

Salt Spring Island
WATER PRESERVATION SOCIETY
Newsletter Fall 2010

Opportunity to Protect our Lakes

It was a rude wakeup call in 1999 when Cusheon Lake residents were told they couldn't use the water for any purpose because of a particularly bad algal bloom. The danger was that the algal bloom might be accompanied by a bloom of Cyanobacteria. Some types of Cyanobacteria produce toxins that can be harmful to the nervous system and liver. High doses can cause illness, even death. These toxins cannot be removed by boiling or filtration. Chlorination can be effective but produces other problematic by-products. Although the water districts test for these toxins, it can be difficult to determine when they are present. They can appear suddenly and may occur in a different part of the lake than was tested. That is why any algal bloom is cause for concern.



Cont'd on back page.

AGM

HARBOUR HOUSE HOTEL- CROFTON ROOM
JANUARY 21, 2011 at 7 PM



Rodney & Ron
setting fences.

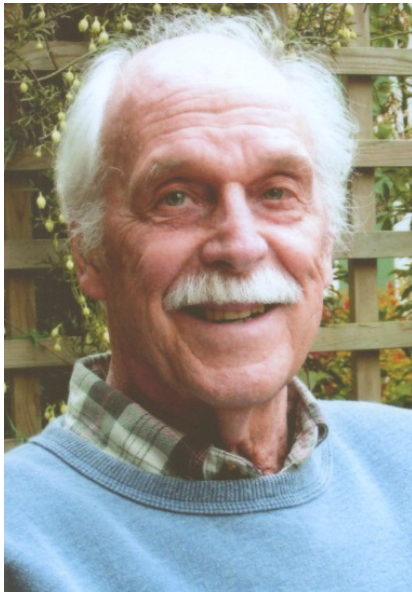
*NOMINATIONS TO THE BOARD
OF DIRECTORS ARE WELCOME*

GUEST SPEAKER TBA

Please mark **Jan 21** on your calendar today and join us OR complete the enclosed proxy.

It is essential that we have a quorum to continue the important work of the Water Preservation Society.

TOM WRIGHT: A TRIBUTE



The Salt Spring Island Water Preservation Society will sadly miss a cherished member who recently left us. Tom Wright has served our society for a long time with great devotion and energy. He gave so much of his time sharing his knowledge of geology and hydrology with the community, and applying his considerable mapping skills to various tasks of importance.

As a lifelong educator, Tom was a kind and generous man who always was thoughtful of others and cared so much for the environment. His many contributions as a member

of the executive and as a resource person so often provided in-depth and comprehensive information that was vital to the organization. Everyone who worked with Tom appreciated his kind nature and his willingness to share and work together with a wide variety of people and groups on the island.

Tom may no longer be with us but his spirit lives on and his knowledge that he passed on in his many writings, maps, talks, lectures, and personal conversation will be remembered for a long time.

Wayne Taylor

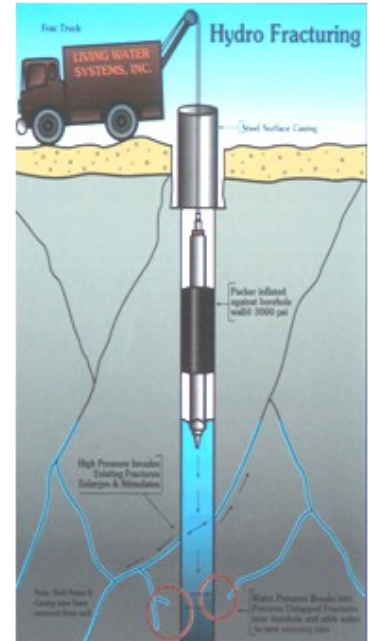


FRACTURING: A SOLUTION TO INADEQUATE WELLS ?

Fracturing. Is this the solution to inadequate wells? Fracturing is the injection of water under high pressure to fracture the rock in order to open it up and let the gas, water, or oil get to a drill site. There are some very attractive aspects to fracturing but there are problems, too. Fracturing could make a lot more water available in your well. It might connect your well to a larger reservoir for you to draw on. It might create more space for the winter rains to lie in for you to use in the summer. Or, it might connect your more or less adequate pool of water to lower levels and drain it all away! Maybe that larger pool of water is your neighbour's source and after fracturing, their well could run dry in January. Or, if your neighbor fracts, it might be you that goes thirsty.

Clearly, if any fracturing is to be done on Salt Spring, it ought to be a communal enterprise so that winners can compensate losers. We would have to proceed cautiously to be sure that there are more winners than losers and that it was doing more good than harm so that, on balance, more water would be available, not less. Whether enough is known about this process and the geology involved to make this worthwhile, should be answered by the experts. Of course, conservation is the least expensive and dangerous approach.

John Heddle



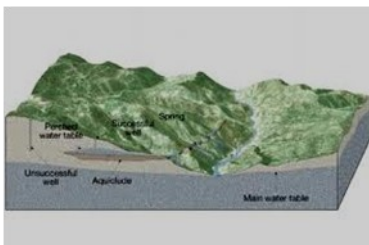
KNOWING ABOUT WATER: Ground Water Under Salt Spring Island

Part 4 of a series by Tom Wright

Some precipitation does not run off as surface water, but instead trickles down into the rocks below to become groundwater.

Some fortunate parts of the world are underlain by porous and permeable rock formations called aquifers. These provide good storage and easy transmission of significant quantities of fresh water.

We are not so lucky. Our entire island forms an aquiclude, a mass of essentially dense rocks



without effective porosity or permeability, other than an irregular and intermittent network of

fractures. These fractures are the result of regional folding and faulting, but their exact location is poorly known. They may occur at seemingly random depths, or may be absent altogether.

As a result, drilling for water on Salt Spring Island is something of a lottery. One lucky householder may find several producing zones in a well drilled to only 35 metres, while his less fortunate neighbour might drill a deeper well to 350 metres, and find no fracture zones at all. No fractures, no water!

To see an example of the kind of rock which lies below us, look at the rock face across from Mouat's Store. Notice the sparse pattern of fractures.

More about groundwater production next time.

Ed note: Last June Tom had this to say:

"Here are the four concluding parts of the series 'Knowing About Water' for you to use when you put the next four WPS newsletters together. I felt it would be good to get them done in advance."



2010 BC LAKES STEWARDSHIP SOCIETY COMMUNITY FORUM

June 5 in Quw'utsun' Conference Centre, Duncan

This provincial Community Forum's recurring theme was on WATER CONSERVATION. This is a brief summary.

Facilitator: Dr. Rick Kool, Royal Roads University, acknowledged the stewardship practiced throughout the province by First Nations groups over thousands of years. Their moral stance was to care for the land to the 7th generation, not to own it for immediate use and advantage, despite consequences.

David Anderson, former Minister of the Environment, Victoria MP, summarized the effects of our changing climate and how it is affecting the amount and timing of rainfall.

David insisted, along with other speakers, that we need to improve the local management of our water sources, along with serious conservation practices by everyone. Where water problems have been solved, there has been coordinated local management. He said the biggest problem is the greed of Canadians who want to sell/export water, without considering the long-term effects or the total costs, both technical and environmental.

Dr. Nancy Olewiler, School of Public Policy, SFU, spoke on the concept of

putting a price according to its estimated value, on the ecosystem goods and services (EGS) provided by a watershed.

All parts of nature from - glaciers



to wetlands



provide valuable services that should be factored into land use decisions, to help society make economical choices about the future of their regions. This concept is called **Natural Capital** which is another way of valuing **sustainability.**

Dr. Richard Hebda: Schools of Earth & Ocean Sciences & Environmental Studies, U.Vic, keynote address: **Climate change and its affect on lakes & wetlands:**

Climate impact models produce results consistent with observations from paleoecological studies. They indicate that fish and wildlife populations and their ecosystems will likely experience unprecedented change in the coming decades. In anticipation of such impacts, Hebda

recommends that we maintain resilience and minimize the disturbance of our natural surroundings. Widespread and immediate conservation of natural areas is central to the adaptation strategy, for fish, wildlife, and the rest of us.

Resilience also encompasses biological and cultural diversity.

He strongly recommends that we cut no more trees, and plant a lot of them, to slow the winter rains in order to sustainably recharge surface and groundwater.

BC coastal forests are one of the world's largest stored carbon sinks and source of removal of CO₂. We must maintain and restore the forests for this value as a vast water filter and storage resource.

They must not become a green carbon "trap", by being planted for bio-energy to fuel our addiction to our vehicles. This makes nature into our slave and is false science.

We can only reduce emissions by drastically cutting fossil fuel use. This includes our stopping "eating" fossil fuels, in the production and transportation of our food.

Eileen Wttewaall

Opportunity to protect our Lakes (cont'd)

In response to this problem, islanders worked with government officials and scientists to complete scientific studies for both Cusheon and St. Mary Lakes. The studies determined that algal blooms occurred because of excess phosphorus in the lakes, and in the case of Cusheon Lake, the phosphorus was coming primarily from land clearing activities. Rain hitting bare soil causes erosion, i.e. flow of soil particles (which carry phosphorus) into nearby streams and eventually into lakes. The studies recommended passing new bylaws to assure that land clearing did not result in harmful quantities of soil and phosphorus being carried into streams and lakes.

But the Islands Trust could not take action until the relevant bylaws could be reviewed. Now, that time has come! The Islands Trust is reviewing the relevant Development Permit Area and Land Use Bylaws.

The Local Trust Committee could provide much of the needed protection by implementing the Provincial Riparian Area Regulations (RAR), something the Province required to be done by 2006. The Trust area is one of the last jurisdictions not to implement these regulations. RAR protects fish and their habitat. Not surprisingly, protecting fish from erosion and silt will also protect our drinking water. RAR regulations would provide protection within 30 metres of our lakes and the streams leading to them. Current SSI regulations only cover 10 metres around lakes and a few streams. Most SSI streams have no protection. RAR does not prohibit activity within these areas, but only requires that activities not harm fish habitat, including prevention of erosion into water bodies.

We urge you to write the Islands Trust now and ask that RAR be fully implemented to require effective measures to prevent erosion of soil/phosphorus into our lakes and streams, especially within the watersheds of our drinking water lakes: Cusheon, St. Mary Lake and Weston. If you hear other information about this issue and would like to clarify the details,

please email us: ssiwps@hotmail.com OR
check the WPS website: www.ssiwaterpreservationsociety.ca.

Maxine Leichter



WHO ARE WE?

The **SSI Water Preservation Society** was founded in 1981. It 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 | Eileen Wttewaall |
| Treasurer | Wayne Taylor |
| Member-at-Large | Penny Polden |
| Member-at-Large | Rodney Polden |
| Newsletter Editor | |
| Newsletter Design | Judi Francis |



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Online:
ssiwaterpreservationsociety.ca

Memberships:
Individual \$10, Family \$20

COUNTRY GROCER TAPES –

Please put your tapes in box

#125

