

## **Wahleach Project Water Use Plan**

### **Monitoring Program Terms of Reference**

- **WAHWORKS-2 – Wahleach Reservoir Fertilization**

### **Addendum 3**

**March 3, 2015**

## **A1 Addendum to WAHWORKS-2 – Wahleach Reservoir Fertilization**

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

The WUP recommended 10-year Wahleach Reservoir fertilization program has been underway since 2005 through a Memorandum of Understanding with the BC Ministry of Environment (MOE). The WUP ordered program ended in 2014 and the Wahleach Water Use Plan Review is scheduled to occur in 2017. Increased phytoplankton and zooplankton productivity have translated into increased fish abundance and biomass since the program's inception. Assessments of Wahleach Reservoirs' fish populations indicate a significant increase in abundance and overall biomass since the start of nutrient restoration – particularly for kokanee (Hebert et. al. 2013). The objective of this physical work program is to restore kokanee abundance in Wahleach Reservoir (BC Hydro 2005). The program objective would be compromised by ending the program at this time to await the scheduled review.

BC Hydro and the BC Ministry of Environment have agreed to continue the Wahleach Reservoir Fertilization Program until such time as the Wahleach Water Use Plan is reviewed and determination is made on the continuance of the program.

The methodology for the fertilization program will remain largely the same. Creel surveys will no longer be conducted as previous surveys have collected sufficient data regarding use of the reservoir as a kokanee recreational fishery. Mid-water gill netting will be replaced with trawling as it is deemed to be a more effective method of fish capture in this small reservoir.

### **A1.2 Objectives and Scope**

The changes in this addendum apply to both schedule and budget as a result of the gap created in the end of the Water Use Plan monitoring period and the scheduling of the Water Use Plan Order Review. The main objective of the extension is to ensure effective delivery of a fertilization program that sustains a Wahleach Reservoir kokanee recreational fishery until such time as the program can be reviewed. The program will continue to be monitored using sampling strategies that include: 1) hydro-acoustics and trawl, 2) near shore gill netting, and 3) tributary spawner surveys. These three sampling strategies will allow for both evaluation of fish productivity response to fertilization and confirmation of stock status of recreational fish species of interest during the time of the extension.

### **A1.3 Reporting**

Annual study data reports will be completed for the extended program Years 11-13.

### **A1.4 Schedule**

The Wahleach Reservoir fertilization program will continue past the 10-year recommended review period to sustain the Wahleach Reservoir kokanee recreational fishery until the Water Use Plan Order Review scheduled in 2017. This addendum extends the Wahleach Fertilization Program by three years (2015, 2016 and 2017). The program includes annual fish sampling strategies involving: 1) hydro-acoustics, 2) near shore gill netting, and 3) tributary spawner surveys critical to confirm annual fish population response to fertilizer addition.

### **A1.5 Budget**

Total Revised Program Cost: \$1,435,504.

### **A1.6 References**

BC Hydro 2005. Wahleach Water Use Plan. Physical Works Terms of Reference. WAHWORKS-2 – Wahleach Reservoir Fertilization Program. A BC Hydro Water Use Plan Terms of Reference.

Hebert, A.S., S.L. Harris, T. Weir, L.Vidmanic and N.E. Down. 2013. Wahleach Reservoir Nutrient Restoration Project, 2011-2012. Province of British Columbia, Ministry of Environment, Ecosystems Protection & Sustainability Branch, Conservation Science Section.