

The Community Mapping Network

Helping to plan sustainable communities

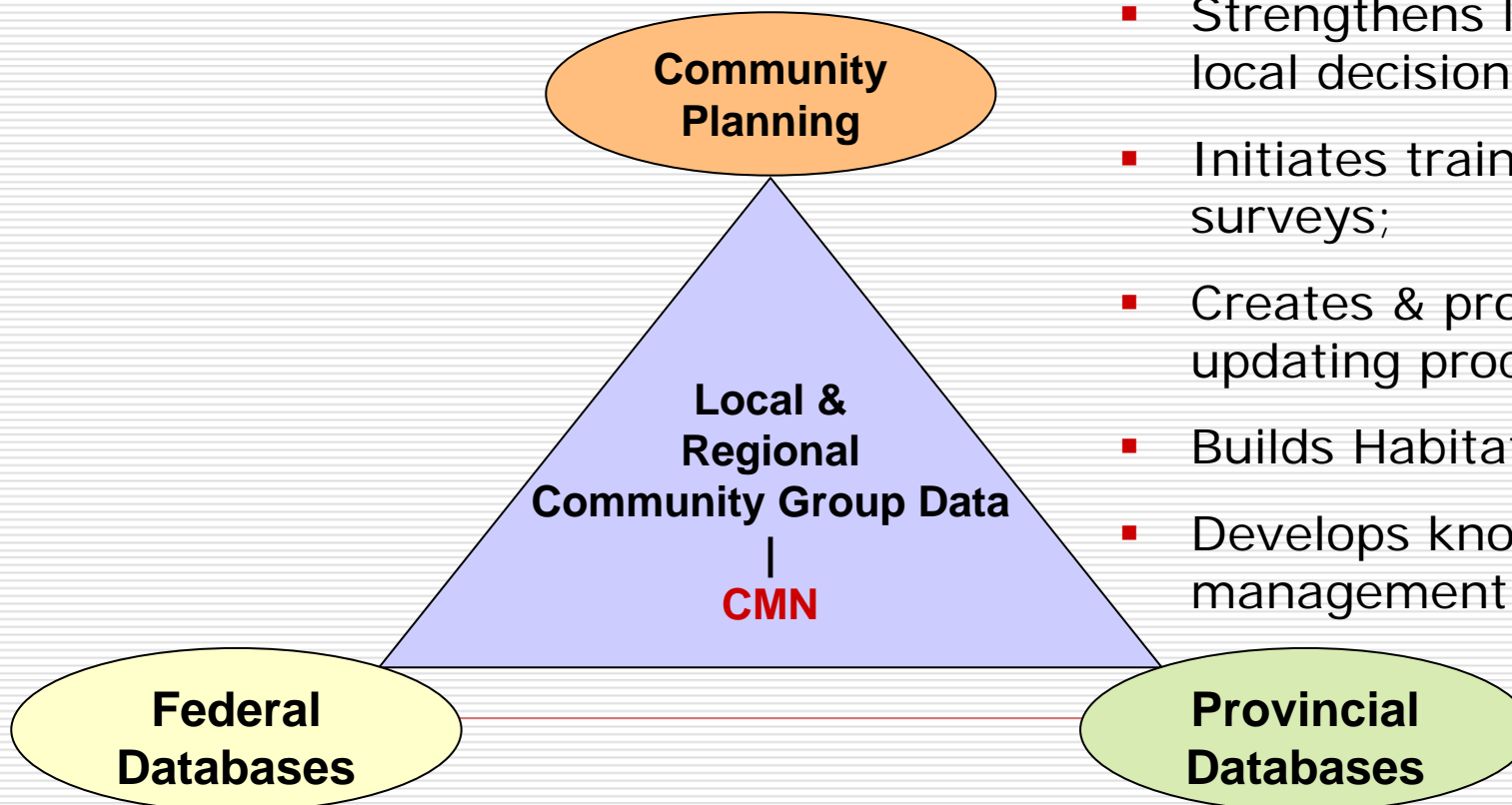


CMNBC.CA

CMN Business Model

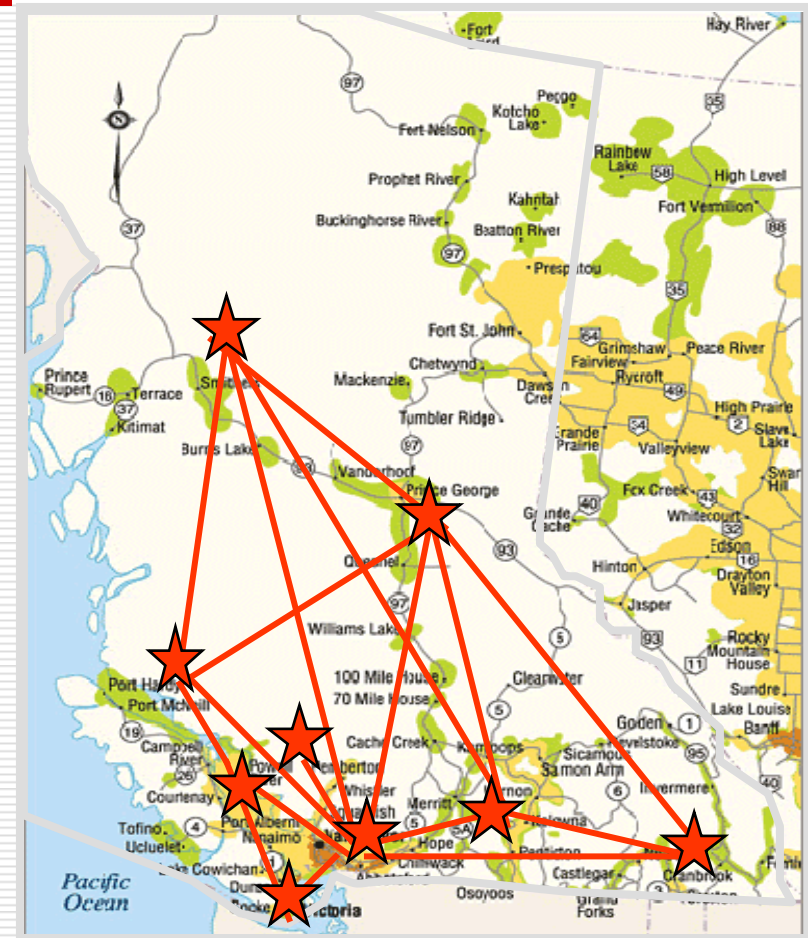
KEY ACTIVITIES:

- Integrates & shares data;
- Strengthens links to local decision making;
- Initiates training & field surveys;
- Creates & provides updating processes;
- Builds Habitat Atlases;
- Develops knowledge management systems.



Building the Community Mapping Network

- Share information and resources for information/knowledge management
- **Integrate** Habitat Information
- Provide quality assurance and quality control
- Develop methods/standards
- Build customized atlases
- Promote inventory and mapping
- **Leverage** CMN resources to help new partners



Some CMN Resources, Web Services:

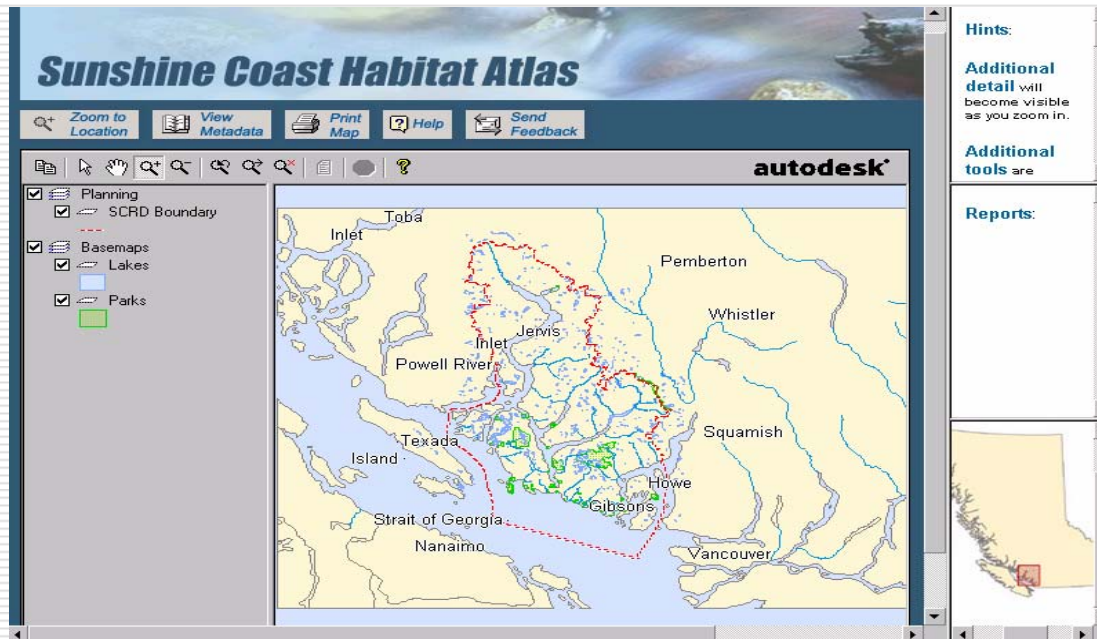
- Provincial & US orthos & LandSat imagery
- BC Watershed Statistics
- PurView 3D viewing for photo interpretation & 3D Viewscape for fly through and landscape modeling
- Geo-referenced shoreline video streaming
- On-line Cartographic functions (map mark up)
- Interactive charting (graphs) for time series & analysis
- On-line data capture for points, lines, polygons & attributes
- On-line access with “granular” levels of security if needed
- The “right stuff” for collaborative on-line GIS decision support

SHIM – SEI – SHAs

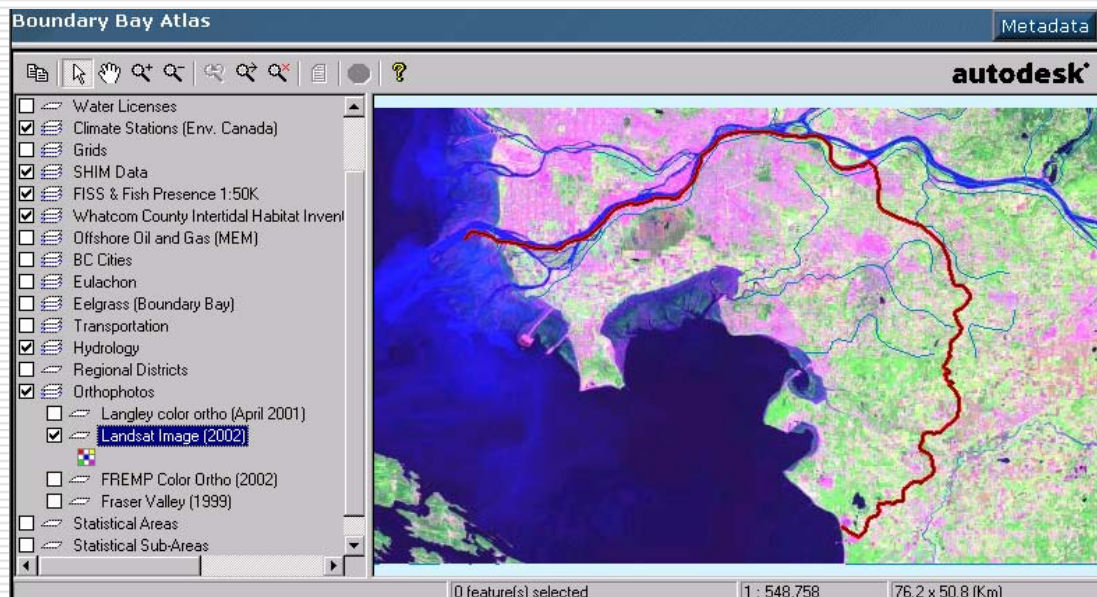
FREMP – Sturgeon – Habitat Videos

- “Sensitive Habitat Inventory & Mapping”
 - “Sensitive Ecosystem Inventory”
 - “Sensitive Habitat Atlases”
 - “Fraser River Estuary Management Program”
 - White Sturgeon Habitat (Lower Fraser River)
 - Shoreline Videos of “Riparian Areas”
-

Sensitive Habitat Atlas Projects

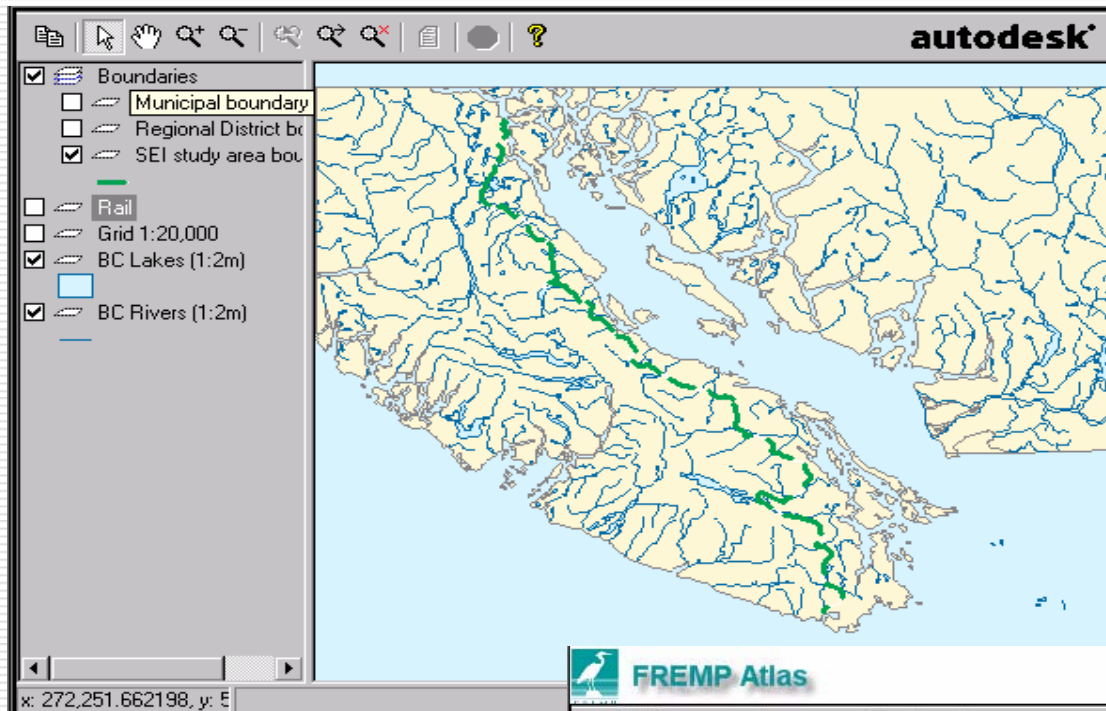


Sunshine Coast
Regional District,
Spring, 2003 and
Updated April, 2004
&
Sea to Sky SHA 2004



Boundary Bay
Area Atlas,
Initiated Fall, 2002 &
2007 (MapGuide Ent.)

Sensitive Ecosystem Inventory (SEI)



Sensitive Ecosystems Inventory

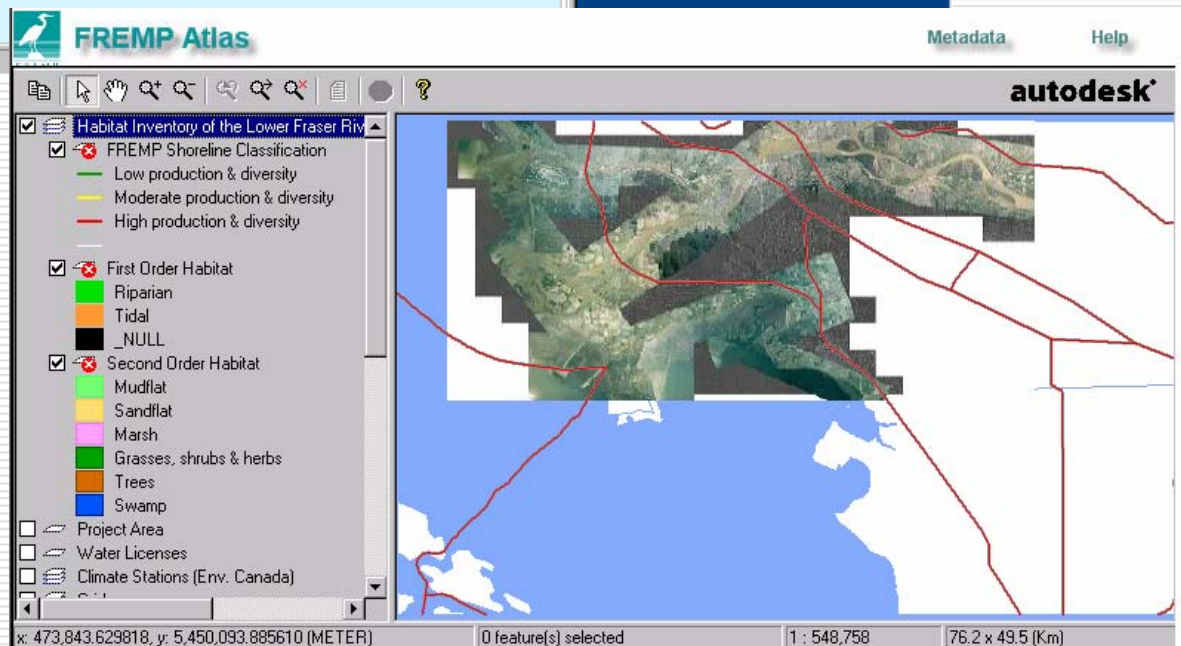
- [Code description](#)
- [SEI information](#)

This MapGuide application is currently under construction.

To see more detail use the "zoom tool". More map layers or "themes" will be available as you zoom in. If you are not familiar with MapGuide Viewer, there is a comprehensive HELP library available, just click the right mouse button to go there at any time.

To view the maps, you must first download the Mapguide plug-in from Autodesk. Click on the image below to go to the download page.

FREMP, Fraser River Estuary Management Program





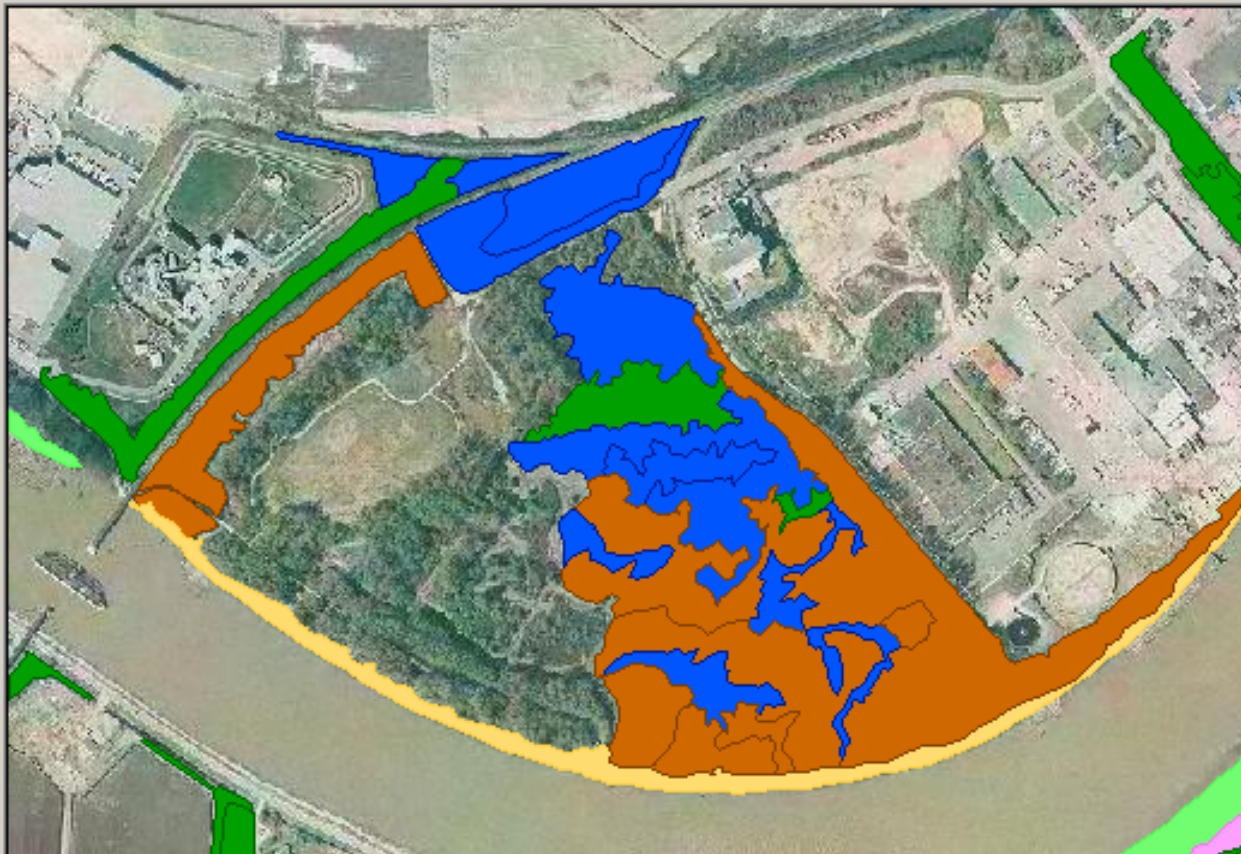
Fraser River Estuary Management Program

[Metadata](#) [Print](#) [Help](#)



autodesk

- Colour Coding
- Habitat Inventory
 - First Order Habitat (Detailed Mapping)
 - Second Order Habitat (Detailed Mapping)
 - Mudflat
 - Sandflat
 - Marsh
 - Grasses, shrubs & herbs
 - Trees
 - Swamp
 - Community (Detailed Mapping)
 - First Order Habitat (Coarse Mapping)
 - Second Order Habitat (Coarse Mapping)
 - Community (Coarse Mapping)
- Habitat Compensation Sites
- Other Information Layers
- FREMP Colour Ortho (2002)



1 : 10,314 4,629 x 3,160 (ft)

To cancel 'zoom in', press Esc key.

Internet

Wildlife Tree Stewardship Atlas

Mapping Tools

Metadata

Help



Source: [Marie O'Shaughnessy](#)

Welcome to the Wildlife Tree Stewardship Atlas. Press the "Mapping Tools" button in the top frame to view more options.



autodesk

- Preliminary Locations
- Validated Wildlife Observations
 - Bald Eagle
 - Barn Owl
 - Barred Owl
 - Bat
 - Great Blue Heron
 - Cooper's Hawk
 - Great Horned Owl
 - Kestrel
 - Marbled Murrelet
 - Northern Goshawk
 - Osprey
 - Peregrine Falcon
 - Pileated Woodpecker
 - Red-tailed hawk
 - Wood Duck
- Transportation
- Place Names
- Hydrology
 - Lakes
 - Rivers
- Grids
- Boundaries
- Orthophotos
- BC Watershed Groups



x: 795,058.949623, y: 440,484.789776 (METER)

1 : 3,615,119

523 x 476 (Km)



Approximate Areas for Porpoise Bay Eelgrass Mapping August 20, 2002

Photos 1999

5482500

5482500

5482000

5482000

5481500

5481500

4,131 m²

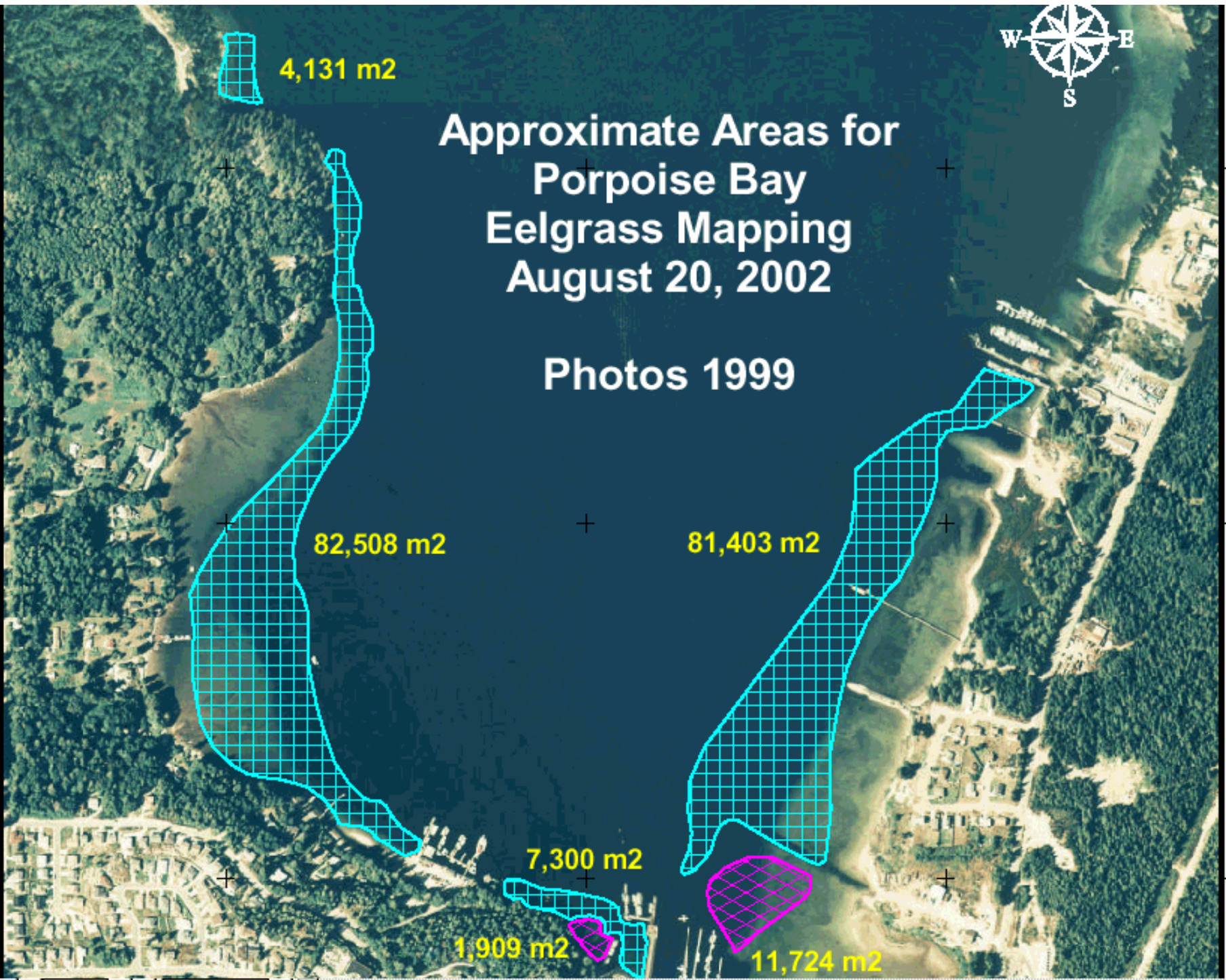
82,508 m²

81,403 m²

7,300 m²

1,909 m²

11,724 m²



South Coast Cutthroat Atlas

South Coast Cutthroat Atlas

Login

Help

Options

Search

Study Area

Metadata



autodesk

- Cutthroat Data Entry
- EMS
- Structural Stages (TEM)
- Cutthroat Presence
 - Total Cutthroat Distributio
- WLAP Flood Structures
- Stream Habitat Unit Data
- Stream Data
- Flow
- Lake Data
- Flood Structures
- Brood Capture
- Stocking
- Place Names
- Boundaries
- Interim Hydrology 1:15k
- Grids
- Roads
- Hydrology
- Orthophotos



1 : 1,832,950

252 x 165 (mi)

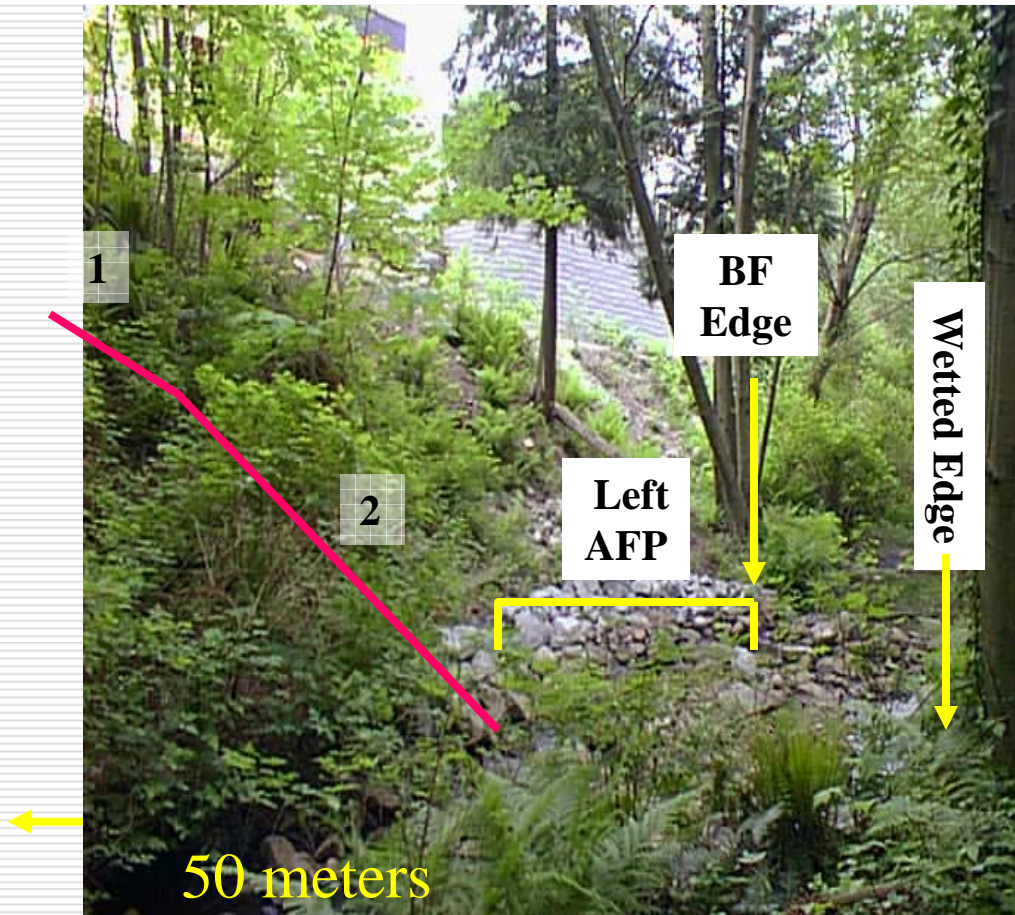
Cross-Sections

Riparian Area:

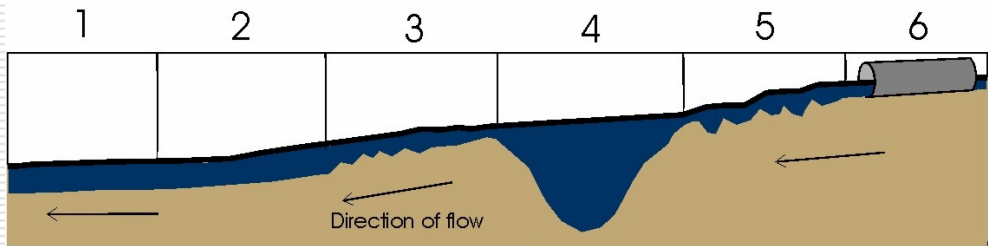
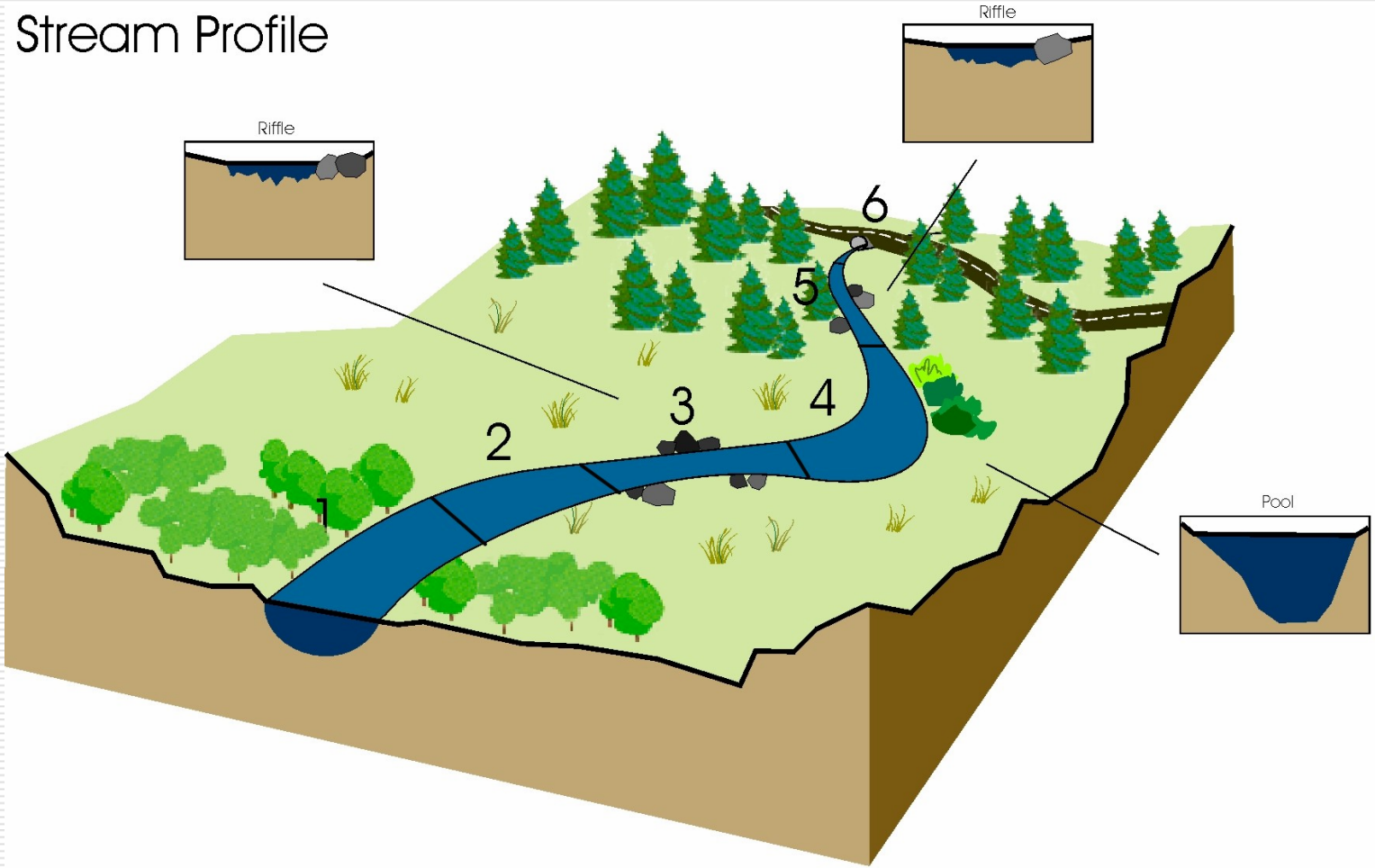
1. 50 m beyond the active flood plain
2. Classify the area for 15m on either side of the transect line.

Codes:

- riparian vegetation,
- riparian bank stability
- Break up this distance if any of the codes or band width of the vegetation changes.



Stream Profile



Profile of gradient change

- Segment 1 - dense riparian forest, glide
- Segment 2 - non-forested, glide
- Segment 3 - non-forested, riffle
- Segment 4 - non-forested, pool
- Segment 5 - coniferous forest, riffle
- Segment 6 - culvert, impervious surface





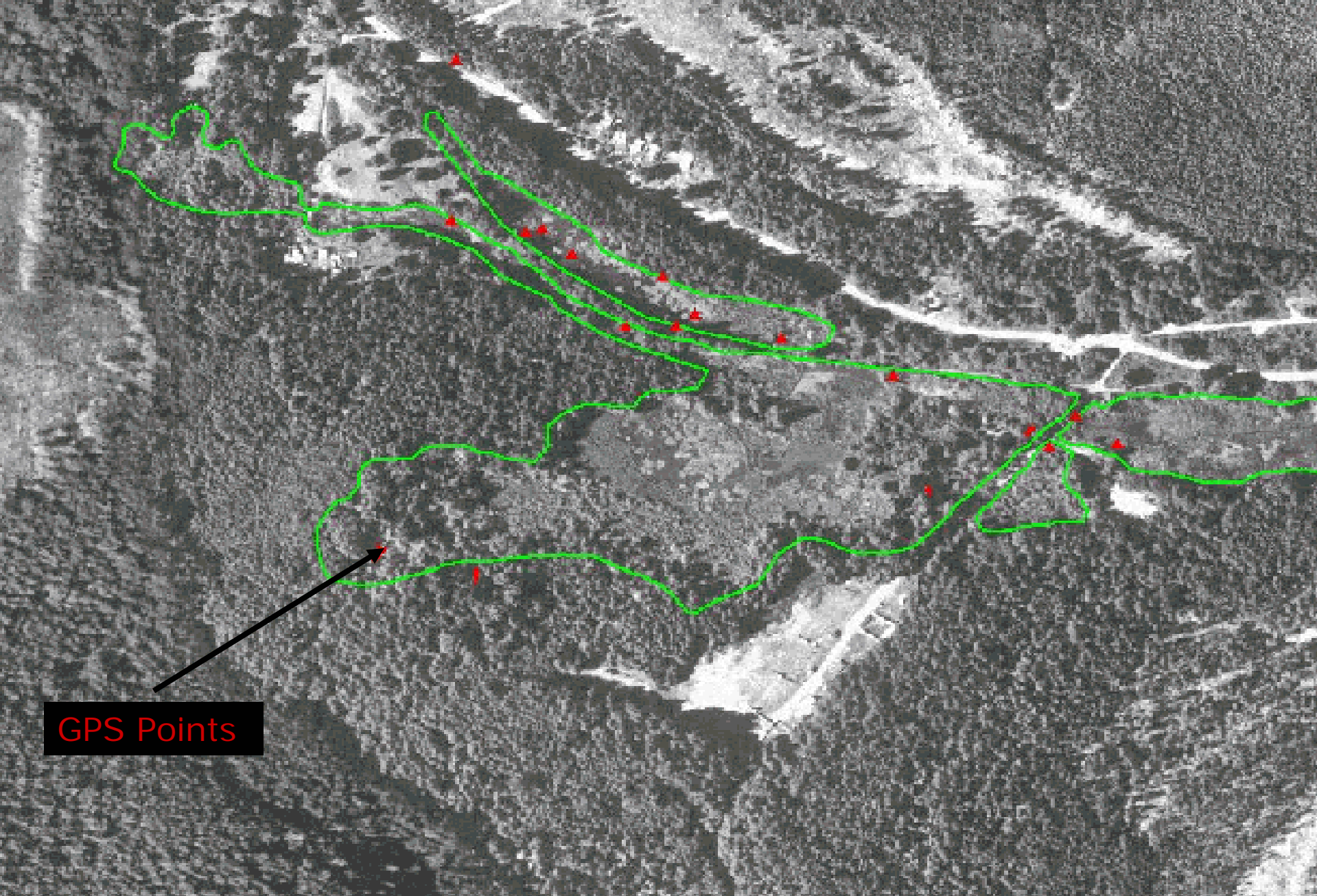
1:20,000 TRIM Watercourse Mapping



Community Based GPS Field Surveys



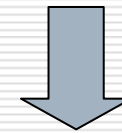
Mapping Small Wetlands



Integrated Watershed Information



- Orthophoto image
- Contours
- Storm utilities
- Lot boundaries



Watershed Boundaries

Watercourses

Fisheries Sensitive Zone



TOWNSHIP OF LANGLEY

WATERCOURSE CLASSIFICATION - DRAFT



Microsoft PowerPoint - [SHIMDFO]

File Edit View Insert Format Tools Slide Show Window Help

Times New Roman 24 B I U

Slide 20 of 39 Whirlpool.pot

Start | Microsoft Outlook | Exploring - (C:) | Microsoft PowerPo... | 7:59 AM

Applications

Mission Creek Watershed Assessment:



Joe Rich Creek

- Land use / management
- Water quality
- Identify Restoration Opportunities

Standard Data Collection

Menu Icons (current choice is highlighted)

Battery Status

PC Card (if used)

Real-Time Status

Number of Satellites

Current PDOP

Number of Fixes in Current Feature

Softkey Menu

Corresponding Softkeys

use NEXT to: cycle through all open screens ("multitasking")

use MENU to: open main menu from any screen

use ESC to: back out of menus and screens exit data capture (saves file)

use ENTER to: select highlighted options save changes to screens save and end current feature

Use ARROW KEYS to: move around on screens key will cycle through choices on text menus key will bring up text menus when ► shows

If unit locks up, try (in order of desperation):

- 1) Turn off, **ON** then on.
- 2) Hold **ON** key for five seconds, then turn on.
- 3) Warm boot (don't loose data)
 - a) turn unit off **ON**
 - b) hold backspace key
 - c) press **ON** key while holding **ON**
 - d) unit should re-boot after a few seconds.
- 4) Cold boot (loose **all** data):
 - a) ask for directions!!

ON On-Off Switch (toggle)

Fn Secondary key functions

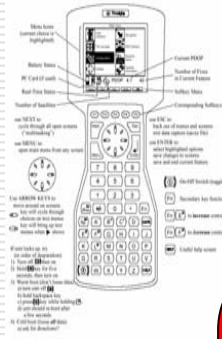
Fn **E^u** to increase contrast

Fn **F^o** to decrease contrast

HELP Useful help screen



The SHIM Data Dictionary



- the SHIM Data Dictionary is a customized Pathfinder Office software package designed to work with Trimble Pathfinder GPS units in the field
- creates a streamlined method for organizing and storing SHIM field data collected with high end GPS units (target horizontal accuracy of $\pm 5m$)
- contains a nested hierarchy of stream feature menus for easy, understandable and consistent data entry in the field
- stored dictionary information can be uploaded regularly from the GPS data logger onto PCs
- line segment, point and polygon features can all be exported into ArcView and displayed in views using predefined theme properties

- Features:
- ~ STREAM
 - X POINT
 - X CROSS-SECTION
 - X Culvert
 - X Obstruction
 - X Modification
 - X Discharge
 - X Erosion
 - X Fish_Habitat
 - X Fish_Sample
 - X Enhancement
 - X Wildlife
 - X Tree_Wildlife
 - X Waterbody
 - ~ Wetland
 - X Water_Sample
 - X Photo_Location

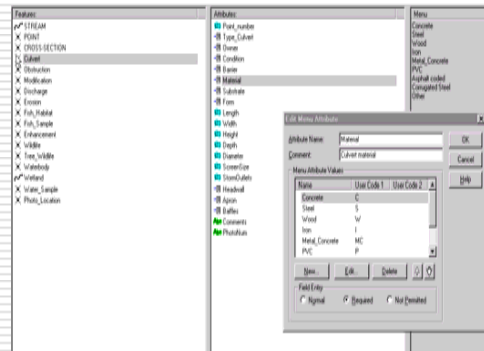
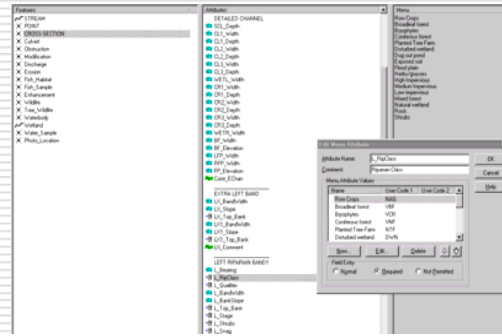


Accurate Spatial Capture of Multiple Watercourse Features

- stream centerline and top of bank
- modifications
- designated wildlife trees
- riparian habitats
- fish habitats
- fish sampling sites
- obstructions
- culverts
- erosion areas
- enhancements
- wildlife sitings
- discharge points
- wetlands
- ponds
- water sampling locations
- photo locations
- stream cross-sections



Standardized Data Organization



Easily Transferable Data Format for Integrated SHIM Mapping Projects



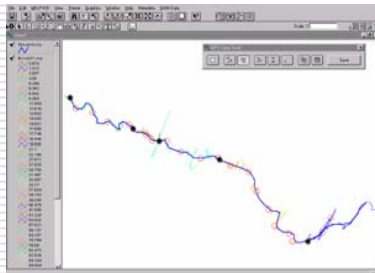
SHIM Data Dictionary Extension

Benefits of the Extension

- correct interpretation of raw data collected using GPS receivers involves a series of post-processing steps
- to simplify this process and to allow SHIM mappers to more easily interpret their collected stream information, the Data Dictionary Tool was developed as a customized ArcView extension for post-processing raw GPS data
- the Tool also contains features for easily creating, editing and merging ArcView shape files, that will assist in minimizing project size and will facilitate general data management

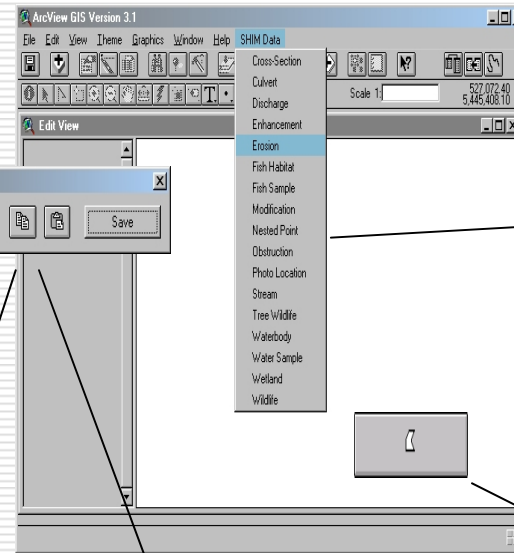
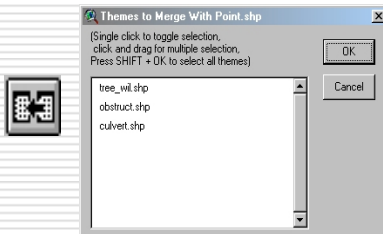
Interpolate Streams

- digitize a new best fit line and insert stream segment break points or vertices
- use the Circle Buffer Tool to assist in the determination of the line of best fit during the line drawing process
- transfer collected stream information from GPS derived line segments to newly digitized line segments



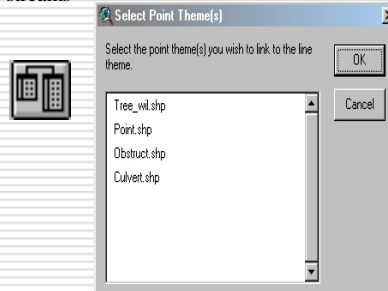
Merge Themes

- use the Merge Themes Tool to combine data from stream attributes of the same feature type (i.e., points, lines or polygons)



Link Point Data to Stream Lines

- use the Link Themes tool to create unique point ids based on stream name and TRIM mapsheet number
- select multiple point themes to link to parent streams

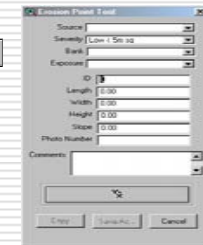


Multiple Uses

- manually correct stream linework derived from GPS datapoints
- link previously derived GPS point data to new stream linework using unique ids
- create and merge common shapefile themes
- incorporate archived hard copy or electronic spreadsheet data into current SHIM data formats
- create digitized polygons of riparian habitat.

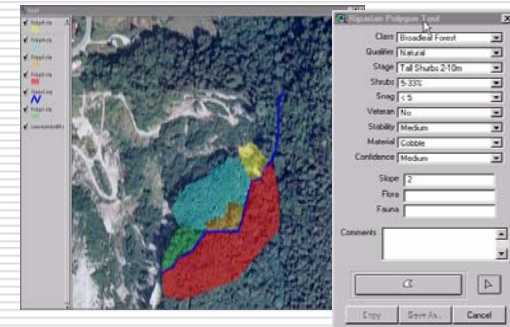
Create SHIM Data Points

- record and map new point data
- incorporate archived data into existing SHIM data structure and mapping protocols



Create Riparian Polygons

- delineate riparian habitat polygons adjacent to mapped streams.
- data cells within the Riparian Polygon Tool can be populated by habitat information collected directly in the field or else interpreted from underlying orthophotos
- the Confidence data cell allows for a qualitative assessment (low, medium or high) by the user of the relative accuracy of the riparian classifications




SHIM Cross-Sectional Diagram Tool

Benefits of the Tool

- generates diagrams of spatially accurate stream cross-sectional profiles based on GPS collected point data for stream widths and depths
- can generate profiles based on simpler stream measurements (i.e., stream wetted, bankfull and floodplain widths/depths) or on measurements recorded as part of the SHIM detailed cross-sectional procedures (i.e., measurements of channel, wetted, bankfull and floodplain widths and depths/elevations)
- this information can be used in hydraulic analyses that help determine stream water-surface elevations at periods of high flood and can assist planners in defining floodway limits

Displaying Stream Cross-Sections

- in ArcView add a Cross-Section points theme to the view

- select the Cross-Sectional Diagram Tool icon 

- click on a Cross Section point
- a cross sectional diagram is automatically calculated, drawn, labelled and opened in an ArcView window
- the view can be immediately printed on any printer or saved within the ArcView project

Cross-Sectional Attribute Tables

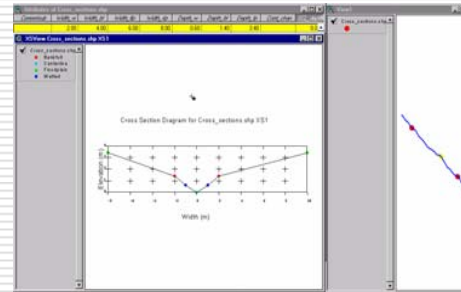
- stream channel attributes can be examined within a database (dbf) format in ArcView
- or they can be exported to other software packages (ArcInfo, Microstation, etc.) for GIS users who prefer to work outside the ArcView environment.

Shape	Station	Elevation	Label	RipClass	Easting	Nothing
Point	0.00	-0.28	Centerline		585334.72	5443481.51
Point	-0.50	-0.24	Channel Bottom		585334.55	5443481.04
Point	-1.60	0.05	Channel Bottom		585334.19	5443480.00
Point	-2.30	0.10	Channel Bottom		585333.97	5443479.34
Point	-1.20	0.00	Wetted Width		585334.32	5443480.38
Point	0.50	-0.34	Channel Bottom		585334.88	5443481.99
Point	1.15	-0.24	Channel Bottom		585335.09	5443482.60
Point	2.50	0.23	Channel Bottom		585335.53	5443483.88
Point	1.93	0.00	Wetted Width		585335.34	5443483.34
Point	-2.95	0.22	Bankfull		585333.75	5443478.72
Point	2.95	0.22	Bankfull		585335.68	5443484.30
Point	-4.75	0.30	Floodplain		585333.17	5443477.02
Point	4.15	0.30	Floodplain		585336.07	5443485.44
Point	-63.26	54.86	Riparian	Mixed forest	585314.12	5443421.70
Point	-138.43	82.22	Top of Bank	Mixed forest	585289.65	5443350.62
Point	-188.37	84.84	Riparian	Mixed Forest	585273.39	5443303.41
Point	65.43	51.72	Top of Bank	Mixed forest	585356.02	5443543.38
Point	122.00	-4.85	Riparian	Mixed forest	585374.44	5443596.87

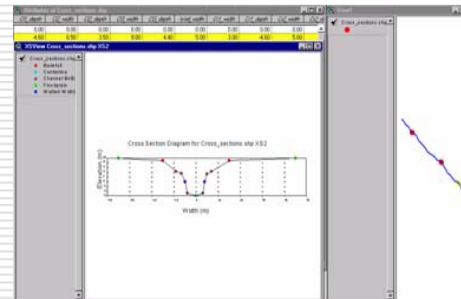
Varied Stream Representations

- 3 different levels of cross-sectional complexity can be displayed based on the level of information provided

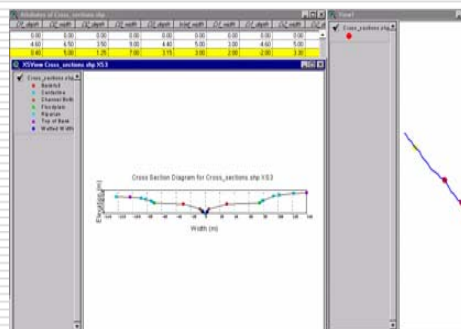
1) Simple Stream



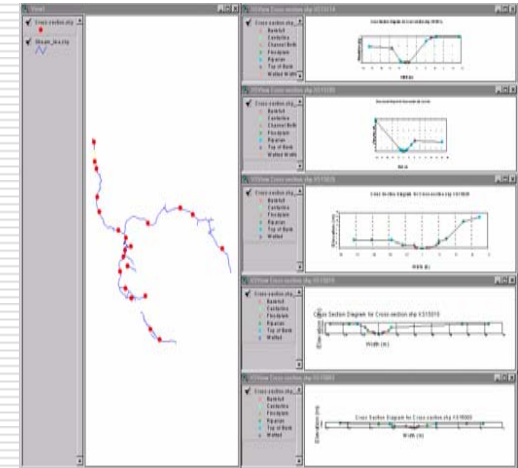
2) Complex Stream



3) Complex Stream + Upland Slope

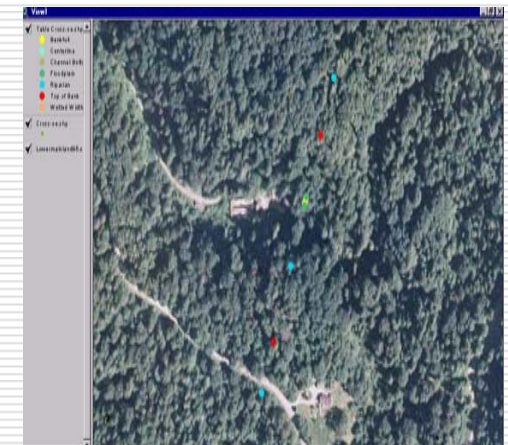


- Selecting multiple cross-section points simultaneously will allow you to examine the change in hydraulic profile along the length of the stream



Spatial Display of Cross-Section Features

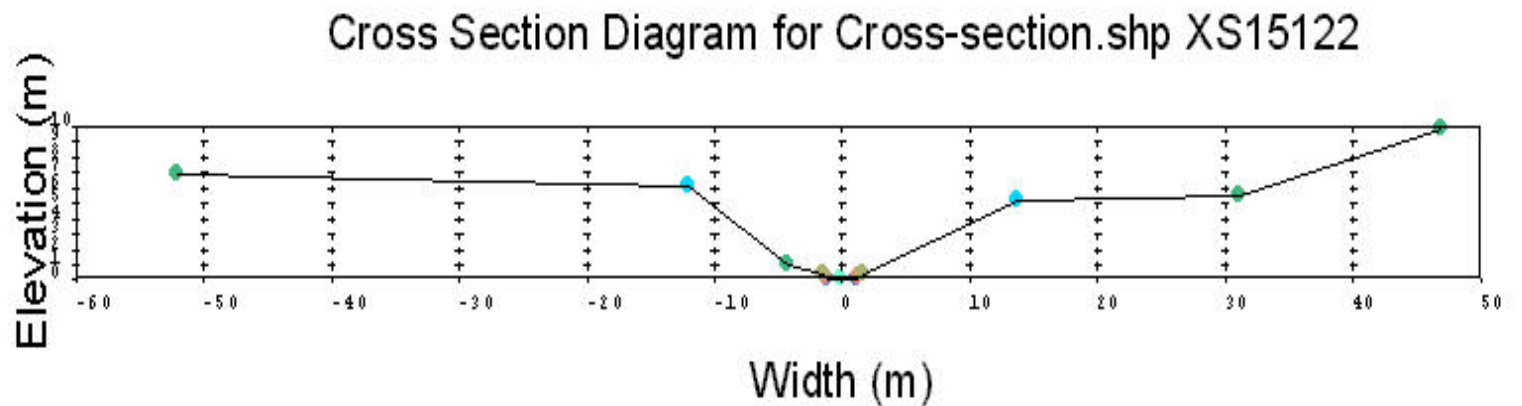
- all channel cross-section points have associated UTM coordinate locations that can be used to display the points on any underlying map or orthophoto backdrop

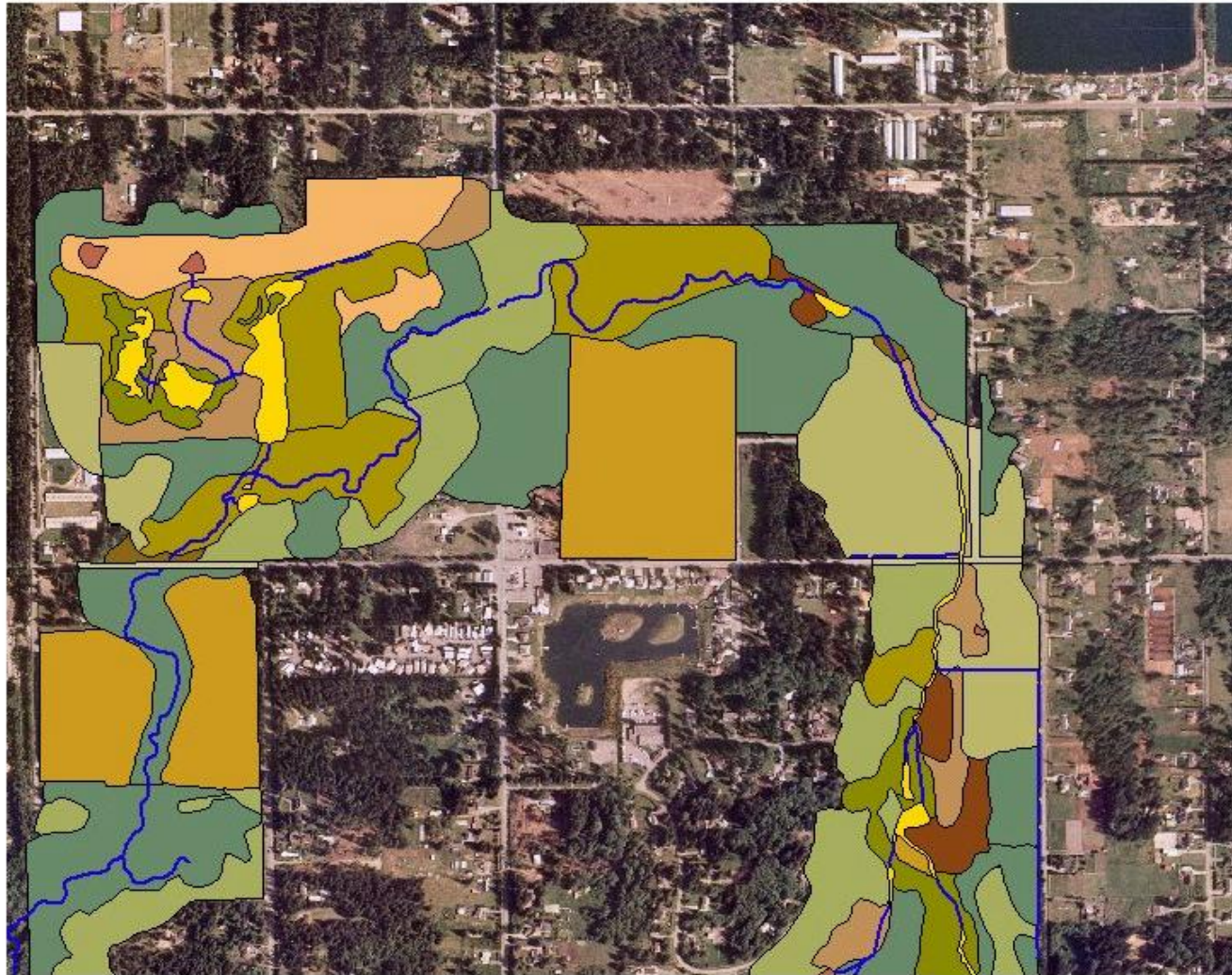


Stream Cross Section


Cross-section.shp

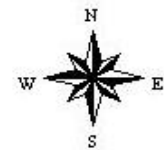
- Bankfull
- Centerline
- Floodplain
- Riparian
- Top of Bank
- Wetted





Classification Legend

-  Dug-out pond or reservoir
-  Disturbed Wetland
-  Natural Wetland
-  Agricultural Use
-  Exposed Soil
-  Human-made Surfaces (high stability)
-  Human-made Surfaces (low stability)
-  Logged Areas
-  Residential Landscape
-  Broadleaf Forest
-  Herbs / Grasses
-  Mixed Forest
-  Coniferous Forest
-  Shrubs



**Campbell Valley River
Land Classification Project**

Date January 10, 2000
 GIS and Land Classification
 by:
 Storte Id Terralis Data Ltd.
 Unit 1 20120 92A Avenue
 Langley B.C.
 www.storteid.com



COMMUNITY
MAPPING
NETWORK

Sensitive Habitat Inventory and Mapping

Metadata

Help



autodesk

- Community Mapping
- Salmon Stock Status 1998
- Georgia Basin Boundary
- Orthophotos Coverage
- Watershed Classification
- Place Names
- Data Entry (SHIM)
- SHIM
- FISS & Fish Presence 1:50K
- Grids
- Local Gov't Features
- Transportation
- 1:20k Features
- Hydrology
- Interim Hydrology 1:15k
- Grasslands
- Land Use / Crops (Langley & Surr
- Orthophotos
- Boundaries
- Watersheds (1:20k)
- Watershed Groups (1:20K)
- Watersheds (1:50k)



x: 529.496.353417, v: 5.445.336.148859 (METER) BC Border (1:20k) (2) :

2 'Major Cities' selected

1 : 2,000

1.389 x 893 (ft)

SHIM Atlas - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address <http://204.244.79.12/mapguide2008/SHIM/Shim.php> [Link here](#) Go

Back Forward Stop Refresh Home Search Favorites Print Mail New Tab

Sensitive Habitat and Inventory Mapping (SHIM) Atlas

Print Tools Zoom Select

Layers


- Tracklines
- Data Entry
 - Lower Fraser Coho
- Graphs
 - Temperature Graph Demo
- Fish Distribution
- Fish Observations (BC)
- FISS and Fish Presence 1:50k
- SHIM Features
- Flood Structures
- Forest
- Base Maps
- Hydrology
- Transportation
- TRIM 1:20K
- Orthophotos / Imagery

Properties

None Selected

<http://204.244.79.12> - Nicola Lake Video - Micro...

Nicola Lake



03:01 / 1:33:49, Playing Internet

Videos

Nicola Lake

GPS Time
02:22:49pm

Latitude
50 9.698

Longitude
120 34.932

Video Controls

Start Close Pause

Resume

Tasks

X: 1385791.726094, Y: 586754.309609 (Meter) 0 feature selected 1: 5625.00 913.80 x 712.89 (m) Powered by MapGuide

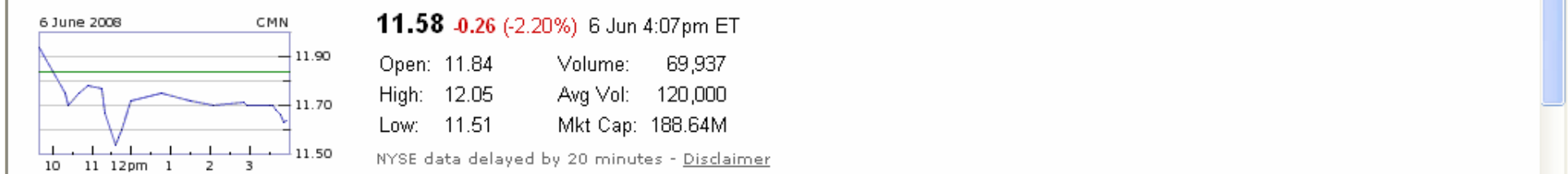
start Community Ma... URISA 2008 Pr... Microsoft Powe... SHIM Atlas - Mi... http://204.244... 10:10 PM

Google [Advanced Search](#) [Preferences](#)

Search: the web pages from Canada

Web Results 1 - 10 of about 4,160,000 for CMN. (0.11 seconds)

CMN - Cantel Medical Corp (United States) (NYSE)
[Google Finance](#) [Yahoo Finance](#) [MSN Money](#) [AOL Finance](#) [CNN Money](#) [Reuters](#)



Children's Miracle Network - Home
 Each year a child is selected from every **Children's Miracle Network** hospital in Canada and every state in the U.S. to represent the 17 million children ...
www.childrensmiracletnetwork.ca/ - 18k - [Cached](#) - [Similar pages](#)

Children's Miracle Network
Children's Miracle Network 4525 South 2300 East Salt Lake City, Utah 84117 ...
Children's Miracle Network was founded by the Osmond family in 1983. ...
www.childrensmiracletnetwork.ca/page.php?id=2 - 14k - [Cached](#) - [Similar pages](#)

Community Mapping Network (CMN)
 Created to share a wealth of natural resource information and maps with communities in British Columbia, Canada. Allows users to add data.
www.shim.bc.ca/ - 26k - [Cached](#) - [Similar pages](#)

[CMN Official Website](#) - [[Skip intro](#)]



Welcome **Atlas Gallery** **MapBuilder** ?

The [CMN](#) shares a wealth of natural resource information and maps with communities in British Columbia and Canada.

You can access information three ways:

1. [Atlas Gallery](#)
2. [Mapbuilder](#)
3. [LiteView](#) (for MACs) - *Under Construction*

Note: First time users must install the free Autodesk Mapguide Viewer. Click [HERE](#) to get the Viewer.

- Click on an atlas below:
- ALL ATLASES
 - Abbotsford Watershed Atlas
 - Anglican Map Project
 - BC Grasslands
 - BC Historic Mines
 - BC Watershed Statistics
 - BC Wetlands
 - BCIT FWR SHIM
 - Bird Studies Canada Atlas
 - Central Coast Watershed
 - Chilliwack River Habitat Atlas
 - Community Greenmap
 - Comox Valley Project Watershed
 - Cowichan Valley Habitat Atlas
 - DFD Cultus Lake Atlas



Resources		What's New
<p>Search Tools Search tools for this site, MWALP and Natural Resources Information Network.</p>	<p>Community Projects Directory</p>	<p>Apr 15, 2008 - The Fraser River Estuary Management Plan Habitat Classification System ("colour coding") and other data are now accessible for viewing using open source Mapguide Enterprise 2008. Click here to go directly to the FREMP Atlas.... ▶ go to news</p> <p>Feb 21, 2008 - New data entry tools are available to support the Lower Fraser Coho Conservation and Enhancement Initiative, Paddling Together, Making a Difference Workshop, Challenges and Solutions... ▶ go to news</p> <p>Oct 11, 2007 - CMN is upgrading to Open Source Mapguide Enterprise. View the new atlases ... ▶ go to news</p>
<p>Case Studies Compilation of community mapping case studies in British Columbia.</p>	<p>Watershed Education Valuable information about watersheds education.</p>	
<p>Methods & Standards Coastal Shoreline Inventory, SHIM Mapping Methods and standards.</p>	<p>Workshops Our upcoming training workshops.</p>	

[Link to new CMN here](#)

[Link MG Enterprise here](#)