

Chum Fishery Substitution

**Yukon River Panel Project CRE-106-04
Final Report**



**Prepared on behalf of the
Vuntut Gwitchin First Nation**

**By Beverley Brown,
North Yukon Stewardship Coordinator
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Abstract:

The Old Crow subsistence fishery was subjected to a volunteer closure on the Porcupine River main-stem from August 10 to October 15, 2004, resulting in increased numbers of chum salmon reaching their spawning grounds. Commercial dog food and frozen ground chicken was distributed to Old Crow dog owners to replace dog food supplied by the chum subsistence fishery.

Objectives:

- 1) Build community capacity and stewardship for the conservation and restoration of salmon stocks and their habitat in the Porcupine River sub-basin.
- 2) Restore chum salmon stocks by directly increasing spawning escapement
- 3) Set the stage to ensure long-term conservation of the salmon resource and its habitat in the Porcupine River sub-basin

1. Background

Arising from a meeting in December, 2001 the Porcupine River Working Group (PRWG) was formed by members to maintain a drainage specific focus and to facilitate more community based meetings.

The Porcupine River Working Group includes members of the Yukon Salmon Committee, Dept of Fisheries and Oceans, Canada, the North Yukon Renewable Resources Council, the Vuntut Gwitchin First Nation and the community steward. Some members of this group also sit on the Yukon River Panel.

The Working Group is tasked with developing the Porcupine River plan, soliciting community input as well as facilitating discussions on salmon research, habitat issues and developing local capacity in fisheries management.

To date, the declining returns of chum salmon have taken the lead role in the Group's efforts. In 2000, the Fishing Branch River, the primary spawning grounds for Porcupine River chum salmon, saw a record low estimated at 5,000 chum. The escapement target range is 50-120,000 chum with a maximum recorded return of 353,000 in 1975.

In 2002, DFO implemented a partial closure of the Porcupine River chum fishery.

In 2003, the community of Old Crow chose not to fish fall chum as a voluntary conservation measure which enabled the first chum substitution program supported financially by the Yukon River Panel's Restoration and Enhancement Fund¹. Approximately 1000 pounds of arctic char was purchased from Icy Waters in Whitehorse and transported via Air North to Old Crow dog mushers.

This project and the related voluntary closure continued despite higher than expected chum returns in 2003, providing a significant boost to chum escapement on the Porcupine River.

In May 2004 a survey was conducted in Old Crow by DFO by directly contacting dog mushers and holding one-on-one interviews. The survey had three questions:

1. How many sled dogs do you have?
2. How many chum do you need to feed the dogs
3. If the fish run is low, would you support the voluntary closure by accepting the substitution program?

Comments and suggestions were also requested. Results of this survey were key in developing the chum substitution program. Results indicated 9 dog owners

¹ The Panel had established a policy that would in exceptional circumstances support the substitution of harvest of a depressed fish stock to aid increased escapement of that stock to the spawning grounds. This would apply only when the fishery was open and the opportunity to fish voluntarily foregone. By policy, support is not provided for fisheries that are closed.

have a total of 126 workings dogs. On average of 55 chum were required per dog indicating that the total annual requirement for sled dogs is estimated at 7, 020.

Every dog owner was in support of the substitution program except one who could not be reached.

2. Methods

An initial meeting between William Josie, VGFN Natural Resources Director/PRWG Chair and the community steward outlined the criteria for dog owners to be eligible for the Chum Substitution Program. The criteria was

1. the dog owners must have 4 dogs or more, all of which must be working dogs
2. the dog owners must have a history of fishing in the Porcupine River.

A well-attended public meeting was arranged in Old Crow on August 20 to discuss the intent and goals of the Chum Substitution Project.

A list of Old Crow people who had been fishing each year since 1996 was available. This information was combined with the known dog owners in town to create a list of people eligible for the program.

Using dog owner's comments and suggestions, a decision was made by VGFN to buy a small amount of commercial dog food and a large amount of frozen ground chicken for this year's program. Many dog owners were dissatisfied with the 2003 program because the low protein content of the arctic char byproducts as well as the logistically challenging bi-weekly distribution methods. The first load of commercial food came into Old Crow on Sept 1, 2004 and the last load of frozen chicken came in on November 11, 2004.

3. Results

Ten dog owners with a total of 152 dogs received 4500 lbs of commercial dog food and 9000 lbs of frozen ground chicken. A total of 13,500 pounds of chum substitution products was shipped to Old Crow from Whitehorse via Air North. Each dog received approximately 30 pounds of commercial dog food and 50 pounds of chicken.

Approximately 20,000 chum salmon reached the Fishing Branch weir in the 2004 season. This number is lower than the 2003 season when approximately 29,500 chum reached the weir. The 2004 season numbers indicate that the chum salmon stock in the Porcupine River remain well below escapement targets of 50,000 and also below the ten-year average (1993-2002) of roughly 31,600.

4. Conclusions

The Old Crow subsistence fishery generally harvests between 4,000 and 6,000 chum salmon, primarily for dog food. The May survey results indicated that mushers require on average 55 chum salmon per dog. Therefore, the total annual requirement for sled dogs, despite dog owners reducing their teams in recent years, is estimated at 7,020. The escapement at Fishing Branch for the 2004 season was substantially higher as a direct result of the voluntary closure implemented by the Vuntut Gwitchin First Nation government on behalf of the VG citizens of Old Crow.

Distribution remained logistically challenging for the 2004 season, as it had been the previous season. Shipment from distributors to Air North cargo in Whitehorse relies heavily on the schedules of distributors and availability of freezer space at the Air North cargo warehouse. Communications between the distributor and Air North cargo staff therefore is essential. Shipments from Whitehorse to Old Crow rely heavily on the availability of space on the aircraft and the random priorities of cargo staff. Whitehorse cargo staff were requested to call/email or fax shipment information to project coordinators, however on numerous occasions this did not occur. Consequently shipments to Old Crow were random leading to dependence on Old Crow airport staff to relay information on incoming dog food shipments to project coordinators.

Once delivered to Old Crow, challenges remained for distribution as transportation from the aircraft to dog mushers was also random. The project coordinator contacted dog mushers for each shipment to meet at the airport for distribution or else relied on community volunteer efforts for distribution.

The building of capacity and stewardship in Old Crow for the conservation and restoration of stocks was positive and reflected by the unanimous decision by all dog owners surveyed in May to accept the substitution program. A general understanding among dog owners and community members of the necessity and reasoning behind the voluntary closure and the chum salmon substitution program exists.

As noted in the previous Chum Fishery Substitution Final Report (CRE-106N-03) this project can only be maintained with sufficient community support, which is difficult to maintain if fisheries in adjacent communities remain open. Last year's recommendation (see below) is re-emphasized in this report as it remains key to future project success. Old Crow fishers DO feel alone in making sacrifices for conservation efforts consequently compromising their stewardship values and the effort of VGFN to manage their fishery.

Tension was evident during the end of the fishing season voluntary closure as a belief among some local fishers was evident that the chum stock population was strong enough to allow for short fishing windows. Fishers understood the terms which the substitution fishery would operate included:

The possibility remains of a later season (80% passage) weir/test fishery projection of >19,000 resulting in a re-opening of the fishery; this action would likely not result in a substantial chum harvest and would

not jeopardize the substitution program. The purpose of this opening would be to allow for the harvest of early coho”

Communication surrounding the potential of an early coho fishery should be initiated pre-season.

The objective of this project - to support the long-term conservation of chum salmon and habitat in the Porcupine River sub-basin - has been contributed to substantively during the three years that the community of Old Crow has voluntarily not fished for fall chum on the Porcupine River system, supported by substitution dog food. To further ensure the long-term conservation, the following recommendations must be addressed.

5. Recommendations

- As noted in Chum Fishery Substitution Final Report: CRE-106N-03: “a mechanism (must) be provided to ensure that any fishery closure on the Porcupine River is consistent with management measures taken both within the Alaska portion of the Porcupine River and on the Yukon River main stem in Alaska as well as the Yukon.”
- Late season projections and the possibility of short fishing windows must be discussed by fishery managers.
- The community of Old Crow must be kept informed on the status of the stock, and have their issues and concerns addressed directly and regularly by the Porcupine River Working Group.
- The Porcupine River Working Group should offer supper when they hold public meetings as this is the expected means of conducting business at a community level in Old Crow and will ensure a good turn out.