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Project Title: Collaborative Research: Changes in Lake Dynamics on the Arctic Coastal Plain of North America Over the Past Half-Century

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Classification: Water Quality

Dataset Title: Water quality data for lakes on the North Slope of Alaska

Abstract: A regional assessment of thermokarst lakes across the Arctic Coastal Plain of Alaska was conducted using satellite images to detect changes in lake coverage and morphometry during the satellite era. The analyses were augmented by summer field studies focused on lake evaporation, seasonal and interannual changes in fundamental lake characteristics, and collection of lake water temperature and bathymetry and water quality (this dataset) in three study areas. The measurement program was designed to correlate patterns in water quality with shoreline changes, interannual variations in lake levels, energy and moisture exchange. In summer 2008, lakes near Barrow were studied and instrumented and water quality data collected. In 2009, we focused on lakes further inland near Atqasuk. In 2010, lakes near the Arctic Coastal Plain-Arctic Foothills were studied.

Metadata files: This data set contains lake water temperature and water quality parameters from thermokarst lakes on the North Slope of Alaska, collected during summer over a 3-year time period. Along with this *ReadMe* file, in this directory is a master list of all lake locations called *Lake LocationsWQ.xls*. It contains only the Latitude and Longitude for all lakes for which there is temperature and water quality data.

Lake Water Quality Directory:

There is a single file with the name *Maurer_2008-2010_LakeWQ.xls*. Water quality measurements were collected from lakes in 2008, 2009 and 2010. A YSI 6600 V2-4 Multi-Parameter Water Quality Sonde was used in each of the three sampling regions from 2008-2010. In summer 2008, lakes near Barrow (100 series lake names) were studied and instrumented and water quality data collected. In 2009, we focused on lakes further inland near Atqasuk (200 series lake names). In 2010, lakes near the Arctic Coastal Plain-Arctic Foothills were studied (300 series lake names). Triplicate readings were taken for each lake from three different locations. The file contains a metadata sheet with contact information and data format information, and a second sheet with the collected data.