



Ministry of Forests, Lands and Natural Resource Operations

Groundwater Licencing

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&

Faye Hirshfield, PhD

Ministry of Forests, Lands & Natural Resource Operations





Outline for today

1. Background and introduction to the new WSA (Pat)
2. The application process (Faye)
3. Groundwater regulation (Pat)
4. Examples (Faye)



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Background

BC has been licencing surface water for over a century

On Feb 29 2016 the Province introduced new water laws to include licencing groundwater

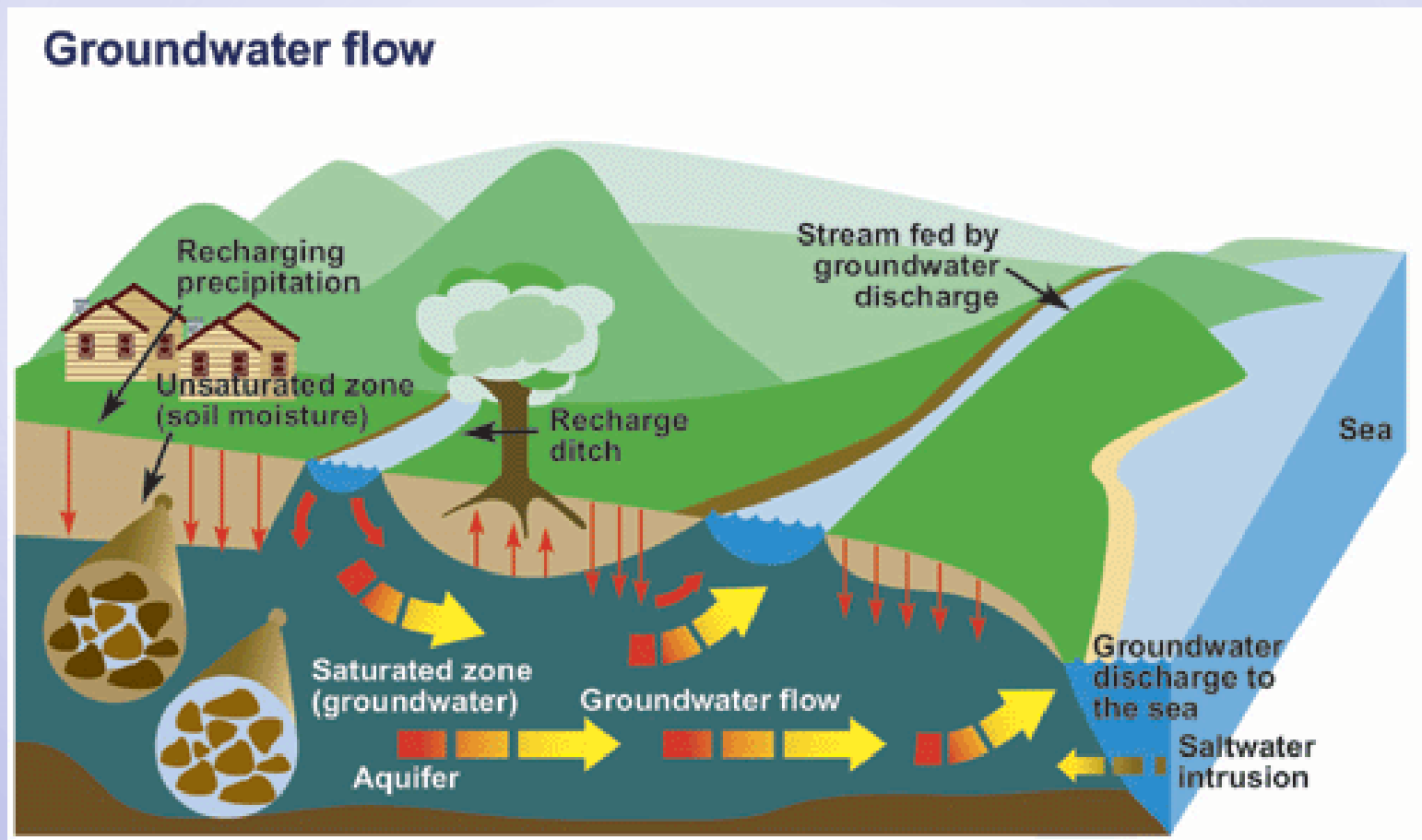
B. C. WATER ACTS, 1892-1914



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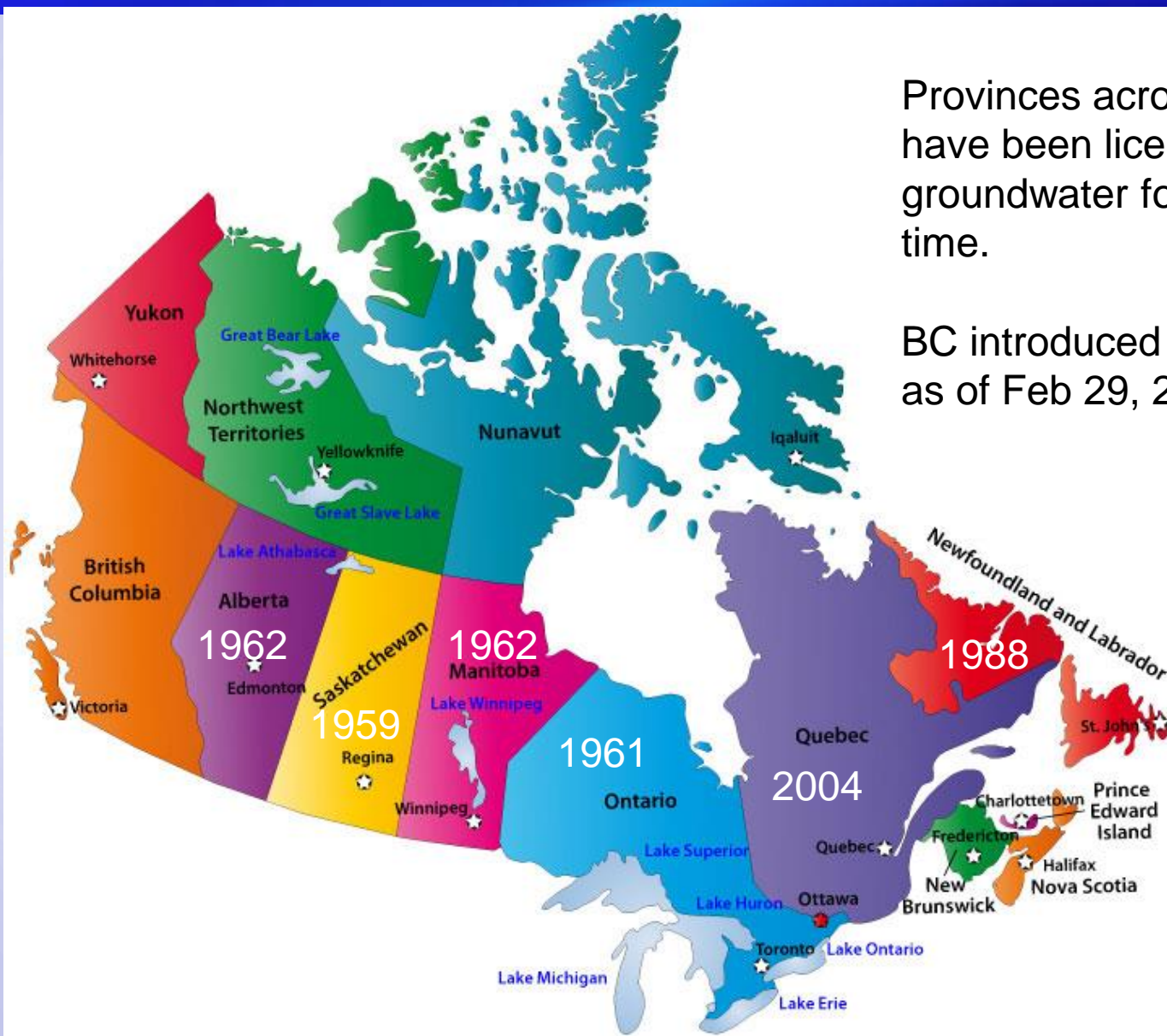
How is groundwater defined?

The new Water Sustainability Act defines groundwater as:
water naturally occurring below the surface of the ground





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Provinces across Canada have been licencing groundwater for some time.

BC introduced licencing as of Feb 29, 2016



Water Sustainability Act: Updating our current water laws

Benefits of holding a water licence

- Water rights are attached to land, not people, secures water rights attached to your property or business
- BC operates under a FIT-FIR (first in time – first in right)



- Existing groundwater users are exempt from application fees if you apply for a licence prior to and including Dec 31, 2017.
- Three years to apply and have historical use recognized (2016-2019). BC operates under FIT-FIR (first in time – first in right)
- Existing non-domestic groundwater users that have not yet applied for an authorization are responsible for rentals for the portion of 2016 occurring after Feb 29



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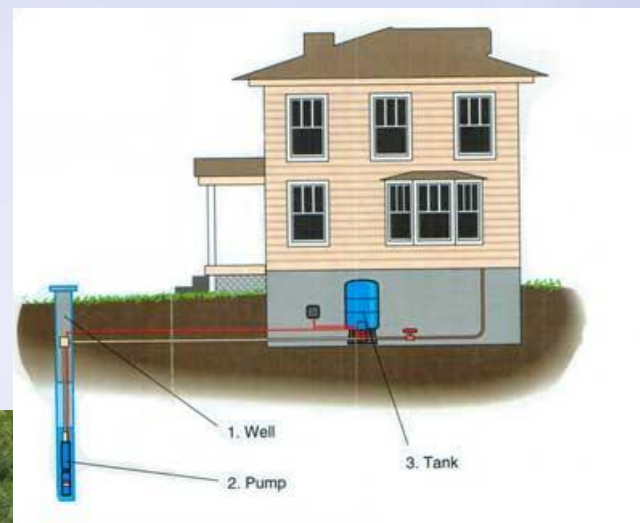
Who qualifies for a groundwater licence?
&
When do you not need a water licence?





No licence required: domestic use


- Drinking water
- Food preparation
- Sanitation
- Fire prevention
- ★ Water for pets and household animals or poultry
- ★ Irrigating a garden adjoining the dwelling (under 1000 m², 0.25 acre)





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Registering your domestic well (use) not mandatory but recommended

 **Domestic Well Registration Form**

This form is intended for registering groundwater wells that are used for domestic water use purpose only. Domestic use of groundwater is exempt from the requirement for obtaining a water licence or use approval and paying provincial fees and rentals. Registering your well creates a record of the location of your well and your water use. It helps to ensure that your use is considered by decision makers when dealing with other licence applications.

Domestic purpose is defined in Section 2 of the Water Sustainability Act as water used for the occupants of a private residence for household uses (e.g., not a multi-family apartment building, hotel, strata or cooperative building) including: drinking water, food preparation, sanitation, fire prevention, water for animals kept for household use or as pets, or irrigation of a garden not exceeding 1000m².

If unsure whether your use is considered to be domestic purpose, or to start your licence application if the well is used for any other purpose, please visit Front Counter BC (<http://www.frontcounterbc.ca/Start-ground-water>).

Owner Information

Well Owner Name: _____

Mailing Address: _____ Town _____ Prov. _____ Postal Code _____

Email Address: _____ or Phone No.: _____

Well Location Information

If the address of the well location is the same as above, please check

If not, at least one of the three following property descriptors must be provided

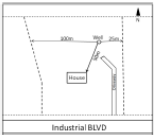
1) Address: _____ Town _____

2) Legal description (available from the property tax assessment notice):

Lot: _____	Block: _____	Range: _____
Plan: _____	Section: _____	Land District: _____
District Lot: _____	Township: _____	

3) PID: _____

Description of well location on the property _____

 **Well location map.** Attach with the well registration form a sketch or diagram (e.g., property assessment drawing) showing where the well is located on the property relative to the property boundaries, a road or any other structures on the land.

Example Sketch

GPS Coordinates of the Well

Coordinates for the well can be determined by using a GPS unit, a cell phone app, or by using a mapping application such as iMapBC or Google Earth.

Latitude (e.g., 49.20184°): _____ Longitude (e.g., 122.58376°): _____

OR

UTM Zone (NAD83): _____ UTM Easting: _____ UTM Northing: _____

Source of coordinates (check one): GPS Google Earth Other (please specify) [_____]

Well Information

If the well construction report is available, please attach to this form. Attached Not Available

If no well construction report is available, complete the following information:

Well Identification Plate Number (steel plate attached to some wells): _____

Date well drilled (YYYY/MM/DD): _____

If the date the well was drilled is unknown, provide the date you took possession of the property (YYYY/MM/DD): _____

Drilling Company: _____

Method of Drilling: Drilled Excavated or Dug

Well depth (ft): _____ Well Diameter (in): _____

Disclaimer

Red lettering indicates information that must be provided for the well and the domestic use to be registered.

The information provided on this form, including personal information, will be added to the Provincial WELLS Database, which is accessible to the public at <http://a100.gov.bc.ca/pub/wells/wellspublic>.

Information relating to the well and well owner submitted to the Deputy Comptroller in this form shall be considered part of the Provincial Government records and subject to the *Freedom of Information and Protection of Privacy Act*.

For more information related to the *Water Sustainability Act* or *Groundwater Protection Regulation*, please visit <http://gov.bc.ca/water>.

Signature of Declaration

I have read and understand the above and declare that the information provided on this form is true to the best of my knowledge. I understand and consent that the information on this form will be published and made publicly available. Digital signatures are acceptable.

Signed: _____ Date (YYYY/MM/DD): _____

Send Completed Form To

Before Submitting:

- Ensure your well is used for domestic purposes only.
- Complete all required information.
- Attach a sketch or map depicting where the well is located on the property.
- Provide any supporting documentation (e.g., well construction report) if available.
- Sign the well registration form.

Mailing Address:

Deputy Comptroller
Ministry of Environment
PO Box 9542, Stn Prov Govt
Victoria BC V8W 9M2

Email:
GroundWater@gov.bc.ca

*copies of these forms can be found online (link below) OR get a hard copy today from us

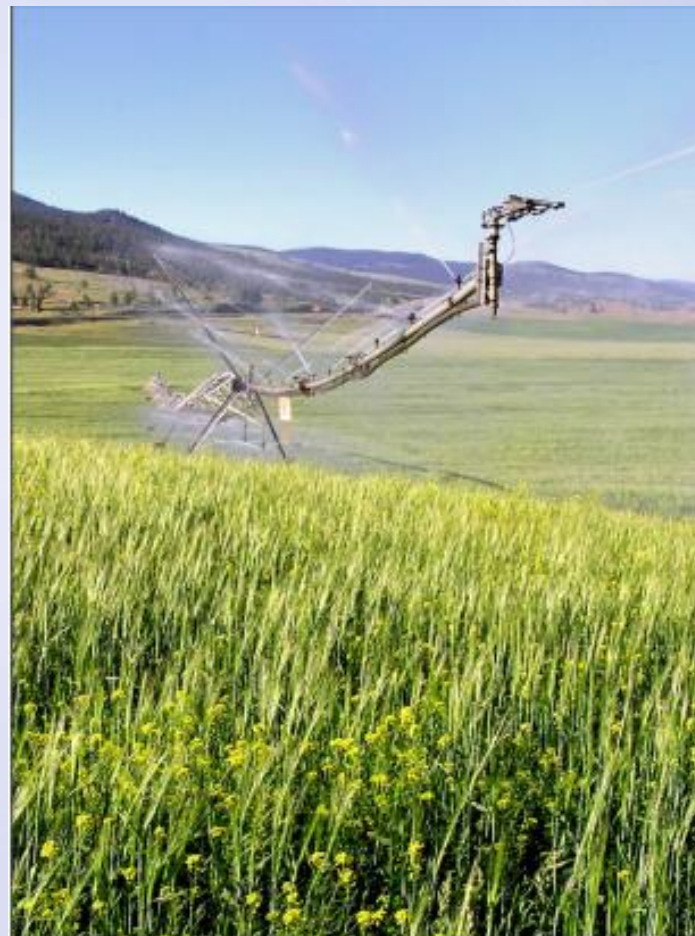
http://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/water-wells/well_registration_form.pdf



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Examples of users who require a groundwater licence:

- Waterworks
- Irrigation
- Livestock watering
- Land improvement
- Storage
- Hotels
- Gas stations
- Businesses rentals
- Community halls
- Church
- Restaurants
- Campgrounds
- Schools
- Airports
- Vineyards
- Gravel washing
- Fish hatcheries





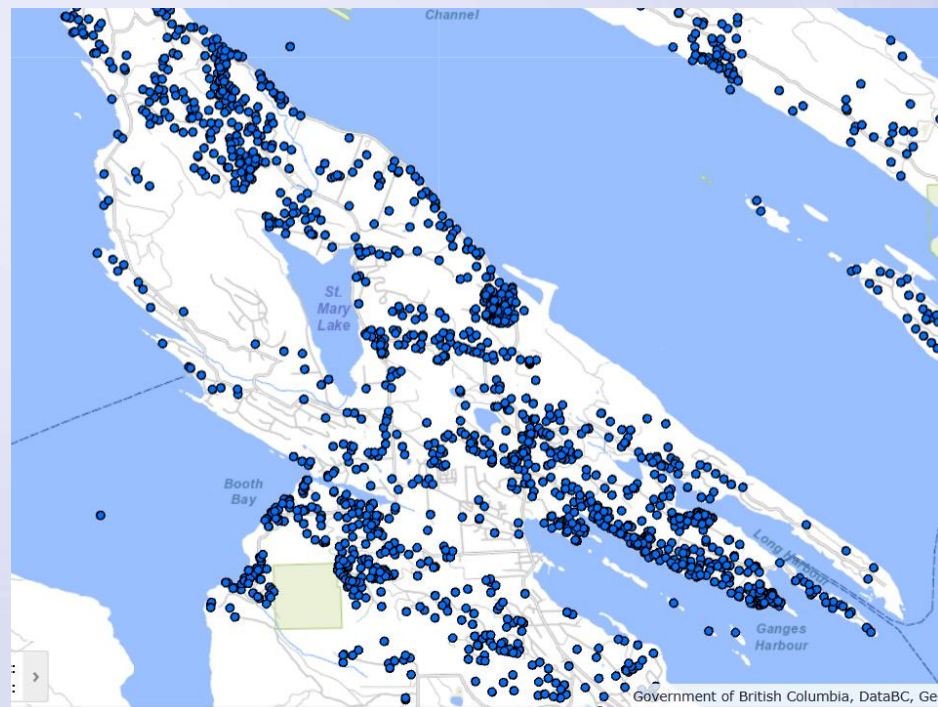
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The Gulf Islands rely heavily on groundwater.

Numerous operations have been diverting and using groundwater for decades, now the Province of BC has aligned itself with jurisdictions across North America and requires a license to divert and use groundwater



Non domestic and domestic wells on Salt Spring Island





Steps for water licence application





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The BASICS

Purpose?

- irrigation, livestock watering, commercial enterprise, aquaculture etc.

Volume?

- how much volume do I divert per year?

History?

- how long have I been using the water for?

Beneficial Use:

- Diverting water for a specific volume and purpose and water is used as efficiently as practicable



Steps for water licence application

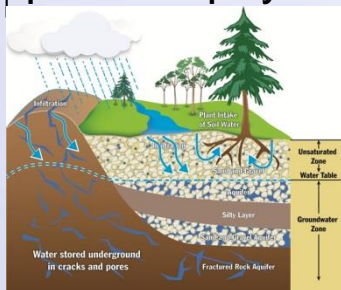
1. Applicant: logon with BCeID to FrontCounter BC website and fill out application

BCeID

<http://www.frontcounterbc.gov.bc.ca/>



2. FrontCounter BC: staff will review application for completeness and process payment



3. Water authorizations staff: consultation, referrals, technical report



4. Decision: water manager will decide whether to approve application



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- BC Land Title & Survey
- BC Online
- Discovery Tool
- Minerals Title Online (MTO)
- Integrated Land and Resource Registry
- MapBC
- The Applications and Reasons for Decision Site
- Help

Help protect B.C.'s natural resources
Report Natural Resource Violations, including damage or illegal use of Crown Land, forest or water:
• Fill out a [Natural Resource Violation Report](#)
• or call 1-800-663-3833 (toll-free 24/7)
• To report flooding or erosion, contact the Conservation Officer Service at 1-877-932-7277 or visit [BC.ca/conservation](#)

Got your Fish and Wildlife ID yet?

- The FWDI replaces the old Hunter Number.
 - If you already have a Hunter Number, you will automatically be issued a new FWDI when you buy a licence or apply for LEH.
 - If you don't have a Hunter Number, you can apply online or at Service BC or Front Counter BC locations.
- For more information:
Call 1-877-886-3222
Visit online www.gov.bc.ca/hunting

www.gov.bc.ca/community

INFO about Natural Resource Applications

START a Natural Resource Application

MANAGE Your Natural Resource Applications (with BCeID)

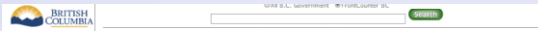
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Do you need help? Check out our help section.



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Natural Resource Applications

FrontCounter BC offers you easy access to 120 applications all over the natural resources sector.

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 - Rural Development
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 - Water - Ground

Water - Surface

Water - Ground



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Use of Groundwater

New Groundwater Licence Application (well constructed/used after Feb 29, 2016)

Existing Use Groundwater Licence Application (well constructed/used on or before Feb 29, 2016)

Use Approval Application (not exceeding 24 months)

Abandonment / Amendments (Changes) to an existing Groundwater Licence

- Abandonment
- Apportionment
- Change of Purpose
- Change of Works
- Extension of Term
- Extension of Time
- Transfer of Apportionment

Register your Well

Register your Well

Provide Additional Information

Provide Additional Information for your Application

Existing Use Groundwater Licence Application (well constructed/used on or before Feb 29, 2016)



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Guide

Water Licence Application

[Start your Water Licence Application](#)

- | | |
|---|---|
| 1. Overview | 5. Consulting First Nations |
| 2. Costs and Responsibilities | 6. Links |
| 3. What you need to apply | 7. Tips for a successful application |
| 4. What happens after you apply | 8. Start your Water Licence Application |

Overview

This application is to apply for a water licence under the *Water Act*, which if granted, permits you to: divert, use or store surface water from a stream, and to construct works. A stream includes a natural watercourse or source of water supply and a lake, river, creek, spring, ravine, swamp and gulch.

A water licence specifies the source, the purpose, the volume and the works associated with the water use as well as where the water can be used. Water use may be restricted to certain times of the year.

You can apply for a variety of purposes on an application. A [list of all water use purposes](#) is available.

You may also be required to apply for a Permit over Crown Land if your works cross or flood Crown land.

[Next >](#)
[Costs and Responsibilities](#)



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A BCeID allows applicants to save their applications and return to them later



FrontCounterBC

BCeID

BCeID

BCeID - What is it?

BCeID is an online service that makes it possible for you to use one user ID and password to sign in securely to many Government services in British Columbia.

There are different types of BCeID. To apply for a natural resource application ANY BCeID type will work; the minimum requirement is a Basic BCeID which can be obtained in just a few minutes.

BCeID - Why use it?

There are many benefits to having a BCeID Account:

- **Stop and start** - you can save and return later to complete your application without losing any information previously entered.
- **Real time status information** - check the status of your application in real time.
- **Access to your applications for multiple people (Business BCeID only)** - more than one person can edit/submit your application or check the status.

Existing Use Groundwater Application

Step 1 - Introduction

2

3

4

5

6

7

8

9

10

11

COMPLETED

Existing Use Groundwater Licence Application

Start your application

Please select one of the options below to start your application.

Purpose

This application is to apply for a water licence groundwater use that was occurring on or before February 29, 2016, when the *Water Sustainability Act* came into force.

IMPORTANT NOTICES ABOUT THIS APPLICATION:

- **If you were not using groundwater on or before Feb 29, 2016**, please apply for a [New Groundwater Licence](#).
- **If you only want to use the water for 24 months or less**, please consider if the [Short-term use of water approval application](#) would meet your needs.

For details on what a domestic purpose means, please review the [Water Sustainability Act](#).
- **If you have been using groundwater to support an oil and gas activity** under the *Oil and Gas Activities Act* or the *Petroleum and Natural Gas Act* contact the [British Columbia Oil and Gas Commission](#).

Applying without a BCeID means that if you leave your computer for a long time without submitting your application, all information you have entered will be lost. There is no way to stop and then continue later unless you sign in with a BCeID.

[Apply without BCeID](#)

BCeID

[Apply with your BCeID](#)

What is a BCeID? Why should I get one?
[Learn more about the BCeID](#)



PRODUCTION (HOST - CA)

Existing Use Groundwater Application (100173860)



EXISTING USE


Groundwater users that have been using groundwater prior to the date that the *Water Sustainability Act* came into force may be granted a priority date for their water licence that is equal to the date they first beneficially used the water.

* Have you been using groundwater for purposes other than domestic use prior to February 29, 2016? Yes No

 Review Application

Print Page

* An asterisk indicates a required field.

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Cancel

Save Application

Next 

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EXISTING USE

Groundwater users that have been using groundwater prior to the date that the Water Sustainability Act came into force may be granted a priority date for their water licence that is equal to the date they first beneficially used the water.

* Have you been using groundwater for purposes other than domestic use prior to February 29, 2016? Yes No

PROOF OF USE

Since you answered "Yes" above, you must provide documentation demonstrating when you began using groundwater. Proof of use will enable you to retain a priority date for your water rights from the date you first began using the groundwater.

Below is a list of options to demonstrate your use of groundwater. Please read through the list and use the "Upload file" button to begin uploading copies of your documents.

Options for proof	Description
Well Log / Construction Report	Please provide the date of completion of the well by submitting the original Well Log or Construction Report.
Construction Permit / Operating Permit	Please provide the date of construction from the Construction Permit or the Operating Permit.
Certificate of Public Convenience and Necessity	The Certificate of Public Convenience and Necessity likely post-dates the well completion date.
Subdivision Approval	Provide proof of the date on the subdivision approval (if involved submission of documents related to "proof of potable water").
Sworn Affidavit	Please provide a sworn affidavit from someone that can testify regarding your use of the groundwater.
Other	<p>Other evidence that could demonstrate the date that you began using groundwater. Such evidence could include:</p> <ul style="list-style-type: none"> - Project Certificate for projects that underwent an Environment Assessment - Documentation of exemption from EA - Building Permit or Occupancy Permit - Consultant report(s) on well or water supply system, e.g. water quality tests - Date on well pump installation invoice - Business purchase agreement - Aerial photos - Date of zoning for land use change

The date from which groundwater has been used regularly and beneficially on an ongoing basis for a water use purpose on appurtenant land.

*UPLOAD YOUR DOCUMENTS HERE

UPLOAD FILE



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ORIGINAL
File with DWR

STATE OF CALIFORNIA WELL COMPLETION REPORT

Page 1 of 1
 Owner's Well No. 1 No. **01020304**
 Date Work Began 8/14/91 Ended 8/28/91
 Local Permit Agency Tehama County Environmental Health
 Permit No. 395-91 Permit Date 8/01/91

DWR USE ONLY - DO NOT FILL IN

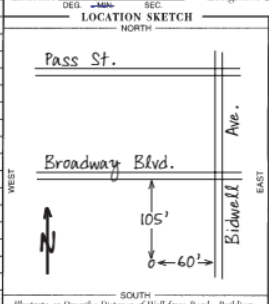
STATE WELL NO./STATION NO. _____

LATITUDE _____ LONGITUDE _____

APN/RS/OTHER _____

GEOLOGIC LOG			WELL OWNER	
ORIENTATION (±)	DEPTH FROM SURFACE	DESCRIPTION	Name	WELL LOCATION
<input checked="" type="checkbox"/> VERTICAL	0	6 topsoil	John Smith	227 Bidwell Avenue
<input type="checkbox"/> HORIZONTAL	6	20 brown clay	Red Bluff	96000 Calif
<input type="checkbox"/> ANGLE _____ (SPECIFY)	20	50 brown clay & gravel		
<input type="checkbox"/> FLUID _____	50	62 gravel (water)		
	62	80 brown clay		
	80	100 gravel to pebble size brown to tan		
	100	116 brown clay, fat changing to sand		
	116	133 cobbles and gravel		
	133	168 brown clay, fat with sandy lenses		
	168	207 gravel to cobble size		
	207	288 blue clay, fat		
	288	305 sand, medium size		
	305	330 blue clay		

* screen type: shutter screen



APN Book 07 Page 12.0 Parcel 14
 Township 25N Range 03W Section 10 MDBM
 Latitude 40 21 51 NORTH Longitude 122 27 2 WEST

ACTIVITY (±)
 NEW WELL
 MODIFICATION/REPAIR
 Deepen
 Other (Specify) _____

DESTROY (Describe Procedure and Materials Under GEOLOGIC LOG)

PLANNED USES (±)
 WATER SUPPLY
 Domestic
 Public Irrigation
 Industrial

MONITORING
 TEST WELL
 CATHODIC PROTECTION
 HEAT EXCHANGE
 DIRECT PUSH
 INJECTION
 VAPOR EXTRACTION
 SPARGING
 REMEDIATION
 OTHER (SPECIFY) _____

WATER LEVEL & YIELD OF COMPLETED WELL

DEPTH TO FIRST WATER 47 (FL) BELOW SURFACE

DEPTH OF STATIC WATER LEVEL 54 (FL) & DATE MEASURED 8/14/91

ESTIMATED YIELD 100 (GPM) & TEST TYPE psmp

TEST LENGTH 3 (Hrs) TOTAL DRAWDOWN 19 (FL)

* May not be representative of a well's long-term yield.

DEPTH FROM SURFACE	BORE HOLE DIA. (Inches)	CASING (S)				INTERNAL DIAMETER (Inches)	GAUGE OR WALL THICKNESS	SLOT SIZE IF ANY (Inches)	DEPTH FROM SURFACE	ANNULAR MATERIAL				
		TYPE (±)	BLANK	SCREEN	JOINT					CEMENT	BENTONITE	FILL	FILTER PACK (TYPE/SIZE)	
0	116	12	✓			steel	6	.25	0	110				
116	133	12	✓			steel	6	.25	110	310			#8 sand	
133	168	12	✓			steel	6	.25						
168	207	12	✓			steel	6	.25						
207	288	12	✓			steel	6	.25						
288	310	12	✓			steel	6	.25						

ATTACHMENTS (±)

Geologic Log
 Well Construction Diagram
 Geophysical Logs
 Soil/Water Chemical Analyses
 Other _____

ATTACH ADDITIONAL INFORMATION, IF IT EXISTS

CERTIFICATION STATEMENT

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief.

NAME **ESSIG WELL DRILLING**
 PERSON, FIRM, OR CORPORATION (TYPE OR PRINTED)
 P.O. BOX 711 WESTPORT CALIF 91201
 ADDRESS CITY STATE ZIP
 Signed Carl Essig Jan 6, 2020 0505051
 WELL DRILLER/AUTHORIZED REPRESENTATIVE DATE SIGNED C-57 LICENSE NUMBER

- Well construction report
- Pumping or water quality test records
- Invoice for pump installation or other work
- Signed statements from knowledgeable persons
- Other relevant evidence



Existing Use Groundwater Application (100173860)

1 2 **Step 3 - Technical Information** 4 5 6 7 8 9 10 COMPLETED

*PURPOSES

Please select the purpose for which the groundwater will be used. Please note that the purpose you indicate may be changed during the application review process to better reflect the use of the water, in which case you will be notified of the change. For definitions of Water Use Purpose, [click here](#)

Existing Use Groundwater Application is exempt from the application fee until February 28, 2017. The rental fee is still calculated on the application and payment of the rental fee is required at the time of submission of your application.

Purpose

Quantity

Fee

Total: \$0.00

ADD PURPOSE

Review Application

Print Page

* An asterisk indicates a required field.

Back

Cancel

Save Application

Next

997

vFCBC - Add a Purpose - Google Chrome

<https://j200.gov.bc.ca/pub/vfcbc/editrelatedobject.aspx?PosseFromObjectId=847639>

Add a Purpose

STEP 1

What purpose do you want to use the water for?

(select)

- (select)
- Conservation
- Industrial
- Irrigation
- Land Improvement
- Mineralized Water
- Mining
- Oil and Gas
- Power

Cancel Save

Top

ACCESSIBILITY



[Link to water use purpose definitions:](#)

http://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/water-rights/water_use_purpose_defns.pdf

Water Sustainability Act **Definitions for Water Use Purposes and Categories of Water Use Purposes** **Effective February 29th 2016**

Instructions for applicants – please read

When filling in an application for an authorization, the application will ask for the following:

“Step 1 – What purpose do you want to use the water for?” →
These are the water use purposes from the Definitions below in **black text** (beginning on page 2)

“Step 2 – Please select one of the following purpose uses?” →
These are the water use subpurposes in **blue text** below (beginning on page 2)

Please note that there are a wide variety of water uses that fall under the different water use purposes, in particular “industrial” water use (e.g., watering livestock) – the example list to the right is what you will see in the on-line application.

Please contact FrontCounter BC with any questions:

- By phone toll-free at 1.877.855.3222 (within North America) or +1.778.372.0729 (outside of North America).
- By email at FrontCounterBC@gov.bc.ca.
- In person across BC at one of the many [FrontCounter BC locations](#)

Please ensure that you know the correct water use purpose for your application. If you cannot find what you are looking for, please use a ‘Ctrl F’ search within this word document.

For example when you hit the ‘Ctrl’ and ‘F’ buttons on your keyboard a box will open where you can type. If you type in ‘dust control’ you can use the highlighted arrows to scroll

(None)	↑
Aquifer Storage: Non-Power	
Aquifer Storage: Power	
Camps & Public Facilities	
Commercial Enterprise	
Conservation: Construct Works	
Conservation: Storage	
Conservation: Use of Water	
Cooling	
Crop Harvesting, Protection & Composting	
Domestic (WSA01)	
Fish Hatchery	
Fresh Water Bottling	
Greenhouse & Nursery	
Heat Exchanger, Indl & Comm	
Heat Exchanger, Residential	
Ice & Snow Making	
Industrial Waste Mgmt	
Irrigation: Local Provider	
Irrigation: Private	
Land Improvement: General	
Land Improvement: Ind'l for Rehab or Remediation	
Lawn, Fairway & Garden	
Livestock & Animal	
Mineralized Water: Bottling & Dist	
Mineralized Water: Comm. Pool	
Mining: Hydraulic	
Mining: Placer	
Mining: Processing Ore	
Mining: Washing Coal	
Misc Indust	
O & G: Oil Fld Inject. (non-deep GW)	
Oil & Gas: Drilling	
Oil & Gas: Hydraulic Fracturing other than deep GW	
Oil & Gas: Hydraulic Fracturing, Deep GW	
Oil & Gas: Oil Field Injection, Deep GW	
PCL/Dam	
PCL/Permit	
Permit to Occupy Crown Land	
Pond & Aquaculture	
Power: Commercial	
Power: General	
Power: Residential	
Processing & Manufacturing	
Pulp Mill	
Swimming Pool	
Vehicle & Equipment	
Waterworks (other than LP)	
Waterworks: Local Provider	
Waterworks: Water Delivery	
Waterworks: Water Sales	
Well Drill/Transprt Mgmt	
	↓



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*Works

Works are the physical equipment used to move the water from its source to where it will be used. For example, works can include a screened intake, pump, pipeline, irrigation system, dugout, storage structure etc. Please ensure that you add all the major components of your works – typically there will be multiple items listed in this section. Scroll down the list provided to see all the options available for selection. For a formal definition of “works”, refer to Section 1(1) of the [Water Sustainability Act](#).

ADD WORKS

Well Works

*Will the water be diverted using a Well? Yes No

ADD WELL



Well

Please select your works:

Well

Explanation

As an existing user, your works should be fully constructed. If your works are not fully constructed for some reason, (e.g. under repair), please provide details in the "Comments" field below.

*Status

Fully Constructed

Well Information

Please supply some additional information regarding your well.

Well ID Plate Number:

Well Tag Number:

Aquifer source:

Depth of well:

metres

Diameter of well:

centimetres

Date of construction:

mmm dd, yyyy



*Geographic coordinates of well:



Latitude:

Longitude:

Decimal degrees

*Method of location measurement:

(None)

Well Is On:

Crown land

Private land

Estimated Yield:

m³/day

*Is the well a flowing artesian well at any time of the year?

Yes

No

Unknown

*Is the well head in a pit or a sump?

Yes

No

Unknown

*Are there other wells on the property that are not in use?

Yes

No

Unknown

WELL DOCUMENTS TO ATTACH

Later in the application process, you will be required to upload a Drawing to Scale. You may use this screen to attach any other documents that you feel are specific to your well that you have not already uploaded previously.

Type of Document

Description

Other

Please upload any other documents that do NOT fit into one of the other types and that are applicable to this application.

UPLOAD YOUR DOCUMENTS HERE



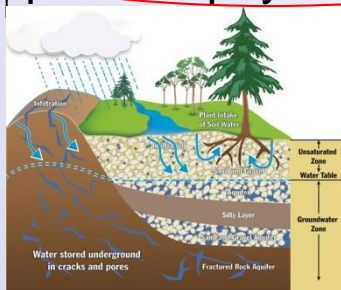
Steps for water licence application

1. Applicant: logon with BCeID to FrontCounter BC website and fill out application

BCeID



2. FrontCounter BC: staff will review application for completeness and process payment



3. Water authorizations staff: consultation, referrals, technical report



4. Decision: water manager will decide whether to approve application



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Example Use	Application fee	Annual Rental
Domestic stream water use	\$250	\$50 minimum \$2.25/1000m ³
Irrigation	\$250 – \$1000	\$50 minimum \$0.85/1000m ³
Waterworks Local Provider	\$1000 – \$10 000	\$200 minimum \$2.25/1000m ³
Pulp mill	\$1000 – \$10 000	\$1.30/1000m ³ (amount used) \$0.85/1000m ³ (remaining allocation)

Water rental calculator

www.env.gov.bc.ca/wsd/water_rights/water_rental_rates/calculator/ 28



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	Application fee	Annual water rental	Minimum rental
Livestock watering	\$250-1,000 <i>*exempt in first year</i>	\$0.85/1,000 m ³	\$50 minimum

Water rent estimator:

http://www.env.gov.bc.ca/wsd/water_rights/water_rental_rates/calculator/

Example: 20 dairy cows @ 30 gal/day/animal

600 GPD. 219,000 GPY= 995.59 m³/year

$$995 \text{ m}^3/\text{year} * \$0.85/1000\text{m}^3 = \$0.84$$

Annual water rental \$50





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	Application fee	Annual water rental	Minimum rental
Commercial enterprise - domestic	\$1,000 <i>*exempt in first year</i>	\$2.25/1,000 m ³	\$200 minimum

Water rent estimator:

http://www.env.gov.bc.ca/wsd/water_rights/water_rental_rates/calculator/

Vacation rental

1000 gallons per day = 1659.32 m³/year = \$3.73/year

Annual water rental \$200



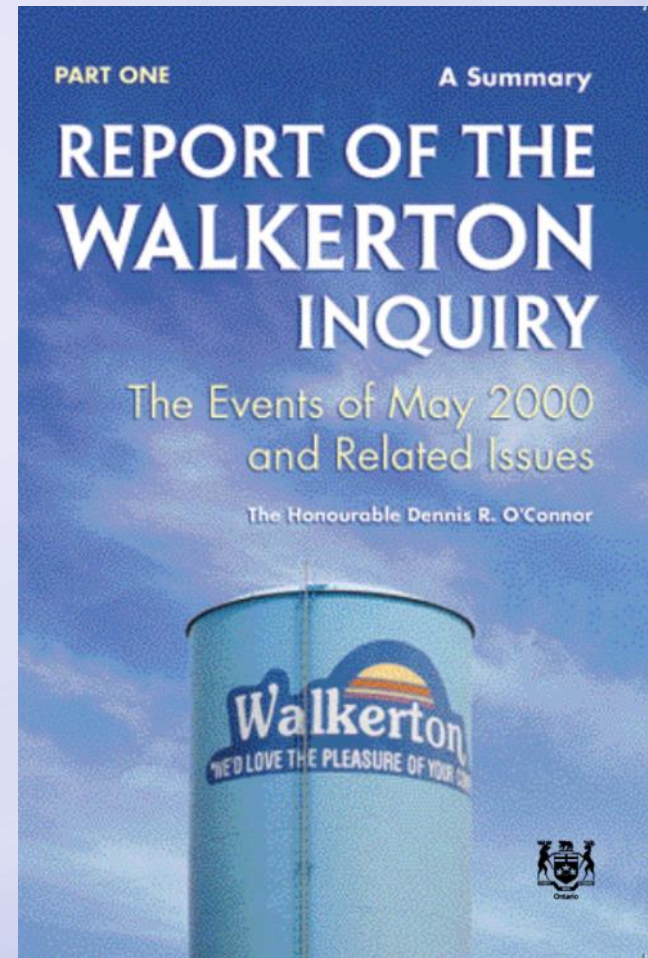
Ministry of **F**orests, **L**ands
and **N**atural **R**esource **O**perations

Groundwater Regulations



Ground Water / Groundwater Protection Regulation History

- Post-Walkerton emphasis on source protection and well construction standards
- GWPR “basics” 2004 under the *Water Act*
- 2016 GWPR “expanded” under the *Water Sustainability Act (WSA)*





“GWPR” Requirements that still exist

The following requirements remain essentially unchanged:

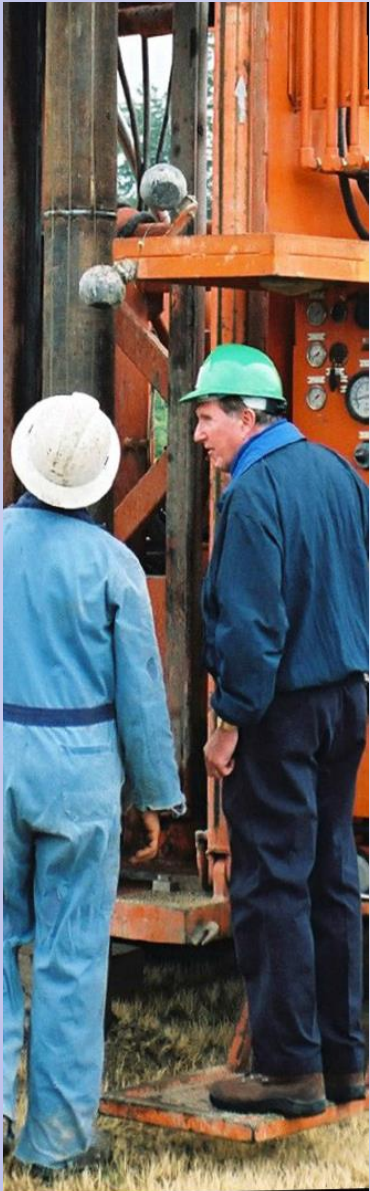
- Caps and covers
- Well identification
- Casing stick-up
- Graded surface
- Protection of casing
- Flood-proofing water supply system wells
- Well Operation (WSA) (Saltwater Intrusion)





Changes Under the “GWPR”

- Wells regulated under the WSA
- ★ Registration and qualifications for drillers and well pump installers
- Alternative Specifications
- ★ Well construction requirements
 - Well pump installation standards
- ★ Artesian Flow
 - Well maintenance requirements
 - Well deactivating and decommissioning
 - Well reporting requirements





Registration of drillers & pump installers

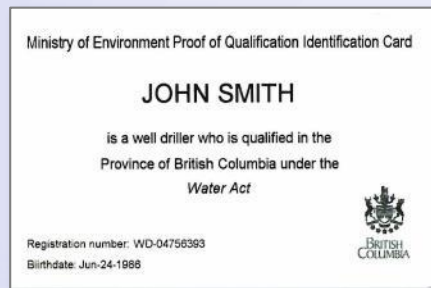
Pre-WSA	new
<p>Qualifications for Registration:</p> <ul style="list-style-type: none">• BC Water Well Driller (ITA)• BC Well Pump Installer (ITA)• Equivalent from other prov / territory• CGWA	<p>All prior qualifications plus:</p> <ul style="list-style-type: none">• BC Geotechnical / Environmental Driller (ITA)• BC Geexchange Driller (ITA)
<p>Drillers can drill all classes of wells and install pumps</p>	<p>New drillers' activities restricted according to qualification / class of driller</p>



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WSA restricts well construction, decommissioning and pump installation to:

- Well drillers and well pump installers registered with the province (GWPR part 2)



- Professional hydrogeologists or geotechnical engineers
- Exceptions:
 - constructing and decommissioning excavated wells up to 15m deep;
 - decommissioning any well up to 5m deep





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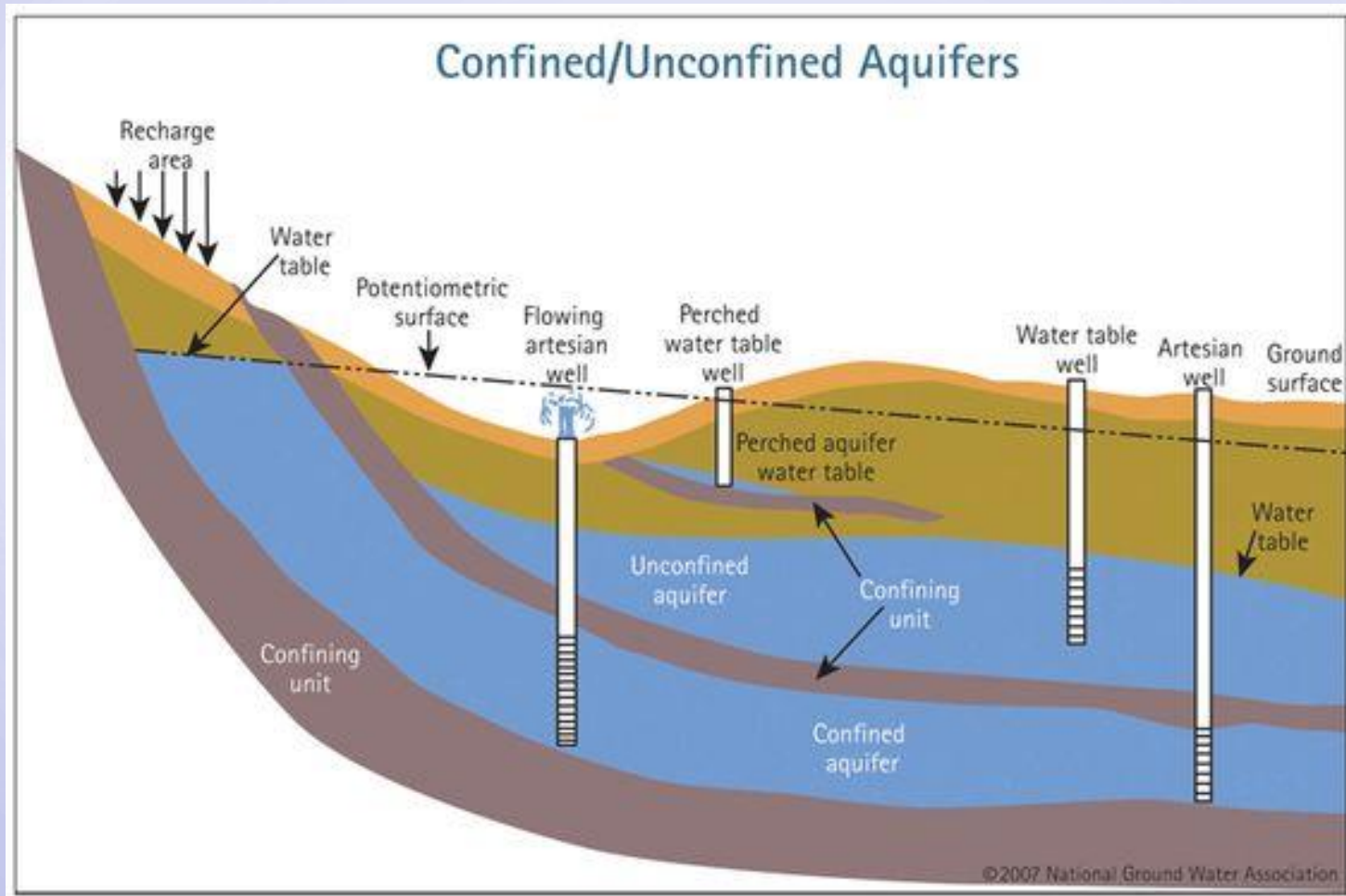
New water supply well must be at least 15m from existing well

- Minimize risk of well interference
- Owner can drill one additional well within 15m of the existing well
- If not feasible, professional can recommend a closer setback





Requirements for Flowing Artesian Wells





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Artesian flow must be stopped or brought under control (WSA s. 52, 53)

Responsible parties:

- Driller at time of construction
- Well owner or land owner for existing well

“Under control” means:

- Clear of sediment
- Entirely conveyed through casing (if applicable)
- Can be turned off indefinitely
- Does not pose a threat to property, public safety or the environment





Flowing Artesian Wells

- Control the flow of a flowing artesian well requires:
 - Wellhead to be equipped to prevent backflow into the well
 - Measure of the shut-in pressure or static water level and report it
- The owner of a flowing artesian well must
 - protect and maintain/protect any equipment installed to control the flow or prevent backflow
- Require well construction reports and well decommission reports for all flowing artesian wells, regardless of the class of the well.





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Well ID plates link the well to the well record



- Person responsible for constructing a well must attach ID plate
- Also applies to an owner of a well supplying a water supply system
- Obtained from the comptroller
- Plainly visible
- Report on well construction report or well ID report



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Roles and responsibilities of well owners



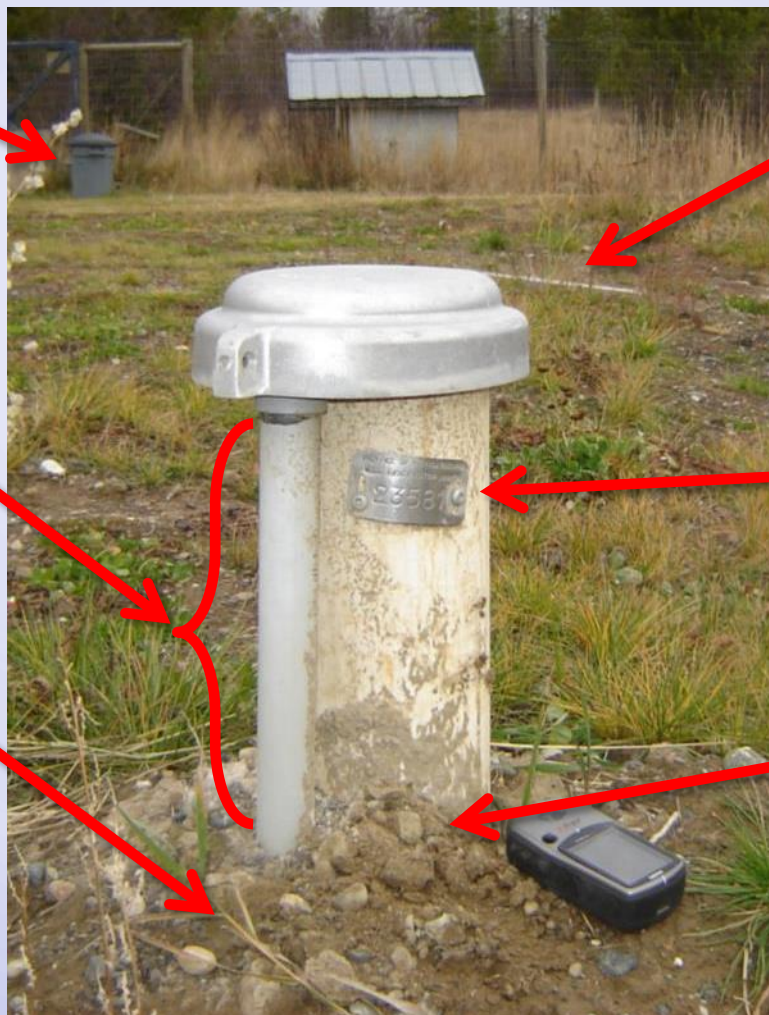


Owners must maintain wells and promptly carry out repairs

Store contaminants
>3m away and
prevent from traveling
within 3m of wellhead

Maintain 0.3m stick
up and protect from
damage

Keep ground sloped so
water does not pond
and is conveyed away
from wellhead



Maintain access to
wellhead for inspections

Keep area clear of
obstructions and
vegetation

Replace ID plate if lost
or damaged

Maintain surface seal
and fill any visible
annular space with
sealant



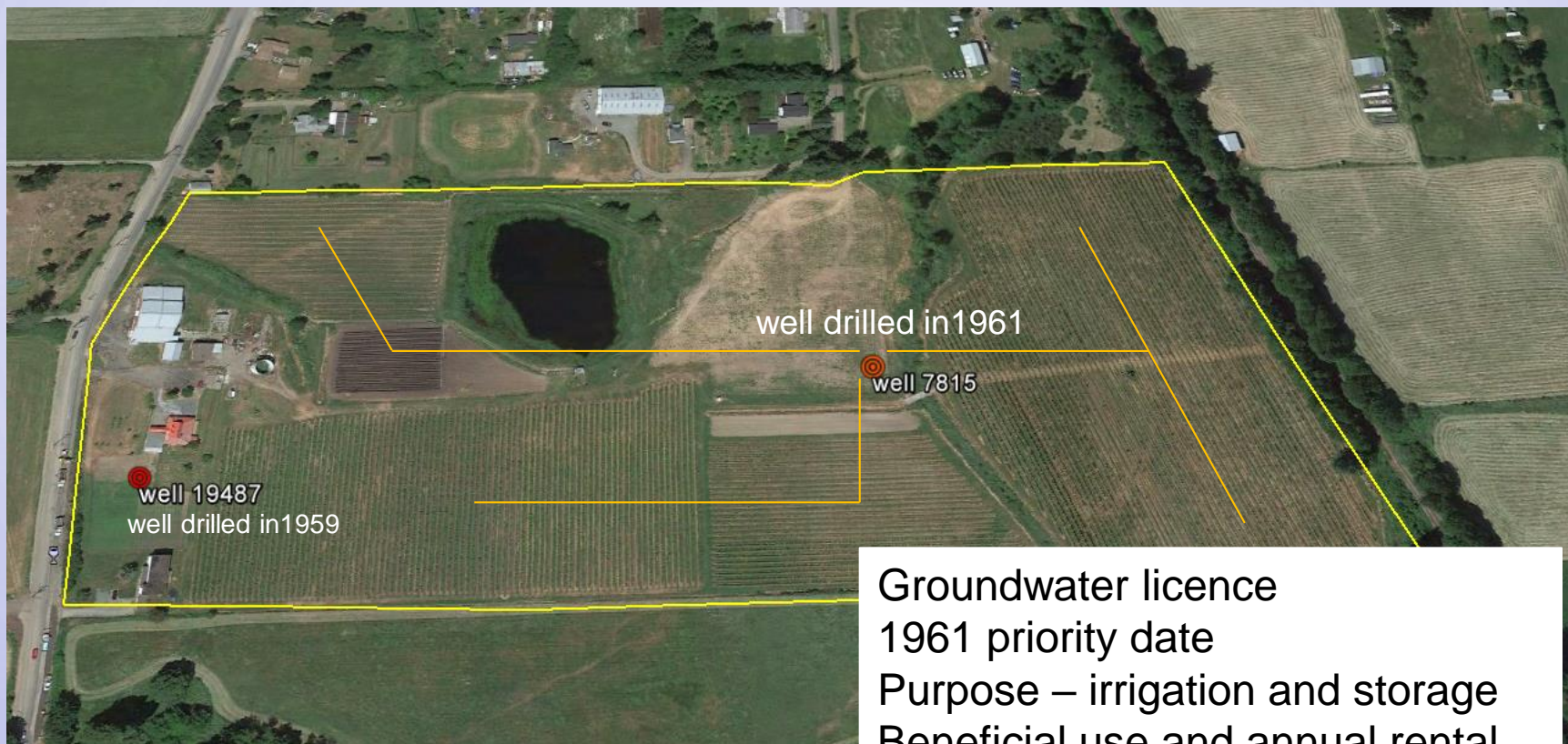
Disclaimer

- These are hypothetical examples
- Nothing I say can fetter a decision, under the act we reserve right to ask you for more information to support a decision for licence application



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irrigation of vineyards
domestic well supplying house



Groundwater licence
1961 priority date
Purpose – irrigation and storage
Beneficial use and annual rental



Well 3
1975
irrigation

Well 2
1955
Irrigation &
livestock watering

Well 4
2001
greenhouse

Well 1
1947
household



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Agriculture water calculator

<http://www.bcagriculturewatercalculator.ca/>

BC Agriculture
Water Calculator

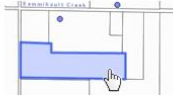
Place or address Search

Welcome Irrigation Livestock Help

About this Application v1.2.2

The BC Agriculture Water Calculator helps agriculture water users in British Columbia estimate the annual [irrigation or livestock water demand](#) for a farm. Irrigation water demand estimates are made based on the geographic location of the farm, as well as its soil type, crop type and type of irrigation. Livestock water demand estimates are made for a given number and type of animals.

Get started with irrigation water demand

1. Find your property by searching for an address (above) OR zooming in on the map.
2. Click your property on the map to select it.


The application will display a preliminary annual irrigation water demand estimate.
3. Adjust the soil, crop and irrigation parameters to update the estimate for your scenario.

Get started with livestock water demand

1. Click the *Livestock* tab (above).
2. Select the type and quantity of animal, and the number of days needing water. For multiple

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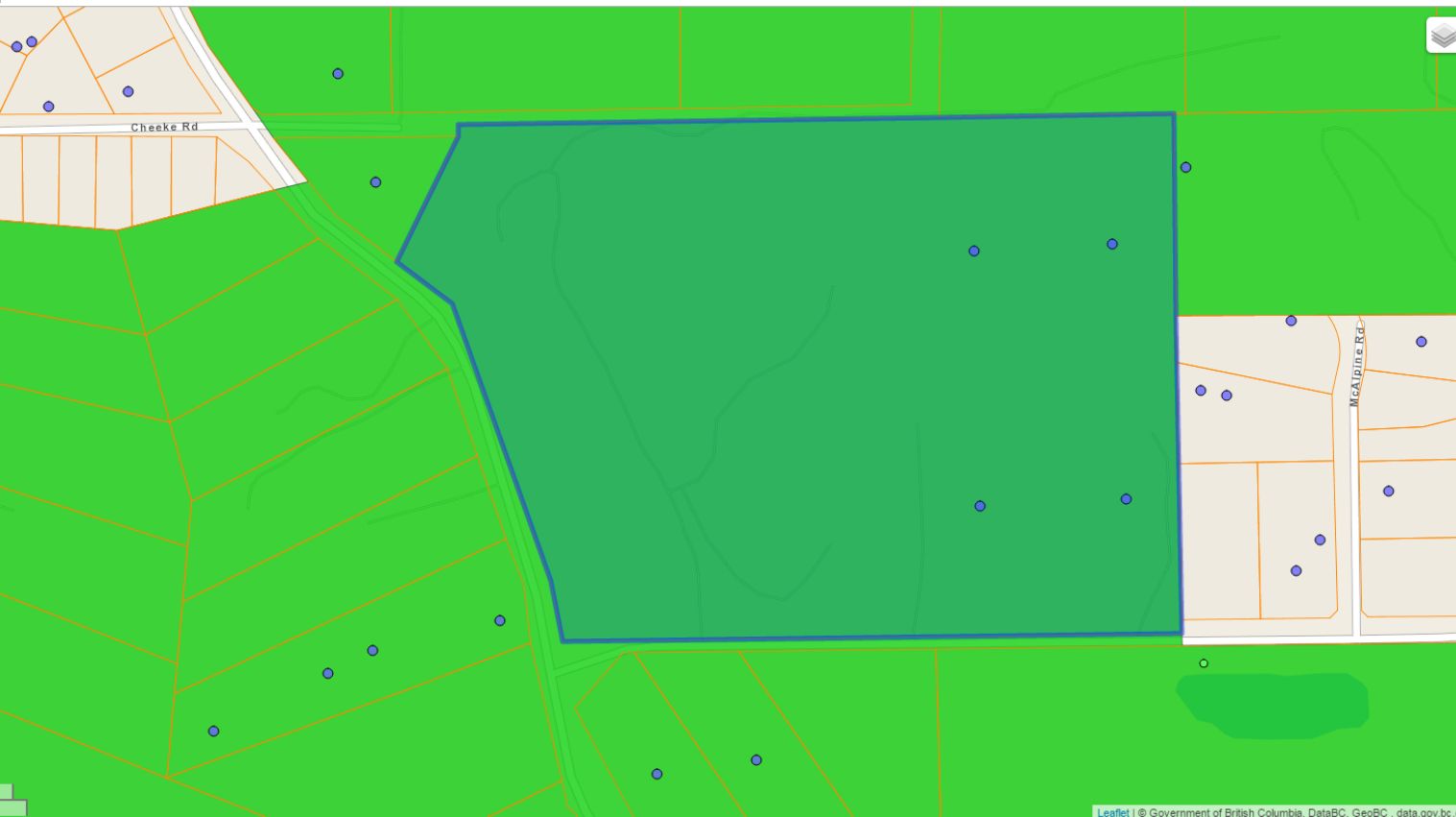
300 km
100 mi

the partnership for water sustainability in bc
Okanagan Basin WATER BOARD
Investment Agriculture Foundation
BRITISH COLUMBIA
Canada



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BC Agriculture
Water Calculator



Welcome Irrigation Livestock Help

Tip: Hold the [ctrl] key while clicking on the map to select multiple land parcels. ✕

Total Area 56 Acres ▾

Irrigated Area 56 Acres ▾

Crop Forage ▾

Soil Sandy Loam ▾

Irrigation Type Sprinkler ▾

Growing season 171 days

Climate ID 26721870

Peak ET * 5.1 mm/day

Peak Flow Rate ** 290 gpm ▾

Annual Irrigation Water Demand
84250 m³/year ▾

[More information](#)

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* ET: evapotranspiration



Welcome Irrigation **Livestock** Help

Type of animal Dairy - milking

Daily water demand 130 L

Number of animals 30

Days needing water (per year) 365

Annual water demand 1423500 L

Add another type of animal

Total annual water demand for livestock

1423500 L

Save as PDF

Welcome Irrigation Livestock Help

Tip: Hold the [ctrl] key while clicking on the map to select multiple land parcels.

Total Area 56 Acres

Irrigated Area 26 Acres

Crop Forage

Soil Sandy Loam

Irrigation Type Sprinkler

Growing season 171 days

Climate ID 26721870

Peak ET * 5.1 mm/day

Peak Flow Rate ** 130 gpm

Annual Irrigation Water Demand

39140 m³/year

More information Hide

Standardized Irrigation Water Demand †

372 mm/year

Domestic Household

No licence required

1947 Well #1

Irrigation & livestock watering

120,000 GPY

Water licence # 1

1955 Well #2

Irrigation

70,000 GPY

Water licence # 2

1975 Well #3

Industrial – Greenhouse & Nursery

30,000 GPY

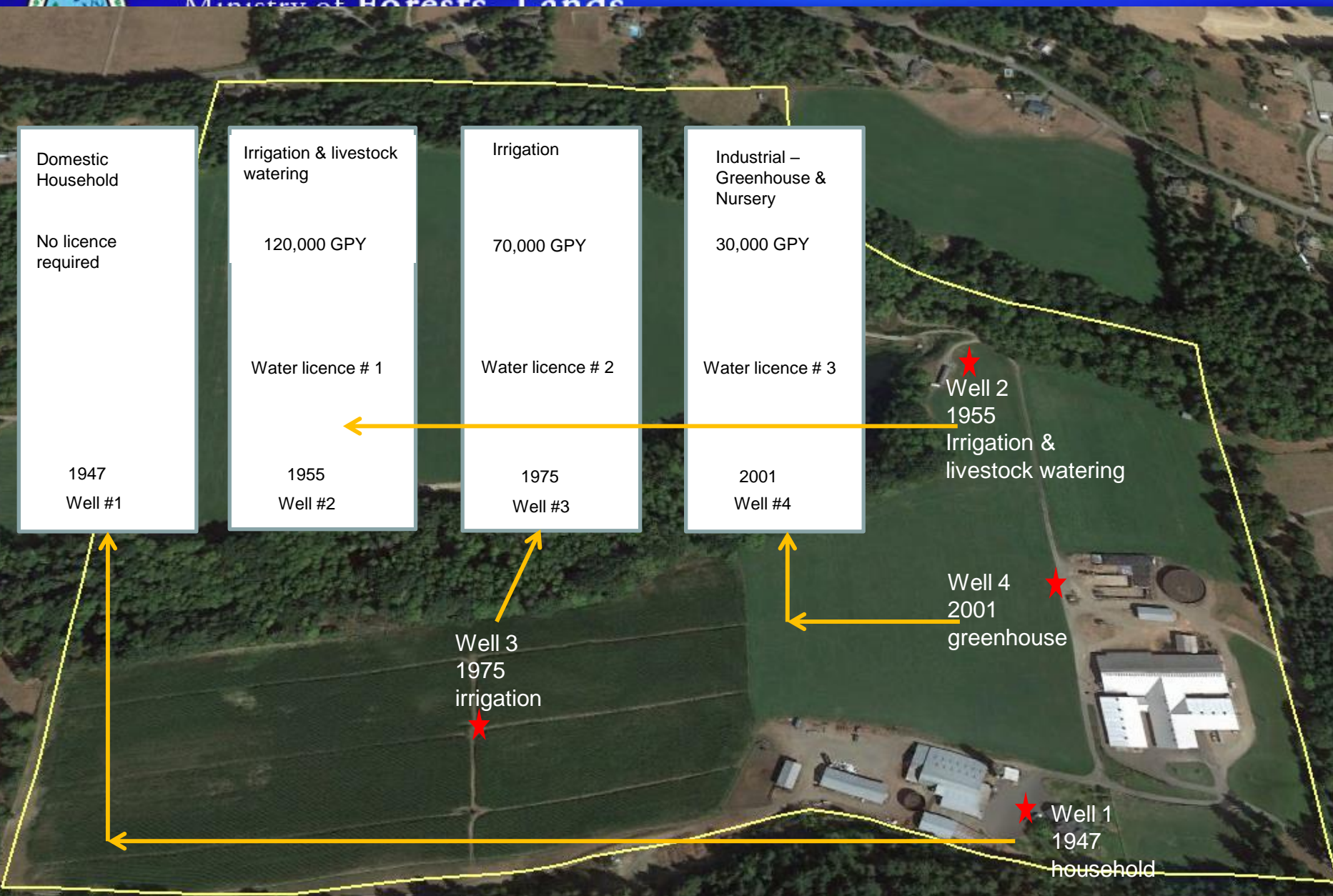
Water licence # 3

2001 Well #4

Well 2
1955
Irrigation & livestock watering

Well 4
2001
greenhouse

Well 1
1947
household





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- Existing groundwater users are exempt from application fees if you apply for a licence prior to Dec 31, 2017
- Three years to apply and have historical use recognized (2016-2019)
- Existing non-domestic groundwater users that have not yet applied for an authorization are responsible for rentals for the portion of 2016 occurring after Feb 29



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FrontCounterBC

Contact FrontCounter BC

By Phone

Call FrontCounter BC toll free at: **1-877-855-3222**
Call from outside North America at: **++1-778-372-0729**

By Email

Send us an e-mail at: FrontCounterBC@gov.bc.ca

In Person

Come and visit one of our many [locations](#) across BC

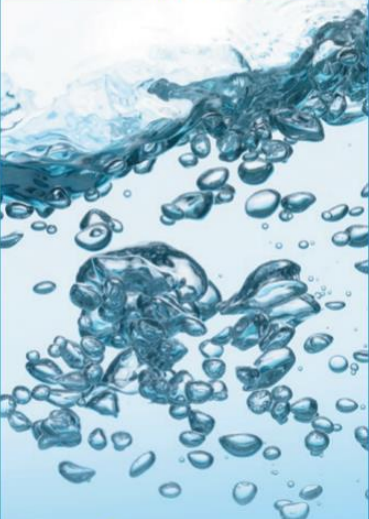



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Thank you

Licensing
Groundwater
Users

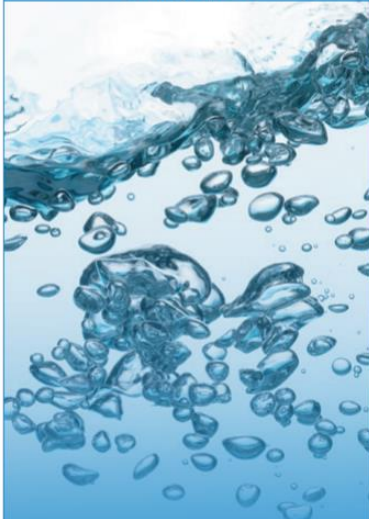
NEW REQUIREMENTS IN EFFECT
February 29, 2016




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