Coquitlam-Buntzen Water Use Plan

Monitoring Program Terms of Reference

- COQMON#5 – Coquitlam River Periphyton and Benthic Invertebrate Monitoring

Addendum 1

February 9, 2009
A1 Preamble

This Coquitlam-Buntzen Water Use Plan (WUP) Monitoring Program Terms of Reference (TOR) Addendum is the second program wide addendum since original submission in 2005. The first December 2006 program wide TOR addendum was followed by three individual monitoring program TOR addendums in which Provincial; Comptroller of Water Right approval for the proposed TOR changes was received shortly after initial BC Hydro submission. The changes summarized here are threefold: those that have resulted from the extension to the review period necessitated by the delay in the implementation of Treatment 2 flow regime, those that have resulted from adaptive responses to monitoring studies, and increases in lead consultant rates inconsistent with available 2% annual inflation.

The original monitoring program includes a comparison of two flow releases to the Lower Coquitlam River. The second release (“Treatment 2”), a 9-year monthly-adjusted flow prescription, required that one of the low level outlets (LLO#3) be replaced due to dam safety concerns that the existing outlet was unsuitable for long-term use. The installation of the replacement valve was delayed due to delays in the completion of a previously scheduled seismic upgrade to the dam. Both projects are now complete and to accommodate the 9-year Treatment 2 commitment, the review period must be extended to 2017 from 2015 as originally agreed. An interim extension to 2016 has already been incorporated into the budget, and this addendum summarizes the final extension for this program due to the implementation delay.

TOR Addendums are reviewed and approved by the Coquitlam-Buntzen WUP Monitoring Committee prior to submission to the Comptroller of Water Rights (CWR) for formal integration into the Implementation Order for the Coquitlam-Buntzen WUP.

The following changes are detailed in this addendum:

- COQMON#2 – Coquitlam Dam Flow Release Interim Ramping Rate Monitoring: budget extension through 2017 to accommodate 9 years of monitoring of treatment 2.
- COQMON#3 – Lower Coquitlam River Fish Habitat Requirements Study: schedule change associated with Treatment 2 delay and associated minor amendment to capture fall 2008 spawning monitoring requirements, and budget extension to 2017.
- COQMON#4 – Assessment of Pink Salmon Passage in Lower Coquitlam River: schedule adjustment to confirm assessment initiation in 2007.
- COQMON#5 – Coquitlam River Periphyton and Benthic Invertebrate Monitoring: schedule change associated with Treatment 2 flow regime delay, budget change to include changing contractor rates, and budget extension to 2017.
- COQMON#6 - Lower Coquitlam River Temperature Monitoring: budget change to include additional field monitoring and reporting time in the final study year.
- COQMON#7 - Lower Coquitlam River Fish Productivity Index: budget increases to include the purchase/repair of smolt and fry traps, increased labour for annual trap installation and operation, and extension to 2017.
Addendum to COQMON#5 – Coquitlam River Periphyton and Benthic Invertebrate Monitoring

Addendum Rationale

Since developing the original terms of reference for this study program in 2005, the lead consultant on this project has increased the rates for resources utilized in the project beyond anticipated by inflation. The consultant has also proposed opportunities to reduce effort in the program while still meeting study objectives. This addendum summarizes the increased rates and decreased effort that will result in a $70K increase to the cost of delivery of this program. Also included is the change in schedule that has resulted from the delay in implementation of Treatment 2 flow releases (summarized in section A1).

Schedule

The following schedule is anticipated to be followed towards completion of these study requirements:

- Summer 2009: 8-week fall sampling
- Fall 2009: 8-week fall sampling, fish stomach analysis
- 1 December 2009: model development update drafted
- 15 January 2010: model development update finalized
- Spring 2010 or 2011: 8-week spring sampling as required,
- 1 December 2010 or 2011: performance measure and final model development report drafted
- 28 February 2011 or 2012: performance measure and final model development report finalized

*Note that annual performance measure updates will be calculated from the benthos model as part of this study, per the original study terms.*

In consideration of the three (spring, summer, fall) seasonal sampling sessions completed previously for the Treatment 1 flow regime there is potential for reduction in the number of remaining Treatment 2 seasonal evaluations from three to two including only summer and fall sessions. This will be based on BCH, including Coquitlam Monitoring Advisory Committee members, and the lead consultant assessing the ability of the Coquitlam River health model’s ability to accurately predict the relative importance of flow and other variables in determining river health after update with only the Treatment 2 summer and fall seasonal sampling sessions.

Budget

The implications of the increased resource rates, delay in implementation of Treatment 2 sampling, and extension of the review period to 2017 are summarized in the budget below. Note the 2010 implementation costs are optional based on requirement to complete the final fall Treatment 2 seasonal evaluation.

| Total | $238,887 |