



'NAMGIS
FIRST NATION

Nov. 2, 2016

Dear Jack Minard,

It was a pleasure to meet with you and Stacey on September 14th, 2016. The advisory role you described brought us hope that our concerns regarding the Nimpkish Salmon would be heard.

'Namgis First Nation has identified 3 concerns listed below that we are seeking your help with. I will attempt to elaborate on them to show that the government needs to assist 'Namgis in putting the health of the salmon runs in the Nimpkish Watershed back to the way it was before logging, pesticide spraying, over fishing, and fish farming contributed to the devastation of the runs.

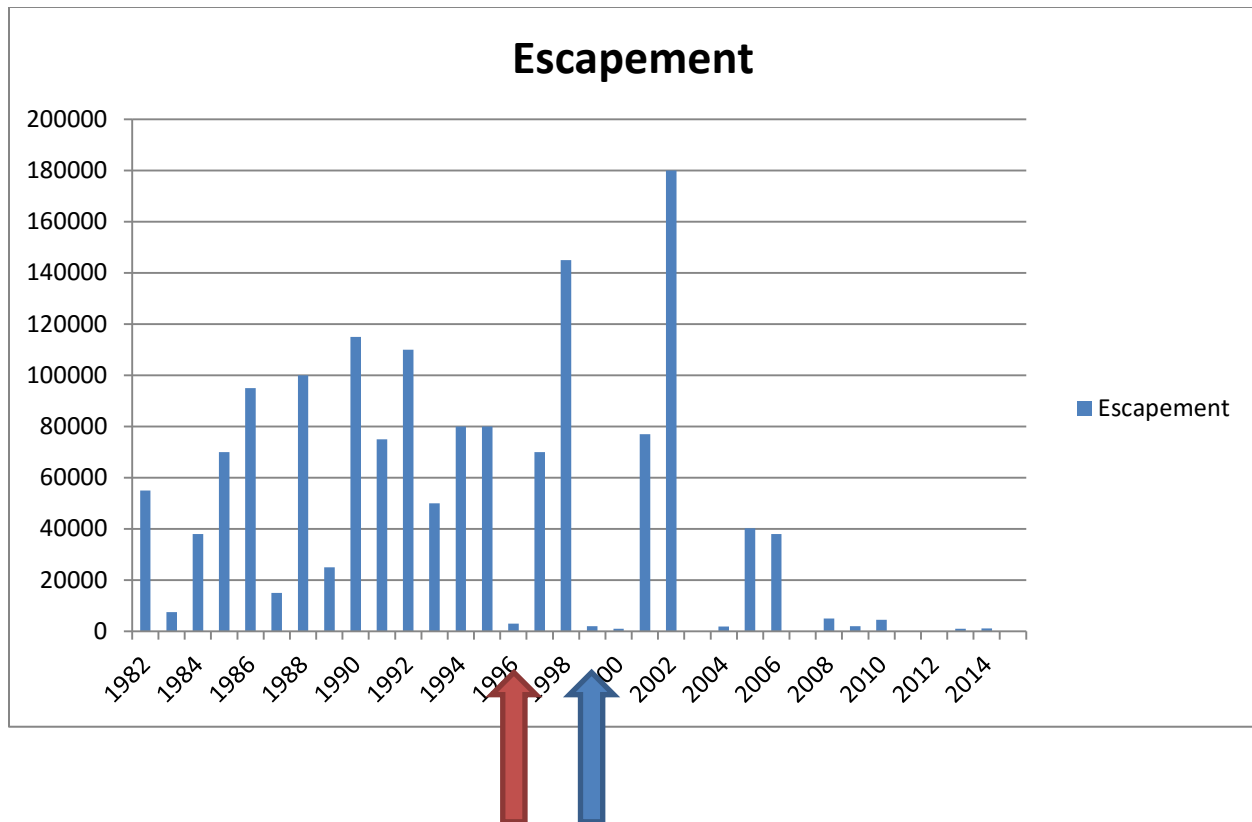
1. Chum Salmon Crashes in the Nimpkish River

BACKGROUND INFORMATION

In 1996, 'Namgis First Nation Council were in negotiations with Greg Savard, DFO to allow 'Namgis to have the chum salmon incubation numbers increased from 2 million eggs to 10 million eggs. The discussions were favourable and an Agreement in Principle was understood by the both parties at the close of the meeting.

The four-year chum cycle for the 1996 returning adults had been consistently increasing (as shown in the table below) with the expectations of a surplus of 98,000 chum in 1996 predicted. See the graph below for the chum escapement since 1982.

YEAR	ESCAPEMENT
1984	38,000
1988	100,000
1992	110,000
1996	3,000



You can imagine the disappointment when it was observed that very few fish returned to the Nimpkish River. Personally, I actually felt we were sabotaged. No one believed there could not be less than 3,000 fish so that was what went into the escapement record. The year after the crash (1997) the chum escapement was 70,000 and in 1998 it was up to 145,000+. Then in 1999, the second crash occurred. With this letter is a copy of a report that was given to council in 1999 on this matter.

Also attached is a copy of the records which shows the escapements to the Nimpkish. You need only look at the Chum Escapement column. I believe this is enough evidence to warrant some action on this neglected matter. Right now there is a plan to do helicopter flights to count this year's chum escapement, providing more evidence to the lack of chum returning to the river. For decades 'Namgis has been providing escapement estimates and this extra enumeration effort seems a waste of time when the people who have worked on this species already know the runs have all but disappeared.

CURRENT REQUEST

The Nimpkish is far from being the productive river it once was. As the graph above shows the chum numbers continue to decline. Currently there are two cycles that are almost non-existent and two cycles that are very poor. 'Namgis has raised this concerned and it appears to not be getting the attention needed. It is hoped that you can raise this issue to the upper levels of DFO management so that they are aware of the dire situation that the Nimpkish Chum salmon are in. As a result of these huge declines of chum salmon millions of dollars have been spent by the

local first Nations people purchasing low quality food due to not having Chum Salmon to harvest.

2. Nutrient Enrichment in the lakes of the Nimpkish Watershed to rebuild Sockeye Salmon stocks.

BACKGROUND INFORMATION

In the late 1980s Fisheries and Oceans Canada's Lake Enrichment Program applied nutrients to the Woss and Nimpkish Lakes until 1989. Through this program the Nimpkish sockeye numbers were rebuilding, as evident with an estimated 362,000 adult sockeye returning to the Nimpkish River in 1992. Additionally, with similar timing the Gwa'ni Hatchery also stopped incubating sockeye in 1989.

In the summer of 2000, the 'Namgis Hatchery staff counted approximately only 5,800 sockeye return in the adult assessment program. Through the Nimpkish Resource Management Board 'Namgis lobbied DFO to do something to rebuild sockeye again. The Hatchery Manager insisted that the Nation wanted to re-activate its sockeye hatchery incubation program and also stated it wanted to carry on with the addition of liquid fertilizer to the lakes. Eventually with assistance from Kim Hyatt and Don McQueen both programs were up and running in 2001. Initially, the Pacific Salmon Foundation funded the Nutrient Enrichment Program and then through a request from Nimpkish Resource Management Board the program was funded by Canadian Forest Products. Since 2011 'Namgis has funded the Nutrient Enrichment Program. Additionally that year, the sockeye incubation ceased.

Unfortunately, in the spring of 2016 the 'Namgis Administration could not afford to run the Lake Fertilization program anymore. This was devastating to the salmon enhancement program as Lake Fertilization is an important factor in ensuring the runs will be sustained. Sockeye is a huge part of the 'Namgis First Nation's diet. Until improvements are made to the current state of the ecosystem, the Nimpkish watershed lakes will not be able to provide enough nutrients to support the plankton chain which feeds the juvenile sockeye in their nursery, Woss and Nimpkish Lakes.

CURRENT REQUEST

1. It is hoped that you will be able to convince the upper management that the Nimpkish, which used to be the fourth largest sockeye producing river in BC, needs to become a priority for rebuilding the sockeye runs. 'Namgis is seeking funds to continue fertilizing the Woss Lake (~\$70,000 annually) and also to re-establish fertilizing the much larger lake the Nimpkish Lake (program costs would need to be re-evaluated as this program has not occurred in recent years).
2. The hydroacoustic surveys are an important part of the Lake Fertilization program. DFO staff have been doing these surveys and while DFO has undergone many cutbacks it is almost impossible to get outside funding into DFO to cover the cost of these surveys. In addition to the funding requested above, equally important is that DFO make the commitment to continue to complete 2-3 hydroacoustic surveys annually, otherwise

additional funding would be required to bring in another organization to complete the surveys.

Loss by not Food Fishing to help re-establish the stocks

To show the world how important sockeye are to the 'Namgis First Nation, it should be known that for more than 25 years, the Nation did not fish the Nimpkish River. This voluntary stop to food fishing was to ensure that all the surviving adults returning could spawn to help with the rebuilding of the stocks. The Nation was told that if the run was over 250,000 returning sockeye, then a fishery could be entertained, provided there was a means of establishing fairly accurate escapement numbers. Even with all the enhancement efforts and the no food fishing (although there is still a lot of poaching occurring up the river) the sockeye escapement estimates have not neared 250,000.

In 2016, 'Namgis had their first controlled fishery in the Nimpkish River. For years the 'Namgis wanted to have a counter at the entrance to the river that would give a reliable count. A small percentile scale was made by the Hatchery Manager to use for harvest. As this was the first year, the target harvest was not met but, the percentile scale worked well for establishing a small food fishery, while still allowing the majority of the salmon to return to spawn.

I have also provided a worksheet to show conservatively what the people have lost in dollar value by giving up their harvesting, for sustenance of the Nimpkish River sockeye. Interpret the cost toward food purchases rather than salmon sustenance in those years.

3. Proper Enumeration Tool

CURRENT REQUEST

To assist in the management and potential harvest opportunities in the Nimpkish Watershed the 'Namgis First Nation would like to see at least 3 DIDSON counters in the Nimpkish Watershed. One is needed at the lower Nimpkish River to estimate the overall return of sockeye into the Nimpkish Watershed. One is needed at the Vernon Lake outlet to see how many sockeye enter into that lake system and one DIDSON counter is needed at the outlet of the Woss Lake for the same reason. Woss Lake has been fertilized since 2000 and therefore it is imperative that the number of sockeye returning to that watershed be enumerated to better understand just how the Lake Fertilization is helping or not helping along with other knowledge that can be gained.

Yours Truly,

Henry Nelson

Henry Nelson,

Gwa'ni Hatchery Manager

GWA'NI HATCHERY

NIMPKISH RIVER CHUM SALMON ESCAPEMENT - 1999

Report for the NAMGIS FIRST NATION BAND COUNCIL

The number of the 1999 Chum Salmon Escapement into the Nimpkish River was so low it should be declared a disaster. The proposal "NIMPKISH RIVER CHUM HARVEST PLAN FOR SURPLUS FISH – FALL 1999" showed that the anticipated return for chum to the Nimpkish River was 172,194. (see attached sheet). Instead it appeared that the total run size may have been under 2000.

Only one other time has it resembled this year. In 1996 saw the Nimpkish chum stocks very low and only 3000 fish were observed to have returned that year. For that particular year a surplus of 98,000 was anticipated. Local Fisheries workers when asked what they thought had happened suggested low ocean survivals.

Broodstock Observations

In the 19 years that I have been involved with SEP collecting broodstock in the estuary and observing the river I have never seen it this dead in terms of fish jumping or finning. Some small schools were set on during the broodstock collection. The largest school being sixty. On one occasion a set was made on a school where a half dozen were finning and jumping at slack water. All that was in the net in the end were six fish. During the course of the broodstock collection it was always anticipated that fish would show at slack water but nothing really showed. If there was one thing that I learned in the time that I have been broodstocking in the estuary the fish for some reason always surface and jump and fin at slack water more than when the tide is ebbing or flowing. Also in the past two years since we have had our crew boat, the fish finder would beep continuously. This year very few beeps were heard. The fish finder beeps and shows a picture of a fish and depth on the screen if fish are swimming under the boat. The total fish caught for broodstock was 65 fish and 16 of these were females. At least 60 fish from several sets were released earlier in the broodstock collection. In hindsight they would have not been released.

In River Observations

Water levels were high during the timing of the upstream migration of the chum. A good indicator of fish strength was always revealed at the site in front of the hatchery's water outflow pipe. Especially when it was flooding the adult chum would come near the shore to get out of the current. It was then that they could be seen finning and grouped in a line. At least since the new hatchery has been operating many chum would be found at the outflow pipe trying to go up the 3 foot diameter pipe. Only one pair was seen at the pipe

outlet of the hatchery where last year there was thousands. This year sightings were very scarce even while snorkel swimming past the hatchery beach which is also the beach seine sight for chum. On November 26, 1999 a beach seine set was made in the Lower Nimpkish with no fish sighted or caught.

Helicopter Observations

Two helicopter flights were used to attempt to count chum salmon in the river. On November 26, on a clear, sunny day Don Wilson did not see one chum in the river although he reported it impossible to see in the deeper pools. The next time after all the broodstocking was finished on Dec 18, Don Wilson and Bert Svanvik saw only one carcass below the highways bridge.

To make matters worse high numbers of seals and sealions were seen picking off the already weakened stock. Some times the seals were shot at and at least one was hit. It was difficult to shoot at the seals for two reasons. 1. The site is too close to the residential area beside the river. 2. There is a feeling that seals should not be killed if they were not going to be eaten and there is a belief they were here even before the First Nations. Don Wilson on his first attempt to count chum from a helicopter reported approximately 150 seal at the mouth and about 1000 in the immediate area.

Dick Beemish, a biologist with the Pacific Biological Station, wrote a paper a shortwhile ago on the affects of global warming as a possible reason for fish declines and also alluded that the fish may be picked up in other fisheries as they search for food in the nutrient rich waters in the Arctic. He also speculated that the migration of warm water fishes such as mackerel and pilchards to the area and may be eating the fry and smolts as they go out to sea.

I am not satisfied the above theory answers totally what happened to the Nimpkish Chum Salmon. I feel that the fish were caught in a fishery somewhere. The article written by Ron McCleod regarding the drastic decline of the sockeye returning to Rivers Inlet speaks of the indifference the Department of Fisheries has on these disasters. He also indicated that there does not seem to be anyone in a position of authority in DFO interested in finding out what has gone wrong and what it will take to put things right. I support his criticism. I feel there should be political pressure put on the DFO to investigate what happened to the Nimpkish Chum Stocks.

Some questions I have are:

- 1.) Could they have been caught in the Alaskan Fishery? Japanese Fishery?
- 2.) Could our own Canadian Fishery in an opening north of us have caught them?
- 3.) Is this happening to all chum stocks?
- 4.) Are we being politically sabotaged because we want to harvest surpluses to be more autonomous in managing our resources?

- 5.) Could this be part of a larger plan to remove any interest in commercially harvesting wild stocks to make it easier to pass Farm Fish interests, oil exploration interests in the Queen Charlotte Straits, or hydro interests in our rivers?

The cycle of the 1996 broodyear is coming next year and will definitely not be a good year for chum returns to the Nimpkish. That run may never be built up to the level that was anticipated for many years. The 1999 cycle (this past year) suffers the same fate and in 2003 the escapement will be very low. We as commercial fishermen have rolled over like beaten dogs when our livelihood was removed but we cannot allow government to remove our food fish from us. That is genocide.

We need to show that we are concerned because we want to know what is happening. If we don't no one else will. It is recommended that Band Council write a strongly written letter to someone in authority to investigate. Bob Warren may be able to assist in who would be appropriate to write to if he is still in existence. Fisheries has restructured so much recently that it is hard to find who is in charge.

Henry Nelson,

Manager, Gwa'ni Hatchery

Chum Egg Takes In The 4 Year Cycles Of The Two Chum Crashes In The Nimpkish River

As I have repeatedly stated the Nimpkish River suffered two very drastic crashes. The first such crash happened in 1996 and again in 1999.

The following table shows the egg take numbers per year since that time.

Year	Eggs Taken	Escapement Est.	Capture effort	
1996	449,362	3,000	estuary seine	First Crash
1997	4,478,018	70,000	estuary seine	
1998	5,139,274	145,000	estuary seine	Comm. Fishery
1999	38,412	2,000	estuary seine	Second Crash
2000	19,500	1000	estuary seine & beach seine	
2001	6,597,600	77,000	estuary seine	
2002	4,502,184	180,000	estuary seine	
2003	0	100	estuary seine	
2004	514,044	1800	estuary seine	
2005	6,657,617	40213	estuary seine	
2006	4,248,708	37962	estuary seine	
2007	0	0	estuary seine	
2008	1,581,535	5,000	estuary seine & channel	
2009	2,369,249	2000	estuary seine & channel	
2010	401,711	4450	estuary seine & channel	
2011	13,047	30	channel & beach seine	
2012	146,081	148	channel	
2013	507,232	1000	Channel & box seine	
2014	515,968	1050	channel & box seine	
2015	11,490	62	channel & box seine	

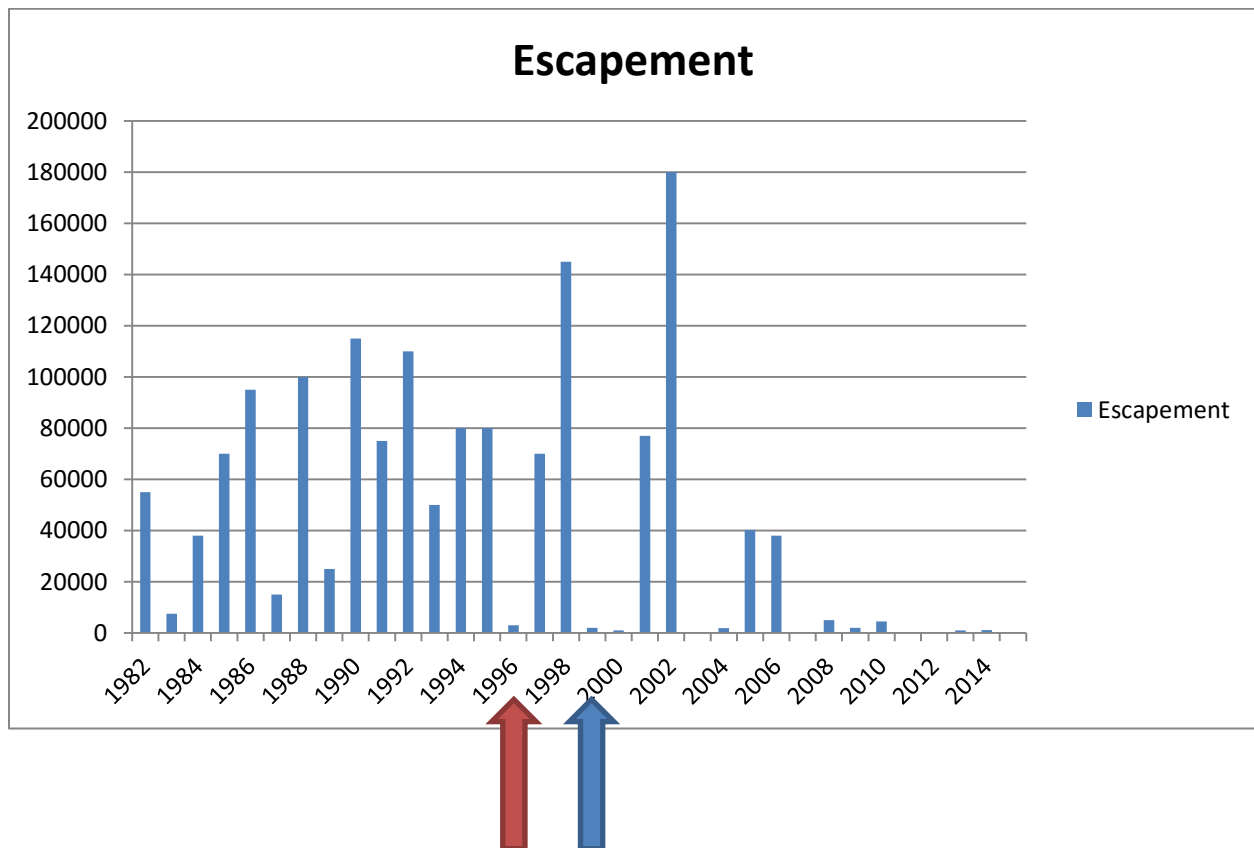
Nimpkish River Chum Escapement since 1982

The Nimpkish River Chum have declined disastrously beginning with the first crash in 1996 and the second crash in 1999. The other two run cycles (1997 & 1998) have not crashed as drastically but they continue to decline chronically despite the output of millions of chum fry. The runs are so low now that the hatchery has experienced no eggs taken in 2003 and 2007. In 2011 and 2015 the hatchery could not collect more than 14,000 eggs, a big drop from our highest egg-take of 6,656,617 eggs.

There are many unknown factors that may affect the lifecycle of salmon, but these are some questions posed by the Gwa'ni Hatchery manager:

- Could the chum have been caught in a fishery in Alaska?
- Could they be eaten up going through fish farms on their way to the sea? Or
- Has pesticide entered the river at a critical life stage of the chum salmon at the alevin stage or the fry stage?

Below is a graph showing the number of adult chum returning to the Nimpkish River. The large red arrow shows the initial crash of 1996 and the smaller red arrows show the escapement associated with this crash (2000, 2004, 2008, 2012 & this year will also be in this cycle). Likewise, the large blue arrow shows the second crash of 1999 and the smaller blue arrows show the escapement associated with this crash (2003, 2007, 2011 & 2015).



Number of Nimpkish Fish given up in voluntary shut down of food fishery for 25 years

Escapement year	Estimated Escapement	Allowable Catch %	Allowable F&C Pieces	This Chart is based on the First Scale Hank introduced for the Beach Seine Food Fishery in June/July 2016.
1991	40000	5	2000	
1992	300,000	10	30000	Hank's conservative estimate
1993	60,000	7	4200	
1994	20000	3	600	
1995	15000	2.5	375	
1996	20000	2	400	
1997	80000	9	7200	
1998	22000	3.2	704	
1999	21000	3	630	
2000	5800	0	0	Did not exceed 10,000
2001	38000	4.75	1805	
2002	115990	10	11599	
2003	39582	4.9	1940	
2004	22621	3.25	735	
2005	34001	4.4	1496	
2006	42953	6	2577	
2007	25000	3.5	875	
2008	43146	5.25	2265	
2009	9240	0	0	Did not exceed 10,000
2010	119676	10	11968	
2011	112160	10	11216	
2012	54687	6.4	3500	
2013	56331	6.5	3662	
2014	71980	8.1	5830	
2015	89613	9.9	8872	
1,458,780 5.74 114448 X 2 = 228896				

Most of these escapement Numbers were derived from Snorkel/swim counts.

Most of the Snorkel/swim counts covered a small portion of the sockeye migration area <35%

Some literatures say that the Nimpkish Lake area which is not assessed produced 48% of the total run in the watershed

The manager believes that all the escapement numbers above could be easily doubled based on the assumptions.

Therefore the allowable catches could have been double if this **miniscule** scale was used.

The average percent for the 23 years is 5.74%. Two of the 25 years did not exceed 10,000.

At \$2.00 per pound X 5 lbs average per fish X 228896 sockeye this would be worth **\$2,288,964.79**

That figure suggests a lot of money would have been saved rather than spending in the grocery store.

The Cost per pound of sockeye is just a guess but it gives a clear picture of the value of Food fish.

By Hank Nelson

26-Jul-16