LWSS

# Lakelse Watershed Sampling

The Lakelse Watershed is located 20 km south of Terrace along Highway 37 and drains an area of approximately 589km$^2$ (figure 1). It is bordered on the east and west by the Kitimat mountain ranges, to the south by a Terrace formed by receding glaciers, and the Skeena River floodplain makes up the northern boundary. In the upper part of the watershed lies Lakelse Lake which has an area of approximately 14.5km$^2$ and receives water input from the majority of tributaries found within the watershed due to the steepness of the surrounding topography (figure 2).

The Lakelse Watershed is home to a number of important fish species some of which include: Cutthroat Trout (Oncorhynchus clarki clarki), Rainbow Trout (Oncorhynchus mykiss), Dolly Varden Char (Salvelinus malma), Steelhead (Oncorhynchus mykiss), Sockeye Salmon (Oncorhynchus nerka), Chinook Salmon (Oncorhynchus tshawytscha), Pink Salmon (Oncorhynchus gorbuscha), Chum Salmon (Oncorhynchus keta), and Coho Salmon (Oncorhynchus kisutch). The entire system as a whole contributes significantly to commercial, recreational and sustenance fisheries. The trapping of these juvenile fish helps to indicate which creeks are currently fish bearing, and whether they can be fish bearing in the future.

Many different invertebrate species reside in the Lakelse Watershed. Invertebrates are an animal that lacks a backbone. Invertebrates comprise about 95% of animal species. Invertebrates can live in both aquatic and terrestrial environments and can range from sponges, to crabs, worms and insects. Invertebrates such as Caddisfly (Trichoptera), Mayfly (Ephemeroptera), and Stonefly (Plecoptera) are very sensitive to pollution and organic sediment. They can act as indicators in a stream system.

A history of development surrounding the watershed in the form of forestry, transportation and other linear corridors, and rural development has left lasting impacts on the lake and its tributaries within the watershed. The cumulative effects of land use changes have negatively affected fish, wildlife, and cultural values and additional proposed industrial developments have brought forward an increased effort to proactively manage these resources by local and regional stakeholders. To protect the future of the watershed one must know the current values, and this is why the Lakelse Watershed Initiatives Program with all its partners began the collection of scientific data related to water quality on many of the streams in the watershed. Through the implementation and continuation of this structured sampling plan, current and future data can be compiled to better monitor water quality trends that occur within the watershed's streams that may trigger a red flag indicating negative impacts from industrial and rural development or give us more insight related to global warming.


*Figure 1. Geographic Location of the Lakelse Watershed. Credit: Google Maps 2016.*

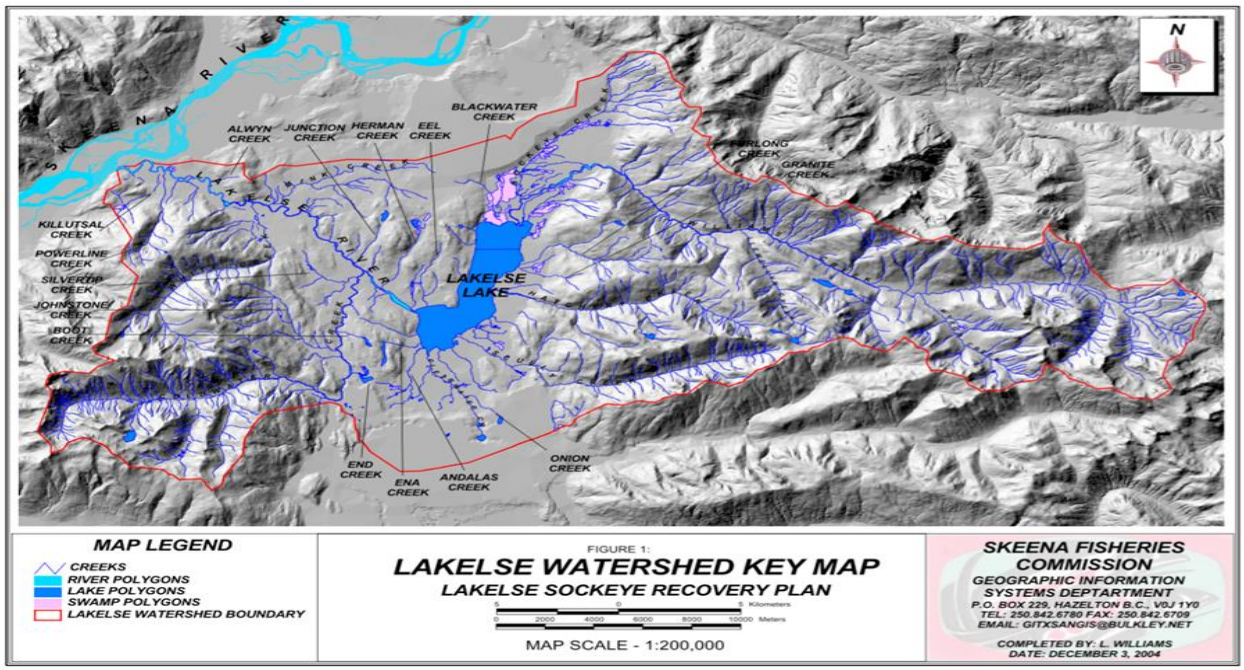


*Figure 2. Detailed map of Lakelse Watershed. Credit: Gottesfeld et al. 2002.*


*Figure 3. Map showing location of sample sites within the Lakelse Watershed. Credit: Google Earth Pro 2016.*

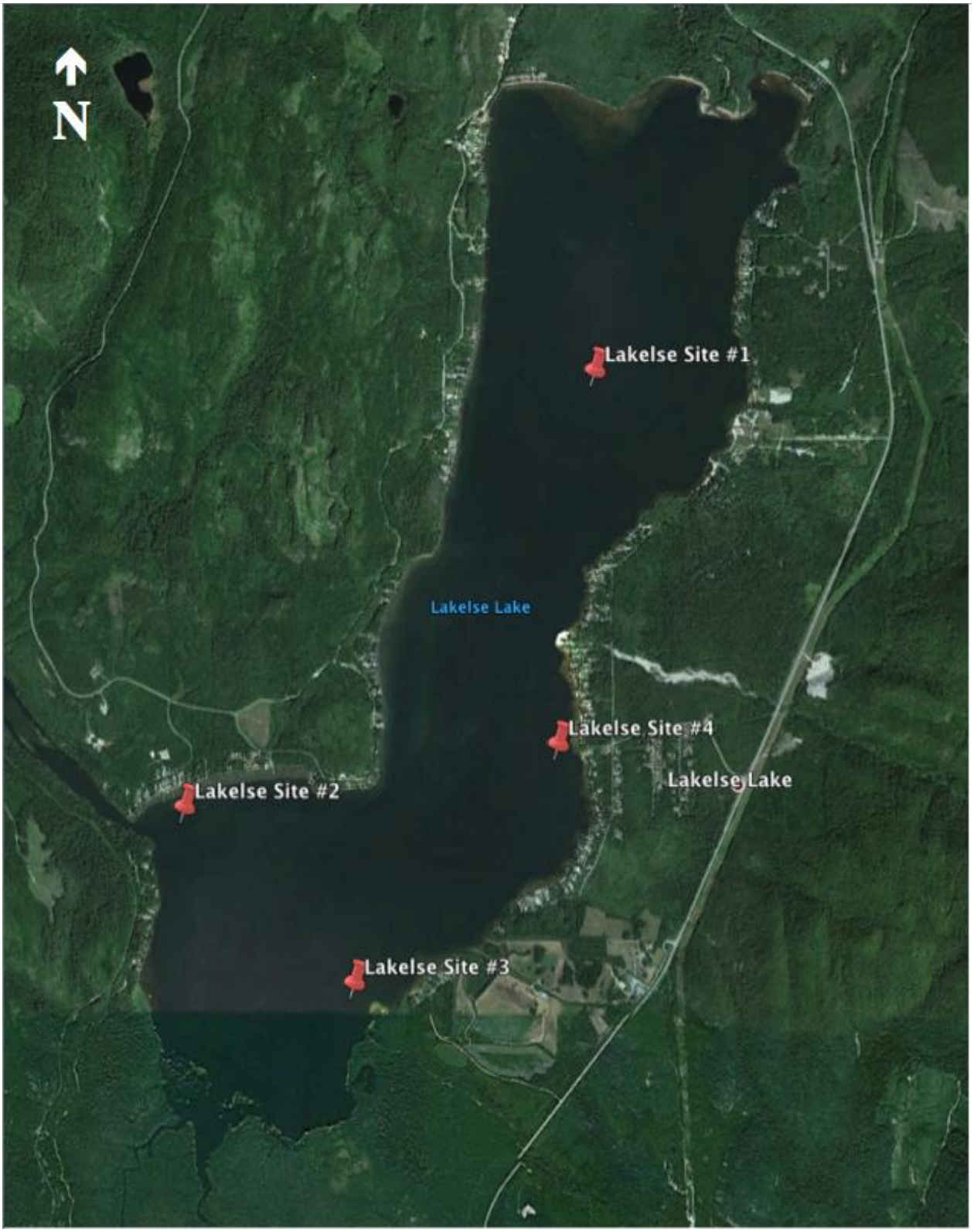


*Figure 4. Aerial map of sampling location on Lakelse Lake. Credit: Google Earth Pro 2016.*