

Groundwater in BC

Policy, Science, Data and Decisions

February 26 / 2018

Outline



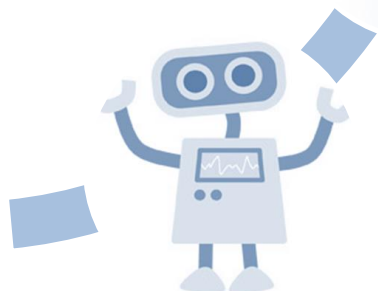
Legislation
The Water
Sustainability Act



Organization
& Staff



Our Approach
& Our Data



Under
Development

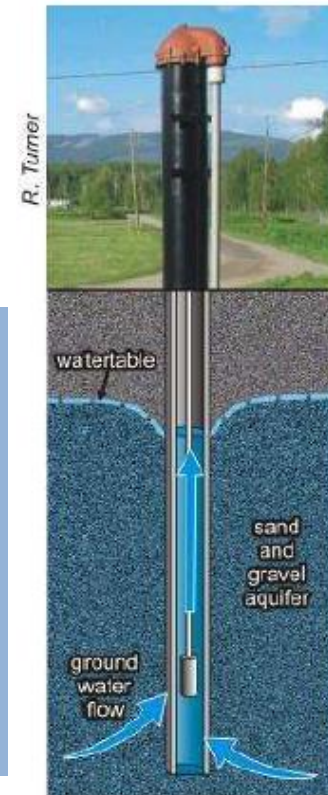


Water Sustainability Act

NEW RULES NOW IN EFFECT
February 29, 2016

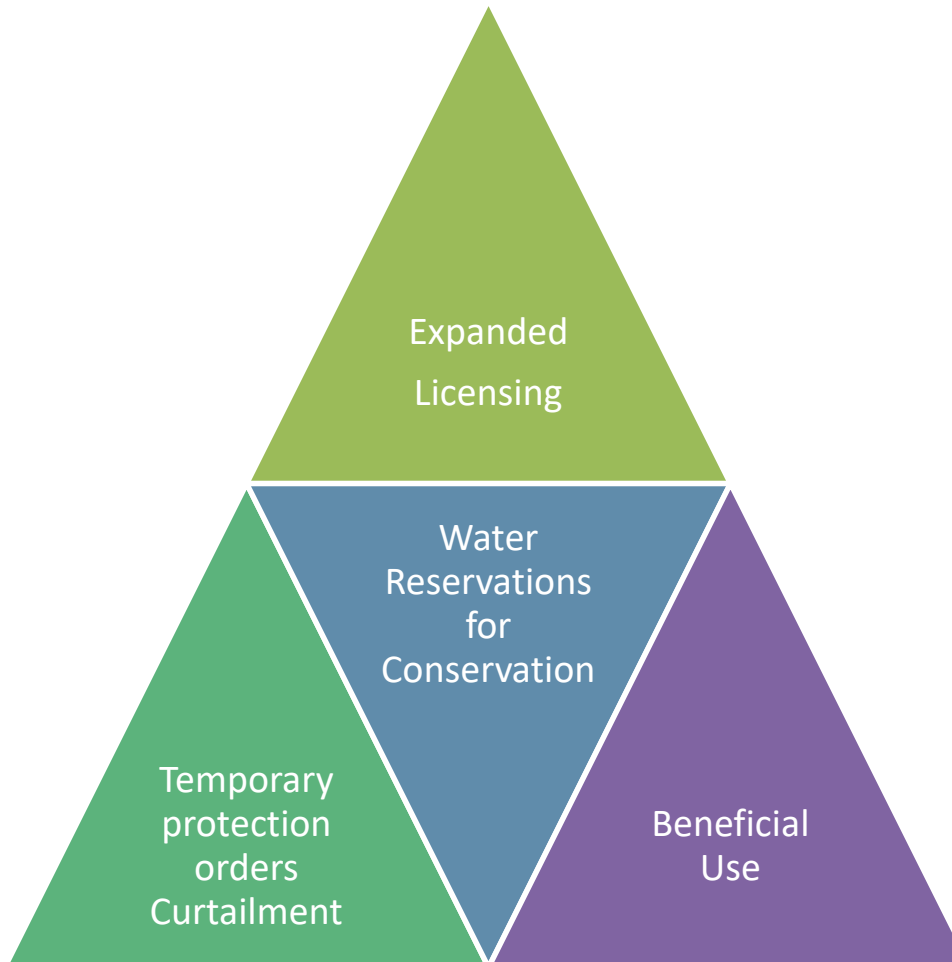
NEW
Application fee waiver
period extended to December 31, 2017

- Licensing of groundwater use
- Measuring & Reporting of Use
- Protection for streams
- Manage Water Scarcity
- Water Sustainability Plans
- Setting Objectives: Quality & Quantity





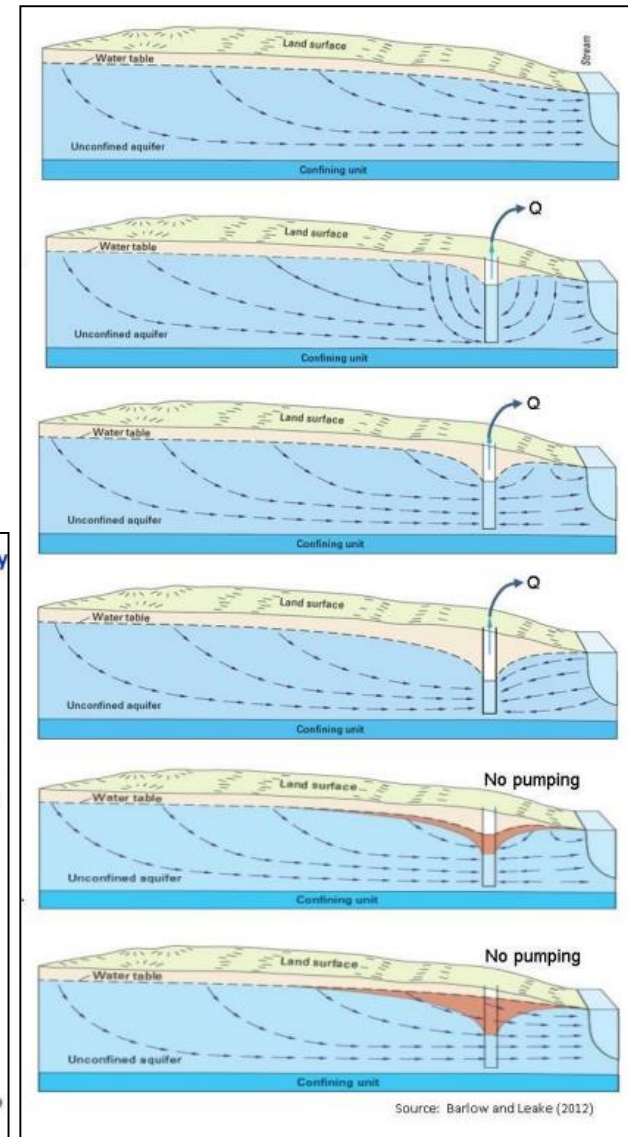
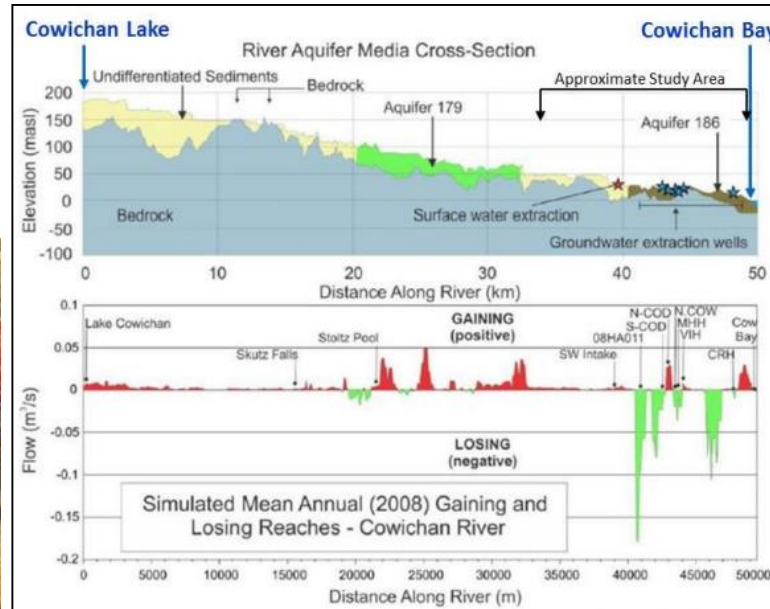
Protecting Aquatic Ecosystems (Environmental Flow Needs)

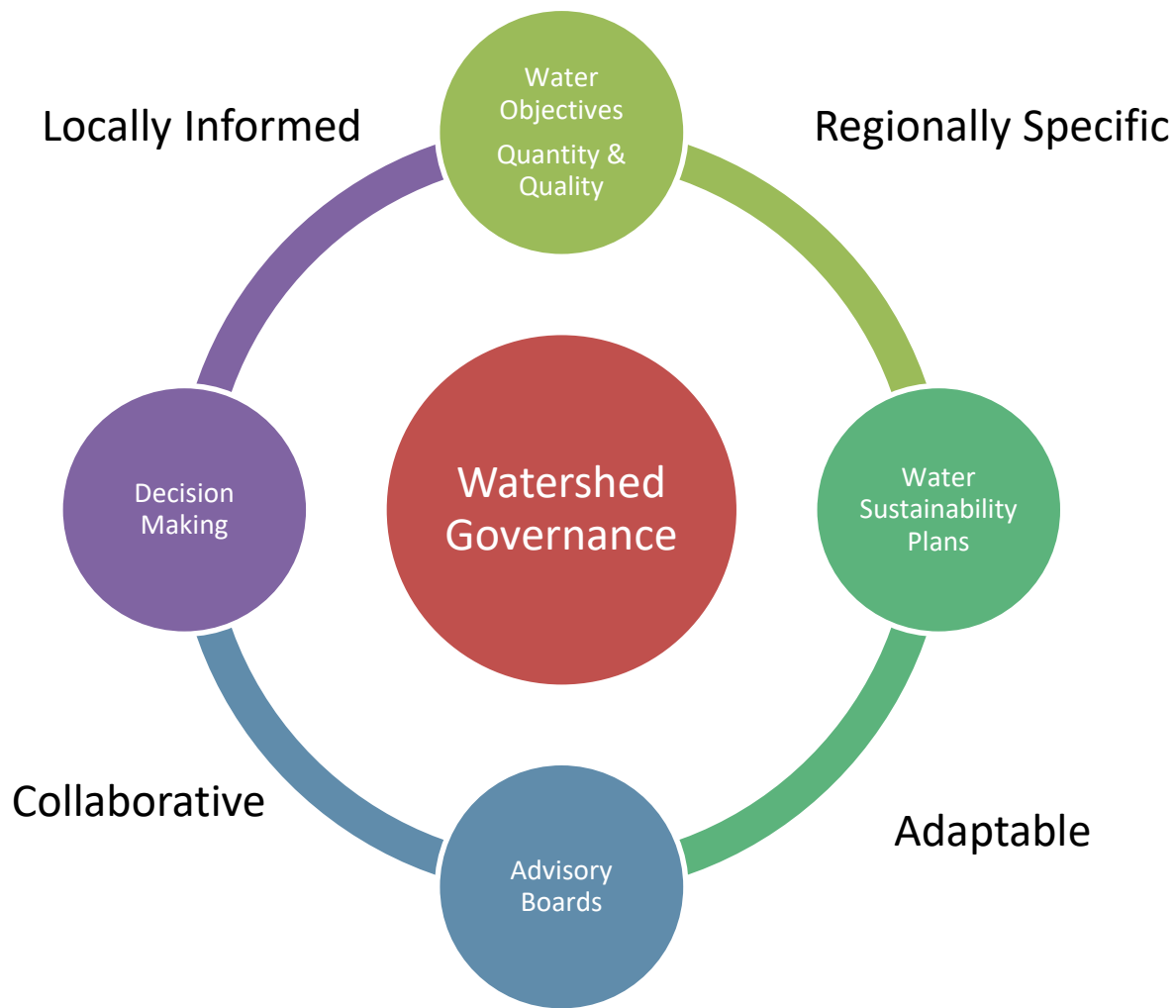


Temporary Protection Orders

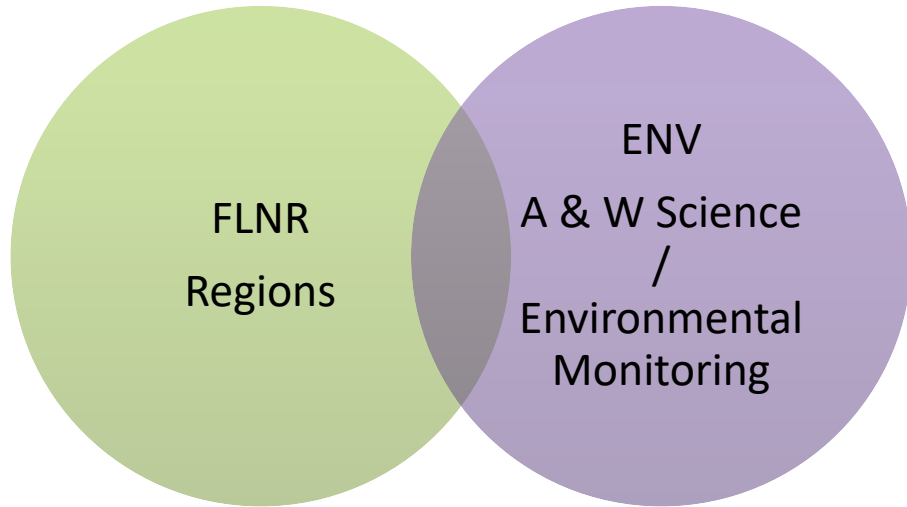
To address

- Seasonal Water Scarcity
- Drought





Province of BC Groundwater Science

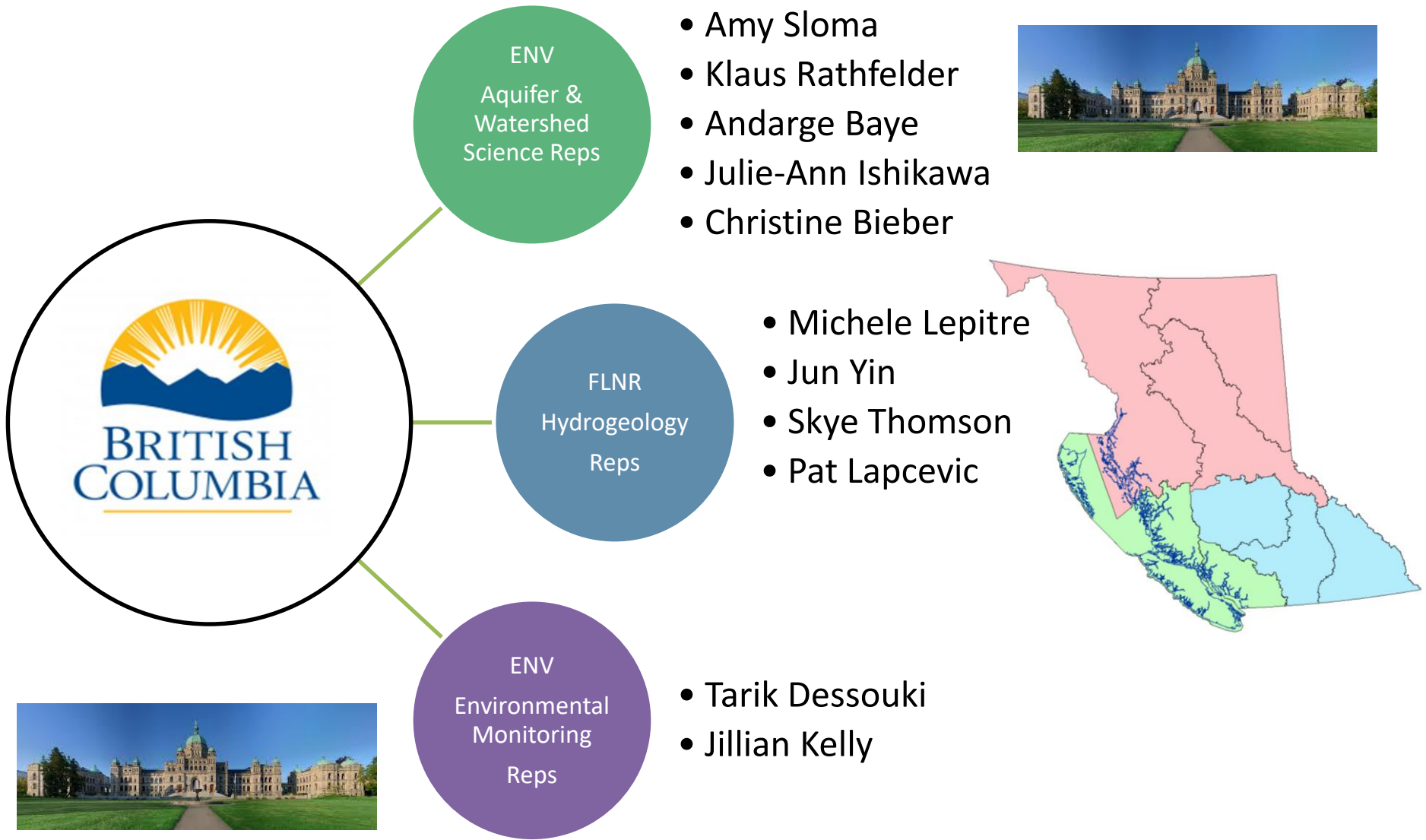


Collaborate on :

Science & Research
Groundwater Characterization Studies
Monitoring
Policy Development

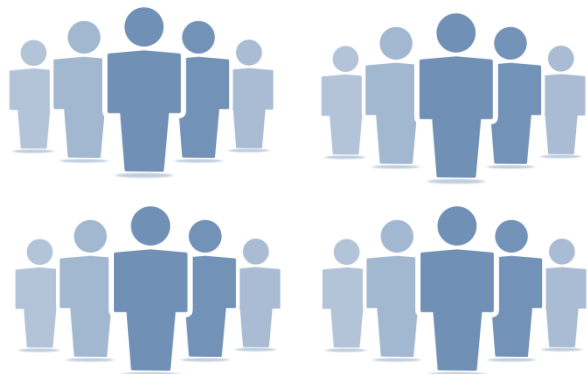


Province of BC Workshop Representatives



Province of BC Expertise

More than 20 staff
specialize in &
have education &
experience in
hydrogeology.



Specialized knowledge in:

Management &
Planning

Legislation &
Policy

Standards and
Data Systems

Stakeholder
Relationships

Protection

Monitoring
Networks

Conducting
Regional Studies

Groundwater
Characterization

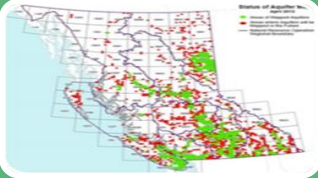
Groundwater
Modelling



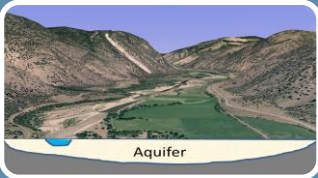
Our Approach: Data Systems & Analysis



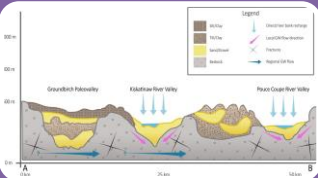
WELLS



Mapping



Water Budgets



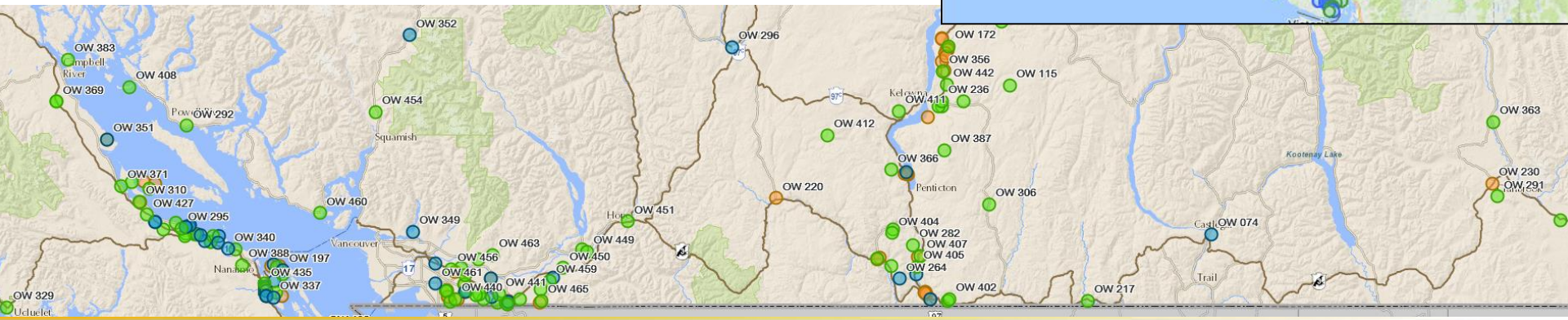
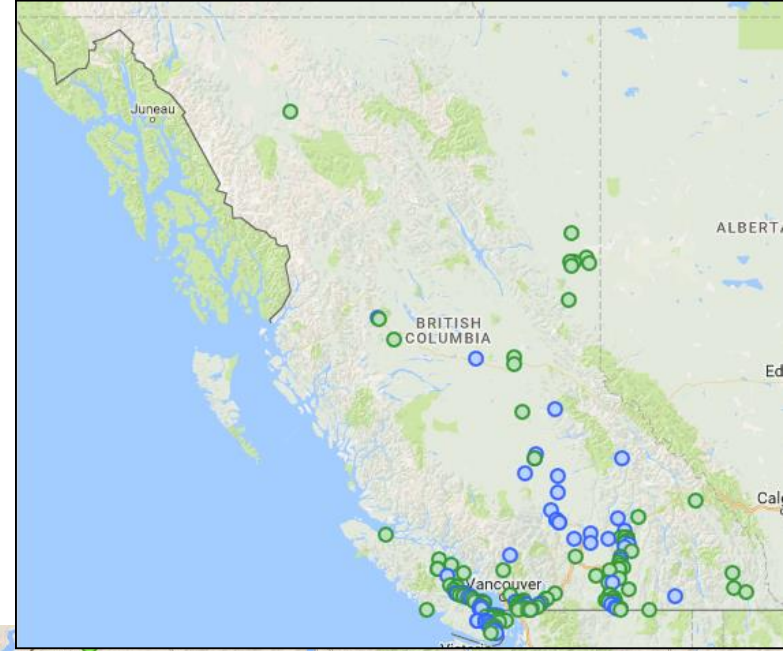
Modelling & Characterization Projects



Our Approach: Monitoring

Provincial Groundwater Observation Well Network

- Established 1961
- 190 active wells in the network
- Groundwater Levels & Chemistry
- Shared FLNR / ENV Responsibility

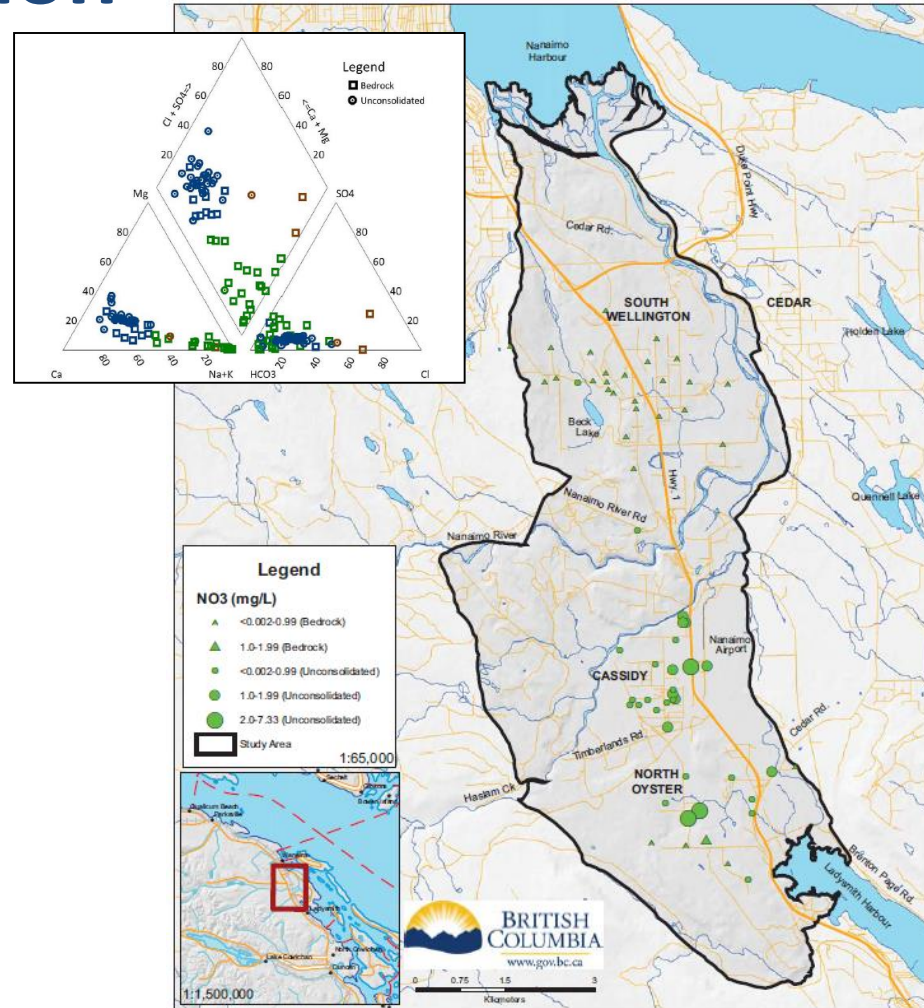


Our Approach: Monitoring / Characterization

Regional Water Quality Studies & the Ambient Network Example:

Groundwater Quality Survey of Aquifers in South Wellington, Cassidy and North Oyster, Vancouver Island

Sylvia Barroso, P. Geo., Rachelle Ormond, and Pat Lapcevic, P. Geo.



Our Approach: Research Partnerships

Example:

Assessment of Aquifer-Stream Connectivity Related to Groundwater Abstraction in the Lower Fraser Valley

Phase 1 Field Investigation

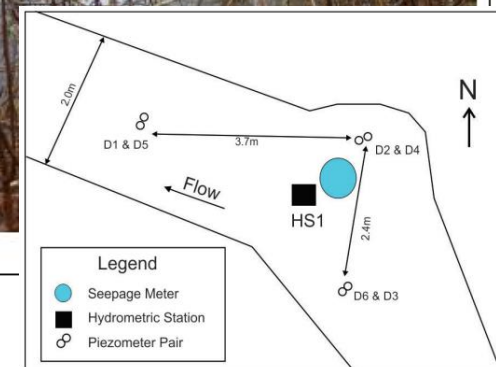
Glenn Hall, Diana M. Allen, Mike Simpson, Habtamu Tolera,
Bryan Jackson, Mary Ann Middleton, and Michele Lepitre



a

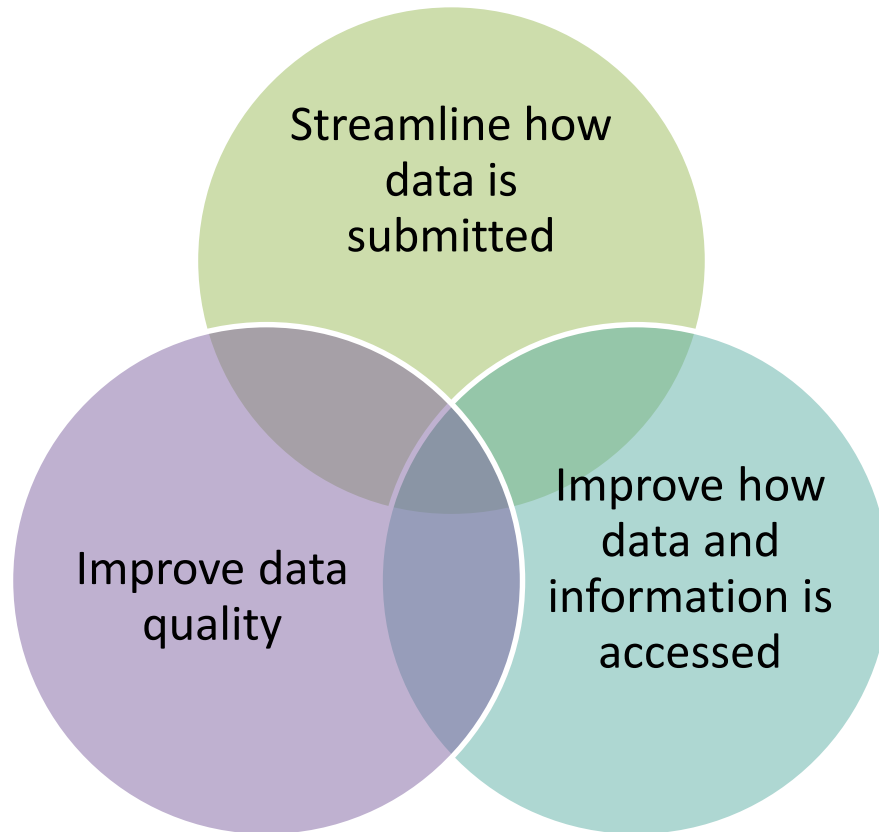


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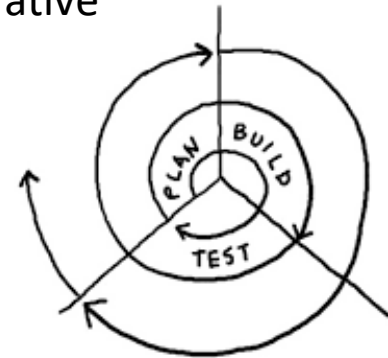


New & Under Development:

GWELLS (the new WELLS)



Iterative



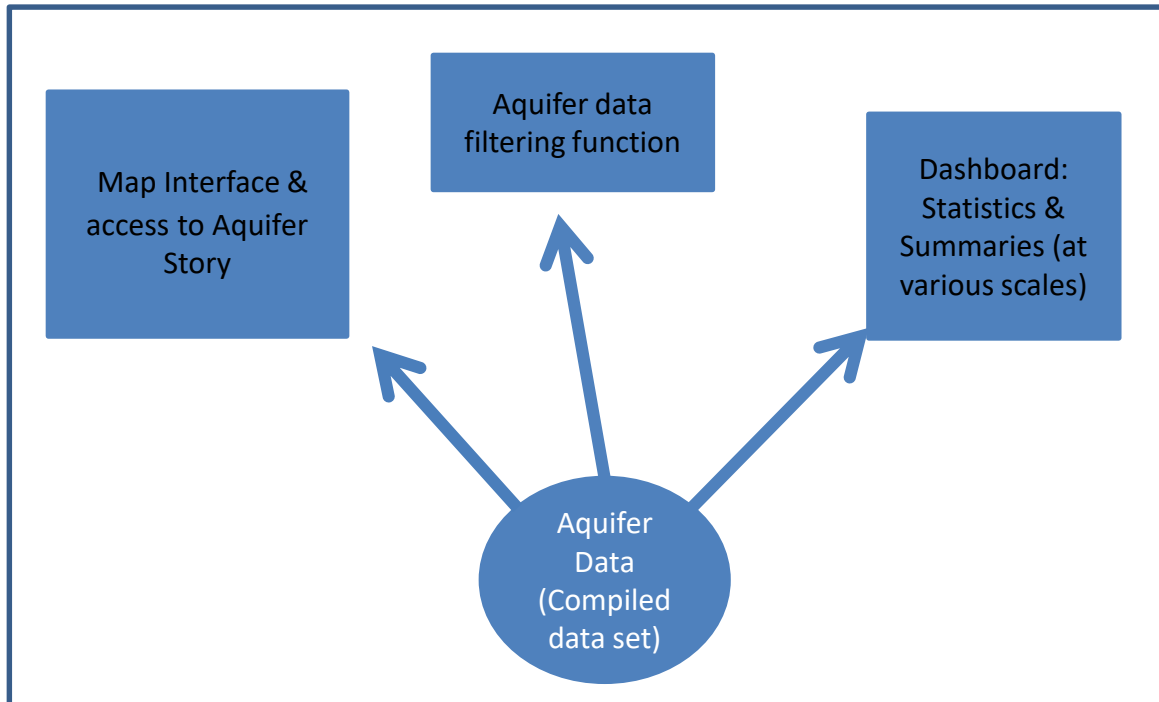
Collaborative



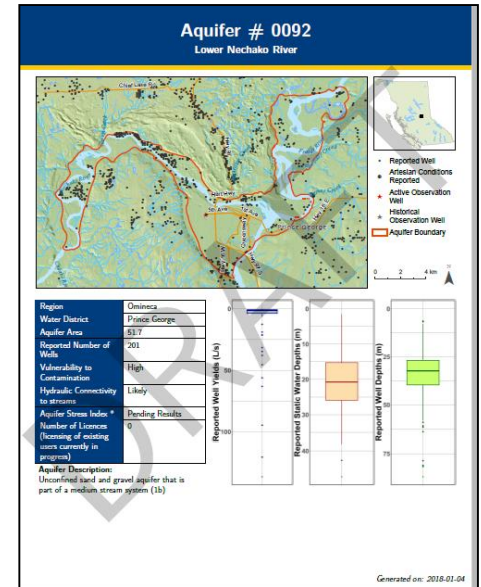
New & Under Development:

Aquifer Dashboard (Hub / Portal)

- Pulling available groundwater information together
- Aquifer based platform



Interactive map based tool



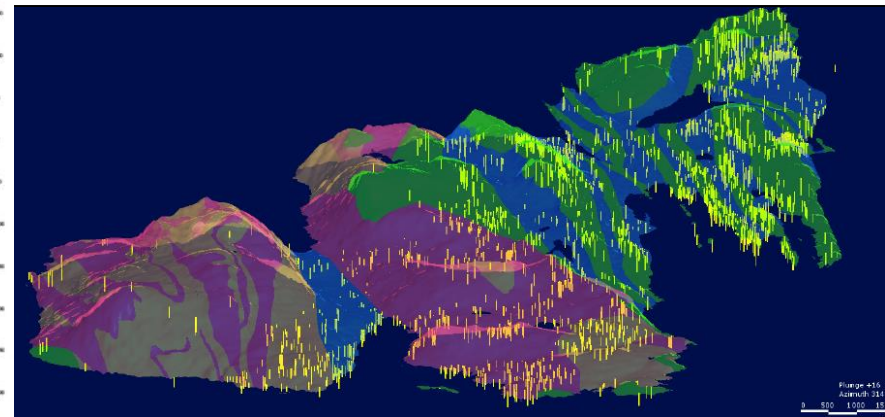
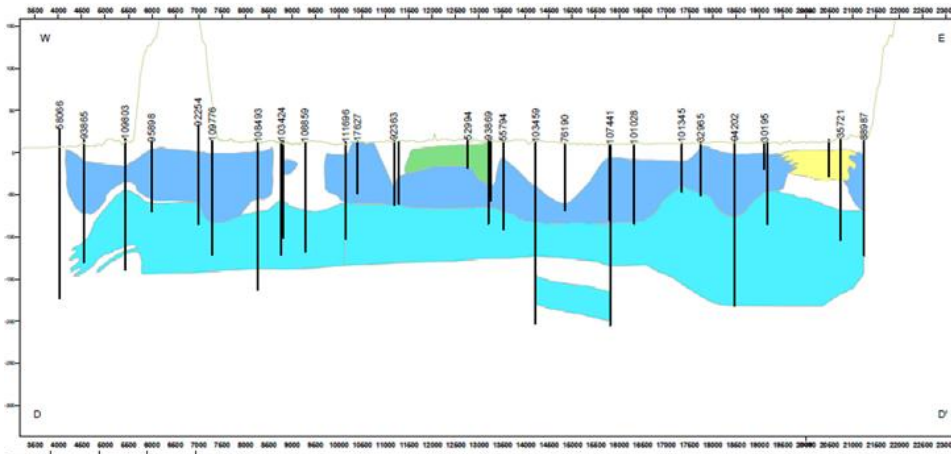
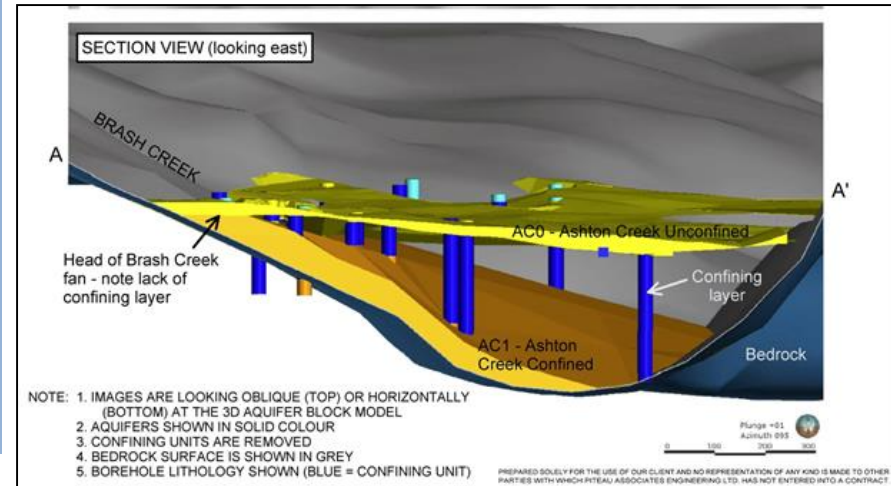
Aquifer Factsheets



New & Under Development:

Hydrogeologic Mapping

- More rigorous approach
- Better Support For:
 - Analysis
 - Modelling
 - Water Management Decisions & Planning

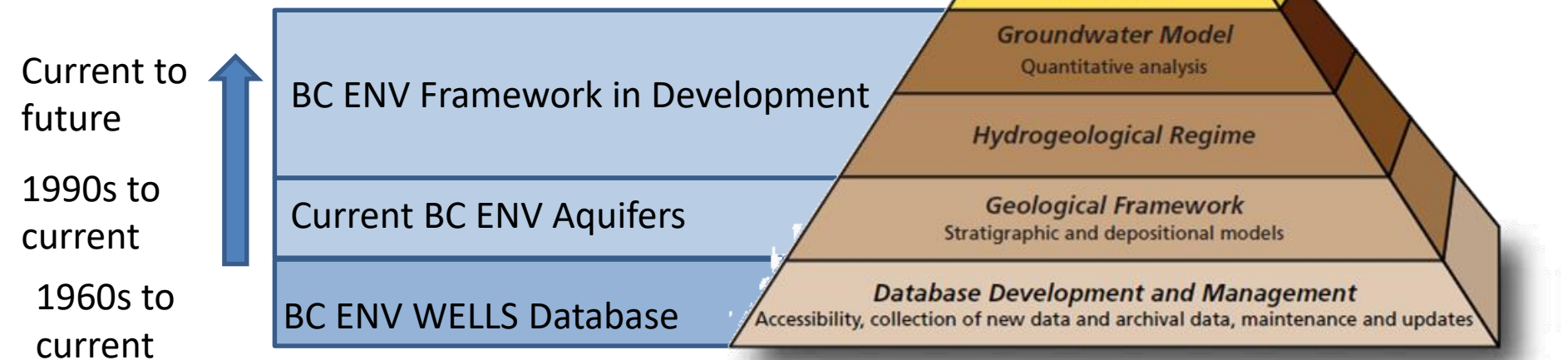


New & Under Development:



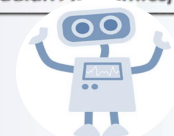
Groundwater Knowledge Framework

- Informs Data Systems
- Approach to Water Management



(Council of Canadian Academies, 2009)

Figure 4.1
Science requirements for groundwater sustainability.



Decision Making:



Approach to Water Management supports our decisions and policies

- Landuse and Watershed Planning
- Bilateral Water Agreements
- Drinking Water Protection Regulation
- Supports working collaboratively with various partners and First Nations (UNDRIP)



