

(Feasibility of Reintroduction of Anadromous Fish Above or Within the Hells Canyon Complex)

Historical Abundance of Anadromous Fish Upstream Of the Hells Canyon Complex (E. 3.1-2, Chapter 6)

John W. Anderson

AFS Certified Fisheries Scientist

Cold Stream Consulting, P.O. Box 575 Baker City, OR 97814

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I. Introduction

This chapter provides two sets of anadromous fish adult return estimates for the area upstream of HCC. The first set of estimates covers the predevelopment era of the late 1880s. The second set of estimates covers the latter half of the 1950s, prior to construction of the HCC.

II. Conclusion

1. The Applicants' contract researchers provide two sets of estimates based on extensive literature searches and data analysis. The analysis is logical and reasonable. They are as follows:

[This is a synthesis of information presented in chapter 6]

Table 1. Estimated predevelopment adult returns to the Columbia River of anadromous fish produced upstream of the HCC site.

Species/Race	Low	High
Spring/summer chinook	760,000	1,190,000
Fall chinook	135,000	225,700
Summer steelhead	117,000	229,800
Sockeye	14,400	57,400
Pacific lamprey	No data	No data
Total salmon & steelhead	1,026,400	1,702,900

Table 2. Estimated post-development adult returns to the Columbia River of anadromous fish produced upstream of the HCC site.

Species/Race	Hell Canyon Complex	Columbia River Mouth	Ocean Recruits at Ocean Age 2*
Spring/summer chinook	1,857	4,986	5,540
Fall chinook	16,387	29,936	149,682
Summer steelhead	7,534	16,388	16,388
Sockeye	0	0	0
Pacific lamprey	No data	No data	No data
Total salmon & steelhead	25,778	51,310	171,610

*This represents the beginning of a harvestable size and the data table indicates that 119,746 fall chinook salmon were harvested in the ocean (149,682 - 29,936 = 119,746 caught).

Response:

The BLM agrees that based on the historic record this data is reasonable for modeling purposes.

III. Study Adequacy

The BLM tentatively agrees with these findings. The fisheries management agencies should be consulted prior to full agreement by BLM. The study appears to be logical and adequate. There are uncertainties that can never be answered concerning actual anadromous runs. This study and the rationale (Chapman and Chandler, IPC) is probably as accurate an estimate as can be developed.

IV. BLM Conclusions and Recommendations

Conclusions

The study thoroughly researches historic anadromous fish run size into the Snake River prior to Hells Canyon Complex closure. To validate their assumptions about run size (Table 2), the applicant has used research collected from two sources. Since the numbers of anadromous fish can vary dramatically the run-size should be presented as a range rather than a single number for each anadromous species as was presented for the pre-settlement period.

Recommendations

The NMFS, FWS, Tribes, IDFG and ODFW should be consulted for any additional information on this subject before the BLM accepts these estimates.