

**USFWS (U.S. Fish and Wildlife Service). 2013. Summary of Bull Trout Conservation Successes and Actions since 1999.**

Since the listing of bull trout, numerous conservation measures have been and continue to be implemented across its coterminous range. These measures are being 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. In many cases these bull trout conservation measures incorporate or are closely interrelated with work being done for recovery of salmon and steelhead, which are limited by many of the same threats.

**Coastal Recovery Unit:**

In 2011, we published a final rule in the Federal Register to establish a nonessential experimental population of bull trout in the Clackamas River and its tributaries in Clackamas County, Oregon, under section 10(j) of the Endangered Species Act of 1973. Bull trout were extirpated from the Clackamas River basin in the early 1960s, and re-establishing bull trout in the Clackamas River basin will help achieve recovery goals within the Coastal Recovery Unit. Adult and juvenile bull trout were translocated from the Metolius River to the Clackamas River in 2011 and 2012, and the first spawning activity was observed in the fall of 2011. Additional translocations are planned to continue for several years. The Service and Oregon Department of Fish and Wildlife are conducting this project in coordination with Mt. Hood National Forest, the Confederated Tribes of the Warm Springs Reservation, Portland General Electric, NOAA Fisheries, and the U.S. Geological Survey.

In the Upper Willamette River core area, a variety of habitat enhancements, fish screens, and passage improvements in the McKenzie River basin have been implemented by the Willamette National Forest, Oregon Department of Fish and Wildlife, and Eugene Water and Electric Board. Bull trout from the McKenzie River have been introduced into the Middle Fork Willamette River to reestablish this population.

In the Hood River core area, bull trout conservation measures have included the decommissioning and removal of Powerdale Dam by PacifiCorp in coordination with Columbia River Land Trust and Hood River County, various stream habitat improvements, and screening of the Coe Creek diversion by the Middle Fork Irrigation District.

Within the Lower Deschutes Core Area, the City of Prineville and seven primary irrigation districts that comprise the Deschutes Basin Board of Control are completing an HCP designed to conserve bull trout and their habitats. When completed, the HCP will benefit bull

trout and other aquatic and riparian-dependent species while meeting current and future irrigation and municipal water needs.

Additionally, Portland General Electric (PGE) and the Confederated Tribes of Warm Springs, completed a fish collection facility in 2009 at Round Butte Dam to provide downstream fish passage for steelhead and salmon; this project also provides connectivity for bull trout between the upper and lower Deschutes basins (core area). PGE, the Tribe, and local watershed conservation groups are also funding numerous supporting projects for stream habitat restoration in adjoining watersheds (e.g., Metolius River, Crooked River, Trout Creek, Whychus Creek, Shitike Creek).

Within the Elwha River core area, the Elwha and Glines Canyon Dams had blocked upstream anadromous salmonid access to 70 miles of bull trout habitat on the Olympic Peninsula. Removal of these dams began in 2011 and anadromous bull trout are anticipated to return to the upper watershed as migratory corridors are opened and accumulated sediment is flushed from the Elwha River system.

Within the Puget Sound Major Geographic Region, the recently completed regional salmon recovery plan under the Shared Strategy for Puget Sound and plan implementation by watersheds under the Puget Sound Partnership has resulted in general habitat improvements for bull trout. However, actions to date (e.g. land acquisition, floodplain restoration, culvert removal, riparian revegetation, levee setbacks, road removal) have generally been focused on Puget Sound Chinook salmon. The Washington Forest Practices HCP has provided additional habitat protections in forested upland habitats, with improved forestry practices and associated restoration work.

FERC relicensing of major hydropower facilities in this recovery unit has provided opportunities for development of fish passage at formerly impassible sites. New fish passage facilities being constructed at the PacifiCorp Lewis River project (Lewis River core area) will collect and transport fish between Merwin Dam and Swift Dam, opening 117 miles of stream habitat upstream. In the Skokomish River core area, Tacoma Public Utilities' Cushman Hydroelectric Project is constructing fish collection facilities for upstream passage of adult fish and downstream passage of juveniles.

Within the Puyallup River core area, upstream passage was recently restored above Puget Sound Energy's Electron Dam on the upper Puyallup River, restoring connectivity for the bull trout populations that have been isolated above the dam from the rest of the basin's populations (i.e., White and Carbon Rivers) for nearly 100 years. Renewed passage will help facilitate reestablishment of migratory bull trout, especially the anadromous form, to the Puyallup River.

In the Snohomish-Skykomish core area in the Olympic Peninsula MGR, 106,577 acres of the Mount Baker-Snoqualmie National Forest were designated as the Wild Sky Wilderness in 2008. Much of the key spawning and rearing habitat for bull trout within the North Fork Skykomish River system, including thousands of acres of low-elevation old growth forest with 25 miles of salmon streams, was protected by this designation.

### **Klamath Recovery Unit:**

In the Upper Klamath Lake core area, suitable habitats for bull trout in Sun Creek and Threemile Creek (Crater Lake National Park and Sun Pass State Forest) has been expanded using a combination of piscicide treatment (to remove competing brook trout and hybrids), bull trout reintroduction, and creation of exclusion barriers to prevent re-invasion by brook trout. This work has been conducted by Crater Lake National Park and Oregon Department of Forestry staff in coordination with the Oregon Department of Fish and Game and U.S. Fish and Wildlife Service.

In the Sycan River core area, fish passage improvements have been made on the South Fork of Long Creek (cooperators include Upper Sycan Watershed Council, The Nature Conservancy, and Fremont-Winema National Forest); reconnection of the Sycan River with Long Creek. Brook trout control efforts in Long Creek are ongoing but have not yet been totally effective in removing them from the watershed.

In the Upper Sprague core area, restoration has included culvert replacements in multiple watersheds and restoration of instream woody debris in Leonard and Brownsworth Creeks. Brown trout removal from Boulder Creek is ongoing.

### **Mid-Columbia Recovery Unit:**

In the John Day River basin of Oregon, the U.S. Forest Service and BLM are working with private landowners and Confederated Tribes of Warm Springs on projects for road removal, channel restoration, mine reclamation, and improved grazing management that will benefit bull trout in three core areas (North Fork, Middle Fork, and Upper Mainstem John Day core areas).

In the Walla Walla and Touchet core areas in Washington, considerable progress has been made in eliminating fish passage barriers on the Touchet River, Walla Walla River, and Mill Creek through screening irrigation ditches, consolidating ditches, and modifying diversion structures. A major fish ladder installed at Nursery Bridge near Milton Freewater facilitates passage of large salmon, steelhead, and bull trout. A settlement agreement signed by three local irrigation districts and the U.S. Fish & Wildlife Service provides for maintenance of instream

flows in a stretch of the Walla Walla River that had been seasonally dewatered by irrigation diversions.

Bull trout in several Washington core areas have also benefited from improved forestry management reducing impacts on aquatic and riparian systems, resulting from implementation of the 2006 Washington State Forest Practices HCP with the Washington Department of Natural Resources.

In the Clearwater River basin in Idaho, a variety of stream restoration projects have been implemented on Federal Lands (Nez Perce-Clearwater National Forests, Bureau of Land Management). The Nez Perce tribe has funded fish habitat restoration in the Lochsa River core area, in conjunction with a Forest Service land exchange with Western Pacific Timber properties. Bull trout migratory connectivity on the Clearwater River has been improved by removal of the Emily A dam, and fish passage improvements at the Rainy Lake dam.

### **Upper Snake Recovery Unit:**

Numerous localized fish habitat restoration actions have been implemented on BLM and Forest Service lands in the Salmon River basin and elsewhere in the Upper Snake Recovery Unit. These actions include decommissioning roads, removing barriers and culverts at road crossings, and riparian habitat improvement and benefit bull trout.

The Upper Salmon Basin Watershed Program has implemented over 500 projects since 1993 to increase instream flow and improve fish habitat for listed salmon and bull trout across the Salmon River headwaters, East Fork Salmon River, Lemhi, and Pahsimeroi core areas. The program, coordinated by the Idaho Governor's Office of Species Conservation, works with cooperating private landowners to develop restoration projects and obtain funding from Bonneville Power Administration and other agencies. Projects have included removal of migration barriers to provide fish access to 75 miles of stream, screening of 249 irrigation diversions, instream habitat improvement in 494 miles of stream, and riparian habitat restoration over 352 miles of stream (158 miles fenced). These projects have provided significant benefits to bull trout, salmon, and other salmonid species.

### **Columbia Headwaters Recovery Unit:**

Within the Kootenai and Clark Fork Major Geographic Regions of western Montana, more than 100 habitat improvement and fish passage projects benefitting bull trout have been implemented. The Montana Fish Wildlife and Parks, in coordination with State and Federal agencies, Tribes, and private partners, are the primary project managers. These projects are

funded by a variety of public and private sources, including EPA Superfund, Clark Fork Natural Resource Damage Program, AVISTA Native Salmonid Restoration Program, Kerr Mitigation, other FERC-related projects, Bonneville Power Administration, MFWP license revenue, Montana's Future Fisheries Improvement Program of 1995, Montana Bull Trout and Cutthroat Trout Enhancement Program of 1999, Federal FRIMA funds, ESA partnership and stewardship grants, U.S. Fish and Wildlife Service Partners for Fish and Wildlife funding, Bring Back the Natives and other sources of U.S. Forest Service funding, and many others.

Additionally, the U.S Forest Service has implemented numerous restoration actions benefitting bull trout on Forest Service lands throughout these MGRs (from 2004-2010) include removal/replacement of 453 culverts, decommissioning of 461 miles of road, 18.4 miles of stream channel construction, and 7.5 miles of riparian restoration. Numerous additional problematic road segments are being targeted for restoration.

Bull Trout recovery and conservations actions implemented in the Clark Fork watershed have considerably improved bull trout habitat and population connectivity from Lake Pend Oreille to tributaries in the upper Clark Fork. Additional conservation actions under consideration include improvements in water temperature and establishing instream flows to gain the full benefit of this connectivity. Examples include:

- In 2006, work began to remove the Milltown Dam on the upper Clark Fork River (and the nearby Stimson Dam on the Blackfoot River), restoring fish passage at this site. The Clark Fork upstream of Milltown Dam was designated an EPA Superfund site, and three million tons of sediment, contaminated with heavy metals due to upstream mining, were removed during cleanup. Funded by a Natural Resource Damage lawsuit against ARCO, the State of Montana is leading riparian revegetation and habitat restoration in the confluence area. This project will allow greater freedom of bull trout movement in the upper Clark Fork (Clark Fork and Blackfoot core areas), allowing individuals to more freely access various watersheds within the system.
- In 2010, a fish ladder was constructed at Thompson Falls Dam, owned and operated by PPL Montana, improving fish passage connectivity in this section of the Clark Fork River (Lake Pend Oreille core area).
- Passage of bull trout at Cabinet Gorge and Noxon Dams (Lake Pend Oreille core area), owned and operated by Avista, is facilitated by a trap and haul fish passage program. Development of a rapid genetic assignment process in cooperation with the Service's Abernathy Fish Technology Center has allowed researchers to capture individual bull trout at the base of Cabinet Gorge Dam, determine with high probability their stream of natal origin, and return those adults to the portion of the system upstream of the dam so

they may complete their spawning migration. Trap and haul of juvenile bull trout from Montana tributaries downstream to the lower Clark Fork River in Idaho is also being implemented. These measures are improving genetic connectivity between bull trout populations in Lake Pend Oreille and upstream tributaries in the Clark Fork watershed.

- The Avista Native Salmonid Restoration Program has funded implementation of stream habitat restoration projects in numerous tributaries throughout the lower Clark Fork - Lake Pend Oreille basin.
- In the Blackfoot River basin, intensive efforts are being made through public/private partnerships to restore bull trout access to stream habitat by removing culvert barriers, reducing impacts of irrigation systems, seasonally enhancing instream flow, and addressing acid mine runoff and thermal barriers.
- Additional angling restrictions and law enforcement have been implemented in areas (e.g. portions of the Blackfoot River basin), where incidental catch of bull trout has been a problem.
- In the West Fork Bitterroot core area, there is an agreement with Montana Department of Natural Resources and Conservation to provide water releases from Painted Rocks Dam to benefit fisheries.

In the Lake Pend Oreille core area, actions to restore bull trout connectivity are underway at three hydroelectric dams that are presently barriers to the upstream movement of bull trout. At Albeni Falls Dam, temporary upstream passage for bull trout (restoring access to natal streams and cold-water foraging habitat in Lake Pend Oreille for fish that have travelled downstream of the dam) is being re-established with a trap-and-haul system implemented by the Kalispel Tribe of Indians and other partners. Under the Biological Opinion for the Federal Columbia River Power System, the U.S. Army Corps of Engineers is studying designs to determine the feasibility of providing permanent fish passage at Albeni Falls Dam. Further downstream, fish passage systems are under development at Boundary Dam (Seattle City Light) and at Box Canyon Dam (Pend Oreille Public Utility District) where a fish passage settlement agreement is in place and is in the process of being implemented.

The Plum Creek Native Fish HCP was permitted in 2000 and initially covered 648,000 hectares (1.6 million acres) of private forested lands, mostly in the Columbia Headwaters Recovery Unit. Subsequent changes have included a reduction in the amount of covered lands, with portions divested to Stimson Lumber (which assumed a spinoff permit) and to State of Montana and Forest Service ownership under the Montana Legacy Project. Through implementation of the HCP, proactive management is occurring to protect and restore important

bull trout habitat with annual monitoring and reporting, while at the same time allowing the companies to manage and harvest their timber base, construct and maintain roads, and manage other resources such as grazing allotments and recreational properties. Lands within these HCPs occur adjacent to several hundred miles of stream reaches, including substantial holdings that were identified as important bull trout habitat. The other large HCP in this region is the Montana DNRC Forested Trust Lands HCP. This HCP is a broad umbrella document covering multiple listed aquatic and terrestrial species on forested State lands in Montana. It covers 222,000 hectares (548,500 acres) in western Montana. Collectively, these HCPs cover much of the important State and private land that contains bull trout spawning and rearing habitat in core areas with the Clark Fork and Kootenai watersheds.

There are also several lake trout suppression projects ongoing in the Columbia Headwaters Recovery Unit. For example, in the Lake Pend Oreille core area, Idaho Department of Fish and Game is actively working to suppress lake trout populations, using a combination of angler bounties and gill-netting and deep-water trap netting to target aggregated spawning locations identified by acoustic telemetry. Preliminary results indicate that the project is successfully causing substantial reductions in lake trout populations. Removal of lake trout is expected to substantially reduce competition and predation on bull trout in Lake Pend Oreille. Idaho Department of Fish and Game is also actively controlling lake trout in Upper Priest Lake (core area), with some success. However, effectiveness of this project is impaired by Upper Priest Lake's physical connectivity with Priest Lake, where a robust lake trout population exists as a source for recolonization. An experimental lake trout control program is being conducted in Swan Lake by Montana Fish Wildlife and Parks and the Swan Valley Bull Trout Working Group. National Park Service staff are also actively controlling lake trout at Quartz Lake (core area) in Glacier National Park. In Flathead Lake, the fishing limit for lake trout has been expanded with fishing derbies organized by the Confederated Salish and Kootenai Tribes, but no other active control measures are yet in place; lake trout populations in Flathead Lake have not substantially responded, and more intensive control efforts would likely be required given the great size of the lake and the large lake trout population.

### **Saint Mary Recovery Unit:**

The primary issue precluding bull trout recovery in the Saint Mary recovery unit relate to impacts of water diversions for the Bureau of Reclamation Milk River Project, including dewatering of Swiftcurrent Creek and the Saint Mary River channel, entrainment of bull trout at the Saint Mary Diversion Dam, and at least seasonal migration barriers to upstream bull trout movement at the diversion.

The Blackfeet Nation Bull Trout Management Plan was adopted in 2010. This document evolved from negotiation between the Tribe and the U.S. Fish and Wildlife Service over the

status of proposed bull trout critical habitat on the Blackfeet Reservation. In exchange for foregoing the designation of critical habitat in Tribal waters, the Tribe agreed to pursue management actions, including but not limited to funding a fisheries biologist (now accomplished), reducing certain habitat impacts, resolving entrainment and fish passage issues at the Saint Mary Diversion Dam, eliminating road culvert passage barriers, improving livestock grazing and forestry practices, reducing impacts of anglers and commercial fisheries on bull trout, and instituting annual monitoring among others.

A water rights compact between the State of Montana and the Blackfeet Nation has been approved by the Montana legislature and the Tribe, and implementing Congressional Settlement legislation at the Federal level has been introduced. The compact allocates the Tribe's water right as 50,000 acre feet per year from the Saint Mary River and authorizes appropriate development of water storage. This settlement should clarify the status of water rights in the basin, but significant issues remain unresolved regarding instream flow for fish and the proportion of the Tribal water right that would be provided from Sherburne Dam, and allocation of waters of the Saint Mary River under the Boundary Waters Treaty.