

Water-Level Impacts to Spawning Smallmouth Bass, Crappie Spp. And Channel Catfish (E.3.1-5, Chapter 1)

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I. Introduction

The purpose of the study was to determine what affects the operation of the Hells Canyon Complex has on smallmouth bass, crappie spp. and catfish. The research effort spanned a period from 1991 to 1998, which provided a reasonably long period of study. The majority of the results are predicated on the findings in Brownlee Reservoir. It appears that the well documented findings for Brownlee Reservoir are representative of Oxbow and Hells Canyon reservoirs. Although channel catfish were listed as a species of concern, the focus of the report emphasized crappie and smallmouth bass. The channel catfish sample size was relatively small and there was less information generated about channel catfish than for crappie and smallmouth bass.

II. Conclusions

- *“In most years smallmouth bass spawning peaked from May 19 to June 1.*
- *In most years crappie spawning peaked from May 10 to 21 and again from June 8 to 24.*
- *The duration of the smallmouth bass spawning period is related to the rate of temperature increase during the prespawning period.*
- *The duration of the crappie spawning period is related to the date of the first nest observation.*
- *Nesting habitat has not been limited in Brownlee Reservoir at observed water elevations.*
- *Water level drafts of more than 1.2 m (4 ft) during active spawning period have a severe negative effect on nest success.*
- *Water level filling during the active spawning period does not have an affect on nest success.” (Page 34, Paragraph 3)*

III. Study Adequacy

This study was limited in scope and has met the objective it was set out to accomplish. The BLM should accept this report as sound and valid after discussing the findings with the Oregon Department of Fish and Wildlife and Idaho Fish and Game.

IV. BLM Conclusions and Recommendations

Conclusions

The primary findings document that water level drafts of more than 1.2 meters during active spawning have a severe negative effect on nesting success of all three species. The report also documented by species the thermal affects on spawning as well as the range and peak of spawning. The method used and data collected are based on sound aquatic science. The research data indicated that nest densities were in low numbers or not observed in many years in Oxbow and Hells Canyon reservoirs. The minimal amount of information on nest sites in Oxbow and Hells Canyon reservoirs does not diminish the conclusion but does leave a question as to why the populations were so low that few nests were found. The number of channel catfish nests sampled was limited but appears to be adequate to substantiate the fact that they can be negatively affected by reservoir drafting.

The knowledge that drafting of the reservoirs can severely limit reproduction of smallmouth bass, crappie and channel catfish (based on their spawning timing, depth and thermal requirements) can be used to either enhance the reservoir sport fishery or reduce their numbers if they are considered to be a major threat to native species' recovery or maintenance.

Recommendations

The BLM has no further recommendations for warmwater fish studies.