

June 28, 2019

Ted White, B.Sc.
Director and Comptroller of Water Rights
Ministry of Forests, Lands, Natural Resource Operations and Rural Development
PO Box 9340 Stn Prov Govt
Victoria, BC V8W 9M1

Dear Mr. White:

**Re: Peace Project Water Use Plan
Dinosaur Reservoir Management Plan Annual Report 2019**

Your letters approving the Peace Project Water Use Plan - Dinosaur Reservoir Management Plan Water Use Plan monitoring programs and physical works Terms of Reference state that BC Hydro is required to submit an annual report as well as individual monitoring program reports in June of each year. As per your approval letter dated August 29, 2018, recognizing that GMSWORKS-56 Hudson's Hope Boat Launch Maintenance is the only project left in implementation under the Dinosaur Reservoir Management Plan, the annual report for 2018 is provided via this letter.

GMSWORKS-56 Hudson's Hope Boat Launch Maintenance

This project is for the maintenance of the boat ramp constructed under GMSWORKS-51(Hudson's Hope Boat Ramp Construction). Routine maintenance includes annual installation of the floating access dock and walkway before the recreation season begins and removal at the end of the season for winter storage. The maintenance plan also includes annual inspections to ensure that the ramp is maintained in safe working order, and whatever cleaning activities (e.g. removal of debris or sediment from the ramp) may be needed. Further structural maintenance is performed on an as-need basis.

In 2018 structural maintenance was completed to address erosion issues. An inspection in late 2017 indicated that the erosion protection (i.e. rip-rap) had moved away from the edge of the driving surface of the ramp. Undercutting of the driving surface of the ramp and exposure of the geotextile on both the upstream and downstream sides of the ramp were observed. The rip-rap appears to have moved downslope from the edge of the ramp between elevations 502.75 m and 502.0 m which correspond with the dominant water elevations that are experienced on Dinosaur Reservoir. This suggests that wind, wave and possibly ice are the erosive forces. It is possible that some rip-rap particles have been removed by the public.

The structural maintenance work was completed in July 2018 according to BC Hydro Approved Work Practices for Boat Launches, and was done in the dry. Peace Canyon Dam staff completed the work, resulting in significant cost savings compared to hiring an outside contractor. One finding of the work is that there has been some damage to the concrete slab "key" that holds the slabs together. This component is currently functional and safe but it will need close inspection in the future to ensure the condition does not get worse over time.

At the time of submission of this letter update, there has been no change to the GMSWORKS-56 project schedule or Terms of Reference. The updated financial information is in Table 1 below.

Table 1: Dinosaur Reservoir Management Plan WUP Monitoring Program and Physical Works Costs

Monitoring Programs	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
GMSM14A DNR Tributary Habita	\$150,364	\$32,018		\$32,018	\$118,346	Project Completed	
GMSM14A DNR Tributary Habita - OR DM	\$57,080	\$14,509		\$14,509	\$42,571		
GMSM14A DNR Tributary Habita - OR Imp	\$93,284	\$17,509		\$17,509	\$75,775		
GMSW08A DNR Demonstration	\$247,265	\$15,886		\$15,886	\$231,379	Project Completed	
GMSW08A DNR Demonstration - OR DM	\$63,222	\$7,878		\$7,878	\$55,344		
GMSW08A DNR Demonstration - OR Imp	\$184,043	\$8,008		\$8,008	\$176,035		
GMSW09A DNR Tributary Inven	\$41,013	\$34,262		\$34,262	\$6,751	Project Completed	
GMSW09A DNR Tributary Inven - OR DM	\$16,013	\$11,137		\$11,137	\$4,877		
GMSW09A DNR Tributary Inven - OR Imp	\$25,000	\$23,125		\$23,125	\$1,875		
GMSW12A DNR Recreation Acc	\$118,729	\$72,364		\$72,364	\$46,365	Project Completed	
GMSW12A DNR Recreation Acc - OR DM	\$60,765	\$16,178		\$16,178	\$44,587		
GMSW12A DNR Recreation Acc - OR Imp	\$57,964	\$56,186		\$56,186	\$1,778		
GMSW51A BRC Dinosaur	\$3,258,435	\$4,252,392		\$4,252,392	(\$993,957)	Project Completed. This non-remissible project overspend was due to schedule delays and material deficiencies.	
GMSW51A BRC Dinosaur - ONR DM	\$180,300	\$7,697		\$7,697	\$172,603		
GMSW51A BRC Dinosaur - ONR Imp	\$3,078,135	\$4,244,695		\$4,244,695	(\$1,166,560)		
GMSW53A BRD Dinosaur	\$87,965	\$64,131		\$64,131	\$23,834	Project Completed	
GMSW53A BRD Dinosaur - ONR DM	\$12,965	\$11,510		\$11,510	\$1,455		
GMSW53A BRD Dinosaur - ONR Imp	\$75,000	\$52,621		\$52,621	\$22,379		
GMSW56A Dinosaur Maintenance	\$504,143	\$87,462	\$219,877	\$307,340	\$196,803	Efficiencies found during project implementation	
GMSW56A Dinosaur Maintenance - ONR DM	\$25,758	\$14,877	\$5,302	\$20,179	\$5,579		
GMSW56A Dinosaur Maintenance - ONR Imp	\$478,385	\$72,585	\$214,575	\$287,160	\$191,225		

OR - Ordered Remissible
ONR - Ordered Non-Remissible

Should you have any questions please do not hesitate to contact me.

Regards,

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C:

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