UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE

Paul Beck
see my comments pg 4

2630 Wildlife Planning (KETCHIKAN (CHICKAMIN DIST)) September 4, 1974

FISH CREEK Evaluation 101-15-085

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During August 21, 1974, through August 24, 1974, a field trip was conducted to determine the following:

1. Inspect (dike) improvement work on Salmon River.

2. Monitor fish run into Fish Creek with emphasis on chum salmon.

3. Map and document physical features of Fish Creek relating to improvement work.

4. Monitor fish runs (emphasizing chum) on other streams in Portland Canal.

5. Assist National Marine Fishery Biologist Jack Helle in collection of chum in Fish Creek and other streams in Portland Canal. Lengths, weights, and scale samples were taken to relate size of fish to other areas in Alaska.

On August 21, 1974, an aerial survey revealed and estimated 50,000 pinks and 7,000 chums in the Tombstone River. A light die off of pinks and moderate die off of chums was occurring reflected by carcasses present.

In the 10 miles of stream surveyed, pink were spread out on the riffles for the upper 7 miles, with the exception of one school located in a pool 2 miles upstream. Pink spawners were well distributed throughout with a small number (30) above the lake. Chum salmon were distributed in the upper 4 miles with none observed above the lake. Twenty-three chum carcasses were measured and scale samples taken to determine age and size. Preliminary analysis of the data indicated these chums to be of a large size but, not averaging that of the Fish Creek run.

On August 21, 1974, the Salmon River and tributaries were surveyed for chum spawners. In the drainage, two small tributaries besides Fish Creek were supporting chum spawners. The tributary located directly across from Hyder, on the left going upriver, contained 250 chum with a light die off occurring. Twenty-three chum carcasses

were also sampled at this tributary with preliminary data analysis revealing a large size, but not yet approaching the Fish Creek chum. Fifty chum were observed in the tributary on the left of the Salmon River going upstream in a line with the Fish Creek bridge. These fish were not sampled due to time limitation. Other tributaries in the Salmon River drainage had no spawners present. An attached map shows exact location of tributaries. On August 22, 1974, an estimated 10-20 chums were spawning along the lower end of the newly constructed Fish Creek dike. This spawning was in glacial water of the Salmon River. Spawning in the lower tributary near Hyder was also observed to be occurring in glacial water where the fresh water enters the river.

On August 22, 1974, I assisted Jack Helle, National Marine Fisheries Service, to collect lengths, weights, and scale samples from 250 chum salmon carcasses from Fish Creek. Preliminary data analysis indicates large chum spawners in Fish Creek for this segment of the 1974 run. Only carcasses were sampled with a substantial number of male carcasses over 20 pounds. Results of the sampling will be sent to the Ketchikan office when they become available.

On August 23, 1974, Fish Creek was walked in its entirety to estimate salmon escapement and document the physical nature of the stream. An estimated 5,000 chum salmon were observed with 90 percent spread out and spawning. Die off was heavy with 2,700 carcasses observed. Twenty-three pink salmon were observed in the lower and below the bridge. Coho fry Y.O.Y. and holdovers were observed commonly in the upper area above the bridge. Rearing coho were present but in small numbers in the lower area. Rearing area in the lower stretches is considered poor. Side channels off Fish Creek are limited and are characterized by large amounts of silt and sand. The lower pond areas are slow-moving stagnant waters and no rearing coho were observed. Two schools of Dolly Varden (estimated 50 each) were observed near the bridge. Dollies to 12 inches were observed in the stream and in the fishermen's creel. See attached map for detail. Special points of interest from the trip include:

1. The dike work looks good and if it holds will protect the Fish Creek spawning gravels. The area directly below the bridge was being heavily used by chum spawners. This area is now fresh water with no glacial sediments being added by the Salmon River. See attached map for details.

2. The large number of cars and campers were observed viewing Fish Creek. An estimated dozen campers were observed each day. Molesting of the salmon by throwing rocks, snagging, etc., was common. I talked to four different people (all cases were young boys) who were harassing the fish. At least one party of fishermen were present at all times I was at the stream, with good catches of Dollies common. Cans and other garbage was present along the stream. Lawrence Mark, a Hydar resident, was very concerned about the above problem.

3. The low density of wildlife in the adjacent area of Fish Creek. No bears were observed in the stream and only a limited number of tracks observed in the lower part of the stream (tracks indicated a sow and cub). Both brown and black bears have been observed in this area in the past. Remains of two bears were observed upstream. Viscera was observed near the bridge of a recent kill and remains of a cinnamon phase black bear yearling was observed further up the stream (time of death estimated spring of 1974). No bald eagle nests were observed and the total number of eagles observed was two adults and one yearling. This is a very low density considering 5,000 chum salmon were actively spawning in Fish Creek; the only large concentration of salmon for a considerable distance. The main gull activity was from bonaparte gulls working the salmon eggs. Very few glaucous wing gulls or herring were observed and salmon carcasses were intact. In most streams I have observed in Southeast Alaska, eyes are picked from the salmon carcasses. The small number of gulls is probably geographically caused.

4. The heavy concentration of chum salmon was characterized by where upwelling occurred in the spawning beds. A temperature probe was used to detect upwelling areas. Research by Helle indicates that major chum spawning areas are characterized by upwelling. This leads to some interesting possible effects timber harvest could have on these upwelling areas.

5. Pink salmon observed were exceptionally small in size. Only 23 fish were observed and none were collected. The males were mature and were estimated at from one to two pounds. Four pounds is an average used for Southeast Alaska pink salmon. In 1972 approximately 200 pinks were observed by N.M.F.S. above the bridge and small size was also noted.

Recommendations:

1. Conduct a survey after 5 years have elapsed to monitor effects on dikes and Fish Creek spawning area.

2. Close the sport fishing season on Fish Creek from July 15 until October 3. This would protect the vulnerable chum salmon in this stream from harrassment and snagging mortality. The new road system allowing easy access to the spawning grounds of Fish Creek promotes viewing of this resource, and compounds harassment etc., to the spawning fish from human encounters. A Forest Service sign placed on the road prior to reaching the spawning grounds with information on life history and uniqueness of this specie would be of value. Emphasis on effects of harassment could be included on the sign which may eliminate some of the problem. Closing of the season should be discussed with the Alaska Department of Fish & Game biologists and the State Wildlife Protection Division.

3. Close the area to black and brown bear hunting. This has been done at Anan Creek for viewing with apparent success. Increased use of the area will increase the value of viewing salmon as well as species related. This would only solve a portion of the bear problem. A town such as Hyder with 600 workers at the Granduc Mine and no permanent law officer would make enforcement difficult. I believe that protection is warranted and should be initiated to get full value from the resources at Fish Creek. This also should be discussed with ADFAG and the State Protection Division.

4. Conduct pre-emergent sampling in the spring to document areas of production and relate to dike improvement. Continue to cooperate with National Marine Fisheries Service on all phases dealing with life history of the large unique run of chum.

5. Monitor log jam located above the junction of the Salmon River as a potential barrier.

DENNIS [illegible]
Fish & Wildlife Biologist

Attached

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Agree that this should be discussed by ADF&G [illegible]