Module 1

Existing Information Review

1.1 Purpose

The purpose of this SHIM module is to collect, review, and synthesize existing information. The objectives of this module are to:

- Identify and obtain existing (known) information and sources about the watercourse and watershed from municipal, regional, provincial and federal planning and fisheries agencies.
- Identify local knowledge through discussion and documentation from regional fisheries professionals and local/community "experts".
- Ensure that collected background information is distributed back to the Fisheries Information Summary System (FISS);
- Identify and schedule the SHIM inventory and component office and field tasks required to complete your specific inventory project.

Note: that in some projects or locations, a high level of detail on a watercourse already exists as background or known information. In some of these instances, it may not be necessary to complete subsequent SHIM modules. However, the reader should be aware that fish distribution, watercourse, and fish habitat characteristics experience considerable change over time. In these instances SHIM should be used to augment and update existing information to help identify and measure spatial changes in the watercourse.

1.2 Final Products

- A completed background information review should generate the following products: An understanding of known credible and reliable

fish, fish habitat and spatial data for the subject watercourse and surrounding watershed.

- An understanding what information may be conflicting or inadequate to properly describe and map the watercourse.
- A summary or list of recent information to be added to the Fisheries Information Summary System.
- The summary of updated information to be sent to the Ministry of Fisheries, and the Department of Fisheries and Oceans Canada.

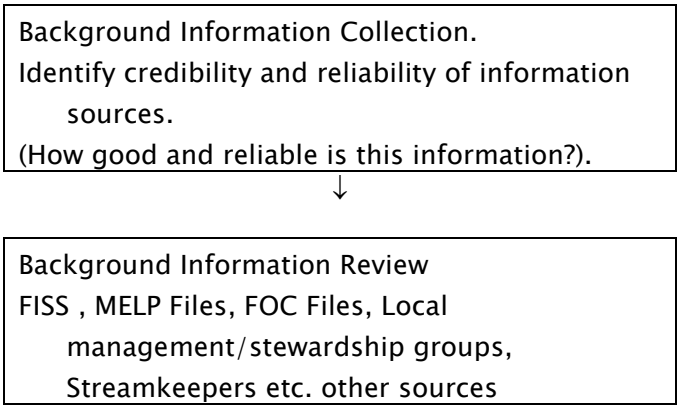
1.3 Introduction

A thorough review of existing information, prior to conducting additional field inventory, is a required starting point for understanding and examining a specific watercourse. Past information will highlight previous projects, and potentially the physical and biological characteristics of the watercourse. This review can also be used to identify information gaps and how new inventory information can augment these sources. Subsequent SHIM modules can be used separately or together to provide a coherent methodology to collect new inventory data.

This SHIM module can often be considered the office phase of the project. Both Module 1 (Existing Information Review) and Module 2 (Watershed Overview) should be used to help identify, review and assemble information from a variety of sources and information types.

1.4 Inventory Review Procedure

The steps and discussion below outline the recommended procedure for review of background (existing) information.



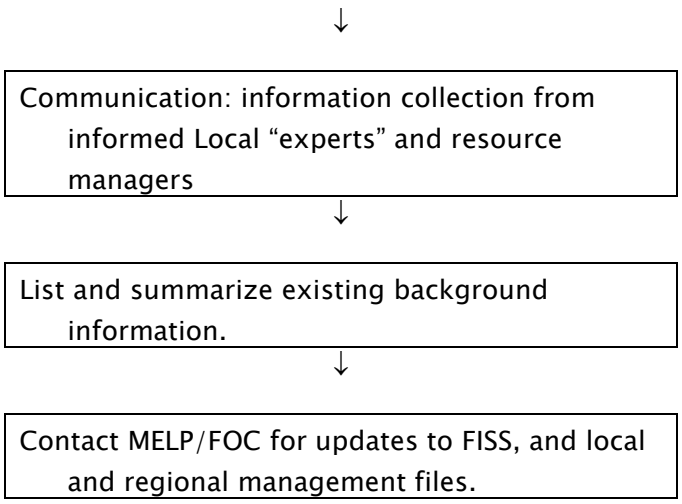


Figure 1.1 Flow chart of the potential process for reviewing existing or background information.

Step 1. Collection and Review of Existing Information

Historic or existing watercourse information for a proposed inventory location should be thoroughly examined to determine its utility and reliability. Professional judgement and common sense should also be applied e.g. past data collected to rigorous standards may have more use than some less rigorous sources of recent data. The simple criteria below can be applied to help review historic or existing information. If a quick scan of existing information reveals that any of the criteria outlined below are not satisfied, then little effort should be spent on assembling and reviewing these data. Conversely, if all of the criteria are satisfied, then these data should be reviewed and incorporated into your project information.

- **Date of data collection** – When was the data collected? Watercourses and aquatic features change over time in response to both natural and anthropogenic processes, and so do fish populations that rely on them. More recent data can be considered better information or more representative of current conditions.
- **Rigor of data collection/standards** – How was the data collected? The credibility of the data can be better understood if the source methods are reviewed.
- **Source of data** – Who collected the data? The credibility of the data is enhanced if it is collected by individuals with training and/or experience in conducting fish, and fish habitat surveys. If you have any doubts, contact the individuals who collected or know of these data and the methods used.

- **Nature of data** – Why and What. Are these data useful for your inventory project? Was these data collected to meet same or similar project objectives? What information is lacking?

A list of all documents, reports, maps and project results reviewed and ultimately used should be reported a in standard bibliographical format (*see Step 3*).

Step 2. Communication – Local Experts

Documentary information should be supplemented through direct communication with fisheries staff at FOC and MWLAP. Other fisheries professionals and local experts should also be contacted:

- Regional/municipal staff;
- First Nations guardians, staff, elders;
- Consultants familiar with the area;
- Stewardship group representatives;
- Local experts.

Step 3. FISS Updates

Fisheries information not previous recorded or documented in FISS, but identified and assembled through your review should be listed and provided to MWLAP/FOC for incorporation into FISS. Individual fisheries and habitat projects generally require that a copy of results be provided to the MWLAP and FOC. In some cases updated FISS data forms and maps may be required as a deliverable for your project funding. Procedures for completing FISS updates are provided in the *Fisheries Information Summary System: Data Compilation and Mapping Procedures* (FHIIP, 1995).

1.5 Sources Of Information

1.5.1 Fish and Fish Habitat Information from Federal and Provincial Agency Sources

(i) Fisheries Inventory Summary System

Provincial fisheries information has been compiled into a standard data system called the Fisheries Information Summary System (FISS) and should be a starting point for your information review. This electronic data system was originally developed as hardcopy Stream Information

Summary System (SISS) catalogues. In some cases, information transfer may have been missed, or recent projects may not have been yet entered into the FISS database.

FISS information is available from the following sources:

- BC Ministry of Agriculture, Food and Fisheries
- BC Ministry of Water, Land and Air Protection
- Fisheries and Oceans Canada

Watershed codes that are linked to FISS information can be found on the BC Ministry of Water, Land and Air Protection (formerly Ministry of Environment, Lands and Parks, MELP) web page at http://www.gov.bc.ca/elp/

Specific watershed codes can be found by following this set of instruction into the appropriate sections of the MELP web page:

1. Fisheries;
2. Inventory & Data Systems;
3. Data management Unit
4. Find the Watershed Codes of Waterbodies
5. Stream Query (includes RAB codes)
6. Find all the waterbodies on a 1:50,000 mapsheet
7. Lake survey query – Physical
8. Lake survey query – Chemical

For the most recent fisheries and habitat information please contact MWLAP's regional fisheries staff. The contact numbers for the regional Fish, Wildlife and Habitat Protection staff may be obtained through Enquiry B.C. (1-800-663-7867 or EnquiryBC@gems3.gov.bc.ca).

General or specific questions regarding data requests, and the nature and/or content of FISS data, geographic status reports, or information about references and copies of the *Fisheries Information and Summary System (FISS): Data Compilation and Mapping Procedures Manual* may be directed to:

Gordon Oliphant
Ministry of Sustainable Resources, Data Management Unit
P.O. Box 9358 Stn. Prov. Govt., Victoria, B.C. V8W 9M2,
Phone:250-356-9938, Fax:250-356-1202,
Email:goliphan@fwhdept.env.gov.bc.ca

The SHIM Steering Committee at the BC Conservation Foundation has also developed a new map based interactive web tool for FISS data retrieval at: http://www.shim.bc.ca.

Web tool instructions:

- Using the magnifying glass on the SHIM Atlas page, zoom into a location on the map. Click the BC Lakes and BC Rivers box on the left. You may have to zoom in several times until stream names and watershed codes appear at the touch of the cursor. Click the stream to obtain a report.
- You can also zoom to a specific FISS search results may present several watershed codes. Click on a watershed code associated with this creek to view the FISS report.

Inquiries about the development and access to http://www.shim.bc.ca can be directed to:

Brad Mason
Fisheries and Oceans Canada
Habitat Enhancement Branch
Stn 360 - 555 West Hastings St.
Vancouver, B.C., V6B 5G3
P:hone: 604-666-7015
Fax: 604-666-0417
email: masonb@pac.dfo-mpo.gc.ca

Hardcopy FISS maps are available at a cost of $3.00 each plus shipping and tax from:

Archetype Print
459-409 Granville Street
Vancouver, B.C., V6C 1T2
phone: (604) 602-0282
fax: (604) 602-0283

Although Archetype Print provides printing and distribution services for MWLAP and FOC, they only track recent data and do not verify outdated data is on FISS maps. If a map is not available then there may not be any information available for this location, although this should be confirmed by contacting Mr. G. Oliphant (above). There will often be whole

waterbody (entire river, lake, wetland) information on a map sheet. This type of data is linked through the watershed code in the database only and may or may not be indicated on the original map. Also please note that these are hardcopies of the original maps. In some cases, there may be several copies of the same map sheet with information on different portions of the map.

(ii) Other Fisheries Information from Federal and Provincial Sources

A variety of other fisheries reports, records, survey and data reports may be available at the MWLAP Regional Office. These materials may be accessed by contacting the regional fisheries staff and arranging to view any relevant materials. The contact numbers for the regional Fish, Wildlife and Habitat Protection staff may be obtained through Enquiry B.C. (1-800-663-7867 or EnquiryBC@gems3.gov.bc.ca). The following information may also be available for a specific area:

- Other government agency (Fisheries and Oceans Canada) reports and studies.
- Studies completed by consultants.
- Aquatic biophysical inventory maps.
- Fish stream and riparian area classification maps.
- Inventory video recordings (and associated habitat maps) located in regional offices.

1.5.2 Fisheries Information from Municipal and Regional Governments

Information on fish, fish habitats, and other environmental characteristics may be available through local municipal (city, village, town, district) and/or regional district government offices. The contact numbers of the local municipality or regional district near your project location can be found in the blue pages of the local telephone directory. The following types of information may be available through these offices:

- environmentally sensitive area studies showing the location and extent of these features.
- drainage studies and mapping showing the location of drains and associated infrastructure.
- floodplain studies or mapping showing the location and extent of floodplains and wetlands.

- fisheries watercourse classification mapping showing the location of watercourses and their fisheries values.
- hydrology mapping showing the location of watercourses, aquifers, well, etc..
- topographic mapping showing terrain elevation height of land, and contours.
- cadastral mapping showing legal survey information, lot boundaries and ownership.

1.5.3 Fisheries Information from Stewardship Groups

Stewardship and conservation organisations may also have valuable information on local watercourses and other aquatic habitats. The contact number for your local stewardship group can be obtained through the Community Advisor, or Stewardship Coordinator at the regional Fisheries and Oceans Canada office (consult the blue pages of the telephone directory for this phone number) or the Stewardship Advisor/Coordinator at the regional Ministry of Water, Land and Air Protection office (consult the blue pages of the telephone directory for this phone number). The following types of data may be available though local stewardship groups:

- historical information including maps, photographs or reports describing the watercourse and documenting pollution events, diversions, etc.
- juvenile and adult (spawner) fish sampling results
- creel and commercial harvest survey results
- riparian and instream habitat survey results
- descriptions of habitat restoration and enhancement projects.

1.5.4 Fisheries Information from First Nations

First Nations may also have valuable fisheries information on local watercourses and other aquatic habitats. The contact number for the local Band or Tribal Council can be obtained by contacting the Ministry of Aboriginal Affairs through Enquiry B.C., or looking in local phone directories. The following types of data may be available though First Nations:

- historical information not available in written form

- juvenile and adult (spawner) fish sampling results
- riparian and instream habitat survey results

1.5.5 Red and Blue Listed Species

Sightings and occurrence records for red and blue listed species are maintained by the B.C. Conservation Data Centre (CDC). The CDC archives information on location, known presence, species, and species status for listed species of plants and animals. Requests for information can be made by contacting CDC through their website at http://www.env.gov.bc.ca/rib/wis/cdc/ or by contacting the CDC directly at:

Conservation Data Centre
Second Floor, 2975 Jutland Road
Victoria, B.C., V8T 5J9
phone: 250-356-0928
fax: 250-387-2733

1.5.6 Maps and Aerial Photographs

Maps and aerial photographs should be obtained and reviewed for each inventory project location. These items should include:

- 1:50,000 scale National Topographic Series (NTS) or BC Geographic System (BCGS) topographical maps (note: this mapping is only helpful for large watersheds);
- 1:20,000 scale Terrain Resources Information Management topographical maps (TRIM maps);
- 1:20,000 scale Forest Cover maps for watersheds that are forested in their headwater areas;
- Terrain classification maps;
- Surficial geology maps
- Community watershed maps;
- Current aerial photographs and/or orthophotographs; and,
- 1:5,000 scale municipal base mapping.

Mapping and aerial photographs can be purchased at a number of retail outlets throughout the province. For information on the retail outlet near you, visit the Geographic Data BC website at http://home.gdbc.gov.bc.ca

Mapping and aerial photographs may be available for viewing and/or purchase through the local municipal or regional district office. Selected maps and air photos may be available for viewing at the University of British Columbia (Geographic Information Centre) or the University of Victoria (Map Library).

1.6 Required Inventory Data

Required SHIM Module 1 products should include a summary and listing of:

Sources of Information

A list of all persons who were consulted or contributed to the data review must be provided. The list must include the following information in the tabular format:

- name
- phone/fax/email
- title
- organisation
- date
- comments

Bibliography

Follow format from Canadian Journal of Fisheries and Aquatic Sciences, or References Cited in this manual.

Fisheries information, including the following:

- watershed name(s)
- major watershed code(s)
- total watershed area (if available)
- total watercourse length (if available)
- fish presence in mainstem
- fish presence in tributaries
- fish presence in lakes/wetlands
- other information (surficial geology, land use, etc.)

In Module 2 (Watershed Overview) a map product is requested as a deliverable and uses existing information compiled from Module 1 (above).

1.7 Reporting

The project leader or biologist should summarize the assembled data and maps as the final component of SHIM Module 1. MWLAP or FOC representatives should be consulted at the initiation of the project to determine reporting requirements, specifically reporting to add information to regional and provincial databases.

1.8 References Cited

BC Conservation Data Centre Website: http://www.env.gov.bc.ca/rib/wis/cdc/

Federal/Provincial Fish Habitat Inventory and Information Program. 1995. Fisheries Information Summary System: Data Compilation and Mapping Procedures. Fisheries and Oceans Canada.

FISS Map Based Interactive Tool: http://www.shim.bc.ca.

Geographic Data British Columbia Website: http://home.gdbc.gov.bc.ca

Ministry of Environment, Lands and Parks and Fisheries and Oceans Canada, 1997. Fisheries Information Summary System (FISS): Data Compilation and Mapping Procedures.

Ministry of Environment, Lands and Parks Website: http://www.gov.bc.ca/elp/