



An Overview of Newfoundland and Labrador's Water Resources Portal

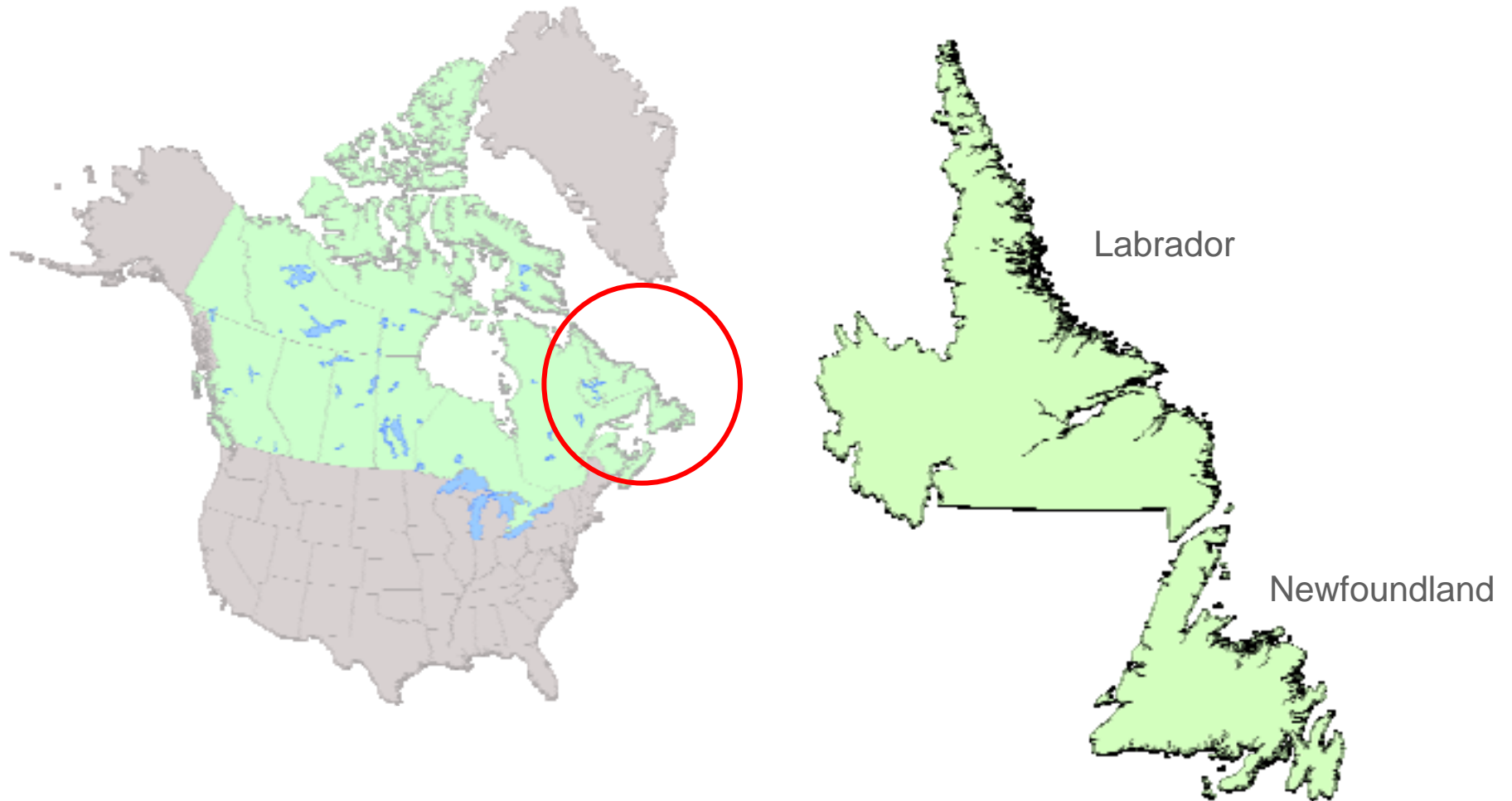
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Government of Newfoundland and
Labrador

Newfoundland & Labrador



NL WRMD - Who We Are

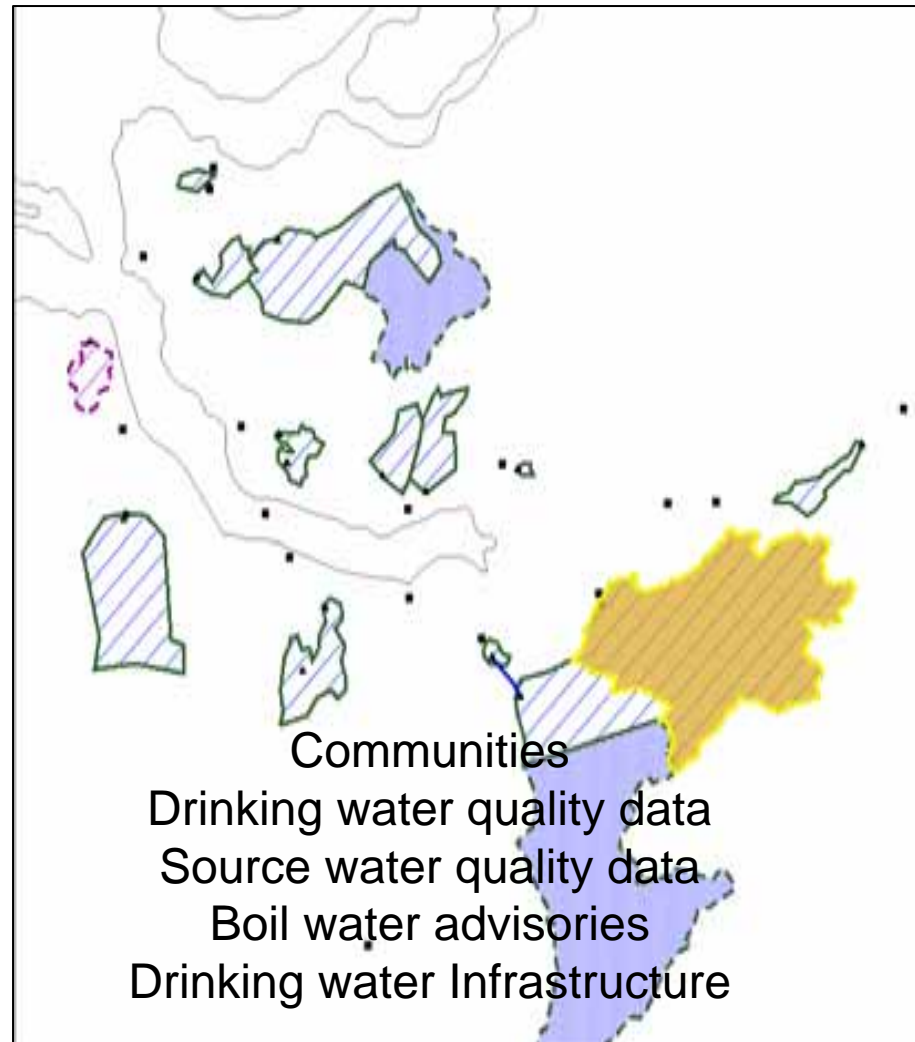
- Water Resources Agency for the Government for Newfoundland and Labrador

- Surface Water
- Water Quality
- Groundwater
- Hydrologic Modelling
- Water Investigations
- Water Rights
- Community Water and Wastewater
- OETC

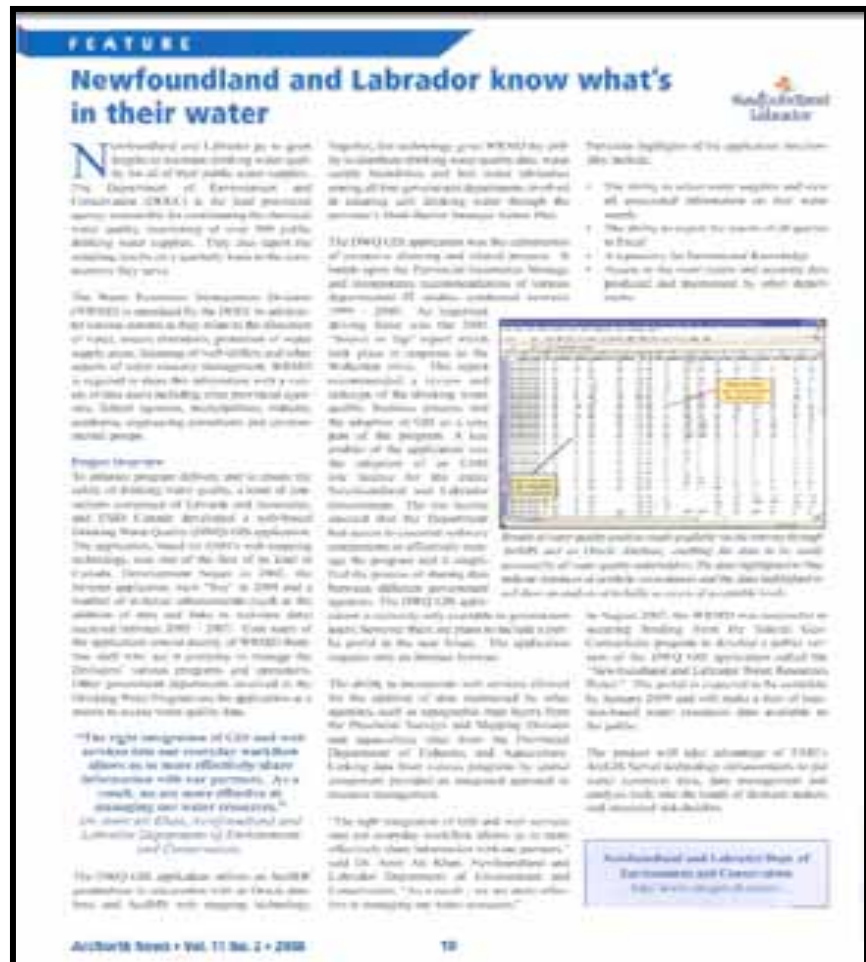
The DWQ GIS Application

Drinking Water Quality (DWQ) GIS Application

- ESRI ArcIMS application
 - Requires only the Internet Explorer browser on the end users machine
- Accessible anywhere on the internal government network including the regional offices



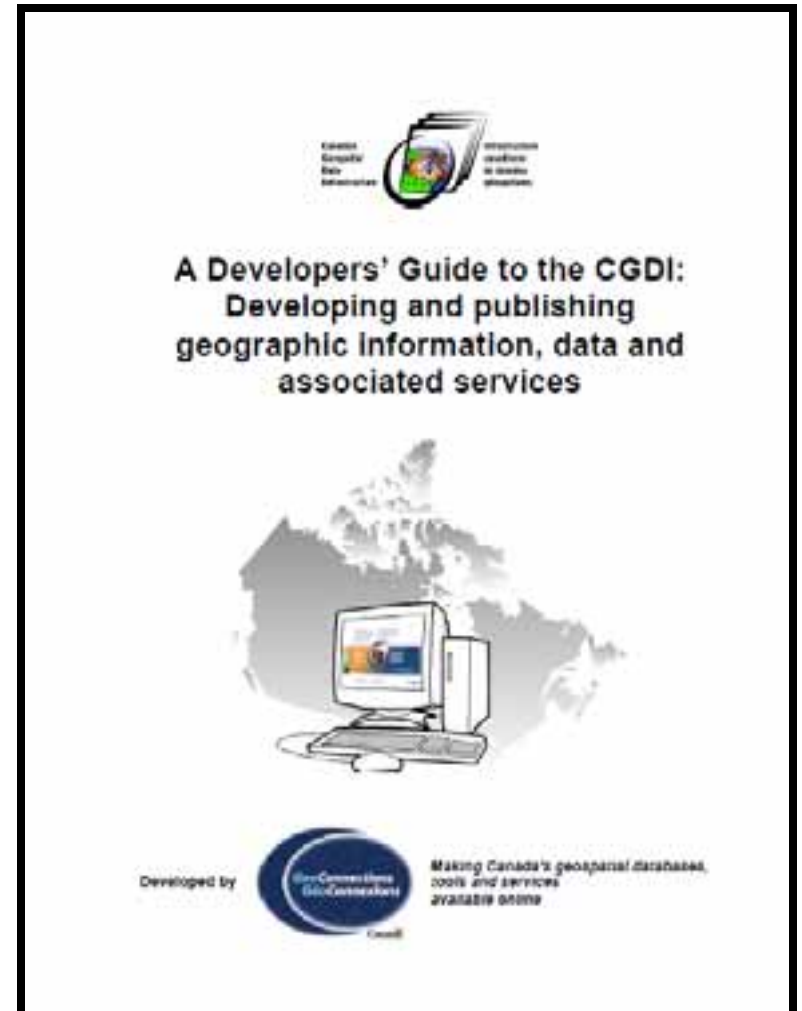
The DWQ GIS Application



NL Water Resources Portal



- Enhanced **Canadian Geospatial Data Infrastructure (CGDI)** compliant **Public Version** of the existing ArcIMS Drinking Water Quality GIS application



[http://www.geoconnections.org/publications/
Technical Manual/CGDI Technical Manual
_0204_e.pdf](http://www.geoconnections.org/publications/Technical%20Manual/CGDI%20Technical%20Manual_0204_e.pdf)

Purpose

- Geospatial Decision Support System (GDSS)
An operational platform that will make available to decision makers various location based water resources (environmental and geomatic) data.
- Help integrate and overlay the various water resources data sources and services.
- Improve decision making by the lead provincial agency for water resources management in the province and various other stakeholders

Stakeholders

- Industry (NL Power, NL Hydro, mining companies)
- Municipalities,
- Federal agencies (Department of Fisheries and Oceans (DFO), Environment Canada),
- Other provincial departments and agencies,
- Academia (Memorial University, College of the North Atlantic, Sir Wilfred Grenfell College),
- Recreational users (outfitters, salmon fishers, kayakers),
- Engineering consultants
- Special interest groups such as environmental organizations and watershed management committees.

Scope

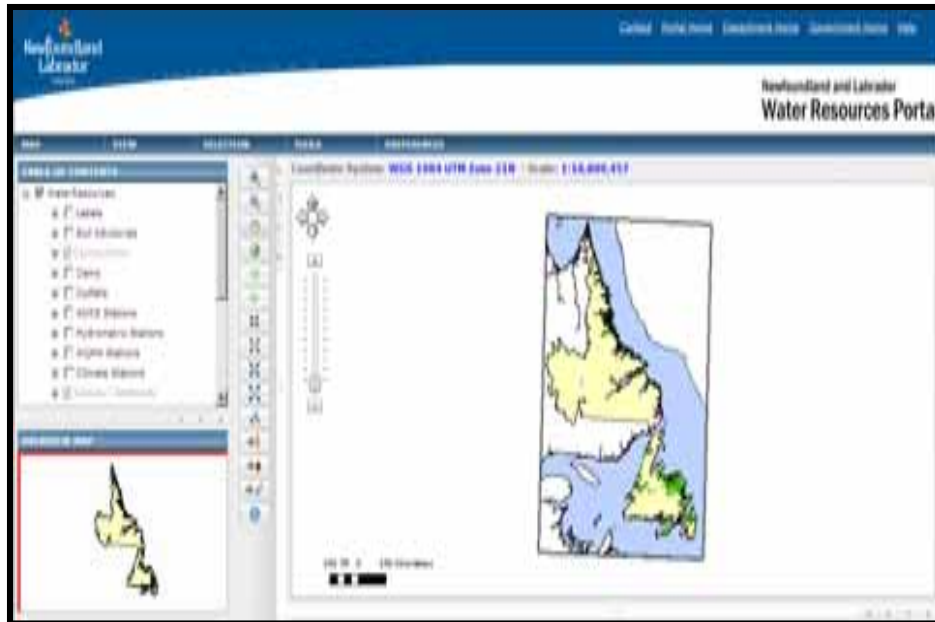
- Drinking water quality treatment profiles; source protection area watersheds; boil water advisories; ambient water quality data; ambient water quality station profiles; ambient water quality station watersheds; real time water quality data; hydrometric station profiles; hydrometric data; climate station profiles; dam locations; sewage outfalls; tertiary watershed boundaries; and topographical data.

Future Datasets

- 1 in 20 year and 1 in 100 year flood risk mapping;
- Environmental permits
- Operator Education and Training resources
- Flood events documentation
- Wetlands Inventory
- Water and wastewater distribution/collection networks
- Diverted watersheds

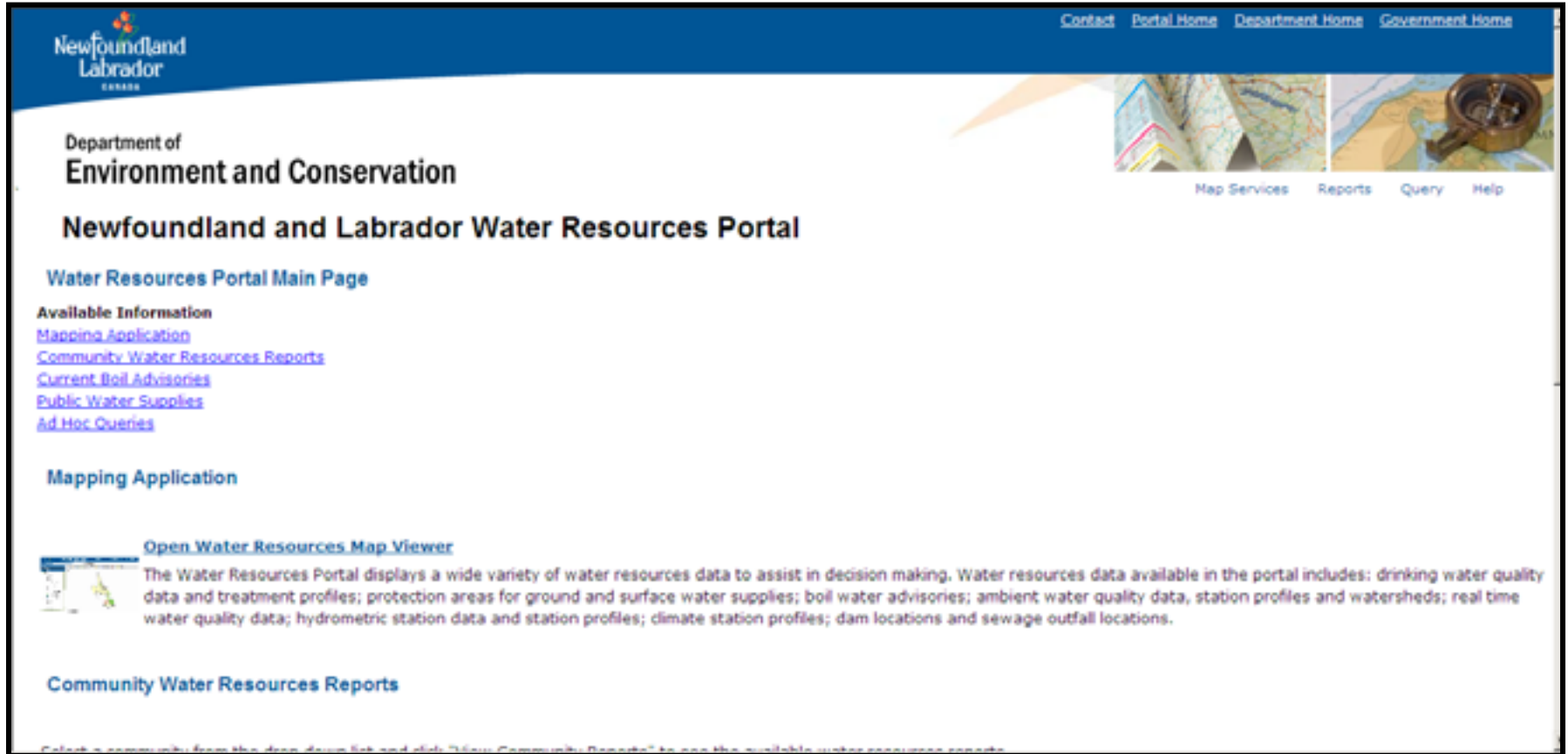
Project Concept

- Internet Application
- WMS Web Services



<http://www.canal.gov.nl.ca/envdat/map.asp?Request=GetCapabilities&Version=1.1.1&Service=WMS#EnvirodatPoints>

NL Water Resources Portal



<http://maps.gov.nl.ca/water/>

NL Water Resources Portal

- 3-Tier security model used to ensure data integrity
- Automated data update
- Technical Specs
 - ArcGIS Server 9.3 for the MS.NET Framework
 - Enterprise Edition
 - ESRI Portal Toolkit for ArcGIS Server 9.3

NL Water Resources Portal

Mapping Application

[Open Water Resources Map Viewer](#)



The Water Resources Portal displays a wide variety of water resources data to assist in decision making. Water resources data available in the portal includes: drinking water quality data and treatment profiles; protection areas for ground and surface water supplies; boil water advisories; ambient water quality data, station profiles and watersheds; real time water quality data; hydrometric station data and station profiles; climate station profiles; dam locations and sewage outfall locations.

Community Water Resources Reports

Select a community from the drop down list and click "View Community Reports" to see the available water resources reports.

Select Community:

Current Boil Advisories

[Boil Advisories](#)



Current Boil Advisories in effect.

Public Water Supplies

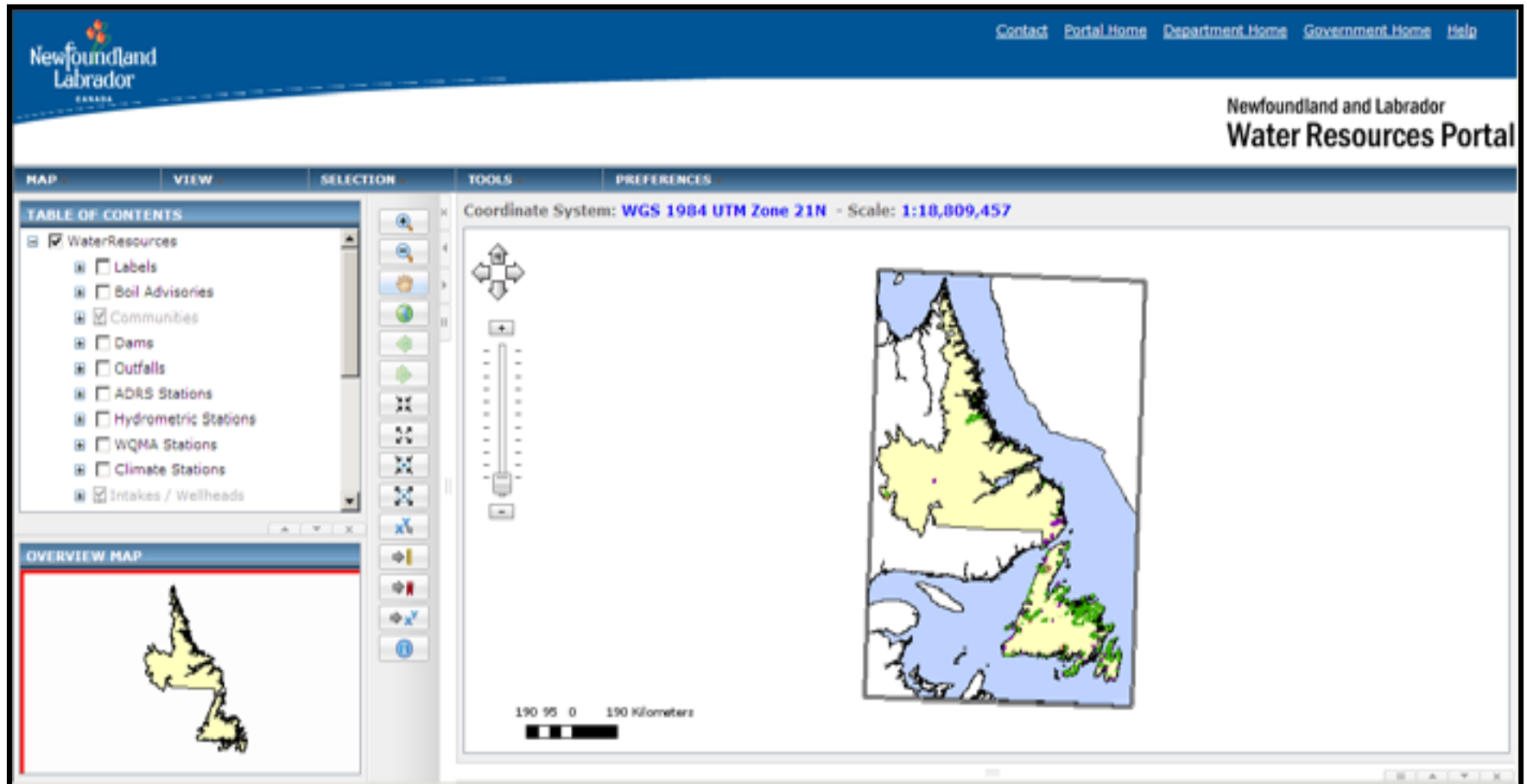
[Public Water Supplies List](#)



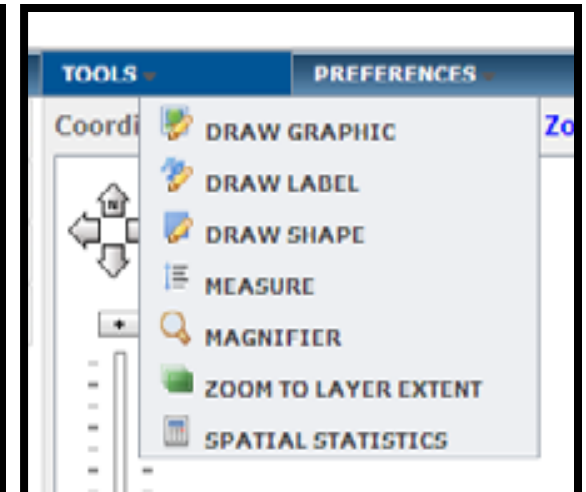
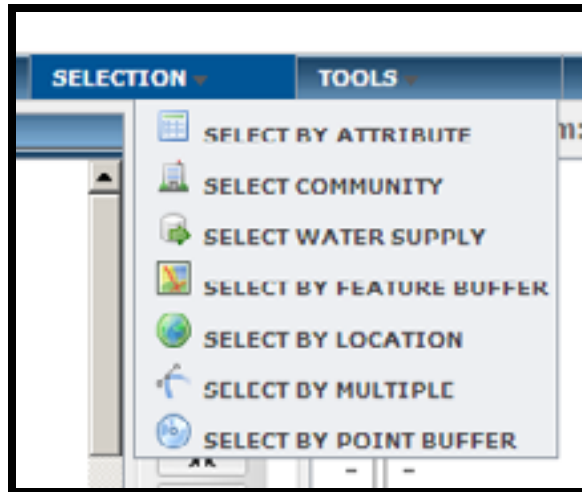
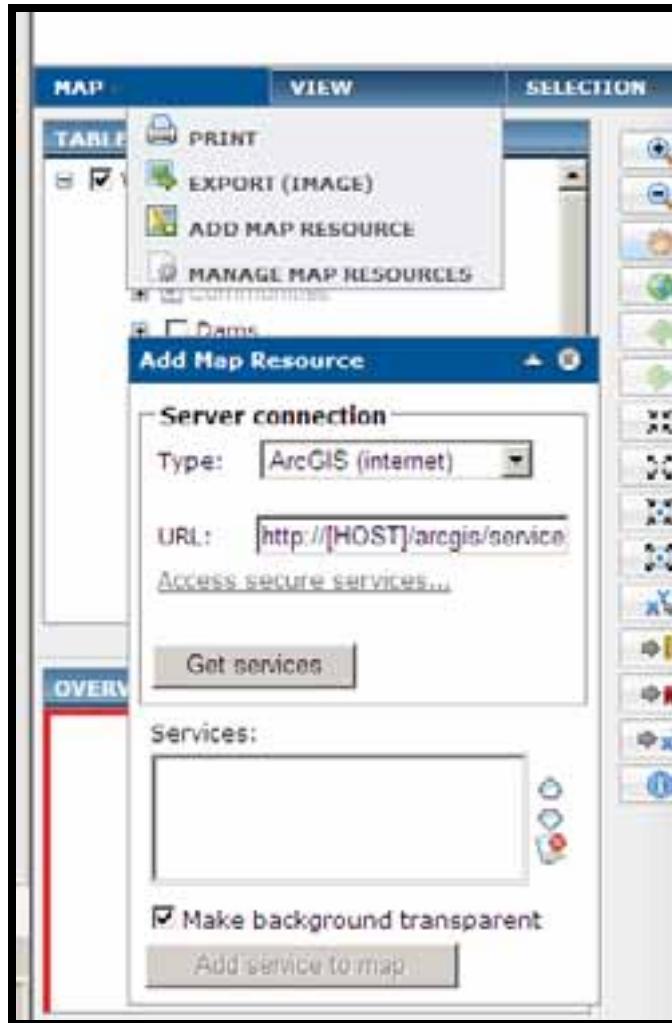
Report listing all public water supplies.

Ad Hoc Queries

Mapping Application



Mapping Application



Mapping Application

Newfoundland and Labrador
CANADA

Contact Portal Home Department Home Government Home Help

Newfoundland and Labrador
Water Resources Portal

MAP VIEW SELECTION TOOLS PREFERENCES

TABLE OF CONTENTS

- ☒ WaterResources
 - ☐ Labels
 - ☐ Boil Advisories
 - ☒ Communities
 - ☒ Dams
 - ☐ Outfalls
 - ☐ ADRS Stations
 - ☐ Hydrometric Stations
 - ☐ WQMA Stations
 - ☐ Climate Stations
 - ☒ Intakes / Wellheads
 - ☒ Diversion Pipelines

OVERVIEW MAP

Coordinate System: WGS 1984 UTM Zone 21N - Scale: 1:219,704

Bay d'Espoir (Dams)

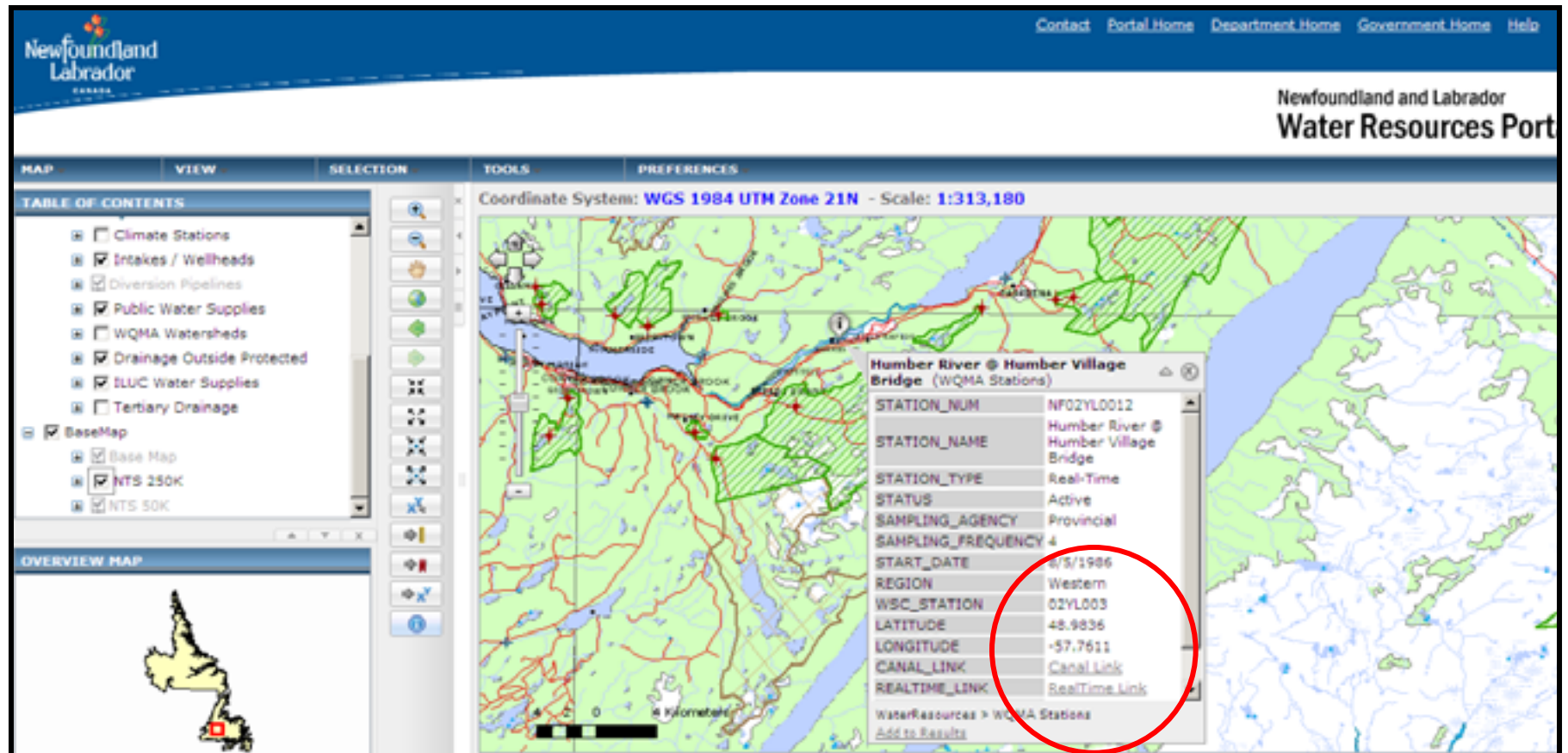
LATITUDE: 48.145
LONGITUDE: -57.04667
DAM INDEX NUM: 61
PROJECT NAME: Bay d'Espoir
DAM NAME: MSD-8 (Granite Overflow Spillway)
OWNER NAME: Newfoundland and Labrador Hydro

RESULTS

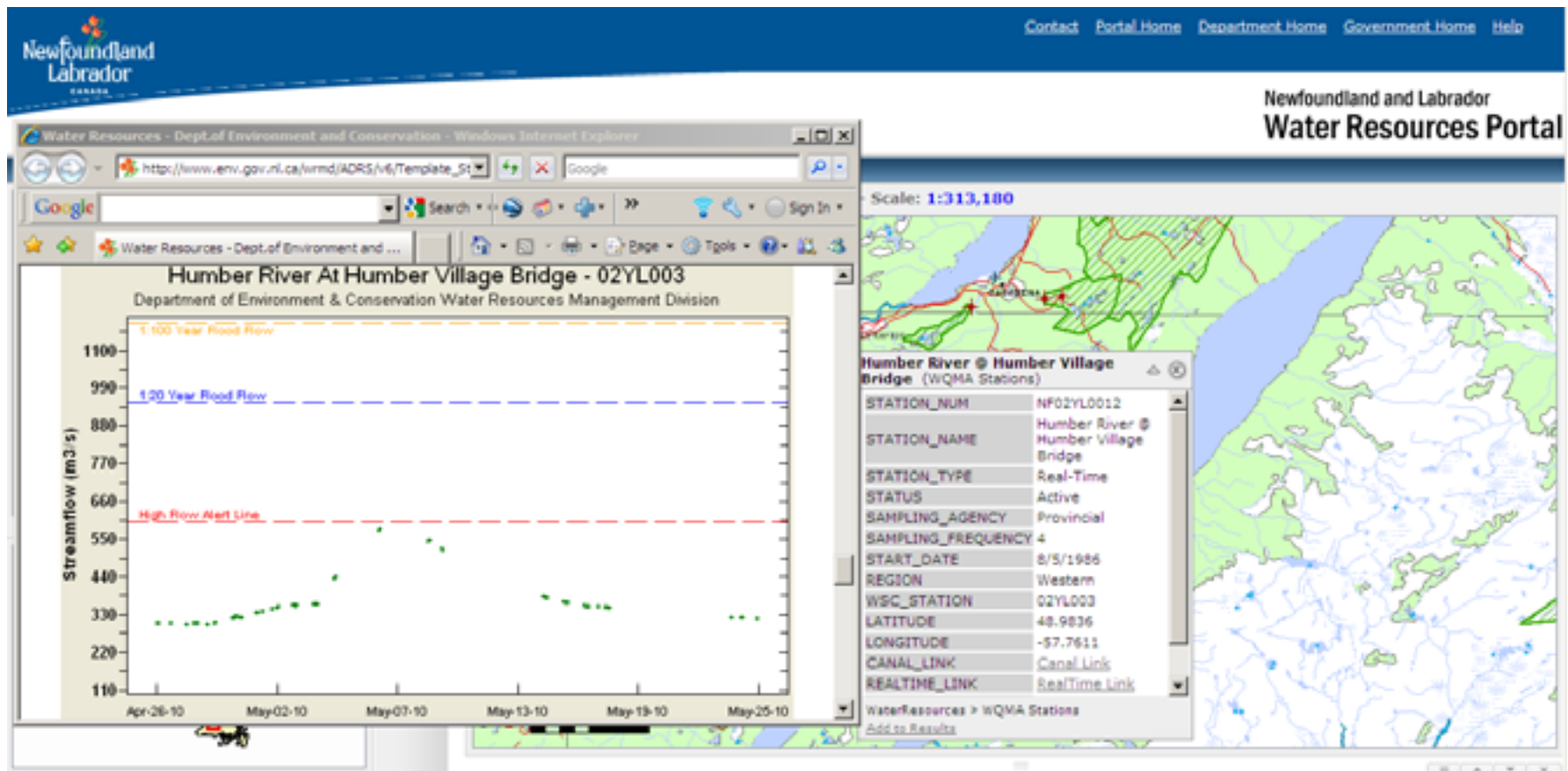
Export to: CSV Clear Table

RECORD #	ACTIONS	LAT_DEC	LONG_DEC	DAMINDEXNUM	PROJECT_NAME	DAM_NAME	OWNER_NAME	PURPOSE_DRINKING	PURPOSE_INDUSTRIAL	PU
1		48.145	-57.04667	61	Bay d'Espoir	MSD-8 (Granite Overflow Spillway)	Newfoundland and Labrador Hydro	Null	Null	Priv

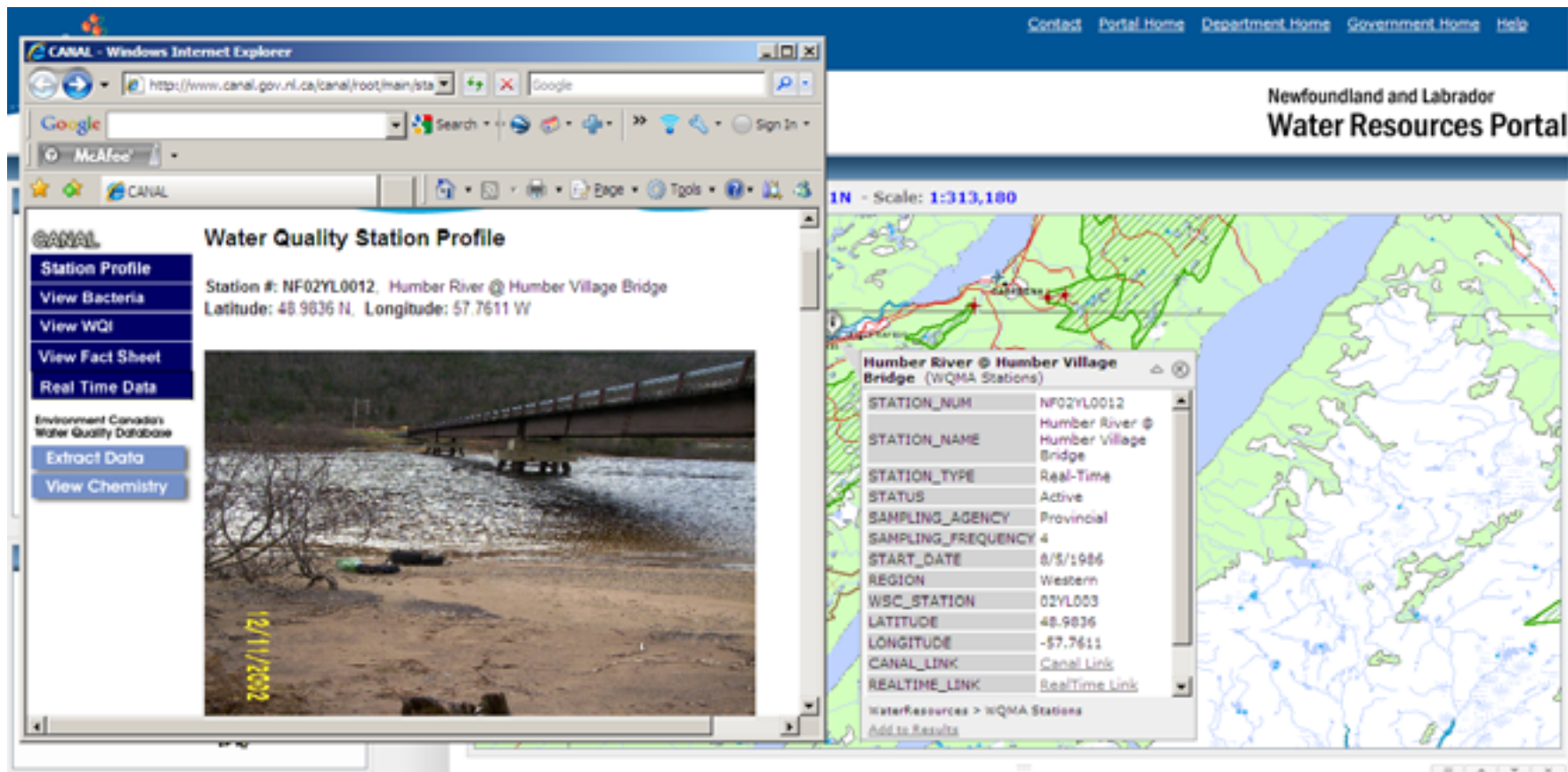
Mapping Application



Mapping Application



Mapping Application



Community Water Resources Reports

Community Water Resources Reports

Select a community from the drop down list and click "View Community Reports" to see the available water resources reports.

Select Community: Admiral's Cove

View Community Reports

The screenshot displays the Newfoundland and Labrador Water Resources Portal. At the top, there is a navigation bar with links for Contact, Public Home, Department Home, and Government Home. The main header identifies the portal as the Newfoundland and Labrador Water Resources Portal. Below the header, a 'Select Report' dropdown menu is set to 'THMs Summary', with a 'View Report' button next to it. The main content area shows a 'Main Report' tab and a sidebar with the 'Badger' community selected. The central part of the page features a 'THMs Summary for Public Water Supplies in Newfoundland and Labrador' table. The table has columns for 'THMs Average (ug/L)', 'Average Type', 'Total Samples Collected', and 'Last Season Sampled'. The data row for 'Badger' shows a THMs Average of 0.08 (circled in red), an Average Type of 'Running', 10 Total Samples Collected, and a Last Season Sampled date of 'Winter 2002'. The sidebar also lists the 'Community Name: Badger', 'Service Area: Badger', and 'Source Name: Wind Field, 2 wells on standby'.

THMs Average (ug/L)	Average Type	Total Samples Collected	Last Season Sampled
0.08	Running	10	Winter 2002

Current Boil Advisories



Department of Environment & Conservation
Water Resources Management Division

Boil Water Advisories for Public Water Supplies In Newfoundland and Labrador

Community Name	LGP Num	Region (GS)	Census Population	Serviced Area	Source Name	Boil Advisory Issue Date	Reason Code	Boil Advisory Reason
Admiral's Beach	20	SJ	188	Admiral's Beach	2 Well Fields	Nov 28, 2004	B1	Chlorination system is turned off by operator, due to taste
Appleton	85	Gan	562	Appleton (+Glenwood)	Gander Lake (The Outflow)	May 20, 2010	D1	Water distribution system is undergoing maintenance or repairs.
Aquaforte	100	SJ	103	Aquaforte	Cavies Pond	Jun 23, 2000	C1, F3	System Maintenance & Coliform Count
Bale Verde	170	Gan	1,276	Bale Verde	Bale Verde River	Jul 08, 2009	E1	Water entering the distribution system or facility, after a minimum 20 minute contact time does not have a free chlorine residual of at least 0.3 mg/l or equivalent CT value.

Public Water Supplies

Newfoundland and Labrador
Canada

Contact Portal Home Department Home Government Home

Newfoundland and Labrador
Water Resources Portal

Group Tree 1 / 1 100%

Main Report

- Admiral's Beach
- Anchor Point
- Appleton
- Aquaforte
- WS-G-0004
- WS-G-0005
- Arnold's Cove
- Avondale
- Badger
- WS-G-0010
- Bale Verte
- Baine Harbour
- Barachois Brook
- Bartlett's Harbour
- Bay L'Argent
- Bay Roberts
- Bay St. George South
- Bay de Verde
- Beaches
- Beachside
- Bear Cove
- Belburne
- Belleoram
- Bellevue

Department of Environment & Conservation
Water Resources Management Division

Public Water Supplies
in
Newfoundland & Labrador

Supply Type	Source Type	Protected	Chlorination	Other Treatm
Community Name: Admiral's Beach	WS Num: WS-G-0001			
Serviced Area: Admiral's Beach				
Source Name: 2 Well Fields				
Ground Water	Drilled			

Ad Hoc Queries

Newfoundland and Labrador
CANADA

Contact Portal Home Department Home Government Home

Newfoundland and Labrador
Water Resources Portal

Select Table to Query: Source Water Physical Parameters and Major Ions

PH < 7.00000000

☒ And ☐ Or

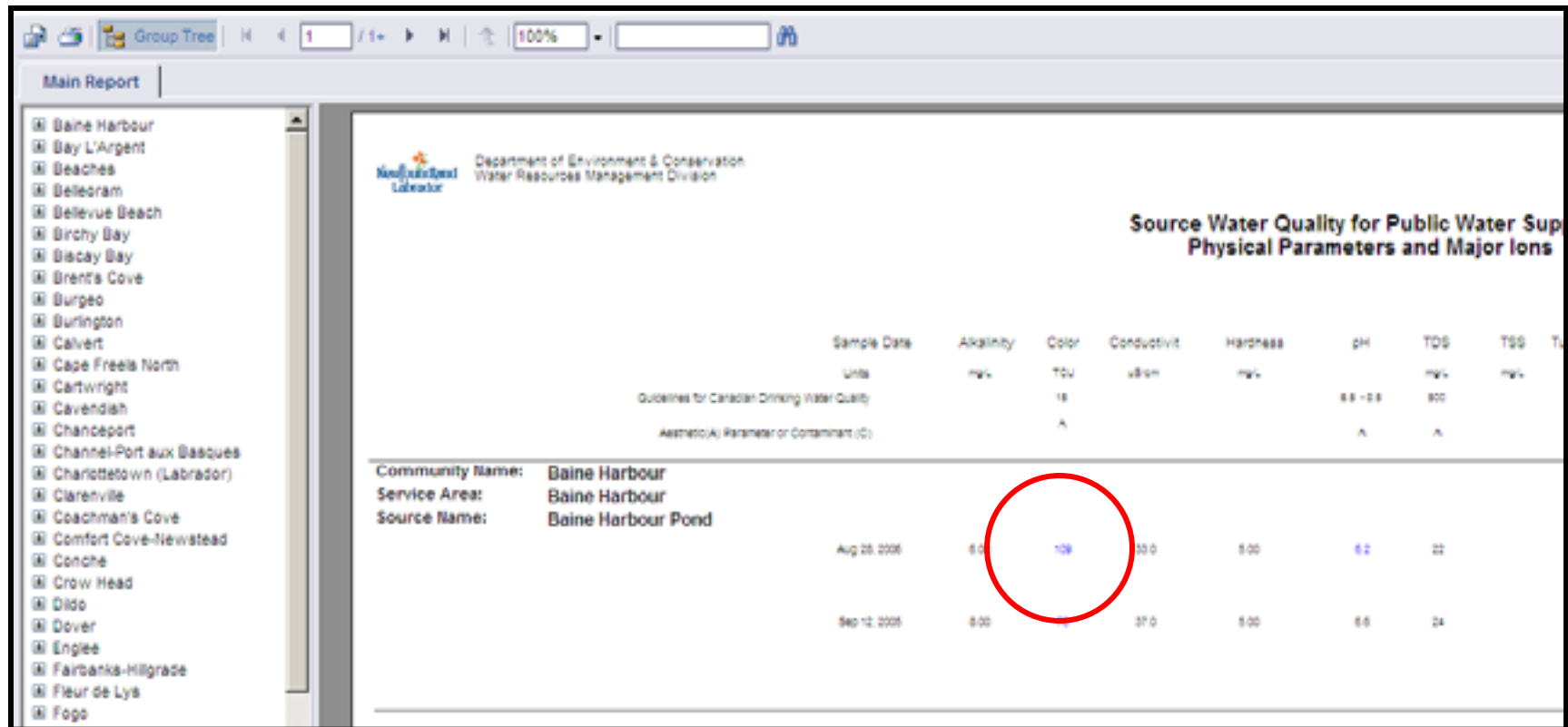
DOC > 10.00000000

☐ And ☐ Or

=

Execute Clear


Ad Hoc Queries



The screenshot displays a web application interface for water quality data. On the left is a 'Group Tree' sidebar listing various locations. The main content area shows a report titled 'Source Water Quality for Public Water Supply Physical Parameters and Major Ions' for 'Baine Harbour'. The report includes a table of water quality parameters with columns for Sample Date, Alkalinity, Color, Conductivity, Hardness, pH, TDS, and TSS. A red circle highlights the value '108' in the Color column for the sample dated 'Aug 26, 2006'.

Sample Date	Alkalinity	Color	Conductivity	Hardness	pH	TDS	TSS
Units	mg/L	TCU	uS/cm	mg/L		mg/L	mg/L
Guidelines for Canadian Drinking Water Quality							
		15			6.5 - 8.5	500	
Aesthetic(A) Parameter or Contaminant (C)							
		A			A	A	
Community Name:	Baine Harbour						
Service Area:	Baine Harbour						
Source Name:	Baine Harbour Pond						
Aug 26, 2006	8.0	108	33.0	5.00	6.2	22	
Sep 12, 2006	8.00		37.0	5.00	6.6	24	

Water Resources Map Viewer Help



Department of
Environment and Conservation

Newfoundland and Labrador Water Resources Portal

Water Resources Map Viewer Help



Available Help Topics

- [FAQ](#)
- [Help Videos](#)
- [Documents and Manuals](#)
- [Glossary of Terms](#)

FAQ

1. What is the preferred screen resolution for using the Water Resources Map Viewer?
- 1024 x 768
2. What are the supported browsers for the map viewer?
- Internet Explorer 6, Internet Explorer 7, Mozilla Firefox.

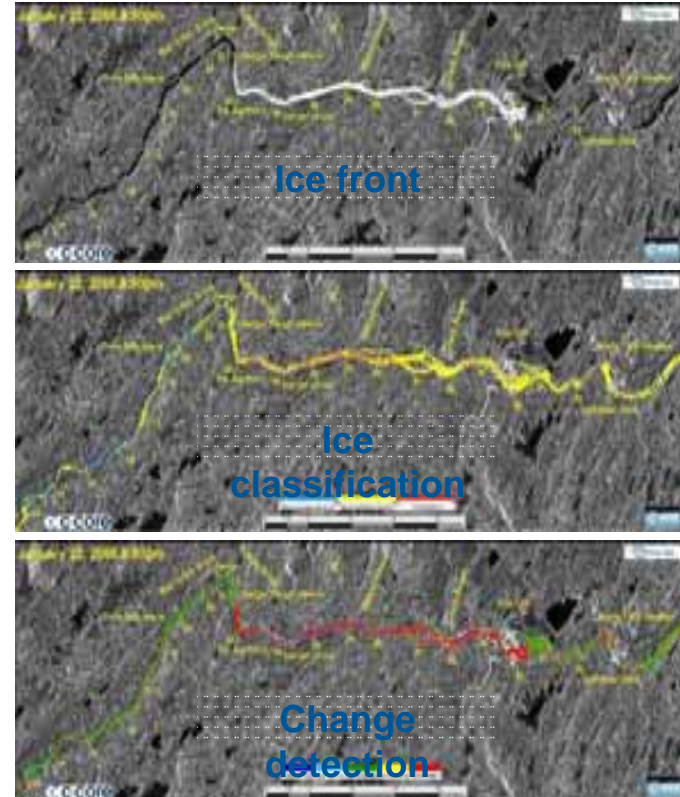
Contact Portal Home Department Home Government Home



Home Map Services Reports Query

Path Forward

- 1 in 20 year and 1 in 100 year flood risk mapping
- Remote sensing imagery and derived products
- Environmental permits
- Operator Education and Training resources
- Flood events documentation
- Wetlands Inventory
- Water and wastewater distribution/collection networks
- Diverted watersheds



THANK YOU

