

MEMORANDUM


State of Alaska
 DEPARTMENT OF FISH AND GAME

TO: Rupert E. Andrews, Director
 Division of Sport Fish

501.114

DATE : August 6, 1969

FROM:  Roger D. Wadman
 Regional Supervisor
 Division of Sport Fish

SUBJECT: Proposed Management-Research
 Study for Auke Lake, Juneau

BACKGROUND

Auke Lake is located 12 miles north of Juneau on an all-weather highway. It drains into saltwater in Auke Bay. Land use sites and power are readily available. Further facts:

1. The lake presently provides very little recreational angling. There is a limited population of cutthroat trout and Dolly Varden char.
2. The major species produced by the lake is red salmon. The adult run varies from 5,000 to 10,000 fish annually. These fish are not providing either a commercial or recreational catch except for a few that may be picked up in the Icy Straits purse seine fishery.

The second largest salmon run (200 - 500) is silvers, which receives limited freshwater fishing pressure near the lake outlet.

Chum salmon and pink salmon production can be rated as trace.

Sculpin and stickleback are also present.

POSSIBLE ENHANCEMENT PROGRAMS

1. Rehabilitate and stock with:
 - (a) silver salmon
 - (b) king salmon
 - (c) rainbow trout
2. Rehabilitate and utilize disease-free water for hatchery supply.
3. Leave as is.

REHABILITATE AND RESTOCK

This is one of the more appealing of the enhancement programs; however, a decision would have to be made as to which species of fish to produce. Silver salmon have been proven to be successful in similar situations. They present several drawbacks which should be considered.

Mr. Rupert E. Andrews
Director, Sport Fish

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August 6, 1969

The present natural populations of silver salmon in the Juneau area provide ample recreational opportunity. In fact, the silvers that Auke Lake would produce could easily be insignificant when compared to the natural stocks available. In addition, putting the lake into silver salmon production would preclude the utilization of the lake for recreational fishing. The only fish available would be fry silvers.

Restocking with king salmon is the next possibility. King salmon stocks are low and any addition to them would be welcome. If any numbers of kings were produced at all, it would be readily apparent in the anglers' creel. If both spring- and fall-run kings could be produced, the results would be dramatic.

The disadvantages to this program are that king salmon are as yet not proven to be successful in this type of situation. Also, as with silver salmon, the sole role of the lake would be that of fry rearing.

Rainbow trout would provide year-round recreational use of the lake. Rainbow fishing in the Juneau area is spotty at best. A good rainbow lake would be appreciated by both resident and tourist anglers alike. Strong opposition would come to this program from the majority of the local citizens, however, as Auke Lake is an historical salmon lake. In facing reality, it must be realized that Southeast Alaskans are salmon oriented. I do not believe any educational program, no matter how strong, would change their point of view.

Regardless of which species was selected for planting, a fishproof control structure would be required on the outlet. If salmon are selected, a weir would also be required, as well as temporary housing.

A problem would also be encountered with the returning adult red salmon. Whether a combined sport-commercial total take of these fish could be sold to the public remains in question.

HATCHERY WATER SUPPLY

This program would be readily accepted by local residents and possibly BCF. I believe it would be necessary to rehabilitate the lake to remove the possibility of disease-carrying fish. This would also remove the stickleback which conceivably cause problems at the Hatchery. After rehabilitation, the possibility exists the lake could be used for fry rearing if it is found that disease would not be a problem.

The drawbacks to this approach are the lack of availability of suitable land for a gravity flow type hatchery; however, if land presently owned by the Territorial Sportsmen and the first private lot on the left downstream side of Auke Creek was obtained, there would be ample space. Even the intertidal area, which is not a spawning area, could be filled and utilized.

Another problem is the potential pollution problem from residences and the College. This could be corrected by action from the Department of Health and Welfare.

Mention has been made, by Alex McRea, of the possibility of a gravity flow supply lowering the lake level during periods of low water flow. There are two possible solutions to this which may merit consideration. One would be to have a standby pump which would operate only during low flows to return the used water to the lake. The other would be to construct the hatchery on the lake shore and rely solely on pumped water.

LEAVE AS IS

At present, the lake provides many hours of aesthetic enjoyment to residents and tourists who watch the salmon fight their way up the creek. In fact, this is a scheduled stop on the tour bus system.

This approach, however, does not provide for any utilization of the fish beyond being "show pieces."

RECOMMENDATIONS

My recommendations are as follows:

1. that Auke Lake receive prime consideration from the Hatchery Section as a possible fish hatching and rearing location;
2. the lake be rehabilitated and planted to spring- and fall-run king salmon;
3. the lake be rehabilitated and planted to rainbow trout;
4. the lake be rehabilitated and planted to silver salmon;
5. leave as is.

Any segment of this preliminary report may be expanded upon to the degree requested or required.

MEMORANDUM

State of Alaska

TO: Roger D. Wadman,
Regional Supervisor
Division of Sport Fish
Juneau

FILE NO: 501.114 (New)

DATE : June 24, 1969

FROM: Rupert E. Andrews, *R. Andrews* Director
Division of Sport Fish

SUBJECT: Proposed Management-Research
Study for Auke Lake, Juneau

The Sport Fish Division has been requested to prepare an outline for a management-research study of Auke Lake with recommendations for its active management primarily for recreational fishery enhancement.

As I see it, several approaches are open to us, based on the most favorable return to anglers i.e. resident trout fishery or using Bear Lake guidelines. Any recommendations would be contingent upon the biological-political aspects. Also, I understand that the Auke Bay Laboratory has had past research interests in Auke Lake. Perhaps a cooperative approach might be investigated.

REA:lf

cc: Croxton
Noerenberg