

GUIDE TO FINDING WATER WELL INFORMATION

~How to use the BC Water Resources Atlas and the WELLS Database~

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1 Guide To Finding Water Well Information

There are two online resources provided by the Ministry of Environment that may be used to obtain well information: BC Water Resource Atlas and the WELLS Database¹. This guide explains how to find water well information in both of these applications.

BC Water Resource Atlas (BCWRA)

The BCWRA is a map based, GIS (geographic information system), tool. A map of BC is used to find and narrow into the location and well of interest. Once a specific well is found the well record can be obtained through this application.

WELLS Database

WELLS is the provincial ground water well database. The WELLS database can be searched for water well records provided that legal descriptions, well locations, or well construction details of the well are known.

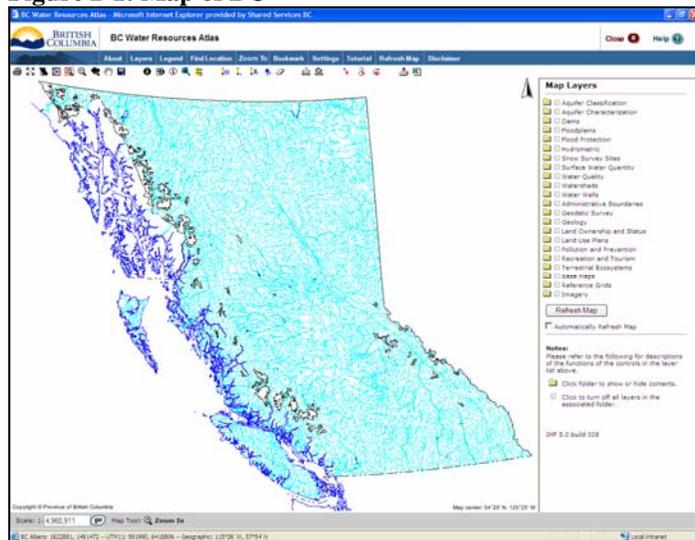
2 How to Use the BC Water Resources Atlas

2.1 Access and Open BCWRA

Access the application at http://www.env.gov.bc.ca/wsd/data_searches/wrbc/index.html

- To open the application click [Launch the WRBC Application >>](#)
- When the application is opened a full map view of BC will be displayed (Figure 2-1).

Figure 2-1: Map of BC



¹ For the advanced user, further resources are discussed on Page 9.

2.2 Finding the Location of a Well

There are three main methods to find the location of a well:

2.2.1 Find Location Method

Use this method if you know the common name of the area in which the well is found.

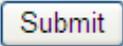
- Select the  button on the tool bar.
- Select Place Name from list on right. The zoom extent under Place Name allows the option to zoom to the location within a 1 km radius and offers a close up view of the area.
- Enter Place Name (e.g. if you are trying to find a well on Bowen Island, enter Bowen).
- Select  to display results.
- From the list that appears, click on the option that is closest to your location (e.g. click on Bowen Island).
- The  zoom in tool can be used to further focus in on your exact location.

2.2.2 Zoom to Method

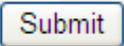
Use this method if you know the Parcel Identifier Number (or PID) of the property or the Well Tag Number (a unique database number generated by the computer) of the well.

** Note that the cadastral layer which contains the PID information is not available for the whole province.*

For the PID:

- Select the  button on the tool bar.
- Select Integrated Cadastral Fabric.
- Enter the PID (9 digit number, no dashes or spaces e.g. 008036365) and press .
- If the PID is found, select the link to the property. The application will zoom to the property.

For the Well Tag Number:

- Select the  button on the tool bar.
- Select Water Wells.
- Enter the Well Tag Number and press .

- If the Well Tag Number is found, select the link to the property. The application will zoom to the property.

2.2.3 Zoom In Method

Use this method if you want to zoom into your area of interest from the whole of BC Map Extent.

- With the zoom in tool , move the computer mouse cursor (+) to the area of interest.
- Hold down the left mouse button and extend the cursor diagonally to create a square.
- Repeat this process until you receive a detailed view of the location area.
- Similarly, the zoom out tool  can be used to zoom out to a less detailed extent.

2.3 Adding Map Layers to View Wells and Other Features

Once you are zoomed into the correct area map layers can be turned on and off to help identify the well record in question.

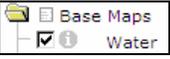
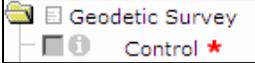
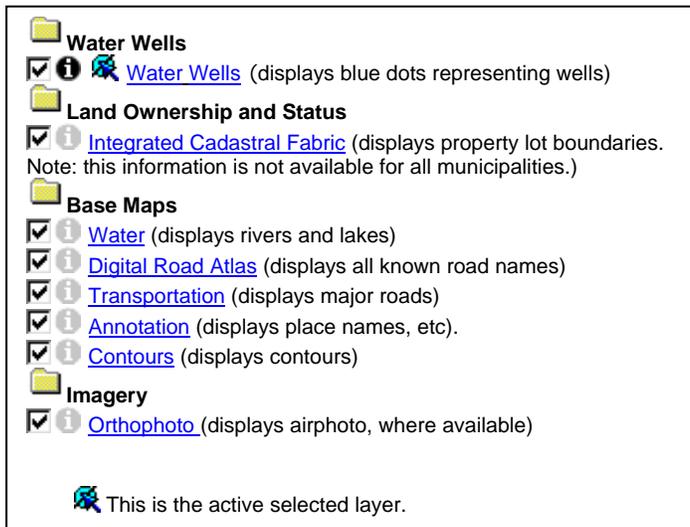
- Click on  button on the tool bar. This will show a list of yellow folders on the right side of the screen under the heading **Map Layers**. The yellow folders  represent the categories of map layers that are available.
- Click on the yellow folders to view the map layers that are available in each category.
- To turn on each layer, click on the white box next to the layer name. When the layer is properly selected a check mark will appear in the box .
- If the boxes are grey it is because the layer is not visible at the scale that the map is currently at. To view a greyed out layer at its proper scale click on the red star symbol beside the layer name  and the map view will zoom in automatically.
- The layers of greatest use for finding a well are shown below. Click on these layers and any other layers that are of interest (Figure 2-2).

Figure 2-2: Useful Layers



- Select the button or the **Automatically Refresh Map** option to redraw the map when new layers have been added (See Figure 1. Refresh Map buttons located below the list of Map Layers).

2.4 Viewing a Well Record

Select the identify tool  located to the left of the  [Water Wells](#) water well map layer.

- The color of the icon changes from grey  to black  when the layer is activated (See Figure 2-2).
- The identify feature option  is only available if the map is zoomed in close enough. Greyed in boxes  indicate that the map layer will not be displayed at the selected map scale.



- Select the identify tool  from the tools menu at the top of the screen
- Click on the well on the map (represented by blue dots •).
- The detailed well record report will be visible in a separate pop-up screen.

2.4.1 Confirm That You Have Found the Right Well Record

Confirm the well record and the property information by checking details in the record with information that you know about the well such as:

- Legal property information or address
- Depth of well

- Drilling company
- Year drilled
- Casing diameter

2.4.2 *Reasons for Not Finding the Right Well*

There are several reasons that you may not be able to find a well:

- The well could be in BCWRA but with the wrong location. The locations of wells can be as much as 200 metres off, depending on the amount of information that was available when the well location was added to the map.
- Not all wells in the database have a mapped location. Therefore, if you do not see a well on the map in the BCWRA, the well record information may only exist in the Provincial WELLS database.
- Not all wells are in the Provincial WELLS database or BCWRA as driller record submission has been done on a voluntary basis.

2.5 Viewing Well Details Using the Excel Function

- Click on the Excel Spreadsheet button  on the toolbar.
- Select 'Water Wells' in the layer name drop down menu to the right of the screen. Select 'Yes' for the within visible extent field and select 'No' for the selected features only field. Click  .
- Once it has finished processing your request, click on [\[open the Excel file \]](#) .
- A window will open asking you to save or open the file, click either save or open. A spreadsheet of the wells within the visible extent of the map will appear (Figure 2-3). The spreadsheet provides available data on such things as: well tag number, well yield, artesian conditions, depth of well drilled, depth to bed rock, diameter, legal information, screen information, etc.

- See the Reports 2 & 6 for the full range of search criteria

Report 1 and Report 7

Search with the Well Tag Number in Reports 1 and 7 to go directly to a well record. The WTN is a unique identifier for a well within the Provincial WELL database. Report 1 retrieves a brief version of the well record and Report 7 retrieves the entire record.

Use Report 1 and 7 if:

- You know the Well Tag Number of the well.

3.2.1 How to use Report 2 and Report 6:

- Check off all boxes beside the field names that you would like to show in the search results (Figure 3-1).
- Enter information that you know about the well in one of the blank fields or select the appropriate criteria from a drop down menu.
 - Include percent signs % directly on either side of the criteria that you enter. This acts as a wild card in your search. You do not need to include the % in the Well Tag Number field or Street Name (these have been embedded)
 - Be sure to put a green check in the box beside the search criteria that you entered.

Figure 3-1: Report 2 Example Search Criteria

<input checked="" type="checkbox"/>	Well Tag Number:	<input type="text"/>
<input checked="" type="checkbox"/>	Street Name:	<input type="text" value="%webster%"/>
<input checked="" type="checkbox"/>	Land District:	<input type="text" value="▼"/>
<input checked="" type="checkbox"/>	Site Area:	<input type="text"/>
<input type="checkbox"/>	Range:	<input type="text"/>
<input type="checkbox"/>	Township:	<input type="text"/>
<input type="checkbox"/>	Observation Well Number:	<input type="text"/>
<input checked="" type="checkbox"/>	District Lot:	<input type="text"/>
<input type="checkbox"/>	BCGS Mapsheet:	<input type="text"/>
<input type="checkbox"/>	Section:	<input type="text"/>
<input type="checkbox"/>	Choose by Island:	<input type="text"/>
<input type="checkbox"/>	Lot:	<input type="text"/>
<input type="checkbox"/>	Plan:	<input type="text"/>
<input type="checkbox"/>	Latitude:	<input type="text"/>
<input type="checkbox"/>	Longitude:	<input type="text"/>
<input type="checkbox"/>	UTM Zone:	<input type="text" value="▼"/>
<input type="checkbox"/>	UTM East:	<input type="text"/>
<input type="checkbox"/>	UTM North:	<input type="text"/>
<input checked="" type="checkbox"/>	PID:	<input type="text"/>

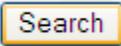
- Click on  at the bottom of the page.
- A separate page listing the well records that match the search criteria will appear (Figure 3-2).

Figure 3-2: Example of Search Results from Report 2

Well Tag Number	Land District	District Lot	Street Name	Site Area	PID
59108	KOOTENAY	1236	WEBSTER RD.	FRUITVALE	
36857	ESQUIMALT		FARHILL RD, WEBSTER PROPERTY	METCHOSIN	
37144	ESQUIMALT		FARHILL RD, WEBSTER PROPERTY	METCHOSIN	
23787	COWICHAN		WEBSTER DR.		
48232	COWICHAN		WEBSTER DR		
68230	MOUNTAIN		2720 WEBSTER RD	NANAIMO	
52806	CARIBOO	859	WEBSTER LAKE RD	QUESNEL	
72737	CARIBOO		3 KM UP WEBSTER LK RD	QUESNEL	
72788	CARIBOO	7298	WEBSTER RD		
81317			WEBSTER RD	SALT SPRING ISLAND	
81113			WEBSTER DR		

3.3 View the Well Record

- Click directly on the Well Tag Number displayed in the search results (Figure 3 in blue); OR
- Make note of the Well Tag Number so that you can look up the full detailed record using Report 7 later.

3.4 Confirm That You Have Found the Right Well Record

Confirm the well record and the property information by checking details in the record with known information such as:

- Legal information.
- Depth of well.
- Drilling company.
- Year drilled.
- Casing diameter.

3.5 Tips for Using the WELLS Database

- **Less is More!** Search only one piece of information at a time. For example, try searching road name first (Figure 3) then select the well you are interested in from the list that results (Figure 4). Remember that every piece of information you are looking for may not be in the database, as demonstrated by the blank fields in Figure 4, so it is best to try a number of search criteria separately to find a specific well.

- **Always Use Wildcards (%)!** Put a wildcard (%) directly on either side of the information that you put into your search criteria (Figure 3). For example, if the well is located on ‘Shawnigan Lake Road’, enter %shawnigan% into the street name field. The wildcard will search the database for any record with ‘shawnigan’ entered into the street name field. *Wild cards do not need to be used for Street Name in Report 2.*
- **Note the Well Tag Number!** The Well Tag Number is the most useful piece of information that you can have when searching the WELLS database. It is a unique identifier for a well within the WELLS database. Always note the Well Tag Number so that you can go directly to the detailed well record (using Report 7 for example).
- **Water Wells Constructed After November 1, 2005** should have a stainless steel identification plate attached on or near the well head. It is possible to search by the identification plate number using Report 2 or Report 6. (Note that the identification plate number and the Well Tag Number are not the same. The Well Tag Number is a computer generated number assigned to a well record once it has been entered into the WELLS Database).

4 Further Resources

Users possessing experience with advanced mapping applications and Geographic Information Systems (GIS) may also refer to the following services. The use of these services is not discussed within this guide.

Land and Resource Data Warehouse (LRDW): <http://lrdw.bcgov/>

- **Discover Data Service**

The Discovery Service allows users to determine what data is available in the Province of B.C. Land Resource Data warehouse. The available layers include wells, aquifers, and other spatial data sets.

- **Download Data**

The Distribution Service allows users to order information for download from the warehouse to their own computers. The available data layers can be determined using the Discover Data service above. The user may select features from a data layer of interest for a specific geographic area and export these in various formats. There is generally no cost associated with the data acquisition. Not all data layers are available to members of the public.

- **iMap BC Application:**

<http://aardvark.gov.bc.ca/apps/gga/detailHome.do?action=showCategoryPage&id=2>

This is an online mapping application similar to the B.C. Water Resources Atlas described above. Using the Spatial Overlay Engine (SOE) tools it is possible to select records for multiple wells in an area and export these in a various formats (including as spreadsheet or comma delimited files).

