

South Coast Groundwater Management and the *Water Sustainability Act* Presentation to Fraser Valley BCGWA November 21, 2015

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South Coast Water Management

Regional Water Manager

- Surface Water Section
- Groundwater Section

Groundwater Section

- Management and Protection
 - Hydrogeologist
 - Groundwater Protection Officer
 - Observation Well Technician
- Licensing
 - Hydrogeologist
 - Authorization Officers and Senior Technicians (located in both Surrey and Chilliwack)



Water Sustainability Act (WSA)

- Into force early 2016
- Regulate groundwater
- Consider hydraulic connection between surface and groundwater (regulated as one resource)







Water licensing: Basic principles

- Grants a right to use water (with conditions)
- Right runs with the property
- Water rights are subject to FITFIR (first in time, first in right) principle
 - Seniority based on date of first beneficial use
 - More senior licensees get their full allocation before junior licensees (related to water scarcity)
 - Exceptions: Essential household use (250 L/day), Critical Environmental Flow





Licensing Wells

- Domestic use exempt
- Non-domestic irrigation, industrial, waterworks, etc. will need a license
 - Both existing and new wells
- Similar licensing scheme as for surface water fees, rentals
- FITFIR model
- Challenges:
 - Hydraulic connection
 - Sustainable extraction



Existing Licensable Wells

- Required to apply for a license
- Can continue to use the water while their application is processed
- Demonstrate beneficial use of water and document date of first use
- Assigned a priority date (FITFIR)
- Have three years to apply for a license, application fee is waived for the first year



1969

2003

1971



Implications for new licensable wells



- Can drill a well before getting a license, but can't use the water until a license is granted
- Quantity authorized by a license will depend on impacts (existing users, streams)
- Should consider setbacks prior to drilling
- Documentation: well yield, well construction, etc
- More discussions to come with Government on this



Domestic wells

- Not licensed, unless have an area based regulation
- Well owners have no license, but have a deemed water right
- Rights are considered when adjudicating a water license
- Priority based on date of first use
- Subject to regulations during times of water shortage























The Provincial observation well network

- monitor groundwater quantity (and quality)
- early warning system for problems
- 160 active wells



Vancou

Ministry of Forests, Lands and Natural Resource Operations

http://www.env.gov.bc.ca/wsd/data_searches/obswell/map/



British Columbia Groundwater Observation Well Network





🔘 Wells with real-time data



British Columbia Groundwater Observation Well Network





Observation Well #002 OBS WELL 2 - ABBOTSFORD (AIRPORT HUNTINGDON RD W OF CLEARBROOK RD)

Water levels for the last two calendar years, along with historical statistics

Graph

Data Table

Water level below ground surface in metres













Groundwater-surface water interaction study

- Better inform decisions related to hydraulic connection between wells & surface water
- Collaboration with FLNRO hydrogeologists and hydrologists; SFU (Diana Allen)
- Two study sites: unconfined & confined

(Hopington & Salmon River; Beaver River/Aldergrove & West Creek)

- Pumping well near creek, intermediate
 piezometers, up and downstream hydrometric
 station, seepage meters (baseline data)
- 2-3 day pumping test
- Test several analytic models being developed to inform water licensing decision



QUESTIONS?

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