAHO


Final Critical Habitat for the
Lower Columbia River Steelhead ESU
LOWER COLUMBIA / CLATSKANIE SUBBASIN
17080003
123°30'0"W
123°0'0"W
122°30'0"W
46°30'0"N
46°0'0"N
WASHINGTON
OREGON
N
05
04
06
03
02
01
Columbia R
Longview
Rainier
Hatchery Cr
Kalama R
Bear Cr
Elk Cr
N Fk Kalama R
Burris Creek
St. Helens
Columbia River reaches shown are in the Lower Columbia River corridor map.
0 5 10 20 Kilometers
0 5 10 20 Miles
Legend
Cities / Towns
State Boundary
Critical Habitat
Water Bodies
Subbasin Boundary
Watershed Boundaries
01 - 06 = Watershed code - last 2 digits of 17080003xx
Area of Detail
WASHINGTON
OREGON
IDAHO


Final Critical Habitat for the
Lower Columbia River Steelhead ESU
UPPER COWLITZ SUBBASIN
17080004
122°0'0"W
121°30'0"W
46°30'0"N
WASHINGTON
01
02
03
04
05
Muddy Fk Cowlitz R
Skate Cr
Butter Cr
Lake Cr
Packwood
Hall Cr
Johnson Cr
Silver Cr
Kiona Cr
Randle
Davis Cr
Cowlitz R
Woods Cr
Cispus R
North Fork Cispus R
Quartz Cr
Iron Cr
Yellowjacket Cr
N
0 5 10 20 Kilometers
0 3.75 7.5 15 Miles
Legend
Cities / Towns
Critical Habitat
Subbasin Boundary
Watershed Boundaries
01 - 05 = Watershed code - last 2 digits of 17080004xx
Area of Detail
WASHINGTON
OREGON
IDAHO

Final Critical Habitat for the Lower Columbia River Steelhead ESU

COWLITZ SUBBASIN 17080005

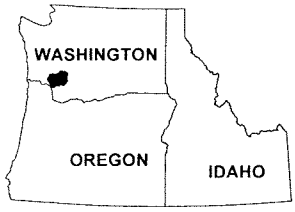


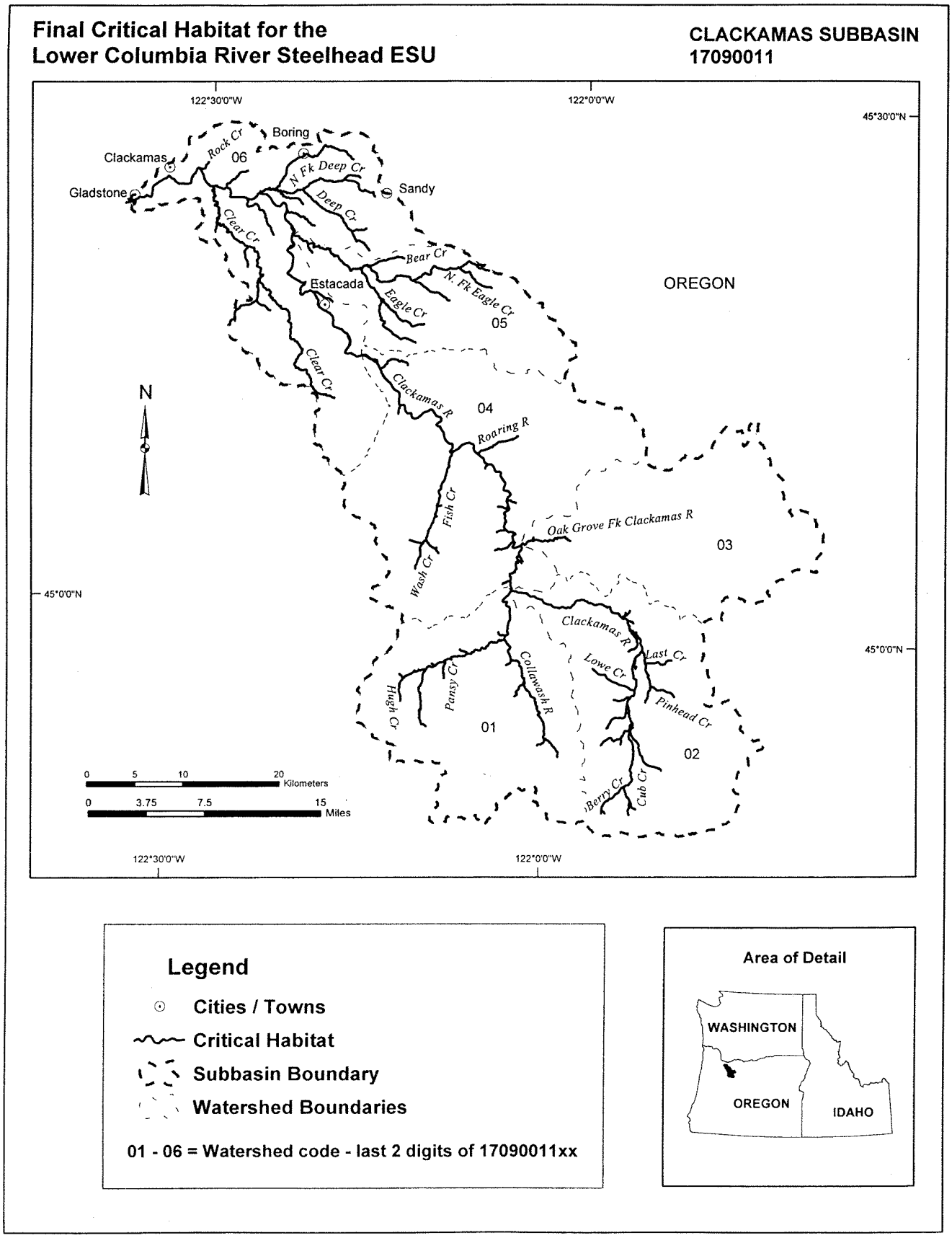
Legend

- Cities / Towns
- State Boundary
- Critical Habitat
- Water Bodies
- Subbasin Boundary
- Watershed Boundaries

01 - 08 = Watershed code - last 2 digits of 17080005xx

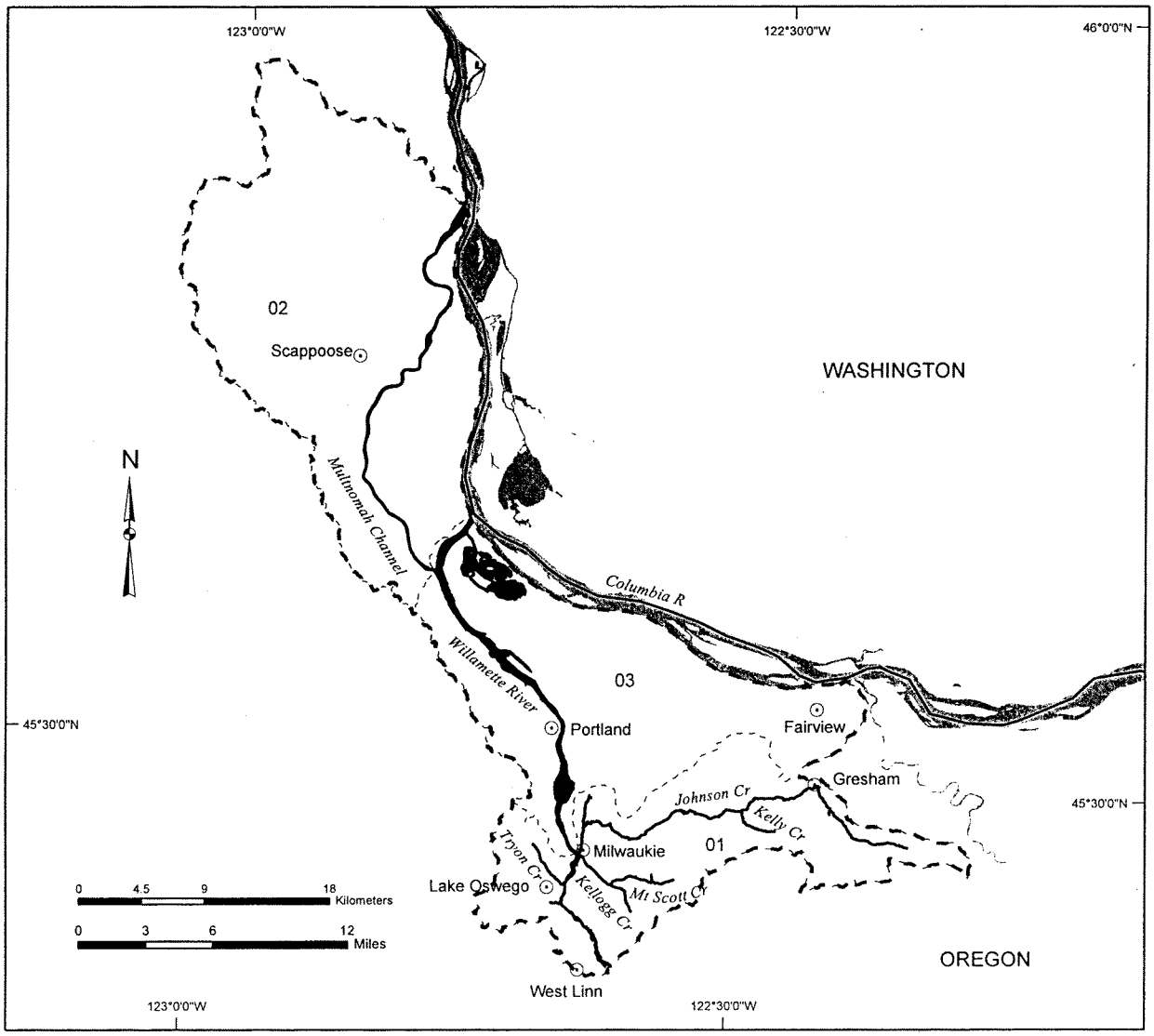
Area of Detail




Final Critical Habitat for the
Lower Columbia River Steelhead ESU
CLACKAMAS SUBBASIN
17090011
122°30'0"W
122°0'0"W
45°30'0"N
45°0'0"N
Clackamas
Gladstone
Boring
Sandy
Estacada
OREGON
Rock Cr
06
N Fk Deep Cr
Deep Cr
Clear Cr
Bear Cr
N Fk Eagle Cr
Eagle Cr
05
Clackamas R
04
Roaring R
Fish Cr
Oak Grove Fk Clackamas R
03
Wash Cr
Clackamas R
Last Cr
Lowe Cr
Collawash R
Pansy Cr
High Cr
01
Pinhead Cr
02
Berry Cr
Cub Cr
N
0 5 10 20 Kilometers
0 3.75 7.5 15 Miles
Legend
Cities / Towns
Critical Habitat
Subbasin Boundary
Watershed Boundaries
01 - 06 = Watershed code - last 2 digits of 17090011xx
Area of Detail
WASHINGTON
OREGON
IDAHO

Final Critical Habitat for the Lower Columbia River Steelhead ESU

LOWER WILLAMETTE SUBBASIN 17090012

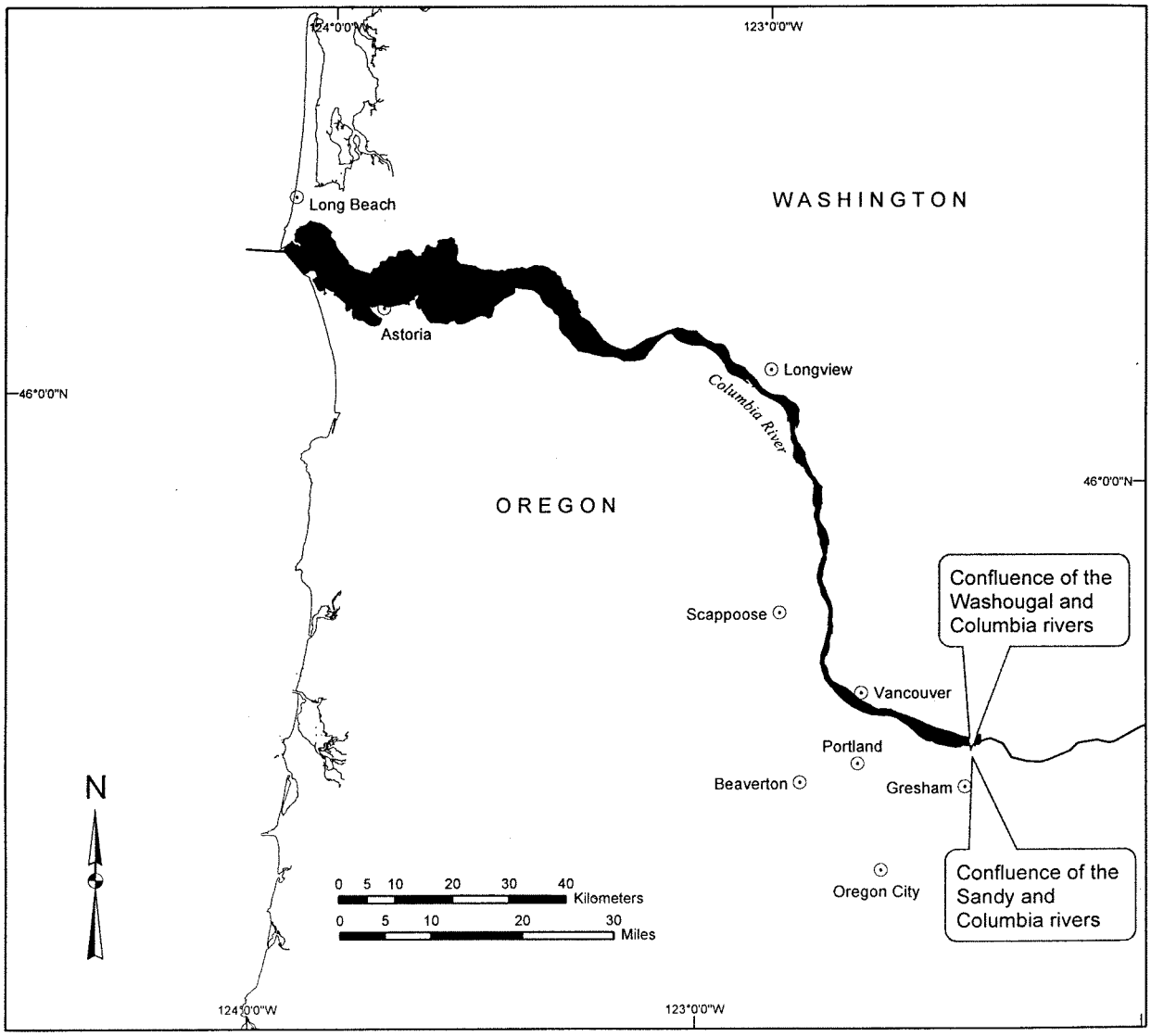


Legend

- Cities / Towns
- State Boundary
- Critical Habitat
- Water Bodies
- Subbasin Boundary
- Watershed Boundaries

01 - 03 = Watershed code - last 2 digits of 17090012xx

Rearing / Migration Corridor for the Lower Columbia River Steelhead ESU



Legend

- Cities / Towns
- State Boundary
- Rearing / Migration Corridor

Lower Columbia River Steelhead ESU

Lower Columbia River Corridor
The lower Columbia River corridor is that segment from the mouth of the Columbia River at the Pacific Ocean upstream to a line connecting the confluences of the Sandy River (Oregon) and Washougal River (Washington).

BILLING CODE 3510–22–C

(t) *Upper Willamette River Steelhead (Oncorhynchus mykiss).* Critical habitat is designated to include the areas defined in the following subbasins:

(1) Upper Willamette Subbasin 17090003—(i) *Calapooia River Watershed 1709000303.* Outlet(s) = Calapooia River (Lat 44.5088, Long –123.1101) upstream to endpoint(s) in: Bigs Creek (44.2883, –122.6133); Butte Creek (44.4684, –123.0488); Calapooia River (44.2361, –122.3664); Hands Creek (44.2559, –122.5127); King Creek (44.2458, –122.4452); McKinley Creek (44.2569, –122.5621); North Fork Calapooia River (44.2497, –122.4094); Potts Creek (44.2581, –122.4756); Spoon Creek (44.4379, –123.0877); United States Creek (44.2244, –122.3825).

(ii) *Oak Creek Watershed 1709000304.* Outlet(s) = Willamette River (Lat 44.7504, Long –123.1421) upstream to endpoint(s) in: Calapooia River (44.5088, –123.1101); Cox Creek (44.6417, –123.0680); Periwinkle Creek (44.6250, –123.0814); Truax Creek (44.6560, –123.0598).

(iii) *Luckiamute River Watershed 1709000306.* Outlet(s) = Luckiamute River (Lat 44.7561, Long –123.1468) upstream to endpoint(s) in: Bonner Creek (44.6735, –123.4849); Burgett Creek (44.6367, –123.4574); Clayton Creek (44.7749, –123.4870); Cooper Creek (44.8417, –123.3246); Grant Creek (44.8389, –123.4098); Little Luckiamute River (44.8673, –123.4375); Luckiamute River (44.7970, –123.5270); Maxfield Creek (44.6849, –123.3427); McTimmonds Creek (44.7622, –123.4125); North Fork Pedee Creek (44.7866, –123.4511); Plunkett Creek (44.6522, –123.4241); Price Creek (44.6677, –123.3732); Sheythe Creek (44.7683, –123.5027); Soap Creek (44.6943, –123.2488); South Fork Pedee Creek (44.7798, –123.4667); Teal Creek (44.8329, –123.4582); Unnamed (44.7562, –123.5293); Unnamed (44.7734, –123.2027); Unnamed (44.7902, –123.6211); Vincent Creek (44.6380, –123.4327); Waymire Creek (44.8725, –123.4128); Woods Creek (44.6564, –123.3905).

(2) North Santiam Subbasin 17090005—(i) *Middle North Santiam River Watershed 1709000504.* Outlet(s) = North Santiam River (Lat 44.7852, Long –122.6079) upstream to endpoint(s) in: Little Rock Creek (44.7330, –122.3927); Mad Creek (44.7373, –122.3735); North Santiam River (44.7512, –122.2825); Rock Creek (44.7011, –122.4080); Snake Creek (44.7365, –122.4870).

(ii) *Little North Santiam River Watershed 1709000505.* Outlet(s) = Little North Santiam River (Lat 44.7852, Long –122.6079) upstream to endpoint(s) in: Cedar Creek (44.8439, –122.2682); Elkhorn Creek (44.8139, –122.3451); Evans Creek (44.8412, –122.3601); Fish Creek (44.8282, –122.3915); Little North Santiam River (44.8534, –122.2887); Little Sinker Creek (44.8235, –122.4163); Sinker Creek (44.8211, –122.4210).

(iii) *Lower North Santiam River Watershed 1709000506.* Outlet(s) = Santiam River (Lat 44.7504, Long –123.1421) upstream to endpoint(s) in: Bear Branch (44.7602, –122.7942); Chehulpum Creek (44.7554, –122.9898); Cold Creek (44.7537, –122.8812); Morgan Creek (44.7495, –123.0443); North Santiam River (44.7852, –122.6079); Salem Ditch (44.8000, –122.8120); Santiam River (44.6869, –123.0052); Smallman Creek (44.7293, –122.9139); Stout Creek (44.8089, –122.5994); Trask Creek (44.7725, –122.6152); Unnamed (44.7972, –122.7328); Valentine Creek (44.7999, –122.7311).

(3) South Santiam Subbasin 17090006—(i) *Hamilton Creek/South Santiam River Watershed 1709000601.* Outlet(s) = South Santiam River (Lat 44.6869, Long –123.0052) upstream to endpoint(s) in: Albany—Santiam Canal (44.5512, –122.9032); Hamilton Creek (44.5392, –122.7018); Johnson Creek (44.4548, –122.7080); McDowell Creek (44.4640, –122.6803); Mill Creek (44.6628, –122.9575); Morgan Creek (44.4557, –122.7058); Noble Creek (44.4513, –122.7974); South Santiam River (44.4163, –122.6693).

(ii) *Crabtree Creek Watershed 1709000602.* Outlet(s) = Crabtree Creek (Lat 44.6756, Long –122.9557) upstream to endpoint(s) in: Bald Barney Creek (44.5469, –122.5959); Bald Peter Creek (44.5325, –122.6024); Beaver Creek (44.6337, –122.8537); Camp Creek (44.5628, –122.5768); Crabtree Creek (44.6208, –122.5055); Cruiser Creek (44.5543, –122.5831); Green Mountain Creek (44.5777, –122.6258); Roaring River (44.6281, –122.7148); Rock Creek (44.5883, –122.6000); South Fork Crabtree Creek (44.5648, –122.5441); White Rock Creek (44.6050, –122.5209).

(iii) *Thomas Creek Watershed 1709000603.* Outlet(s) = Thomas Creek (Lat 44.6778, Long –122.9654) upstream to endpoint(s) in: Criminal Creek (44.7122, –122.5709); Ella Creek (44.6815, –122.5228); Hortense Creek (44.6756, –122.5017); Jordan Creek (44.7527, –122.6519); Mill Creek (44.7060, –122.7849); Neal Creek (44.6923, –122.6484); South Fork Neal Creek (44.7016, –122.7049); Thomas Creek (44.6776, –122.4650); West Fork Ella Creek (44.6805, –122.5288).

(iv) *South Santiam River Watershed 1709000606.* Outlet(s) = South Santiam River (Lat 44.3977, Long –122.4473) upstream to endpoint(s) in: Canyon Creek (44.3074, –122.3300); Falls Creek (44.4007, –122.3828); Harter Creek (44.4166, –122.2605); Keith Creek (44.4093, –122.2847); Moose Creek (44.4388, –122.3671), Owl Creek (44.2999, –122.3686); Shuttle Camp Creek (44.4336, –122.2597); Soda Fork South Santiam River (44.4410, –122.2466); South Santiam River (44.3980, –122.2610); Trout Creek (44.3993, –122.3464); Two Girls Creek (44.3248, –122.3346).

(v) *South Santiam River/Foster Reservoir Watershed 1709000607.* Outlet(s) = South Santiam River (Lat 44.4163, Long –122.6693) upstream to endpoint(s) in: Lewis Creek (44.4387, –122.6223); Middle Santiam River (44.4498, –122.5479); South Santiam River (44.3977, –122.4473).

(vi) *Wiley Creek Watershed 1709000608.* Outlet(s) = Wiley Creek (Lat 44.4140, Long –122.6752) upstream to endpoint(s) in: Farmers Creek (44.3383, –122.5812); Jackson Creek (44.3669, –122.6344); Little Wiley Creek (44.3633, –122.5228); Unnamed (44.3001, –122.4579); Unnamed (44.3121, –122.5197); Unnamed (44.3455, –122.5934); Unnamed (44.3565, –122.6051); Wiley Creek (44.2981, –122.4318).

(4) Middle Willamette Subbasin 17090007—(i) *Mill Creek/Willamette River Watershed 1709000701.* Outlet(s) = Mill Creek (Lat 44.9520, Long –123.0381) upstream to endpoint(s) in: Mill Creek (44.8268, –122.8249).

(ii) *Rickreall Creek Watershed 1709000702.* Outlet(s) = Willamette River (Lat 44.9288, Long –123.1124) upstream to endpoint(s) in: Willamette River (44.7504, –123.1421).

(iii) *Willamette River/Chehalem Creek Watershed 1709000703.* Outlet(s) = Willamette River (Lat 45.2552, Long –122.8806) upstream to endpoint(s) in: Willamette River (44.9288, –123.1124).

(iv) *Abernethy Creek Watershed 1709000704.* Outlet(s) = Willamette River (Lat 45.3540, Long –122.6186) upstream to endpoint(s) in: Willamette River (45.2552, –122.8806).

(5) Yamhill Subbasin 17090008—(i) *Upper South Yamhill River Watershed 1709000801.* Outlet(s) = South Yamhill River (Lat 45.0784, Long –123.4753) upstream to endpoint(s) in: Agency Creek (45.1799, –123.6976); Cedar Creek (45.0892, –123.6969); Cockerham Creek (45.0584, –123.5077); Cosper Creek (45.1497, –123.6178); Cow Creek (45.0410, –123.6165); Crooked Creek (45.0964, –123.6611); Doane Creek (45.0449, –123.4929); Ead Creek (45.1214, –123.6969); Elmer Creek (45.0794, –123.6714); Gold Creek

(45.0108, –123.5496); Jackass Creek (45.0589, –123.6495); Joe Creek (45.1216, –123.6216); Joe Day Creek (45.0285, –123.6660); Kitten Creek (45.1110, –123.7266); Klees Creek (45.0784, –123.5496); Lady Creek (45.0404, –123.5269); Little Rowell Creek (45.0235, –123.5792); Mule Tail Creek (45.0190, –123.5547); Pierce Creek (45.1152, –123.7203); Rock Creek (45.0130, –123.6344); Rogue River (45.0613, –123.6550); Rowell Creek (45.0187, –123.5699); Unnamed (45.0318, –123.5421); Unnamed (45.0390, –123.4620); Unnamed (45.0431, –123.5541); Unnamed (45.0438, –123.4721); Unnamed (45.0493, –123.6044); Unnamed (45.0599, –123.4661); Unnamed (45.0945, –123.6110); Unnamed (45.0994, –123.6276); Unnamed (45.1151, –123.6566); Unnamed (45.1164, –123.6717); Unnamed (45.1412, –123.6705); West Fork Agency Creek (45.1575, –123.7032); Wind River (45.1367, –123.6392); Yoncalla Creek (45.1345, –123.6614).

(ii) *Mill Creek/South Yamhill River Watershed 1709000803.* Outlet(s) = Mill Creek (Lat 45.0908, Long –123.4434) upstream to endpoint(s) in: Mill Creek (45.0048, –123.4184).

(iii) *Lower South Yamhill River Watershed 1709000804.* Outlet(s) = South Yamhill River (Lat 45.1616, Long –123.2190) upstream to endpoint(s) in: South Yamhill River (45.0784, –123.4753).

(iv) *Yamhill River Watershed 1709000807.* Outlet(s) = Yamhill River (Lat 45.2301, Long –122.9950) upstream to endpoint(s) in: South Yamhill River (45.1616, –123.2190).

(6) Molalla/Pudding Subbasin 17090009-(i) *Abiqua Creek/Pudding River Watershed 1709000901.* Outlet(s) = Pudding River (Lat 45.0740, Long –122.8525) upstream to endpoint(s) in : Abiqua Creek (44.9264, –122.5666); Little Abiqua Creek (44.9252, –122.6204); Little Pudding River (45.0435, –122.8965); Powers Creek (44.9552, –122.6796); Pudding (44.9998, –122.8412); Silver Creek (44.8981, –122.6799).

(ii) *Butte Creek/Pudding River Watershed 1709000902.* Outlet(s) = Pudding River (Lat 45.1907, Long –122.7527) upstream to endpoint(s) in: Pudding River (45.0740, –122.8525).

(iii) *Rock Creek/Pudding River Watershed 1709000903.* Outlet(s) = Rock Creek (Lat 45.1907, Long –122.7527) upstream to endpoint(s) in: Rock Creek (45.0876, –122.5916).

(iv) *Senecal Creek/Mill Creek Watershed 1709000904.* Outlet(s) = Pudding River (Lat 45.2843, Long –122.7149) upstream to endpoint(s) in: Pudding River (45.1907, –122.7527).

(v) *Upper Molalla River Watershed 1709000905.* Outlet(s) = Molalla River (Lat 45.1196, Long –122.5342) upstream to endpoint(s) in: Camp Creek (44.9630, –122.2928); Cedar Creek (45.0957, –122.5257); Copper Creek (44.8877, –122.3704); Cougar Creek (45.0421, –122.3145); Dead Horse Canyon Creek (45.0852, –122.3146); Gawley Creek (44.9320, –122.4304); Lost Creek (44.9913, –122.2444); Lukens Creek (45.0498, –122.2421); Molalla River (44.9124, –122.3228); North Fork Molalla River (45.0131, –122.2986); Pine Creek (45.0153, –122.4560); Table Rock Fork Molalla River (44.9731, –122.2629); Trout Creek (45.0577, –122.4657).

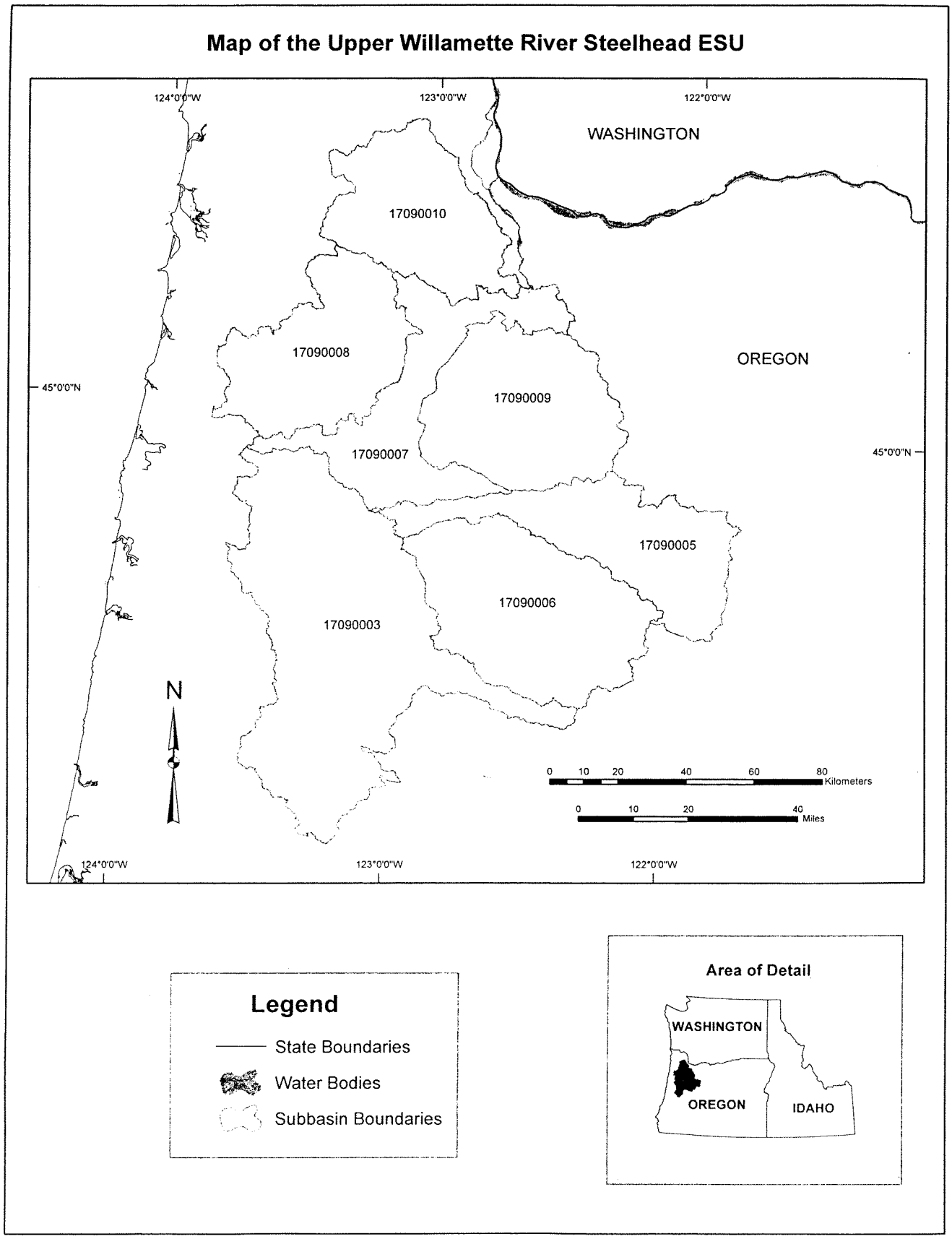
(vi) *Lower Molalla River Watershed 1709000906.* Outlet(s) = Molalla River (Lat 45.2979, Long –122.7141) upstream to endpoint(s) in: Buckner Creek (45.2382, –122.5399); Canyon Creek (45.1317, –122.3858); Cedar Creek (45.2037, –122.5327); Gribble Creek (45.2004, –122.6867); Jackson Creek (45.1822, –122.3898); Milk Creek (45.2036, –122.3761); Molalla River (45.1196, –122.5342); Woodcock Creek (45.1508, –122.5075).

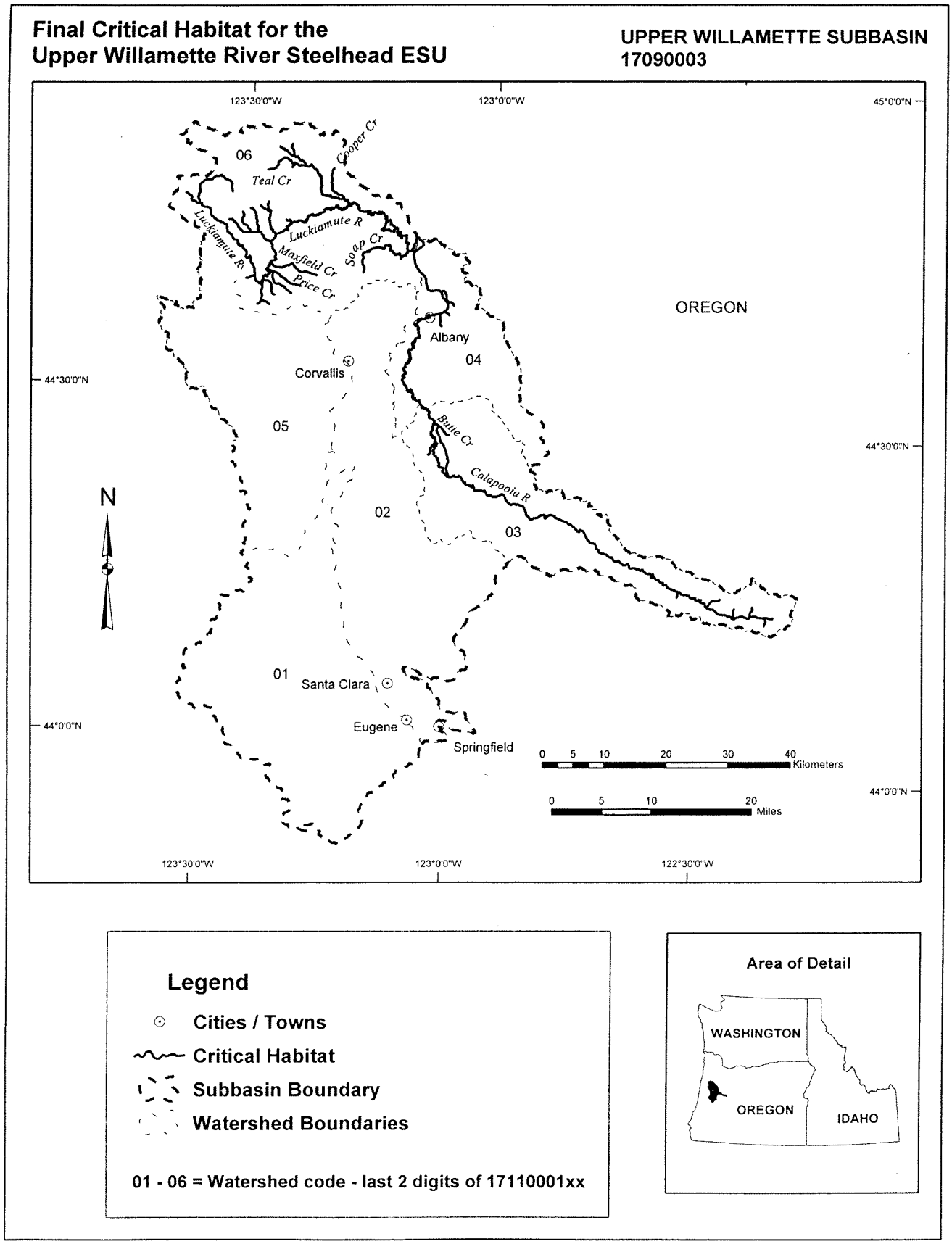
(7) Tualatin Subbasin 17090010—*Gales Creek Watershed 1709001002.* Outlet(s) = Tualatin River (Lat 45.5019, Long –122.9946) upstream to endpoint(s) in: Bateman Creek (45.6350, –123.2966); Beaver Creek (45.6902, –123.2889); Clear Creek (45.5705, –123.2567); Gales Creek (45.6428, –123.3576); Iler Creek (45.5900, –123.2582); North Fork Gales Creek (45.6680, –123.3394); Roaring Creek (45.5620, –123.2574); Roderick Creek (45.5382, –123.2013); South Fork Gales Creek (45.6059, –123.2978); Tualatin River (45.4917, –123.1012).

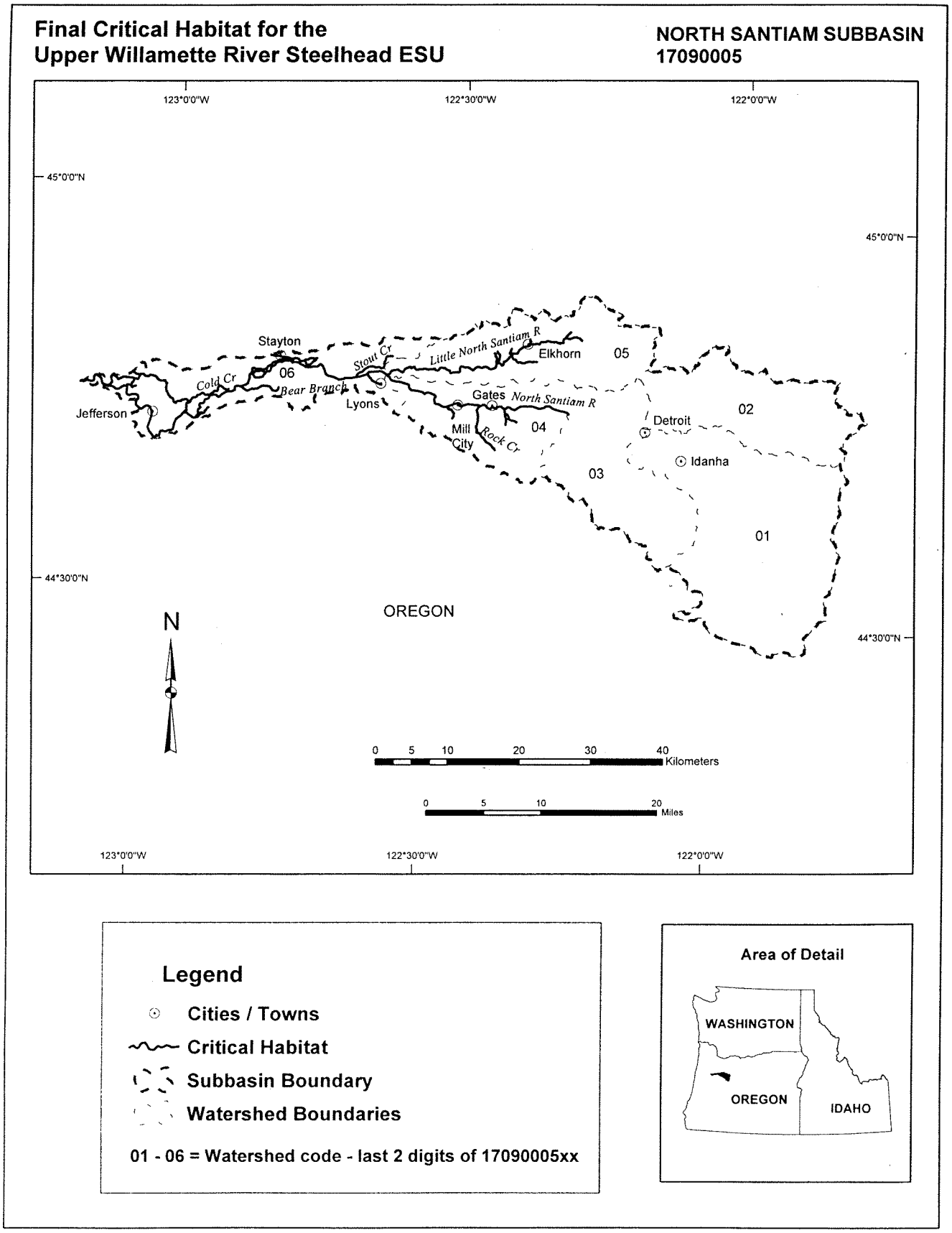
(8) Lower Willamette/Columbia River Corridor—*Lower Willamette/Columbia River Corridor.* Outlet(s) = Columbia River (Lat 46.2485, Long –124.0782) upstream to endpoint(s) in: Willamette River (45.3540, –122.6186).

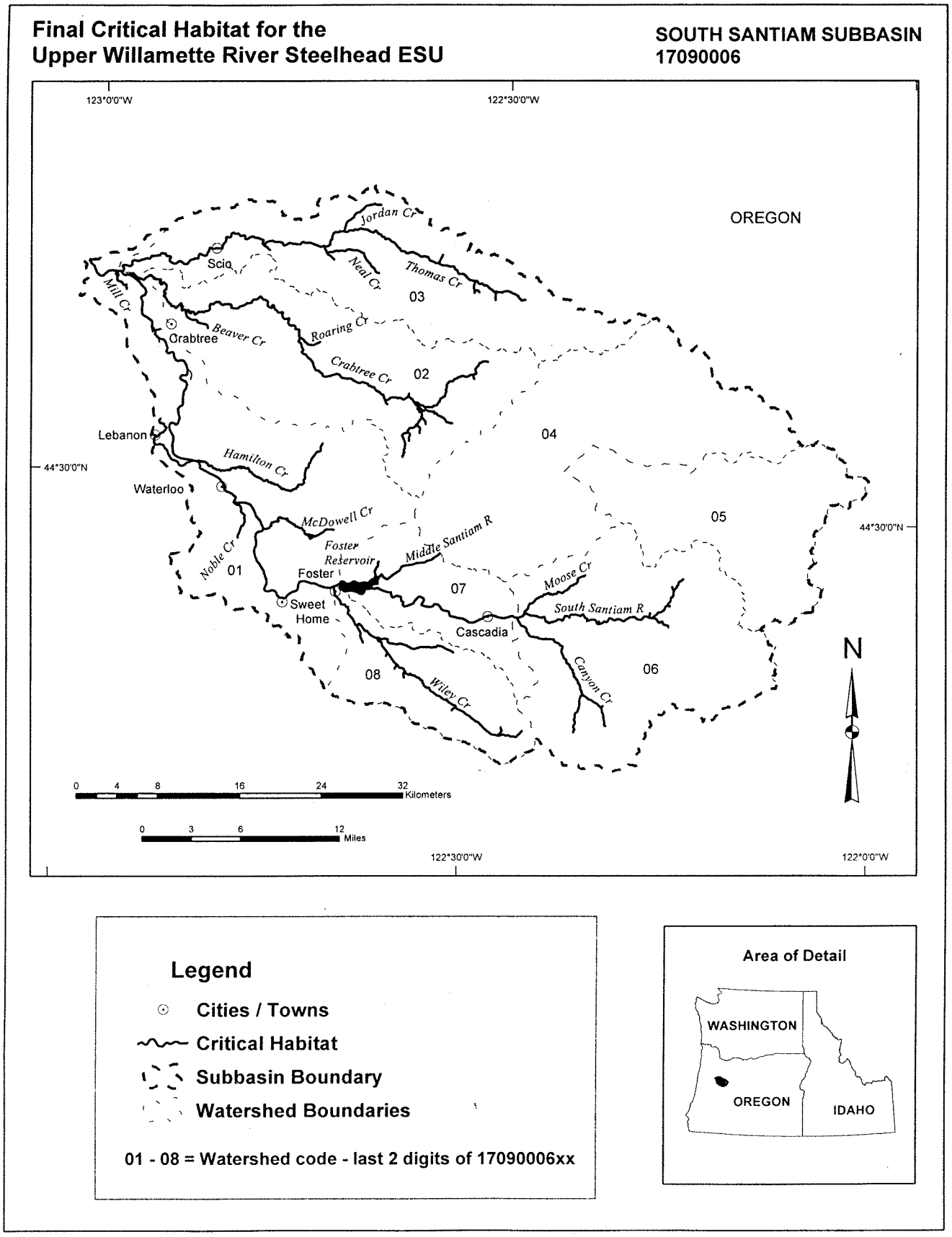
(9) Maps of critical habitat for the Upper Willamette River Steelhead ESU follow:

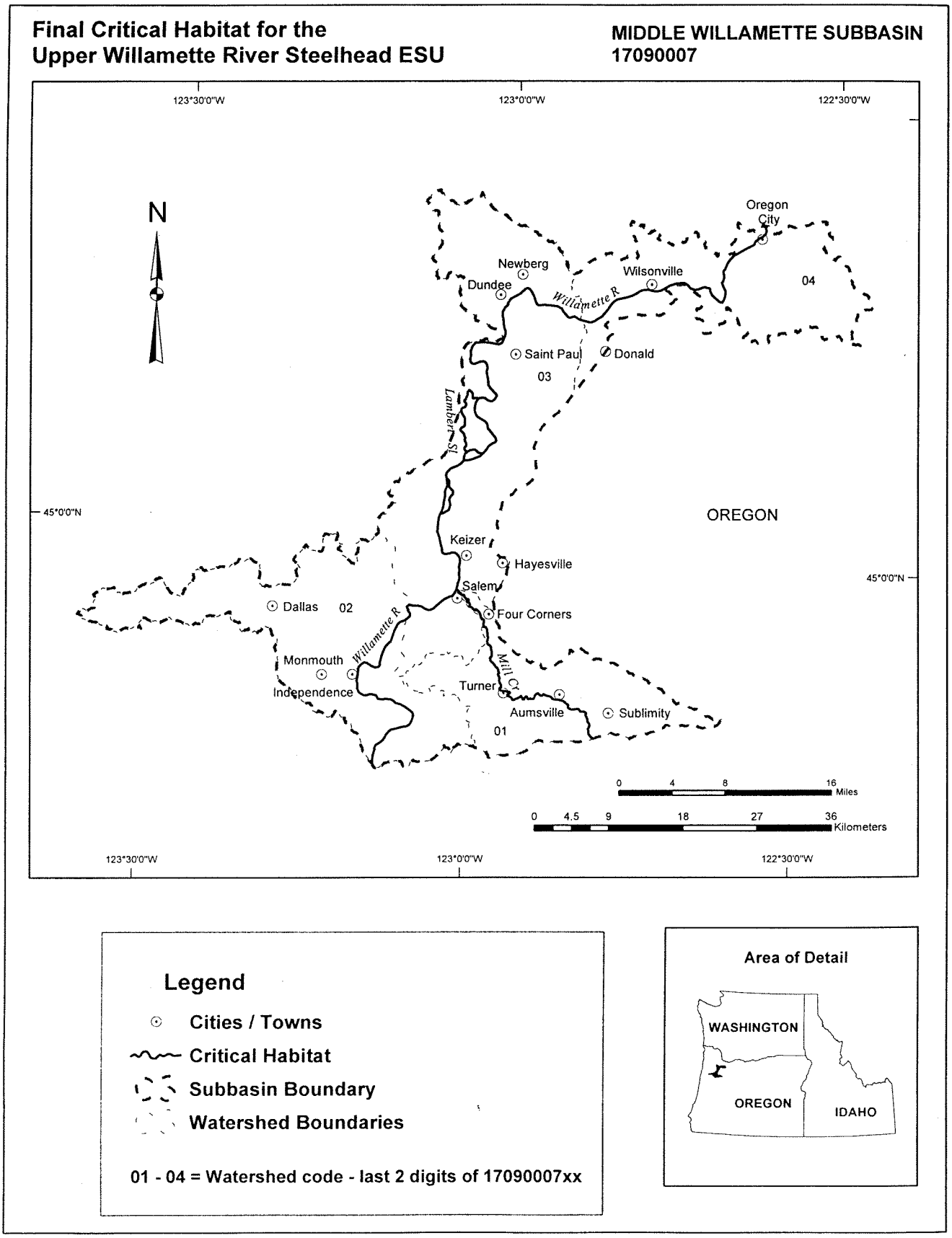
BILLING CODE 3510–22–P


Map of the Upper Willamette River Steelhead ESU
124°0'0"W
123°0'0"W
122°0'0"W
WASHINGTON
OREGON
45°0'0"N
17090010
17090008
17090009
17090007
17090005
17090006
17090003
N
0 10 20 40 60 80 Kilometers
0 10 20 40 Miles
Legend
State Boundaries
Water Bodies
Subbasin Boundaries
Area of Detail
WASHINGTON
OREGON
IDAHO


Final Critical Habitat for the
Upper Willamette River Steelhead ESU
UPPER WILLAMETTE SUBBASIN
17090003
123°30'0"W
123°0'0"W
45°0'0"N
44°30'0"N
44°0'0"N
122°30'0"W
06
Teal Cr
Cooper Cr
Luckiamute R
Luckiamute R
Maxfield Cr
Price Cr
Soap Cr
OREGON
Albany
04
Corvallis
05
Butte Cr
Calapooia R
N
02
03
01
Santa Clara
Eugene
Springfield
0 5 10 20 30 40 Kilometers
0 5 10 20 Miles
Legend
Cities / Towns
Critical Habitat
Subbasin Boundary
Watershed Boundaries
01 - 06 = Watershed code - last 2 digits of 17110001xx
Area of Detail
WASHINGTON
OREGON
IDAHO

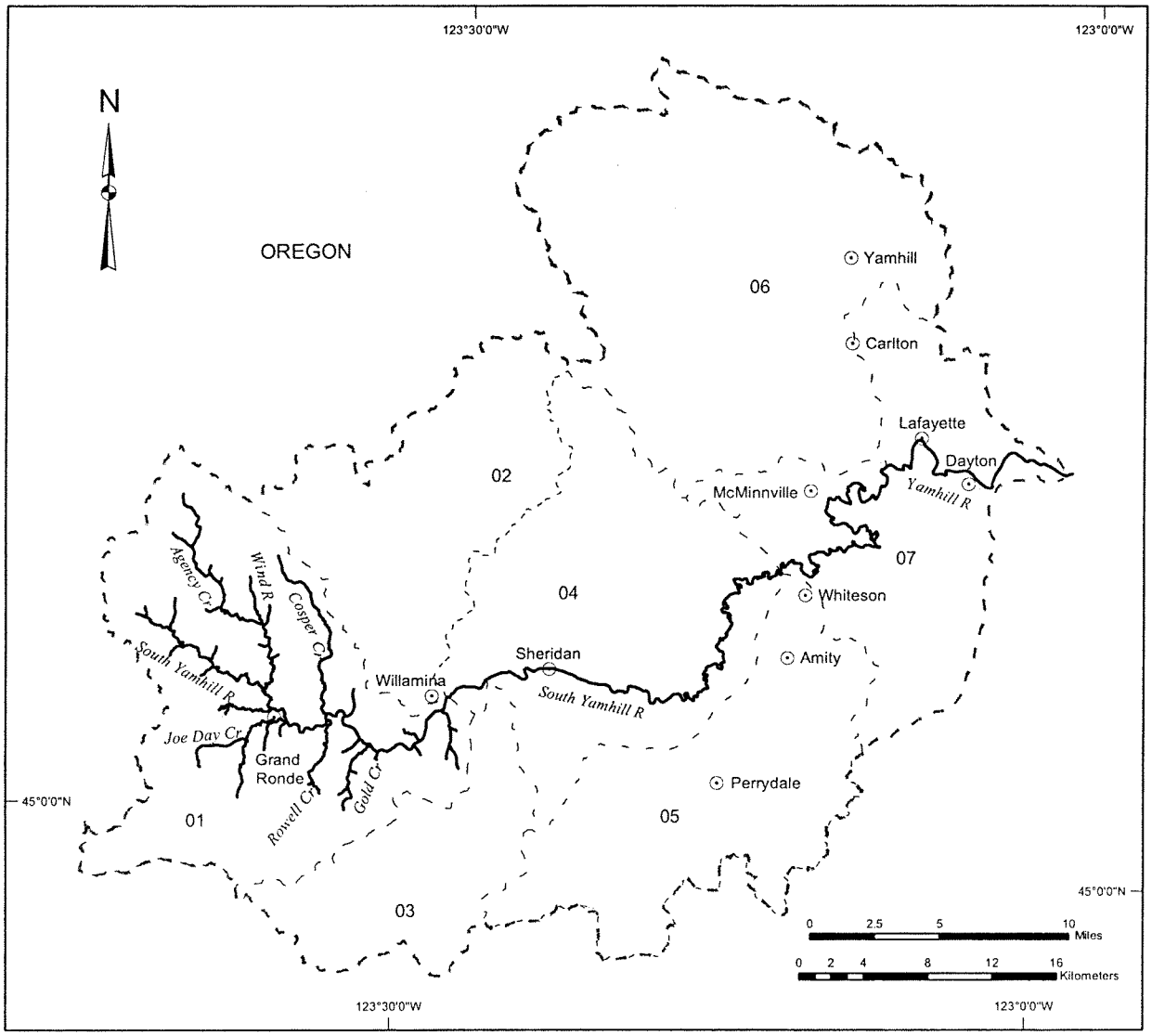

Final Critical Habitat for the
Upper Willamette River Steelhead ESU
NORTH SANTIAM SUBBASIN
17090005
123°0'0"W
122°30'0"W
122°0'0"W
45°0'0"N
44°30'0"N
Stayton
Cold Cr
06
Bear Branch
Stout Cr
Little North Santiam R
Elkhorn
05
Jefferson
Lyons
Gates
North Santiam R
Mill City
Rock Cr
04
Detroit
02
Idanha
03
01
OREGON
N
0 5 10 20 30 40 Kilometers
0 5 10 20 Miles
Legend
Cities / Towns
Critical Habitat
Subbasin Boundary
Watershed Boundaries
01 - 06 = Watershed code - last 2 digits of 17090005xx
Area of Detail
WASHINGTON
OREGON
IDAHO


Final Critical Habitat for the
Upper Willamette River Steelhead ESU
SOUTH SANTIAM SUBBASIN
17090006
123°0'0"W
122°30'0"W
122°0'0"W
44°30'0"N
OREGON
Jordan Cr
Scio
Neal Cr
Thomas Cr
Mill Cr
03
Crabtree
Beaver Cr
Roaring Cr
Crabtree Cr
02
04
Lebanon
Hamilton Cr
Waterloo
McDowell Cr
05
Foster Reservoir
Middle Santiam R
Noble Cr
01
Foster
07
Moose Cr
Sweet Home
South Santiam R
Cascadia
N
08
Wiley Cr
Canyon Cr
06
0 4 8 16 24 32 Kilometers
0 3 6 12 Miles
Legend
Cities / Towns
Critical Habitat
Subbasin Boundary
Watershed Boundaries
01 - 08 = Watershed code - last 2 digits of 17090006xx
Area of Detail
WASHINGTON
OREGON
IDAHO


Final Critical Habitat for the
Upper Willamette River Steelhead ESU
MIDDLE WILLAMETTE SUBBASIN
17090007
123°30'0"W
123°0'0"W
122°30'0"W
45°0'0"N
N
Oregon City
Newberg
Dundee
Wilsonville
Willamette R
04
Saint Paul
Donald
03
Lambert St
OREGON
Keizer
Hayesville
Salem
Four Corners
Dallas
02
Monmouth
Independence
Willamette R
Mill Cr
Turner
Aumsville
Sublimity
01
0 4 8 16 Miles
0 4.5 9 18 27 36 Kilometers
Legend
Cities / Towns
Critical Habitat
Subbasin Boundary
Watershed Boundaries
01 - 04 = Watershed code - last 2 digits of 17090007xx
Area of Detail
WASHINGTON
OREGON
IDAHO

Final Critical Habitat for the Upper Willamette River Steelhead ESU

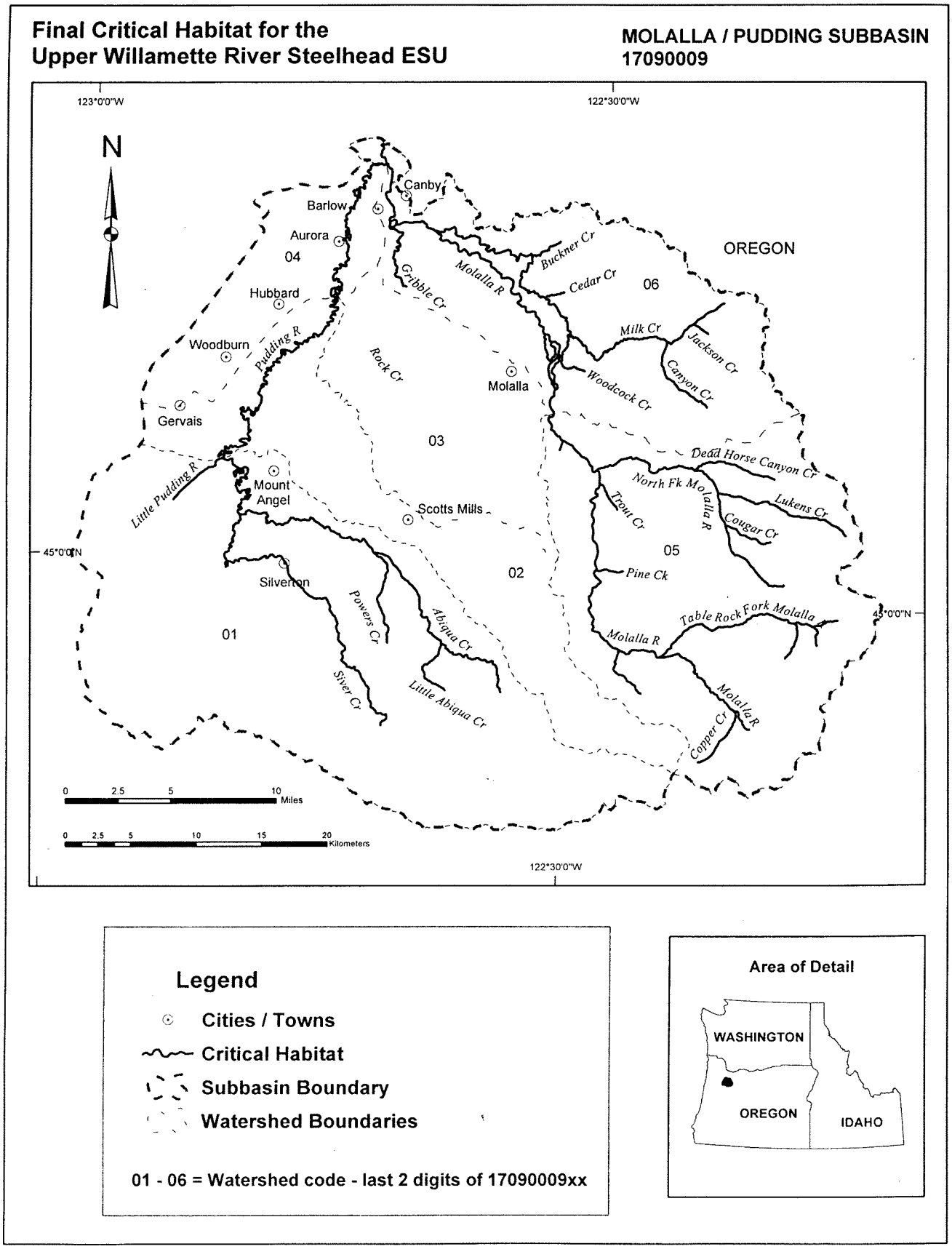
YAMHILL SUBBASIN 17090008

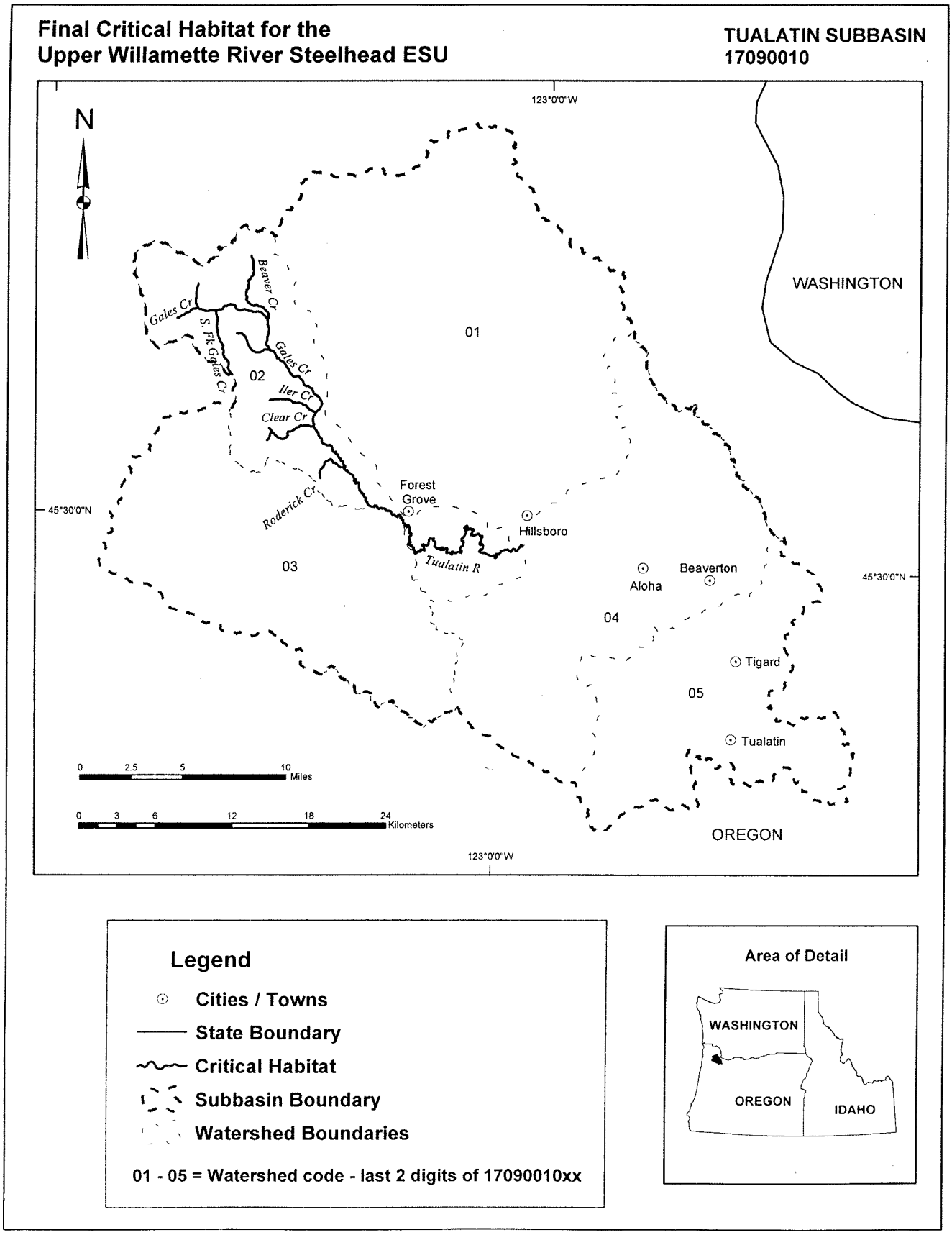


Legend

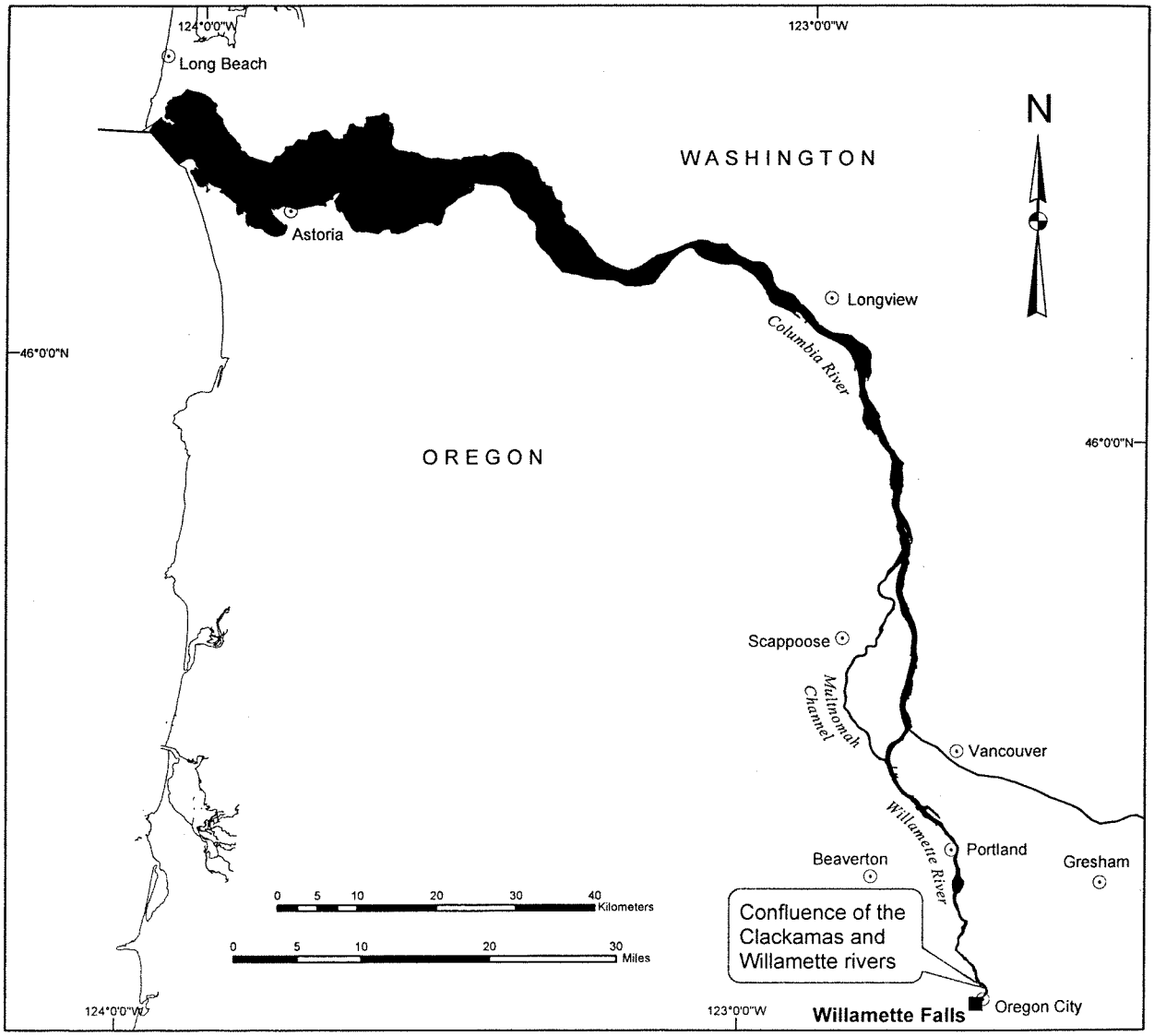
- Cities / Towns
- Critical Habitat
- Subbasin Boundary
- Watershed Boundaries

01 - 07 = Watershed code - last 2 digits of 17090008xx


Final Critical Habitat for the
Upper Willamette River Steelhead ESU
MOLALLA / PUDDING SUBBASIN
17090009
123°0'0"W
122°30'0"W
N
Canby
Barlow
Aurora
04
Hubbard
Woodburn
Pudding R
Gervais
Little Pudding R
Mount Angel
Gribble Cr
Molalla R
Buckner Cr
Cedar Cr
06
OREGON
Milk Cr
Jackson Cr
Canyon Cr
Rock Cr
Molalla
Woodcock Cr
03
Dead Horse Canyon Cr
North Fk Molalla R
Lukens Cr
Trout Cr
Cougar Cr
Scotts Mills
45°0'0"N
05
02
Pine Ck
Silverton
Powers Cr
Abiqua Cr
Table Rock Fork Molalla
01
Molalla R
Siver Cr
Little Abiqua Cr
Molalla R
Copper Cr
0 2.5 5 10 Miles
0 2.5 5 10 15 20 Kilometers
Legend
Cities / Towns
Critical Habitat
Subbasin Boundary
Watershed Boundaries
01 - 06 = Watershed code - last 2 digits of 17090009xx
Area of Detail
WASHINGTON
OREGON
IDAHO


Final Critical Habitat for the
Upper Willamette River Steelhead ESU
TUALATIN SUBBASIN
17090010
N
123°0'0"W
WASHINGTON
Beaver Cr
Gales Cr
S. Fk Gales Cr
Gales Cr
Iler Cr
Clear Cr
Roderick Cr
01
02
03
04
05
Forest Grove
Hillsboro
Tualatin R
Aloha
Beaverton
Tigard
Tualatin
45°30'0"N
0 2.5 5 10 Miles
0 3 6 12 18 24 Kilometers
OREGON
Legend
Cities / Towns
State Boundary
Critical Habitat
Subbasin Boundary
Watershed Boundaries
01 - 05 = Watershed code - last 2 digits of 17090010xx
Area of Detail
WASHINGTON
OREGON
IDAHO

Rearing / Migration Corridor for the Upper Willamette River Steelhead ESU



Legend

- Cities / Towns
- State Boundary
- Rearing / Migration Corridor

Upper Willamette River Steelhead ESU

Lower Willamette / Columbia River Corridor
The lower Willamette / Columbia River corridor is that segment from the mouth of the Columbia River at the Pacific Ocean upstream to the confluence of the Clackamas and Willamette rivers, including the Multnomah Channel portion of the lower Willamette River.

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BILLING CODE 3510–22–C