

Nechako Fisheries Compensation Program  
Annual Report

Executive Summary of Activities in 2016-2017 and Proposed Work  
Program for 2017-2018

March 31, 2017

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# Administration

## Technical Committee Operations

The Technical Committee undertook minimal activities in Year 29 of the NFCP and communicated via email. During the year, the Technical Committee undertook the projects approved for the 2016/2017 fiscal year.

## 2016/2017 Program Summary

As described in the Year 2015/2016 Program Summary, NFCP Chinook monitoring activities were transferred to DFO in 2015 and the 2016 Chinook estimate was provided by DFO as documented in Steering Committee Decision Record 2014-2015 #2<sup>1</sup>.

In the 2016/2017 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 2016/2017 program year was \$99,820.

The Committee completed a report in July, 2016 to provide a review of NFCP activities since inception. The report is titled:

*NFCP. 2016.. Historical Review of the Nechako Fisheries Conservation Program: 1987 - 2015.*<sup>2</sup>

In September 2016, the Technical Committee published an article in the Vanderhoof Omineca Express and the Prince George Citizen on "*Conserving and Protecting Salmon in the Nechako River*"<sup>3</sup>. The article was prepared to summarize the NFCP Historical Review Report in a non-technical fashion.

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<sup>1</sup> [http://www.nfc.org/Decision\\_Records/Current\\_Decision\\_Records/DR%20SC%202014-15\\_2.pdf](http://www.nfc.org/Decision_Records/Current_Decision_Records/DR%20SC%202014-15_2.pdf)

<sup>2</sup> [http://www.nfc.org/Current\\_Reports/NFCP%20History%20Report%20July%202016.pdf](http://www.nfc.org/Current_Reports/NFCP%20History%20Report%20July%202016.pdf)

<sup>3</sup> [http://www.nfc.org/Current\\_Reports/Conserving%20and%20Protecting%20Salmon%20in%20the%20Nechako%20River.pdf](http://www.nfc.org/Current_Reports/Conserving%20and%20Protecting%20Salmon%20in%20the%20Nechako%20River.pdf)

## Proposed 2017/2018 Program

The proposed 2017/2018 (Year 30) 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 2017/2018 projects is shown in Table 1. Table 2 provides a comparison of the proposed Year 30 program budget with the approved budgets for the previous 2 years.

**Table 1.** NFCP: Proposed 2017/2018 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
<b>TOTAL</b>	<b>\$70,500</b>	<b>\$29,320</b>	<b>\$99,820</b>
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 30 (2017/2018).

	2015/2016		2016/2017		2017/2018	
	DAYS	EXPENSES	DAYS	EXPENSES	DAYS	EXPENSES
REMEDIAL MEASURES						
Summer Temperature Management	\$54,750	\$15,910	\$54,750	\$15,910	\$54,750	\$15,910
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
<b>Sub-Total Remedial Measures</b>	<b>\$70,500</b>	<b>\$29,320</b>	<b>\$70,500</b>	<b>\$29,320</b>	<b>\$70,500</b>	<b>\$29,320</b>
MONITORING						
Enumeration						
Carcass Recovery						
<b>Sub-Total Monitoring</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>GRAND TOTAL</b>	<b>\$70,500</b>	<b>\$29,320</b>	<b>\$70,500</b>	<b>\$29,320</b>	<b>\$70,500</b>	<b>\$29,320</b>

## Comparison of Completed Year 29 and Proposed Year 30 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 29**

#### **2016/2017**

The Summer Temperature Management Program (STMP) was operated in the summer of 2016 as in prior years. The summer of 2016 was warmer than average when compared to previous years, and as a result, the discharge of the Skins Lake Spillway was increased above minimum levels on several occasions in response to warming trends. Due to the above average temperatures, the maximum flow target of 283 m/s<sup>3</sup> at the Nechako River below Cheslatta Falls was exceeded 5 days during the water temperature control period (July 20 – August 20).

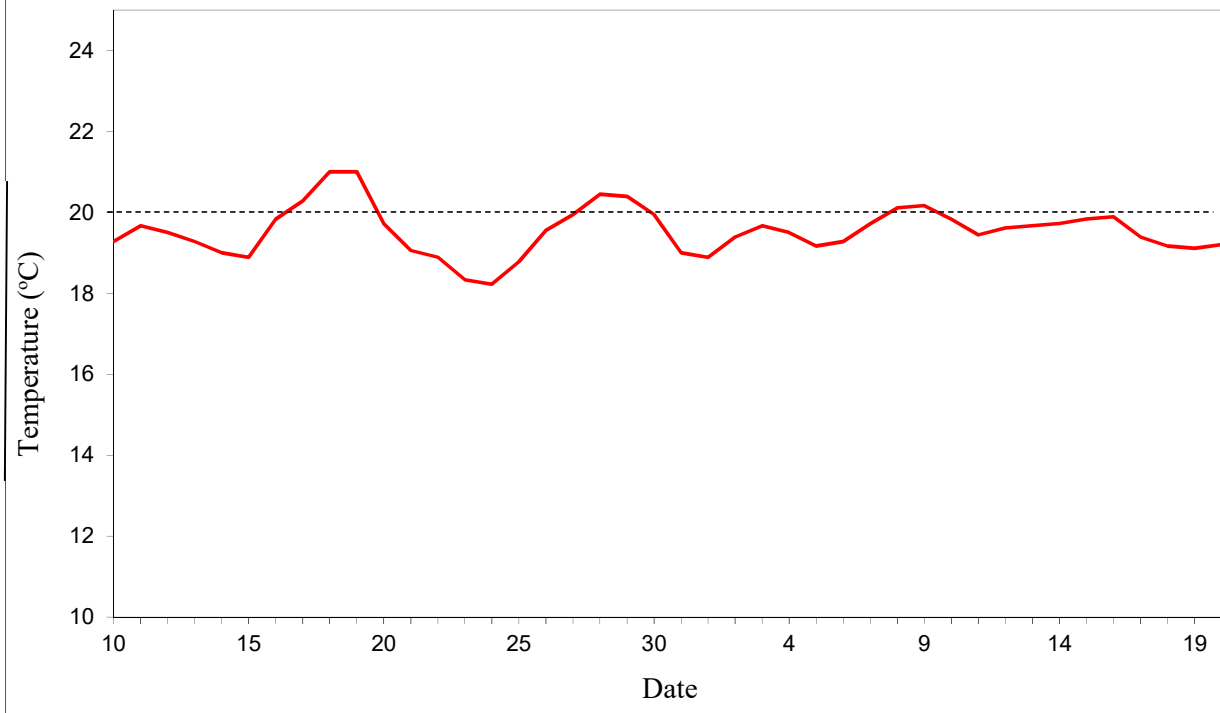
Recorded mean daily water temperatures in the Nechako River upstream of the Nechako-Stuart River confluence (at Finmore) are shown in Figure 1.

#### **YEAR 30**

#### **2017/2018**

The 2017/2018 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 to August 20, 2016.



**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 29**

**2016/2017**

In 2016/2017, the release of the Annual Water Allocation was initiated in April as noted in Figure 3 at a rate of 49 m<sup>3</sup>/s. Releases from the reservoir remained at the requested levels from late April to the start of the STMP in July. Following the STMP, releases were decreased in late August to control the discharge in the Nechako River below Cheslatta Falls to approximately 31.2 m<sup>3</sup>/s through the spawning period in September. It is anticipated the releases will average 31.3 m<sup>3</sup>/s or more for the remainder of the fall and winter in order for the Annual Water Allocation to be fully utilized (36.8 m<sup>3</sup>/s).

**YEAR 30**

**2017/2018**

In 2017/2018, 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 the Nechako River below Cheslatta Falls, April 2016 to March 2017.

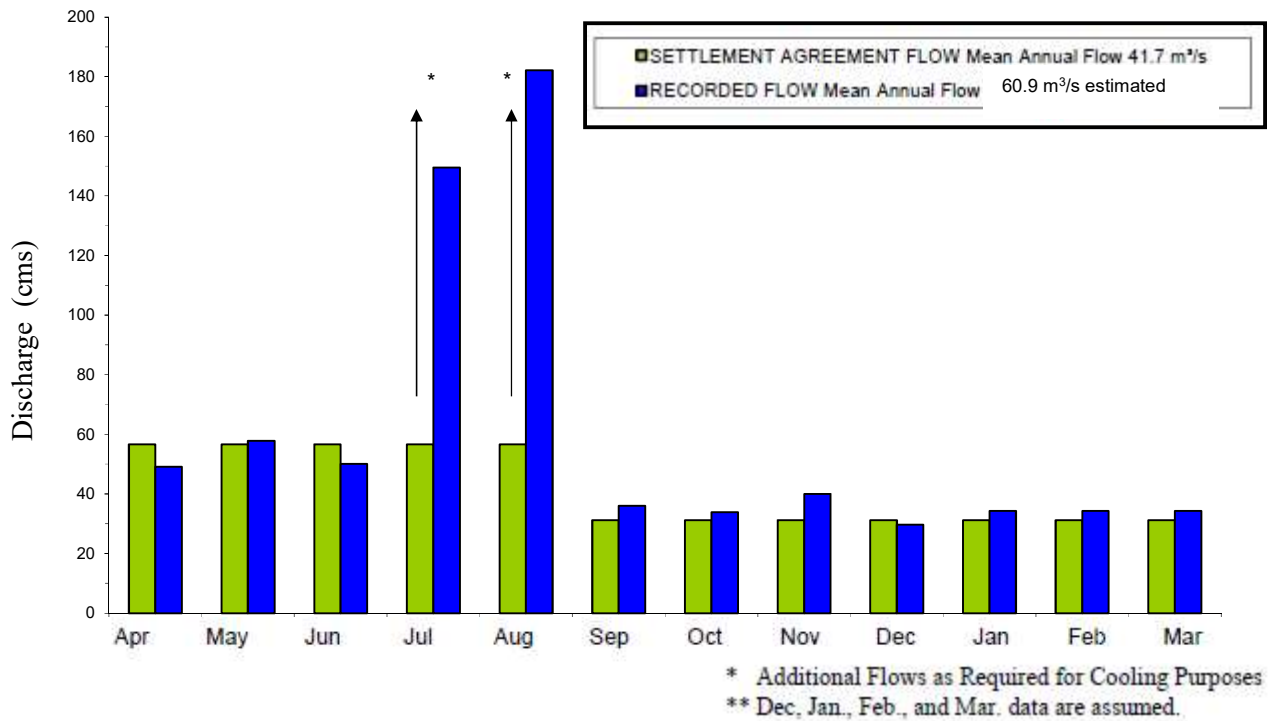
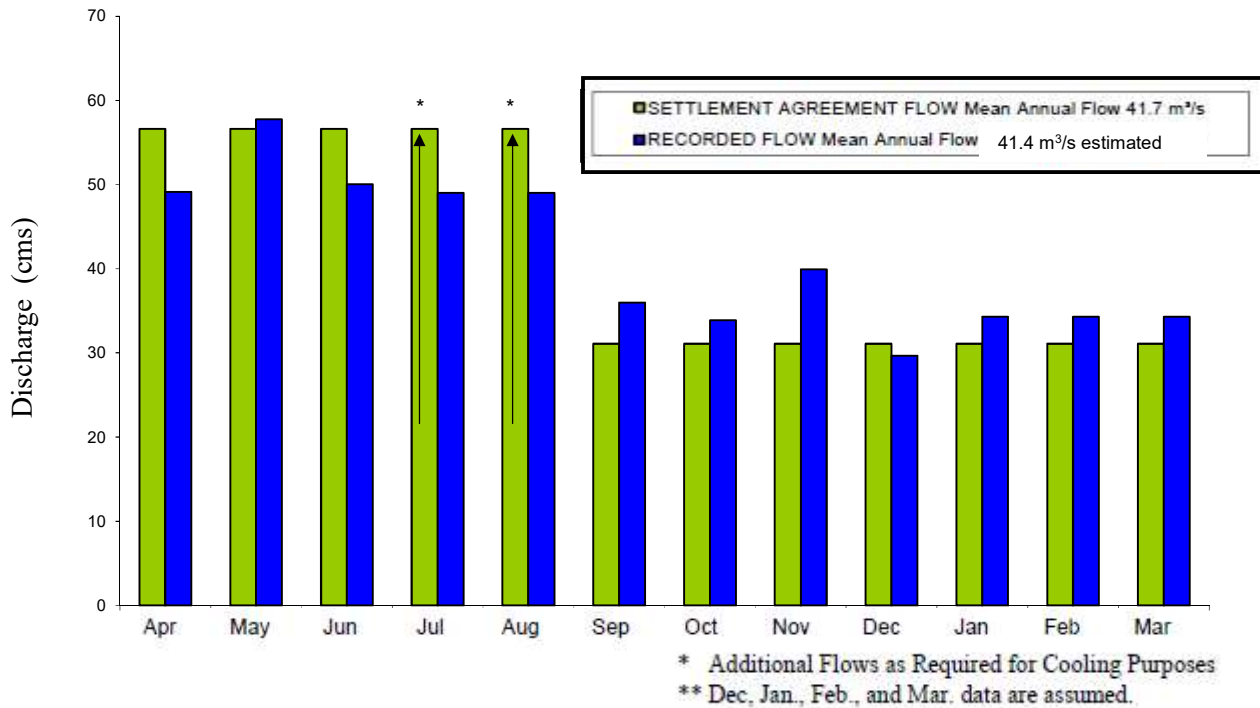


Figure 3. Comparison between Settlement Agreement and Recorded Flow in the Nechako River below Cheslatta Falls - without added Cooling Flows, April 2016 to March 2017.



**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 29**

**2016/2017**

The flow discrepancy project was not undertaken in 2016-17 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 30**

**2017/2018**

During 2017 - 2018 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 29**

#### **2016/2017**

In 2016, Chinook were enumerated by DFO during 2 helicopter over-flights in September. Results indicated an escapement of 3,138 spawners (Figure 4) which is within the upper and lower range of the Conservation Goal.

#### **YEAR 30**

#### **2017/2018**

During 2017, Nechako Chinook spawner enumeration will be carried out by the Stock Assessment Division of DFO.

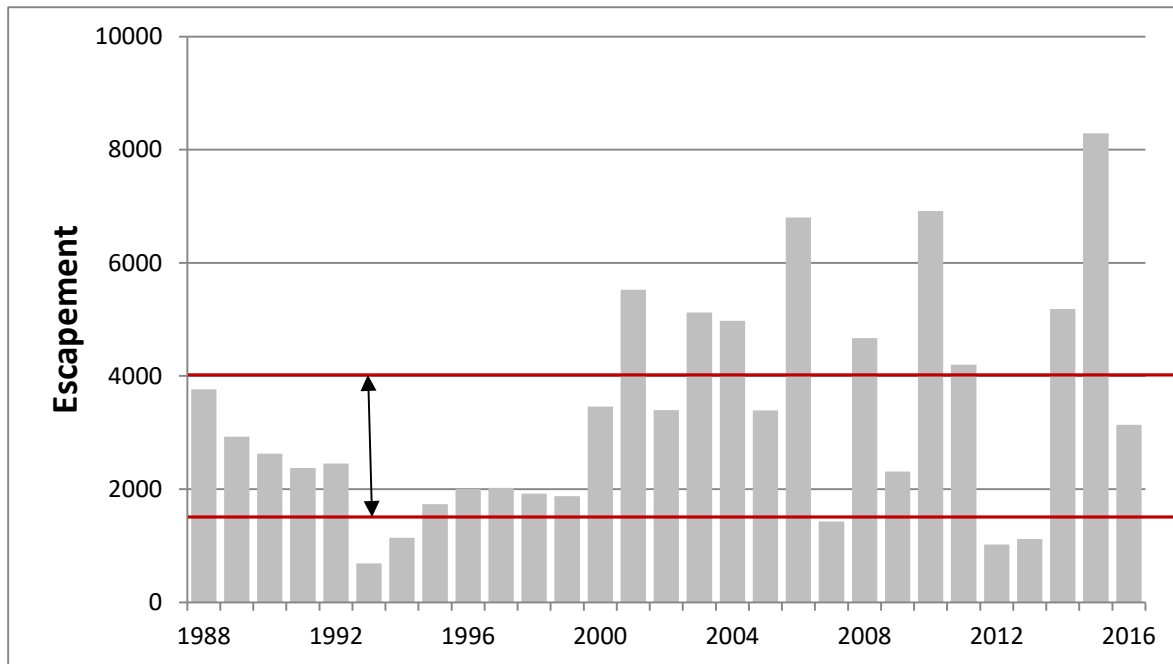


Figure 4. NFCP Chinook escapement estimates for the Nechako River. Red lines show the upper and lower target populations that define the Conservation Goal.