

Memorandum

To : Survey Files

Date : September 20, 1989

From : Department of Fish and Game

Subject : Taylor Creek, El Dorado County

A better subject might be kokanee management in Lake Tahoe, but that might get lost. This one won't.

A meeting to discuss kokanee management in Tahoe was suggested at the close of the Bi-state fisheries meeting at Incline Village on May 17, 1989. The meeting was then scheduled and held on September 6 in Rancho Cordova in order to make decisions before the spawning season begins on October 1.

Attendees included:

Pat Coffin, Nevada Department of Wildlife
Jim Curran, Nevada Department of Wildlife
Don Junell, Nevada Department of Wildlife
Ted Frantz, Nevada Department of Wildlife
Jeff Reiner, Tahoe Basin Management Unit, USFS
Julie Perrochet, Tahoe Basin Management Unit, USFS
Jim Messersmith, California Department of Fish and Game
Patrick O'Brien, California Department of Fish and Game
Jim Ryan, California Department of Fish and Game
Russ Wickwire, California Department of Fish and Game

The following management goals for kokanee in Tahoe were presented and discussed.

- 1) Natural reproduction must be maintained in Taylor Creek, the only appreciable spawning stream, sufficient to maintain the species in perpetuity.
- 2) Also good management should ensure a sport catch of 20,000 to 50,000 age 3 fish annually. Fish should be 14-16 inches long TL.
- 3) Also best management will provide for eggtake of 1-2 million each year for management in waters outside Lake Tahoe.
- 4) Encourage spawning for public viewing and interpretive purposes in Taylor Creek.

Kokanee are popular with anglers and guides. The kokanee fishery takes considerable pressure off Mackinaw fishing during the summer months. The size of kokanee is believed to be inversely related to their abundance in Tahoe. During 1987, 1988, and 1989 when fish were abundant, average size dropped from over 14 inches to less than 12. In 1989, the small average size resulted in angler complaints. The group felt a desirable management goal would be a 14-16 inch TL fish.

The means available to increase the average length of fish include limiting the number of individuals recruited to the fishery and by increasing the harvest. Of these two only a limit on recruitment can be easily carried out. Based on surveys by Forest Service biologists, spawning habitat is limited to a maximum of 9,000 pairs of kokanee in Taylor Creek. To date there has never been an attempt to limit spawning, and escapement in 1988 reached over 50,000 in Taylor Creek. The group decided that spawning in 1989 should be limited to 9,000 pairs. This will require construction of a weir to count fish and a plan to pass fish in the best way. Should the fish be allowed through in groups throughout the run which lasts two months or should some other plan be devised? Additional thoughts are requested on this.

There also is a need for eggs for management purposes in other California lakes and reservoirs. Based on the 1988 eggtake 2,757 females produced 1.548 million, an average of 500 eggs each. For 1,000,000 eggs this means 2,000 females will have to be spawned. If the fish were larger, more eggs would be produced per female. This is another desirable feature of increasing the average length to 14-16 inches. A question of stocking Lake Tahoe was debated at length. There was no current consensus reached. Incubator capacity and rearing space limits production to 1,000,000 fish.

Capacity could be increased by taking eggs to Mt. Whitney Hatchery (one-time) or by using the Mason Valley Station under construction in Nevada. Both of these would require normal approval from our Fish Pathology Unit.

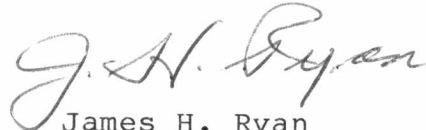
There was considerable speculation about survival rates of kokanee from egg to adult. In anadromous stocks one percent would be considered excellent. Based on one percent survival in Tahoe, a sport catch of 20 to 50 thousand age 3 fish would require between two to five million eggs. Eggtaking needs for management purposes would be 2.0 million, and about 1.8 million for natural spawning in Taylor Creek. This boils down to a total need of 5.8 to 8.8 million eggs based on the present 12-inch spawners. This would require a total population of 60,000 to 90,000 age 3 fish each year for all purposes. Several participants expressed doubt that

natural spawning in Taylor Creek could provide such a population without supplementary stocking. Unless the average size and average egg capacity were to increase, 9,000 pairs could produce only 4.5 million eggs. However, unless the present plan is implemented, our knowledge will remain inadequate and we will remain in the dark.

In summary, it appears the 1989 program will do these things:

- 1) Allow for 9,000 pairs of natural spawners in Taylor Creek.
- 2) Allow for an eggtake of 1,000,000 for management in lakes outside Tahoe.
- 3) If the spawning run drops below 1,000 pair supplemental stocking of 100,000 fry will be made in Tahoe in 1990. The objective is to maintain a continuous spawning run between 1,000 and 9,000 pairs.
- 4) The fishway between Fallen Leaf Lake Dam and Taylor Creek will remain blocked for the foreseeable future.

Sincerely,



James H. Ryan
Associate Fishery Biologist

cc: Participants
Almo Cordone

JHR:ds