



**South Okanagan  
Similkameen**

CONSERVATION  
PROGRAM

# Groundwater Legislation and Local Government Tools

SVPS May 15, 2012



**Wesley Miles - Shared Environmental  
Planner**

*MG 2011*

# Shared Planner's Role:

**Assisting with land use planning processes; providing information and tools that support decision makers, and key stakeholders.**

- Provide technical and policy support during Official Community Plan reviews, Comprehensive Community Plans, Regional Growth Strategy
- Extension of science, mapping, workshops, capacity development (funding and expertise)
- Policy and conservation tools Green Bylaw Toolkit, Ground bylaw language, technical advice



# Applicable Legislation – Surface and Groundwater

## **Canadian Fisheries Act**

Protects fish and fish habitat

Regulates the release of deleterious substances into fish-bearing waters.

Prohibits Harmful Alteration, Disruption or Destruction of fish **habitat**

## **B.C. Water Act / Water Protection Act**

Part 9 of the Water Act governs all works in or about a stream.

Works need an approval or notification, depending on the type of work.

Is not used to regulate the use of Groundwater.

## **Environmental Assessment Act**

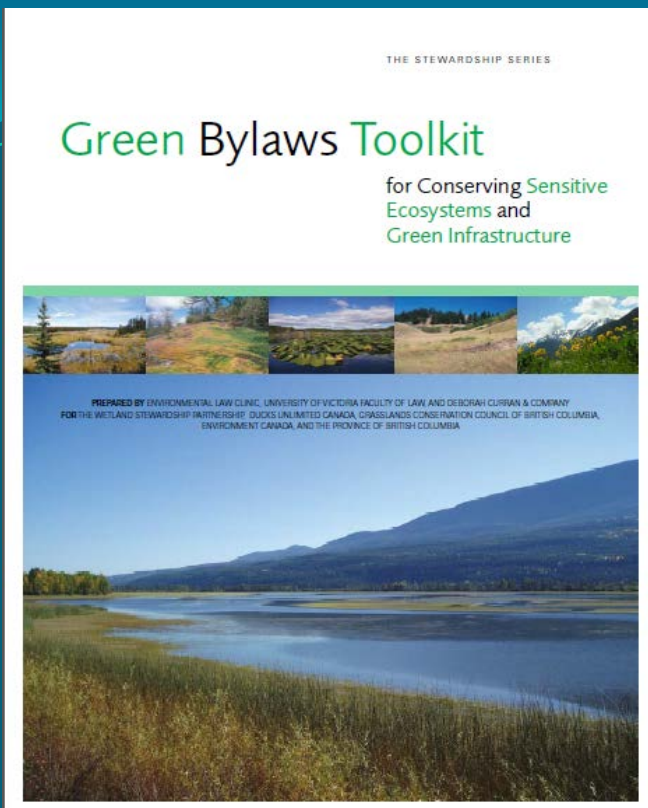
Only regulates large scale groundwater withdrawal. (i.e mines, mills)

## **B.C. Fish Protection Act & Riparian Areas Regulation**

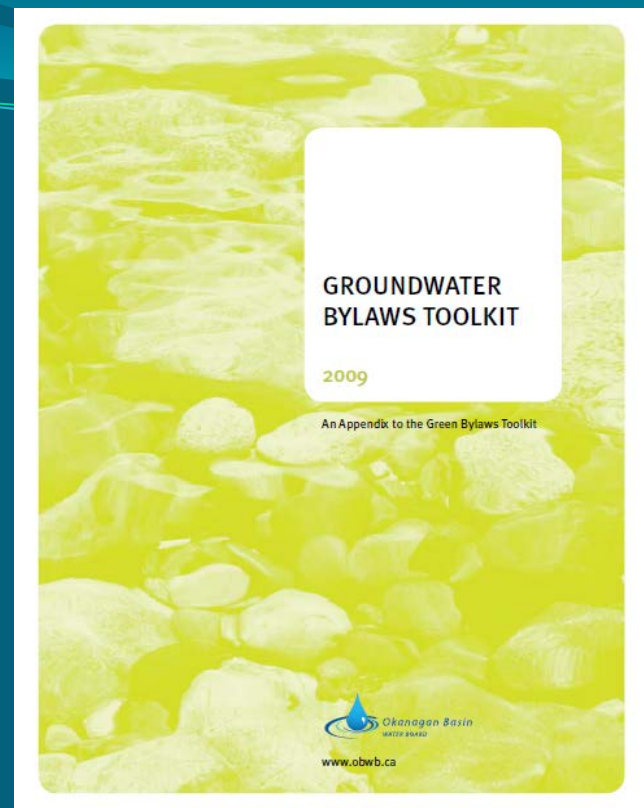
Provides for protection of riparian areas.

## **Federal Water Quality Guidelines**

Addresses drinking water and the protection of aquatic life.



Green Bylaws Toolkit, 2007



Groundwater Bylaws Toolkit, 2009

- Background information and data
- Outlines Federal, Provincial and Local Government Jurisdiction
- Policy and Bylaw Recommendations: Regional Growth Strategies (RGS), Official Community Plans (OCP), Zoning, Development Permits, and Subdivision Servicing.
- Case Studies/Examples

# Background Information and Data

## GROUNDWATER BYLAWS TOOLKIT

2009

An Appendix to the Green Bylaws Toolkit



Figure 4: Types of aquifers

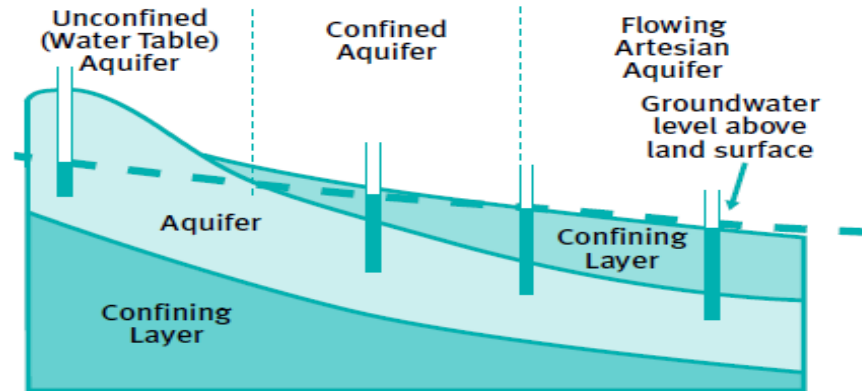


Table 4: Qualified individuals that local government staff may consult for input on groundwater issues

Name	Title	Description
Qualified Professional (P.Eng. or P.Geo. with APEGBC)	QP	<ul style="list-style-type: none"> <li>• A professional engineer or geoscientist with specific expertise in hydrogeology</li> <li>• Member of the Association of Professional Engineers and Geoscientists of BC (APEGBC)</li> <li>• Assesses groundwater quantity and quality</li> <li>• Determines testing requirements</li> <li>• Interprets test data beyond graphing and for specific well capacity reporting</li> <li>• Signs reports and submits them to the agency or agencies with jurisdiction over the study and its recommendations</li> </ul>
Qualified Well Driller	QWD	<ul style="list-style-type: none"> <li>• Registered as a qualified well driller with the province</li> <li>• Drills wells</li> <li>• Conducts yield and pumping tests</li> <li>• Prepares detailed well driller's reports</li> </ul>
Qualified Well Pump Installer	QWPI	<ul style="list-style-type: none"> <li>• Registered as a qualified well pump installer with the province</li> <li>• Installs and services well pumps</li> <li>• Conducts pumping tests</li> <li>• Collects field data such as flow rate and water level measurements</li> <li>• Prepares basic field data tables and graphs</li> </ul>









## GROUNDWATER BYLAWS TOOLKIT

2009

An Appendix to the Green Bylaws Toolkit



## GROUNDWATER BYLAWS TOOLKIT – OVERVIEW OF TOOLS

4.2	Groundwater data collection and mapping		<ul style="list-style-type: none"> <li>Identifies vulnerable areas for protection</li> <li>Directs development to appropriate locations</li> <li>Serves as foundation for all other tools</li> <li>Can be done on a broad scale, to set the stage for more detailed scale assessment later</li> </ul>
4.3	Water management and well protection planning		<ul style="list-style-type: none"> <li>Establishes strategies within a designated planning area to safeguard all water resources and reduce conflict among water users, including well protection planning</li> <li>Focuses on water conservation &amp; pollution prevention</li> <li>Provides for broader consultation and continuous monitoring</li> <li>Enables access to provincial funding (if legislated under Part 4 of the Water Act)</li> </ul>
4.4	Regional growth strategies		<ul style="list-style-type: none"> <li>Coordinates region-wide action among jurisdictions sharing one or more aquifers</li> <li>Designates urban containment boundaries that direct development to appropriate locations</li> <li>Includes regional commitments to groundwater protection and sustainability</li> <li>Supports data collection &amp; mapping</li> </ul>
4.5	Official community planning		<ul style="list-style-type: none"> <li>Guides how and where new development occurs</li> <li>Directs council and staff to undertake groundwater protection measures</li> <li>Raises awareness within a community of groundwater issues and areas of concern</li> <li>Establishes and contains the guidelines for development permit areas</li> </ul>
4.6	Zoning for groundwater protection		<ul style="list-style-type: none"> <li>Regulates use and density of property to direct development away from groundwater-limited or aquifer recharge areas</li> <li>Can limit lot sizes to reduce density in groundwater-scarce areas</li> <li>Can prohibit potentially polluting uses in areas where aquifers must be protected</li> <li>Sets standards on aspects of development that will have an impact on the water resource on the site or in the area (e.g., setback from riparian areas)</li> <li>Can encourage groundwater-sensitive development by clustering development through rezoning</li> <li>Can leverage habitat protection or water-efficient amenities when rezoning</li> </ul>
4.7	Aquifer protection development permit areas		<ul style="list-style-type: none"> <li>Can be used to accomplish similar goals as regulatory bylaws, but limited to specific areas or types of ecosystems (may apply across several different zoning designations)</li> <li>Prohibits site disturbance before development approval</li> <li>Can allow local government to monitor ecosystem conditions as development progresses, and for a specific amount of time post-development</li> <li>Allows local government to collect security from permit-holder that can be used to complete permit requirements if the permit holder does not comply</li> </ul>
4.8	Aquifer protection development approval information areas		<ul style="list-style-type: none"> <li>Guides how and where new development occurs</li> <li>Directs council and staff to undertake groundwater protection measures</li> <li>Raises awareness within a community of groundwater issues and areas of concern</li> <li>Establishes and contains the guidelines for development permit areas</li> </ul>
4.9	Subdivision servicing bylaws		<ul style="list-style-type: none"> <li>Can require that works mimic natural hydrology</li> <li>Can set drainage and rainwater infiltration standards</li> <li>Can require standardized minimum flow rates for providing sustained yield</li> <li>Can require wells to be closed when property connected to community water systems</li> <li>Can require bonding for future operations and maintenance of larger systems</li> <li>Can take into account cumulative impacts of incremental development</li> </ul>

# Local Government Tools: Groundwater

## Green Bylaws Toolkit

for Conserving Sensitive  
Ecosystems and  
Green Infrastructure

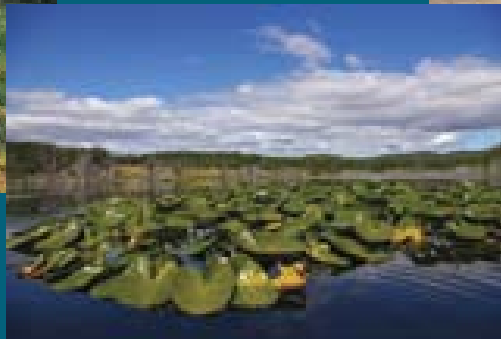


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ENVIRONMENT CANADA, AND THE PROVINCE OF BRITISH COLUMBIA



# Local Government Tools: Other

- Tree removal
- Soil deposition and removal
- Watercourse Development Permits
- Environmentally Sensitive Development Permits
- Conservation Zoning
- Conservation covenants
- RGS, OCP's etc.

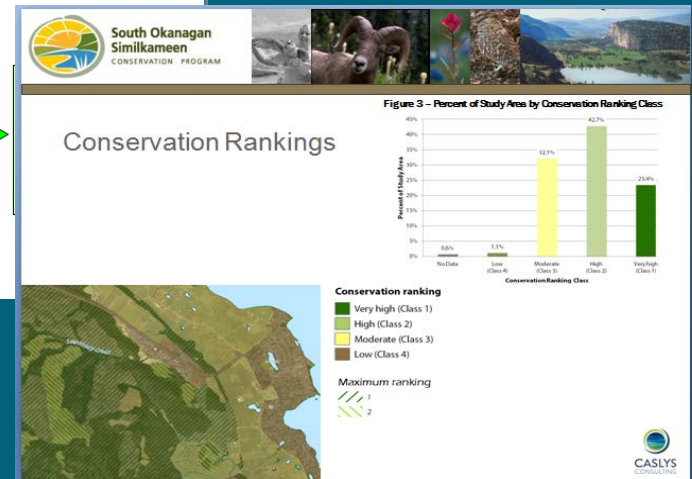
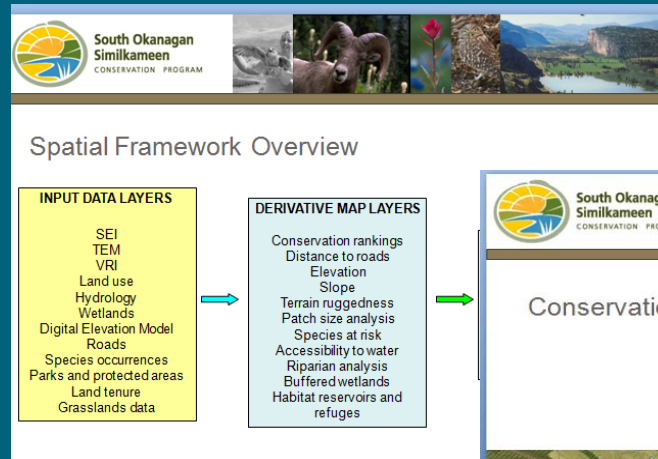




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# Biodiversity Conservation Strategy (BCS): Update





# Links

Okanagan Basin Water Board (OBWB) - <http://www.obwb.ca/>

Green Bylaws Toolkit -  
[http://www.greenbylaws.ca/images/greenbylaws\\_web1207.pdf](http://www.greenbylaws.ca/images/greenbylaws_web1207.pdf)

Groundwater Bylaws - [http://www.obwb.ca/groundwater\\_bylaws\\_toolkit/](http://www.obwb.ca/groundwater_bylaws_toolkit/)

MoFLNRO – <http://www.env.gov.bc.ca/wsd>

SOSCP – <http://www.soscp.org>

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Questions?