



Salt Spring Island

WATER PRESERVATION SOCIETY

Newsletter Spring/Summer 2011

SALT SPRING ISLAND WATER COUNCIL PLANS: MAY 2011

The SSI Water Council provides a unique forum for sharing information on the quality and quantity of Salt Spring's surface and groundwater resources and undertakes projects in support of this role. We meet every two months, to discuss a wide variety of water issues, our next meeting is at 10 am on May 27th at the Lions Hall.

SSI Climate Action Plan

I am the designated Water Council representative on the SSI Climate Action Council. A draft Climate Action Plan has been released setting out actions to be taken to meet the targets for reduction in greenhouse gas emissions on the island. I will continue to participate in the process of community consultation over the next few months.

While transportation and food are, by far, the major sectors contributing to GHG emissions, conservation of potable water use would help to reduce the energy used for pumping, water treatment and heating of water. We will also consider the effect that climate change is projected to have on water supply.

Well Monitoring Network Project

Council is undertaking a groundwater well monitoring project with community water systems on the island to establish a more comprehensive database on water table depths.

In addition to existing well records, monitoring kits have been purchased and installed on three additional wells. A presentation on the current data analysis will be made at the next Council meeting.

Development Permit Area 4 revisions

The protection of drinking water lakes and watersheds is a priority issue for Council in securing safe water quality for islanders. The proposed bylaw for the revised DPA 4 – Lakes, Streams, Wetlands and Riparian Areas has been released and Council has submitted its feedback to the Trust.

Community Water Systems

Last year, Council prepared a Potable Water Supply and Demand Study for the island and will be updating the report later this year. We will also continue to monitor proposals by the NSSWD to enhance water supply and water quality at St. Mary and Maxwell Lakes and we will review any updates to their report on "Future Water Supply and Demand Alternatives".

NSSWD trustees will be reporting on progress on their toilet rebate program for customers at future Council meetings.

BC Society incorporation

We have prepared the draft constitution and bylaws to incorporate as the *SSI Water Council Society* which should facilitate future funding of Council. The necessary documents will be submitted once Council has given final approval.

Water Council website

Council approved proceeding with the establishment of a Water Council website to provide a dedicated source of data and reports on potable water as well. We have engaged a website design firm to assist in the initial content of the website.

2011 Work Program

In addition to the current projects noted above, Council has agreed to initiate a groundwater workshop and a review of progress on the Cusheon and St. Mary Lakes watershed management plans later this year. We will also continue to participate in the review of the proposed BC Water Sustainability Act

Peter Lamb, Coordinator, SSI Water Council,





RIPARIAN REGULATIONS UPDATE

As I write this, the Local Trust Committee gave first reading to bylaw 449 to implement the Riparian Area Regulations for the purpose of protecting and restoring our salmon and trout streams on Salt Spring Island. By protecting our streams, we will also be helping to restore our drinking water lakes that are suffering from blooms of algae and toxin-producing cyanobacteria. This bylaw is required by the provincial government.

The bylaw has already undergone some revisions and we expect more as the trustees respond to comments from the community. If passed with most of its provisions intact, bylaw 449 will set a new higher standard for environmental protection on Salt Spring Island. We expect a public hearing on the bylaw in middle or late May and then the bylaw will most likely receive 2nd and 3rd readings by our trustees. After that, the bylaw will go to Trust Executive and the Ministry of Community, Sport and Cultural Development for approval before it hopefully comes back to our Local Trust Committee for final reading in the Fall.



We are fortunate to have trustees who are continuing this effort despite some vocal opposition. We believe a majority of islanders support efforts like this bylaw, to provide stronger protection for our island's natural environment consistent with the mandate of the Islands Trust.

Maxine Leichter

KNOWING ABOUT WATER: Groundwater Production

Part 5 of a series by Tom Wright

In Part 4 we saw that our island is an aquiclude, a mass of dense rock containing an irregular network of fractures. Within the fracture network is a lens of fresh water, derived from rainfall, but accessible only where fracture porosity exists. (No fractures, no water!)

The aquiclude fills up to the land surface during winter rains, but during the dry season the upper surface of the water lens (called the water table) progressively falls as water is removed by pumping. If the water table falls beneath the producing fracture zones, a particular well goes dry.

Many wells on Salt Spring Island go dry in late summer or autumn, and the householder must then buy water from a water district or other supplier.

As the island population increases, wells go dry more frequently. The phenomenon of a newly drilled well causing a neighbouring well to go dry is also becoming increasingly common.

Some water wells on Salt Spring will produce at a rate of several gallons per minute for only a few hours before the water table around the well is pulled down into a 'cone of depression', cutting off the water flow. The well must then rest for a few hours to allow the cone of depression to refill before pumping can begin again.

Regional groundwater movement will be the topic of Part 6 in this series.



**BC's LACK OF EFFECTIVE, ENFORCEABLE, REGULATIONS:
SSI WPS GUEST SPEAKER, OLIVER BRANDES**

Oliver Brandes, associate Director of the U.Vic Polis Project on Ecological Governance, was the guest speaker at the Salt Spring Island Water Preservation Society AGM in Ganges on Jan. 21, 2011.

Brandes, who has a degree in economics from Queens University and a law degree from U.Vic, spoke on the topic of **“Water Law and Governance Reform: Think like a watershed”**, using a power point presentation.

He began by explaining that POLIS is the Greek word meaning “a collective gathering together for better decision-making”, and that the Polis Project on Ecological Governance works on policy, through U.Vic (and other universities) developing directions for practice as it intersects with sustainability.

Governance is different from government, he pointed out. The core governance belief is that there are biophysical limits and the economy is a subset of the ecosystem.

There is a fresh water crisis through the growing, concentrated demands by urbanization, energy needs and industrial agriculture. Persistent pollution and over-allocation result in crucial shortages, including ‘fish in the mud’. Disrupting natural flows has often resulted in unforeseen

consequences, a caution to be considered with our SSI lakes.

But where are we in this crisis, in BC?

Oliver Brandes calls it the “BC Water Muddle” because BC lacks effective enforceable regulations. Decisions are highly discretionary and uncoordinated and not related to their ecological function

So how can we get past the muddle? What are the province’s constitutional responsibilities? What are the limits of its power? What are the public’s property and civil rights and what are the actual practices?

The BC government’s recent initiative, called LIVING WATER SMART (booklet, website, etc.) has a lot of potential, but its words can only be effectively activated when there are enough resources given to carry through.

Water Law is a process (see the website www.polisproject.org). The U.Vic Polis study has made reform recommendations, and the government has been involved in some discussions. But BC needs to

develop “hydro-citizenship” where the protection of all our waters is a priority, including the watersheds, and collaboration with First Nation communities.

This entails “whole system thinking”: water is not free, but a public trust, now and into the future. There needs to be a new water Infrastructure based on conservation, stewardship and reuse, with accountability through independent oversight.

Oliver Brandes: “In a healthy society, economy always follows ecology and education precedes them both”. We need to engage all in governance and ecology for we are just beginning to understand both. Beyond the 3 R’s, schools need to teach and experience ecology.



See the full report on the website ssiwaterpreservationsociety.ca

Eileen Wttewaall



Study Identifies Contaminants in SSI Groundwater

A study of Salt Spring Island groundwater found about a third of the wells tested had levels of coliform and arsenic that exceeded the Canadian Drinking Water Quality (Guidelines). The study, "The Geochemistry of Groundwater on SSI, BC" was conducted by Pat Lapcevic, of the BC Ministry of Environment and others.

Ten percent of the wells sampled had arsenic concentrations greater than recommended by the Guidelines. But another 20% of the wells sampled had lower levels. Ms. Lapcevic states that this is a matter of concern since "arsenic is a human carcinogen and exposure to any level if consumed may increase the risk of internal cancers such as lung, bladder, and liver cancer."

The arsenic levels of concern were mostly concentrated in the central part of the island in certain geologic formations. Another finding was that arsenic concentrations can vary with the time of year. The authors propose that this may be due to seasonal variations in groundwater level. She notes that this "may have implications in the treatment systems used." The study also found that "Wells hundreds of metres apart can have measured concentrations differing by several orders of magnitude."

About a third of the wells sampled had some bacterial contamination. The authors state that this is "likely preventable by incorporating wellhead and aquifer protection measures such as properly siting and constructing wells (surface seals) and well head protection measures (e.g. well caps, minimum casing stickup and flood proofing) to prevent the introduction of surface water to the interior of the well or well annulus.

Manganese concentrations greater than the aesthetic Guideline of 50 µg/L were measured in 33% of all wells sampled. Manganese is not a health hazard but can cause discoloration of plumbing fixtures. Contact the Water Preservation Society for a copy of the full report.

Maxine Leichter



WHO ARE WE?

The **SSI Water Preservation Society** was founded in 1981. The Society owns 272 acres of St Mary's Lake watershed and 20 acres of Maxwell Lake watershed.

We are a volunteer, non-profit group that promotes the protection of the sources of potable water on SSI and the increase of public awareness of the value of water resources.

Memberships, donations and volunteers of all ages are essential to the survival of our Society just as clean drinking water is essential to humans and ecosystems so please keep the cheques flowing.

Our website has pertinent information regarding our history, purposes, bylaws etc. Volunteers are always appreciated for fundraising, writing brief articles, annual broom cutting and serving on the Board.

OUR EXECUTIVE

- | | |
|-----------------|---------------|
| President | Ron Hall |
| Vice President | |
| Secretary | Penny Polden |
| Treasurer | Wayne Taylor |
| Member-at-Large | Rodney Polden |
| Member-at-Large | John Borst |



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Memberships

Individual \$10, Family \$20

COUNTRY GROCER TAPES

Please put your tapes in box

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