

ANNUAL NA RRATIVE REPORT - BULKLEY-MORICE AREA.

TREND OF THE SEVERAL FISHERIES.

Commercial Fisheries.

There are no commercial fishing operations conducted in this sub-district at the present time.

Indian Food Fishery.

Enumerated in the table below, are the Indian Food Fishery catches at Moricetown falls for the period 1956 to 1962, inclusive.

YEAR	SOCKEYE	SPRING	COHO	PINKS	STEELHEAD	JACKS	TOTAL
1956	1,429	3,200	1,617		296		6,532
1957	178	2,450	461	22	52		3,160
1958	165	2,874	244	4	112		3,399
1959	824	2,613	1,237	985	315		5,714
1960	473	677	892	238	107		2,390
1961	1,016	2,092	1,145	1,078	593	1,990	7,914
1962	645	1,148	1,328	500	395	1,015	5,031

(In addition to the above a total of 40 Chum salmon were taken.)

Comparative features of the above indicate the following:

- i) Sockeye catches, though not large compare favourably with other years.
- ii) Spring catches indicate a 50% abundance from 1957 to 1962.
- iii) Other species compare very favourably with catches taken in other years and in the case of Pink salmon and Steelhead a good abundance is indicated.

A total of 50 permits were issued to the Moricetown Indians, and it is thought to be a good representation of the population engaged in fishing for food purposes. It is now understood that more than one permit had been issued to a family or 'family group' but this would be very difficult to prevent, as very often families are split and do not reside in a family dwelling, nor retain the family name. It is hoped that this matter, if only for statistical purposes, can be corrected somewhat during the 1963 season.

Of all permits issued, it is suggested that 95% of all permit holders utilized gaff hooks for the taking of salmon, with only 3 gillnets being used. A few salmon were taken by dip-net during low water levels.

A two day closed period was utilized during the year, and this was recognized by all Indian permit-holders, and allowed for a good escapement period. There were no apparent abuses of the closure.

Sport Fishery.

There is no question whatsoever, that the salmon escapement to the Bulkley Morice and other rivers in the sub-district, are annually attracting more and more tourists to the area, in an effort to enjoy the unusually good fishing afforded, by migrating Spring and Coho salmon during the summer months.

The situation, although basically of tremendous economic value to the Province of British Columbia, does offer some unfavourable complications to the available salmon. It is felt that during hot periods during the summer, when stream levels are low, salmon often remain in deep shaded pools, awaiting a favourable rise in water conditions to provide better passage upstream. In a case such as this, salmon are often subjected to tremendous pressure by both local and out of province fishermen, who are aware of an accumulation of salmon in these particular pools, and exert a great deal of fishing time in the locations. This is particularly true of the situation at Moricetown Falls, when it seems salmon require a considerable volume of water in the fishways before attempting an upstream migration through same. On one occasion during the past summer in excess of 100 automobiles were parked at Moricetown, with at least one occupant from each car carrying a rod and reel, and attempting to take salmon from the pools below the fishways.

After this pressure has been averted, with an upstream migration, the fish are further exposed to the sport fishing element. With the advent of better access roads to inland lakes, salmon are often interrupted in the spawning process by sport fishermen who find the salmon ready victims to almost any lure presented. Although the salmon do not offer an appealing nor appetizing table product, the thrill of hooking and landing a large salmon undoubtedly appeals to these sportsmen, regardless of the consequences to the fish, even if released.

With these thoughts in mind it has been suggested, therefore, that consideration be given to closing the upper portion of the Morice River to sport fishing efforts, for the duration of the Spring salmon spawning cycle. These are known spawning beds and accessibility is extremely convenient. Spawning populations are not of sufficient volume to afford being exposed to exploitation at this time.

DEVELOPMENTS AND CHANGES

The Fish Culture and Development Branch, with the established hatchery at Nanika River, this year transported 10 million Sockeye eggs from the Babine Lake to the hatchery for incubation and distribution in the Morice Lake watershed, in the hopes of rehabilitating this depleted run.

Logging operations are continually increasing on or near watersheds which prior to the development of excellent roads were not being utilized for logging purposes. Camps are established on the lakes draining into Morice and constant checks are necessary throughout the winter months to help prevent and control any unnecessary debris being deposited in locations which would eventually prove detrimental to fishery interests. To date there has been little of this type of interference reported or seen.

One of the major developments in this sub-district which could prove to be of major importance is the general increase of beaver throughout the entire area and on all known and surveyed watersheds. Dams are built regularly and in locations which are almost impossible to gain ready access. Dams are no sooner removed by Departmental personnel than the reconstruction process is in progress again. The only solution presently available seems to be to remove as many dams as possible and in the most strategic localities, to coincide with the arrival of migrating salmon. To date this has been the accepted practice. However, due to the large geographical abundance of the area, it is not possible to ascertain the volume or inconvenience dams may be causing on less important systems. A full survey would be a major undertaking. The most practical solution would appear to be to offer a bounty on a specified number of beaver each year, such as is done with the hair seal on the coast, in any effort to control population explosions which appear to be occurring throughout the entire area.

It has been suggested that there would be a natural deterrent to an over-abundance of these animals, but to date such has not been the case.

ABUSES.

None filed or recorded.

CLOSED SEASONS.

A two day weekly closed period was established during the Indian Food fishery at Moricetown Falls during the season. This was accepted by the Indians and generally adhered to.

STREAM INSPECTION DURING MIGRATING PERIOD.

Regular inspection were conducted throughout the entire sub-district during the salmon migration period to ensure there was no pollution of streams. All stream were also checked for log jams, beaver dams etc.

CONDITION OF THE MORICETOWN FISHWAY.

Fishways presently appear to be in normal condition, but may require some minor repairs after ice conditions are disqualified.

SPAWNING CONDITIONS.

Spawning conditions during the 1962 season were considered to be excellent. Water levels acquired and maintained a constant moderate level during the entire migration period. This proved to be particularly advantageous to the Spring salmon run, which is usually retarded for a few days at Moricetown Falls. This year with good water levels the run was not hampered and thereby exposed to a heavy Indian Food fishery. Escapements considered good.

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PREVENTION OF OFFENSIVE ACTIONS.

A Guardian position is established at Moricetown Falls, and the employee is instructed to carry out the following duties:

- a. Prevent illegal fishing during closure periods.
- b. Stop or report and known illegal distribution of salmon taken by Indians, under permit, for food purposes.
- c. Tabulate and report on the volume of the Indian Food fishery.
- d. Report on salmon migrations through the fishways and report any and all irregularities noted.
- e. Repair and keep establishment in good order.

In addition to this, regular patrols are carried on by the local Officer during the entire season. When concentration of sport fishermen are reported in a specific location educational advice is offered in respect to salmon runs etc. This advice is believed to be helpful in reducing infraction against the regulations such as exceeding stipulated daily limits etc.

During the past year it has become apparent that there is some illegal distribution of salmon by Indians. It is a known fact that some Indians accept monies in exchange for salmon caught under permit for food purposes. Little could be done to actually lay a legal information, but the suggested violators were informed that the Department was aware of the activities. This depreciated the illegal activities for the 1962 season. It is suggested that there is no concentrated attempt to distribute the fish in a central location or through a major source, but rather small quantities are sold to numerous outlets.

ESTIMATED SPAWNING POPULATIONS AND LOCALITIES.

All spawning locations had sufficient water supplies.

Sockeye.

This species had an estimated total escapement of 6,600 pieces. Of this total 4,000 were in the Upper Nanika River, with the balance frequenting the Bear Lake system.

Springs.

15,500 spring salmon were observed on the spawning grounds, with 10,000 being present on the Bear River location. 4,000 were located on the Upper Morice, with the balance being spread over the Upper Bulkley.

Pinks.

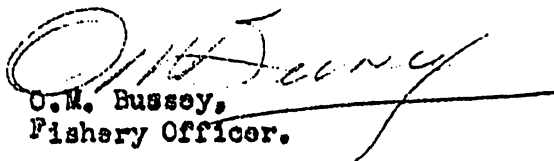
Although only 6,100 Pink salmon were observed, this certainly offers a tremendous increase over the 550 representatives noted in the brood year.

Coho.

A strong run of this species was observed in all streams inspected. Although difficult to establish the size of these runs, it is estimated that an escapement in excess of 13,000 was realized.

SUMMARY.

Although not particularly strong in any respect, the escapement is considered to be suitable, and with adequate support and care, should offer sufficient parent stocks for fair to good returns. The 1962 escapement compares favourably with that taken over a ten year average.


O.M. Bussey,
Fishery Officer.

ANNUAL NARRATIVE REPORT

TERRACE-LAKELSE AREA

- 1962 -

WEATHER CONDITIONS

Winter conditions 1961-62 were generally good from a fishery standpoint until January 1962 when periodic quick thaws and sharp freezing during low flows caused some heaving and drying on bars of the main stem Skeena from Terrace west.

Water levels were normally high over most of the areas streams until February. Low levels continued throughout the spring until early June flood run-off that was about six feet below normal year flood crest levels. Summer levels were adequate in most of the important streams. Fall rains increased levels in September and a flood level occurred in October that continued at a slow rate of lowering until the lowest levels in February. Snowfall was less than normal. Early winter levels totalled approximately three feet and all was practically melted off by mid-January.

A table of comparison temperatures and precipitation provided by the Terrace Department of Transport meteorological station will show the general conditions in the immediate Terrace locality. Minimum temperatures in the interior Kispiox-Hazelton area as reported by local residents were more severe with reports of 15 and 20 degrees below zero for January and February. Adequate water levels, no flooding reported. Snowfall much the same as the lower portion of the area.

		Max.	Min.	Pcpn.		Max.	Min.	Pcpn.		Max.	Min.	P.
1960	Jan.	43	-04	5.7	Feb.	44	15	3.88	Mar.	51	10	5.0
1961	Jan.	41	13	8.77	Feb.	43	12	1.16	Mar.	57	20	2.0
1962	Jan.	49	-04	10.93	Feb.	43	13	.52	Mar.	62	02	1.0
1960	Apr.	70	28	2.58	May	72	32	1.81	June	73	33	1.0
1961	Apr.	68	27	1.54	May	76	37	.98	June	81	37	1.0
1962	Apr.	62	29	4.44	May	72	27	.65	June	79	37	1.0
1960	July	90	40	2.00	Aug.	93	40	5.32	Sept	78	37	1.0
1961	July	93	44	0.20	Aug.	89	48	1.78	Sept	79	32	4.0
1962	July	88	45	.94	Aug.	78	42	2.82	Sept	78	37	3.0
1960	Oct.	60	34	10.44	Nov.	48	19	5.38	Dec.	40	12	5.0
1961	Oct.	65	24	9.72	Nov.	46	14	4.30	Dec.	38	5	6.0
1962	Oct.	54	32	7.52	Nov.	55	30	11.22	Dec.	43	10	6.0

Total precipitation for the year 1962, 51.60 inches; snowfall 38 inches

Mean temperature for the year 43.4.

SPAWNING SUMMARY

Seaward migration of salmon fry as indicated by redd sampling and Lakeelse River pink salmon fry output trapping carried out by Research personnel assisted by the writer and area patrolman, indicated a good survival and emergence. Fry trapping and spot checks by Protection staff on other streams using fyke nets indicated a three week later peak seaward movement than during the previous two years.

Sockeye:

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Sockeye seeding in the area is classified as Light; about 50% of the numerical strength of brood year 1958 stocks. Main producing streams and marginal spawning stocks observed in Allistair lake were inspected once only on Sept. 7th. and it was considered that spawning was at its peak as numerous dead and ripened fish were visible on that date, with an indication of a small school only lying off the main stream at the head. The estimate and live and dead count would indicate a run in the order of 10 to 15,000 adults. It must be considered that in past years, runs of Sockeye to this system continue over the full period from early September well on into late October. Late inspections this year were not possible due to unfavourable flying weather conditions. In comparison, brood year 1958 stocks were considered Heavy by Insp. Giraud in the Allister lake system when populations in the "L" 50,000 adult sockeye strength were reported. Kispiox region grounds of Stevens-Swan and Club lakes were inspected twice on September 8th, and 28th. and findings were disappointing. Only 17 Sockeye were observed on foot inspections Sept. 8th. and no increase found in a more extensive Helicopter check on the 28th. The 1958 stocks there were classed as "Very Good" and in the "C" category of 5,000 plus. Water levels at Gitwangulf may have had an adverse effect although no evidence of mortality could be found on observation of canyon and pools below on the latter inspection. Lakelse System creeks were well supplied with a 15 to 20,000 run estimated. Slightly better than the assessment of 1958. Williams Creek in that system received the bulk of the run of fish which near 9,000 were utilized by Research for requirements of the Scully creek Hatchery where near 10,000,000 eggs were placed for incubation. Talum lake marginal and tributary main producer streams, Cedar and Clear creeks received an average year comparable brood year stock of "C" 5,000 strength. A small annual run of Sockeye into marginal spawning of lake Kitwancool appears on the decline with only "A" and "B" strength visible at lake outlet over the past three seasons. A numerical comparison between records of 1958's overall area 80,000 plus adults with this years tally of 40,000 would indicate a 50% decline over brood stocks, even after allowing for a possible late Allistair increase.

Springs:

The Spring salmon runs to the area major producers Kalum-Kispiox and Copper (Zymoetz) systems are difficult to assess as visible counts not possible on account of the water silt discoloration. Carcass recovery counts do provide a yardstick for assessment. In 1962 the water levels in late September were higher than during the previous two years recoveries, it was necessary to wade out and feel for them and it is possible that this condition resulted in the lesser than previous year assessment. We recovered only 114 large springs from the main spawning Kalum river bars in 1962 compared to 357 carcasses in 1961. Considering 1957 as the brood year an assessment then shows as 'best in years' with 1958 considered above average escapement, the overall 1962 Spring salmon seeding can only be classified as Light. A rough tally would indicate a 3,000 escapement population.

Coho:

Coho stocks in the area as indicated by seasonal spot checks on the main producers and follow up late October inspections indicated an average 'Good Medium' seeding achieved considering the incomplete full coverage of the full limits of the major rivers when compared to the reported 'Especially Light' seeding recorded for the area in 1959. A positive count from Lakelse river Research fence of 7,000 Coho adults in by mid September compares with 11,000 known in same time 1961. Indian food fishery catches and sportfishery indicated a steady run into the area from early August through to late October. An estimated numerical total to main producers of 20,000 for 1962

Spawning Summary (Cont'd)Pinks:

An unexpected good Medium strength run of Pinks in the order of 800,000 escapement to the main spawning grounds in comparison to a very light escapement of 250,000 in 1960. The bulk of the run entered to Lakelse river where Research fence counts of 635,000 adults provided a heavy seeding in comparison to the 110,000 count in 1960. Kispiox river was down from brood year escapement with between 60,000 and 75,000 estimated there in comparison to near 100,000 in 1960. The estimate from strip counts in the Kitwanga river of 80,000 adults is an increase over brood year 25,000 fence count in 1960. There was a light seeding on the main stem Skeena sloughs this year, the same as in the 1960 brood run. This gives the area a two consecutive year good Pink escapement with 1961 assessment near the 1½ million mark.

Chums:

Indications of light scarce scattered stocks in the usual spawning locations of the main stem Skeena sloughs and in Kispiox-Kitwanga rivers. The areas Chum contribution is usually very light, and there was no indications of any late run through the Indian net fishery to indicate other than an overall Light seeding could be expected. An estimate from visual stocks observed would not exceed 1,000 adults for the overall area in 1962 compared to a similar light seeding stock reported for brood year 1959.

Steelhead:

There was no actual count of spawners made on any stream in the area, all indications from reports by sportsmen of good signs on main river Kispiox-Kalum and Lakelse river with good catch data from the Indian Fishery suggests a better than average year steelhead run entered to the area from early August through to this report. A reported record Fly fishing catch of 33 lbs. from Kispiox river in September by a USA sportsman Mr. Karl Mausser of San Mateo California. Hazelton-Kispiox residents advised that 1962 run appeared to be better than past five years.

Eulachons:

There were indications in the lower Skeena of a very good run of this species as was indicated also in the past two seasons. There is a District 2 closure in effect for commercial uses and the only utilization is by locals both white and Native for home consumption.

Indian Fishery:

The trend of this fishery indicated by the comparison of the annual catches and number of permits issued is towards lesser utilization of fish in the diet of the Indians of the 10 villages between Terrace and Kispiox on the Skeena system. Steady seasonal employment in the logging industry of the interior Hazelton-Kispiox-Kitwanga region is also apparent from patrol observations, as well as the coastal fisher contributions to the economy of the natives. A noticeable trend in the processing of the Indian food fishery is to more canning and salting and even some storage in deep freezers rather than the smokehouse method. There are many abandoned smokehouses, this modernization would tend to eliminate a lot of spoilage so that even a lesser catch total would not suggest insufficient supply. Of the ten villages all except the Hagwilget tribe reported adequate requirements obtained. Indians there did not in my opinion exert much effort to obtain more than their day to day odd fresh fish needs, with none preserved for winter from our patrol observations.

Table of comparison catch of Indian Food fish over the past 5 years.

<u>Year:</u>	<u>Sockeye:</u>	<u>Springs:</u>	<u>Coho:</u>	<u>Pinks:</u>	<u>Chums:</u>	<u>Steels:</u>	<u>Totals:</u>	<u>Familic</u>
1962	11,046	969	1,333	2,050	27	447	15,872	112
1961	12,996	1,508	1,576	1,670	nil	495	18,245	103
1960	11,282	841	1,700	1,010	162	131	15,126	155
1959	24,761	5,540	8,936	2,858	1,004	637	43,736	181
1958	31,000	2,400	8,750	11,400	900	1,330	55,780	204

Sport Fishery:

During 1962 there were 1,914 Angling licences issued through agencies of the Provincial Government in the Terrace to Hazelton region of the area. The number of Non-Resident licences totalled 123 mostly to U.S.A. visitors. This years total compared to 2,133 licences of which 160 were non-resident has been suggested as accountable for by the impact of the movement of tourists to the Seattle fair rather than to the fishing attractions of the area. A noticeable drop in USA trailers and cars to the usual Kispiox area during summer and fall months this year even with a better than average abundance of Coho and Steelhead in the fishery. In 1960 the total licences issued amounted to 1,293 of which 37 were non-resident. A stepped up publicity by local tourism groups by press, radio and local T.V. station media will no doubt attract greater numbers of non-resident anglers in future. A firm catch statistic is difficult to estimate as the effort is so widespread and unaccountable by patrol contacts not always made with the effort. From contacts with a few interested sources at Kispiox-Hazelton a rough figure of 500 steelhead from Kispiox-Kitwanga-Hazelton has been obtained aswell as an estimate of approximately 150 individual anglers on the Kispiox river during months August through to November. On the Lakelse river a good average year run of Coho in September attracted most of the Kitimat-Terrace-Prince Rupert sportsmen with as many as 100 vehicles checked on weekends. It is estimated that exploitation of this rivers Coho run would reach a 10% catch of 800 to 1,000 of the run. It would appear that it will be necessary to establish a constant supervision to deter abuses of regulations and it is intended to concentrate the duties of the lower Skeena patrolman to that effort at least during the main run movement. Three violations of excess limit catches and two of 'Jigging' was successfully prosecuted by the local Provincial Game Conservation Officer during September stemming from his patrols of the river. It is reported that the Provincial Game Branch have a Gear restriction regulation under which the minister of Recreation may close any river if a gear used is considered as detrimental, and that such control might be considered for the various streams of the Northern areas, this would appear to be the Game depts method of control measures proposed as an alternative to banning any particular type of gear. The use of cluster hooks with heavy metal lures is considered to be nullifying the protection afforded to salmon by prohibition of 'Jigging' aparatus. The same results of jigging can be obtained by the method of casting and overhauling of the cluster hook and heavy lure, even if the intent is to induce the fish to take the hook by mouth. There was no evidence of mutilation of live female salmon for fish roe bait observed. There was only one salmon derby organized in the Terrace area in 1962 which was a sporting supply store publicity effort in which 117 anglers weighed in a total of 125 Coho between dates August 15 and September 15 th. Todate there has been no winter steelhead derby advertised. The catch of Spring salmon mainly from Kalum river during year from best available sources of information indicates a fair 2-300 fish catch of an average 25 lb. weight out of an estimated 1,500 to 2,000 fish escapement to that system. The relaxation of the closure period by inwards movement of sportfishing boundary from the C.N.R. bridge to the Canyon on the Kalum did not appear to be detrimental to the 1962 spawner spring stocks, very few anglers took advantage of the extra area, mainly on account of water high levels and better results obtained from the main stem Skeena bars as well as the attraction of the Kitimat river in the adjacent area.

Stream Improvement:

During the 1962 season the two seasonal employees and the writer opened up potential log jam debris and beaver dams on nine streams with a total recorded 226 hrs hand labor with an expenditure for powder amounting to \$77.00. In addition 8 miles of trail was slashed out extending up Kalum river and Deep creek in that system. The power saw supplied to the Terrace and Babine areas was used approximately 50 hours and was shipped back and forth between the two areas as requirement demanded. The debris windfalls work is a normal annual duty and only the more serious potential blockages in a few individual main spawning streams can be attended to when timing suitable before migrants might be delayed entry or damaged by the use of explosives. The beaver dam menace is an increasing factor to contend with as very little effort is undertaken by trappers to trap out the watersheds of the area. There are numerous small beaver dams in the Sealy lake system being continuously rebuilt after being opened in the interests of Coho upstream migration, to date they do not appear to be a complete blockage to ascending fish and there is evidence that some good in providing adequate summer water levels for fry development is achieved by not attempting to completely remove some of the beaver dams. There are no fishways operating in the Terrace-Lakelse area.

Obstructions:

Only in the Kispiox river is there any indication of a serious danger of blockage to the main Sockeye grounds of Stevens-Swan-Club lakes by the Canyon at Gitwangulf. It has been recommended that an Engineering and Biological study be made to check out the impact this canyon and cascades water level velocities would have on seasonal adult migrations. There is work necessary on the Lakelse river also to assure clear route through a large accumulation of windfall tree debris in hand for 1963 where it may be necessary to expend public funds estimate of \$700 for hire of equipment to drag out large trees, some of which may have a salvagable value and could be taken into account with some logger to offset the cost of clearance.

Hatcheries:

The Fisheries Research Board have a mobile trailer hatchery unit in operation on Scullubuchand creek where in 1962 approximately 10 million Sockeye Eggs are under incubation. The temporary hatchery erected and operated on Kleanza creek was destroyed by fire on March 4th, this 1962 year with the loss of approximately 1½ million Sockeye Alevins just prior to their readiness for release. The Research board operated the counting fence on Lakelse river during full salmon movement of Pinks to the system, fences were also operated at mouth of Williams creek and Scullubuchand to trap adult Sockeye for hatchery requirements. The field staff of the Fisheries Research Board under the Skeena Management program cooperate fully and receive ours on matters of mutual concern. We do stream enumeration surveys when possible with them and receive valuable assistance in protection patrol coverage by this cooperation.

Violations:

One only prosecution was successfully concluded before local justice in the area in 1962. The offence by a Prince Rupert white non-citizen resident of operating a gillnet in the closed area of the Skeena. This apprehension was achieved through the cooperation of Field crew of the Research board by bringing the evidence and information to my attention. A fine of \$100 with confiscation of boat and outboard engine that was sold by public tender through Area Director in the amount of \$350. There were no other cases taken to trial or pending from 1962 season.

Predator Control:

A hair seal hunt was carried out in the Skeena estuary in June in 1962 in company with Inspectors Bussey and Gelley from the base camp near Kwinitsa provided through the courtesy of the C.N.R. local roadmaster who allowed us the use of an unused watchman shack. A kill of 95 seals was achieved. The last previous hunt in 1960 resulted in a kill of 72 hair seals. It is recommended that an annual rather than bi-annual be considered to contain the hunt at the lowest possible level, rather than alternate the effort with the Nass river program. There were no bears destroyed in the area in 1962 and no increase in predation evident from bear activities on the spawning grounds.

Industrial Development:

Logging and sawmill operations are the main industrial activities in the area: Information provided by Forestry Ranger indicates slight difference over the past year. A total production in log scale amount to 262 million B.F.M. which he reports is near the allowable cut for the sustained yield units of the area. Sawmill production from the above reported cut amounts to approx 75 million board feet from nine local Terrace mills employing a work force of 190 men. Protective clauses are incorporated into licences issued in the district to cover logging operations on salmon streams. There has been no prosecutions made for infraction of these clauses or Fisheries Act as none observed during 1962. Good cooperation from managements of local logging firms in consulting before proceeding with logging procedures. There were 4 only applications for our consideration for inclusion of protective clauses put forward through this office in 1962. River transport of logs only on the Skeena from Terrace west to tidewater by one firm during 1962. There is evidence that an increase volume of water towir may develop with extensions of timber sales into Skeena estuary from Terrace for the future and it can be also expected that there will be more activity in winter river bar dry booming and holding grounds to follow. There has been no detrimental removal of gravel from spawning ground for road construction in the area in the past year.

Two water rights applications of a total received in 1962 of 4 applyin were referred back to District Supervisor for attention before approval. One for a lime quarry washing and the other for additional supply from Deep Creek for the municipal requirements at Terrace.

Departmental Employees & Equipment:

Two seasonal employees employed as patrolman and Guardian gave good service and cooperation to the writer and are recommended for further employment. The area truck performed satisfactorily for a patrol year of 12,000 miles. Repair expenditures were reasonable and operation and maintenance approximated \$282.77 exclusive of fuel supplies which amounted to a gas consumption of 759 gallons gasoline costing \$ 267.1. The writer provides a garage at a rental of \$10.00 per month for a total of \$120.00 expenditure. The total cost of vehicle all included being \$659.95 which for 11,713 miles operation in 1962 or .06¢ per m. A 40 H.P and river boat supplied 1961 was operated for 143 hrs on patrol and seal hunt of Skeena giving very good service with some expenditure incurred from District fund to keep in operation after warranty expired. A new 3 H.P. also supplied 1962 for small cartop boat expected to be supplied for coming season. Office facilities provided in Terrace Federal building are considered adequate and office equipment in good condition. In any consideration for replacement of the area truck it is respectfully suggested that a similar panel type light vehicle with any suitable trailer for transport of heavy river boat the main requirement to be considered in preference to any heavy type vehicle of the four wheel drive secondary concern as road travel conditions are steadily improving in the area.

Respectfully submitted:

February 20, 1963.

[Signature]
Fishery Officer.