

ANNUAL NARRATIVE

Babine-Morice Sub-district

1984

By Terry Turnbull & Denis Burnip

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ANNUAL NARRATIVE

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I. GENERAL DESCRIPTION OF SUBDISTRICT

The Babine-Morice Subdistrict consists of: the Skeena River watershed above the confluence of the Skeena and Babine Rivers, the Babine River watershed upstream from the Kiskagos Reserve, the Bulkley River watershed upstream from and including Trout Creek, (in 1985 it will include the areas associated with the sports and food fisheries of Moricetown) and the Zymoetz River upstream from McDonell Lake. The subdistrict serves the communities of Smithers, Telkwa, Quick, Houston, Topley, Topley Landing, Granille, Fort Babine and their respective surrounding areas. Total population is approximately 22,000 people.

II. FISHERIES

A. Commercial Fisheries

1. Babine River Jack-Sockeye Harvest

The Babine Lake Indian Band removed 39,961 jacks between August 22 and September 03. The fish weighed 492.5 gm. (average) and a length of 35.8cm (average); and they were sold to B.C. Packers Fishing Company, Prince Rupert.

B. Sport Fisheries

1. Non-Tidal Waters - Sport fish catches

For Babine River (BR), Bulkley-Morice (B-M) and the Bear-Sustut (B-S)
- See Table 1 page 3.

2. Provincial Sport Fishing Licences

- sold in area - (See Table 2, page 3)

3. Sport Fishery Closures

a. New Regulations for 1984

No new ones in 1984.

b. Public Notices in 1984

chinook sport catches - non-tidal reduced to one (1) over 50cm in Skeena drainage.

4. Sport Fishery Restrictions

No new restrictions in 1984.

5. Sport Fishing Conditions

a. Bulkley - Morice

Springs - Good catches of springs reported. The first ones being taken week ending July 1/84 at the Bulkley-Morice confluence. Once again the majority of springs being caught below Moricetown at "Idiot Rock". Jack springs were caught quite readily in Moricetown Canyon; fish limits were taken quite often.

Coho - Coho fishing was poor. Reports of large numbers of coho being gaffed at Moricetown would seem to have had a detrimental effect on the run. The first coho reported being caught week ending August 12/84.

Steelhead - Steelhead fishing was reported to have been average. Although larger fish were being caught. The runs should have been stronger, but estimates by the Provincial Government indicate 45% of the Bulkley-Morice steelhead were caught by the commercial gear in the mouth of the Skeena. Compared to other runs (Suskwa-Babine-Kispiox) the Bulkley run was poor.

b. Babine River

The sport fishery on the Babine River was excellent. The prime target being steelhead, which even anglers with limited talent (T. Turnbull) managed to catch. Coho and springs also returned in good numbers and the sportsmen did well.

c. Bear River (Sustut River)

Sport fishing was excellent for springs (once again) reports of limits being caught were quite common. Our friends from the U.S.A. were in once again and left with 26 large springs (13 anglers), having hooked and released approximately 250 more. Who knows how many others did as well. Apparently none of the 26 springs were less than 25 lbs., I'm sure a few jacks went as well.

6. Sport Fish Meetings

The Smithers Sub-district organized two sport fish meetings this year. One meeting held on November 21, 1984 in Houston and the other held on November 22, 1984 in Smithers. Please see the following summary as reported by T. Turnbull.

A summary of the meetings is, of course, on file. It must be said that the general public participated vigorously. Their main concern is the catch of steelhead by commercial fishermen, and to a lesser extent, by Indian food fishermen.

6. Sport Fish Meetings continued

The Moricetown gaffing problem arose as we expected.

Many anglers still wonder why they can't have pink, chum, or sockeye.

People were confusing the mandate of the Department as opposed to the elected Government over a number of issues. But before the meetings were over, I think some people began to recognize the difference.

TABLE 1

SPORT FISH CATCHES FOR 1984 - SMITHERS SUB-DISTRICT

		Spring	Jack-Spring	Coho	*Steelhead
1984	(B-M)	250**	300	200	
	(BR)	100	U/K	150	
	*** (B-S)	26	50	U/K	
TOTAL		375	350	350	
1983	(B-M)	65	U/K	760	1,526
	(BR)	U/K	U/K	U/K	87
	(B-S)	51	U/K	U/K	57
TOTAL		116	—	760	1,670
1982	(B-M)	55	25	140	992
	(BR)	50	U/K	U/K	117
	(B-S)	U/K	U/K	U/K	U/K
TOTAL		105	25	140	1,109

* Steelhead figures not available until next summer.

** (B-M) a large number of springs and jack springs are caught below Moricetown, on "Idiot Rock" (not included in estimate.

*** (B-S) Known catches only.

TABLE 2

PROVINCIAL SPORT FISHING LICENCES

YEAR	NON-RESIDENT	CANADIAN RESIDENT	SHORT-TERM	CANADIAN RES. STEELHEAD	NON-RES. STEELHEAD	CANADIAN SENIOR
1984						
1983						
1982	474	3,660	349	2,047	386	187
1981	673	4,352	240	1,126	412	169
1980	632	4,084	235	1,172	395	164

Figures are not available until next year

C. Indian Food Fishing

1. Bear Lake Food Fishery Figures - 1984

LICENCES	SOCKEYE	SPRING
1 band licence	300	300

2. Babine Lake Food Fishery Figures - 1984

LICENCES	SOCKEYE	SPRING	COHO	PINK	TOTAL
67	10,000	8	—	236	10,244

3. Indian Food Fishery Summary - 1984

A sudden unexpected windfall of man-days exclusively for patrolling the Babine area, allowed for the most accurate gathering of food fish figures in years. We hope for a similar move of divinity this year.

There was an Elder Fishery this year on August 23rd with a catch of 750 sockeye.

Officer Burnip phoned the Lake Babine Band office weekly for a licence issue update. This strategy worked, all licence books were accounted for.

Prince George fishery office kindly issued a band licence to Takla People. Our observations and secondhand reports give the skimpiest food fish estimate.

Again, the natives continue to snag chinook in the closed area of Bear River. If we are fortunate enough to apprehend a snagger, what does the Department want done? Their sockeye catch has dwindled in recent years, likely as a result of the Area 4 fishery; and the chinook stocks remain strong.

III. SPAWNING SUMMARY

Salmon escapements to the Babine system are counted through the Babine River counting weir (Terry Bedard).

The fence panels were installed on July 4th and removed on October 2nd. The first sockeye arrived on July 9th.

Notes on Table escapement figures:

*Sockeye, pink, coho, and chinook are qualitative. Note: Where significant escapement may occur in Babine tributaries below the fence, that species has been qualitative.

A. Tables

1. **SOCKEYE**

YEAR	BABINE SYSTEM	UPPER SKEENA	BULKLEY-MORICE	UPPER COPPER
1984	1,173,137 (120,752JK)	UNK	3,000	800
1983	886,393 (153,700JK)	UNK	4,000	5,000
1982	1,136,344 (60,217JK)	UNK	3,000	1,000
1981	1,132,734 (155,549JK)	2,522	1,000	1,200
1980	526,059 (233,855JK)	1,950	650	140
1979	1,160,966 (90,498JK)	4,300	1,650	1,100

BABINE LAKE SOCKEYE SPAWNERS

1984	1983	1982	1981	1980
308,292	257,193	417,000	578,134	164,852

2. **COHO**

YEAR	BABINE SYSTEM	UPPER SKEENA	BULKLEY-MORICE	UPPER COPPER
1984	2,956	N.O.	1,600	UNK
1983	2,704	N.O.	1,900	50
1982	2,287	N.O.	650	UNK
1981	2,166	N.O.	1,354	150
1980	4,399	N.O.	3,995	N.O.

3. **PINKS**

YEAR	BABINE SYSTEM	UPPER SKEENA	BULKLEY-MORICE
1984	69,422	N.O.	UNK
1983	504,088	N.O.	30,000
1982	380,348	N.O.	9,000
1981	326,451	N.O.	100(?)

4. **CHINOOK**

YEAR	BABINE SYSTEM	UPPER SKEENA	BULKLEY-MORICE
1984	1,780 (380JK)	12,000	4,500
1983	948 (408JK)	3,500	5,000
1982	900 (317JK)	3,000	3,100
1981	723 (146JK)	5,100	3,290
1980	918 (242JK)	9,000	5,075
1979	780 (404JK)	3,000	4,675
1978	466 (1,111JK)	4,050	6,950
1977	588 (768JK)	1,800	4,750

B. Summary Comments

1. Sockeye

a) Babine System

The return of 1,173,137 sockeye would appear to be about average. The problem being that the enhanced stocks (Fulton & Pinkut) are much stronger than the natural stocks. These are targeted on for commercial openings and the other stocks are treated as incidental. Some creeks such as Tachek and 4 Mile were well below 10 year average.

b) Bulkley - Morice System

Nanika River sockeye escapement would appear to indicate an average return, comparing it to the last 3-5 years. Still well below historical escapements.

c) Upper Copper River

The sockeye escapement is approx. 2/3 of its brood year (1981) and well below last years record return. Water levels were very high.

d) Upper Skeena System

Sockeye were observed but a true estimate is unknown.

2. Coho

a) Babine System

True coho numbers are unknown. The counting fence is removed too early and true numbers are not obtained.

b) Bulkley Morice System

Coho escapements were extremely poor. The only system that held its own was Toboggan Creek. A helicopter flight on November 30, 1984 only counted 18 coho in the Nanika and 40 in the Morice. According to Dave Bustard, Consultant, who was on the flight, its the worst he has seen in years.

c) Upper Copper River

Current strength of coho stocks is unknown.

d) Upper Skeena

Current strength of coho stocks are unknown.

3. Pinks

a) Babine System

It would appear the Babine pinks are well below average and are also well below their brood year of 380,348. Most being caught by the commercial gear during openings at the mouth of the Skeena.

b) Bulkley-Morice System

The pink escapement was very poor. Although pinks were observed within the system, a true number is not known.

c) Upper Skeena System

Current strength of pink stocks in unknown.

4. Chinooks

a) Babine System

The return is encouraging. The return of 1,780 is well above its brood year and the 10 year average. Also approximately 30 chinook returned to the Fulton River to spawn.

b) Bulkley-Morice System

Upper Bulkley River chinook returns were low. The returns may indicate poor survival of the Emerson Creek component as this years' escapement is well below the 10 year average.

The Morice River chinooks held there own. However, when compared with good escapements to other systems (Bear/Sustut) it would appear to be low. Then again those systems do not have a Moricetown Canyon to run. 90% of the chinook spawning occurred between Gosnell Creek and Morice Lake.

Nanika escapements were estimated at approximately 100 fish. The helicopter flight of September 12, 1984 revealed two chinooks "above" the Nanika falls, a first according to records.

c) Upper Skeena System

The Bear River chinook return is the only quantitative count in this system.

c) Upper Skeena System continued

This year's 12,000 spawners is approximately 4 times greater than its brood year (1979 - 3,000). Hopefully this is only a start of what's to come.

5. Salmon Enhancement Projects

a) Emerson Creek Facility

No chinook eggs were taken this year due to manpower cuts within the Sub-district (A. Groat transferred and Houston Guardian time eliminated).

b) Toboggan Creek Hatchery

New this year, a joint D.F.O. and F & W project saw the start of a new hatchery. A pilot test of facility was done with 2,000 coho eggs. The hatchery will house chinooks, coho and steelhead.

c) Classroom Incubators

One female coho was taken to supply the local schools with the brood-year stock for 84/85 year.

d) Fort Babine Project

This year the Fort Babine fisheries center (Enterprise) recently collected 58,603 chinook and 63,393 coho eggs to be housed in a floating rearing and incubation facility.

IV. **FRY SALVAGE**

None reported.

V. **ENVIRONMENTAL, MULTIPLE WATER USE**

A. Pollution

1. Equity Silver Mine

a) Sodium Lauryl Sulphate Tests

The use of Sodium Lauryl Sulphate, a detergent soap, to treat acid generating soil/water conditions did not prove satisfactory. The company doesn't plan any further tests. (See attached Mine layout drawing)

b) Acid Mine Drainage (AMD)

i) Collection System

Acidic water continues to be a problem for the company.

i) Collection System continued

More seeps showed up this year both above and below the AMD collection ditch system in the Bessemer Creek system. Water accumulating on the southern tail pit floor is PH 3-4 and more often than not, the dissolved copper level of Bessemer Creek is out of compliance with the Metal Effluent Regulations (EPS).

The company has two pumping stations on Bessemer Creek that pump the entire creek in that section to the AMD treatment plant. Below the waste rock dumps there are trenches above the AMD collection ditch which diverts seepage from the dump to the main AMD collection ditch. Another pumping station catches and returns down slope seepage up to the main AMD collection ditch. And yet another pump stationed on Getty Creek (which drains the southern tail pit) puts the entire creek in to the main AMD collection ditch.

Each ore pit has its up hill diversion ditch designed to minimize run-off to the pits. The Main Zone pit diversion ditch runs into Berzelius Creek which drains into Foxy Creek. Conversely the southern tail pit ditch drains to a wooded area on the Goosly side.

Over at the tailings pond, the small seepage dam was designed to catch seepage from the tailings pond and return it there too. Unfortunately acid rock was used in the seepage dam construction, and its $350\text{m}^3/\text{day}$ goes to the AMD plant instead of the tailings pond.

ii) AMD Treatment Plant

The treatment plant provides lime neutralization through a lime storage silo, a slaker, and a mixing tank. The rate of lime water to acid water is automatically controlled by PH probes in the reaction tank. The resulting solution goes to the settling pond, where the precipitates settle out as sludge. The rate of sludge production is estimated at $80,000\text{m}^3$ per annum with one percent solids content. Supernatant water flows from the settling pond through a filter dam to the diversion pond. These ponds are west of the tailings pond separated by a dam. In the spring months during run-off treated water from the diversion pond is released to Lu Creek.

ii) AMD Treatment Plant continued

Lu Creek drains to Foxy Creek where the treated water must meet a 1:5 ratio with Foxy water. Again, unfortunately some acid generating rock was used in the construction of the filter dam between the settling pond and the diversion pond. A localized PH drop occurred and to maintain water quality in the diversion pond, water is recycled to the treatment plant.

In April 1984, a larger lime slaker was installed to handle the volume of AMD, previous to that excess untreated AMD went into the tailings pond. AMD is not welcome in the tailings pond because it interferes with the reclamation/leach system in the mill.

iii) Tailings Pond Facility

The approved tailings disposal is sub-aqueous deposition of tailings slurry to a water retaining tailings impoundment. The tailings storage facility has been in operation since July, 1980, accumulating approximately $6.21 \times 10^6 \text{m}^3$ supernatant as of October, 1983.

The existing tailings facility was designed for a no-release situation. A projected $11 \times 10^6 \text{m}^3$ of supernatant would be present in the pond when operations ceased.

iv. The Space Problem

Prior to mine development, the company and the Provincial Waste Management Branch (W.M.) chose to ignore the AMD question, even though EPS and the B.C. Research Council forewarned them, therefore, the original design of the tailings area included space presently being utilized for AMD facilities. Current tailings production level indicates the AMD area will be needed for tailings by 1985. To buy time for a space solution, W.M. via the consultation procedure allowed the company a temporary discharge permit. As of October, 1984 approximately $1 \times 10^6 \text{m}^3$ of tailing supernatant was removed from the pond, treated in the AMD system and released to the environment. Currently the tailings production rate is 5,200 tpd; and the company may want to increase production to 8,200 tpd, thereby compounding the space problem.

...../11

v. Potential Solutions Undergoing Test Studies

Sub-aerial - The sub-aerial deposition technique has been used successfully in warmer climates, but it is new to British Columbia. Tailings are mixed to get distribution of coarse and fines, then spread in a thin layer around the pond. The layer dries creating what is called a partial saturation that binds water in a negative pore pressure. Theoretically when the whole pond is fully laminated with these layers it will hold most of its watery content.

Advantages portrayed by this system are space saving, less long term seeps, and quicker reclamation. If the technique works it would eliminate costly relocation of the water treatment facilities.

Tailings Disposal in the Southern Tailing Pit - Tests are being done to see if the pit can be filled with 10 meter layers of waste rock injected with tailings. Suppression of existing acid generation in the pit, with minimal movement of air and water through the waste rock is the desired goal. A tailings deposit in the pit would take a convenient 30% of tailings production for four years.

Waste Rock Dump - A trial tailings injection in the benches of the waste dump is underway. The top surface of the bench is sealed with till and sloped to provide drainage.. It is hoped that infiltration of precipitation and seepage channels in the dump will be drastically reduced.

B. Environmental Issues

1. Kemano Completion Project

- 18 January, 1984 - The Interior News - Alcan files application for project approval - create 15,000 worker years & 3,000 permanent jobs.
- 25 January, 1984 - The Interior News - B.C. Utilities Commission hearings into Alcan's Kemano Completion Project application could be months away.
- 23 February, 1984 - Alcan Bulletin - Copies of the Energy Project were released to the public. 150 copies of the full 511 page document.
- 15 February, 1984 - The Interior News - Save the Bulkley claims Alcan is water poor.
- 29 February, 1984 - The Interior News - Gitksan - Wet'suwet'en Tribal Elders want Alcan stopped.

1. Kemano Completion Project continued

- 14 March, 1984 - The Interior News - Twenty presentations to D.F.O. public hearings in Smithers. Nearly all the presentations oppose the Kemano development.
- 28 March, 1984 - The Interior News - In Your Opinion - Letter from hereditary chief of the Wolf, Art Wilson. Explains Kemano I, how Kemano I negatively affected indians.
- 28 March, 1984 - The Interior News - Kitimat chamber calls for united business front - Alcan should not be scapegoat for the mess that has been created in the fishing industry.
- 21 March, 1984 - The Interior News - Smithers council reverses "No Smelter" policy.
- 11 April, 1984 - The Interior News - Alcan seeks meeting with D.F.O. to review latest information about its Kemano project.
- 23 May, 1984 - The Interior News - Questions about Alcan's Bruce Rozenharts connections with the Progressive Conservative party have "become a tempest in a teapot" company spokesman Brian Hemingway said.
- 22 August, 1984 - The Interior News - Alcan must ensure net gain in Skeena River fish stocks - Skeena River Tory candidate Peter Weeber (promises - promises).
- 03 October, 1984 - The Interior News - Anti-Kemano groups organize.
- 26 October, 1984 - Alcan Bulletin - Alcan postpones Kemano project.
- 05 December, 1984 - Interior News

bulletin

MOVED OUT: The Alcan Kemano offices on Alfred have now closed and Gary Miltenberger, the company's public relations officer in town, is looking for other employment. Also closed are Kemano public relations offices in Vanderhoof and Kitimat. The company postponed the \$2.5 billion project in October, saying that market conditions were unknown and aluminum inventories high.

2. IHN Virus Fulton & Pinkut Channels

05 December, 1984 - The Interior News - A Virus has caused the survival rate of salmon eggs in the largest spawning channel of the Fulton River sockeye enhancement system near Granisle to drop from 28 to 5.6 million fry this spring, according to a federal fisheries spokesman.

Cam West, head of the northern salmon enhancement program, said the disease, known as infectious haematopoeic necrosis (IHN), has no cure.

The outbreak is the largest to affect the facility, which produces 100 million salmon eggs a year, since it opened in 1965.

West said IHN is forever present in all sockeye salmon but does not always affect the fish. "There is no cure for it. It is carried in every sockeye stock just like the symptoms for the human cold are present in people," said West. If the virus attacks, it affects the kidneys of fry in their first week of rearing, he said. "The cells carrying the disease are found in the yolk sack which surrounds the embryo of the salmon egg," said West. "After hatching, the embryo depends on the yolk sack from the time it comes out of the spawning channel gravel bed until shortly after entering Babine Lake."

He said fry killed by IHN have been found only in one of the two spawning channels. "It is the largest channel being about 2km wide and 5km long," said West. He said the reason for the IHN outbreak could be added stress placed on the fry during their period beneath the gravel channel bottom.

"The last couple of springs have been more sunny than usual which I think contributes to increased algae growth in the channel," said West. To counteract the algae, said West, the gravel bottom was cleaned twice last summer and a scafifier was used to pump air and water to dislodge sediment build up on the gravel.

He said information is also being sought from Japanese and American fisheries departments for their experiences in managing sockeye stock being killed by IHN.

Studies are also underway at the spawning channel to determine how IHN affects the sockeye at early life stages and when the virus is likely to become fatal. "Because the virus is endemic, we don't consider it a serious threat to the future spawning capabilities of the Fulton River channels," said West, "On the other hand, we're not going to just sit back and wait until it goes away."

C. Industrial Development

1. Bell Copper Mine

Bell has an estimated 3 1/2 to 4 years life at 24,000 t.p.d., based on anticipated copper prices; Granisle has possibly another 3 or 4 years. If the mines re-open, they will do so one at a time.

Since the mines are near depletion, the various government agencies and the mine owners, MacLaren Forest Products had 3 meetings to formulate a reclamation and abandonment plan. This mine does not fall under the formal stage 1 and 2 procedure laid down for modern mines because of its age.

Basically the plan will develop programs to identify acid generating potential in waste rock and tailing ponds, find low PH seeps, monitor the chemical nature of surface run-off and study water balance in the pits. Once the magnitude of problems is known, then projects will be developed to prevent their continuance in perpetuity or provide effluent treatment. Naturally the mining company is concerned with the last statement and the final work may yet be to come.

Both E.P.S. and W.M. (Provincial) have been monitoring water quality around the mines. Note quotes from Margret Ross's letter, E.P.S. "In May, 1984, water quality along the east shore of the main arm below Babine Lake was affected by site run-off. Cu, Fe, Mn, and conductivity were elevated. Copper was 5 to 10 times higher than the average for the main arm....along the east side of the Granisle tailings pond, approximately 130 meters from dam and 29 meters deep....Cu, Fe, Mn, Sr, Ba, Mo, B, Ca, Mg, Ni, K, Cl, SO_4 residues and conductivity were all elevated. In July, 1984,....site run-off had a PH 4, high conductivity (2,500 umhos/cm, total residue (2830 mg/l))....eg total cu=25.9 mg/l....In summary, water quality...has been affected by acid mine drainage from the Bell Copper site...."

2. Granisle Mine

(covered under Bell Copper Mine)

3. Equity Silver Mine

In order to more efficiently utilize the ore material, Equity is attempting to set up a gold extraction plant using a cyanide procedure. All effluents are to be retained in the tailings pond during the pilot stage.

Equity is also milling molybdenum transported from existing ore stock piles at the Endako Mine.

4. Crowsnest Resources - Telkwa Coal

A preliminary public consultation meeting was held in Telkwa. Populace generally supportive of coal development. Best informations available says the developments is 3 - 4 years away.

D. Obstructions and Diversions

The problem as outlined in the 1983 Narrative Re: "Beavers" is still somewhat of a problem todate. Co-operation from the Department of Highways and the Ministry of Forests has helped the problem, but only for a short period of time. This office has taken it upon ourselves to "blow the little mothers up". This of course is with the blessing of the Ministry of the Environment. So watchout my little "Fur bearers", Terry The MAD BOMBER Turnbull cometh (Written by D. Burnip).

E. Referrals Processed in 1984

	1984	1983	1982
1. Water Licences	15	30	36
2. Pesticide Projects	17	6	1
3. Gravel Removal Operations	5	6	13
4. Forestry Referrals	84	59	19
5. Highways	7	3	1
6. Railways	37	5	--
7. Land	13	6	17
8. Mines	87	26	28
9. Dyking	1	--	2
10. Stream Crossings	1	1	1
11. Outfall (W.M.B.)	4	5	2
TOTAL	271	147	121

VI. TRENDS IN THE FISHING INDUSTRY

A. Food Fishing

1. Bear Lake Food Fishery

As per 1982 - 1981 Annual Narratives.

2. Babine Band Food Fishery

As per 1982 - 1981 Annual Narratives.

3. Moricetown Food Fishery

SmithersnS/D became responsible for Moricetown in November.

To say what the future holds is a fairly large ? . Policy has not yet been put forward and with the sensitive issues of Indian Self Government, Aboriginal Rights etc., the fishing patterns (proposals) are not yet complete.

4. Food Fishing General

As per 1983 Annual Narrative, lets wait and see!

B. Sport Fishing

It would appear that the sport fish industry is starting to realize just how much it contributes to the B.C. economy. D.F.O. took quite a few well placed "blows" during the two sport fish meetings held in Houston and Smithers.

During the 1984 season, sport fishing for chinooks within the non-tidal portion of the Skeena and its tributaries was altered (by public notice) to reduce the catch limit to 1 chinook over 50cm per day.

VII. ENFORCEMENT

A total of 2 counts were alleged in 1984 for violations of the Fishery Regulations.

<u>CHARGED</u>	<u>REGULATION</u>	<u>DEPOSITION</u>
Henry BROOKS	57(1) & 10(f) B.C.S.F.R.	Still before the Courts.

1. Enforcement - Smithers Sub-district

With no ticket book system and policy regarding I.F.F., enforcement became very difficult. Numerous warnings were issued for small treble hooks and no licences.

The sale of I.F.F. ran rampant in the Smithers area (only to keep it to this Sub-district). Numerous complaints were received but our hands were tied. Hopefully policy regarding illegal sales of I.F.F. etc., will be forth coming before the 1985 season kicks off.

VIII. PREDATORS

Bears, merganzers and Eagles were plentiful in most systems.

IX. ADMINISTRATION

A. Staff

1. Fishery Officers

T. Turnbull - GT-3
D. Burnip - GT-2

2. Wardens

A. Klopfenstein (November 1 - November 19, 1984)
-on parental leave without pay for the season.

3. Guardians

* Harry Blodgett (May 4 - November 1, 1984)

**S. Mitchell (July 2 - August 31, 1984)

* H. Blodgett's position has been cut; he replaced the Warden for this season.

**S. Mitchell's position was one of those midnight and Government Job Creation programs.

4. Trainee

Nil

5. Recommendations

During 1984, A. Klopfenstein took most of the year off. H. Blodgett took over Mr. Klopfenstein's time as H. Blodgett's time (4 months) had been cut. This S/D relies alot on seasonal staff. H. Blodgett and A. Klopfenstein have proven themselves over and over again and are extremely valuable to the successful operations of this S/D. We request that A. Klopfenstein's Warden position be increased to 9 months and H. Blodgett's position increased to 6 months for future years. Also, this office has had a drastic increase in referrals, public enquiries etc. In order to free up the field staff, a clerk should be hired for part days (6 months worth of man-days). These are only a few of many guardians this S/D had once, and are required in order to conserve and protect the resource properly.

X. EQUIPMENT

A. Vehicles

1980 - Dodge P/U truck

1981 - Ford Bronco

1981 - Chevy P/U truck

UNK - Terra Jet

B. Boats

1. One inboard jet boat (Legace Bay) which was not launched for the 1984 season due to cost of repairs and condition of vessel.
2. Two river boats (one aquired from A. Groat's inventory).
3. One rubber raft - needs repairs.
4. One wooden hull lake boat - ready for the "great boat yard in the sky".
5. One 10 foot skiff.

C. Trailers

1. One Kenskill trailer - Morice Guardian.
2. Tee Nee Trailer (utility).

D. Outboards

1. Merc 50 H.P. (2) c/w jets.
2. Merc 40 H.P. (1)
3. Merc 20 H.P. (1)
4. Johnson 18 H.P. (1)
5. Johnson 5.5 H.P. (1)
6. Johnson 9.5 H.P. (1)
7. Merc 65 H.P. (1) c/w jets.

E. Chain Saws

Three

F. Long Guns

1. 30-06 (2)
2. Shotgun 12 guage (1)

G. Hand Guns

1. 357 (3)

XI. INFORMATION, EDUCATION AND OTHER PROGRAMS