

Duncan Dam Project Water Use Plan

Monitoring Programs and Physical Works Annual Report: 2013

Implementation Period: April 2012 to March 2013

- DDMMON-1 Lower Duncan River Ramping Rate Monitoring
- DDMMON-2 Lower Duncan River Habitat Use Monitoring
- DDMMON-3 Lower Duncan River Hydraulic Model Development
- DDMMON-4 Lower Duncan River Kokanee Spawning Monitoring
- DDMMON-5 Upper Duncan River Bull Trout Migration Monitoring
- DDMMON-6 Lower Duncan Dam Bull Trout Passage Monitoring
- DDMMON-7 Lower Duncan River Water Quality Monitoring
- DDMMON-8 Duncan Watershed Riparian and Cottonwood Monitoring
- DDMMON-9 Lower Duncan River Mosquito Monitoring and Management Plan Development
- DDMMON-10 Duncan Reservoir Fish Habitat Use Monitoring
- DDMMON-11 Duncan Reservoir Burbot Monitoring
- DDMMON-12 Duncan Reservoir Archaeological Overview Assessment
- DDMMON-13 Duncan Reservoir Archaeological Site Erosion Monitoring
- DDMMON-14 Duncan Wildlife Use Monitoring
- DDMMON-15 Lower Duncan River Stranding Protocol Development and Finalization
- DDMMON-16 Lower Duncan River Fish Stranding Impact Monitoring
- DDMMON-17 Duncan Reservoir Kokanee Stock Assessment
- DDMWORKS-1 Lower Duncan River Argenta Slough Erosion Protection
- DDMWORKS-2 Duncan Reservoir Glacier Creek Boat Ramp Extension
- DDMWORKS-3 Plan to Address Nutrient Retention Caused by Duncan Dam Operations
- DDMWORKS-4 Action Plan to Minimize Stranding of Kokanee Spawning in Lower Duncan River Sidechannels

For Conditional Water Licence for Duncan Dam and Reservoir 27027

April 30, 2013

BC Hydro Duncan Dam Project Water Use Plan Monitoring Programs and Physical Works Annual Report: 2013

1 Introduction

This document represents a summary of the status and the results of the Duncan Dam Water Use Plan (WUP) monitoring programs and physical works to March 31, 2013, as per the Duncan Dam Order under the *Water Act*, dated December 21, 2007. There are seventeen monitoring programs and four physical works.

2 Status

The following table outlines the dates that TOR for the Duncan Dam WUP Monitoring programs and physical works were submitted to and approved by the CWR.

**Table 2-1: Dates of Duncan Dam WUP TOR Submissions and Approvals by the
Comptroller of Water Rights**

Monitoring Program & Physical Works TOR	Order Clause	Original ToR Submission		Most Recent ToR Resubmission	
		Date Submitted	Date Approved	Date Submitted	Date Approved
DDMMON-1 Lower Duncan River Ramping Rate Monitoring	Clause 5(e)	Apr 03, 2008	Apr 30, 2008		
DDMMON-2 Lower Duncan River Habitat Use Monitoring	Clause 5(e)	Aug 07, 2008	Sep 9,2008		
DDMMON-3 Lower Duncan River Hydraulic Model Development	Clause 5(e)	Apr 03, 2008	Apr 30, 2008		
DDMMON-4 Lower Duncan River Kokanee Spawning Monitoring	Clause 6(a)	Apr 03, 2008	Apr 30, 2008	Dec 19, 2008	Mar 17, 2009
DDMMON-5 Upper Duncan River Bull Trout Migration Monitoring	Clause 6(b)	Jan 23, 2008	Mar 05, 2008	Feb 22, 2010	Mar 18, 2010
DDMMON-6 Lower Duncan Dam Bull Trout Passage Monitoring	Clause 6(b)	Jan 23, 2008	Mar 05, 2008		
DDMMON-7 Lower Duncan River Water Quality Monitoring	Clause 6(c)	Dec 16, 2008	Mar 11, 2009		
DDMMON-8 Duncan Riparian Monitoring	Clause 6(d)	Aug 07, 2008	Sep 09, 2008	Nov 01, 2012	Nov 15, 2012
DDMMON-9 Lower Duncan River Mosquito Monitoring and Management Plan Development	Clause 6(e)	Aug 07, 2008	Sep 09, 2008		
DDMMON-10 Duncan Reservoir Fish Habitat Use Monitoring	Clause 6(f)	Dec 16, 2008	Mar 11, 2009		
DDMMON-11 Duncan Reservoir Burbot Monitoring	Clause 6(g)	Apr 03, 2008	Apr 30, 2008		
DDMMON-12 Duncan Reservoir Archaeological Overview Assessment	Clause 5(f)	Dec 04, 2009	Feb 05, 2010		
DDMMON-13 Duncan Reservoir Archaeological Site Erosion Monitoring	Clause 5(g)	Dec 04, 2009	Apr 07, 2010		
DDMMON-14 Duncan Wildlife Use Monitoring	Clause 6(h)	Aug 07, 2008	Sep 09, 2008		

Monitoring Program & Physical Works TOR	Order Clause	Original ToR Submission		Most Recent ToR Resubmission	
		Date Submitted	Date Approved	Date Submitted	Date Approved
DDMMON-15 Lower Duncan River Stranding Protocol Development and Finalization	Clause 5(e)	Dec 16, 2008	Mar 11, 2009	Jul 30, 2009	Aug 31, 2009
DDMMON-16 Lower Duncan River Fish stranding impact monitoring	Clause 5(e)	Jul 23, 2008	Sep 08, 2008		
DDMMON-17 Duncan Reservoir Kokanee Stock Assessment	Clause 6(f)	Dec 04, 2009	Apr 08, 2010		
DDMWORKS-1 Argenta Slough Erosion Protection	Clause 5(a)	Jan 23, 2008	Mar 18, 2008		
DDMWORKS-2 Glacier Creek Boat Ramp	Clause 5(b)	Jan 23, 2008	Mar 18, 2008		
DDMWORKS-3 Plan to Address Nutrient Retention Caused by Duncan Dam Operations	Clause 5(d)	Jan 23, 2008	Mar 18, 2008		
DDMWORKS-4 Action Plan to Minimize Stranding of Kokanee Spawning in Lower Duncan River Sidechannels	Clause 5(c)	Dec 04, 2009	Apr 08, 2010		

3 Schedule

The following table (Table 3-1) outlines the current schedule for the monitoring programs and physical works being delivered for the Duncan Dam WUP.

Table 3-1: Table of WUP Schedule

Monitoring Programs	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
	WLR YR1	WLR YR2	WLR YR3	WLR YR4	WLR YR5	WLR YR6	WLR YR7	WLR YR8	WLR YR9	WLR YR10	WLR YR11 Final Review
DDMMON-1 Lower Duncan River Ramping Rate Monitoring	✓	✓								■	
DDMMON-2 Lower Duncan River Habitat Use Monitoring	✓	✓	✓	✓	✓						
DDMMON-3 Lower Duncan River Hydraulic Model Development		✓	✓		✓	■				■	
DDMMON-4 Lower Duncan River Kokanee Spawning Monitoring	✓	✓	✓	✓	✓	■	■	■	■	■	
DDMMON-5 Upper Duncan River Bull Trout Migration Monitoring	✓	✓			✓	■		■		■	
DDMMON-6 Lower Duncan Dam Bull Trout Passage Monitoring	✓	✓	✓	x					■	■	■
DDMMON-7 Lower Duncan River Water Quality Monitoring			✓	✓	✓						
DDMMON-8 Duncan Riparian Monitoring		✓	✓		✓	■	■	■	■	■	■
DDMMON-9 Lower Duncan River Mosquito Monitoring and Management Plan Development		✓	✓	✓	✓		■		■		■
DDMMON-10 Duncan Reservoir Fish Habitat Use Monitoring		✓	✓	✓	✓		■		■		■
DDMMON-11 Duncan Reservoir Burbot Monitoring		✓	✓	✓			■				
DDMMON-12 Duncan Reservoir Archeological Overview Assessment			✓								
DDMMON-13 Duncan Reservoir Archeological Site Erosion Monitoring				✓	✓	■	■	■			
DDMMON-14 Duncan Wildlife Use Monitoring		✓		✓			■			■	
DDMMON-15 Lower Duncan River Stranding Protocol Development and Finalization		✓	✓	✓	u/w	■	■	■	■	■	■
DDMMON-16 Lower Duncan River Fish stranding impact monitoring	✓	✓	✓	✓	✓	■	■	■	■	■	
DDMMON-17 Duncan Reservoir Kokanee Stock Assessment									■	■	■
Physical Works											
DDMWORKS-1 Argenta Slough Erosion Protection	✓	✓	x			■					
DDMWORKS-2 Glacier Creek Boat Ramp	x	✓									
DDMWORKS-3 Kootenay Lake Nutrient Loading Funding	✓	✓	✓	✓	✓	■	■	■	■	■	
DDMWORKS-4 Action Plan to minimize stranding of kokanee stranding in Lower Duncan River Sidechannels							■	■	■	■	■
Legend:	■	=	Program to be undertaken/initiated in identified year								
	u/w	=	Project is underway								
	✓	=	Program completed for the year								
	x	=	Program started, but encountered operational or hydrological delays								

4 Monitoring Programs and Physical Works Terms of Reference

The Monitoring Programs and Physical Works being implemented under the Duncan Dam WUP are described in Terms of Reference. These Terms of Reference and the reports for work completed to date can be found here:

http://www.bchydro.com/about/sustainability/conservation/water_use_planning/southern_interior/duncan_dam.html

5 Summary of Monitoring Programs

5.1 DDMMON-1 Lower Duncan River Ramping Rate Monitoring

5.1.1 Status

This monitoring program was initiated in 2008 and does not implement again until 2017. No report is attached.

5.2 DDMMON-2 Lower Duncan River Habitat Use Monitoring

5.2.1 Status

This monitoring project is complete. Attached is the report for Year 3 dated September 17, 2012.

5.3 DDMMON-3 Lower Duncan River Hydraulic Development

5.3.1 Status

This monitoring program was initiated in 2009 and Year 3 is in progress. The next update to the hydraulic model will occur in 2017.

No report is attached. Expected report due June 2013 to be submitted in next year's report.

5.4 DDMMON-4 Lower Duncan River Kokanee Spawning Monitoring

5.4.1 Status

This monitoring program was initiated in 2008 and will be carried out every year over 10 years. Attached are the reports for Year 4 dated May 31, 2012 and Year 5 dated March 31, 2013.

5.5 DDMMON-5 Upper Duncan River Bull Trout Migration Monitoring

5.5.1 Status

This monitoring program was initiated in 2008 and will be carried out periodically over 10 years.

No report is attached. Expected report for Year 3 due May 2013 to be submitted in next year's report.

5.6 DDMMON-6 Lower Duncan Dam Bull Trout Passage Monitoring

5.6.1 Status

This monitoring program was initiated in 2008 for 3 years. Post-monitoring will recommence for 3 years in 2016 after the implementation of a new weir.

No report is attached.

5.7 DDMMON-7 Lower Duncan River Water Quality Monitoring

5.7.1 Status

This monitoring program was initiated in 2010 and was completed in 2012.

Attached is the report for Year 2 dated September 1, 2012.

5.8 DMMON-8 Duncan Watershed Riparian and Cottonwood Monitoring

This project has been divided into two discrete monitoring components based on their locations in the Duncan River watershed.

5.8.1 DDMMON-8-1 Lower Duncan River Riparian Cottonwood Monitoring

5.8.1.1 Status

This monitoring program was initiated in 2009 and with the exception of 2011, will be carried out every year over 10 years.

Attached is the report for Year 3 dated March 2013.

5.8.2 DDMMON-8-2 Duncan Reservoir Riparian Monitoring

5.8.2.1 Status

This monitoring program was initiated in 2009 and with the exception of 2011, will be carried out every other year over a 10 year period.

Attached is the report for Year 2 dated March 2013.

5.9 DDMMON-9 Lower Duncan River Mosquito Monitoring and Management Plan Development

5.9.1 Status

This monitoring program was initiated in 2009 and will be carried out periodically over 10 years.

No report is attached. Expected report for Year 4 (2012) to be submitted in next year's report.

5.10 DDMMON-10 Duncan Reservoir Fish Habitat Use Monitoring

5.10.1 Status

This monitoring program was initiated in 2009 and will be carried out periodically over 10 years. No implementation in 2013; the project will resume in 2014.

Attached is the report for Year 4 (April 2011 – January 2012) dated June 14, 2012. The Year 5 report (April 2012 – January 2013) has been reviewed by BC Hydro and is in the process of being finalized. It will be submitted in next year's annual report.

5.11 DDMMON-11 Duncan Reservoir Burbot Monitoring

5.11.1 Status

This monitoring program was initiated in 2009 and as a result of 2011 implementation, the Terms of Reference are being revised. Due to resource constraints, BC Hydro has delayed resubmission of the TOR to 2013.

No report is attached.

5.12 DDMMON-12 Duncan Reservoir Archaeological Overview Assessment

5.12.1 Status

This study was initiated in 2010 and was completed in 2011.

5.13 DDMMON-13 Duncan Reservoir Archaeological Site Erosion Monitoring

5.13.1 Status

This monitoring program was initiated in 2011 and will be carried out every year for 5 years.

Attached is the report for Year 2 dated October 31, 2012.

5.14 DDMMON-14 Duncan Wildlife Use Monitoring

5.14.1 Status

This monitoring program was initiated in 2009, implemented in 2011, and will be next carried out in 2014 and 2017.

No report is attached.

5.15 DDMMON-15 Lower Duncan River Stranding Protocol Development and Finalization

5.15.1 Status

This project was initiated in 2009 and will be carried out every year for 10 years.

Attached is the report for Year 3 dated January 7, 2013.

5.16 DDMMON-16 Lower Duncan River Fish Stranding Impact Monitoring

5.16.1 Status

This project was initiated in 2008 and will be carried out every year for 10 years.

Attached is the report for Year 4 dated July 11, 2012.

5.17 DDMMON-17 Duncan Reservoir Kokanee Stock Assessment

5.17.1 Status

This study will be carried out every year for 3 years commencing in 2015.

6 Summary of Physical Works

6.1 DDMWORKS-1 Argenta Slough Erosion Protection

6.1.1 Status

Consultation with the regulators (Department of Fisheries and Oceans, Canadian Wildlife Service, and Ministry of Forests, Lands and Natural Resources) took place in January 2013 regarding the results of the Argenta Slough Erosion Protection Assessment dated January 15, 2010. The regulators did not support proceeding with the physical works outlined in the Assessment as a result of excessive costs and the likelihood of significant environmental damage to the Slough to provide construction access to the bank. BC Hydro will recommence erosion monitoring in 2013 and evaluate alternatives.

6.2 DDMWORKS-2 Glacier Creek Boat Ramp Extension

6.2.1 Status

The ramp was completed in May 2009.

6.3 DDMWORKS-3 Plan to Address Nutrient Retention Caused by Duncan Dam Operations

6.3.1 Status

Payments are made annually to the amount of 17.5% of the previous years fertilisation cost as per the letter of agreement between BC Hydro and the FWCP. In 2012, the payment was \$119,691.

6.4 DDMWORKS-4 Action Plan to Minimize Stranding of Kokanee Spawning in Lower Duncan River Sidechannels

6.4.1 Status

Consultation with the regulators (Department of Fisheries and Oceans and Ministry of Forests, Lands and Natural Resources) took place in January 2013. The regulators agreed to treat the Kokanee within the Lower Duncan River, Lardeau and Meadow Creek as one population based on genetic analysis conducted by Lemay & Russello 2011¹. In general, the regulators rejected physical works given issues with logistics, annual maintenance and potential secondary effects on other resources in the area. BC Hydro is currently evaluating alternatives.

7 Monitoring Programs and Physical Works Costs

The following table summarizes the Duncan Dam WUP monitoring programs and physical works costs approved by the Comptroller and the Actual Costs to March 31, 2013.

¹ Lemay M. A. and Russello M.A. 2011. Genetic stock identification of kokanee salmon from Kootenay Lake British Columbia, Report to BC Hydro.

Table 7-1: Duncan Dam WUP Monitoring Programs and Physical Works Costs

Monitoring Programs	Activity	Costs approved by CWR	Life to Date Actuals (LTD)	Estimated to Complete (Forecast)	Total Forecast (LTD and Forecast)	Variance Total to Approved	Explanation	Corrective Action
Duncan Dam Annual Report	ONR	\$25,300	\$7,346	\$17,954	\$25,300	\$0		
DDMMON#1 LOWER DUNCAN RIVER RAMPING RATE MONITORING	ONR	\$247,883	\$125,967	\$117,260	\$243,227	\$4,656	Efficiencies in project implementation expected.	No corrective action.
DDMMON#1 Direct Management 001	ONR	\$34,639	\$17,643	\$13,260	\$30,903	\$3,736		
DDMMON#1 Implementation 002	ONR	\$213,244	\$108,324	\$104,000	\$212,324	\$920		
DDMMON#2 LOWER DUNCAN RIVER FISH HABITAT USE MONITORING	ONR	\$566,815	\$502,057		\$502,057	\$64,758	Project Complete in 2012. Efficiencies found in project implementation.	No corrective action.
DDMMON#2 Direct Management 001	ONR	\$84,707	\$40,585		\$40,585	\$44,122		
DDMMON#2 Implementation 002	ONR	\$482,108	\$461,472		\$461,472	\$20,636		
DDMMON#3 LOWER DUNCAN RIVER HYDRAULIC MODEL DEVELOPMENT	ONR	\$645,686	\$540,714	\$121,346	\$662,060	(\$16,374)	Due to model complexities and coordination tasks in the first year, direct management costs were higher than anticipated.	Resubmission of TOR delayed to 2013.
DDMMON#3 Direct Management 001	ONR	\$60,107	\$73,461	\$11,736	\$85,196	(\$25,089)		
DDMMON#3 Implementation 002	ONR	\$585,579	\$467,253	\$109,610	\$576,863	\$8,716		
DDMMON#4 LOWER DUNCAN RIVER KOKANEE SPAWNING MONITORING	ONR	\$1,462,700	\$503,460	\$716,464	\$1,219,924	\$242,776	Efficiencies in project implementation expected.	No corrective action.
DDMMON#4 Direct Management 001	ONR	\$148,850	\$31,646	\$82,854	\$114,500	\$34,350		
DDMMON#4 Implementation 002	ONR	\$1,313,850	\$471,814	\$633,610	\$1,105,424	\$208,426		
DDMMON#5 UPPER DUNCAN RIVER BULL TROUT MIGRATION MONITORING	ONR	\$436,738	\$168,797	\$267,941	\$436,738	\$0		
DDMMON#5 Direct Management 001	ONR	\$88,738	\$33,245	\$55,493	\$88,738	\$0		
DDMMON#5 Implementation 002	ONR	\$348,000	\$135,552	\$212,448	\$348,000	\$0		
DDMMON#6 LOWER DUNCAN RIVER BULL TROUT PASSAGE MONITORING	ONR	\$280,970	\$93,135	\$134,621	\$227,756	\$53,214	Efficiencies in project implementation expected.	No corrective action.
DDMMON#6 Direct Management 001	ONR	\$78,970	\$27,205	\$13,281	\$40,486	\$38,484		
DDMMON#6 Implementation 002	ONR	\$202,000	\$65,930	\$121,340	\$187,270	\$14,730		
DDMMON#7 LOWER DUNCAN RIVER WATER QUALITY MONITORING	ONR	\$154,827	\$106,114	\$16,210	\$122,323	\$32,504	Project complete in 2012. Efficiencies in project implementation.	No corrective action.
DDMMON#7 Direct Management 001	ONR	\$43,003	\$22,077		\$22,077	\$20,926		
DDMMON#7 Implementation 002	ONR	\$111,824	\$84,037	\$16,210	\$100,246	\$11,578		
DDMMON#8 DUNCAN RIPARIAN MONITORING	ONR	\$1,457,738	\$483,287	\$836,053	\$1,319,340	\$138,398	Efficiencies in project implementation expected.	No corrective action.
DDMMON#8 Direct Management 001	ONR	\$192,758	\$51,334	\$89,915	\$141,248	\$51,510		
DDMMON#8 Implementation 002	ONR	\$1,264,980	\$431,953	\$746,138	\$1,178,091	\$86,889		
DDMMON#9 LOWER DUNCAN RIVER MOSQUITO MONITORING AND MANAGEMENT PLAN DEVELOPMENT	ONR	\$497,176	\$319,556	\$192,726	\$512,282	(\$15,106)	Increase in frequency of larval dip sampling and annual stakeholder meeting were requested by local government.	Resubmission of TOR by June 30, 2013.
DDMMON#9 Direct Management 001	ONR	\$122,310	\$63,568	\$50,365	\$113,933	\$8,377		
DDMMON#9 Implementation 002	ONR	\$374,866	\$255,988	\$142,361	\$398,349	(\$23,483)		
DDMMON#10 DUNCAN RESERVOIR FISH HABITAT USE MONITORING	ONR	\$791,362	\$522,104	\$269,258	\$791,362	\$0		
DDMMON#10 Direct Management 001	ONR	\$117,205	\$51,535	\$65,670	\$117,205	\$0		
DDMMON#10 Implementation 002	ONR	\$674,157	\$470,569	\$203,588	\$674,157	\$0		
DDMMON#11 DUNCAN RESERVOIR BURBOT MONITORING	ONR	\$1,131,566	\$520,606	\$293,502	\$814,108	\$317,458	Terminated Year 4 monitoring based on difficulties in obtaining sample size without undue stress to fish.	Resubmission of TOR delayed to 2013.
DDMMON#11 Direct Management 001	ONR	\$173,632	\$46,626	\$127,006	\$173,632	\$0		
DDMMON#11 Implementation 002	ONR	\$957,934	\$473,980	\$166,496	\$640,476	\$317,458		
DDMMON#12 DUNCAN RESERVOIR ARCHEOLOGICAL OVERVIEW ASSESSMENT	ONR	\$68,632	\$71,521		\$71,521	(\$2,889)	Project complete.	No corrective action.
DDMMON#12 Direct Management 001	ONR	\$21,870	\$26,992		\$26,992	(\$5,122)		
DDMMON#12 Implementation 002	ONR	\$46,762	\$44,529		\$44,529	\$2,233		
DDMMON#13 DUNCAN RESERVOIR ARCHEOLOGICAL SITE EROSION MONITORING	ONR	\$306,185	\$101,754	\$137,750	\$239,504	\$66,681	Efficiencies in project implementation expected.	No corrective action.
DDMMON#13 Direct Management 001	ONR	\$79,579	\$57,123	\$15,468	\$72,591	\$6,988		
DDMMON#13 Implementation 002	ONR	\$226,606	\$44,631	\$122,282	\$166,913	\$59,693		
DDMMON#14 DUNCAN WILDLIFE USE MONITORING	ONR	\$450,955	\$217,426	\$217,801	\$435,226	\$15,729	Efficiencies in project implementation expected.	No corrective action.
DDMMON#14 Direct Management 001	ONR	\$97,167	\$59,688	\$35,421	\$95,109	\$2,058		
DDMMON#14 Implementation 002	ONR	\$353,788	\$157,738	\$182,380	\$340,118	\$13,670		
DDMMON#15 DUNCAN RESERVOIR RIVER STRANDING PROTOCOL DEVELOPMENT AND FINALIZATION	ONR	\$257,049	\$81,613	\$145,758	\$227,370	\$29,679	Efficiencies in project implementation expected.	No corrective action.
DDMMON#15 Direct Management 001	ONR	\$71,421	\$15,298	\$48,350	\$63,648	\$7,773		
DDMMON#15 Implementation 002	ONR	\$185,628	\$66,314	\$97,408	\$163,722	\$21,906		
DDMMON#16 LOWER DUNCAN RIVER FISH STRANDING IMPACT MONITORING	ONR	\$1,002,995	\$332,247	\$558,787	\$891,034	\$111,961	Efficiencies in project implementation expected.	No corrective action.
DDMMON#16 Direct Management 001	ONR	\$144,330	\$32,942	\$57,078	\$90,020	\$54,310		
DDMMON#16 Implementation 002	ONR	\$858,665	\$299,305	\$501,709	\$801,014	\$57,651		
DDMMON#17 DUNCAN RESERVOIR KOKANEE STOCK ASSESSMENT	ONR	\$248,583	\$460	\$247,133	\$247,593	\$990	Efficiencies in project implementation expected.	No corrective action.
DDMMON#17 Direct Management 001	ONR	\$49,281	\$460	\$47,831	\$48,291	\$990		
DDMMON#17 Implementation 002	ONR	\$199,302		\$199,302	\$199,302	\$0		
DDMWORCS#1 LOWER DUNCAN RIVER ARGENTA SLOUGH EROSION PROTECTION	ONR	\$270,761	\$94,697	\$176,053	\$270,750	\$11	Efficiencies in project implementation expected.	No corrective action.
DDMWORCS#1 Direct Management 001	ONR	\$47,561	\$23,518	\$24,032	\$47,550	\$11		
DDMWORCS#1 Implementation 002	ONR	\$223,200	\$71,178	\$152,022	\$223,200	\$0		
DDMWORCS#2 DUNCAN RESERVOIR GLACIER CREEK BOAT RAMP EXTENSION	ONR	\$197,339	\$123,521	\$8,241	\$131,762	\$65,577	Project completed.	No corrective action.
DDMWORCS#2 Direct Management 001	ONR	\$71,139	\$36,945	\$8,241	\$45,185	\$25,954		
DDMWORCS#2 Implementation 002	ONR	\$126,200	\$86,576		\$86,576	\$39,624		
DDMWORCS#3 PLAN TO ADDRESS NUTRIENT RETENTION CAUSED BY DUNCAN DAM OPERATIONS	ONR	\$1,496,979	\$648,891	\$813,109	\$1,462,000	\$34,979	Efficiencies in project implementation expected.	No corrective action.
DDMWORCS#3 Direct Management 001	ONR	\$40,979	\$3,012	\$2,988	\$6,000	\$34,979		
DDMWORCS#3 Implementation 002	ONR	\$1,456,000	\$645,878	\$810,122	\$1,456,000	\$0		
DDMWORCS#4 ACTION PLAN TO MINIMIZE STRANDING OF KOKANEE SPAWNING IN LOWER DUNCAN RIVER SIDECHANNELS	ONR	\$241,650	\$9,948	\$192,676	\$202,624	\$39,026	Efficiencies in project implementation expected.	No corrective action.
DDMWORCS#4 Direct Management 001	ONR	\$90,342	\$9,793	\$79,207	\$89,000	\$1,342		
DDMWORCS#4 Implementation 002	ONR	\$151,308	\$155	\$113,469	\$113,624	\$37,684		

OR - Ordered Remissible
ONR - Ordered Non-Remissible

* Red values in parentheses denote overage.