USING FRESHWATER ATLAS DATA

The following is a high-level overview of intended and potential uses of B.C. Freshwater Atlas data.

WHAT INFORMATION DOES THE FRESHWATER ATLAS CONTAIN?

- Streams, tributaries and major rivers
- Obstructions (dams, falls and rapids)
- Waterbodies (lakes, wetlands and glaciers)
- Coastal bays and inlets
- Watersheds (individual watersheds to larger drainage basins)

THE FRESHWATER ATLAS ALLOWS YOU TO:

- Map water features and their associated watersheds
- Conduct analyses at a province-wide level
- Identify connected watersheds, streams, rivers and lakes at regional levels
- Examine an individual stream's watershed for local planning

THE FRESHWATER ATLAS CAN ANSWER QUESTIONS SUCH AS:

These types of questions can be answered for the whole province, a region or a single watershed:

- How many lakes, wetlands, glaciers and reservoirs are in my study area? What size are they?
- Which streams, lakes and wetlands are either downstream or upstream of a development that is planned for my local area?
- How many watersheds occur in my regional planning unit? What are their areas? What is the total area of the land base they occupy?

HOW CAN THE FRESHWATER ATLAS STREAM NETWORK BE USED?

The Freshwater Atlas lets you link environmental information to B.C.'s network of streams, lakes and rivers by location, using GPS coordinates. Applications include:

- Water management and water use planning
- Display of fisheries data
- Hydrological modelling
- Locating water features by name
- Emergency preparedness, such as identifying communities downstream of a dam or resources in the path of a chemical spill

The Freshwater Atlas could provide the foundation for studying factors that influence salmon habitat in B.C. It facilitates the integration of the following types of information:

- Spawning habitat maps
- Locations of salmon-bearing streams and lakes
- Water quality monitoring stations and stream flow data
- Upstream and downstream land uses
- Obstructions blocking fish passage
- Recreational and commercial harvest statistics
- Salmon escapement statistics

HOW CAN THE FRESHWATER ATLAS HELP OUR UNDERSTANDING OF THE LAND BASE?

Information from a variety of disciplines can also be linked or summarised by the watersheds within the Freshwater Atlas. This lets users examine the potential impacts of both human activities and natural phenomena on the landscape.

Statistics for each watershed can be generated to quantify land use types or density values. These can provide useful indicators – helping to monitor the conditions within either an individual watershed or permitting the comparison of watersheds within either a region or throughout the entire province.

For example, the Freshwater Atlas is being used to monitor the extent and hydrological impacts of Mountain Pine Beetle infestation. The impact on stream flow can be summarized by major drainage basins.