MONTANA FISH, WILDLIFE & PARKS

FISHERIES DIVISION
JOB PROGRESS REPORT

STATE:	MONTANA	PROJECT TITLE:	STATEWIDE FISHERIES INVESTIGATIONS
PROJECT NO.:	F-78-R-1	STUDY TITLE:	SURVEY AND INVENTORY OF WARMWATER LAKES
JOB NO.:	IV-a	JOB TITLE:	NORTHWEST MONTANA WARMWATER LAKES

PROJECT PERIOD: JULY 1, 1994 THROUGH JUNE 30, 1995

ABSTRACT

Warmwater fisheries habitat was maintained through existing statutes and laws. Habitat structure was added to regional lakes by local clubs and Department personnel to benefit differing age classes of largemouth bass. Illegal transplants of fish to new waters continues to be a very serious problem jeopardizing many established fisheries. Reservoir and tributary fisheries work continued on Noxon Rapids and Cabinet Gorge impoundments. A M.S. thesis by Kathleen Walker-Smith titled, "Environmental and Biological Factors Limiting Reproduction, Recruitment and Growth of Largemouth Bass in Seeley and Echo Lakes, Montana" is near completion.

BACKGROUND

There are approximately 60 waters within Northwest Montana that provide warmwater fishing opportunities. Interest in warmwater fishing is increasing and pressure exceeds approximately 40,000 mandays annually. The common regional warmwater species are largemouth bass (*Micropterus salmoides*), smallmouth bass (*Micropterus dolomieui*), northern pike (*Esox lucius*), yellow perch (*Perca flavescens*), pumpkinseed (*Lepomis gibbosus*), and burbot (*Lota lota*).

Warmwater fish in Northwest Montana are primarily managed on a self-sustaining basis. Exception to this includes supplemental stocking of largemouth bass to provide genetic diversity to existing populations, and recruitment enhancement stocking into Noxon Rapids and Cabinet Gorge reservoirs on the lower Clark Fork River. Fish are obtained from the Miles City State Hatchery. Waters with surplus, stunted populations of largemouth are utilized to collect and transfer fish to other waters with limited recruitment with assistance from area bass clubs.

Increasing fishing pressure will require additional improved access sites to ensure continued public access. Growth and development on warmwater lakeshores and watersheds continues to impact water quality, quantity, and aquatic habitat. Where shoreline cover is limited, structure enhancement is utilized to improve conditions.

Illegal introductions of non-indigenous species to new waters continues to be a very serious problem. Yellow perch and northern pike are typically the species discovered after illegal transplanting. Other species also include white crappie (*Pomoxis annularis*), goldfish (*Carassius auratus*), pumpkinseed (*Lepomis gibbosus*), and largemouth bass.

OBJECTIVES AND DEGREE OF ATTAINMENT

Activity 1 - Survey and Inventory
Objective: To survey and monitor the characteristics and trends of fish populations, angler harvest and preferences, and to assess habitat conditions in selected waters.

This objective was attained. On Noxon Rapids and Cabinet Gorge reservoirs, work was reported in special segment report: Northwest Montana Coldwater Lakes Investigations, Noxon Rapids and Cabinet Gorge Reservoirs Segment, Project No. F-46-R-8 (Huston, 1995). This objective was attained on the following regional waters: Abbot Lake, Church Slough, Echo Lake, Fennon Slough, Horseshoe Lake, Island Lake, Lake Mary Ronan, Lindbergh Lake, Lion Lake, Loon Lake, Peterson Lake, Rogers Lake, and Swan Lake. A M.S. thesis by Kathleen Walker-Smith titled, "Environmental and Biological Factors Limiting Reproduction, Recruitment and Growth of Largemouth Bass in Seeley and Echo Lakes, Montana" is in the final stages of completion.

Activity 2 - Fish Population Management
Objective: To implement fish stocking programs and/or fish eradication actions to maintain fish populations at levels consistent with habitat conditions and other limiting factors.

This objective was attained. The Miles City Hatchery provided the region with young-of-the-year largemouth bass. These fish originated from a diverse background and were utilized to infuse genetic diversity into existing populations in Noxon Rapids and Cabinet Gorge reservoirs and Echo Lake.

Surplus populations of largemouth bass were identified. Fish from Woodland Park Pond were transplanted to McWennegar Slough.

Activity 3 - Technical Guidance
Objective: To review projects by government agencies and private parties which have the potential to affect fisheries resources, provide technical advice or decisions to mitigate effects on these resources, and provide landowners and other private parties with technical advice and information to sustain and enhance fisheries resources.

This objective was attained. Fisheries personnel commented on projects that had potential to affect warmwater fisheries. Of species interest were private parties developing shoreline property leased from Washington Water Power on Noxon Rapids and Cabinet Gorge reservoirs.

Fish habitat was enhanced through placement of artificial structures in numerous warmwater lakes. Structures typically consisted of Christmas tree bundles, root wads, or wooden pallets. All structures complied with a Corps 404 permit secured for this purpose. Area bass clubs assisted with the work. Lakes that were treated included: Echo Lake, Lake Five, Lower and Middle Thompson lakes.

Activity 4 - Aquatic Education

Objective: To enhance the public's understanding, awareness, and support of the state's fishery and aquatic resources and to assist young people to develop angling skills and to appreciate the aquatic environment.

This objective was attained. Fishery personnel gave numerous talks to sportsperson groups and the media to promote understanding and support for warmwater fishery programs. Special emphasis was given to the extent and impacts of illegal fish introductions.

Several Youth Angler Education Classes and Kid's Fishing Clinics were conducted or attended.

PROCEDURES

Standard floating and sinking monofilament gill nets 125-feet long by 6-feet deep were used for fish collection. Nets contained 25-foot panels of 3/4, 1, 1 1/2, 1 3/4, and 2-inch bar mesh. One-hundred foot by 6-foot beach seines were used primarily for juvenile fish collection. An 18-foot jon boat with boom mounted electrodes operating on a Coffelt VVP-IIC electrofishing box powered with 110 volt current was also used for sampling. We weighed and measured collected fish and extracted scales and stomach samples for future analysis. A list of waters with available species has been progressively compiled and updated (Appendix A).

Water quality and aquatic habitat were protected or enhanced by participation in the Natural Streambed and Land Preservation Act (NSLPA), the Lakeshore Protection Act (LPA), the Army Corps of Engineers (COE) 404 permit program, and Montana Pollution Discharge Elimination System (MPDES). Proposed projects were reviewed and mitigative measures recommended where appropriate.

Snorkel/SCUBA surveys were utilized for structure evaluations in Echo Lake.

The Miles City Fish Hatchery provided the region with young-of-the-year largemouth bass. These fish originated from a diverse background and were utilized to infuse genetic diversity into existing population in Noxon Rapids and Cabinet Gorge reservoirs and Echo Lake.

RESULTS AND DISCUSSION

Species Introductions

During the project period only a few bass were transplanted from Woodland Park Pond to McWennegar Slough. In the past largemouth bass transplants have been made to supplement populations that suffer poor survival due to prolonged climatic conditions. The discovery of whirling disease in Montana may preclude future transplants.

During the project period Echo Lake was stocked with bass from Miles City Fish Hatchery to improve genetic diversity. Local bass clubs assisted with boat distribution of the 15,000 bass. An additional 65,000 young-of-the-year bass were also stocked in Noxon Rapids Reservoir and 25,000 in Cabinet Gorge Reservoir, also to improve genetic diversity.

Illegal fish introductions continue to plague fish management within the region. During the report period five lakes were found to contain illegally introduced fish: Estes Lake - yellow perch; McCaffery Lake - northern pike; Jessup Mill Pond (USFS hatchery water source) - yellow perch, pumpkinseed; Boyle Lake - northern pike; Carpenter Lake - yellow perch, bull trout.

In response to illegal introductions, the 1995 Montana Legislature passed a law prohibiting the live transport of fish in the Western and Central Fishing Districts. Two individuals involved in the illegal transplant at Jessup Mill Pond were convicted under the new statute, fined a total of $1,030 and lost their hunting and fishing privileges for 24 months. Hatchery crews are attempting to recover the transplanted fish through electrofishing and gill netting.

Access

Negotiations continued on regional waters. A road easement was secured at a site on Horseshoe Lake near Ferndale. Site improvements including a new dock, boat ramp and handicapped access were completed at Lake Mary Ronan. Latrines were provided for a Department of State Lands site on Echo Lake in response to sanitation concerns that might have closed the site to the public. The Department also committed nearly $200,000 for fishing access site development on the Thompson Chain of Lakes acquisition.

Habitat Protection and Enhancement

Lakeshore protection applications, some requiring Department recommendations for mitigation, were processed through regional county agencies. Comments were submitted on Corps of Engineers (COE) 404 permits for regional lakes and streams. NSLPA permits were reviewed and recommendations made.

Fish populations were enhanced and habitat loss mitigated by enlisting the aid of Washington Water Power, USFS, Western Montana Bassmasters, Echo Lake Bassmasters, Clark Fork Bass

Anglers, Noxon Rod and Gun Club and other local groups to purchase and install bass habitat structures. Waters receiving structure improvements include: Echo Lake, Middle Thompson Lake, Peterson Lake and Murphy Lake. Structures were also placed in Horseshoe Lake (Ferndale) to benefit smallmouth bass (*Micropterus dolomieui*) spawning. A regional COE 404 permit was updated to allow habitat improvement work for another five-year period.

Kathleen Walker-Smith has nearly completed a M.S. thesis titled, "Environmental and Biological Factors Limiting Reproduction, Recruitment and Growth of Largemouth Bass in Seeley and Echo Lakes, Montana. Department personnel assisted with project design and implementation during the period. Results and implications will provide a sound foundation for future management on applicable waters.

RECOMMENDATIONS

There is an increasing demand for baseline population and habitat data on the 114 warmwater lakes within the region. As time allows we need to collect population indices for prioritized waters. This information would help confirm a need for different management such as regulations changes.

The number of bass fishermen and interest among them is ever increasing. Tournament requests, requests for special regulations, and concern over specific fisheries continue to come in at a greater frequency. Complaints about illegal spear fishing are also more frequent as are complaints about mortality or injury to fish during tournaments. A more conservative policy will need to be evaluated that will reduce potential impacts from the above issues.

Habitat enhancement structures in specific waters will need additional evaluation.

A more extensive genetic sample of regional bass populations would be desirable. This would identify populations needing additional genetic diversity that could be infused through stocking.

Illegal introductions of warmwater fish is causing severe impacts to many fisheries. Education and increased enforcement of existing statutes are needed to further discourage illegal transplants.

LITERATURE CITED

Huston, Joe E. 1995. Northwest Montana coldwater lakes investigations, Noxon Rapids and Cabinet Gorge Reservoirs Segment, Project No. F-46-R-8.

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