Willow Lake

Sept. 2, 1952

C. L. Anderson, Director
The Alaska Dept. of Fisheries
Juneau, Alaska

Dear Andy:

The following is a report of my activities for the month of July and August:

Fish Planting.

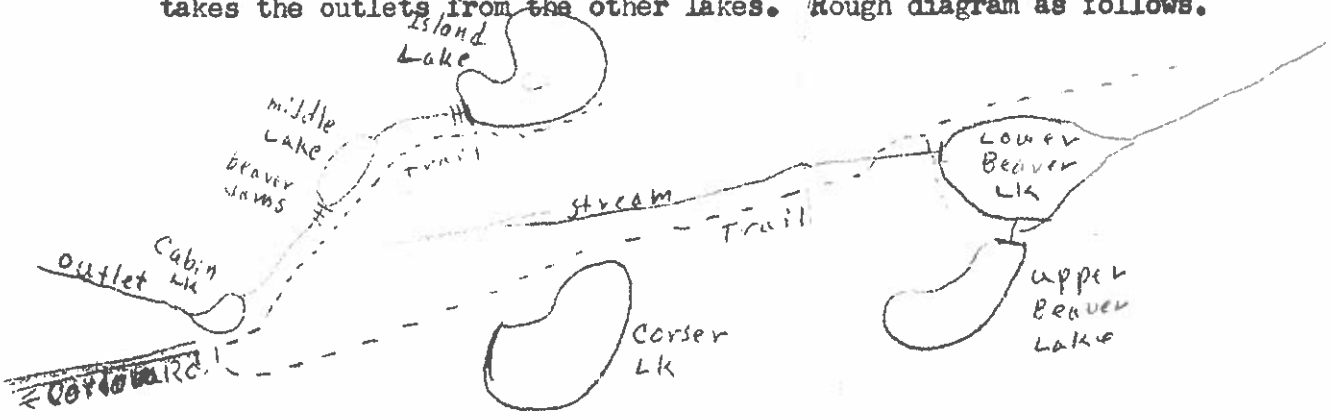
As this report is for two months, the fish planting can be covered in the one report. The planting, in general, went much the same way as the one you were at. Some of the cans would be in excellent shape, and some would have some mortality. All in all, I think it went very well, and Ed has every reason to be proud of the job. Ed, as you know, brought the last load over the Richardson Highway to Frand and Jerry's Lake, near Glen Allen. That trip was quite an ordeal, and the fish came through surprisingly well. My figures on the mortality for the plants made in this area is just slightly over 2%.

All of the plants were completed by Aug. 14th. I recieved verbal permission from FWS to make the Sand Lake experimental plant on Aug. 9th and we planted the lake on the 10th. Steve McCutcheon developed the pictures he took at the Upper Fire Lake plant, and we have the prints. The Anchorage Times sent a reporter out on one of the plants and gave us a very good write up with one of the pictures. You have the clippings on that.

Cordova.

After the trip to Cordova with you, Andy, I flew aver again during the latter part of August. I called Frank Hoover, of the local Issac Walton League, before leaving, and he made arrangements with Hollis Henrichs, the postmaster, to help me get around. I took some gear over with me and worked out all the lakes close to town except Scout Lake (planted with 150 rainbow fry last year) and Crater Lake (virging lake, 2½ mile hike at 1800 ft.).

There are six small lakes on the Cabin Lake system, all of them within a mile of the road on good trails. Cabin Lake, on the road, is less than 10 acres, 18 feet deep. It has a 3 c.f.s. outlet, and takes the outlets from the other lakes. Rough diagram as follows.



The Cabin Lake sampling set gave 2 cutthroat, 30 dolly, one white fish and two adult red salmon. Cottoids, stickleback and very numerous silver salmon fry were observed. From this informationaand local reports, I would say that the lake was carrying all of the fish it could handle at the present time.

Cabin Lake is the end of the anadromous fish run, however, and also has by far the best spawning facilities, so the other lakes follow a different pattern. Middle Lake, of about 5 acres, is also very shallow, so I by-passed it in favor of working on some of the others. It could very well be carrying a few cutthroat and dolly, however.

Island Lake, the upper lake on that tributary of the system, has about 50 to 60 acres of water and has a large area running from 20 to over 35 feet in depth. It has been supporting a moderately heavy fishery on the native stock and the spawning facilities appear to be quite limited. The results of the sampling set also indicated the population to be low, with 3 dolly from 8½" to 9¼" and 6 cutthroat from 6¼" to 10". Cottoids were also observed while working on the lake. No stickleback were seen, although they are undoubetdly present, being found throughout the system. The information we have now indicates that this lake would respond to a fry plant, and would be one of our best bets in the Cordova area.

Corser Lake, adajcent to the other tributary of Cabin Lake, has no visible inlet or outlet. It has about 40 acres of water. The maximum depth I found was 20 ft. Despite the shallow nature of this lake and apparent lack of water exchange, there is a trout population. A sampling set gave 7 dolly from 9½ to 14 inches and 3 cutthroat from 6½ to 8 inches. The fish were in very good shape, and had fast growth. A few stickleback were found, and there are, no doubt, cottoids present. About two-thirds of this lake is less than 10 feet deep. This might, along with the lack of water exchange, limit the number of fish that could be carried through the winter. When the fry are available it would be, I believe, worth while to try a small plant in the lake.

Upper and Lower Beaver Lakes, of about 20 and 30 acres respectively, are as far up the Cabin Lake system as I worked. I did not get out on them as we didn't have time to get the boat to the lakes. The lakes appear to be quite shallow--quite large areas in both lakes with emergent vegetation. There is some water exchange in both lakes, however, and trout were observed jumping on the lower lake. More work will have to be put into them before we can come to any conclusions. As is true of all these lakes except Cabin and Corser, the level is controlled by beaver dams. These dams, along with the small flow and rapid drop of the creek, prevent access by sea-runs.

Scout Lake, of about 25 acres, was planted by the local club last year with 150 rainbow fry they had left from 10,000 eggs flown in from a commercial hatchery in the states. I did not get to work

on this lake. I left a net with Mr. Henrichs and he is going to make a sampling set and take some soundings. The lake is blocked to migrants by a falls and is reported to be virgin except for last years plant. It may be an ideal spot for a few thousand of out fish.

Crater Lake, at 1800 feet, is also blocked to migrants by a falls and is reported to be virgin. From the reports I received, this lake will not be very productive--fairly high, deep, clear water, very few dhallows. The club is very interested in it, however, and it may be advisable to let them carry the fish in as the fry become available.

Mr. Henrichs has agreed to use his boy scout troops to work on the lakes for me. They can take sounding, make rough charts. measure water exchange, etc. We can us the information and will be able to work up a merit badge deal for the scouts out of it. I was very pleased with the interest shown by the sportsmen in Cordova, and by their sincere desire to help in any way they can.

Willow Lake.

This lake, as you will remember, is between Copper Center and Tonsina on the Richardson Highway, and is the one we were interested in stocking for the Valde, area. Ed, John Butrovich and I put a boat on the lake and checked it out this past month. Unfortunately, the maximum depth we found was less than 8 feet in this 500 acre lake. This will almost certainly preclude any sucessful carry over of trout through the winter. The fish reportedly found in the lake during past years must have been the result of yearly migrations from the creek system. The condition of the outlet would prevent any migration at the present time.

The Glen Allen area has numerous possibilities for our work, but that is quite a ways from the Valdez area. The only possibilities I have near Valdez at the present are the summit lakes, which do not appear to be very productive.

Sampling Work During July and August.

Lower Fire Lake, 16 miles from Anchorage.
1--two lb. rainbow, female, egg skein one-half mature, heavily infested with parasitic copepods.
1--6½ in. immature rainbow, one gill copepod.
3--9 in. landlocked silver salmon, mature testes.
1--6½ in. immature silver salmon.
No parasitic copepods were found on the silver salmon. Checked further during August, and the lake and connected creek system showed a few adult red salmon. Presumably silver salmon will also be found later, although no signs of young silvers, so commonly found in the shallow water areas, were seen. Some adult reds were also observed

trying to work up the small, steep creek into Upper Fire Lake. Do not know if the can make it. I had more or less made up my mind, from the condition of the creek and from local reports, that migrants could not get to the upper lake. Should be able to verify this one way or another during the fall. This little outlet creek from the upper lake is still our best bet for a hatchery site. The lower lake checked out a maximum depth of twelve feet, while the upper lake, reported locally to be "very deep", went thirty-five feet.

Hidden Lake.

Eight miles from Anchorage, planted with 1800 rainbow fry. Sampling set before plant was made gave three 17 in. dolly, egg skeins well developed, very good condition. One 18 in. silver salmon, eggs about one-half developed, very chunky fish, weighing a good two and one-half pounds. From the description of the fish at the time of planting, I believe these fish to be going into the third year, which would be exceptional growth. The condition of the fish also indicated very good growth.

Frank and Jerry's Lake.

149 mile post, Glen Highway. Sampling set gave 21 grayling, from 8 in. to 13½ in., 18 of them were from 11 to 13½ in. and 3 were in the 8 in. group. There is at least some natural spawn in the lake, as the fish could not all be from the original small salvage plant. There is no visible inlet or outlet. This lake checked out less than 15 feet deep. I can't understand why it doesn't winter kill, but the grayling have really been doing well. Still don't have too much on how readily grayling will gill in the sampling net. On the basis of this and the Eureka Lodge Lake sets, with what little I know of the expected populations, I would say that they are easier to gill than trout--thus the number of fish in the set would not be indicative of as high a total population in the lake as we would expect on a comparable set in a trout lake.

Eureka Lodge Lake.

128 mile post, Glen Highway. Sampling set gave 18 grayling, with one in the 8 in. group, the rest from 11 to 15½ in. Here again, with no visible inlet or outlet, there is some natural propagation. This lake also is extremely shallow, and why it doesn't winter kill is completely beyond the sketchy information I have on what constitutes a winter kill condition. The fish have been getting by for at least five years--would like to know how. I hope I can find a lot more lakes like it--these fish have really put on the growth.

I put in a few days on the Cottonwood Creek system. It consists of Twin Lakes, Cottonwood Lake, Mud Lake and Wasilla Lake. These are all fairly shallow lakes, running from about 50 acres to 1500 acres. Salmon and migratory trout have access to all of them and they also have resident rainbow and dolly varden, whitefish, suckers, stickleback, etc. They are located in the middle of the Matanuska Valley and have followed the general patter of all these lakes after getting any amount of fishing pressure. Both the salmon and

have shown very marked declines in recent years, and the regualtory measures instigated by FWS have given no appreciable returns. We cannot, of course, do anything for these lakes at the present time, but it would be of definite value if we could get a measure of the population change created in the lakes by the fishing pressure on both the resident and migratory slamonoids. I don't imagine I will have much time to spend on them, but it would be a very interesting project. The thing most readily seen is the tremendous number of stickleback throughout the lake system, and no doubt the sucker population is correspondingly heavy. These shallow, warm water lakes have a tremendous production potential if it could be utilizied.

Copper River Valley Sportsmen's Assoc.

On Aug. 12th I attended a meeting of the above club at Glen Allen Lodge. The previous week, shortly after they started the club, they had a meeting with representatives of the Alaska Command and FWS on the proposed withdrawal of the Lake Louise area for use by the military. The club had gone on record as opposing the project for the following reasons, as I remember their conversation: The military would decimate the fishing population of the lake without making any attempt to replace the fish removed. The caribou herds in the area would be destroyed by the military. The road would not be opened to general travel and it would prevent access to the area by civilians. Also much more in the same vein. The members of the club had considerable misinformation on what could be accomplished by "replacing" the fish removed from the lake, and had asked that every fish caught be "replaced" by a planted fish.

It is interesting to note that at the same time that this hassel was taking shape, FWS asked us if we could furnish some rainbow fry for the restocking of the lake. This was for the purpose, as explained to me by Roger Allin, of measuring the comparative returns from rainbow fry as against salvaged native in building up self-supporting spawning runs. I told him that we would probably be able to furnish a few thousand fry for them next year if they so desired, but that we would not be interested in taking any active part in the project. In passing, I would consider it most unlikely that any appreciable returns could be derived either from fry plants, native or otherwise, or from plants of larger salvaged stock.

My meeting with the members of the club consisted in explaining the background of our department and our sport fish program to them, and in enlisting their aid in getting information on local lakes which might be suitable for our management. I also covered the purpose and use of the territorial sport fishing license, getting considerable heckling from a drunk in the audience. He kept crossing me up with complaints that the Fairbanks area was doing a hell of a fine job on the sale of the stamps, so why couldn't we on this side? He was, as you may have surmised, a member in good standing of The Tanana Valley Sportsmen's Assoc.

Anchorage Sportsmen's Assoc.

As I mentioned to you when you came through from Kodiak, the Sportsmen's Assoc. is holding a raffle on a $5,000 Cadillac in conjunction with their annual dinner. They figure thay can get $15,000 from the raffle. The proceeds are tentatively to go toward a hatchery in the area for us. I was not advised of this until the night before their tickets and so forth were printed, as I was in Cordova. They have cooked up a "Fish Unlimited" deal for promotion, and I understand that we are mentioned in the literature. I do not have the details on it as yet, but will send them along as soon as I can get them (everyone is moose hunting right now).

On the face of the deal, it looks alright to me. One thing, we will have to have it very definitely understood that any use we make of the money (or hatchery or whatever) will have to be with no strings attached. I have been mulling it over considerably in the past few days, and that is the only drawback I can see in the situation--we definitely cannot be put in the position of having to accept direction in our work for any group. All in all, I would believe that the value of having them participate actively in our work would outweigh the possibility of obligation on our part.

That about covers my activities for the past two months, Andy. Tell the boys hello for me, and give my regards to your wife.

Sincerely,

Alex H. McRea
Senior Biologist

cc-Marvich