



HYDROMETRIC INFORMATION NETWORK PROGRAM

Terms of Reference

OKANAGAN BASIN WATER BOARD

Providing leadership to protect and enhance the quality of life in the Okanagan through sustainable water management.

2020

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1.0 Introduction

The Okanagan Basin Water Board (OBWB) Okanagan Basin Hydrometric Information Network Program (the Program) is a component of the Water Management Program.

The objective of the Program is to develop and manage an adequate hydrometric information network in the Okanagan. This document provides OBWB staff with direction to manage and operate the Program.

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Participation in this project is without prejudice to the Aboriginal Title and Rights of the Syilx People, Okanagan Nation, and member communities of the Okanagan Nation Alliance.

2.0 Preamble

Hydrometric information is essential for a number of local and other government planning and decision-making processes. The OBWB has a mandate to coordinate between levels of government about water usage and to participate financially or otherwise in investigations or projects on behalf of Okanagan local governments (OBWB governance manual, p. 2).

At its peak in the 1980s, the National Hydrological Service, Environment and Climate Change Canada (*formerly known as: Water Survey of Canada*), in collaboration with the province of B.C., operated 156 stations in the Okanagan, which had decreased to 25 stations by 2007, where it remains today. In 2003, the B.C. government commissioned a business review of the B.C. hydrometric program (Azar et al., 2003), which concluded that public investment in the B.C. hydrometric program provided a 19:1 return on investment (p. viii of Azar et al., 2003). That report further concluded that the lack of leadership, focus and dedication has led to “neglect which, in turn, has created a program on the brink of collapse” (p. 50).

Hydrometric (water level and streamflow) information is essential for Okanagan water management decisions, such as provincial and municipal infrastructure planning and design, flood management, determination of fish flow needs, and water supply and demand modelling. Hydrometric data have a wide range of applications and support many activities including:

- calibrating and verifying hydrologic models;
- regional flood and drought frequency analysis;
- reservoir operations planning and implementation;
- major lakes water level management;
- assessment of aquatic ecosystems;
- water licence allocation and ongoing management;
- climate change assessment; and
- water supply planning.

The OBWB’s five-year Strategic Plan (2020-2024) identifies the importance of improving hydrometric data for water management in the Okanagan. The existing Okanagan stably funded hydrometric network is inadequate to meet current and future water management needs, either of governments (local, regional, Okanagan Nation, senior) or the private sector.

3.0 Operations

The Program includes:

- stabilizing current projected funded hydrometric monitoring;
- establishing new hydrometric monitoring stations;
- collecting, analyzing, and storing hydrometric data;
- coordinating resources amongst Program partners; and
- summarizing hydrometric information into publishable format and publishing the information.

The OBWB-led program, requires collaboration with the Okanagan Nation Alliance, senior governments and Okanagan water purveyors. The program delivery responsibilities of OBWB and other parties are addressed in Section 4.0.

3.1 Operating Principles

3.1.1 The Program supports all aspects of the planning, operation, and management of a hydrometric program in the Okanagan. This includes:

- network planning and station selection;
- hydrometric station equipment installation, operation, repair, maintenance;
- hydrometric information management (e.g. data collection, analysis, and storage; and dissemination of summarized hydrometric information); and
- program management and administration.

3.1.2 The Program operates in partnership with multiple service providers.

3.1.3. The Program is managed through the OBWB's Water Management Program and is governed by the financial and governance rules of that program.

3.2 Permitting Process / Other Permissions

Appropriate governments' (e.g. First Nation, federal, provincial) permissions and/or permits for working in and around streams will be applied for, when required, prior to work in any Okanagan streams.

3.3 Quality Assurance and Quality Control

All OBWB stations will be operated at either a grade A (National Hydrological Service) or grade B data standard (2009. Manual of BC Hydrometric Standards. p. 3).

Procedures used to deliver Program components will utilize the protocols outlined in the Manual of British Columbia Hydrometric Standards, including protocols for:

- establishing gauging stations;
- constructing gauging stations;

- hydrometric levelling procedures;
- stage measurement procedures;
- discharge measurement procedures;
- rating streams and computing discharge; and
- standard process for review of hydrometric data.

3.4 Publication of Hydrometric Information

The National Hydrological Service publishes federally-obtained hydrometric information by July 1 each year. Hydrometric data obtained by the Program will also be analyzed, approved, summarized, and published by July 1 each year. Hydrometric data collected by this program will be posted on the respective B.C. government and federal government websites.

3.5 Reporting

Reporting on the Program will be conducted annually in October. The OBWB must document the activities of the Okanagan Hydrometric Information Network program in their annual report.

4.0 Roles and Responsibilities

The Program requires partnerships between OBWB and other parties. Table 1 lists the program partners, and identifies their roles and responsibilities.

Table 1. Partnership matrix: roles and responsibilities

| Agency | Role & Responsibility |
|---|--|
| Okanagan Basin Water Board | Program leadership, management, provision of base funding, and coordination of partners. A management committee will be struck to support the program. |
| Okanagan Nation Alliance, local and regional governments, Improvement Districts | Hydrometric network management support (station installation, operation, and maintenance, data support) |
| Provincial Government | Data management support (Provincial Aquarius open data warehouse) |
| Federal Government | Implementation, operation, and maintenance of a portion of the expanded hydrometric network |

5.0 Financing

The Program requires a long-term commitment of funding and leadership to ensure ongoing success. The following describes the Program financing framework:

- 5.1 The Okanagan Basin Hydrometric Information Network program is part of the OBWB's Water Management Program. Annual assessments to cover the costs of the program are part of the Water Management Program's \$0.02 per \$1,000 assessment ceiling.
- 5.2 The OBWB will apply for grants and establish cost-sharing agreements to where possible to support the installment and maintenance of the network.
- 5.3 The Okanagan Basin Hydrometric Information Network program funds hydrometric stations and associated information management.
- 5.4 Okanagan Basin Hydrometric Information Network Program budgets will be prepared and approved by the OBWB through to the general annual budget process.