



Source Water Protection in BC: Challenges and Opportunities

Presented to:

Okanagan Water Stewardship Council

Kelowna, BC

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Water Stewardship Division

Outline

- Source Water Protection in BC: the Provincial Context
- Okanagan Source Water Protection: the Local Context
- Challenges and Opportunities

What is Source Water Protection?

- Drinking water comes from surface and ground water sources
- **Watersheds** are the sources for surface water: lakes and streams
- **Aquifers** are the sources for ground water: wells and springs
- Source water protection involves managing activities in source water areas to protection drinking water quality and quantity



A bit about BC's drinking water...

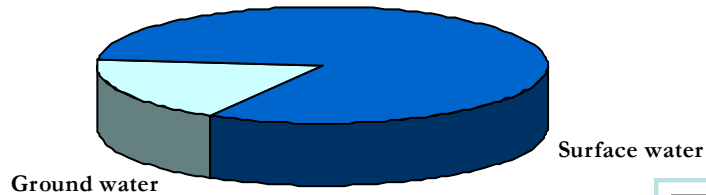
- ▶ Total population of 4.25 million
- ▶ 4500 permitted water systems (surface and ground water)
- ▶ Greater Vancouver and Greater Victoria supply 2.5 million (59%) from protected surface water supplies
- ▶ Of remaining 1.75 million (41%): 60% surface, 40% ground water from unprotected sources





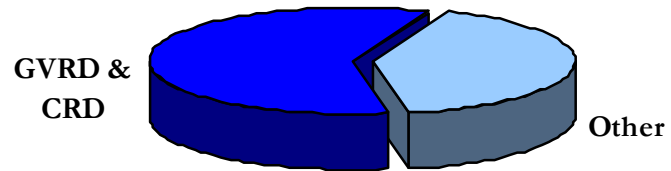
BC Drinking Water Sources

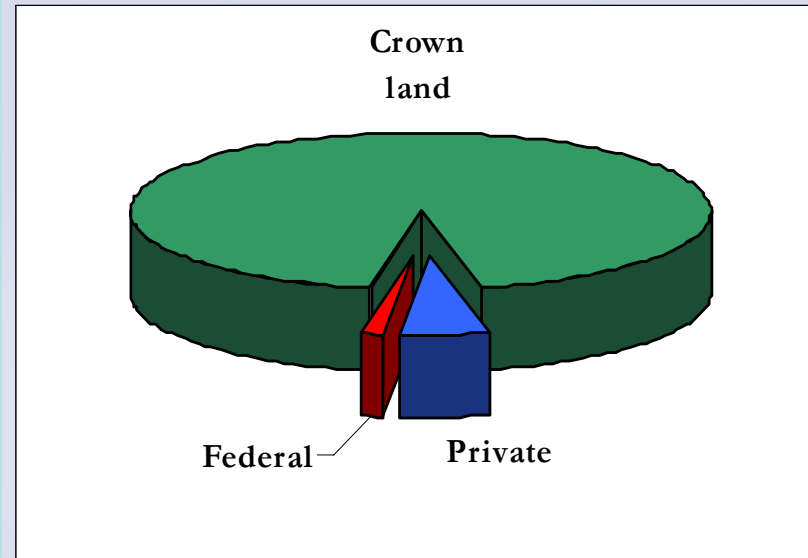
Surface and Groundwater Use



Population Served By

(BC Population: 4.25 million)





Land and Water Management in BC

- Challenging terrain and diverse biogeoclimatic zones
- 94% Crown land: multiple land use tenures
- 5% privately owned
- 1% federal

Auditor General's Report on Protecting BC's Drinking Water Sources 1998-1999

Key Findings:

- Neglecting source protection can be costly
- Water source management is not integrated in BC
- Need better management of managing effects of other resource users on drinking water sources
- Absence of ground water management a problem
- Small water systems are particularly vulnerable

Drinking Water Action Plan



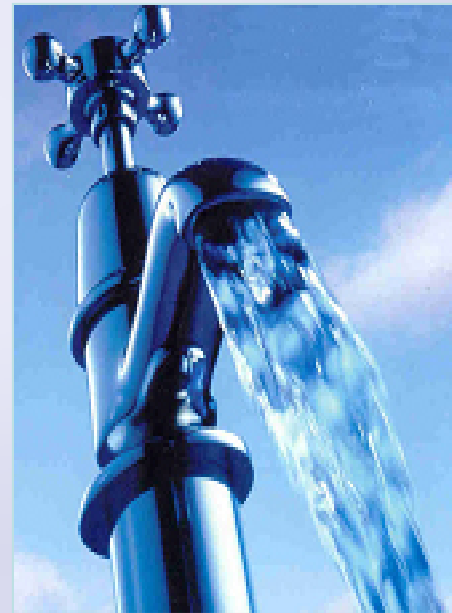
Action Plan for Safe
Drinking Water in
British Columbia

Regulatory Tools for Source Protection

- Drinking Water Protection Act
- Water Act
- Forest and Range Practices Act
- Environmental Management Act
- Land Act

Drinking Water Protection Act

- ▶ Contains broad powers for drinking water protection, including source water protection
- ▶ Drinking Water Officers can order source to tap assessments and response plans, hazard abatement or prevention orders
- ▶ Enables Drinking Water Protection Plans





Water Act

- Water Act primarily regulates surface water allocation
- 2001 amendments enabled Water Management Plans, some well protection
- Ground Water Regulation addressed well construction and operator certification



Forest and Range Practices Act

- Replaces Forest Practices Code
- Mostly “results-based”
- Designates “community watersheds”
- Sets water quality objectives
- Doesn’t apply to private managed forest land



Environmental Management Act *(formally Waste Management Act)*

- Agricultural Waste Control Regulation
- Contaminated Sites Regulation
- Municipal Sewage Regulation
- Hazardous Waste Regulation
- Organic Matter Recycling Regulation
- Integrated Pest Management Act

- Allows for Area-based Plans

Land Act

- Section 15 OIC reserves
- Section 16 watershed reserves
- Section 17 notations
- Watershed leases eliminated in the 70's

Planning

- Drinking Water Protection Plans –DWPA
- Water Management Plans – Water Act
- Area-based plans under EMA
- Resource Sustainability Plans/Land and Resource Management Plans
- Environmental Farm Plans
- Community-led plans

Other tools for source protection...

- Science and information
- Assessment tools
- Monitoring
- Setting standards and guidelines
- Interagency cooperation
- Education and outreach

SOURCE WATER PROTECTION

OKANAGAN BASIN

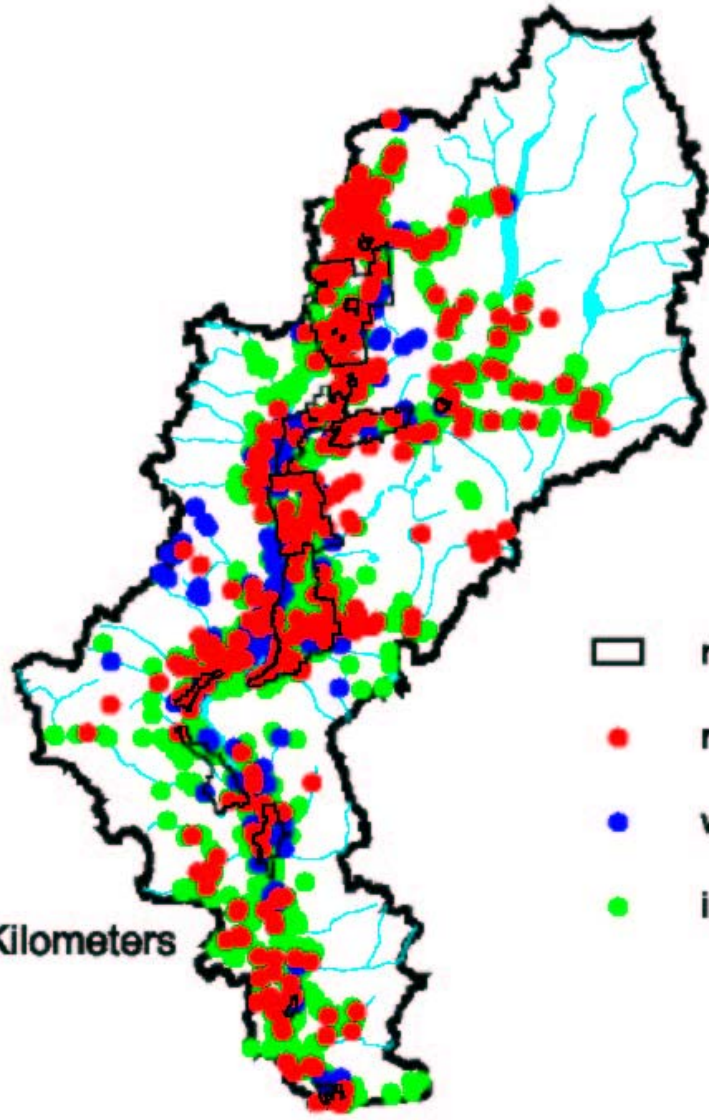


0 10 20 km
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Legend

- Drainage
- Roads

Dec. 31, 2004



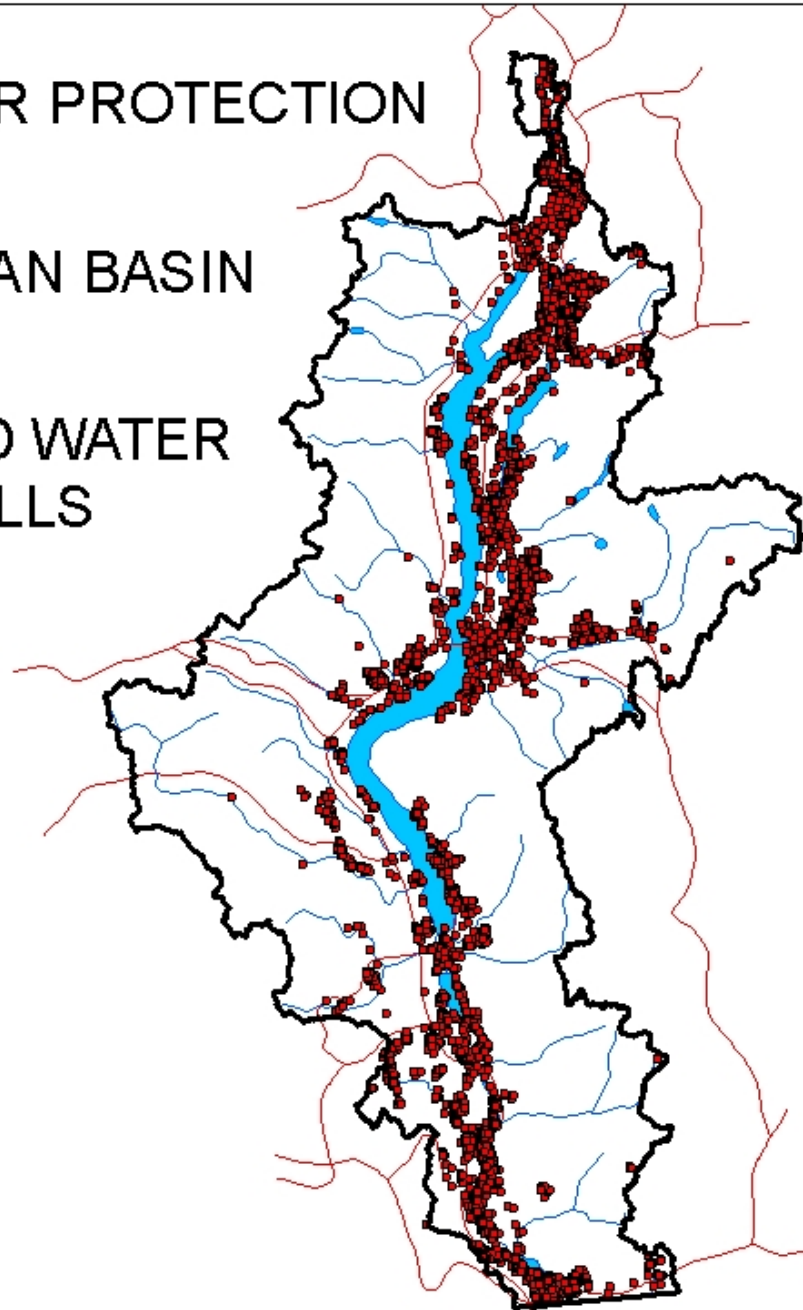
-  municipal boundaries
-  restrictions
-  waterworks licences
-  irrigation licences



SOURCE WATER PROTECTION

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GROUND WATER WELLS



0 10 20 km
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Legend

- Drainage
- Roads

SOURCE WATER PROTECTION

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COMMUNITY WATERSHEDS



0 10 20 km

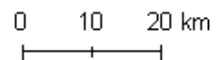
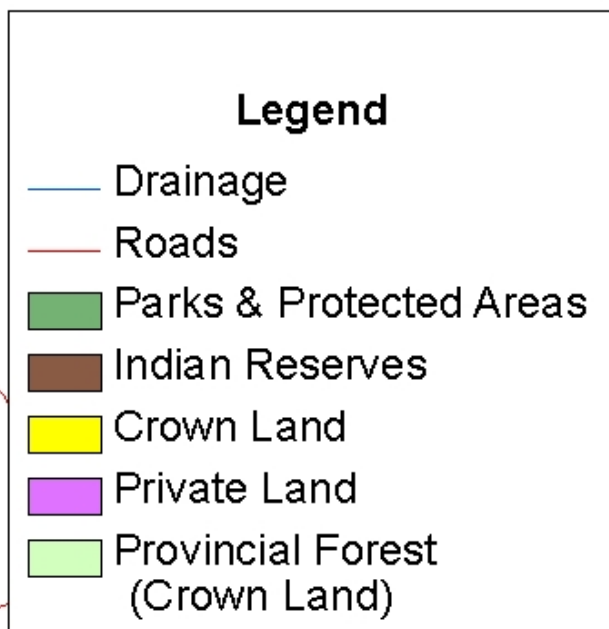
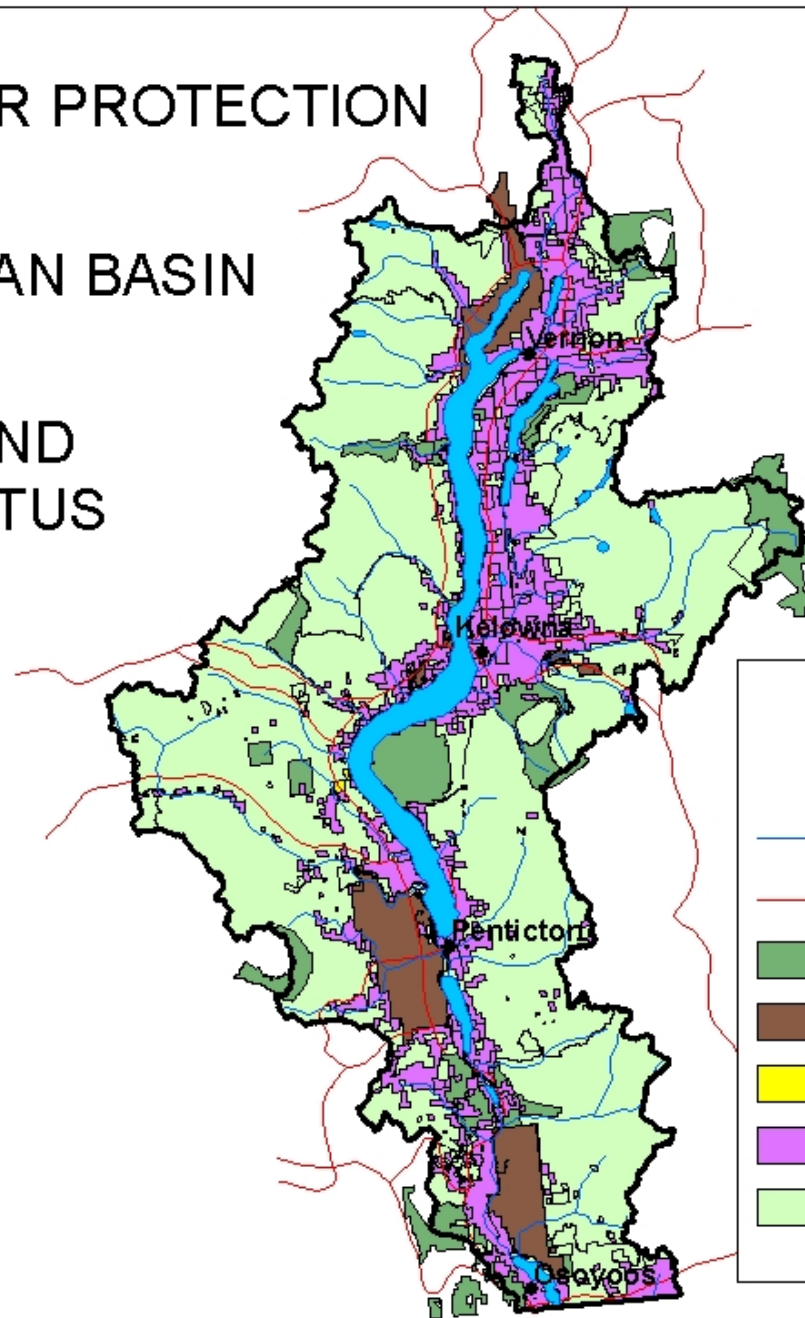
Legend

- Drainage
- Roads

SOURCE WATER PROTECTION

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LAND STATUS



Okanagan Source Water Protection Issues

- A vulnerable landscape
- Crown vs private land
- Managing multiple uses of watersheds and aquifers
- Population growth
- Climate change impacts

Challenges for source water protection

- Ensuring accountability for source protection across overlapping or conflicting jurisdictions
- Implementing source protection in a climate of deregulation and trend towards “results-based” approaches
- Addressing the disconnect between water suppliers’ responsibilities and source protection
- Scale of planning tools
- Resource constraints

Opportunities

- A “water-aware” public
- A greater emphasis on partnerships
- OBWB/OWSC’s role in education, outreach, environmental protection and governance
- Source water protection in the OWSC water sustainability strategy?
- Provincial water strategy



Ministry of
Environment



Questions or comments? Please contact:



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