

# **BC** Water Use Reporting Centre



www.bcwaterusereporting.ca

Information Guide For Utilities March 2012



## **TABLE OF CONTENTS**

ACKNOWLEDGEMENTS
INTRODUCTION
GETTING STARTED
User Login3
Managing Users3
SETTING UP YOUR PROFILE
Profile – General
Profile – Licence
Profile – Ground Water
Profile – Reservoir/Lake Level10
Profile – Return Flow
Profile – Users
ENTERING WATER DATA
Data Entry – Water Usage14
Data Entry – Reservoir/Lake Level
Data Entry – Return Flows
VIEWING THE DASHBOARD
Comparative Metrics – Water Usage21
Comparative Metrics – Consumption21
Comparative Metrics – Water Storage21
Non-Comparative Metrics – Precipitation and Temperature
Non-Comparative – Evapotranspiration 22
Non-Comparative – Snowpack
Non-Comparative – Drought Level
GENERATING REPORTS
Annual Water Use Summary – Individual
Other Summary Reports
Ad Hoc Report
GETTING HELP
PROVIDING FEEDBACK



BC Water Use Reporting Centre

### **LIST OF APPENDICES**

Appendix A. Context diagram

- Appendix B. Other water management resources
- Appendix C. Instructions for uploading data from SCADA
- Appendix D. User Issues and Feedback Reporting Form



### ACKNOWLEDGEMENTS

This project was made possible with the input from many Okanagan water supply professionals and provincial government staff. Special thanks to the water supplier and information management technical committee working group co-chairs: Michael Stamhuis, Bruce Wilson, Wenda Mason and Liam Edwards. Also, thank-you to the five utilities who tested the beta version of the software: Skip Cable at Lakeview Irrigation District, Brent Edge at City of Penticton, Patti Hansen at District of Lake Country, Bob Hrasko at Black Mountain Irrigation District, and Toby Pike at South East Kelowna Irrigation District.

Nelson Jatel, Water Stewardship Director at the Okanagan Basin Water Board, was the Project Manager for the BC WATER USE REPORTING CENTRE imitative. David Morton and his team at Spot Solutions developed the BC WATER USE REPORTING CENTRE software. Kellie Garcia of Insight Environmental Consulting and Bruce Wilson provided outreach and extension support.

Funding for this project came from the Building Canada Fund – Communities Component and the Okanagan Basin Water Board.





### **INTRODUCTION**

The BC Water Use Reporting Centre – Okanagan Pilot (THE CENTRE) is a simple and user-friendly online interface for large volume water users in the Okanagan watershed to report their water use. THE CENTRE improves efficiency for both the water user and government agencies by standardizing data collection, organizing the information, and providing it back in a useable form. The system also provides a platform to audit reporting compliance and data quality. The system has distinct benefits at two levels: for local and senior government staff and regional water and infrastructure planners interested in patterns of use at a large geographic scale; and for individual water users to improve their knowledge of their own water use patterns and how they compare to neighbouring users and other sectors.

THE CENTRE consists of five key areas (see Figure 1):

**Profile** allows water purveyors to enter information about their water systems and configure the way they will view information in THE CENTRE.

**Data Entry** provides screens to enter information in the following categories, each presented on a separate tab:

- Water Usage (surface and ground water)
- Snow Course depth
- Reservoir/Lake Levels
- Return Flows

The **Dashboard** is a management tool that enables water purveyors at a glance to compare their usage and lake/reservoir levels against other purveyors. It also includes climate and evapotranspiration information.

The **Reports** provide water purveyors with the ability to view and print data that they have input into the system. They also provide OBWB staff with the ability to view information about the number of users in the system, last sign-on, last period for which data is entered, etc.

Help provides definitions of the data fields in the CENTRE and explains the various functions.







### **GETTING STARTED**

#### **User Login**

#### URL: <u>www.bcwaterusereporting.ca</u>

**User name and temporary password:** these can be obtained from Nelson Jatel at the Okanagan Basin Water Board (250-469-6295, njatel@obwb.ca)



Screen shot 1: User Login Page

### **Managing Users**

There are **three** types of Users in THE CENTRE:

- Utility Viewer May only view user's organization utility profile, dashboard and users. Can also access and generate organization reports.
- Utility Data Entry User Utility viewer rights plus full data entry privileges.
- **Utility Administrator** Utility Data Entry User rights plus add and change profile information and users and roles within its own organization and add utilities to its own organization.

**IMPORTANT:** The OBWB sets up the Utility Administrator role for each organization by assigning them a user ID and temporary password, and entering generic name and email address information on the Users page. During the utility's **first BC Water Use Reporting Centre session** the administrator **must update** the First Name, Last Name, and Email fields for the Utility Administrator user and change the temporary password. Once this information has been changed, the administrator can start adding new users to the profile.



Directions on how to add and edit THE CENTRE users are provided on the next page.

#### Steps to edit Utility Administrator User information:

See screen shots 2, 3 and 4

1) Go to the "Profile" tab

2) Select the "Users" tab

3) Click the "Add/edit users" button

4) Click the "Edit" button beside the Utility Administrator entry

5) Update the First Name, Last Name and Email fields with your information

(you can keep the name generic as "Utility Administrator" if you prefer)

6) Click the box beside Change Password

7) Enter a new password – choose one that you will remember!

8) Click "Update"

9) Click "Save"

#### Steps to add/edit Users:

#### See screen shots 2, 3 and 4

1) Go to the "Profile" tab

2) Select the "Users" tab

3) Click the "Add/edit users" button

4) Fill in the User ID, First Name, Last Name, Email and Password fields (you

can use a name like "Operations" if you prefer)

5) Update the First Name, Last Name and Email fields with your information

6) Choose the User Role

7) Click "Add"

9) Click "Save" when you are finished adding users

	Profile	Data Entry	Dashboard   Repor			
lelsc	ON'S W	vaterwo <sup>ile</sup>	orks			* indicates required field
ganizat	ion Utility:	Okanagan Tee	et Watenworke #1 -			
ganizat General	tion Utility:	Okanagan Tes Ground Water	st Waterworks #1   Reservoir/Lake Level	Return Flow Users		
ganizat General Users	tion Utility:	Okanagan Tes	st Waterworks #1  Reservoir/Lake Level	Return Flow Users		Add/edit users
ganizat General Users User ID	Licence	Okanagan Tes Ground Water First Name*	st Waterworks #1  Reservoir/Lake Level Last Name*	Return Flow Users	Roles*	Add/edit users

Screen shot 2: Users page



elson's W ompany Prof ganization Utility:	Vaterworl ile Okanagan Test V	<b>⟨S</b> Vaterworks #1 ▼					indicates requ	ired fie
ieneral Licence	Ground Water R	eservoir/Lake Level	Return Flow U	sers			Save	Cano
Users								
User ID*	First Name*	Last Name*	Email*		Roles*			
001	Nelson	Jatel	njatel@limn	ology.ca	Utility Administra	ator Ec	lit	
User ID First Name Last Name Email Password			Roles	Utility Administrato	or ver	Add		

Screen shot 3: Users page in Edit mode

		Ashboard Report	is Help			- Exil
all in the second	un-	De la come				
elson's w	aterwo	rks				
0.001101						* indicates required
ompany Profi	le					malcates required
janization utility:	Okanagan Tes	t Waterworks #1 👻				
eneral Licence	Ground Water	Reservoir/Lake Level	Return Flow	Users		
						Save Ca
Users						
User ID*	First Name*	Last Name*	Email*		Roles*	
001	Nelson	Jatel	njatel@lin	nnology.ca	Utility Administrator	
User ID	001		Roles	Utility Administrator	Update	Cancel
First Name	Nelson			Utility Data Entry Use	r	
Last Name	Jatel			Utility Viewer		
Email	njatel@limnolo	gy.ca				
Change Passw	ord					
Password						
Confirm Password						

Screen shot 4: Editing Utility Administrator name, email and password



### **SETTING UP YOUR PROFILE**

The Profile area in THE CENTRE includes six sections:

- General
- Licence
- Ground Water
- Reservoir/Lake Level
- Return Flow
- Users

#### **Profile – General**

**PURPOSE:** Displays general information about the company and contains customizable parameters that are shared by all users within an organization.

**IMPORTANT:** The user's organization may be required by the Ministry of Environment to report on more than one water utility. If so, on this, and all other BC WATER USE REPORTING CENTRE screens, the user must select which utility they are currently setting profile information for, viewing dashboard information for, or reporting on. This is done using the "Organization Utility" dropdown menu.

#### Information that must be entered on the General Profile page includes:

- **Utility No** is the number given to the Utility by the Ministry of Environment and used on the Annual Water System Return Form (called the "Water System No" on the MoE form).
- **Client No** is the number given to the reporting client by the Ministry of Environment and used on the Annual Water System Return Form.
- **Owner** is the name of the organization that is legally responsible for the water licence and the legal duties of the water system.
- **Office Location** is either lat/long is provided by the user, or they can select the location from a map. The map can be accessed by clicking "Map".
- Data Entry Units that the user will be using to enter data. All entered data is converted to a common format for storage, but is received and viewed in the units selected by the user. The units can be changed at any time.
- Area Served is a descriptive name for the area that their utility serves, i.e. "Rutland".
- **Population Served** is the number of people served by the utility
- Basis of Population Estimate is one of:
  - Apply Canada census information where available
  - o Best local estimates (reviewed annually)
  - No. of connections \* 3 people/connection
  - Specify population calculation method

If the user selects the last selection "Specify population calculation method", a box will appear that allows the user to specify.

- Area Units is the unit of "land mass" (either hectares or acres) that the reporting organization uses to describe the land area serviced by this organization.
- Irrigated Acres/Hectares (currently) is the area of land in the area served by the utility that is irrigated.



- **Total Committed Acres/Hectares** is the total land area served by the utility. The user may select either acres or hectares for data entry.
- Weather Station default is the closest (calculated on a straight line basis, without regard for elevation or water bodies) weather station. The long/lat of the organization as entered on the general profile page will be used. The user may alternatively select any other weather station.
- **Customers** enables the user to enter the number of customers served and which of three types they are:
  - o Industrial/Commercial
  - o Agricultural
  - o Residential
- Water Systems are the name or names of the water systems the organization reports on to the Ministry of Environment (e.g., Rose Valley Reservoir, Mission Creek). IMPORTANT: You will be required to match the water system names entered on the General Profile page with your points of diversion/licence numbers on the Licence Profile page.
- **My Links** are web links that are useful to the utility, for example the home page of the Utility's website.

elson's wate	rworks		
ampany Profile			* indicates require
anization Utility: Okanada	in Test Waterworks #1 🐨		
eneral Licence Ground \	Water Reservoir/Lake Level Return Flow Use	15	
			Save
	<i>I</i>		
tility Name:*	Okanagan Test Waterworks #1		
itility No:*	001		
lient No:*	345678		
wner:*	Test Works		
ffice Location	Latitude: 49 682197 Longitude: 440	572922 Map	
ata Entry Unite	-113		
ata Entry Office.	1/100acre x ft. ▼		
rea Served:	Okanagan Area	History	
opulation Served:*	2400	History	
asis of Population Estimat	e:* Best local estimates (reviewed annually)	▼ History	
rea Units:*	🦉 Aores 街 Heotares		
rigrated Acres (currently):	38000	History	
otal Committed Acres:	12000	10000	
/eather Station:	Penticton South	Hauty	
Customers			
Connections*	Customer Type*		
5001	Industrial/Commercial/ Institutional	×	
3004	Residential	×	
2997	Agricultural	×	
	Please Select	Add Customer	
Water Systems			
Water System Name*			
desiderata		×	
langula creek		×	
	ii.	Add Source	
My LINKS	Link*		
OBWB	www.obwb.ca	×	
Limnology	www.limnology.ca	×	C



#### Screen shot 5: General Profile tab

**The General Profile data must be reviewed, and, if required, updated annually.** In order to assist the user to comply with this requirement, they will be required to provide confirmation that they have done so each January. Until confirmation is given, they will not be able to enter any water use data.

#### **Profile – Licence**

The "Licence" tab provides "read-only" information. It shows the licences held by the purveyor. The information is sourced from GeoBC. Points of Diversion are represented as points on the map. Clicking on a point populates the licence information for the POD in the table at the left.

**IMPORTANT:** The user must link water systems added on the General Profile page to PoDs listed here by clicking "Edit" and then choosing the appropriate system from the drop down menu. The user must also specify whether or not the PoD is a consumptive licence by checking the box beside those that are consumptive. "Save" must be clicked when the edits are completed. See screen shot 7.

**IMPORTANT:** If there are any issues with your licence information (e.g., incorrect licence location), please note them on the User Issues & Feedback Form in Appendix D.

zation Utility: Okanagan Test Waterworks #1 • ral Licence Ground Water Reservoir/Lake Level Return Flow Users  ter Licence Information ing the 'Node' on the map will display the Licence detail information.  PoDs (4) Water System 1 C109399/PD71481 desiderata 1 C109399/PD71481 langula creek 1 C109399/PD71481 langula creek 1 C109392/PD58148 langula c	vizztion Utility: Okanagan Test Waterworks #1 • eral Licence Ground Water Reservoir/Lake Level Return Flow Users rater Licence Information
Part Licence Information       ReservoinLake Level       Return Frow       Users         ing the Node' on the map will display the Licence detail information.       Image: Course of the state of the	Pobs (4)     Vater System       © C029574/PD57975     desiderata       © C109399/PD71481     desiderata       © C109399/PD71481     langula creek       © C109399/PD58148     langula creek
ter Licence Information ing the 'Node' on the map will display the Licence detail information. POS (4) Vater System 1 C029574/PD57975 desiderata v 1 C109399/PD71481 desiderata v 1 C109399/PD71481 angula creek v 1 C109392/PD58148 angula cr	ater Licence Information         king the 'Node' on the map will display the Licence detail information.         PoDs (4)       Water System         C 029574/PD57975       desiderata         C 109399/PD71481       desiderata         C 109390/PD71481       langula creek         C 109392/PD58148       langula creek
In the Node' on the map will display the Licence detail information.	ater Licence Information         king the 'Node' on the map will display the Licence detail information.         PoDs (4)       Water System         C 029574/PD57975       desiderata         C 109389/PD71481       desiderata         C 109399/PD71481       langula creek         C 109392/PD58148       langula creek
ing the 'Node' on the map will display the Licence detail information.	ing the Node' on the map will display the Licence detail information.
PoDs (4)       Water System         1 C029574/PD57975       desiderata         1 C109389/PD71481       desiderata         1 C109390/PD71481       langula creek         2 C109392/PD58148       langula creek	PoDs (4)       Water System         1 C029574/PD57975       desiderata         1 C109389/PD71481       desiderata         1 C109390/PD71481       langula creek         2 C109392/PD58148       langula creek
PoDs (4)       Water System         1 C029574/PD57975       desiderata         1 C109389/PD71481       desiderata         1 C109390/PD71481       langula creek         2 C109392/PD58148       langula creek         1 C109392/PD58148       langula creek	PoDs (4)       Water System         1 C029574/PD57975       desiderata         1 C109389/PD71481       desiderata         1 C109390/PD71481       langula creek         1 C109392/PD58148       langula creek
1 C029 (V)       Index System         1 C029574/PD57975       desiderata         1 C109399/PD71481       langula creek         1 C1093992/PD58148       langula creek	1 C029(1)       Index System         2 C029574/PD57975       desiderata         3 C109389/PD71481       desiderata         4 C109390/PD71481       langula creek         5 C109392/PD58148       langula creek
I C109389/PD71481 desiderata  C109399/PD71481 langula creek  I C109392/PD58148 langula creek  C C C C C C C C C C C C C C C C C C C	C109389/PD71481 desiderata
C109390/PD71481 Iangula creek  C109392/PD58148 Iangula creek C109392/PD58148 Iangula creek C109392/PD58148 Iangula creek	C109390/PD71481 Iangula creek  C109392/PD58148 Iangula creek  C109392/PD58148 Iangula creek  C109392/PD58148 Iangula creek
C109392/PD58148 angula creek	C109392/PD58148 langula creek
Okanogan Lake Kalamalka Lake bin	Okanagan Lake Kalamalka Lake
	Loke Kalamalka Loke Loke
	111 St. 1 111 SP/ 11 4 11 - 44



#### Screen shot 6: Licence Profile tab

Profile   Data	a Entry   Dashboard   Reports	Help
Nelson's wat	erworks	* indicates required fields
General Licence Gro Water Licence Info Clicking the 'Node' on the	und Water Reservoir/Lake Level	Return Flow Users Save Cancel
PoDs (4)           ✓ C029574/PD57975           □ C109389/PD71481           ✓ C109390/PD71481           ☑ C109390/PD71481           □ C109392/PD58148	Water System         desiderata         Iangula creek         Iangula creek	Terrori Vernor Dispersion Contragan Lake Vernor Ver

Screen shot 7: Linking water systems to PoDs and selecting consumptive PoDs

#### **Profile – Ground Water**

The "Ground Water" tab shows information about wells registered to the utility. The information is sourced from the Wells database at the Ministry of Environment.

Wells are represented as points on the map. Clicking on a point populates the information for that well in the table at the right.

**IMPORTANT:** If a well is missing, the user can click on the "Add New Ground Water" button, and they can then enter information about the well (equivalent to a "Schedule 2"). Once entered and saved, the data is transmitted to the Ministry of Environment in a nightly batch process for entry into the wells database. The new data will appear in THE CENTRE following the next download of well information.

**IMPORTANT:** If there are any issues with your well information, please note them on the User Issues & Feedback Form in Appendix D.



Company Profile			
Organization Utility: Okanagan Test Waterworks #1			
General Linence Cround Water Receivabiliteixe Level Return Flow Licence			
			Edit
Ground Water Information			
		testplate #1 🔻 Add	New Ground Water
King Br	1. Well Identificat	ion Plate Information	
ALL AND ROLLING	Date of Attachment	Mar 15 2011	m (
	Plate Number:	testplate #1	
Road Hoard Road	Plate Attached by:	installer 345	
Recht Are	Description:		]
		well	
- Las Ave			
Patterson Rd	2. Water Well Info	rmation	
	Well Name: *	desiderata 001	
Notes	Location/Address:	Laboration Missioned	
Plate Number		Lakeview vineyard	
This is the physical number found on the stainless steel plate attached to			
the well. It is not the electronic number the well is assigned in the WELLs	Enter Latitude/Longi	tude or UTM: *	
database, called the "Well Tag Number".	Latitude: *	@ Latitude/Longitude @ UTM	
vveil Location Provide the Land District (e.g. New Westminister) for the well location and	Longitudo: *	45.030034	
include in "Legal Description of Well Location" section.	Source of Latitude/L	-119.080118	
Geographic Coordinates	Source of Latitude/L	ongitude or UTM coordinat	es
Ensure the GPS map datum on your GPS is set to "NAD 83"	Legal Description of	Well Location	T.ed,000 map (C) Other
<ul> <li>If using UTM Coordinates, please include the zone (e.g. Zone 10)</li> <li>Latitude and Longitude can be expressed as desimal degrees</li> </ul>	Township:		
(50.514575)	District Lot:		
	Lot:		
	Section:		
	Range:		
	Block:		
	Plan:		
	Land Dictrict:		
	DID-		
	FID.		
	3. Water Supply S	ystem Information	
	System Name:		
	Owner Name:		
	Mailing Address:		
	City or Town:		
	Postal Code:		
	Phone #:		
	Email:		
	Well Details	🛞 meter 🔅 feet	
	Well Depth(m):	0	
	Well Diameter(m):	0	
		-	

Screen shot 8: Ground Water Profile page

### Profile – Reservoir/Lake Level

If a user manages a reservoir, they must first identify each location that they are reporting on. The user must select "Edit" and then enter the following information:



- **Reservoir name** is the name of the reservoir or lake that supplies water for the utility.
- **Spill Elevation** is the known geodetic elevation of the top of the spillway lip. If the geodetic elevation is not known use the local datum elevation that your utility normally uses for referencing a Full Reservoir Pool (or spill elevation).
- **Dead Storage** is the volume of water that is in the reservoir that is not accessible without major infrastructure changes to the intake works i.e. below the intake or diversion elevation. May be an estimate. This dead storage volume may assist with planning during a severe drought scenario where emergency water supplies could be accessed by pumping into the existing intake works.
- **Max storage** is the volume of water that is actually usable and accessible to the water system under current physical conditions.
- Latitude and longitude is the geographical location of the reservoir or lake. Can be entered manually or selected from the map.

		ALL STREET, ST	TANK KELDARA	Parties and	And the second s	
	18 1 1 1 1 1	North Contraction				
			The Market	Statistics of the second	THE BOARD	sar all
Profile   Data Er	ntry Dashboard	Reports Help	Malianty T	Concession of the local division of the loca		NTT - S
A PROPERTY OF TAXABLE PARTY.		163	and the second second	and the second	1	
Provide and the	and the second second		and the second s		and the	
lelson's wate	rworks					(
lelson's wate	rworks					* indicates required field
lelson's wate Company Profile	rworks					* indicates required field
Velson's Wate Company Profile rganization Utility: Okana	rworks	#1 -				* indicates required field
Velson's Wate Company Profile rganization Utility: Okanz General Licence Ground	rworks agan Test Waterworks Water Reservoir/La	#1 ▼ ke Level <b>Return Flo</b> v	w Users			* indicates required field
Velson's Wate Company Profile rganization Utility: Okana General Licence Ground	rworks agan Test Waterworks Water Reservoir/Lat	#1 - ke Level Return Flov	w Users			<ul> <li>indicates required field</li> </ul>
Velson's wate	rworks agan Test Waterworks Water Reservoir/Lat	#1 ▼ ke Level Return Flov	w Users			<ul> <li>indicates required field</li> </ul>
Velson's wate	rworks agan Test Waterworks Water Reservoir/Lat primation Spill Elevation*	#1 - ke Level Return Flow	W Users Max Storage*	Latitude*	Longitude*	<ul> <li>indicates required field</li> </ul>
Velson's wate Company Profile rganization Utility: Okana General Licence Ground Reservoir/Lake Level Info Reservoir/Lake Name*	rworks agan Test Waterworks Water Reservoir/La prination Spill Elevation* [m]	#1 ▼ ke Level Return Flow Dead Storage* [1/100acre x ft.]	W Users Max Storage* [1/100acre x ft.]	Latitude* [Decimal]	Longitude* [Decimal]	<ul> <li>indicates required field</li> </ul>

Screen shot 9: Reservoir/Lake Level Profile page

1/ S						
elson's water	works			and the second		Idea
ompany Profile					*	indicates required fie
anization Utility:	-					
Okanaga	an Test Waterworks	#1 -				
eneral Licence Ground W	ater Reservoir/La	ke Level Return Flow	w Users			
						Save Can
Reservoir/Lake Level Inform	nation	Dand Stanson *	Mary Channes	Linderal a *	Lange Street a *	
Deservate/Lake Manue *	Spill Elevation	Dead Storage	max storage	Lautude	Longitude	
Reservoir/Lake Name*	Iml	[1/100acro v ft ]	[1/100acro v ft ]	[Decimal]	IDecimall	
Reservoir/Lake Name*	[m]	[1/100acre x ft.]	[1/100acre x ft.]	[Decimal]	[Decimal]	
Reservoir/Lake Name*	[ <b>m</b> ] 100	[1/100acre x ft.] 8	[1/100acre x ft.] 8	[Decimal] 50.029467	[Decimal] -119.403534	Edit 🗙



#### Screen shot 10: Reservoir/Lake Level Profile page in Edit mode

#### **Profile – Return Flow**

If a user returns water to a lake, reservoir or stream, they must first identify each location that they are reporting on. The user must select "Edit" and then enter the following information:

- **Reference Number** is the numerical identity given to the Return Flow location, plant or area that is used for identification and recording purposes.
- **Outlet Elevation** is the elevation of the return flow outlet in metres.
- Latitude and longitude is the geographical location of the reservoir or lake. Can be entered manually or selected from the map.

	Entry Dashboard Re	eports Help		
all and the second s		FOR HERE		
lelson's wat	erworks			•
ompany Profile				* indicates required field
ganization Utility: Ok	anagan Test Waterworks #1	•		
General Licence Grou	nd Water Reservoir/Lake Le	evel Return Flow Users		
				Ed
Return Flow Informatio	in .			
	Outlet Elevation* [m]	Latitude* [Decimal]	Longitude* [Decimal]	
Reference Number*			TO CRUE TO A COMPANY OF THE OWNER	

Screen shot 11: Return Flow Profile page

Profile   Data	Entry   Dashboar	rd   Reports   Help					
epinet and	a second			Harris		-	24
elson's wat	erworks						
						* inc	licates required f
omnany Profile							incures required i
ompany Profile ganization Utility: Ok	anagan Test Waterwo	rks #1 🔻					
ompany Profile ganization Utility: Ok general Licence Grou	anagan Test Waterwo nd Water Reservoir	rks #1 🔻	low Users				
ompany Profile Janization Utility: Ok eneral Licence Grou	anagan Test Waterwo nd Water Reservoir	rks #1 💌 Return Fi	low Users				Save Ca
ompany Profile ganization Utility: Ok ieneral Licence Grou Return Flow Informatio	anagan Test Waterwo nd Water Reservoir	rks #1 💌 r <mark>/Lake Level</mark> Return Fi	Users				Save Ca
ompany Profile ganization Utility: Ok ieneral Licence Grou Return Flow Informatik Reference Number*	anagan Test Waterwo nd Water Reservoir on Outlet Elevation	rks #1 ▼ //Lake Level Return F/ * [m] Latitude* [	low Users Decimal] Lon	gitude* [Decima	al)		Save Ca
eneral Licence Grou Return Flow Informatio Reference Number* ref test 001	anagan Test Waterwo nd Water Reservoir on Outlet Elevation 678	rks #1 • /Lake Level Return Fl * [m] Latitude * [1 49.813729	low Users Decimal] Lon -119	gitude* [Decima .505158	a <b>i)</b> Edit	×	Save Ca

Screen shot 12: Return Flow Profile page in Edit mode





BC Water Use Reporting Centre

### **Profile – Users**

See the **Managing Users** section on page 3.



### **ENTERING WATER DATA**

#### Data Entry – Water Usage

The Water Usage tab only appears if the user's organization is a licence holder or has wells associated with it.

Water use is entered monthly on this tab. The month for which the data is entered is selected from the dropdown list at the top. Data for previous months can be re-edited as long as that data has not been provided to the Water Stewardship Division.

Each water system is listed, and the user enters how much water is drawn from each. Similarly, the amount of water drawn from each well is entered.

**IMPORTANT:** Water usage data can also be imported in an **Excel spreadsheet**. See page 16 for a list of the steps involved. Water usage data can also be linked from your **SCADA** system using a SOAP/XML Web Service interface. See Appendix C for instructions on how to do this.

At the bottom right, summary information is entered:

- A breakdown of usage by category (Industrial/Commercial; Residential; Agricultural)
- The maximum and minimum daily demand for that month and the date on which that max/min was realized.

THE CENTRE calculates the difference, if any, between the sum of the summary usage and the sum of the water drawn from each POD and well, and displays that as "unaccounted for".

In addition, the user must indicate, for each data point entered in the summary table, whether the amount is measured or estimated.

The Certification checkbox must be checked before that month's data can be saved in THE CENTRE (see screen shot 14).

Annually, the water use data entered is provided to the Water Stewardship Division of the Ministry of Environment for entry into their tracking system and calculation of usage fees owed. THE CENTRE keeps track of what data has been provided.

Users will be provided with a monthly email prompt to enter data. The email will go to all users in the role of administrator and data entry.





#### Screen shot 13: Water Usage Data Entry page

Profile   Data Ent	🔽   Dashboard   Reports   Hel		No. of the second	- Ale and all	Lange
					K
lelson's water	works				
ata Entry					
Organization Utility: Okana	agan Test Waterworks #1 👻 Year: 2	2011 - Month: 01 -			
Water Usage Reservoir/Lake	e Level Return Flows				
January	<b>y 2011</b>	RTIFY THAT THE BELOW	INFORMATION IS	5 CORRECT	Save Ca
urface Water		Ground Wate	er		
Vater System Name	Volume [1/100acre x ft.]	Well Name	Plate Number	Volume [1/100acre x ft.]	
esiderata	1018 History	desiderata 001	testplate #1	46	History
angula creek	History	Monthly Total		46	
onthly Total	1018	Monthly Tota	al Volume o	of Water U	sed
		Category	Volume [1/100acre x ft.]	Measured	% Ground water
		Industrial/Commercial/ Institutional	486 Hi	istory Estimated	• 0
		Agriculture	454 Hi	istory Estimated	• 0
		Residential	122 Hi	istory Estimated	• 0
		Leakage / Unaccounted for			
		Daily Demand Max	Hi	istory (© Measure © Estimate	d
		Daily Demand Min		istory 🕜 Measure	d d



#### Screen shot 14: Water Usage Data Entry page in Edit mode showing Certification Box

Since historical data may be changed by the user, THE CENTRE maintains an audit log for all data entered. The log is accessible by clicking on the "History" link that is provided beside each data value. The History view is read only and may not be modified.

Vater Usage Reservoir Janu	<b>Year</b> 2011	Month 1	Volume* [1/100acre x ft	Created By .]	Created Date	
Vater Usage Reservoir Janu Janu	2011	1	4040	9		
Janu Janu			1018	OBWB	Mar 24, 2011	
			Institution			ured % Ground water
			Agricultu	1ai	History	Estimated T

Screen shot 15: Water Usage Data Entry page audit log



#### **IMPORTING MONTHLY WATER USAGE DATA FROM EXCEL**

#### Steps to import water use data in Excel format:

#### See screen shots 16 and 17

- 1) Download the sample spreadsheet by clicking on the template button and saving the spreadsheet to an appropriate folder on your computer.
- 2) Enter data into the spreadsheet. A description of what to put in the columns is included below. See screen shot 17
- Year year that the data refers to in the format: 20XX (e.g. 2011)
- Month month that the data refers to in the format: 1 for Jan, 2 for Feb, 3 for Mar, etc.
- Type surface water, ground water, or water used
- Description name of water system; name of well; name of customer i.e., Industrial/Commercial/Institutional, Agriculture, Residential; Daily Demand Max; Daily Demand Min
- Volume the volume associated with year, month, type and description
- Date the date the volume was measured, only enter for Daily Demand Max and Daily Demand Min (format = mm/dd/yy)
- Measured where the measurement was taken for the customer: at source, estimated, at customer, measured
- Percentage the percentage of the total monthly volume that went to each customer
- 3) Click the import button
- 4) Browse to the spreadsheet you saved
- 5) Click validate, system will show you if you have an errors to correct
- 6) Click import when system tells you the spreadsheet is ready

**IMPORTANT:** Many utilities have historical water usage data in an Excel spreadsheet format. To upload this historical data, the spreadsheet must be re-formatted to match the template (see screen shot 17).



Screen shot 16: Water Usage Data Entry page with import and template buttons circled





# Okanagan Basin

BC Water Use Reporting Centre

Sample Data Ur	pload Spreadsheet_Nelsor	's Waterworks 2	011 to April [Cor	mpatibility Mod	le] - Microsoft	Excel				ا سی	5 ×
Home Insert Page Layout Formulas Data Review	View Add-Ins	Acrobat								0	_ = X
Themes Effects - Themes Page Setup	Image: Size Print Breaks Background Print Titles       Fint Breaks Background Print Titles       Fint Print Breaks Background Print Scale to Fit       Scale to Fit       Scale to Fit       Print Break Print Breaks P										
L25 • (* fx											*
A B C D	E	F	G	Н	1	J	К	L	M	N	0
1 Year Month Type Description	Volume	Date	Measured	Percentage							
2 2011 1 Surface Water desiderata	10000										
3 2011 2 Surface Water desiderata	10000										
4 2011 3 Surface Water desiderata	9000										
5 2011 4 Surface Water desiderata	10000										
6 2011 1 Ground Water desiderata 001	9000										
7 2011 2 Ground Water desiderata 001	10000										
8 2011 3 Ground Water desiderata 001	9000										
9 2011 4 Ground Water desiderata 001	10000										
10 2011 1 Water Used Industrial/Commercial/ In	stitutional 4000		At Source	11							
11 2011 2 Water Used Industrial/Commercial/ In	stitutional 4000		At Customer	22							
12 2011 3 Water Used Industrial/Commercial/ In	stitutional 3900		Estimated	33							
13 2011 4 Water Used Industrial/Commercial/ In	stitutional 4000		At Source	44							
14 2011 1 Water Used Agriculture	3000		Estimated	11							
15 2011 2 Water Used Agriculture	3000		At Customer	22							
16 2011 3 Water Used Agriculture	2900		At Source	33							
17 2011 4 Water Used Agriculture	3000		At Source	44							
18 2011 1 Water Used Residential	2000		At Customer	11							=
19 2011 2 Water Used Residential	2000		At Source	22							
20 2011 3 Water Used Residential	1900		Estimated	33							
21 2011 4 Water Used Residential	2000		Estimated	44							
22 2011 1 Water Used Daily Demand Max	10	1/15/2010	Measured								
23 2011 2 Water Used Daily Demand Max	10	2/22/2010	Estimated								
24 2011 3 Water Used Daily Demand Max	10	3/15/2010	Measured								
25 2011 4 Water Used Daily Demand Max	9	4/15/2010	Estimated								
26 2011 1 Water Used Daily Demand Min	7	1/15/2010	Estimated						2		
27 2011 2 Water Used Daily Demand Min	7	2/22/2010	Estimated								
28 2011 3 Water Used Daily Demand Min	8	3/15/2010	Measured								
29 2011 4 Water Used Daily Demand Min	7	4/15/2010	Estimated								
30 2011 1 Surface Water langula creek	10000										
31 2011 2 Surface Water langula creek	10000										
32 2011 3 Surface Water langula creek	9000										
33 2011 4 Surface Water langula creek	10000										
34 2011 1 Ground Water langula 001	10000										
35 2011 2 Ground Water langula 001	9000										
36 2011 3 Ground Water langula 001	10000										
37 2011 4 Ground Water langula 001	10000										
38	Income 10										×
Death Data citury Data citury rype / water used Description / M	icosuidu / Ca					-	100		(III) 1000 (		

Screen shot 17: Example of an Excel spreadsheet for upload to the Water Usage Data Entry page with 2011 data for water systems "desiderata" and "langula creek" and wells "desiderata 001" and "langula 001"

### Data Entry – Reservoir/Lake Level

The "Reservoir/Lake Level" tab will only be visible for purveyors that have entered Reservoir/Lake level information on their profile.

The user must select the month and year of entry from the dropdown lists at the top. THE CENTRE also displays the previous month's value.

The user must specify the volume, what date the measurement was taken on and whether the volume reported is the total volume in the reservoir or lake or the useable volume (i.e., useable or currently accessible to the water system without design or physical infra-structure changes).



the state of the state of the	A STATEMENT		A second second		
elson's wat	erworks	5			
ata Entry			Months		
ata Entry Organization Utility: C Nater Usage Reservoir/	)kanagan Test W /Lake Level <b>Re</b>	Vaterworks #1  Year:	2011 • Month: 01 •		
ata Entry Organization Utility: <sub>C</sub> Nater Usage Reservoir	Okanagan Test W /Lake Level Re	Vaterworks #1  Year:	2011 • Month: 01 •		
ata Entry Organization Utility: C Nater Usage Reservoir Reservoir/Lake Level	Okanagan Test W /Lake Level Re	Vaterworks #1  Year:	2011 • Month: 01 •		(
ata Entry Organization Utility: Nater Usage Reservoir Reservoir/Lake Level Reservoir/Lake Name	Okanagan Test W /Lake Level Re Year Month V	Vaterworks #1  Year: turn Flows Volume* [1/100acre x ft.]	2011 • Month: 01 • Measurement Date*	Total/Usable	

Screen shot 18: Reservoir/Lake Level Data Entry page

#### **Data Entry – Return Flows**

The "Return Flow" tab will only be visible for users that have entered Return Flow information on their profile.

The user must select the month and year of entry from the dropdown lists at the top. THE CENTRE also displays the previous month's value.

The user must specify the monthly total, daily maximum and minimum flows and the dates that these flows were measured.

	ata Entry	Dashboard   Reports	Help			
in the second	15m					
elSON'S Wa	aterwo	rks				
Prganization Utility: Water Usage Reser	Okanagan 1 voir/Lake Leve	est Waterworks #1 🔹	Year: 2011 V Month:	02 🔻		
						E
Return Flows						
Return Flows Reference Number	Year Month	Monthly (Total Qty) [1/100acre x ft.]	Daily Max Qty [1/100acre x ft.]	Daily Max Date	Daily Min Qty [1/100acre x ft.]	Daily Min Date

Screen shot 19: Return Flow Data Entry page



### **VIEWING THE DASHBOARD**

The Dashboard provides "at a glance" summary information on both water use and associated environmental factors. In addition, the user can select another organization to compare data with. The basis of comparison is the most recent month that both companies have entered data for. For example, if the current date is July 15, and a user has entered June's data and wants to compare to a utility that has not entered data since April, the system will display the comparative metrics for April.



Screen shot 20: Dashboard page

The following sections describe the data displayed on the dashboard.

### **Comparative Metrics – Water Usage**

A comparison of the previous month to the same month last year is displayed. Water consumption, broken down into Agricultural Residential and Industrial/Commercial is shown on either a bar graph or a pie chart. The display mode is selectable by a radio button. If the bar chart is chosen, in dotted lines, the numbers for the chosen comparative utility are shown.

The data for the most recent month entered is shown. In the event that either the user or the comparative utility are not up to date in their data entry, the data for the most recent month that they have both filed data for is shown.

A comparison of the year to date for this year versus year to date for this date last year is displayed. Water consumption, broken down into Agricultural Residential and Industrial/Commercial is shown on either a bar graph or a pie chart. If the bar chart is chosen, in dotted lines, the numbers for the chosen comparative utility are shown.

The data source for the display is the information that the user and other users entered into the BC WATER USE REPORTING CENTRE database.

### **Comparative Metrics – Consumption**

The water consumption data is displayed for the user's own utility versus the chosen comparison utility both "As at May xx" and "Year to Date".

Consumption data is from the CENTRE database and is determined by dividing the water usage recorded by the population served.

### **Comparative Metrics – Water Storage**

The water storage is displayed for any two selected reservoirs. The dropdown for the graphic on the left provides all of the user's reservoirs, while the one on the right displays all of the reservoirs for the comparative utility.

The percentage is calculated from the data in the CENTRE database. It is:

• (Current Usable Volume/Maximum Useable Storage) x 100

### **Non-Comparative Metrics – Precipitation and Temperature**

The following temperature data is displayed:

- Maximum temperature ever recorded for this day
- Minimum temperature ever recorded for this day
- The average temperature for this day
- Yesterday's maximum temperature



• Yesterday's minimum temperature

The following precipitation data is displayed:

- Previous month for this year
- Previous month for the previous year
- The monthly maximum, minimum and average for the previous month
- Year-to-date precipitation to the previous day for the current year
- Year-to-date precipitation to the previous day for the previous year
- The year-to-date maximum, minimum and average for the previous month

The data that is displayed will be for the weather station specified on the General Profile page.

#### **Non-Comparative – Evapotranspiration**

This information is obtained from Farmwest and stored in the same manner as precipitation and temperature. The year-to-date values are displayed, compared with the long-term average.

#### **Non-Comparative – Snowpack**

Snowpack information is obtained from Snowpillow/Snowpack information in GeoBC.

The user may select a Snow Pillow or Snowpack station. The system will remember their choice. The choice is organization-wide, not just for the individual user.

#### Non-Comparative – Drought Level

The drought level is set by Ministry of Environment staff, usually between the months of June through September. The index is set on a watershed, or basin, basis.



### **GENERATING REPORTS**

Several reporting options are available to users. The user may select the format of the report from either of Excel, PDF or Word. The Excel format is as produced by Crystal reports.

Profile	Data Entry	Dashboard	Reports   Help		
Nelson's	waterw	orks			?
Reports					
<ul> <li>Annual Water Us</li> <li>Summary of Wat</li> <li>Summary of Lak</li> <li>Summary of Ret</li> <li>Ad Hoc Report</li> </ul>	e Summary - Inc ter Usage e Level urn Flow	lividual			

Screen shot 21: Reports page

#### AnnualWaterUseReport\_20110429 [Compatibility Mode] - Microsoft Word 🛕 ୩ 🚍 **9**3) 🖬 Home Insert Page Layout References Viev Acrobat Mailing Review K Cut ・10.5 ・ A ★ 例 三、三、〒 筆 課 斜 ¶ AabbCcDc A Find -Arial A $\overset{ab}{\underset{ac}{\leftarrow}} \mathsf{Replace}$ ✓ Format Painter I U × abe ×, ×' Aa\* \*' I</ Paste 1 Normal 1 No Spaci... Heading 1 Heading 2 Title Subtitle Change Styles \* Select + Font Clipboard Paragraph Styles Client No: 345678 Water Syster Ministry of Environment Water Stewardship Division Annual Water System Return Volume Unit 13587500 GY Volume Imperial Volu BRITISH COLUMBIA 1000 AF 40 AF April 29, 2011 252129 Kalamalka Lake C109385 Return Report by: December 31, 2011 Client No: 345678 Water System No: 001 Water System Name: Okanagan Test V Nelson's waterw 278 AF alka Laki Test Waterw Owner: Test Works we your next annual rental. Failure he due date, may result in being r of Water Rights. For Calendar Year: any of your wate supply from a If Ye percent Total Metered Lo the S At the custor or Not Meter No 7,500 t the So No or Not Me 5,600 Source(s) of Water Use following in Customers ntage o Please indicate the source name(s) and supply obtained from each. lumber of Residential Connections 3,004 96% 4% lumber of Connections: 7,998 testplate #1 Total Population: 2,400 Basis of Estimate Best local estimates (reviewed annually) Cultivated Area: 36,000 Hectar 4 A listing of existing licenses held in your name is enclosed. If any of these licenses are not used and do not form part of your development plan, you should consider their abandonment. I certify that the above information is correct. Signature of Official: Position/Title: Date: Page 1 of 2 Fax: Web: Page 2 of 2 Fax: Web: Page: 1 of 2 Words: 338 English (Canada)

### Annual Water Use Summary – Individual



#### Screen shot 22: Annual Water Use report – Individual

The annual water use survey has historically been filled out on paper by all water licence holders and faxed or mailed to the Ministry of Environment. The CENTRE form must be printed and signed by the Utility Administrator and submitted to the MoE by mail or fax as before.

#### **Other Summary Reports**

NA ULT-):	and the second second	WaterUasgeSo	ummaryRe	port_2011042	9 (Compatibility	Mode] M	icrosoft W	ford					Ĩ.
Home Insert Page Layout	References Mailings	Review Vie	w Acr	obat									
Anal Ca Copy te	- 11.5 ×  A* A*  +) → ×, ×* Ax -  *2 · <u>A</u> - Fort 5	12 · 12 · 14 E E E I I Pa	72-) (\$12 (\$ 11) (\$2-) ragraph	(21) (1) (20 - 11 -) (2	AaBbCcDc T Normal	AaBbCcDo T No Spaci-	AaB Headir	bC AaE	ng 2 Title	( AaBbCcl Subtitle	L Change Styles*	A Find * C Replace C Select * Edting	
	1-3-1-4-1-3-1-2-1-	er Seign	erers.	361.061	Line Public	2.0011	rie i s	10g x 16	+ 12 > 1 + 12 + 1 + 1	COLUMN 1			
		þ	ummarj	of Water	r Usage Data	Entered	d Repor	rt 🔰					
	Organization Name:	Nelson's wat	erworks										
	Utility Name:	Okanagan Te	st Waten	orks#1									
	Report Date:	From: 2011 -	01 to: 201	11-01									
	Ground Water:	Plate Num	uber Yea	Month	Volumefcubic	meteral	Created P	ly User Cre	ated Date				
	desiderate 001	testolates	1 20	1 01	601		ORWR	Ma	24. 2011				
	Monthly Total:	and the second second			568		oone		14, 1511				
	Total Ground Water:				568								
	Manalland												
	Volume Type	Year	Month	Volume (cubic mete	Measur (S)	ed %4 Wa	Ground (	Created User	Created Date	- 1			
	Industrial/Commercial/Ins	tutional 2011	01	6,000	Estimat	ed	0	OBWB	Mar 24, 2011				
	Agriculture	2011	01	6,600	Estimat	bd	0	OBWB	Mar 24, 2011				
	Residential	2011	01	1,500	Estimat	ed.	0	OBWB	Mar 24, 2011				
	Monthly Total:			13,100									
	Total Water Used:			13,100						_			
	Leakage / Unaccounter	for:								_			
	Year Month	Volume(cubic	meters)	Created	User Co	eated Date							
	2011 01	24											
	Total Leakage / Unaccoun	ed forl:	24		-								
										_			

Screen shot 24: Summary of Water Usage report in Microsoft Word format



#### BC Water Use Reporting Centre



Okanagan Basin

WATER BOARD

Screen shot 25: Summary of Lake Levels Report in PDF format



Screen shot 26: Summary of Return Flows report in Excel format



### Ad Hoc Report

Ad hoc reports can be created upon request. Please contact Nelson Jatel at the OBWB (250-469-6295).

Okanagan Basin

VATER BOARD

### **GETTING HELP**

BC WATER USE REPORTING CENTRE includes help function text that can be accessed from any page by clicking the question mark in the upper right hand corner of the screen.

Please contact **Nelson Jatel** at the Okanagan Basin Water board if you have any questions regarding THE BC WATER USE REPORTING CENTRE.

Nelson Jatel Water Stewardship Director Okanagan Basin Water Board Phone: (250) 469-6295 Email: <u>nelson.jatel@obwb.ca</u> Web: <u>www.obwb.ca</u>

### **PROVIDING FEEDBACK**

Your feedback is very important to making THE BC WATER USE REPORTING CENTRE an effective and accurate tool. If you find any issues with the software in general or with the licence or well data entered for your organization, please note those issues on the User Issues & Feedback Form included in Appendix D. The User Issues and Feedback Form may also be downloaded from www.obwb.ca/bcwaterusereporting/.

When you are ready to submit the form, remove it from your User's Guide and fax it to 250-762-7011, Attention: Nelson Jatel, or email it to nelson.jatel@obwb.ca. The CENTRE team will address your issues promptly.

### Appendix A. Context diagram





### **Appendix B. Other water management resources**

Okanagan Supply & Demand Study	http://www.obwb.ca/wsd/
Okanagan Basin Water Resource Information Database	http://www.obwb.ca/obwrid/
Irrigation Calculators	http://www.irrigationbc.com/
North Okanagan Resource/Habitat Atlas	http://www.shim.bc.ca/atlases/nord/index.cfm
Okanagan Nation Alliance Land Use Tool	http://voicesontheland.org/



### **Appendix C. Instructions for uploading SCADA data**

#### **Creating the XML File**

To create the XML file for upload to the web service use the following steps:

1) Go to the Web service is <u>http://www.bcwaterusereporting.ca/Services/SwurtService.asmx</u>

### SwurtService

The following operations are supported.

- <u>SaveGroundWaterEntry</u>
- SaveLakeLevelEntry
- <u>SaveMonthlyUsageEntry</u>
- <u>SaveReturnFlowEntry</u>
- <u>SaveSurfaceWaterEntry</u>
- 2) Click on the Service you wish to test.
- 3) Go to the SOAP1.2 section.
- 4) Copy the XML template.
- 5) Paste the text into an XML editor.
- 6) Fill in the desired values e.g.
   <Username>string</Username> would have the login name with required privileges
   <Username>jack</Username>
- 7) Click on save file to save the file at a desired location.

#### XML Template Values & Tags

The information mentioned below are parts of the templates to explain what sort of data may appear within the tags within the templates and what section is used for data entry of one record.

#### **General Tags**

```
<tCredential>
<Username>string</Username>
<Password>string</Password>
</tCredential>
```

The login and Password required to login to the BC WATER USE REPORTING CENTRE application. Users should have the appropriate data entry privileges or higher.

```
<tUtility>
```



<UtilityName>string</UtilityName> <Year>int</Year> <Month>int</Month> </tUtility>

The **Utility name** should be registered with the mentioned login name. The **year** is a 4 digit integer e.g. 2011 The **month** is a 2 digit integer e.g. 01

#### **SaveGroundWaterEntry**

```
<typeGroundWaterDataEntry>
<WellName>string</WellName>
<Volume>decimal</Volume>
</typeGroundWaterDataEntry>
```

The Complete set of tags represent the data entry for a particular well. With **Well name** being the name of the well and not the plate number. The **Volume** should be entered in the Units which have been selected in the profile of the Utility.

#### SaveLakeLevelEntry

<typeLakeLevelDataEntry>

<ReservoirName>string</ReservoirName>

<Volume>decimal</Volume>

<MeasurementDate>dateTime</MeasurementDate>

<IsUsable>boolean</IsUsable>

</typeLakeLevelDataEntry>

The **Reservoir Name** will have been specified in the profile-> Reservoir/Lake Level section. The **MeasurementDate** will be entered in the format YYYY-MM-DD e.g. 2011-02-25. The **IsUsable** is a Boolean type with will be either "true" or "false".

#### SaveMonthlyUsageEntry

<typeMonthlyUsageDataEntry>

<VolumeType>string</VolumeType>

<Volume>decimal</Volume>

<PercentageGroundWater>decimal</PercentageGroundWater>

<DailyDemandDate>dateTime</DailyDemandDate>

<IsMeasured>**boolean**</IsMeasured>

<MeasurementType>string</MeasurementType>

</typeMonthlyUsageDataEntry>

The VolumeType values can range from

- 1) Industrial/Commercial/Institutional
- 2) Agriculture



- 3) Residential
- 4) Daily Demand Max
- 5) Daily Demand Min

The	IsMeasured	is	Boolean	with	True=	measured	ጼ	False=	Estimated
THE	Isivicasuleu	13	Doolean	WILLI	nue-	measureu	CC C	1 0136-	Lotinateu

The MeasurementType values range from

- 1) At Source
- 2) At Customer
- 3) Estimated

For **VolumeTypes** 1-3 you donot need to enter the **DailyDemandDate** and **IsMeasured** tags. For **VolumeTypes** 4 & 5 you donot need to enter the **PercentageGroundWater** and **MeasurementType** tags.

#### SaveReturnFlowEntry

<List\_tReturnFlowDataEntry>

- <typeReturnFlowDataEntry>
- <ReferenceNumber>string</ReferenceNumber>
- <MonthlyQty>decimal</MonthlyQty>
- <DailyMaxQty>decimal</DailyMaxQty>
- <DailyMaxDate>dateTime</DailyMaxDate>
- <DailyMinQty>decimal</DailyMinQty>
- <DailyMinDate>dateTime</DailyMinDate>
- </typeReturnFlowDataEntry>

The ReferenceNumber will have been specified in the profile-> Return Flows

#### SaveSurfaceWaterEntry

<typeSurfaceWaterDataEntry> <WaterSystemName>string</WaterSystemName> <Volume>decimal</Volume>

</typeSurfaceWaterDataEntry>

The WaterSystemName will have been specified in the profile-> General-> Water Systems



#### Appendix D. User Issues and Feedback Reporting Form

Please record any issues with the software or your licence and well data in the form below and submit it by fax or email to Nelson Jatel at 250-762-7011 or nelson.jatel@obwb.ca. Please include a brief sentence outlining the issue (e.g., water licence location incorrect) and then a more in depth description in the second column (water licence should be located at latitude: XXXX and longitude XXXX).

STATEMENT OF ISSUE/ FEEDBACK	DESCRIPTION

#### For information contact:

Nelson R. Jatel, Water Stewardship DirectorPhone:(250) 469-6295e-mail:nelson.jatel@obwb.caweb:www.obwb.ca