

BCGWA Okanagan Region Regulations Forum
Penticton Lakeside Resort
7 Dec 2005

Summary Memo of Meeting

Attendees:	
Name	Firm/Organization
Jerry Jones	J's Pumps – Salmon Arm
Max Schibli	Schibli Drilling
Nerissa Schibli	Schibli Drilling
Marie Ross	Kala Groundwater Consulting
Leonard White	Cascade Drilling
John Watts	Cascade Drilling
Oleg Ivanov	EBA Engineering Consultants Ltd.
Gilbert Dubois	Laird Improvement District
Des Anderson	Ministry of Environment
Skye Thomson	EBA Engineering Consultants Ltd.
Doug Geller	Summit Environmental Consultants
Bob McFadden	Lingo Pump Service
Tim Warden	Lingo Pump Service
Moe Marji	Lingo Pump Service
Scott Schillereff	EBA Engineering Consultants Ltd.
Ron Johnston	Interior Health

Ron Johnston, P.Eng, from the IHA provided a brief presentation on the Construction Permit Process. The process is summarized below:

Application Form:

- Name, Owner, Site Location Map, Contamination Sources, Aquifer Characteristics, Costs for drilling.

Site Visit:

- With owner or driller and Drinking Water Officer or Public Health Engineer.

Sketch to determine distances

- Ensuring adequate setback distances

CP Conditions

- According to GWPR/GWPA
- Letter from a hydrogeologist/driller to certify conditions
- Info on water source for approval (well logs, reports, lab analysis)
- Approval if meets all guidelines

IHA Contacts:

Name	Telephone	Office
Scott Mason	(250) 851-7320	Kamloops
John Britain	(250) 505-7225	Nelson
Wayne Radomske	(250) 770-3501	Penticton
Ron Johnston	(250) 770-3523	Penticton

Key Issues Raised During Meeting

Note: **DA** refers to Des Anderson, MOE; **RJ** refers to Ron Johnston, IHA; **HSS** refers to Scott Schillereff, EBA.

1. Q: Are there measures to track certification of well drillers and pump installers in BC?

A: **DA** – An updated list is available on the groundwater homepage at <http://www.env.gov.bc.ca/wat/gws/index.html>. Contractors have up to Oct 31, 2006 to certify (grandfathering potential).

-Some Contractors are currently uncertified and uninformed of the new regulations (e.g., some plumbers). More public education of Act/Regs/requirements is needed, but it was unclear who would be responsible for this outreach. A suggestion to communicate regulations through provincial licensing bodies was brought forward.

2. Q: What is GUDI and how will it be administered in BC?

A: **RJ** – GUDI refers to Groundwater Under the Direct Influence of surface water. IHA will oversee guideline development (patterned after existing guidelines from other provinces); to be established in one year. Groundwater is assumed to be GUDI if:

- well is less than 50 ft deep
- well is less than 200 ft from a surface water source
- well is less than 50 ft to static water level in an unconfined aquifer

3. Q: How are locations to be referenced for electronic driller log forms?

A: **HSS** - Confusion exists as to current GPS framework (NAD27 or NAD83) required for online forms. It was suggested MoE include training or further information on the GPS framework necessary for the electronic well log. **RJ** noted accurate readings most often obtained by facing south (direction of most satellites).

4. Q: Who is in charge of enforcement and fines for non-compliance of new regulations?

A: **DA** – MOE has put a strong emphasis on voluntary compliance. In section 94 of the Water Act the maximum fine is \$1,000,000 and/or up to 1 year imprisonment. Policy regulations are currently being established. The sequence of MOE intervention if a problem is: advisory → warning → stop orders → legal action.

RJ – The *DWP* Act states a max fine of up to \$200,000 or 12 months imprisonment but this has never been enforced to date. It has been IHA position to facilitate voluntary compliance. Federal lands are under Health Canada jurisdiction.

5. Q: Is there information available on completing flowing wells?

A: **DA** – Regulations regarding artesian conditions are expected to be structured in Phase 2 of the GWPA regulations. Further information may be obtained from Sec 77 of the Water Act.

- No documents are presently available. No formal guidelines have been established yet although there is reference to artesian conditions on the IHA Construction Permit Application. **HSS** - “Flowing Well Handbook” available online from Dept of Environmental Quality, State of Michigan would be a very useful document.

6. Q: What are the minimum setback distances required on a well siting Construction Permit (CP)?

A: **RJ** - 100 ft from source of contamination; 20 ft from a dwelling; 400 ft from a cemetery; 300 m from landfill. These are minimum setback distances. No special accommodation for groundwater flow direction as of yet. The sketches on CPs are to show the relative distance from a contamination source to a proposed water well location. Some flexibility exists to reposition well (further than setback distance) if field conditions are unfavourable to drill. Owner is required to be onsite during inspection with drinking water officer or public health engineer to ensure adequate setback distances.

7. Q: What if problems exist with well completion or surface seals?

A: If an unfavourable drill conditions exist that inhibit normal adherence to Tables (e.g., boulders at surface; bedrock within 50 ft) it was suggested to step back (pending CP approval) to a new location. It was also suggested that contractors be geared up for varying conditions (e.g., under reamer). Concerns of practicality of the surface seal Table in the GWPR should be addressed with MOE.

8. Q: Are more details available regarding closure (abandonment) of wells?

A: It was suggested that more details should be incorporated in future GWPR.

RJ – If a contractor advises an owner of the new regulations requiring well closure and the owner ignores this, the contractor should send a letter to the owner (for documentation purposes) . If the well to be closed could pose a threat to a community water supply well, send a copy to IHA. IHA would like to be advised of this situation to ensure the well is closed properly to protect the nearby community water supply well.

9. Q: Do 6” Observation Wells require a CP?

A: **RJ** – Depends on intent. If the well is for monitoring purposes then it does not require a CP, but if the end purpose of the well were as part of a water supply system then it would require a CP. If the well is drilled for monitoring purposes near an existing water supply well and there is a risk of the monitor well allowing contamination of the water supply well (i.e., through poor completion), it is the responsibility of the property owner to inform IHA and obtain the necessary approvals. This may require chemical analyses, driller’s logs and a hydrogeology report (if applicable).

10. Q: How do the current GWPR apply to system upgrades and expansion?

A: **RJ** – If the well is for one private domestic household, there is no action required. If the well is part of a water supply system, a CP is required from IHA. If modifications are planned for the system (e.g., adding UV units), IHA needs to approve the proposed system to ensure requirements are met. An engineered drawing is required. An environmental assessment could be required if high flows are expected (>75 L/s).

11. Q: Please elaborate on the EA/CPCN process.

- **HSS** – If groundwater extraction is expected to be greater than 75 L/sec or there will be a greater than 35% increase in water extraction, an environmental assessment (EA) is triggered. This typically only is a concern for large water supply systems and high production wells. The group was uncertain what base flow rate was considered for the 35% increase trigger. The EA is established to ensure there are no significant impacts to the environment (e.g., nearby watercourses). Public consultation may be required with the formal EA review. It is useful for Contractors to know of this pumping rate threshold. If an owner is unaware of the potential need for an EA, the contractor could notify them as a professional courtesy.

DA - Further questions or comments on groundwater based EA’s can be forwarded to Paul Finkel, BC Environmental Assessment Office in Victoria (tel. 250-387-8745).

A CPCN is a regulatory instrument under the Utilities Act to ensure capacity and impacts associated with drinking water wells. This is important for interference effects and proper aquifer management purposes.

12. Q: How should a well be properly disinfected?

A: **RJ** – Correct well operational disinfection requires requires 0.5 mg/L chlorine for a minimum of 20 minutes contact time. A contact chamber is typically incorporated into a water supply system design, and shown as part of obtaining a CP from IHA. A large diameter pipe can also be used as a contact chamber to minimize water short-circuiting. The well could be used directly for operational disinfection but requires a much longer contact time because of the well volume (injecting into a well can be difficult because the chlorine must be injected in proportion to the water used).

For well/system disinfection following commissioning or rehabilitation work, no specific method for well disinfection has been established by IHA.

13. Q: Will Wellhead Protection Plans be necessary?

A: **RJ** – IHA has an owner based Well Protection Plan requirement for large systems (greater than 1000 users) during the operating permit process. Currently voluntary for smaller systems except those that have been ordered to provide one.

Some suggestions for a functional WHPP process in BC:

- incentives to water purveyors (money, less monitoring demands)
- provisions to link back to planning bylaws
- link to Official Community Plans (OCPs) and zoning amendments
- streamline and use a risk-based approach

14. Q: What happens if a well was originally sited with proper setback distances, but a new contamination source appears at a closer distance (e.g., neighbor builds new septic system within 30 m of your well)?

Group considered this would be a civil matter and relates to proper issuing of Building Permit for the new construction. The well owner should notify local authorities.

15. Q: Will water well drillers be required to sample water in the future? Will there be provisions for adequate training?

DA – protocols for water sampling are being developed for Phase 2 of the GWPR. Drillers will be asked to obtain an initial well water sample at the time of drilling. Initial water samples are requested by MOE, since there may never be a formal water sampling program for some wells. Parameters included will be easy to measure in field (e.g., with test kits) and not affected by turbidity. These water data to reside in MOE database.

For more comprehensive groundwater sampling (e.g., at end of pumping tests or as part of system operation) other professionals may be involved. The intent is for guidelines and methods to be established with provisions for training (e.g., sample collection, bottle handling, shipping, etc.)

16. Q: Pumping tests – Will they be standardized in BC?

Different requirements from Regional Districts don't all make sense and should be standardized.

We understand that standard pumping test requirements will be developed as part of Phase 2 GWPR (at least a year away). Group suggestions:

- in interim, provincial suggested guidelines should be established for testing depending on hydrogeologic setting;
- BCGWA could be a good source to supply recommendations to MOE (e.g., strike a pumping test committee?)