

Drinking Water & Watershed Protection Update 2011

Electoral Area H Drinking Water & Watershed
Protection Presentation - March 18th, 2011
Regional District of Nanaimo



DRINKING WATER
WATERSHED
PROTECTION

- * **Healthy Water**
- * **Understanding the Risks**
- * **Reducing the Risks**
- * **Use Wisely**
- * **Improve Awareness**

Purpose of the Program



Healthy Water

- * Identify areas subject to failing septic systems and promote best practices for maintaining those systems.
- * Adopt best practice standards to avoid or reduce the risks of contamination.
- * Test water from a limited number of private wells to better understand water quality issues in different parts of the Region.
- * Use the Vancouver Island Water Resource Vulnerability Mapping.

Purpose of the Program

Understand the Risks

- * Compile and map existing data about the Region's watersheds and aquifers
- * Identify and prioritize major gaps in the information about our surface and groundwater resources.
- * Research the risks from climate change to our water resources and define options for reducing or adapting to those changes.

Purpose of the Program



Reduce the Risks

- * Generate Watershed Management Plans for at risk watersheds and aquifers and use these plans to guide land and resource decisions.
- * Review and revise zoning and development application procedures to enhance water protection.
- * Promote “low impact development” techniques/solutions that aim to reduce the impacts of developments on watersheds.

Purpose of the Program



Use Wisely

- * Develop Water Conservation Plans that sets goals and strategies for efficient water use.
- * Research and promote technologies that use rainwater and gray water.
- * Form a working group of water purveyors and suppliers in the Region to exchange ideas and coordinate activities around safe, sustainable water supplies

Purpose of the Program



Improve Awareness

- * Provide information and incentives to encourage efficient water use.
- * Expand the WaterSmart web site to include water resource information.
- * Enhance the Team WaterSmart education program.

Purpose of the Program

Program Activity

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- * Vulnerability mapping
- * Phase 1 - Observation well network expansion
- * Municipalities participating in Team WaterSmart
- * WellSmart program
- * Water Purveyor Working Group
- * Yellow Point Water Conservation DPA
- * Incentive program for toilet replacement

Program Activity To Date

- * Surface water quality monitoring
- * Provided input to the Regional Growth Strategy update
- * Green Building Sustainability Checklist
- * Residential Irrigation Review Program
- * School education programs
- * Developing updated water sustainability indicators

Program Activity To Date

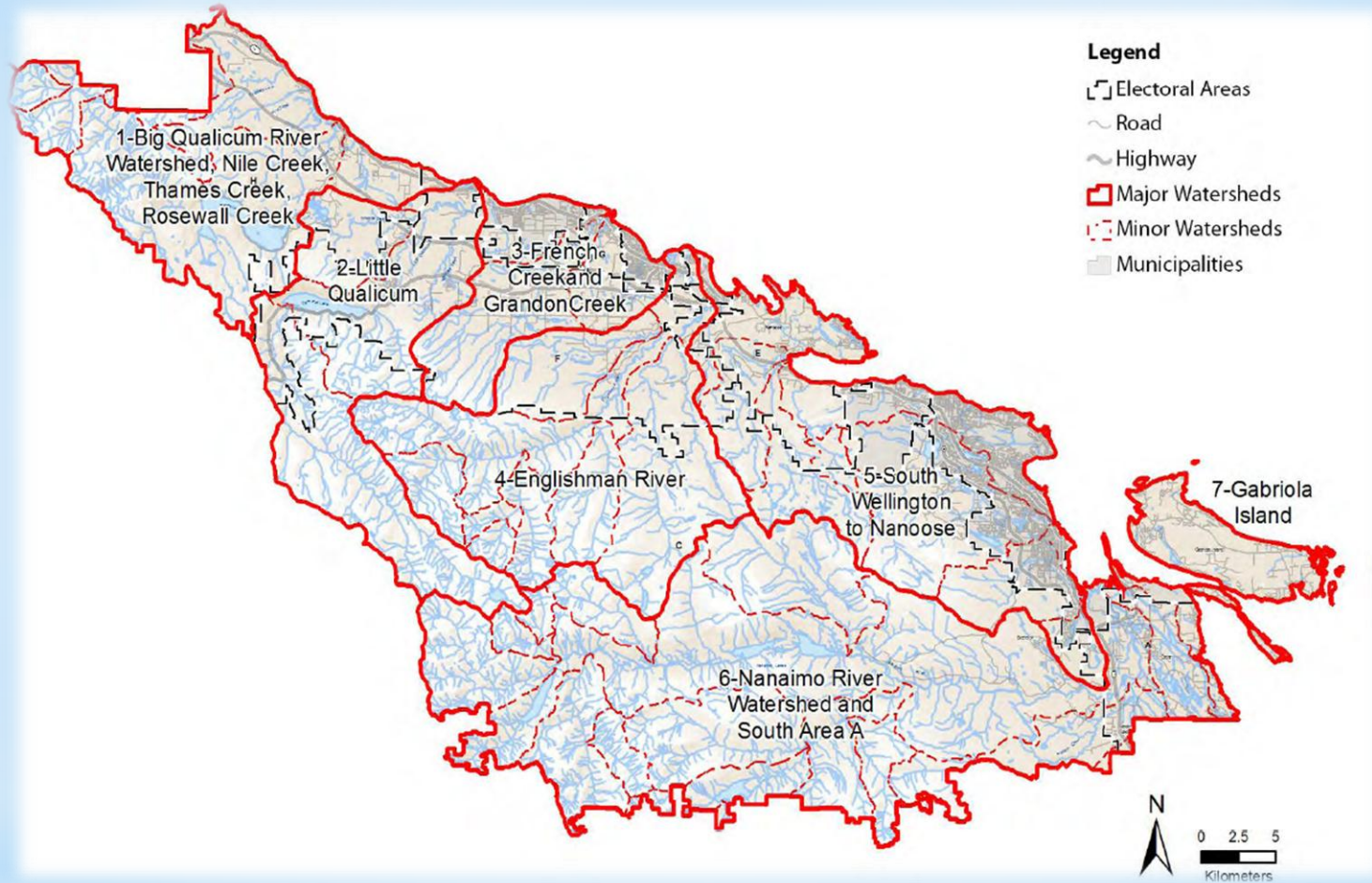


- * Finalize Watershed Snapshot Report
- * Web accessible map and report database
- * Outreach focus on rainwater and gray water use
- * Begin Water Budgets for all 7 areas
- * Begin Aquifer Characterization of key aquifers in partnership with the Geological Survey of Canada
- * Complete Cassidy/South Wellington ground water quality survey in partnership with the MOE
- * Establish surface water quality monitoring network in partnership with MOE and volunteer groups

Key Program Activity 2011

- * Begin Phase 2 of the Observation well program - including searching for volunteer wells in #421, 665, 661
- * Establish “B” level ground water monitoring network
- * Begin collecting/making accessible water data
- * Expand the water conservation incentive program
- * Outreach over highly vulnerable aquifers (HVAs)
- * Gabriola well locates
- * Develop strategy for monitoring water quality in HVAs
- * Landscape and Irrigation Design Standards

Key Program Activity 2011



Watershed Snapshot Report

2010

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1. Describe watersheds
 - problem areas
 - potential solutions
2. Recommendations:
 - By watershed
 - Region-wide

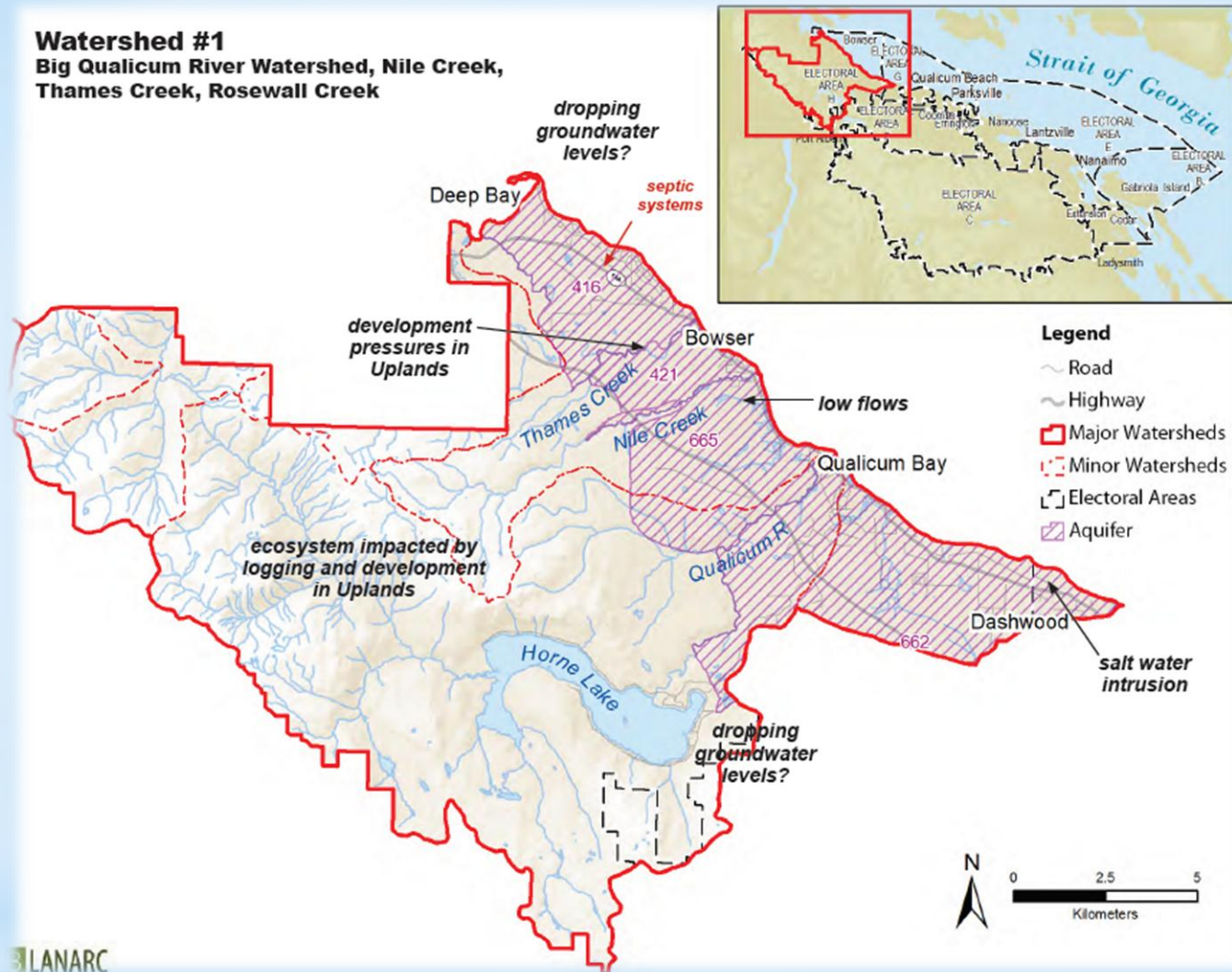
Watershed Snapshot Report

2010

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Watershed #1
Big Qualicum River Watershed, Nile Creek,
Thames Creek, Rosewall Creek



Watershed Snapshot

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- * Develop a better understanding of aquifers and the impacts of extraction by monitoring groundwater levels in all aquifers in the watershed area
 - * Pursue low-cost monitoring opportunities, such as monitoring unused residential wells, to help gather information on unmonitored aquifers #421, 665, 661
 - * Monitoring well to be installed in aquifer 662 (Qualicum River Village)
- * Survey groundwater quality in wells in coastal areas to identify salt water intrusion issues

Watershed Recommendations



Region-Wide: Better understanding our water resources

- Water budgets for each of the seven (7) major watershed areas
- Develop and monitor indicators for assessing water resources
- Determine indicators of water consumption by monitoring (metering) or surveying of representative volunteer users e.g. golf courses, agriculture, commercial/industrial.
- Create central repository for storing river flow data (high and low), stream temperature, etc. Work with Stewardship Groups to monitor. Install automated data collectors as needed.
- Gather information on groundwater levels by working with major users such as purveyors.
- Work with the Ministry of Environment and local volunteers to monitor surface water quality
- In partnership with the MOE, expand Provincial Observation Well Network
- Work with MOE to develop monitoring program for climate change

Science

Region-Wide: Helping communities help the environment

- Develop an interactive website to share water resource information and stewardship resources
- Continue summer outreach activities - focus on outdoor water conservation
- Water conservation incentives
- Develop and implement a strategy for rainwater reuse
- Communicate building options for rainwater and greywater reuse
- Outreach to residences and business/industry in vulnerable areas
- Promote Environmental Farm Plan program
- WellSMART, SepticSmart
- Water purveyor working group

Stewardship



Region-Wide: Better Planning

- Strengthen RGS language regarding water protection.
- Partner with municipalities in integrated rainwater management
- Require higher standards for hydrogeological assessments in at-risk areas (ie., Yellow Point, Parksville, etc.)

...and better building

- Promote Low Impact Development Engineering standards
- Update landscape and irrigation design standards and bylaws
- Develop bylaws dictating construction practices, including sediment and erosion control, spill preparedness, etc.

Planning and Development



Questions?

Thank You

