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Smithers, B.C.  
December 31st, 1950.

G.S. Reade, Esq.,  
Regional Supervisor of Fisheries,  
Prince Rupert, B.C.

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Herewith please find my annual report of the Fisheries in the Babine-Morice area for season 1950.

A. TREND OF THE SEVERAL FISHERIES.

There being no commercial fishing in this area we can only follow the Indian catch for food purposes. As in the past few years there is too great a change in the Indian fishery for this whole area. It seems that this fishery depends on many things. 1. If the Indians are working or not, 2. the weather, 3. What their plans for the winter are, 4. other things which do not seem of any importance to us. By studying the totals for the past 10 years we find that the slight decline can be governed by the facts above and that they are becoming more civilized. Moricetown Indians taking 5,735 Sockeye, 1,437 Springs, 1,654 Coho, and 225 Steelhead or a total of 9,051. The Babine Lake area did not have an accurate count this season as we had insufficient help to cover this large area, Indians are now spread over the entire lake being engaged in sawmill and logging operations. The estimated total for Babine Lake Indian food supply being 27,249. Sport fishing saw an excellent year and many wonderful catches were made, Babine Lake is now being visited by more outsiders than ever before, Americans constituting a large number of them. Sports fishing in the Morice Lake area was excellent, extra large Dolly Vardon abund having no sports fishery to hold them down. Bear Lake area did not have any Indian catch but sportsmen now fly into this area and have reported excellent catches of Rainbow and Dolly Vardon.

B. CONDITION OF FLEET OF FISHING VESSELS.

Lake or River boats powered by outboard motors are steadily increasing, the prosperity of the Indians have shown many new boats on the Lake. The number used for food supply would be difficult to estimate as they use everything from dug-out canoes to nice new shiny boats, the greatest majority use flat bottomed boats powered by outboard motors the average being from 5 to 10 H.P.

C. DEVELOPMENT OR CHANGES.

The Fisheries Research Board operated the Salmon Counting fence on the Babine River again this year removing it about October 15th. Their counts for the different varieties of salmon being Sockeye 543,658, Coho 11,654, Spring 6,838, Pinks 38,728, Chums 7. It was estimated that 33% of the sockeye count were Jacks following a 3 year cycle. Biologist F. Withler was in charge of erecting and operating and adult and fry counting fence on Wiggins or 6 Mile Creek on Babine Lake. They counted ascending adults at 1,225.

The Fish Culture and Development Branch have had a variety of operations in this area, A crew under Engineer J.B. Dyson returned to Babine Lake to see conditions of streams that had been worked on in 1949 and to do any other work found necessary. Men were hard to procure as they could make much more working elsewhere.

A crew under Biologist J. Stokes attempted to make a survey of the Morice River and Lake areas but had difficulties with snow, ice and water conditions as well as inadequate outboard motor power which was finally rectified. Tagging took place at several points of the Morice River and Biologist Stokes attempted to get an accurate count of Sockeye on the Nanika River and Springs in the Morice River. The Nanika remained very silty and observation was therefore very difficult, he was however able to make an estimate of between 25,000 and 35,000 sockeye. I did not visit this spawning area this year, Biologist Stokes giving me his figures.

Engineer R. Gordon and crew made a water survey of the Morice River spawning area, but results are not known to me.

Engineer M.H. Campbell made periodic visits to Moricetown Canyon

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laying out the proposed fishway. Considerable opposition was encountered with the Indians there as they did not want the fishway put in and would not change their opinions even after the Minister of Fisheries promised that they would get all the fish they required for food purposes. Engineer Campbell finally began work late this fall and there has been satisfactory progress to date with one side finished to grade and the other over half blasted out.

The Aluminum Co. have been doing some research work on the Nanika River pending a dam site location on the Nanika River, little is known of this operation.

There was some experimenting with dip nets and barbed gaff hooks at Moricetown but nothing was enforced as their mode of fishing will be changed with the erection of a fishway this next season.

About the middle of June the F.P.L. Branta was brought in by truck and launched in Babine Lake, this is considerably more comfortable than the Babine 2, but there are numerous changes necessary to make it a good Babine Lake boat.

At the beginning of October Captain Mercer and crew arrived from New Westminster station to build ways and addition to Boat house for the F.P.L. Branta, a good job was done but there is still considerable work to put it into condition.

#### D. ABUSEMENTS.

There were few abusements this season with every effort being made to keep them at a minimum.

#### E. CLOSE SEASONS.

The weekly close seasons were changed at Moricetown Canyon this year to conform with those on the coast, they seem to work just as effectively as the split closure and are much easier to regulate. No difficulties were encountered.

#### F. STEPS TAKEN FOR PREVENTION OF ILLEGAL FISHING.

The Department owned truck was used extensively to prevent illegal fishing the sale of fish by Indians.

Two inspectors were in the area, the senior one doing the organization of the whole area and checking. The Junior Inspector being in charge of the Babine Lake area and did his patrols from the new boat F.P.L. Branta, it was found necessary to place the patrolman, who should be left in the Fort Babine area, on the Branta as a safety man. This did not prove satisfactory as we had little check on the Indians at the Upper end of the Lake, in fact the whole area could not be checked as often with one boat as can be done with two.

A Guardian was stationed at Moricetown Canyon to keep check of the Indian catch and regulate the fishing and prevent illegal fishing and sale of salmon by Indians.

#### G. THE PROTECTION OF WATERS FREQUENTED BY FISH.

The majority of sawmill and logging operations immediately by spawning streams have been inspected but there are many more scattered throughout the area that are very mobile and a constant check is difficult to keep, however the B.C. Forest Service in this locality are very co-operative. A complete check will be carried out during these winter months.

#### H. CONDITION OF FISHWAYS.

A fishway is now under construction, scheduled for completion before the spring floods of 1961.

#### I. SPAWNING CONDITIONS.

SOCKEYE. In the Bulkley River system the Sockeye arrived about on time, starting slowly and then heavy for about 3 weeks, then they slackened off. Biologist Stokes spent the whole season in an effort to make an accurate estimate of the Sockeye passing up the Morice River

and to make a count of those on the Nanika River. His estimates were between 25,000 and 35,000. I did not see this River this season but judging by the escapement at Moricetown I think that figure would be fairly accurate, the run was not quite as heavy as last year.

In the Babine Lake area there was a fence count of 543,658 however of this number 33% were estimated to be Jacks. This leaves an effective number at about 360,000. Three years ago there was also a heavy run of Jacks estimated at 47%. The effective fish were of good size and sexes were fairly well even. Water conditions were not very good this year with very low water being encountered. On some streams salmon had difficulty in getting up. The effects of stream clearing certainly proved its worth in this season of low water, Babine Lake being very low this year. It is our opinion that this low water has brought about considerable Lake Spawning being noticed much more this year than in others. We first noticed this in the Bear Lake area and found that Babine Lake also had considerable and is thought that it constituted almost one third of the effective fish passing through the Babine River fence. It is very difficult to make an estimate of this spawning in Babine as well as Bear Lake. Bear Lake differs somewhat in that most of its spawning is right along the beach and it is possible to see a part of it taking place from the waters edge to a point beyond sight. The Streams of Bear Lake area can only be estimated as they are usually past their peak when we arrive. There was a little heavier run into this system than in 1949. In considering the whole escapement for the Babine - Morice area I should say that is was of medium proportions and would compare fairly well with both 1945 and 1946. when there is such a high percentage of Jacks it is difficult to know how to compare and as we do not know what the percentage of age ~~xxxx~~ classes in this years run it can't be compared to any certain year.

**SPRINGS.** There was a medium run into the Babine River comparing well with the cycle years. There was an excellent run into the Morice River, about the same intensity as 1949 but we were able to cover a much greater area of river and made an estimate of 15,000 mostly large and medium springs. The Bear River had a good seeding although we estimated only about half as many spawned as last year or about 25,000.

**PINKS.** The Pinks in the Babine River do not nearly compare with their cycle year. The fence counts here do not give the entire story as there are always a good number of Pinks that do not go through the fence and either die or spawn below the fence these of course are not counted. In a year with out the fence these Pinks spawn further up the stream. The intensity did not nearly compare with the cycle year when there was a very heavy run. Pinks in the Bear Lake area were very light being their off year. There were some pinks got up to the Moricetown Canyon but very few were able to surmount the falls.

**COHO.** The coho were very hard to estimate this year as the whole area had an early freeze up making it impossible to inspect. The water levels were low and in general they had a difficult time. The numbers passing through Moricetown were a good indication that a medium run passed through but I was unable to account for all these on the streams. Coho on Babine River and Lake were of medium proportions but a little heavier than the cycle year. They suffered heavy losses on the shallow creeks from predators. In the Bear Lake area they were just entering the streams when we left and count would be made. There is also a run of Lake spawning here.

**CHUMS.** Seven were counted passing through the counting fence on the Babine River.

**STEELHEAD.** Steelhead were very slack this spring but this fall there seemed to be an excellent run. They were seen spawning along with Coho this fall which was sort of unusual. A medium run entered Babine late this fall.

DOLLY WARDON. This predator abounds in the Babine Lake and Morice Lake areas, Very little sport fishing is done in the Morice Lake or Bear Lake areas therefore there are a large quantity of Large fish. Trout fishing was excellent this season and a good number of large fish were caught, Americans are coming into this area in ever increasing numbers and all were well pleased with their catches.

Water shortage seemed to be our main concern this past year and very few rains in the fall when they were needed failed to give us any too much water. The eggs should not suffer too much as the salmon spawned when the water was lowest therefore should have protection when it comes up.

#### J. GUARDIAN SERVICE.

The Guardian Service comprises of a Guardian at Moricetown Canyon and a patrolman at Fort Babine. The Patrolman was used considerably this season on the F.P.L. Branta which restricted our check on the Indian Fishery. For a more balanced control a qualified man should be employed to take charge of the F.P.L. Branta and be responsible for her, leaving the Patrolman to do his duties in the Fort Babine area and to allow Inspector Gelley the freedom of leaving the boat to go up streams

#### K. SUMMARY.

Conditions have been fairly good with much work having been done in the area. Operation of an adult counting Fence on Babine River and the erection of an adult and fry counting fence on Wiggins Creek by the Fisheries Research Board.

The Fish Culture and Development Branch have made a water survey of the Morice River spawning area; Biological survey and trail clearing including tagging operations on the Morice and Nanika Rivers; Fishways are now under construction at Moricetown Canyon.

The Aluminum Co. have made an investigatory survey regarding Dam site on the Nanika River, little is known of this, only what has been released to the papers.

The F.P.L. Branta was launched in Babine Lake and is considerable improvement on Babine 2. although there are many changes necessary on it to make it a good Babine Lake Boat. Captain Mercer and crew of New Westminster Station erected ways and addition to boat house at Donald's Landing.

The Department owned truck was used to transport supplies etc. to different camps and to facilitate the inspection and control of the area in my charge. The use of this truck for sawmill and logging inspection was limited last winter because of the delay from Dec. 1st. to June 22nd. to have the transmission replaced.

There was a medium escapement of salmon to this area, 33% of the Sockeye entering Babine Lake being Jacks. Water conditions were mostly low and in places had difficulty. Snow and ice conditions to date being good with little loss anticipated.

FILE NO. _____
JAN 8 1951
LETTER NO. 0005

Signed. *W.K. Elliott*  
W.K. Elliott  
Fisheries Inspector.

WEATHER CONDITIONS.

The Spring run-off was late this year, with water levels very low during the time that salmon fry were emerging from the gravel. A higher than normal mortality was observed at this time, due to this low water.

Water levels went up to flood stage during the peak of the Spring run-off, but this condition did not last long, and little damage was found on the spawning grounds.

After the Spring run-off, water levels dropped quickly, and remained lower than normal during most of the salmon season.

During the month of October heavy rains brought local streams to flood stage for a few days, but this period was of short duration and not as severe as in other years. Little or no damage was found on spawning streams after this freshet.

About the middle of November weather turned very cold, streams dropped to their lowest point of the year, and in most cases froze over.

This cold snap lasted until nearly the middle of December, when warm rains brought water levels back to normal, and freed most of the streams from ice.

SPAWNING GROUND SUMMARY.

Spawning ground inspections were made throughout the area during the salmon season. Stream reports were made on salmon streams.

Sockeye.

The Sockeye run of about 20,600 fish was the lightest that I have seen on this area, and was much lower than the cycle year of 1946. The run on the Allistair lake area was down a little on the 1947 figure, but as it was not inspected in 1946 can not be compared to the cycle year.

Kitsumgalum lake area was lighter than 1946, but about the same as 1947. These Sockeye, especially the late run fish were of exceptional good size. Very few jacks were observed.

The Lakelse lake run of about 2,000 fish was the lightest on record as this area always handles at least 10,000 fish. Nearly a third of these Lakelse fish were Jacks and the ratio in the larger fish favored the males.

The Kispiox area was lighter this year than in either 1947, 1948, or 1949. Streams throughout the area were lower than normal, and predation by bears heavier on that account.

Springs.

Spring spawning is scattered in this area, with perhaps the most concentrated taking place in the Kitsumgallum river and the Zymoetz river. The silty condition of these rivers make an accurate estimate impossible. From the size of the Indian catch, and from comparison of the numbers found on smaller streams, a lighter than normal run is indicated.

Pinks.

Pink seeding was better than the cycle year of 1948 throughout the area.

Lakelse river had a very good seeding with over 200,000 fish.

Kitwanga river showed an increase over 1948 with about 100,000 fish.

The total estimate on streams that could be accurately checked was about 325,000 fish, but this does not include the main Skeena river, the Kitsumgalum river, or Kispiox river.

These last named rivers are large, and condition of water make an accurate estimate impossible, but are known to carry a large number of spawners, and the total escapement to the area could be double the figure of 325,000 fish.

SPAWNING GROUND SUMMARY, cont.Chums.

Chum spawning is not found to be very concentrated in this area, with the general rule being a few hundred fish on some of the smaller streams.

The heaviest spawning found this year was on Kitwanga river, with about 6,000 fish scattered over 20 miles of stream. The escapement on the streams on which an accurate estimate could be made was about 8,600 fish.

Coho.

Coho run was lighter than 1947 throughout the area with the exception of Lakelse river, where the seeding was slightly better. Water levels were low during the first part of the Coho run and fish did not enter the smaller streams until late. A few fish were observed under the ice after December 1st. The known escapement would be about 19,800 fish, but this does not include the spawners of some of the silty streams, where an accurate count is impossible.

Steelhead.

This run is scattered throughout the area, and spawning takes place during the winter and into the late spring. An estimate of numbers can not be made for this reason.

Indian catches were lighter than last year, while catches by sport fishermen were about average.

FRY SALVAGE.

Streams were very low in this area until about the 1st of May. About the middle of April, fry began to emerge from the gravel in the Zymoetz (Copper) river, in some of the side channels and sloughs. Fish were found coming out in small seapages and springs, where there was hardly enough water to cover them, and not enough to take them to the main river. In some instances bunches of several hundred fry were found in dry ground above the water line. In most cases these fish were dead, but in some instances the lower layers were still alive.

Trenches were dug to let these fish into the main river and in some instances they were taken to the river in a bucket. Several thousand fry were saved in this manner.

INDIAN FISHERY.

97 fishing permits were issued to Indians this year. Close contact was kept with this fishery in order to keep track of catch, and to eliminate waste, as much as possible, caused by carelessness and poor fishing methods.

Dipnetting was continued at Hagwilget Canyon with only limited success. Barbed gaff hooks were introduced, which proved more efficient than the straight gaff in the taking of salmon, but did not find favour with the Indians on account of the cost and difficulty of manufacture as compared to the old type. The total catch was lighter than last year.

	<u>1950</u>	<u>1949</u>
Sockeye	9,344	11,190
Springs	721	1,046
Coho	1,216	2,534
Steelhead	338	890
Pinks	2,305	1,573
Chums	67	46
Total	<u>13,991</u>	<u>17,239</u>

SPORT FISHING.

Sport fishing was average throughout the district, with very good catches of Dollyvarden and Steelhead taken in Copper river. Fishing for jackspring was good at Hagwilget canyon in the Spring, but Coho fishing was poor there in the fall. Fair catches of Cutthroat were made in local lakes.

#### VIOLATIONS.

No arrests or seizures were made. The area was covered as often as possible by Inspector and Guardian and a close watch kept on fishing spots to prevent infractions. Posters were put up in conspicuous places. Regulations were discussed with fishermen met in course of patrols. Visits were made to logging operations in the vicinity of salmon streams, and no violations found in this respect.

#### GUARDIANS.

Only one Guardian was employed in this area. This Guardian Mr. G.F. Ironside, was employed in the Hazelton area during the salmon season. He patrolled this area, with his personal car, taking care of the Indian Fisheries at Kitsequecla, Skeena Crossing, Hagwilget, Hazelton Glen Vowel and Kispiox, as well as making spawning inspections in this area. His services were satisfactory.

#### LOGGING OPERATIONS.

There has been a general increase in logging throughout the area. This increase is due mostly to the Columbia Cellulose Company, who although they have not started logging on their own limits, have been buying timber from several smaller operators in the district. The Company purchased about 5, 000,000 board feet of pulp logs this year. Most of this timber has come from the lower Kitsumgallum and Zymagotitz rivers. Only a small part of this timber has come from land along the river banks, and in some cases has been trucked fairly long distances.

An attempt to drive this timber was made along with 3 to 4 million feet purchased last year.

Unusual low water conditions and an early freeze-up greatly hampered this operation, and only a small percentage of the timber went through to the booming ground at Scotia river. The remainder is scattered over the bars in Kitsumgallum and Skeena rivers and will not be picked up until spring.

There were in addition, several small sawmills put into operation but these are not near salmon streams and need cause no concern.

#### WATER RIGHTS.

Three applications for water rights were passed to this office, for stream inspection in regards to their affect on salmon runs, Namely;

Diversion on Kitsumgallum river by Columbia Cellulose Co.

Diversion on Juniper creek by Western Uranium Cobalt Mines Ltd.

Clearing on Pontoon creeks are not salmon streams and need cause no concern.

While the Kitsumgallum river is fairly large salmon producer, the nature of the diversion had no ill effect on salmon runs as it was only the cutting off of one point to straighten the river for log driving, and that portion of the water, about one quarter of the river at normal stages, went directly back into the main river and did not cause any falls or obstructions.

#### SEAL HUNT.

A hair seal hunt was carried out again this year with the help of Inspector L.J. Gelley from Babine Morice area.

In all 156 seals were killed and of these 75 were retrieved. In addition about 25 to 30 more were hard hit but disappeared in fast water before it was certain if they were dead.

Although the number killed this year did not come up to 1949 figure, the percentage killed, of the population found this year, would be about the same.

There was a definite decrease in the numbers observed on the river this year.

While no doubt some of this decrease is due to the last 3 years hunting, it is possible, that unusual water conditions and increased activity on the lower river by Columbia Cellulose boats, may have caused some seals to find new pupping grounds.

STREAM CLEARING.

Three small logjams were cleared in Deep creek and a beaver dam removed from Falls Creek, by Inspector without outside help.

WASHINGTON STATE DEPARTMENT OF FISHERIES.


In September two hatchery men from The Washington State Department of Fisheries, arrived in Terrace, with permission to take 1,000,000 pink salmon eggs from Lakelse river for their hatcheries in Washington. These eggs were set up in a temporary hatchery at Lakelse Lake until they reached the eyed stage, and were then shipped by C.N.R. Express to Sumas B.C., from whence they were taken by an agent across the Border to Burlington.

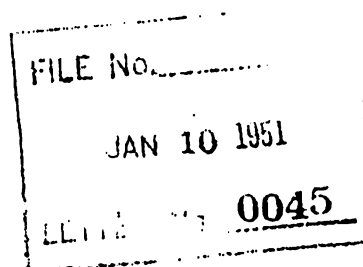
As there was an exceptionally good run of pinks on this area this year, the small percentage taken in this operation would not reduce the seeding to any extent.

EQUIPMENT.

The only new equipment supplied to this area this year was the repeating shotgun for the seal hunt. This shotgun was found to be much more efficient than the light guns used in the first two years. Other equipment operated efficiently, although expenses for the panel truck were higher than last year.

January 6th. 1951,  
Terrace, B.C.

  
V.H.B. Giraud,  
Fisheries Inspector.





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FILE NO.....



CANADA

DEPARTMENT OF FISHERIES

OFFICE OF

Smithers, B.C.

Feb. 7th. 1950

G.S. Reade, Esq.  
Regional Supervisor of Fisheries,  
Prince Rupert, B.C.

Indian fish traps at Moricetown and Hagwilget.  
Last used at Moricetown in 1937.

Mr. R. McDonell ( Ex. Fisheries Inspector) states that he considers that traps of the type that were used at Hagwilget and Moricetown the best way to take fish at these places, but traps would have to be run by Dept. and fish so taken then turned over to the Indians. Mr. McDonell believes that even with traps that some gaffing would be done.

Under Indian tribal law Indians have different locations to fish, There are two places at Hagwilget where a basket or trap can be used. Moricetown also has two spots that can and has been used.

At both Hagwilget and Moricetown one trap was set at the surface and one at depth.

The traps were a source of friction at all times and were discontinued through this fact.

The Indians using the baskets were commercializing the fish both to whites and to Indians.

Due to this fact Dept. refused to renew permit, also Indian Dept. did not encourage rebuilding traps by not giving them any blocks, cordage, twine ect.

Traps were somewhat like lobster traps but larger and made up from small poles and were lifted from water by a long pole used as a lever by a rigging of blocks,

I believe the traps at Moricetown were controlled by Louie Tommy, At Hagwilget by Donald Grey.

I may be able to add to the above information after I see some of the Indians concerned.

L.J. Gelley  
Fisheries Inspector,  
Smithers, B.C.