Snake River Cutthroat Trout - Oncorhynchus clarkii

Abundance: Common within a limited range

Status: NSS3 (Bb)

NatureServe: G4T1T2Q S1

Population Status: Populations are vulerable and widely distributed throughout its limited historic range within the Snake River drainage of Wyoming.

Limiting Factor: Habitat: Limiting factors are severe, but are not increasing significantly. Habitats in the Snake River have been impacted by flow regulation, channel stabilization, and floodplain modifications. Other large river habitats are impacted by agriculture and suburban development.

Comment: Change from NSS4 (Cb) to NSS3 (Bb) in 2017. Rationale for change is an attempt to provide a consistent classification for conservation efforts towards Snake River and Yellowstone cutthroat trout.

Introduction

Snake River Cutthroat Trout are native to the upper Snake River above Palisades Reservoir (Baxter and Stone 1995). They have been introduced into other drainages as a sport fish. Snake River Cutthroat Trout are typically distinguished from other Cutthroat Trout in Wyoming by their profuse and very fine spotting (Baxter and Stone 1995, Behnke 1992). Their diet consists of insects and other fish (Kiefling 1978). Spawning generally begins in late March and continues until early July.

See the Snake/Salt River Basin aquatic basin chapter in the current SWAP for more information relative to this fish.

Habitat

Snake River Cutthroat Trout are found in larger rivers but also occur in reservoirs, lakes, and small streams (Baxter and Stone 1995, Kiefling 1978). They prefer areas with good overhead or instream cover (Kiefling 1978). Snake River Cutthroat Trout typically use smaller tributary streams or spring creeks for spawning (Hayden 1967, Kiefling 1978).

Problems

- Habitat alterations are believed to be responsible for declines of Snake River cutthroat trout. Habitat alterations include manipulation of the hydrograph due to Jackson Lake Dam, altering available habitats in summer and winter, loss of connectivity due to the construction of Jackson Lake Dam, dewatered reaches caused by irrigation diversions, and impassable irrigation diversions, construction of an extensive levee system along the Snake River that has altered aquatic habitat between the levees and prevented flushing flows to adjoining spring creek systems, and land use practices in certain watersheds may increase bank erosion and siltation.
- Competition and hybridization with nonnative trout are impacting some populations.
- h Altered flow regimes, habitat fragmentation, and impacts to aquatic and riparian habitat associated with agricultural practices.

Conservation Actions

- Continue efforts to maintain flows and connectivity.
- Continue to educate landowners and the public about the importance of maintaining habitat for native fish
- h Continue efforts to restore populations within native ranges where opportunities to remove competing or hybridizing species exist

Monitoring/Research

Population estimates are conducted annually on the Snake, Gros Ventre, Hoback, and Salt rivers. Populations will continue to be monitored during routine sampling of other waters.

Recent Developments

In 1998, YSC were petitioned for listing as a threatened species under the Endangered Species Act. The petition was rejected in February 2001, but in December 2004, U.S. District Court for the District of Colorado ruled that the U.S. Fish and Wildlife Service (FWS) illegally rejected the petition. The FWS conducted a 12-month status review of the species and found listing unwarranted. After the FWS decision was announced, proponents for listing filed an Intent to Appeal Brief within 60 days of the decision but have completed no further actions since.

A second iteration of the range-wide assessment was completed in 2006 (May et al. 2007), delineating distribution, abundance, barrier locations, genetic purity, and natural and anthropogenic factors potentially impacting Cutthroat Trout populations and distribution.

New rangewide Conservation Agreement and Conservation Strategy were completed (YCT Range-wide Conservation Team 2009).

In 2010, an irrigation dam was removed from Spread Creek, connecting over 70 miles of additional habitat.

References

Behnke, R. 1992. Native Trout of North America. American Fisheries Monograph 6. American Fisheries Society. Bethesda, MD.

Sweet, D. 2009. Variation in spotting patterns within the cutthroat trout of the Upper Snake River drainage, Wyoming. Wyoming Game and Fish Department Administrative Report. Cheyenne, Wyoming.

YCT Range-wide Conservation Team. 2009. Conservation agreement for Yellowstone cutthroat trout (Oncorhynchus clarkii bouvieri) in the States of Idaho, Montana, Nevada, Utah and Wyoming. Montana Fish, Wildlife & Parks.

May, B., S. E. Albeke, and T. Horton. 2007. Range-wide status of Yellowstone cutthroat trout (Oncorhynchus clarkii bouveri): 2006. Cutthroat Trout Conservation Team Report. Montana Fish, Wildlife and Parks, Helena, MT.

YCT Range-wide Conservation Team. 2009. Conservation strategy for Yellowstone cutthroat trout (Oncorhynchus clarkii bouvieri) in the States of Idaho, Montana, Nevada, Utah and Wyoming. Cutthroat Trout Conservation Team Report. Montana Fish, Wildlife and Parks, Helena, MT.

Hayden, P.S. 1967. Snake River cutthroat trout study: the reproductive behavior of the Snake River cutthroat trout in three tributary streams in Wyoming. Wyoming Game and Fish Commission Cooperative Research Project 4. Cheyenne, Wyoming.

Baxter, G.T., and M.D. Stone. 1995. Fishes of Wyoming. Wyoming Game and Fish Department, Cheyenne.

Kiefling, J.W. 1978. Studies on the ecology of the Snake River cutthroat trout. Wyoming Game and Fish Department administrative report, Cheyenne, Wyoming. 198pp.

Homel, KM. 2013. Spatial ecology and life-history diversity of Snake River Finespotted Cutthroat Trout (Oncorhynchus clarkii behnkei) in the Upper Snake River, WY. Dissertation, Montana State University, Bozeman.



Snake River Cutthroat Trout (Oncorhynchus clarkii spp.)

SOURCE: Digital maps of ranges for Wyoming Species of Greatest Conservation Need: February 2016. Wyoming Game and Fish Department. Note that brown indicates the current known range of the species.

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