

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

Pathogen Assessment and Suitability of Stocks for Reintroduction Above the Hells Canyon Complex (E. 3.1-2, Chapter 10)

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I. Introduction

This chapter examines issues of fish stock suitability and pathogen risks that must be considered in regard to the feasibility of reintroducing anadromous fish above the Hells Canyon Complex. Considerations of stock suitability depend on the goals of a reintroduction program and the inherent risks management agencies are willing to accept. Risks may include genetic introgression with other stocks and the potential for exposing other stocks or populations of resident fish to pathogens or diseases. The state fisheries management agencies must make all decisions regarding introduction of fish.

II. Conclusion

1. *“A reintroduction program will need to determine the most suitable stocks of anadromous fish. Based on their origins, the most likely stocks for reintroduction are Oxbow Hatchery steelhead, Rapid River Hatchery spring chinook salmon and Lyons Ferry Hatchery fall chinook salmon. Sockeye stocks for Payette Lake will require further study.” (Page 16, Paragraph 2)*

Response:

The BLM agrees with this statement.

2. *“There is potential for introducing deleterious pathogens to resident fish above the HCC.”.... “The greatest risk is likely associated with introduction of pathogens that were not endemic to the area prior to HCC construction, in particular *M. cerebralis*. *M. cerebralis* has not been documented in basins immediately within the influence of the HCC such as Pine Creek, Indian Creek, Wildhorse River, Eagle Creek, or the Weiser River. However, the pathogen has been documented in the Imnaha and Grand Ronde rivers below the HCC. The greatest risk of pathogen transfer may be with resident migratory fish such as bull trout and resident redband trout allowed to pass above the HCC.” (Page 16, Paragraph 2)*

Response:

The BLM agrees with this statement.

3. *“Ultimately, the decision of defining and accepting risk is the responsibility of the management agencies. Risks need to be weighed against other factors that will ultimately influence the likelihood of success of a reintroduction program.” (Page 16, Paragraph 3)*

Response:

The BLM agrees with this statement.

III. Study Adequacy

The study is adequate.

IV. BLM Conclusions and Recommendations

Conclusions

Hatchery-produced anadromous fish are the only source for reintroduction. The current hatchery operations have maintained some of the original genetic strains of anadromous fish that were indigenous to the area above the Hells Canyon Complex. There has been some stock mixing from other rivers that may have changed the genetic composition and rendered some of the hatchery fish produced under the Lower Snake Compensation Plan unfit for reintroduction. The hatchery system has identified those stocks, and the probability of their use is minimal.

The issue of introducing pathogens into the system may be more of an issue in hatcheries than in the wild. However, the warmer temperatures in the Snake River above Hells Canyon Complex could cause outbreaks of disease. If passage is provided, there is a potential for diseases now found only in wild fish below Hells Canyon Dam to be transported into upriver populations. However, it seems likely that these diseases are already present in the system due to the fact that the river has only been closed to their migrations for the last 50 years. There is a higher probability that the diseases may exist but have not been identified in wild fish above the Hells Canyon Complex. Only limited inventories of fish pathogens in the wild have been conducted.

Recommendations

The BLM should support the fisheries agencies in their recommendations for reintroduction of anadromous fish above the Hells Canyon Complex with regard to genetic integrity and pathogen introduction.