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Formerly Oregon Natural Resources Council (ONRC)

“Upper Rogue River coho salmon population is at a moderate risk of extinction.” --Excerpts from: 2012 SONCC Coho Recovery Plan-- pertaining to the impacts created by water diversions in southern Oregon’s Upper Rogue Basin

In January, 2012 the National Marine Fisheries Service (NMFS) released a draft Recovery Plan for the Southern Oregon and Northern California Coasts (SONCC) Coho Salmon http://swr.nmfs.noaa.gov/recovery/soncc_draft/SONCC_Coho_DRAFT_Recovery_Plan_January_2012.htm

In summary, NMFS explained and concluded: ***“Upper Rogue River coho salmon population is at a moderate risk of extinction.” (Page 32-9) “The greatest factor limiting recovery of coho salmon in the Upper Rogue River is the lack of suitable rearing habitat for juveniles. The processes that create and maintain such habitat must be restored by restoring flow, increasing habitat complexity within the channel, restoring off-channel rearing areas, and reducing threats to instream habitat.” (Page 32-24)***

The following are additional excerpts from (Volume II) Chapter 32 “Upper Rogue River Population”:

Page 32-4: Spatial Structure and Diversity

Densities of juvenile coho salmon throughout the Upper Rogue River population vary by location (Figure 32-3). Most of the juvenile coho salmon observed recently were in the headwater areas of Little and Big Butte Creeks, Elk Creek, Trail Creek, and Evans Creek. Historically, Bear Creek had more than 25 miles of estimated high IP (Intrinsic Potential) habitat (Figure 32-1); however, no juvenile coho salmon were observed during summer sampling (Figure 32-3), likely due to high water temperatures and habitat degradation in this highly urbanized watershed. Coho salmon juveniles died in Bear Creek during an herbicide-related fish kill on May 6, 1996 (Ewing 20 1999), indicating some juveniles are present in this watershed at least during times of year with lower temperatures.

Page 32-7: The downward trend in adult abundance over the last four generations (1998-2009) has been weakly negative, but much less than a 10 percent decline. Relying on the population decline criterion found in Williams et al. (2008), we conclude that the extinction risk is moderate relative to abundance.

Page 32-9: U.S. Bureau of Reclamation (BOR)

Rogue River Basin Project Coho Salmon Instream Flow Assessment

BOR (Sutton et al. 2007) modeled stream flow needs of SONCC coho salmon in two drainages in southern Oregon in order to assess the effects of BOR’s Rogue River Basin Project on the species. The Rogue River Basin Project (RRBP) is a series of reservoirs and diversions designed to provide water to 35,000 acres of irrigated cropland in Oregon (BOR 2009b). Sutton et al. (2007) was relied upon when analyzing and describing the future effects of the RRBP on SONCC coho salmon and other listed species (BOR 2009b).

Page 32-18:

32.6 Threats

Table 32-2. Severity of threats affecting each life stage of coho salmon in the Upper Rogue River. Threat rank categories and assessment methods are described in Appendix B, and the data used to assess threats for the initial threats assessment (described in Appendix B) is presented in Appendix H.

10

Threats		Egg	Fry	Juvenile	Smolt	Adult	Overall Threat Rank
1	Roads	Very High	Very High	Very High	Very High	Very High	Very High
2	Agricultural Practices	High	Very High	Very High	Very High	Very High	Very High
3	Urban/Residential/Industrial	Medium	Very High	Very High	Very High	Very High	Very High
4	Channelization/Diking	Medium	High	High	High	High	High
5	Timber Harvest	Medium	Very High	Very High	Medium	Medium	High
6	Dams/Diversion	Medium	Medium	High	High	High	High
7	Mining/Gravel Extraction	Low	High	High	High	Medium	High
8	Climate Change	Low	High	High	Medium	Medium	High
9	Invasive Non-Native/Alien Species	Medium	Medium	Medium	Medium	Medium	Medium
10	Hatcheries	Medium	Medium	Medium	Medium	Medium	Medium
11	Road-Stream Crossing Barriers	-	Medium	Medium	Medium	Medium	Medium
12	High Intensity Fire	Low	Low	Low	Low	Low	Low
13	Fishing and Collecting	-	-	-	-	Low	Low

Page 32-13: The Rogue River Basin Project (RRBP) is a series of reservoirs and other facilities used to collect, impound, and divert water from the Rogue River for delivery to irrigated cropland (BOR 2009b). The RRBP adversely affects coho salmon in the Bear Creek and Little Butte Creek watersheds of the Upper Rogue River subbasin. Forty-seven percent of the high-IP (Intrinsic Potential) habitat in the Upper Rogue River subbasin is located in these watersheds.

Page 32-14 & 15: Flow depletion reduces water volume and slows water velocity, thus promoting warming, stagnation, and depressed dissolved oxygen (D.O.) (Thompson and Fortune 1970). Nawa (1999) documented loss of coho salmon juveniles in Trail Creek due to flow depletion and low D.O. Little Butte Creek is similar to Trail Creek and has both low flow and D.O. problems.

Page 32-19 & 20: **Agricultural Practices**

Although the extent of agriculture in the Upper Rogue River subbasin is not large, these lands substantially overlap high IP (>0.66) coho salmon habitat. Much of the water withdrawals causing insufficient flow are used for agriculture.

Page 32-22: **Dams and Diversions**

The high number of dams and diversion systems in the Upper Rogue River subbasin resulted in a high threat score. Agricultural diversions on major low gradient tributaries can impede upstream adult passage or strand downstream-migrating juveniles, if fish screens are not in place. Major diversions by the City of Medford and large agricultural districts are particularly problematic with regard to reduced stream flows (RBCC 2006).

Page 32-24: **32.7 Recovery Strategy**

The most immediate need for habitat restoration and threat reduction in the Upper Rogue River is in those areas currently occupied by coho salmon in the headwaters of Evans, Trail, Elk, Big Butte, and Little Butte Creeks. Unoccupied areas must also be restored to provide enough habitat for coho salmon to achieve recovery. The severely degraded conditions of the Upper Rogue River habitat, combined with the depressed coho salmon population size and distribution, significantly increases the risk of extinction of this inland coho salmon population, which is critical to recovery of the Interior Rogue River diversity stratum. The greatest factor limiting recovery of coho salmon in the Upper Rogue River is the lack of suitable rearing habitat for juveniles. The processes that create and maintain such habitat must be restored by restoring flow, increasing habitat complexity within the channel, restoring off-channel rearing areas, and reducing threats to instream habitat.