

Upper Lillooet Hydro Project



**Weekly Environmental Monitoring Report #1**

**Reporting Period: September 15th – September 21st, 2013**

*Lillooet River Forest Service Road (FSR) realignment and pre-work planning*

Upper Lillooet River Hydroelectric Facility (Water File No. 2002561, Water licence No. C130613),  
Boulder Creek Hydroelectric Facility (Water File No. 2003049, Water licence No. C129969) &  
Transmission Line (TX Line)

*Environmental Assessment Certificate No.E13-01 (Amendment 1)  
Occupant Licence to Cut (FSR realignment) No. L49717  
Road Use Permit No. 6123-13-02*

Distribution List		Prepared By
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		<b>Date Prepared:</b> September 24, 2013 <b>Date Submitted:</b> September 30, 2013

**ACRONYMS:**

BDRHEF	Boulder Creek Hydroelectric Facility
CRT-EBC	CRT-EBC Construction Inc.
ESC	Erosion and Sediment Control
FSR	Forest Service Road
IEM	Independent Environmental Monitor
Innergex	Innergex Renewable Energy Inc.
ITM	Issue Tracking Matrix
MFLNRO	Ministry of Forestry, Lands and Natural Resources
MOE	Ministry of Environment
RVMA	Riparian Vegetation Management Area
SES	Sartori Environmental Services
TX Line	Transmission Line
ULRHEF	Upper Lillooet River Hydroelectric Facility
WQ	Water Quality
WEL	Westpark Electric Ltd.
WEMR	Weekly Environmental Monitoring Report

## 1.0 Summary of Site Inspections for Reporting Period

The table presented below summarizes the IEM team site presence, weather and monitoring locations by component:

Day	Date	IEM Team Personnel	Weather Conditions	Monitoring Locations & Key Environmental Information
Sunday	Sep 15	-	-	-
Monday	Sep 16	-	-	-
Tuesday	Sep 17	-	-	-
Wednesday	Sep 18	SS, TH	Clear	<b>Lillooet River FSR Realignment at Truckwash Creek</b> <ul style="list-style-type: none"> <li>Field review and pre-work meeting</li> </ul> <b>Tx Line – Segments 1 &amp; 2</b> <ul style="list-style-type: none"> <li>Field review and pre-work meeting</li> </ul>
Thursday	Sep 19	TH	Clear	<b>Lillooet River FSR Realignment at Truckwash Creek</b> <ul style="list-style-type: none"> <li>Excavator arrived at site clean and free of vegetative debris</li> </ul>
Friday	Sep 20	TH	Clear	<b>Lillooet River FSR Realignment at Truckwash Creek</b> <ul style="list-style-type: none"> <li>Commencement of FSR realignment works and discussion in regards to the culvert installation on dry, ephemeral channel (westernmost crossing) and initial fording.</li> </ul>
Saturday	Sep 21	TH	Scattered showers	<b>Lillooet River FSR Realignment at Truckwash Creek</b> <ul style="list-style-type: none"> <li>Temporary fording of dry channel by placing woody debris</li> </ul>

**IEM Team Personnel:**

SS – Stephen Sims

TH – Tom Hicks

## 2.0 Administrative Summary

Key communications and meetings the IEM team had with the licensees, contractors and/or environmental authorities:

Date	Communication Type	Participants	Issues Discussed	ITM ID No.
Sep-17	TX Line office pre-work meeting	WEL, Mumleqs ( <i>i.e.</i> Lizzie Bay Logging and Lil'wat Nation), Hedberg & Associates, Innergex, SES	<ul style="list-style-type: none"> <li>Reviewed clearing plans for segments 1 &amp; 2, work sequencing, and environmental mitigation measures.</li> </ul>	N/A
Sep-18	TX Line field review/ pre-work meeting	WEL, Mumleqs, Hedberg & Associates, Innergex, SES	<ul style="list-style-type: none"> <li>Reviewed clearing plans for segments 1 &amp; 2 in the field, work sequencing, and environmental mitigation measures. Walked the transmission line right-of-way and stopped at areas with environmental constraints to</li> </ul>	N/A

Date	Communication Type	Participants	Issues Discussed	ITM ID No.
Sep-18 (Cont.)	FSR realignment – field review / pre-work meeting	CRT-EBC, Squamish Mills, Whittaker Excavating, Hedberg & Associates, Innergex, SES	<p>discuss mitigation measures.</p> <ul style="list-style-type: none"> <li>Walked the alignment, discussed work sequence, work methods, environmental mitigation measures, work timing windows, and reviewed environmentally sensitive areas.</li> </ul>	N/A

### 3.0 Current Work Restrictions and Timing Windows

The table presented below outlines work restrictions applicable during the reporting period for each active Project component location:

Component	Location	Species of Concern	Construction/Timing Restrictions
ULHEF	Lillooet River FSR realignment at Truckwash Creek	<i>No wildlife related construction timing windows were applicable to the works that occurred during this reporting period.</i>	

## 4.0 Upper Lillooet River Hydroelectric Facility

### 4.1 Monitoring Results

#### 4.1.1 Lillooet River FSR Realignment at Truckwash Creek

##### Construction Activities

- Commencement of clearing, grubbing, bulk excavation and road base construction for Lillooet River FSR on west side of Truckwash Creek from Stn 2+200m – 1+950m

##### Environmental Summary:

- No falling within the Truckwash Creek RVMA occurred during this reporting period.
- Temporary fording of the dry, ephemeral stream crossing was done on September 1, 2013. No environmental concerns were noted as the channel remained dry throughout the works. Installation of the culvert at Stn 2+056m (Photo 1) is scheduled to occur on September 22<sup>nd</sup>.
- No ESC or WQ issues were observed throughout the active works area.

Photos:



**Photo 1 Temporary ford of dry ephemeral channel (Stn. 2056.0 – Sept. 21st, 2013)**

Water Quality Results

Date	Time	Sample Location Description	pH	Turbidity (NTU)	Temperature (°C)
No WQ measurements were recorded during this reporting period. Visual observations of Truckwash Creek during the reporting period indicated that construction activities had no effect on WQ.					

**4.2 Recommendations**

The temporary ford crossing the dry ephemeral channel (FSR realignment station 2056.0) that was constructed on September 21<sup>st</sup> should be removed and the culvert should be installed as soon as possible.

**4.3 Upcoming Works**

The culvert installation schedule was discussed and scheduled for the morning of September 22<sup>nd</sup>. The realignment of the Lillooet River FSR and Truckwash Creek Bridge Crossing work is scheduled to continue for the next 7-8 weeks. Falling on the right bank within the Truckwash Creek RVMA is scheduled to occur on September 23<sup>rd</sup>. Work will continue on the west heading of the alignment during the next reporting period.

**5.0 Transmission Line**

**5.1 Upcoming Works**

The start of the transmission line clearing work in segments 1 & 2 is scheduled to begin next week. An onsite pre-work meeting with the clearing crews will be held prior to the start of clearing works. No temporary or permanent access road construction or

transmission line infrastructure construction will occur as part of the initial clearing activities.

### **6.0 Wildlife Sightings Report, Period**

As per the CEMP, a wildlife sightings record has been implemented and will be updated regularly by Project Personnel. It is mandatory for all personnel to report wildlife sightings including, but not limited to bears, cougars, mountain goats and deer. Wildlife sighting will be reported and recorded by the contractor(s) and will submitted to the IEM on a weekly basis. Wildlife Observation forms will be summarized and appended to the final WEMR issued during each month. Observation or detection of the following species will trigger notification to identified parties according to the following table.

<b>Species Observed or Detected</b>	<b>Notification Period</b>	<b>Agencies to be Notified</b>
Northern Rubber Boa	Immediately	IEM, Owner
Grizzly Bear	24hrs	IEM, Safety Officer, Conservation Officer, Owner
Wolverine Den	24hrs	IEM, MFLNRO, Owner
Spotted Owls	24hrs	IEM, MOE, Owner
Mountain Goats	48hrs	IEM, MFLNRO, Owner

**Note:** No wildlife observations were reported to the IEM during this reporting period.

## 7.0 Environmental Issues Tracking Matrix (ITM)

### 7.1 Hydroelectric Facilities (ULRHEF & BRDHEF)

ITM Tracking Legend:

Work Item Open
Work Item Complete
Issue Closed

Issue Tracking		Environmental Issue		Mitigation Measures			
ID No.	Status	Location	Issue Description	Action Taken/Recommended	Date of Identification	Targeted Completion Date	Date Completed
<i>No outstanding environmental issues.</i>							

### 7.2 Transmission Line

ITM Tracking Legend:

Work Item Open
Work Item Complete
Issue Closed

Issue Tracking		Environmental Issue		Mitigation Measures			
ID No.	Status	Location	Issue Description	Action Taken/Recommended	Date of Identification	Targeted Completion Date	Date Completed
<i>No outstanding environmental issues.</i>							