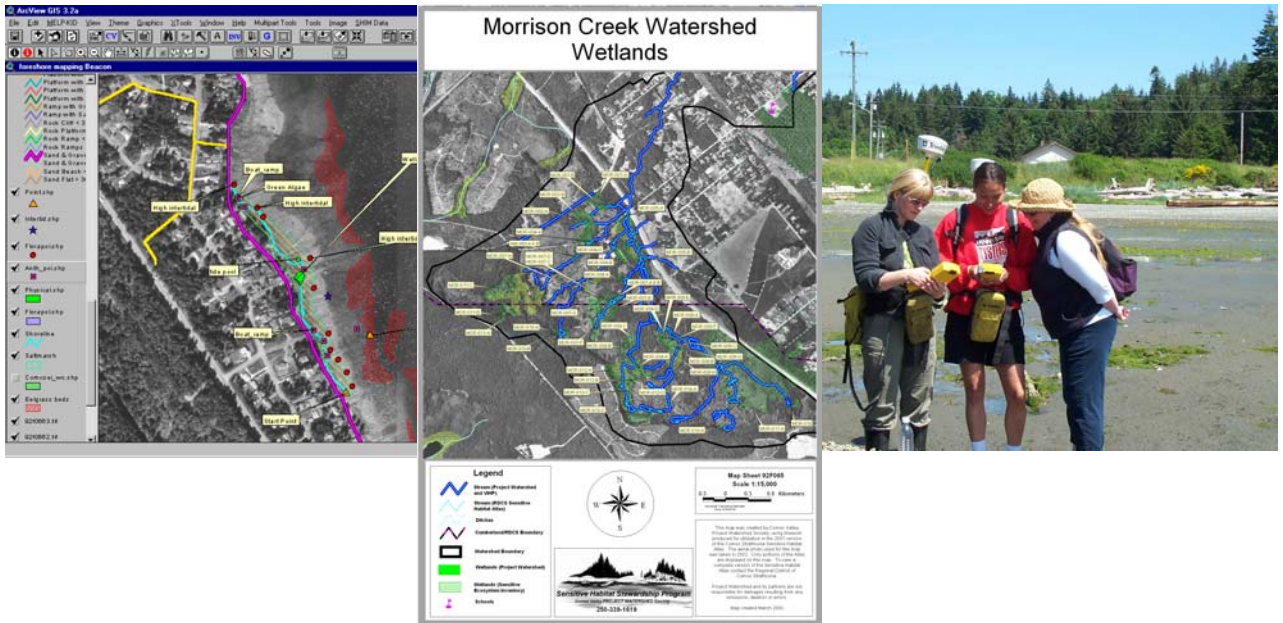


# Sensitive Habitat Inventory & Mapping (SHIM) Maps & Reports Compilation

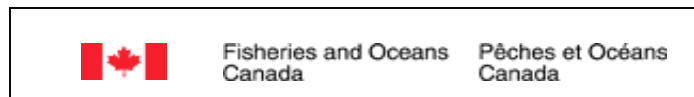
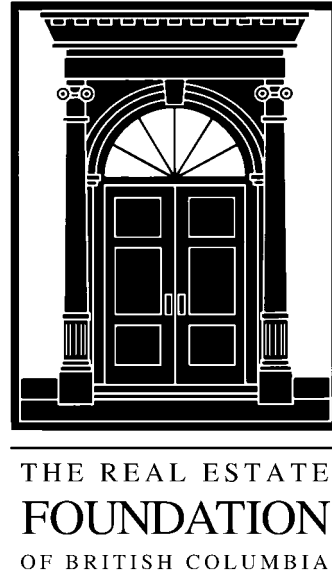
1998 – 2000



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**Acknowledgements:**



Comox Valley Project Watershed Society  
SHIM Reports 1998-2000

**Acknowledgements:** ..... 2  
**Introduction**..... 4  
**Who is Comox Valley Project Watershed?**..... 4  
**Why Map Sensitive Habitat?**..... 5  
**Methods** ..... 5  
    Global Positioning System (GPS)..... 5  
    Geographic Information Systems (GIS) ..... 5  
    Sensitive Habitat Inventory Mapping (SHIM) ..... 5  
**Table of Streams SHIM surveyed by Project Watershed**..... 6  
**List of Appendices**..... 7  
    Appendix 1 SHIM map of Beacon Creek ..... 7  
    Appendix 2 SHIM map and report of Brooklyn Creek..... 7  
    Appendix 3 SHIM map of Cumberland Wetlands..... 7  
    Appendix 4 SHIM maps and report of Dove Creek & Dove Creek “Hydro Tributary” ..... 7  
    Appendix 5 SHIM map and report of Finlay Creek Wetlands ..... 7  
    Appendix 6 SHIM map and report of Glen Urquhart Creek ..... 7  
    Appendix 7 SHIM map and report of Hart/Washer Creek ..... 7  
    Appendix 8 SHIM map of Headquarters Creek..... 7  
    Appendix 9 SHIM map and report of Hindoo Creek..... 7  
    Appendix 10 SHIM map and report of Indian Creek ..... 7  
    Appendix 11 SHIM map and report of Little Oyster Tributary ..... 7  
    Appendix 12 SHIM map Mallard Creek..... 7  
    Appendix 13 SHIM map and report of Millard/Piercy Creek ..... 7  
    Appendix 14 SHIM map and report of Morrison/Arden Creek..... 7  
    Appendix 15 SHIM map and report of Oyster Bay Streams 2, 3 & 4 ..... 7  
    Appendix 16 SHIM map of Oyster Bay Stream 5 ..... 7  
    Appendix 17 SHIM map and report of Queen’s Ditch ..... 7  
    Appendix 18 SHIM map of Roy Creek ..... 7  
    Appendix 19 SHIM map and reports of Tsolum Tributaries..... 7

Comox Valley Project Watershed Society  
SHIM Reports 1998-2000

## **Introduction**

Comox Valley Project Watershed Society has been conducting mapping and inventory of sensitive habitats in Comox Valley Watersheds since its inception 10 years ago. Mapping and inventory methods have evolved over the years, progressing from hand drawn lines on cadastral maps to our current state of the art, standardized, mapping & data collection methods.

Increasingly, Project Watershed receives requests from government agencies, businesses, students, individuals and local stewardship groups for access to collected data in the form of detailed maps & reports. Draft maps produced during mapping projects have been used in a limited way already for a variety of applications including raising local interest, habitat protection referrals, restoration planning, liquid waste management, watershed and OCP planning and real estate purchasing or development referrals.

Through a project, supported in part by the Vancouver Foundation, The Real Estate Foundation of BC and the BC Habitat Conservation Trust Fund, Project Watershed has been able to compile and distribute collected data in a series of published maps, reports and mapping applications allowing a greater cross section of the community to access the information collected during landowner contact and mapping activities. These published materials have been provided to fisheries agency staff at the federal and provincial level and are now available through school & community libraries and on the Internet at the Community Mapping Network website [www.cmnbc.ca](http://www.cmnbc.ca) and on Project Watershed's website: [www.projectwatershed.bc.ca](http://www.projectwatershed.bc.ca)

## **Who is Comox Valley Project Watershed?**

Comox Valley Project Watershed Society is a registered non-profit society, based in the Comox Valley, Vancouver Island, British Columbia. For the past ten years our mandate has been "to promote community stewardship of Comox Valley watersheds through education, information and action".

Project Watershed is recognized locally and internationally for our ability to provide technical expertise in the area of watershed inventory and mapping, and for our ability to involve volunteers in delivery of a diverse array of stewardship programs. The sensitive habitat mapping and inventory information that has been gathered by Project Watershed and others over the past ten years has significantly increased awareness about and improvement to land use activities affecting sensitive stream, wetland and coastal habitats. Besides providing valuable water quality data, community involvement projects addressing non-point source pollution sources and sensitive habitat issues in the Comox Valley, we have created the opportunity for citizens, government agencies and community groups to work together.

Project Watershed has piloted numerous important initiatives and is frequently lauded as a role model for community stewardship organizations throughout British Columbia and the Pacific Northwest. Our organization has been recognized with several community achievement awards. Project Watershed has maintained its leadership role by building productive, durable partnerships with and amongst many community organizations, all levels of government, the business sector, industry leaders, resource managers, land use planners, land owners and citizens. For more information about Project Watershed view our web site: <http://www.projectwatershed.bc.ca/>

## **Why Map Sensitive Habitat?**

Rapid population growth and the corresponding urbanization of watersheds in the Comox Valley have led to large areas of environmentally sensitive land being utilized for development purposes. Fish and wildlife habitats in streams, wetlands and foreshore areas are becoming more and more degraded as a direct result of these pressures. In response to this situation Project Watershed created the Sensitive Habitat Stewardship Program. The objective of this program is to:

- Provide accurate and current sensitive ecosystems information and action opportunities to community members in order to effect better protection and restoration efforts
- Build capacity in resource surveying technology involving GPS and GIS and maintain a community-based GIS that can be drawn upon for regional conservation work
- Provide a role model for other (bio)regional organizations interested in similar work

## **Methods**

### **Global Positioning System (GPS)**

Project Watershed's mapping and inventory work results in detailed biophysical descriptions of streams and wetlands that aid land-use decision making and watershed planning and protection. Utilizing a standardized methodology, Sensitive Habitat Inventory and Mapping (SHIM), accurate locations and attributes, species presence and abundance and habitat features of streams, wetlands and shore zone areas are documented. Standardized RIC GPS procedures are used in combination with state of the art GPS equipment resulting in quality controlled/assured data suitable for utilization by government partners in community planning or land use guidelines.

### **Geographic Information Systems (GIS)**

Mapping, inventory and assessment data is compiled in Arcview GIS. The resulting "smart Maps are used to update and expand the Comox Valley Sensitive Habitat Atlas. Accurate maps and reports are created and data is provided to community decision-makers: citizens, government agencies, industry, volunteers and stewardship groups in a user-friendly format, (Internet based GIS, Arcview format, Access databases, hard copy and digital maps and reports).

### **Sensitive Habitat Inventory Mapping (SHIM)**

The Sensitive Habitat Inventory Mapping (SHIM) method was developed with the interest, cooperation and participation of many individuals and groups within British Columbia. SHIM method development is ongoing and integrates at least seven years of experience and consultation with specialists, local community groups and agencies within the Georgia Basin and West Coast of British Columbia.

SHIM was initiated through the Fish Habitat Inventory and Information Program (FHIIP) through cooperation between Fisheries and Oceans Canada, the British Columbia Ministry of Water, Lands and Air Protection along with many municipalities and non government groups, partners in fisheries inventory and information systems in BC.

SHIM methods and standards have evolved since the inception of mapping at Project Watershed. The methodology used for data collection at the time that these maps and reports were developed was an earlier version of SHIM. The maps and reports in this compilation

Comox Valley Project Watershed Society  
SHIM Reports 1998-2000

were collected using a Trimble Pro XR GPS and compass and chain, using "Stream Mapping Procedures for Land-Use Planning in Coastal Urban Watersheds" version 3.1. Geo-referencing was accomplished using a combination of GPS and compass and chain for establishing locations and field data was collected by hand on data cards. Comparative tests conducted by the then Ministry of Environment found that this method was accurate and reliable for depicting of stream locations. (SHIM methods used for mapping projects occurring after 2001 have used the SHIM methods manual which can be downloaded at [http://www.shim.bc.ca/SHIM\\_Methods.html](http://www.shim.bc.ca/SHIM_Methods.html))

**Table of Streams SHIM surveyed by Project Watershed**

<b>Stream Name</b>	<b>Location</b>	<b>Date of Survey</b>	<b>Report</b>	<b>Appendix #</b>
Beacon Creek	Union Bay	1999	No	1
Brooklyn Creek	Comox	2000	Yes	2
Cumberland Wetlands*	Cumberland	1999	Yes*	3
Dove Creek & Tributaries ♦ Dove Creek Mainstem ♦ Hydro Tributary	Merville	1999	No Yes	4
Finlay Creek	Courtenay	1999	Yes	5
Glen Urquhart Creek	Courtenay	1999	Yes	6
Hart/Washer Creek	Union Bay	1999	Yes	7
Headquarters Creek	Merville	1999	No	8
Hindoo Creek	Union Bay	1999	Yes	9
Indian Creek	Comox	2000	Yes	10
Little Oyster Tributary	Oyster Bay	1999	Yes	11
Mallard Creek	Courtenay	1999	No	12
Millard/Piercy	Courtenay	1999	Yes	13
Morrison/Arden Creek	Courtenay	1999	Yes	14
Oyster Bay Streams 2, 3, 4	Oyster Bay	1999	Yes	15
Oyster Bay Streams 5	Oyster Bay	1999	No	16
Queen's Ditch	Comox	2000	Yes	17
Roy Creek	Royston	1999	No	18
Tsolum Tributaries ♦ Calvert Creek ♦ Chili Creek ♦ Dry Creek ♦ Gark Creek ♦ Keller Creek ♦ Lloydhaven Creek ♦ Reid Creek ♦ River Meadows Creek ♦ Smit Creek ♦ Spirit Creek ♦ Vanier Creek	Merville	1998	Yes	19

\*Report is part of Anderson Engineering Stormwater Management Report for the Village of Cumberland

## **List of Appendices**

- Appendix 1 SHIM map of Beacon Creek**
- Appendix 2 SHIM map and report of Brooklyn Creek**
- Appendix 3 SHIM map of Cumberland Wetlands**
- Appendix 4 SHIM maps and report of Dove Creek & Dove Creek "Hydro Tributary"**
- Appendix 5 SHIM map and report of Finlay Creek Wetlands**
- Appendix 6 SHIM map and report of Glen Urquhart Creek**
- Appendix 7 SHIM map and report of Hart/Washer Creek**
- Appendix 8 SHIM map of Headquarters Creek**
- Appendix 9 SHIM map and report of Hindoo Creek**
- Appendix 10 SHIM map and report of Indian Creek**
- Appendix 11 SHIM map and report of Little Oyster Tributary**
- Appendix 12 SHIM map Mallard Creek**
- Appendix 13 SHIM map and report of Millard/Piercy Creek**
- Appendix 14 SHIM map and report of Morrison/Arden Creek**
- Appendix 15 SHIM map and report of Oyster Bay Streams 2, 3 & 4**
- Appendix 16 SHIM map of Oyster Bay Stream 5**
- Appendix 17 SHIM map and report of Queen's Ditch**
- Appendix 18 SHIM map of Roy Creek**
- Appendix 19 SHIM map and reports of Tsolum Tributaries**