

In this newsletter, we present updates on a number of regulatory and non-regulatory groundwater projects that the Ministry of Environment's Water Stewardship Division staff are involved in this fiscal year 2007/08 that are already underway.

### **Ground Water Protection Regulation (GWPR)**

The Ground Water Advisory Board (GWAB) has completed its recommendations to the Ministry for Phase 2 of the regulation, and has adjourned for the summer. The GWAB is scheduled to meet again in the Fall to discuss the development of the Phase 2 regulations and related matters.

The Ministry is working with the Ministry of Community Services to develop a model by-law for local government on well closure for private wells. This model by-law will be applicable where a property owner hooks up to a municipal water supply. The Ministry of Community Services requires a local government receiving provincial funding for extending a new municipal water supply (e.g., a new municipal well) to rural areas with existing private wells to develop a well

closure by-law to ensure the private wells that will no longer be used be closed. A model by-law will help a local government to comply with Ministry of Community Services' requirement and promote effectiveness and consistency for local government to require well closure where property owners on private wells hook-up to a municipal water supply.

Groundwater staff in the various Ministry regional offices are continuing with GWPR compliance promotion and verification work in 2007/08.

### **Guidelines and Fact sheets**

Vicki Carmichael (Victoria office) is working with the public health engineers from the regional health authorities to develop guidelines for assessing whether groundwater is at risk of containing pathogens. This document will include guidance on determining if a groundwater supply is under the direct influence of surface water (GUDI). The primary focus of the outcome of the assessment is health protection for those consuming groundwater at risk of containing pathogens. The guidance document will be useful to both the regional Health Authority's Public Health Engineers and Drinking Water Officers in determining disinfection requirements for public groundwater supplies.

Vicki is also working to develop a series of fact sheets: how to locate a septic tank, well disinfection, drilling an artesian well and preparing for artesian conditions, storage of substances around a well, and do's and don'ts for conducting pumping tests. These fact sheets should be helpful to contractors and well owners and are being developed in partnership with Agriculture Canada, Ministry of Health and regional health authorities, with input from the BCGWA. The fact sheets will be published on the web and brochures will be printed for distribution.

### **Well Cap Deadline Nov 1, 2007!**

Please note: An owner of an existing well with no well cap is required under Section 10 of the Ground Water Protection Regulation to install and maintain a secure cap on the well by November 1, 2007. To purchase a well cap or have a well cap installed on a well, please contact your local well driller or well pump installer. The registries of qualified well drillers and qualified well pump installers can be accessed on-line:

[http://www.env.gov.bc.ca/wsd/plan\\_protect\\_sustain/groundwater/wells.html#reg](http://www.env.gov.bc.ca/wsd/plan_protect_sustain/groundwater/wells.html#reg).

Another project that Vicki is working on is to develop a provincial guideline document for water related components of an Environmental Assessment (EA) review for mining projects. The proposed guideline document will outline EA requirements for water related studies associated with a mine review and will cover baseline studies, continual monitoring, mitigation and impact modelling for surface water and groundwater. In addition to hopefully reducing current workloads for EA reviews for MOE staff, the provincial guideline document will provide a consistent approach between MOE regions for water issues related to mining reviews.

### **Township of Langley Water Management Plan**

Tim Bennett, Mike Simpson (both from our Surrey office) and Heather Smart (Victoria office) continue to work on the first ever Water Management Plan with the Township of Langley. The Township is heavily reliant on groundwater and the plan will focus on the conservation and sustainable use of the resource. A draft plan is expected this Fall and will be released for public consultation (both stakeholders and technical experts have already been providing input). Once all consultations are complete, the plan will be finalized and submitted to the Minister of Environment. More information is available at the Township website:

[http://www.tol.bc.ca/index.php?option=com\\_content&task=view&id=1681&Itemid=596](http://www.tol.bc.ca/index.php?option=com_content&task=view&id=1681&Itemid=596)

### **Well Record Data Entry and Backlog**

The BCGWA and the Ministry were successful in securing funding from Agriculture Canada this fiscal year for well record processing (Thank you BCGWA for your support and partnership!). This funding will complement the funding from the Ministry and allow the following work to be done:

- keying data in hard copy well construction reports submitted by drillers into WELLS (*remember to include the geographic coordinates on the well construction reports!*) and
- determining well locations for some of the historic well construction reports (some of the backlog).

We are also looking for well drilling companies who would like to submit their well records electronically using EWELLS. If you are interested in submitting your well records electronically, please contact Tammy Blair (250-387-0014) or Lindsay Macfarlane (250-953-3408). Training can be arranged at your office location.

### **Water Quality Surveys on the Gulf Islands and Northern BC**

As mentioned in the June, 2007 newsletter, Ministry groundwater staff (Pat Lapcevic of our Nanaimo office and Dave Tamblyn of our Prince George office) are involved in two water quality surveys – one on Vancouver Island (Gulf Islands) and one in the northern part of BC. Both private domestic wells and public water supply wells will be sampled in both projects but the focus of the northern BC project will be public water well supplies. The water quality survey project on the Gulf Islands is being carried out in partnership with Environment Canada and the B.C. Conservation Foundation. The water quality survey project in northern BC is being carried out in partnership with the Northern Health Authority. These projects benefit the well owner, Health Authorities and the Ministry of Environment in terms of better understanding water quality risks to groundwater users.

### **Observation Well Network**

A review of the Observation Well Network in the Okanagan Basin was completed last fiscal year (*Observation Well Network Review Okanagan Region - Final Report* by Hy-Geo Consulting) and staff in the Penticton and Nelson offices are beginning to implement the recommendations from the review, starting with the work this year to close up to 5 redundant observation wells in the Osoyoos area.

Meanwhile, three observation wells have recently been installed by Dr. Diana Allen of Simon Fraser University in the Penticton Creek research watershed, with funding from the Ministry of Environment. Two wells, of different depths, have been installed at a higher elevation site and are situated side-by-side to allow for measurement of vertical groundwater flow; the third is situated in the valley bottom. The objective of these observation wells is to be incorporated into a surface / groundwater model to better understand groundwater recharge mechanisms in the upland areas in the Okanagan Basin. These observation wells will eventually be incorporated into the provincial Observation Well Network after the research by Dr. Allen has been completed.

Kevin Bennett and Laurie Lyons of our Kamloops office, in conjunction with JR Drilling Central Limited Partnership, recently constructed a multi-level observation well in the Deep Creek area south of Salmon Arm. Monitoring points were established in the shallow (60 ft) unconfined aquifer and in the basal aquifer extending from 275 ft to 320 ft below ground to monitor the impact of groundwater withdraw by the community for potable water and irrigation of farm land and golf courses.

### **Regional and Headquarters Groundwater Contact Information**

#### Lower Mainland Region (office in Surrey)

Tim Bennett, P. Eng., Groundwater Hydrologist (604) 582-5227  
Mike Simpson, Groundwater Protection Officer (604) 582-5205

#### Vancouver Island Region (office in Nanaimo)

Pat Lapcevic, P.Geo., Groundwater Hydrologist, (250) 751-3149  
Sylvia Kenny, Groundwater Protection Officer (250) 751-3265  
Ground Water Technician, Vacant -- To be filled

#### Kootenay & Okanagan Regions (offices in Nelson and Penticton)

Groundwater Hydrologist, Vacant – To be filled  
Trina Stewart, Groundwater Protection Officer, (250) 490-8276  
Monty Miedreich, Groundwater Protection Officer (250) 354-6376

#### Thompson & Cariboo Regions (offices in Kamloops and Williams Lake)

Kevin Bennett, P.Eng., Groundwater Hydrologist, (250) 371-6319  
Laurie Lyons, Groundwater Protection Officer, (250) 371-6280

#### Omineca – Peace Region (office in Prince George)

Dave Tamblyn, P.Eng., Groundwater Hydrologist, (250) 565-4458  
James Jacklin, Water Technician, (250) 565-4403

#### Skeena Regions (office in Smithers)

Emily Bulmer, Water Stewardship Officer, (250) 847-7350

Victoria – Headquarters

Mike Wei, P.Eng., Deputy Comptroller, Groundwater Hydrologist, (250) 356-5062

Vicki Carmichael, P. Ag., Groundwater Hydrologist, (250) 387-9465

Kevin Ronneseth, P. Geo., Groundwater Hydrologist, (250) 356-5180

Tammy Blair, Groundwater Data Technician, (250) 387-0014

Lindsay Macfarlane, Groundwater Data Technician, (250) 953-3408

To request additional well construction/closure forms, well identification plates, or the *BC's Ground Water Protection Regulation: What Private Well Owners Should Know* brochures contact Tammy Blair (250-387-0014) or Lindsay Macfarlane (250-953-3408).