

Nechako Fisheries Compensation Program
Annual Report

Executive Summary of Activities in 2015-2016 and Proposed Work
Program for 2016-2017

March 31, 2016

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Administration

Technical Committee Operations

The Technical Committee undertook minimal activities in Year 28 of the NFCP and held one conference call meeting on Dec. 18, 2015. During the year, the Technical Committee undertook the projects approved for the 2015/2016 fiscal year.

2015/2016 Program Summary

By agreement, NFCP Chinook monitoring activities were suspended in 2015 and transferred to the DFO Stock Assessment Division. Steering Committee Decision Record 2014-2015 #2 outlines the rationale for the shift in Chinook monitoring responsibility.

In the 2015/2016 operating period 3 of 3 planned projects were conducted by the Nechako Fisheries Conservation Program. Planned projects included:

	Person-Days	Person-Day Costs	Disbursements	Total Expenses
3 Remedial Measures Projects	141	\$70,500	\$29,320	\$99,820

The total program budget for the 2015/2016 program year was \$99,820.

The Committee completed a report in March, 2015 to update the status of adult Chinook escapements in the Nechako River. The report is titled:

NFCP. 2015. Trends in Adult Chinook Salmon Escapements in the Nechako River: Results from 26 Years of NFCP Monitoring.

Proposed 2016/2017 Program

The proposed 2016/2017 (Year 29) Nechako Fisheries Conservation Program includes:

	Person-Days	Person-Day Costs	Disbursements	Total Expenses
3 Remedial Measures Projects	141	\$70,500	\$29,320	\$99,820

Remedial measures projects are similar to those conducted previously since the start of NFCP activities in 1988.

A breakdown of person-days and disbursements for proposed 2016/2017 projects is shown in Table 1. Table 2 provides a comparison of the proposed Year 29 program budget with the approved budgets for the previous 2 years.

Table 1. NFCP: Proposed 2015/2016 Program.

REMEDIAL MEASURES	DAYS	DISBURSEMENTS*	RESPONSIBLE
Summer Temp Management	\$54,750	\$15,910	RTA
Flow Control	\$11,250	\$3,410	RTA
Flow Discrepancy Project	\$4,500	\$10,000	RTA
TOTAL	\$70,500	\$29,320	\$99,820
COMMITTEE OPERATIONS**	***	\$50,000	

*Includes contracts

**Includes Independent Member, Annual Meeting and Report, Technical Report Production, and Committee Meetings

***As required by each party. In recent years there have been no committee expenses

Table 2. Nechako Fisheries Conservation Program Previous Years' Budgets and Proposed Budget for Year 29 (2016/2017).

	2014/2015		2015/2016		2016/2017	
	DAYS	EXPENSES	DAYS	EXPENSES	DAYS	EXPENSES
REMEDIAL MEASURES						
Summer Temperature Management	\$54,750	\$15,910	\$54,750	\$15,910	\$54,750	\$15,910
Instream Habitat Complexing						
Flow Control	\$11,250	\$3,410	\$11,250	\$3,410	\$11,250	\$3,410
Flow Discrepancy Project	\$4,500	\$10,000	\$4,500	\$10,000	\$4,500	\$10,000
Sub-Total Remedial Measures	\$70,500	\$29,320	\$70,500	\$29,320	\$70,500	\$29,320
MONITORING						
Enumeration	\$7,500	\$38,200				
Carcass Recovery	\$5,000	\$20,000				
Sub-Total Monitoring	\$12,500	\$58,200	\$0	\$0	\$0	\$0
GRAND TOTAL	\$83,000	\$87,520	\$70,500	\$29,320	\$70,500	\$29,320

Comparison of Completed Year 28 and Proposed Year 29 Projects

Remedial Measures

Summer Temperature Management Program

Nechako River flows and water temperatures are managed using a computer- based program referenced in the Settlement Agreement. The program protocol uses a trend analysis developed from five- day meteorological forecasts to schedule releases from Skins Lake Spillway to attempt to maintain mean daily water temperatures at or below 20.0°C in the Nechako River upstream of the Stuart River (Finmore).

YEAR 28

2015/2016

The Summer Temperature Management Program (STMP) was operated in the summer of 2015 as in prior years. Due to the higher than normal reservoir and estimated snow-pack, discharge at the Skins Lake Spillway (SLS) was higher than typical years at the start of the water temperature operational period (July 10 – August 20). Mean daily water temperatures in the Nechako River above the Stuart River confluences exceeded 20°C on three occasions (July 10, 11 and 19). All three exceedances occurred prior to the water temperature control period.

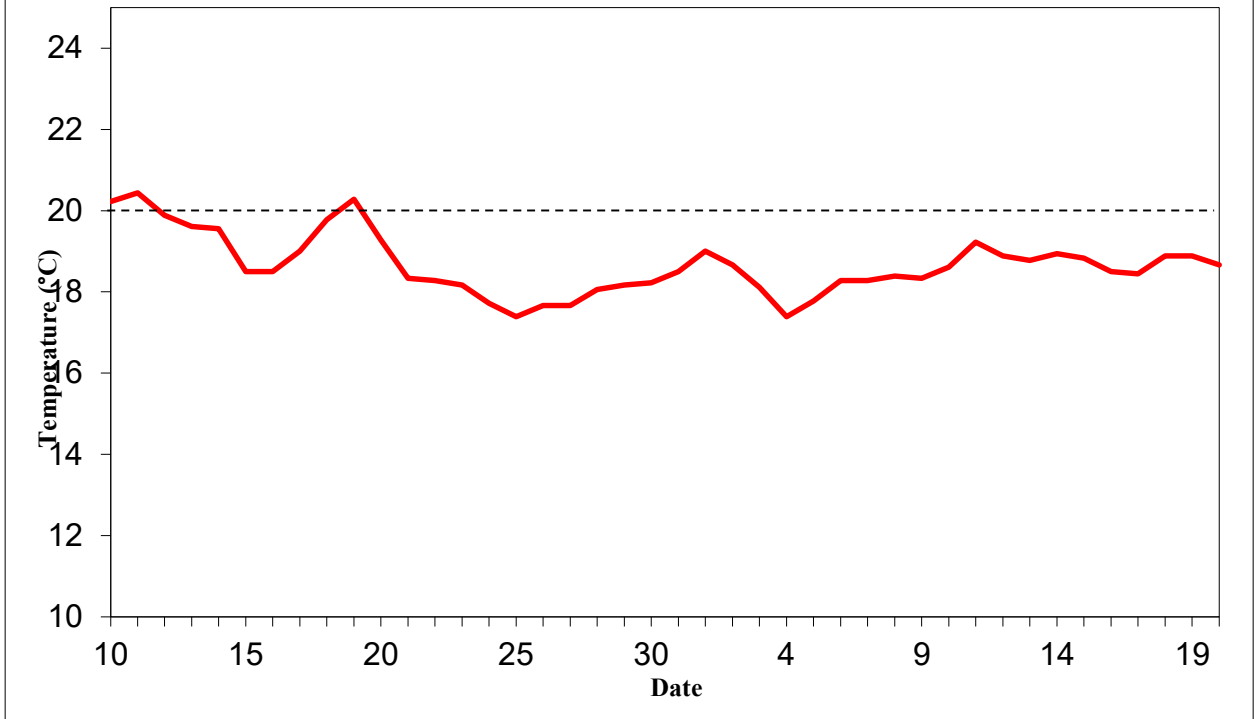
Recorded mean daily water temperatures for in the Nechako River upstream of the Nechako-Stuart River confluence (at Finmore) are shown in Figure 1.

YEAR 29

2016/2017

The 2015/2016 Summer Water Temperature Management Project will follow the same protocol and will be conducted in a manner consistent with previous project years.

Figure 1. Recorded Mean Daily Temperatures in the Nechako River above the Stuart River Confluence July 10, 2015 to August 20, 2015



Flow Control

The NFCP Technical Committee is responsible for the management of the annual water allocation from Nechako Reservoir to best benefit fish in the Nechako River.

YEAR 28

YEAR 29

2015/2016

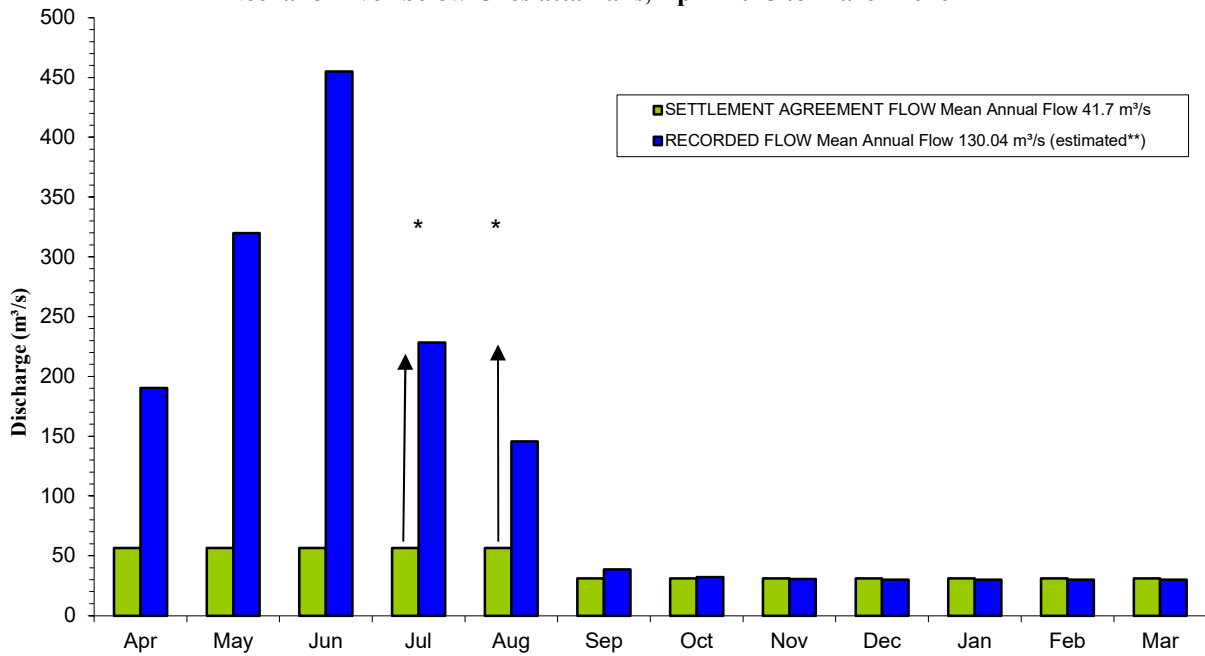
2016/2017

In 2015/2016, the release of the Annual Water Allocation was initiated in April but at a rate greater than requested levels (49 m³/s) due to higher than normal reservoir levels and estimated runoff volumes from snowpack. Releases remained higher than requested from late April to the start of the STMP in July when they were returned to requested levels. Following the STMP, releases were decreased in late August to control the discharge in the Nechako River below Cheslatta Falls to approximately 32.4 m³/s through the spawning period in September. It is anticipated the releases will average 31.1 m³/s or more for the remainder of the fall and winter.

It is estimated that the mean annual discharge from the reservoir will be 129.05 m³/s, which is much greater than the required release of 36.8 m³/s.

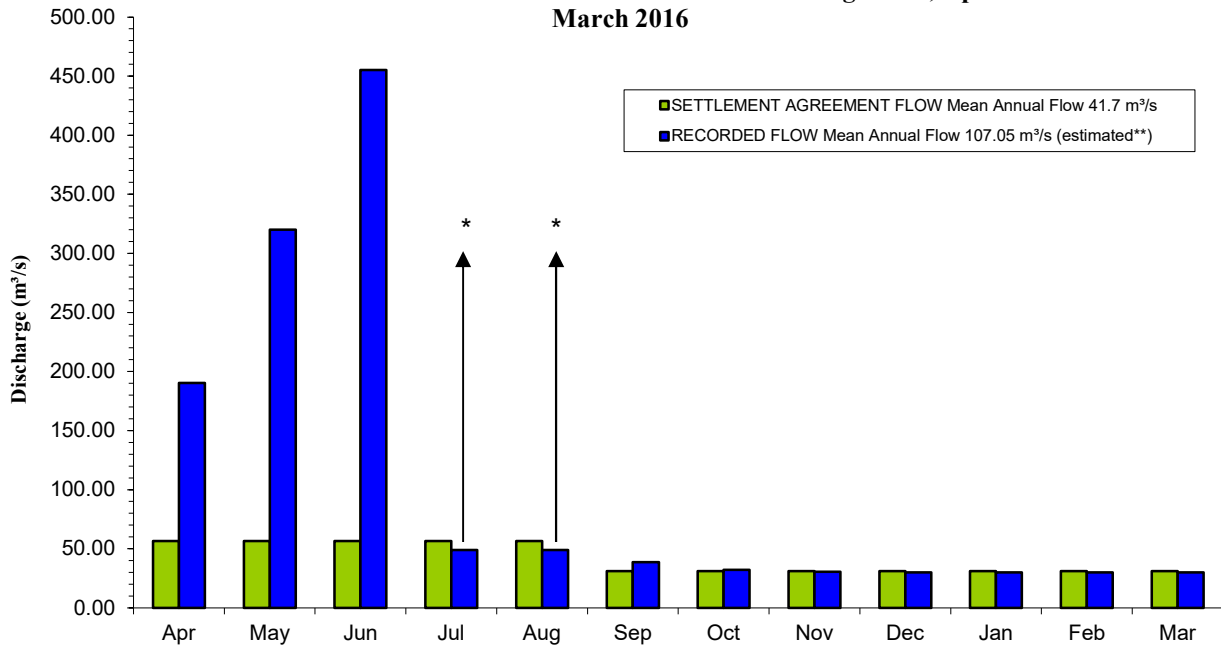
In 2016/2017, flow allocation will again be managed by the NFCP to best utilize the annual water allocation.

Figure 2 - Comparison between Settlement Agreement and Recorded Flow in Nechako River below Cheslatta Falls, April 2015 to March 2016



* Additional Flows as Required for Cooling Purp
 ** Dec, Jan., Feb., and Mar. data are assumed.

Figure 3 - Comparison between Settlement Agreement and Recorded Flow in Nechako River below Cheslatta Falls - without Added Cooling Flows, April 2015 to March 2016



* Additional Flows as Required for Cooling Purp
 ** Dec, Jan., Feb., and Mar. data are assumed.

Flow Discrepancy

Periodically a discrepancy is apparent between the flow records for the Skins Lake Spillway and the Nechako River below Cheslatta Falls. An investigation into the potential reasons for these discrepancies was carried out in February 1999. The investigation indicated that the most likely cause was the use of preliminary data for the station below Cheslatta Falls in making the comparison. There is also the possibility of groundwater recharge occurring in the fall.

YEAR 28

2015/2016

The flow discrepancy project was not undertaken in 2015-16 as no flow anomaly was detected early in the year and discharges from the reservoir were much greater than the minimums required under the 1987 Settlement Agreement for the remainder of the year.

YEAR 29

2016/2017

During 2016 - 2017 a contingency budget will again be established to allow investigation of the source of any observed discrepancy between the Skins Lake Spillway and the WSC gauging station (#08JA017) in the Nechako River below Cheslatta Falls.

Additionally, the Water Survey of Canada will conduct spot checks of the flows at station 08JA4017 to allow a comparison of flows with spillway releases, should an anomaly in the relationships be detected.

Monitoring

Adult Spawner Enumeration

The number of adult chinook salmon returning to the Nechako River is the main performance indicator to evaluate achievement of the Conservation Goal.

YEAR 28

2015/2016

In 2015, Chinook were enumerated by DFO during 2 helicopter over-flights in September. Results indicated an escapement of 8291 spawners in the Nechako River (Figure 4), the highest on record over the period of NFCP monitoring.

YEAR 29

2016/2017

During 2016, Nechako Chinook spawner enumeration will be carried out by the Stock Assessment Division of DFO

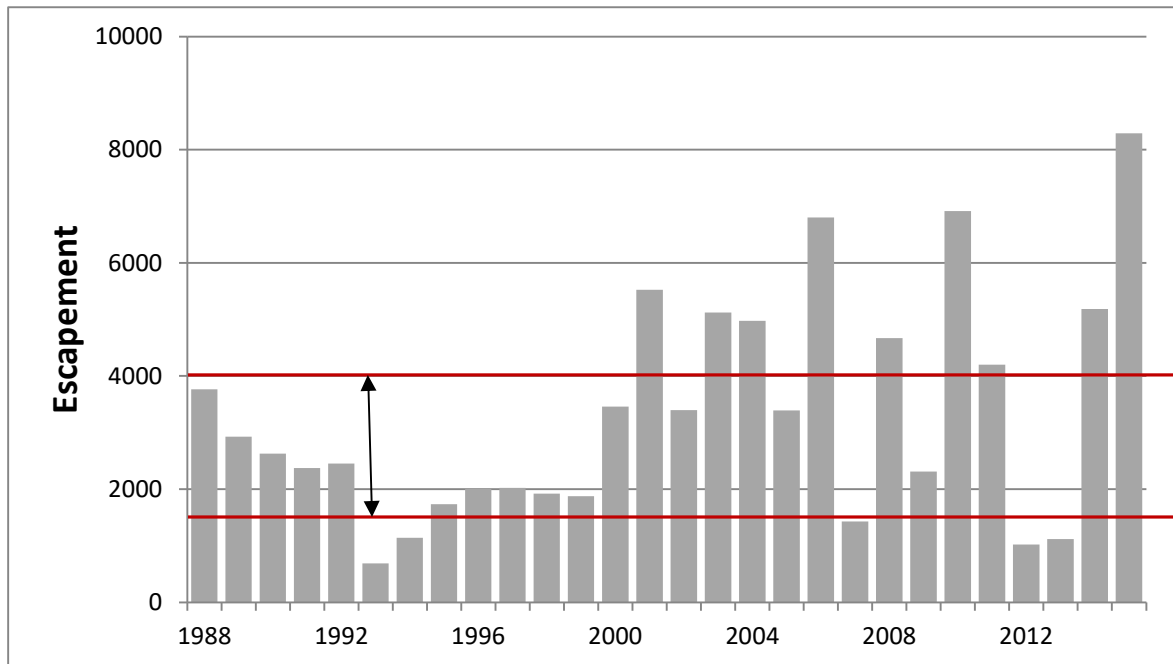


Figure 4. NFCP Chinook escapement estimates for the Nechako River. Red lines show the upper and lower target populations that define the Conservation Goal.