

Helicopter Fry Release
From the Whitehorse Rapids Fish Hatchery
Restoration and Enhancement Fund Project
CRE-61N-06

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November 5, 2006

Abstract

A total of 156,819 Yukon River origin chinook salmon fry were reared at the Whitehorse Rapids Fish Hatchery in Whitehorse, Yukon during the 2005/2006 season. Of these, 68,446 were transported by helicopter and released into two remote locations on June 14, 2006. The two remote release locations included Michie Creek and the M'Clintock River. The balance of fry were released at sites accessible by road and/or boat including Wolf Creek and the mainstem of the Yukon River. All locations are tributaries of the Yukon River located upstream of the Whitehorse Rapids Hydro-generating facility. A sample of fry were screened for disease prior to the release date and all results were negative for pathogens. Fry averaged 2.5 grams in weight at the time of release. A total of 149,242 fry received a coded wire tag and were fin-clipped (adipose fin) in advance of their release. A further 7,698 fry were deemed to small to be tagged but were fin clipped and released into Wolf Creek.

Background

The Whitehorse Rapids Fish Hatchery, located in Whitehorse, Yukon, began operations in 1984. The facility, owned and operated by Yukon Energy Corporation with assistance from the Yukon Government and Department of Environment, raises chinook fry that are cultured from eggs and milt taken from fish captured at Whitehorse Rapids Fishway (also located in Whitehorse). The Hatchery was built and operated in recognition that the hydro-dam, owned by Yukon Energy, could impact survival of fry migrating downstream through the turbines. The facility has produced up to 400,000 fry per year that are released at locations upstream of the Whitehorse Rapids Hydro-generating Facility. In recent years the facility has been releasing between 100,000 and 150,000 chinook salmon fry.

Some of the sites where the fry are released are remote and require the use of a helicopter for access. As the production and release of these fry provides a benefit to users and interest groups along the river, the Restoration and Enhancement Fund provided funding in 2005 to help offset costs associated with releasing the fry into remote areas.

Chinook Fry Production 2006

A total of 178,000 eggs were taken from 31 chinook salmon females and fertilized with milt from 62 males. This resulted in the production of approximately 158,000 chinook fry. Prior to release most fry received a coded wire tag inserted into their nose cartilage and were marked by clipping the adipose fin. A portion of the fish (7,698) however, were too small to receive a coded wire tag and were fin clipped only. On average, the fry weighed 2.5 grams at the time of release.

A random sample of 60 fry were sent to the Pacific Biological Station in Nanaimo, British Columbia, where they were screened for disease. No viral agents or bacterial pathogens were found in any of the fish. More details on the rearing of the chinook salmon are available in the Whitehorse Rapids Fish Hatchery annual report.

Release Methods and Locations

All release locations are tributaries of the Yukon River located upstream of Whitehorse and the Whitehorse Rapids Hydro Facility. For remote sites, fry were transported in an auto-release type bucket that contained approximately 300 litres of water oxygenated by an air-stone and oxygen bottle secured to the bucket. Using a 100 foot tether the bucket was carried by the helicopter to the release locations.

Up to 25,000 fry can be transported in the bucket during each lift. Therefore two lifts were made to Michie Creek and two to M'Clintock River site. A pre-release reconnaissance flight was flown over the locations prior to release. Total helicopter transfer time, including the reconnaissance flight was 4.5 hours.

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Fry released at the Yukon River Mainstem and Wolf Creek sites were transferred in a large insulated plastic fish tote (approximately 1.25 cubic metres). Water in the tote was oxygenated during the transfer. The fry release at the Wolf Creek Campground is an annual public event designed to educate the public about the chinook fry program.

The following table shows the number of fry released at each location and the coordinates of the remote release sites.

Table 1: Chinook Salmon Fry Release sites and Numbers Released at Each Site in June 2006

Location	Coordinates	Number of Fry Released	Release Method
Michie Creek	N 60 ° 41.70' W 134 ° 12.35'	42,856	Helicopter
M'Clintok River	N 60 ° 44.48' W 134 ° 27.64'	35,059	Helicopter
Mainstem Yukon River	N 60 ° 37.34' W 134 ° 53.49'	35,336	Truck/Boat
Wolf Creek	Campground Upstream	26,412 8,806	Truck

All fry transfers went very well with no loss of fish.