

MONTANA DEPARTMENT OF FISH AND GAME
FISHERIES DIVISION

MONTHLY ACTIVITIES SUMMARY - State Management Projects and State Fish Hatcheries

Period: February 1, 1973 through February 28, 1973

Supervisors: Wesley R. Woodgerd, State Fish and Game Director
Keith A. Freseman, Deputy Director
Arthur N. Whitney, Fisheries Division Administrator
George D. Holton, Asst. Fisheries Division Administrator
William Alvord, Chief, Bureau of Fisheries Services
Robert A. Mitchell, Hatchery Production Specialist

2001, 2101, 2121 & 2201 General Hatchery & Management - Whitney, Holton, Alvord, Mitchell

Whitney attended a meeting of the State Council of Trout Unlimited, a meeting with Bureau of Reclamation personnel on our Clark Canyon Study, participated in five staff meetings and met with the department attorney twice on pond licensing and access deed problems. He also prepared an analysis of how several introduced bills on license fee changes would affect our department's income and visited the Anaconda, Arlee and Somers hatcheries and Regions 1, 2, and 4 headquarters. With Mitchell he attended a meeting with WWP, USFS and Region 1 personnel in Noxon on management of Noxon and Cabinet Gorge Reservoirs and conducted a meeting of hatchery brood station managers on cutthroat brood problems.

Mitchell summarized the managers' future needs for hatchery fish and all project personnel met to review these data. He visited all stations this month.

Alvord prepared commercial fishing contracts for Carl Schoenberger and Leonard Stark, assembled material for the Fish and Game Section of the Framework Report being prepared for the Department of Natural Resources and discussed the matter with them. He also prepared a rough draft of material to be included in the Fisheries Field Handbook and sent it to Regional and Hatchery Managers for review, sent a request for permission to obtain Yellowstone cutthroat eggs from Yellowstone Lake to the Park Superintendent, discussed with A/E specifications for a painting contract at Great Falls and security fencing at Anaconda. He visited the Somers and Arlee stations this month.

Holton assisted Margaret Brooks in solving technical problems involved with collectors permits and prepared a proposed department regulation on this. He testified at the House Game and Fish Committee hearing on SB 224 (Scientific Collectors Permits). With wardens Getz and Hagenston he represented wildlife interests at a meeting of the Northeast Helena Valley Planning Committee. The first proof of fishing regulations was reviewed and returned to the printer.

2110 Washoe Park Trout Hatchery, Anaconda - Robert A. Mitchell

Routine hatchery work was carried out this report period. The creek water supply was turned on and ponds were cleaned and screened and made ready for use. One lot of rainbow eggs received from Somers was hatched and cleaned up. Rainbow fry in the hatchery were inventoried and moved to more tanks. The creel census on Georgetown Lake was completed as fishing season closed February 28. Nine days were spent on fish disease work this month.

2113 Jocko River Trout Hatchery, Arlee - Warren K. Taylor

Attention to young fry took up the greater portion of this month's activities, along with other hatchery routine. Due to the constant drop of the spring water supply, it was necessary to activate the pump supply early this month. One pond of yearling rainbow was moved to the brood ponds and the rest were divided into other ponds. The westslope cutthroat brood were divided into the proper ponds before the spawning season starts. One meeting was attended to discuss westslope cutthroat brood feed and egg production. Visitors at the hatchery this report period were Art Whitney, Bill Alvord, Vern Campbell and Bob Mitchell.

2114 Yellowstone River Trout Hatchery, Big Timber - Thomas F. Morgan

Regular hatchery routine was carried out during the report period. The major share of the month was spent on care and hatching of kokanee salmon eggs. A total of 400,000 swimup fry were planted in Yellowtail Dam. Two trips were made to Fort Smith and four streams were planted in the vicinity of Lovell, Wyoming. A total of 300,000 fry were liberated in the hatchery and started on feed. A trip was made to Mammoth, Wyoming to talk to Jack Dean, Fisheries Biologist in Yellowstone National Park, on the possibility of getting cutthroat eggs from Yellowstone Lake. Visitors at the station during the month were Thurston Dotson and Bob Mitchell.

2115 Bluewater Springs Trout Hatchery, Bridger - Emmett L. Colley

The major activities during this report period were moving, repair of distribution equipment and care of fish. Colley moved into the new residence. Neary painted and refinished interior of the old house and moved from Bridger to the station. Wiring and repairing aerators, checking oxygen systems, distribution engine and truck maintenance involved the major portion of the activities. All young fish were inventoried and moved to individual raceways for future rearing. Eggs were received from the Flathead Lake Salmon Hatchery. Thurston Dotson visited the station and took samples of various lots of fish to check for diseases before distribution begins.

2116 Giant Springs Trout Hatchery, Great Falls - Robert L. Hughes

Routine hatchery duties were carried out this month in taking care of small fish. The last rainbows were moved to outside ponds and raceways were thinned into circular ponds. The Environmental Education classes (some 1500 students) from Great Falls school system completed their tours of the hatchery. Some time was spent with engineers of hatchery installations in connection with the development of a state park.

2117 Big Springs Trout Hatchery, Lewistown - Edward H. Furnish

Routine hatchery duties were carried out by station personnel. All lots of fish are on feed and growth appears to be good. Trucks are being prepared for distribution, including painting and general overhaul of tanks. Two-million five-hundred-thousand (2,500,000) fish are on feed with the smallest running around 100 per pound (3 inches).

The Green Thumb Crew worked 8 days this month. Most of their time was spent painting screens and placing paneling in old shop. There is a possibility of losing the crew as Congress has not appropriated money for its operation. The overall picture of both hatcheries is better than it ever has been. This is mainly due to the work of the Green Thumb Crew.

Visitors at the station this month were Bill Alvord, Bob Hughes, and Bob Mitchell.

2119 Flathead Lake Salmon Hatchery, Somers - Vern R. Campbell

Almost the entire report period was devoted to the processing of kokanee and rainbow eggs. All rainbow eggs have been processed and shipped to three of our state hatcheries. Delayed incubation of these eggs averaged 83 days. Processing of kokanee is nearly completed, and at this point, fertilization success is 95.4 percent. This confirms our findings of 1972 that collecting eggs by electrofishing does not contribute to egg mortality.

A meeting relating to high mortalities in both eggs and fry in our westslope cutthroat program was attended in Missoula. Steps were initiated to attempt to solve the problem. General hatchery routine and maintenance was given the necessary attention.

2254 Western District - Boyd R. Opheim

Milltown Dam dewatering problem continued to be the main field activity this month. Results of this project are reported under F-12-R-19. A report on Georgetown Lake and its management was prepared for the County Agent at Philipsburg. This report is to be included in an overall area report concerning the eutrophication of Georgetown Lake. The five-year timber cutting plan for the Ninemile Ranger District and a management plan for the Seeley Lake Ranger District were reviewed and comments submitted.

Two inspection trips were made on the Bitterroot River concerning gravel pit locations. One location was rejected and the other approved. Riprap projects scheduled for Lolo Creek, the Clark Fork River and Rock Creek were reviewed. Talks were presented to the State Weed Control meeting and the Fish Committee of the Western Montana Fish and Game Association.

2255 Northwest District - Robert Schumacher

The major portion of the project time was spent with cooperating agencies. One day was spent with the Missoula County road foreman on bridge debris clearance and repair proposals. One day was spent looking at land available for fishing access sites. Three days were spent either reviewing U. S. Forest Service Planning Unit studies or wild river studies. The cooperative recreation planning meeting with Washington Water Power, U. S. Forest Service and Fish and Game personnel was attended at Noxon. Two days were spent with a River Basins specialist of the Bureau of Sport

Fisheries and Wildlife reviewing projects on which both agencies must comment as to impact on fisheries.

2256 Southwest District - John J. Gaffney

A report was received of a diversion dam placed across the Big Hole River near Glen. Anglers and guides who float this area were quite concerned about the project which reportedly blocked passage for boats. Aerial and ground inspections were made. The new structure was built of large concrete blocks (estimated over 15 cubic feet) and what appeared to be quarry rock. There appeared to be little or no channel excavation. The structure replaces a smaller one that has existed at this site for many years. However, earlier structures did not completely block the channel and boats could float through with varying degrees of difficulty.

Repair work near a county bridge was inspected with a representative of the county bridge crew. The project involved maintenance work on an earlier project and no habitat was altered.

Other time charged to the project included interviews for summer employees and a review of the alternate routes for I-15 between Butte and Boulder.

2257 Northcentral District - Dick Johnson and Ed Nevala

A meeting with the Water Resources Division was attended to discuss future water use of War Horse Reservoir. The Bureau of Sport Fisheries and Wildlife, as well as a group of irrigators, are interested in obtaining the reservoir from the Water Resources Division.

Several State Highway and County stream alteration projects were received and recommendations were made. The A.A.C.I. meeting held in Great Falls was attended. A trip was made to the Dry Fork of Belt Creek with Al Wipperman and a graduate student from Montana State University to discuss a proposed study on the stream. A number of ponds in the Great Falls area were checked for oxygen levels and fisherman use.

2258 Northeast District - Robert Needham

Development of a 15-acre fishing reservoir was investigated. Construction to be handled by the Corps of Engineers will consist of isolating a small bay on Fort Peck Reservoir. The site was inspected with BSF&W and Corps of Engineers personnel and an Environmental Impact Statement was drafted.

Preparation of maps showing available fishing was completed for the entire Region. Warm water stocking requests were submitted. The EIS for bridge construction over the Missouri River and associated roads north of Winifred was reviewed. Oil spills on Raymond Reservoir were investigated. Observations on septic outflow from waterfowl management area 8 continued. A private landowner was contacted in an effort to arrange for purchase of a high quality fishing reservoir. Maintenance and filling (pumping) of northern pike rearing ponds was begun. Meetings of the Hill County Wildlife Association and Phillips County Wildlife Association were attended.

2259 Southcentral District - Clinton Bishop

Proofs for the new fishing regulations were reviewed and submitted to Helena.

A joint letter was prepared with Board of Health representative, Mike Haddix, requesting Environmental Protection Agency assistance, either in funds or manpower, in solving acid mine pollution problems in the Cooke City area. These were submitted to Helena. Assistance was also given to Jack Craven, Custer National Forest, in getting background information on this problem.

A meeting was held in Cody, Wyoming with Lou Pechacek and Ron Kent, Wyoming Game and Fish Department, for the exchange of data collected this past year on Bighorn Lake and plans for the coming year were discussed. A Trout Unlimited meeting and a Laurel Rod and Gun Club meeting were attended this month. Several days were spent reviewing literature that has been accumulating.

2261 Southeast District - Al Elser

An oil spill in the Shell Oil Little Beaver Unit was monitored. Approximately 50 barrels of oil was spilled and 15 barrels were recovered. The spill was well contained, extending only $\frac{1}{2}$ mile from the site of the leak. Oil was collected in a skimmer dam and then recovered. The surrounding area is gumbo and very wet, making salvage operations difficult. The oil remaining in the creekbed was burned. There was no potential danger to aquatic organisms.

The Great Plains Fisheries Workers Association Workshop was attended in Calgary, Alberta. The meeting was well attended and several good papers were presented. Other meetings attended were: a Chamber of Commerce discussion of the economic impact of coal development; a panel discussion of reclamation and water use in relation to coal development.

2262 Reservoir Investigations - Joe Huston

This project was inactive during the report period.

2263 Fisheries Lab - John J. Gaffney

Data sheets and scale mounts were prepared for collections from districts 2, 3, 4, and 5.

2267 Clark Canyon - Beaverhead River Study - Bill Miller

Beaverhead River fish scales from the 1971-72 Wheat and Blaine collections were aged. Ten sets of Beaverhead River fish population data were prepared for computer processing and mailed to Helena. This is the last fish population data to be computer processed on the Beaverhead River until project 2267 is reinitiated in a low water year.

Approximately half of my time this month was spent working on a final Beaverhead River report. This report will complement the Clark Canyon Reservoir which was written in December.

I attended a Helena SCUBA club meeting in an effort to solicit assistance on fisheries studies in Clark Canyon Reservoir and the Beaverhead River. I was mainly interested in the club's assistance in observing ling spawning in Clark Canyon. The

presence of 38 inches of ice on Clark Canyon tended to discourage the club's enthusiasm for a February dive. I attended a Bureau of Reclamation meeting in Great Falls to report on the status of the Beaverhead River-Clark Canyon study.

2270, 2275 and 2276 Libby Reservoir Investigations - Joe Huston & Bruce May

2270 Young Creek Development: A staff gauge was installed in Young Creek and the gauging site was prepared for installation of a continuous flow recorder. This recorder will be installed as soon as the ice cover melts - probably in early March. Scales from out-migrant juvenile and spawning cutthroat were aged. A planning meeting concerning future work was attended in Kalispell.

2275 Development of Lake Koocanusa Tributaries: Age and growth determinations were begun on game fish collected from project streams. An environmental impact statement concerning development work planned for Fiscal Year 1974 was prepared and submitted to the Helena office. Mountain whitefish eggs collected November 1, 1972 finally hatched the week of February 5. About 40,000 fry were planted in Young Creek February 20. Lack of suitable vehicular access into some of the east side tributaries precluded planting these streams with whitefish this year.

2276 Kootenai River: Bioassay cages for use in the Kootenai River were constructed. Two Weiss gas satumeters were received and field tested against the Corps of Engineers' instrument. Readings between the three instruments were very comparable. A review of available literature concerning gas saturation was made. Age and growth determinations were started on fish collected in the Kootenai River and in the Fisher River trap.

Creel census was continued on the river below Libby Dam throughout the month. Large numbers of cutthroat trout and mountain whitefish were caught during the month, mostly within six miles below the dam. The creel data collected in February 1973 are compared to data collected in February 1972 and are shown in Table 1.

Table 1. Comparison of angler harvest, Kootenai River below Libby Dam, February 1972 and February 1973.

Year	Number anglers	Hours fished	Number whitefish	Number cutthroat
1972	117	281	619	1
1973	545	1387	2241	1824

Nearly all the cutthroat trout caught below the dam appear to have been fish that were planted in Lake Koocanusa near Rexford in early spring 1972. Downstream movement through the dam sluiceways probably occurred after the reservoir was drawn down to minimum pool. Many of the fish examined showed eroded and nipped dorsal fins, characteristic of hatchery-reared fish. The flesh of the cutthroats was salmon-colored indicating they have been feeding heavily on crustaceans, characteristic of a lake environment.

Size range of fish caught has varied from 10.0 to 13.0 inches in total length with the average about 11.7 inches. Analysis of scales from the cutthroat showed most fish having one mark or annulus which is probably a planting mark. Cutthroat trout taken from the Kootenai River during electrofishing operations in years past generally have two or three annual marks at a comparable size. One cutthroat caught about five miles below the dam had been marked at the Young Creek downstream trap 45 miles upstream of the dam in summer 1972.

Sixty percent of 770 cutthroat examined for gas bubble symptoms showed symptoms. About 20 percent showed moderate to severe symptoms including tissue necrosis and hemorrhaging. It is anticipated that these fish will start dying from gas embolism in a short time.

Almost all of the mountain whitefish caught by anglers are small and seldom exceed ten inches. Occurrence of gas embolism in these fish is not as frequent or severe as that recorded during the August 1972 sampling in the same general locations. It is thought that many of the whitefish caught had either moved up the Kootenai River or downstream through the reservoir.

The movement of cutthroat trout and whitefish downstream through the reservoir into the river below the dam will have serious impacts upon the reservoir fishery for the next several years. What may have been an excellent lake sport fishery has much less chance now. Downstream movement through the dam's sluices may have serious effects on the success of developing spawning runs into Young Creek and other developed tributaries.

Effects of the reservoir fishes moving down into the river upon fish population sampling efforts may be detrimental. The long-term effects will probably be slight considering the probability of heavy mortalities.

2271 Prickly Pear Stream Improvement - Dennis Workman

Inactive this report period.

2272 Elk Lake - Narrows Creek - Norman Peterson

The draft copy of the annual report was written and edited during this period. Budgeting for the fencing of Narrows and Limestone Creeks was discussed with the Forest Service.

A slide series program of the Elk Lake - Narrows Creek Study was presented to the Helena SCUBA club. After the program, the club was asked to help with the inspection of security of fingerling habitat in Elk Lake near the mouth of Narrow Creek during April. They agreed to photograph and take T.V. pictures of the habitat at that time.

2273 Westwide Water Study - Al Elser

Inactive this report period.