

Redoubt Lake file

MEMORANDUM

State of Alaska

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SUBJECT: Long-Range Harvest
Management of
Chinook at
Redoubt Lake

Introduction

The concept of developing a long-range harvest management plan for chinook at Redoubt Lake implies a long-term project to produce chinook salmon. The goals of this project need to be identified. No one knows yet if this is a one-year research project or a continuing attempt at production. Before a long-range management plan can be formulated we need to know the scope of the project.

The following comments assume a 1-million fry release on an annual basis with survivals to produce 9,000 chinook adults annually. The concerns referenced in the FTP regarding competition with other rearing species for food and space, possible inadequate food base (Bosmina), and lack of knowledge regarding existing smolt numbers will not be discussed here.

Background of Redoubt Management

Redoubt Lake has long supported a traditional sockeye subsistence fishery. This is a dip net, spear, or gaff fishery with reported harvests of 400-500 fish annual

The sport fishery at the Redoubt outlet area is utilized by anglers who catch Dolly Varden and coho, sockeye and pink salmon. Redoubt also has a history of illegal sockeye snagging in the freshwater area below the falls. Many of these illegally taken fish are probably reported on the subsistence permits.

Contribution of Redoubt Lake to commercial fisheries is not fully understood. No one has attempted to identify the contribution of sockeye to the commercial fisheries. No local targeted commercial fishery occurs on Redoubt sockeye. However, some contribution likely occurs incidental to local pink salmon seine fisheries in Salisbury Sound and Sitka and possibly in District 104. Harvest rate of coho by commercial trollers is assumed to be similar to nearby

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Salmon Lake (35 to 40% of adult production). This contribution to the troll fishery would be 3,900 coho in years with adult escapement of 6,500 fish.

Expected Harvest Rates of Chinook by Commercial Troll and Sport Fisheries

Chinook salmon released in Redoubt Lake will contribute to traditional troll fisheries primarily along the outside coast of Chichagof and Baranof Islands and District 104. The harvest rate by the troll fishery is expected to range from a low of 30% during the general season to a high of 50% with an added early terminal fishery. Harvest then would range from 2,700 to 4,500 of the available 9,000 returning adults.

Harvest rate by sport fishermen is not expected to exceed 5% or 450 fish, even with expanded effort.

Issues

1. A large percentage of the total adult production will end up in the terminal area (Redoubt Bay) as the common property fisheries will probably not exceed 50% harvest rate.
2. Targeted fisheries to harvest excess chinook will have to avoid putting pressure on the sockeye stock, i.e. no purse seine fishery. ~~Perhaps~~ a special terminal troll fishery prior to the general troll season could be considered. Troll catch of wild fish or other hatchery production in Redoubt Bay should be low.
3. If chinook are allowed to enter the lake, they may compete with sockeye for spawning area, i.e. dig up redds, etc. This will also further expose the chinook to IHN-infected sockeye.
4. If excess adult return is captured at a weir and discarded, it is likely to produce a public furor. (How many thousand dark spawners can be given to the public and charitable organizations?)
5. Any weir operated to capture chinook will have to be operated so as not to back-up fish. This has been a real problem in other areas (Port Walter). A double weir system will probably need to be employed. Slowing the entry of chinook into Redoubt will cause increased straying of these IHN-exposed fish to other nearby chinook production facilities.
6. The project adult weir should be prepared to dispose of several thousand adult chinook.

5.10 ~~7. Redoubt Lake is a high-profile area near Sitka with a traditional sockeye subsistence fishery.~~

ENF 8. The presence of several thousand chinook in the freshwater area below the falls will greatly increase the enforcement problems which already exist. No chinook snag fishery will be allowed, however, as the sockeye resource will be protected.

SF 9. The existing freshwater sport fishery below the outlet falls will likely have to be closed during the period chinook are present to protect the depressed sockeye run and migration patterns.

Sub ~~10. The existing sockeye subsistence fishery may need to be further curtailed because of excess sport fishing pressure created by the presence of several thousand chinook.~~

~~11. If successful to adult production, this project will contribute 2,700 to 4,500 chinook to the general troll fishery and up to a few hundred to the sport fishery.~~

cc Van Hulle ✓
Cantillon