

## **Addendum #1 January 12, 2009: Kinbasket Reservoir Inventory of Vegetation Resources (CLBMON-10)**

### **A1.1 Addendum Rationale**

Since receiving approval from the Comptroller on the ToR for CLBMON-10 (letter dated 19 April 2007), BC Hydro has implemented a new Aviation Policy for fixed wing and helicopter charter operations that is intended to minimize aviation-related risk to employees and contractors performing a broad range of operational activities. Specifically, the new requirements dictate that we use:

- Single-engine helicopters for transporting staff or contractors (e.g., preferred EC120B, Astar, Bell 407 (or higher), and
- Dual-engine helicopters for low and slow overflights.

As with all of BC Hydro's Safety & Health related rules, Policies and Standards, the Aviation Policy generally applies to contractors when:

1. a BC Hydro employee is aboard the helicopter, and
2. a consultant is hired to perform the work and they in turn hire a helicopter with BC Hydro directing and specifying how the work is to be completed.

In response to this new policy direction, the Columbia River WLR team was requested to undertake a rigorous assessment of their workplans to determine whether overflights are essential or whether there are more effective and safe ways of delivering the work. Factors taken into consideration for this assessment included worker safety, emergency access, specific requirements for data collection, quality of data, and the work schedule and scope. In several cases, use of helicopter or fixed wing aircraft overflights was deemed an essential element of conducting our physical works and monitoring projects given the geographic scope of the work, the large size of the Arrow and Kinbasket reservoirs, limited road access and potential safety hazards of boat-based work on Kinbasket Reservoir, and the need for timely response to flow conditions.

In the case of CLBMON-10, it was deemed necessary that the work involve the use of a single-engine helicopter. The new hourly rate for a single engine helicopter (\$1850/hr) is higher than the rate used in our original ToR budget submission (\$1650/h) and, as a result, BC Hydro is submitting a revised budget for this study.

BC Hydro is also requesting approval on incremental increases in study implementation costs for CLBMON-10 to accommodate the higher costs associated with obtaining aerial photography for Kinbasket Reservoir. The original budget for this task under-estimated the actual cost of acquiring the data. The total annual spend on this program was on track with the approved annual budget in the first year (2007) of implementation due to lower than anticipated costs of completing another key task (completion of the Digital Elevation Model). However, the cost of obtaining the aerial photography in 2008 caused BC Hydro to exceed the approved annual budget by about \$22,600. BC Hydro has covered this cost over-run, as we were unable to secure approval on the increased costs prior to completion of the year's work. The revised budget therefore reflects the annual approved budgets for 2007 and 2008, and amended costs for future years of the programs.

### **A1.3 Budget**

The project budget has been revised to reflect the increased costs associated with helicopter use and obtaining the aerial photography. Overall, the implementation of the monitoring program is expected to cost \$1,223,597 (including 2% rate of inflation and 5% contingency) over the 6 years of study, as compared to the total approved budget of \$1,083,142.