

## **Final Recovery Plan for the Coterminous U.S. Population of Bull Trout**

**Note: coterminous here means having the same boundary**

### **Questions and Answers**

#### **Q. What is a recovery plan?**

A. Under the Endangered Species Act (ESA), the Service is required to develop and implement recovery plans for ESA-protected species. A recovery plan is a road map for how to reach species recovery. Recovery is the ultimate goal of the endangered species program and is the process by which the decline of an endangered or threatened species is reversed and threats to its survival are reduced. The goal of this process is to restore the species to the point where it is a secure, self-sustaining part of its ecosystem and to the point that protections under the ESA are no longer needed. This involves protecting and often restoring the habitat in which the species can thrive. Recovery actions can take many forms and our program has many aspects to reflect the diverse nature of threatened and endangered species recovery. The development of a recovery plan is one of the first steps for species recovery and is a tool to guide the recovery process and measure progress towards recovery.

#### **Q. Are recovery plans regulatory documents?**

A. No, recovery plans are guidance documents; not regulatory documents. This means that no agency or entity is required by the ESA to implement the recovery strategy or specific actions recommended in a recovery plan. However, the ESA clearly envisions recovery plans as the central organizing tool for guiding each species' recovery process.

#### **Q. What is in the final Bull Trout Recovery Plan?**

A. The final Bull Trout Recovery Plan describes the principal actions needed to advance the recovery of bull trout in the six recovery units within the coterminous United States; and includes individual RUIPs (Recovery Unit Implementation Plans) for each recovery unit that will identify site-specific conservation actions at a sub-unit scale.

#### **Q. What are the six bull trout recovery units that comprise the coterminous population of bull trout?**

A. The Coastal, Klamath, Mid-Columbia, Columbia Headwaters, Upper Snake, and St. Mary are the six bull trout recovery units (map of recovery units: <http://www.fws.gov/pacific/bulltrout/images/maps/rangewide.jpg>)

#### **Q. What is a Recovery Unit Implementation Plan?**

A. A RUIP is a companion document to the recovery plan that proposes site-specific conservation actions at the core-area scale for each of the six recovery units. Through interagency collaboration, the U.S. Fish and Wildlife Service (Service) worked with interested and knowledgeable federal, tribal, state, private, and other parties to develop

individual RUIPs for each of the six recovery units that comprise the coterminous US population of bull trout.

**Q. Why did the Service revise the earlier draft Recovery Plan(s)?**

A. Between 2002 and 2004, three separate draft bull trout recovery plans were completed. In 2002 a draft recovery plan that addressed bull trout populations within the Columbia, St. Mary Belly, and Klamath River basins was completed and included individual chapters for 24 separate recovery units. In 2004, draft recovery plans were developed for the Coastal-Puget Sound drainages in western Washington, including two recovery unit chapters, and for the Jarbidge River in Nevada. These previous draft recovery plans were never finalized.

Based on new information found in numerous reports and studies regarding bull trout life history, ecology, distribution, persistence, etc. since their listing as threatened in 1999, the Service developed a revised draft recovery plan in 2014. Since then, we have worked cooperatively with our conservation partners to develop the RUIPs, which identify the conservation actions we believe will effectively conserve bull trout in each of the six recovery units. The RUIPs focus recovery efforts in areas where sustaining bull trout and the fish's recovery can best be achieved.

**Q. Does this final plan totally replace the 2002 and 2004 draft plan(s)?**

A. Yes, while much of the important content has been revised and rolled forward into this final plan and accompanying RUIP's, the previous draft plans no longer represent official recovery planning guidance for Bull Trout.

**Q. What is the strategy for recovery of the coterminous U.S. population of bull trout?**

A. The primary recovery strategy for recovery of bull trout in the coterminous United States is to:

- (1) conserve bull trout so that they are geographically widespread across representative habitats and demographically stable, within six recovery units that comprise the coterminous United States population of bull trout;
- (2) effectively manage and ameliorate the primary threats in each of the six recovery units at the core area scale such that bull trout will persist in the foreseeable future;
- (3) build upon the numerous and ongoing conservation actions implemented on behalf of bull trout since their listing in 1999, and improve our understanding of how various threats potentially affect the species;
- (4) use that information in working with our partners to design, fund, prioritize, and implement effective conservation actions in those areas that offer the greatest long-term benefit to sustain bull trout; and

- (5) apply adaptive management principles to implementing the bull trout recovery program to account for new information. Additionally, we believe that all currently occupied core areas do not need to be recovered.

While we recognize that recovery at the recovery-unit scale will require improvement in many local populations relative to the time of listing and their habitats in some core areas, bull trout and their habitat in those core areas that have exhibited population stability at a sustainable level will only need to be 'maintained' into the foreseeable future.

The final recovery plan includes a conceptual Threat Assessment Tool that, when fully developed, will be integral to future evaluation of bull trout conservation status at the range-wide and recovery-unit scales. The tool assesses threats at the core area scale.

**Q. What are the recovery criteria?**

A. The final recovery plan stipulates that delisting of bull trout can be considered if recovery criteria are met in the six recovery units that collectively comprise the coterminous U.S. population of bull trout. Delisting of an individual recovery unit that meets recovery criteria may also be considered but would require designation of a separate distinct population segment through a formal rule-making process; a recovery plan cannot designate distinct population segments.

The following criteria must be met: Conservation actions have been implemented to ameliorate the primary threats to bull trout in their suitable habitats. If the primary threats have been effectively managed in each recovery unit, the bull trout population will become demographically stable and the long-term persistence of bull trout should be ensured.

The Service may initiate an assessment of whether recovery has been achieved and consider whether delisting may be warranted when the following has been achieved in each recovery unit:

- For the Coastal, Mid-Columbia, and Upper Snake Recovery Units: Primary threats are effectively managed in at least 75 percent of all core areas, representing 75 percent or more of bull trout local populations within each of these three recovery units.
- For the Columbia Headwaters Recovery Unit primary threats are effectively managed in at least 75 percent of all complex and 75 percent of simple core areas (75 percent criterion would be applied to each).
- For the Klamath and St. Mary Recovery Units: All primary threats are effectively managed in all (100 percent) existing core areas, representing all existing local populations. In addition, seven new local populations are located or reintroduced in the Klamath Recovery Unit.

- In recovery units (e.g. Mid Columbia and Coastal recovery units) where shared foraging/migratory/overwintering (FMO) habitat outside core areas has been identified, connectivity and habitat in shared FMO areas should be maintained in a condition sufficient for regular bull trout use and successful dispersal among the connecting core areas for those core areas to meet the criterion.

If threats are effectively “managed” at the thresholds described above, we expect that bull trout populations in each recovery unit will respond accordingly, reflecting the biodiversity principles of resiliency, redundancy and representation.

**Q. How do the final recovery criteria differ from the 2002 and 2004 draft recovery plans?**

A. The final recovery plan revises the recovery criteria proposed in the 2002 and 2004 draft recovery plans to focus on the effective management of threats to bull trout at the core area level, and de-emphasizes achieving targeted point estimates of abundance of adult bull trout (demographics) in each core area.

In the previous 2002 and 2004 draft plans, adult abundance levels (demographics) were proposed as recovery targets for each identified bull trout core area, considering theoretical estimates of effective population size, historic census information, and the professional judgment of recovery unit team members. In developing the final recovery plan, we recognized that bull trout continue to be found in suitable habitats and generally remain geographically widespread across 109 core areas in numerous major river basins in five states.

While the final recovery plan identifies conservation needs for all remaining 110 core areas where bull trout reside, we acknowledge that despite our best future conservation efforts, it is possible that some existing bull trout core populations may become extirpated within the foreseeable future due to unforeseen factors; including the effects of existing small populations, climate change, and isolation, coincident with recovery.

Moreover, the availability of survey data for accurate population estimates is problematic in some regions, and in certain core areas the geographic limitations on available habitat may inherently constrain the ability of bull trout populations to achieve the earlier demographic targets. Therefore, in 2014 we revised the recovery approach to focus on the identification and effective management of known threat factors to bull trout in currently occupied core areas in each of the six recovery units.

The final recovery plan also established recovery criteria thresholds that acknowledge some extant bull trout core area habitats will likely change (and may

be lost) over time and therefore it prioritizes and implements recovery actions in those areas where success is likely. We identified a number of core areas where small population size is a significant threat factor that should be addressed, because population levels are particularly low considering the spatial extent of habitat.

Achieving the proposed recovery criteria in each recovery unit would result in geographically widespread and demographically stable local bull trout populations within the range of natural variation (not necessarily at some theoretical level of effective population size), with their essential cold water habitats connected to allow their diverse life history forms to persist into the foreseeable future; and therefore would bring the species to the point where the protections of the ESA are no longer necessary.

Another difference between the final plan and the 2002/2004 draft plans is that all recovery criteria would have needed to be achieved in each of 27 recovery units in the 2002/2004 plans; while the threshold for determining whether recovery has been achieved and delisting may be warranted in the final recovery plan is primary threats are effectively managed in at least 75 percent of all core areas, representing 75 percent or more of bull trout local populations in the Coastal, Mid-Columbia, and Upper Snake Recovery Units. In the Columbia Headwaters Recovery Units that threshold is primary threats are effectively managed in at least 75 percent of all complex and 75 percent of simple core areas (75 percent criterion would be applied to each). For the Klamath and St. Mary Recovery Units 100 percent of primary threats are effectively managed in all extant core areas in before delisting may be warranted (these two recovery units have only 3 and 4 core areas, respectively).

**Q. Have the recovery criteria or how the criteria are applied changed at all since the revised draft recovery plan went out for public comment in 2014?**

A. Yes, based on the comments received, the Service modified the recovery criteria for the Columbia Headwaters Recovery Unit because the suggested changes were substantive to the final recovery plan (see the response to “What are the recovery criteria”).

**Q. What is the relationship between the RUIPs and the Bull Trout Recovery Plan?**

A. The RUIPs are a required part of the final Bull Trout Recovery Plan and include the specific recovery actions for bull trout described at the core area scale.

**Q. What is the current status of bull trout?**

A. Our most recent five-year status review for bull trout was published on April 8, 2008, and concluded that listing the species as “threatened” remained warranted rangewide in the coterminous United States. Based on this status review, our 2010 recovery report to Congress reported that bull trout were generally “stable” overall range-wide (species status neither improved nor declined during the reporting

year), with some core area populations decreasing, some stable, and some increasing. Since the listing of bull trout, there has been very little change in the general distribution in the conterminous United States.

**Q. What about climate change and bull trout recovery?**

A. At the time of the listing in 1999, climate change effects were not generally considered a factor affecting bull trout. Since that time projected climate warming trends have prompted interest in assessing climate threats and vulnerability of various cold water fishes, including bull trout. Bull trout depend more on cold water than any other freshwater salmon or trout species in the western United States. Therefore, bull trout may be vulnerable to the effects of warming climates and are considered a useful indicator species of the effects climate change will have on the montane stream ecosystems where they reside.

Recent information regarding possible future climate change effects to bull trout has informed the development of the final recovery plan. We expect the geographic distribution of cold water habitat to progressively diminish over the next 50 to 100 years as effects of climate change become more intense, likely resulting in a reduction of cold water habitat suitable for bull trout. Additionally, as ambient air temperature increases, occupied stream reaches with viable cold water sources will become increasingly valuable to bull trout and should be targeted early for conservation and management.

These considerations suggest that effective long-term conservation and recovery of bull trout will require that future conservation resources are allocated to those areas with the anticipated future coldest water temperatures that offer the greatest long-term benefit to sustain bull trout and their habitats.

**Q. What is the role of critical habitat in recovery planning?**

A. Critical habitat was designated for bull trout on October 18, 2010. In the final rule, we identified 32 critical habitat units representing 19,729 river miles and 488,252 surface acres of bull trout habitats. These describe single core areas or groups of core areas that are in close proximity geographically and describing their division into six recovery units. In our 2010 critical habitat designation, we considered the conservation relationship between critical habitat and the bull trout recovery planning process.

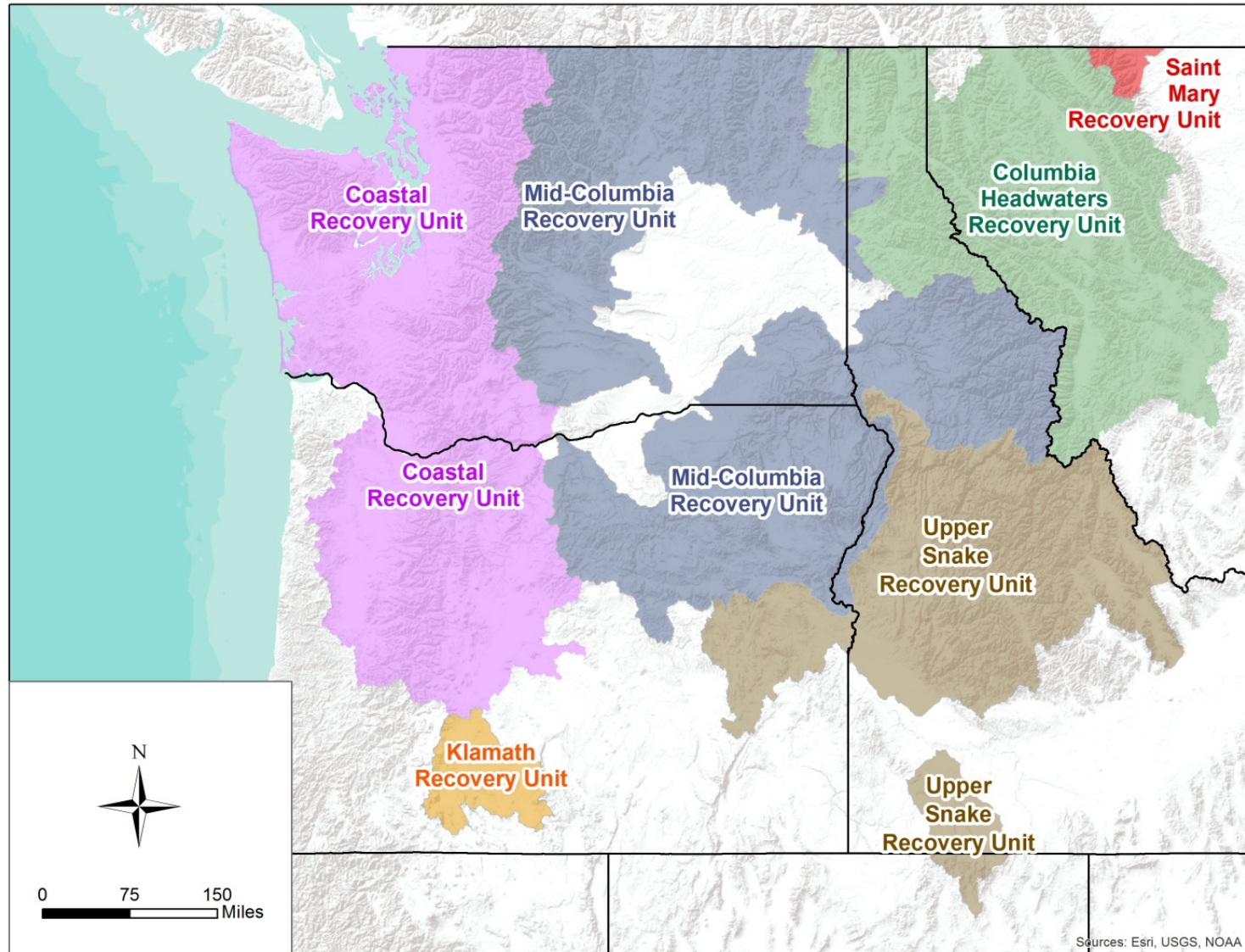
Information used in the 2010 critical habitat designation has informed and contributed to, the overall recovery strategy for bull trout described in the final recovery plan, especially as it relates to sub-dividing the coterminous United States population of bull trout into the six recovery units.

**Q. What happens next according to the final Recovery Plan?**

A. In many parts of the range of bull trout, local interagency bull trout working groups have been implementing conservation actions. The development of RUIPs built upon these existing efforts. The final recovery plan includes an Implementation Schedule that outlines specific recovery actions and estimated costs for bull trout recovery as set forth in each RUIP.

Since the listing of bull trout, numerous conservation measures have been and continue to be implemented across its coterminous range. These measures continue to be undertaken by a wide variety of local and regional partnerships, including state fish and game agencies, state and federal land management and water resource agencies, tribal governments, power companies, watershed working groups, water users, ranchers, and landowners. The final recovery plan provides those conducting these ongoing conservation actions with guidance on what threats are most acute in bull trout areas with the highest conservation value.

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**Figure 4. Locations of the six bull trout recovery units in the coterminous United States.**