Nechako Fisheries Compensation Program

Annual Report

Executive Summary of Activities in 2014-2015 and Proposed Work Program for 2015-2016

March, 2015

Contents

Administration

Technical Committee Operations

The Technical Committee undertook minimal activities in Year 27 of the NFCP and held one conference call meeting jointly with the Steering Committee on Feb. 20, 2015. During the year, the Technical Committee undertook the projects approved for the 2014/2015 fiscal year with the exception of the Chinook residency time study which was deferred.

2014/2015 Program Summary

In the 2014/2015 operating period 5 of 5 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
2 Monitoring Projects	24	$12,500	$58,200	$70,700
Grand Total	165	$82,500	$87,520	**$170,520**

The total program budget for the 2014/2015 program year was $170,520 excluding Technical and Steering Committee operations.

Deferred projects included the flow discrepancy project and the Chinook residence time measurement, a component of the larger enumeration program.

Proposed 2015/2016 Program

The proposed 2015/2016 (Year 28) Nechako Fisheries Conservation Program includes:

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

Remedial measures projects are similar to those conducted previously since the start of the NFCP. Chinook monitoring activities have been suspended as outlined in Steering Committee Decision Record 2014-2015 #2.

A breakdown of person-days and for proposed 2015/2016 projects is shown in Table 1. Table 2 provides a comparison of the proposed Year 28 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

Table 2. Nechako Fisheries Conservation Program Previous Years' Budgets and Proposed Budget for Year 28 (2015/2016)

	2013/2014		2014/2015		Proposed 2015/2016	
	DAYS	EXPENSES	DAYS	EXPENSES	DAYS	EXPENSES
REMEDIAL MEASURES		(inc. contract)		(inc. contract)		(inc. contract)
Summer Temperature Management	$54,750	$15,910	$54,750	$15,910	$54,750	$15,910
Instream Habitat Complexing	$6,000	$4,820				
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	**$76,500**	**$34,140**	**$70,500**	**$29,320**	**$70,500**	**$29,320**
MONITORING						
Enumeration	$8,000	$30,000	$7,500	$38,200		
Carcass Recovery	$4,000	$19,000	$5,000	$20,000		
Sub-Total Monitoring	**$12,000**	**$49,000**	**$12,500**	**$58,200**	**$0**	**$0**
GRAND TOTAL	**$88,500**	**$83,140**	**$83,000**	**$87,520**	**$70,500**	**$29,320**

Cost Sharing Status

Rio Tinto Alcan (RTA) pays for the cost of remedial measures projects (e.g. Summer Temperature Management, Flow Control), DFO pays the cost of applied research projects (e.g. previously - Chinook Ecology) and both agencies share the cost of monitoring projects (e.g. Spawner Enumeration). In recent years, no applied research projects have been undertaken. The proposed program for Year 28 does not include monitoring expenses since this component of the NFCP program has been suspended.

In Year 23 (2010-2011) a decision was taken (SC Decision Record 2010/11-2) to "close-off" the accounting for monitoring projects up to and including Year 22 which were considered balanced in accordance with the cost-sharing provisions of the 1987 Settlement Agreement. In consideration of the fry/juvenile work ($372,000) that was financed by RTA in 2010, it was agreed that DFO would fund the majority of the enumeration and carcass recovery projects delivered in 2011 through 2015. The actual and projected expenditures by RTA and DFO for NFCP monitoring activities from 2010 up to and including 2014/15 (Year 27) are shown in Table 3.

Table 3. Financing schedule for NFCP monitoring projects between 2010-2015.

		Rio Tinto Alcan	Fisheries & Oceans	Total	**Imbalance**
Year 23	actual	$374,600	$90,700	$465,300	**$283,900**
Year 24	actual	$2,500	$90,700	$93,200	**$195,700**
Year 25	actual	-	$61,000	$61,000	**$134,700**
Year 26	actual	-	$61,000	$61,000	**$73,700**
Year 27	actual	-	$70,700	$70,700	**($3,000)**
Total		$377,100	$374,100	$751,200	**($3,000)**

At the end of Year 26, RTA had expended $73,700 more funds than DFO. Following Year 27 the imbalance was effectively retired when RTA had expended $3,000 more than DFO over the 5-year monitoring period.

Comparison of Completed Year 27 and Proposed Year 28 Projects

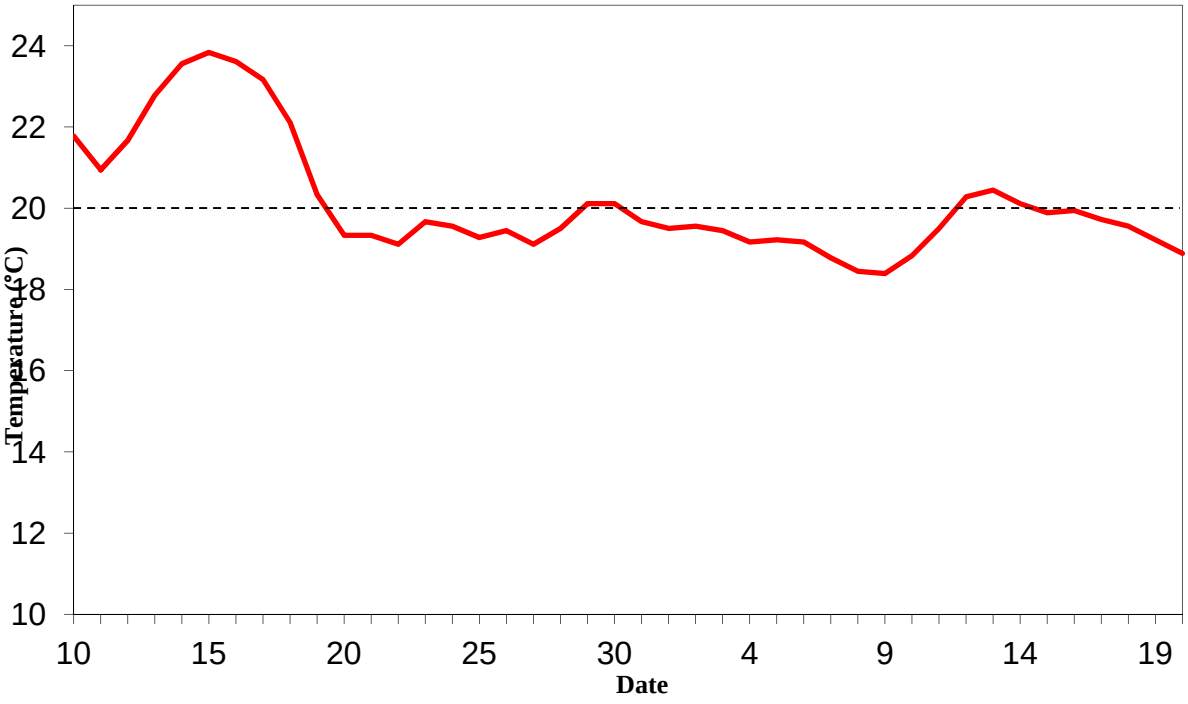
Remedial Measures

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 (Finmoore).

YEAR 27	YEAR 28
2014/2015	**2015/2016**
The Summer Temperature Management Program (STMP) was operated in the summer of 2014 as in prior years. The summer of 2014 was generally 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^3/s at the Nechako River below Cheslatta Falls was exceeded 5 days during the water temperature control period (July 20 – August 20). Figure 2. shows the water temperatures recorded in the Nechako River upstream of the Nechako-Stuart River confluence (at Finmore).	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, 2014 to August 20, 2014

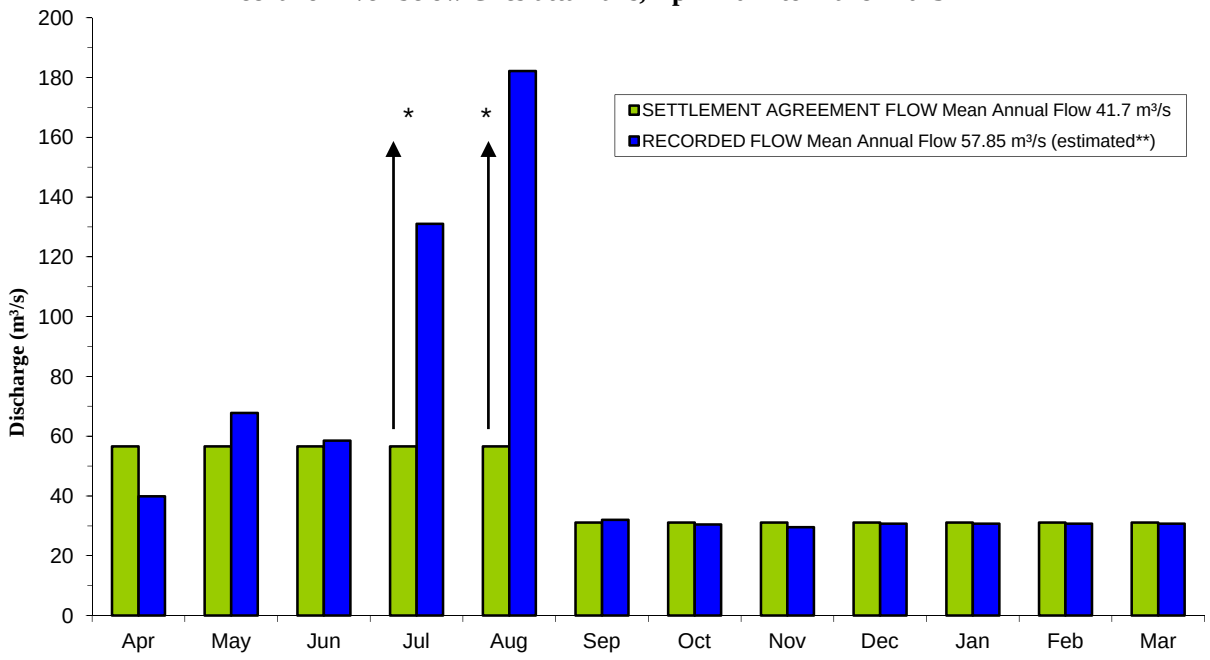


Flow Control

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.

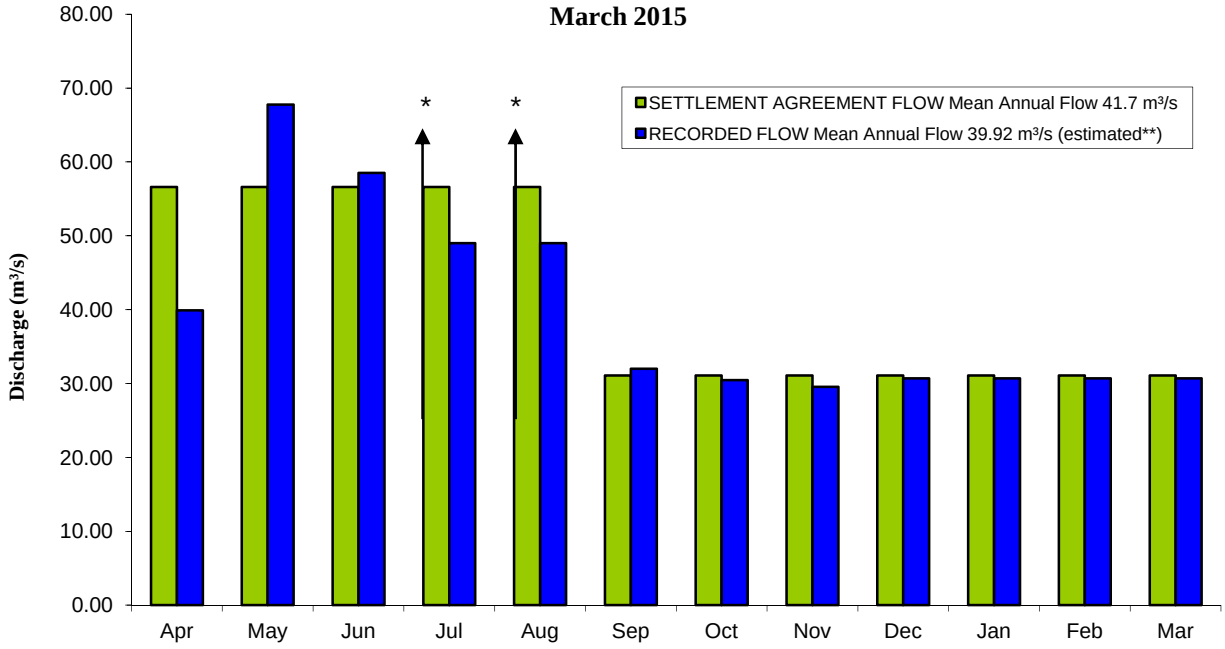
YEAR 27	YEAR 28
2014/2015	**2015/2016**
In 2014/2015, the release of the Annual Water Allocation was initiated in April as noted in Figures 2 and 3. Release from the reservoir remained at requested levels (49 m^3/s) from late April to the start of the STMP in July. In the latter part of the STMP in late August, releases were decreased, to control the discharge in the Nechako River below Cheslatta Falls to approximately 31.78 m^3/s through the spawning period in September. It is anticipated the releases will average 31.78 m^3/s or more for the remainder of the fall and winter. It is estimated that the mean annual discharge from the reservoir will be 56.65 m^3/s, which is higher than the required release of 36.8 m^3/s.	In 2015/2016, 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 2014 to March 2015



* Additional Flows as Required for Cooling Purposes
** 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 2014 to March 2015



* Additional Flows as Required for Cooling Purposes
** 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 27	YEAR 28
2014/2015	**2015/2016**
The flow discrepancy project was not undertaken in 2014-15 as no flow anomaly was detected.	During 2015/2016 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 ultimate indicator of achievement of the Conservation Goal.

YEAR 27	YEAR 28
2014/2015	**2015/2016**
In 2014, 5 over-flights were undertaken between September 5 and October 2. Results indicated a preliminary escapement estimate of 5183 spawners to the Nechako River (Figure 4), above the upper target of the conservation goal of 4000 chinook.	This activity has been discontinued.

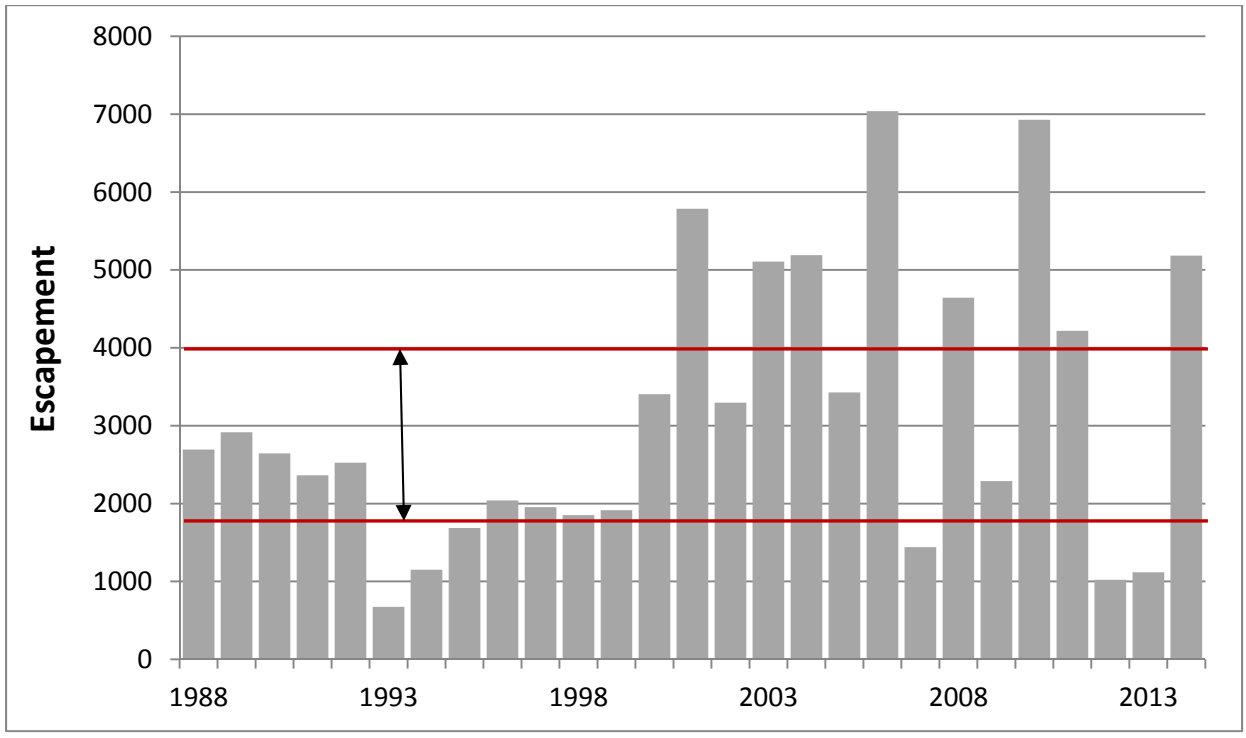


Figure 4. NFCP Chinook escapement estimates for the Nechako River. Red lines show the upper and lower target populations that define the Conservation Goal.

Adult Carcass Recovery

Life history information on freshwater and marine components of Nechako River chinook salmon can be ascertained by analyzing adult carcasses near the spawning grounds. Age at return, time of fresh water residency, and egg deposition are important data to enable results from other monitoring projects to be interpreted.

YEAR 27	YEAR 28
2014/2015	**2015/2016**
Samples taken for age analyses were sent to the aging laboratory and the 2014 age data is not yet available. The data will be analyzed and compiled into a future NFCP report.	This activity has been discontinued.

Fry Emergence

This activity has been discontinued.

Juvenile Outmigration

This activity has been discontinued.

Physical Data Collection

This activity has been discontinued.

Outstanding NFCP Report Publication and Web Site Maintenance

The NFCP has completed over 150 project reports summarizing the results of various remedial measures, applied research, monitoring and data collection projects over the last 25 years of the program. Completed reports for 2014 will be put on the NFCP website in PDF format.

Applied Research

This activity has been discontinued.

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