

WATER ACROSS THE ISLANDS

Well Hydrofracturing: A topic for thought and discussion

The practice of hydrofracturing of wells in an attempt to increase production is on the increase. Demands upon our aquifers are growing each year to keep up with land development and tourism on our Islands.

Hydrofracturing originated in the oil drilling business, and its popularity in the water well drilling industry has grown over the past few years. When a drilled well is hydrofractured, high pressure water is injected through a pipe to expand, clear, or fracture the fissures with the expectation that well production will increase.

For domestic well purposes, usually a single packer method is used. The packer is a hard rubber inflatable balloon placed near the top of the well but below the casing. High pressure water is pumped through the packer from 5 to 45 minutes at a rate of 25 to 60 gpm, pumping up to 1600 gallons of water into the formation. This technique is viable for bedrock formations.

Years ago, well yields were increased by using dynamite, called shot firing, or dry ice. Both methods were relatively uncontrollable for exerted pressures, and shot firing caused many wells to collapse, breaking the surface seal and allowing surface water to enter the well.

Today's concerns about Hydrofracturing

Hydrofracturing has fallen through the legislative crack. There are no requirements for distances from the ocean or neighbouring wells, no required notification of, recording with, or permission from any Ministry. There is no required notification of neighbours or community water purveyors, well sitings or recording of their well data. If flow is redirected or increased, the subject well may benefit, but the neighbouring well may have reduced or no production, or a higher salinity count.

The danger of opening up an aquifer to salt water intrusion and possibly ruining the aquifer upon which an individual or an entire community may depend, makes hydrofracturing a questionable practice that must be looked at by the Ministry of Environment and its Water Advisory Panel.

The vagaries of the results and the inability to determine the sphere of influence create a danger for our islands' supply of potable water, particularly as our aquifers deplete during prolonged summer droughts and the sodium content naturally increase in many wells. Hydrofracturing exacerbates the possibility of aquifer damage.

The risk factor is well recognized by the well drilling industry in that some drillers require a signed release by the owner before they will hydrofracture. While the owner of the damaged well may take the driller, or new well owner to court to recover damage costs, unless one has very detailed and well kept records of his/her well spanning years of production, with quality, quantity, and production details, they have no paper trail to prove hydrofracturing harm. This reduces the chances of a successful lawsuit.

Call for legislation

In replying to the concerns expressed by the Mayne Island Integrated Water Systems Society, the Ministry of Environment stated that the letter had been forwarded to the Water Advisory Panel. The WAP provides guidance on government groundwater policy for new legislation and are currently working on Phase 2 and 3 of changes to the Groundwater Regulations.

It would appear, at this time, that the possibility of the government recognizing the special circumstances for water issues facing the Gulf Islands is remote. Phase 2 legislation recommendations are expected to be in government hands this year, but will not address these concerns. To have hydrofracturing considered under Phase 3, the Gulf Islands would need to be considered to have high risk aquifers. It will be up to the islands to make their wishes known during the Phase 3 community stakeholder consultation process. Since governments have recognized the uniqueness of the Islands by forming the Islands Trust method of governance, they must also recognize the fact that sustainability of natural resources necessary to sustain island life will require attention, set apart from the studies done on mainland groundwater and water reserves. The islands must make it a recognized fact that pilot projects conducted at inland locations, such as those currently being done in Langley Township, bear little relevance to small rock islands surrounded by salt water.

An Action Plan

An ideal and simple solution would be the banning of hydrofracturing on the Gulf Islands, but this is not likely to happen. Therefore, the following would be practical solutions which would add some measure of protection for our aquifers.

- There must be no hydrofracturing allowed, for any reason, within a set distance from the ocean, recommending 100 meters minimum.
- The community and private wells within a set circumference of a well being proposed for hydrofracturing must be tested for quality and quantity before the process begins, and as part of the well driller's costs.
- All hydrofracturing must be pre-approved and recorded on the drillers report, which will remain as part of the permanent well record.
- When hydrofracturing is to take place within or adjacent to a community water system, the water boards must be given adequate notification, and an opportunity for a hearing.
- Consultation with the Islands Trust and community groups with local knowledge on water issues must take place.

As well owners, for self protection, you should have your driller's reports and records in your homeowner's files. You should have metals and minerals tests taken spring and fall the first year, and again the following year so that any changes will be immediately noticed. Your well is the most important part of your real estate investment. Keep good records of everything that occurs with your well.

Finally, given that we are all situated on these rocks and surrounded by salt water and drilling more and more wells to satisfy more and more people, installing more septic fields, and given that we could irreparably damage an aquifer, hydrofracturing is hardly a gamble we think we should be taking on the Gulf Islands.

Mary Cooper,
Mayne Island Integrated Water Systems Society