Abstracts - Data Collection

The Cheslatta/Murray Hydrological Data Collection Project - Summary Report 1989 - 1993 Volume 1 (RM93-1 vols.1 & 2)
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The Cheslatta/Murray Hydrological Data Collection Project (HDCP) was designed to provide the database necessary so that a forecasting procedure could be implemented to estimate flow contributions from the Cheslatta/Murray Lakes watershed. Knowledge of Cheslatta/Murray Lakes inflows would permit optimization of the release of the Annual Water Allocation from the Nechako Reservoir during the Long Term Flow Regime.

The goal of the Cheslatta/Murray HDCP was to establish the foundations of providing a database to monitor climatic conditions and streamflow of an index basin, and to measure snow pack in the Cheslatta/Murray Lakes watershed. This report summarizes site selection, equipment installation, and data collected from 1989 to 1993. Additionally, this report provides results of an analysis of collected data.In 1989/1990, the project involved selection of the Bird Creek drainage as an index sub-basin, and installation of a climate station, a water level recorder on Bird Creek near the outlet of Bird Lake and four snow course stations within the Cheslatta/Murray Lakes watershed. The database developed consists of mean daily air temperatures, mean daily relative humidity, accumulated total precipitation and stage and discharge measurements within the sub-basin, as well as measurements of snow pack from four snow course stations. These data are summarized into monthly and annual values in Volume 1. Annual data obtained from relevant Environment Canada Atmospheric Environment Service (AES) weather stations and Water Survey of Canada (WSC) gauging stations were compared to relate the collected Bird Creek data to long term averages. Bird Creek daily weather station data, mean daily stage and discharge data, as well as detailed snow course data are presented in Volume 2. It is recommended that data collected from this study be analyzed to determine a relationship between the volume and timing of runoff from the Bird Creek index sub-basin and the Cheslatta/Murray Lakes watershed. It is also recommended that Bird Creek data collected in this report could be compared to data from other AES weather stations and other WSC gauging stations to confirm the results relating the collected Bird Creek data to the long term average.