#83330

Region 1

MONTANA DEPARTMENT OF FISH, WILDLIFE AND PARKS

FISHERIES DIVISION
JOB PROGRESS REPORT

STATE: MONTANA		**PROJECT TITLE:**	STATEWIDE FISHERIES INVESTIGATIONS
PROJECT NO.: F-46-R-5		**STUDY TITLE:**	SURVEY AND INVENTORY OF WARMWATER LAKES
JOB NO.: IV-a		**JOB TITLE:**	NORTHWEST MONTANA WARMWATER LAKES INVESTIGATIONS
PROJECT PERIOD:	JULY 1, 1991 THROUGH JUNE 30, 1992		

ABSTRACT

New strains largemouth bass (Micropterus salmoides) were stocked into existing populations to provide more genetic diversity. Fisheries habitat was maintained through existing statutes and laws. The first field season of a Master of Science degree research project identifying factors limiting bass production in Echo and Seeley lakes was completed. Artificial habitat structures continue to be placed to benefit differing age classes of largemouth bass. An illegal transplant of yellow perch (Perca flavescens) into Lake Mary Ronan may jeopardize the fishery.

OBJECTIVES AND DEGREE OF ATTAINMENT

1. Establish and maintain fishable populations (catch rate = 0.25 fish/hour of smallmouth bass and burbot in Noxon and Cabinet Gorge reservoirs. Objectives partially accomplished and submitted in special segment report: Northwest Montana Coldwater Lakes Investigations, Noxon Rapids and Cabinet Gorge Reservoirs Segment, Project No. F-46-R-4 (Huston, 1992).

2. Identify populations with surplus fish that can be used for transplants. Objectives accomplished using state funding.

3. Attempt to acquire and develop access sites on all lakes and reservoirs with the potential for more than 500 mandays of fishing annually. First priority should be given to Lake Blaine and those lakes with adjoining Champion International or Plum Creek Timberlands property. Objectives were partially accomplished using state funding.

4. Minimize the impacts of land and water use on fisheries. Objectives were accomplished using state funding.

5. Define the impacts of fishermen use on specified fisheries and provide an increased opportunity to catch large bass (>12-14 inches) and northern pike (>28 inches). Objectives were accomplished using state funding.

6. Address the demand for new species introductions. Define the parameters of interspecific competition, participate in a walleye introduction EIS, halt the illegal spread of northern pike. Objectives were partially accomplished. Illegal introductions continue.

7. Enhance fish populations through the placement of artificial habitat. Objectives were accomplished using state funding.

8. Define the mechanisms of predator/prey relationships in area lakes. Reduce competition with game fish and reduce overabundant populations of non-game fish. Objectives were accomplished.

9. Encourage increased public knowledge and participation in resource decisions. Objectives were accomplished.

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 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.

A Master of Science (M.S.) degree research project was initiated to identify factors limiting largemouth bass production in Echo and Seeley lakes. The first field season efforts concentrated on: nest counts, structure SCUBA surveys, snorkel transects, electrofishing and young-of-the-year age and growth (Walker-Smith, In Prep.).

The Mile City Fish Hatchery provided the region with young-of-the-year largemouth bass. These fish originated from a more divergent background and were utilized to infuse genetic diversity into some existing populations.

RESULTS AND DISCUSSION

Species Introductions

During the project period no lakes received transplants of bass from surplus populations as in previous years. In the past and likely in the future largemouth bass transplants will be made to supplement populations that suffer prolonged climatic conditions resulting in poor survival.

During the project period seven lakes within the region were stocked with largemouth bass young-of-the-year to improve genetic diversity within the existing populations (Table 1). The Polson Bay area of Flathead Lake was also stocked primarily to determine if the extremely low level population could be augmented.

Illegal introductions continue to plague fish management within the region. On May 31, 1992, two witnesses reported a man illegally planting yellow perch (Perca flavescens) into Lake Mary Ronan. The witnesses were able to capture 33 perch. Department personnel deployed an emergency rotenone treatment curtain in an attempt to contain escaping perch. The effort collected 19, 5" to 7" perch; however, follow-up reconnaissance has revealed that other perch survived. The Lake Mary Ronan fishery is one of the most valuable in the region with an estimated value of four million dollars. The lake is also the largest source of kokanee eggs in Montana. Establishment of yellow perch in Lake Mary Ronan has potential to threaten the entire fishery. We will continue to monitor this situation.

Table 1. Region One largemouth bass stocking summary, 1991.

Lake	Number Fish	Length	Objective*
Church Slough	15,000	1.6	2
Flathead Lake (Polson Bay)	17,361	1.4	1
Island Lake	15,000	1.2	2
Kicking Horse Reservoir	17,361	1.4	2
Lake Mary Ronan	16,800	1.6	2
Middle Thompson Lake	36,600	1.2	2
Ninepipe Reservoir	17,361	1.4	2
Pablo Reservoir	17,361	1.4	2

*1 = Augment low population level.
2 = Provide genetic diversity

This was reportedly the first case of an illegal fish introduction in Montana. The man pleaded guilty and was sentenced to pay a $500 fine plus court costs, $1,500 reimbursement to the Department for rotenone treatment, a two-year loss of fishing privileges and possibly be responsible for future remedial management efforts. The boys who witnessed the incident received rewards totalling $500 each with contributions from TIP-MONT, Montana Trout Unlimited, Montana Walleyes Unlimited and the Montana BASS Federation.

The regional fish manager prepared numerous media projects on the problems surrounding illegal fish introductions. This contribution led to the first recorded guilty plea in Montana. The witnesses read the articles and acted accordingly.

DFWP continued to cooperate with Washington Water Power to document effects of reservoir drawdown on benthic organisms and fish in Noxon Rapids Reservoir (Huston, 1992).

Access

Three regional fishing access sites are presently undergoing site redesign modifications that will continue into FY 1993. These sites include Smith Lake, Skyles Lake, and Flatiron Ridge on Noxon Rapids Reservoir. Champion International donated 4,000 acres containing 17 lakes known as Thompson Chain-of-Lakes to the State of Montana in 1990. Some of those lakes provide angling for largemouth and smallmouth bass, northern pike, yellow perch and pumpkinseeds. Funding was obtained in 1991 to hire a consultant to develop a management plan which will include access development.

Habitat Protection and Enhancement

Lakeshore protection applications, some requiring Department recommendations for mitigation, were processed through regional county agencies. Comments were submitted on ACOE 404 permits for regional lakes and streams.

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 and Noxon Rapids Reservoir.

Washington Water Power, the Clark Fork Bass Anglers, Noxon Rod and Gun Club, Cabinet Ranger District of Kootenai National Forest (USFS) and the DFWP entered into a partnership agreement in December 1990 regarding fish habitat enhancement in Cabinet Gorge and Noxon Rapids reservoirs. The agreement stated that Washington Water Power and the USFS will initially purchase $10,000 of artificial bass structures. The other partners would then provide $7,000 of inkind services including labor, miscellaneous equipment and additional supplies for the project. The project total is $17,000. Installation of the structures has been partially completed and will hopefully be completed during FY 1993.

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 need additional evaluation. It is the intent of the aforementioned M. S. graduate study to evaluate the use of different structure types.

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.

LITERATURE CITED

Huston, Joe E. 1992. Northwest Montana coldwater lakes investigations, Noxon Rapids and Cabinet Gorge Reservoirs segment, July 1, 1989 through June 30, 1990, Project No. F-46-R-3, Job No. II-a, Montana Dept. of Fish, Wildlife and Parks, Helena, MT.

Walker-Smith, Kate. In Preparation. Comparison of limiting factors for reproduction, recruitment and growth of largemouth bass in Seeley and Echo Lakes, Montana.

Prepared by: Scott Rumsey

Date: September 2, 1992

Waters referred to:
Echo Lake 7-6180
Middle Thompson Lake 5-9232
Noxon Rapids Reservoir 5-9328
Seeley Lake 4-7260
Church Slough 7-5710-04

Waters referred to:

Echo Lake 7-6180
Middle Thompson Lake 5-9232
Noxon Rapids Reservoir 5-9328
Seeley Lake 4-7260
Church Slough 7-5710-04
Flathead Lake 7-6400-03
Island Lake 11-8580-04
Kicking Horse Reservoir 7-7020-06
Lake Mary Ronan 7-7700-03
Ninepipe Reservoir 7-8100-06
Pablo Reservoir 7-8160-06
Skyles Lake 7-8650
Lake Blaine 7-5380

Key Words: warmwater lakes; artificial habitat structures, smallmouth bass, largemouth bass, northern pike, exotic species introductions, fishing access acquisition