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Sent: April-30-10 4:33 PM
To: Living Water Smart ENV:EX
Cc: XT:Malcolmson, Sheila Islands Trust EAO:IN; Mary Cooper; Tony Law
Subject: Islands Trust Submission to Water Act Review
Attachments: 2010 04 30 Islands Trust Water Act submission.pdf

SUBMISSION TO WATER ACT MODERNIZATION CONSULTATION
APRIL 30, 2010

In June 2008, the Islands Trust Chair wrote to Minister of Environment Barry Penner to convey its support of the commitments expressed in the ministry's new Living Water Smart plan. In particular we were encouraged by the identification of the Gulf Islands as a priority area for the regulation of groundwater use and offered to work with MOE staff to provide advice in the development of such regulation.

Minister Penner's August 2008 reply was to instruct the Director of Innovation and Planning to meet with our staff, which she did along with several other senior MOE staff in September 2008. We appreciated this, but have since had no further consultation on the development of surface water or groundwater regulations suitable for the Trust Area's unique circumstances. Staff, trustees and island residents attended the multi-stakeholder workshop in Nanaimo on March 5th, but there were dozens of other interests in the room representing a wide range of circumstances, and discussing volumes of groundwater that are far beyond those found in the Islands Trust Area. If a proposed regulation only addresses such high volumes of water, it will not address groundwater concerns on BC's coastal islands.

We are using this current consultation opportunity to reiterate the requests we made as a federation of 13 local governments. While we are respecting the April 30th deadline, we sincerely hope this is not the end of the conversation with the Islands Trust. Since at least 2008, the Islands Trust has been waiting to participate in a more focussed consultation process dedicated to resolving the particular regulatory issues facing the Islands Trust Area. The schedule currently proposed for the legislative drafting does not seem designed to fulfil the commitments made by Minister Penner.

Several island communities within the federation have made submissions on specific issues of water governance such as bulk water extraction, salt water intrusion, hydro-fracturing and water conservation measures such as re-use of grey water. We will not repeat the content of their detailed submissions here but we are committed to following up with MOE staff to implement their ideas. A summary of the most significant issues is attached. Our first priority would be to define groundwater allocation and groundwater extraction "thresholds" based on the characteristics of particular aquifers which vary from island to island.

Our staff contact for this purpose is Lisa Dunn, Director of Trust Area Services, 250-405-5174.

Summary of Issues and Recommendations
Relevant to the Islands Trust Area

Surface water / Groundwater

Issue: Groundwater and surface water are interrelated and need to be treated as such, including regulation and licensing of both groundwater and surface water as one system.

Recommendation: Integrate the management of groundwater and surface water. Avoid conflict by updating the water allocations system. Move beyond first-in-time-first-in-right (FITFIR) system to a system that promotes conservation, discourages over-consumption, and prioritizes water for ecosystems, functioning watersheds and basic human needs.

Bulk water extraction

Issue: The current system puts the burden of proof about water table damage on those who are affected,rather than on those responsible for large withdrawals. Local governments have little legal authority to manage bulk water extractions, even though they are threatening neighbouring residential water supplies..

Recommendation: Where there is high demand in relation to aquifer capacity, the threshold should be just above the volume required for normal domestic purposes. The threshold for what are considered “large” bulk water withdrawals should be based upon the characteristics of particular aquifers and the demand upon them, with a lower threshold for fractured bedrock aquifers. Some have suggested that the extraction of groundwater for sale should be prohibited altogether in the Islands Trust area.

Saltwater intrusion (the movement of saline water into freshwater aquifers)

Issue: Intrusion is usually caused by groundwater pumping from coastal wells. Most wells on Gulf Islands are clustered near the ocean boundary, in the salt water / freshwater interface zone. Depletion of an aquifer can lead to salt water intrusion which can spread to many wells along that interface.

When fresh water is withdrawn at a faster rate than it can be replenished, the water table is drawn down as a result. This draw-down also reduces the hydrostatic pressure. When this happens near an ocean coastal area, salt water from the ocean is pulled into the fresh water aquifer. The result is that the aquifer becomes contaminated with salt water. This is happening to many coastal communities.

In coastal aquifers, there is a sensitive balance between the amount of recharge and the position of the saltwater interface.

- A decrease in recharge will result in encroachment of the interface.
- A rise in sea level will also result in the interface moving inland. Increased pumping can also cause this interface to shift.

Recommendation: Licensing of groundwater wells, based on careful assessments and on-going monitoring of aquifer capacity and potential impacts of saltwater intrusion.

Hydrofracturing

Issue: This volume-increasing process which was introduced by the oil industry is now being used to increase water supply in domestic wells on the Gulf Islands. No studies have been made by professional hydrogeologists on the impact of hydrofracturing on the region. The islands are small, water is a fragile resource, and domestic wells are vulnerable to salt water intrusion. Hydrofracturing may occur anywhere, without prior notification to neighbours, and with no recourse if a neighbour's well is depleted by the process or ruined by salt water or septic intrusion.

Recommendations:
We are relaying the recommendations on hydrofracturing expressed by the Mayne Island Integrated Water Systems Society to the Ministry of Environment and the Ground Water Advisory Board:

- That no hydrofracturing be permitted, for any reason, within a set distance from the ocean (100 meters minimum distance recommended);
- That those using a hydrofracturing process be required to test the production capacity of community and private wells within a set circumference before the process begins, at the cost of the well driller. This will enable owners of nearby wells to identify negative effects resulting from hydrofracturing;
- That all hydrofracturing must be pre-approved by the ministry, recorded on drillers' reports and maintained as part of the permanent well record;
- That community and private water providers be given advance notice and an opportunity to comment when hydrofracturing is proposed within or adjacent to a community water system, and
- That as part of the process to determine what regulations and policies will be adopted that consultation take place with the Islands Trust and with community groups with local knowledge on water issues.

We strongly urge that professional studies be made of the effects of hydrofracturing in the Gulf Islands at the earliest possible date and that each individual well to be hydrofractured in that region require a license from the Ministry of the Environment.

Water Conservation

Issue: Low and declining supplies of groundwater require careful management to ensure all public and private needs can be met in a balanced way.

Recommendation:
Integrated rainwater catchment systems should be mandatory in all new construction on the gulf islands. Storage and re-use of grey-water should also be considered as a mandatory feature in areas of acute water shortage. Grey water / purple pipe systems

must require backflow prevention valves. Education is needed within communities to alert people to the real danger of prolonged and frequent water shortages, the benefits of water conservation, and the part they can play to conserve and protect this precious resource.

Aquifer Vulnerability Map for part of the Islands Trust Area (excluding Howe Sound, Denman and Hornby)