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To: Living Water Smart ENV:EX
Cc: BCGWA - Managing Director
Subject: BC Water Act Modernization - Discussion Paper
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John Slater, MLA,

Please find attached, our response to the MOE WATER ACT Modernization - Discussion Paper.
Respectfully submitted,

BRITISH COLUMBIA GROUND WATER ASSOCIATION
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BRITISH COLUMBIA GROUND WATER ASSOCIATION

POLICY PAPER ON THE *WATER ACT* MODERNIZATION PROGRAM

Submitted to

**John Slater, MLA
Parliamentary Secretary for Water Supply and Allocation**

**BC MINISTRY OF ENVIRONMENT
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April 30, 2010

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April 30, 2010

BRITISH COLUMBIA GROUND WATER ASSOCIATION POLICY PAPER ON THE WATER ACT MODERNIZATION PROGRAM

Dear Secretary;

The BCGWA is pleased to be included in the proposed *WAM* program. Three Directors and the Managing Director of our association attended two of the regional *WAM* Workshops. Using the *WAM Discussion Paper* as a guideline we are pleased to present this Position Paper representing our Associations comments as mentioned below.

Although the Discussion Paper and Workshops were based upon the four goals, and although we realize there is a strong connection between surface and ground water; we will focus our comments primarily on GOAL FOUR; *Regulate groundwater extraction and use*.

COMMENTS

Our intent is to provide constructive suggestions and recommendations that will provide for the sorely needed groundwater regulation and management that do not exist today, without unduly over-regulating the industry or management of the groundwater resource.

Our comments will primarily address;

- Objective for regulating groundwater extraction and use;
- Priority Issues;
- APPENDIX of Further Possible Solutions.

OBJECTIVES for GROUNDWATER EXTRACTION and USE REGULATION

The existing situation - familiar to all who deal with water resource issues in B.C. - is that while the province may wish to regulate the extraction and use of groundwater under the *Water Act*, no such regulations are currently in place. The result has been that development of groundwater has proceeded virtually unchecked and unmonitored over the past several decades, with the de-facto "rights" of development belonging to the property owner. This is effectively the same as the "rule of capture" or the "rule of the biggest pump" whereupon a property owner may, in most instances (except the for EAA regulation control since 1996), develop a well and extract and use (or waste) as much groundwater as he/she may want without having to consider or mitigate impacts to neighbouring wells or adjacent licensed or unlicensed surface waters.

Our recommended objectives are to establish a system that allows for reasonable control and management of groundwater resources, including permits and/or licences for withdrawal and use; mandatory well construction conditions, use and water level reporting mechanisms; and sustainable funding for ongoing management and regulation through the collection of user fees.

PRIORITY ISSUES

Upon extensive thought and discussion we have selected the following issues as paramount to be included in the proposed modernization of the current Water Act.

- Groundwater extraction and use must be regulated and properly enforced in priority areas that are deemed to be critical on science based investigations and historical evidence, i.e. Groundwater Management Areas (GMA);
- For non-GMA, measure and regulation large groundwater extraction and use, within the context of the local hydrogeologic setting and aquifer type. We recommend thresholds as follows: 500 m³ /day (6L/s-100 gpm) for unconsolidated aquifer wells and 100 m³ /day (1.2 L/s – 20 gpm) for consolidated bedrock aquifer wells and eventually lower levels of extraction depending on the hydrogeologic conditions. Large groundwater extraction must be fairly and equitably regulated;
- Establish a system of "permitted use" for less than "large" groundwater extraction, whereby use is allowed but without a "right" to the water. This system could be similar to the permit system in place for drilling contractors to extract small amounts of surface water for drilling use;

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- Enact and then enforce Phase 2 of the Ground Water Protection Regulation as developed by the MOE Ground Water Advisory Board in 2008.

CLOSURE

The BCGWA strongly believes that detailed well construction and groundwater protection regulations are needed now. We represent an industry with little to no regulation. We are seeking to work toward a "level playing field", which will allow a reasonable living for our members and provide a sustainable, quality groundwater resource for all.

We also hope that this process will enhance better cooperation between the Ministries of Environment, Healthy Living and Sport and the regional Health Authorities.

Respectfully submitted, on behalf of the members of the British Columbia Ground Water Association,

BCGWA – WAM Committee:

Remi Allard - President

Doug Geller - Director

David Slade - Past President

Bruce Ingimundson – Managing Director

April 30, 2010

Contact:

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APPENDIX FOLLOWS.....

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APPENDIX

FURTHER SOLUTIONS FOR IMPLEMENTING GROUNDWATER USE AND REGULATION FOR YOUR CONSIDERATION:

1. Adopt an integrated approach to monitoring and managing the province's surface water and groundwater resources. Strike a balance between planning and actual regulations that are objective-based. Do not count on the Part 4 of the *Water Act* (Water Management Plans) to create meaningful groundwater regulation because these plans rely too much on planning and have the potential to delegate too much decision-making to the community that needs regulation;
2. Decrease reliance on voluntary measures or results-based approaches as these will ultimately fall short of objectives;
3. Administer permitting of groundwater and surface water usage out of the same office. Also develop and administer rules for artificial injection of surface water (treated or untreated), collected storm water, treated municipal effluent or process water (e.g. geothermal);
4. Create a series of provincially-mandated, regional water management area authorities similar to the Okanagan Basin Water Board, who will do the science necessary (i.e. water balance analysis, in-stream flow analysis, etc) to create surface/ground water basin plans. The basin plans will determine water availability and create the implementing rules for regulation;
5. Initially, water authorities and regulation of the priority areas will only cover a relatively small part of the province in terms of strict regulation. More general regulation to include mandatory reporting should be province-wide;
6. Consider using a regulation system (similar to the province of Saskatchewan), which involves a two-step process (at a minimum) to extract groundwater for a proposed withdrawal beyond identified single family home supply wells such as;
 - a. An "investigative permit" (permit to drill and test) and;
 - b. A "permit to use", following receipt and review of formal application and supportive information (e.g. well log, hydro-geo report). Increase the level of investigation/study required based on the size of the groundwater extraction development;

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7. Consider legislating the timeframes for regulatory review of permit applications. In some priority basins, make it possible for additional permit conditions to be imposed, for example, making a permit conditional upon completion of a water conservation/demand management plan submitted to and accepted by the Ministry or regional water authority. Make permits revocable if conditions on the permit are not met; for example, failure to submit required monitoring reports;
8. Subject all proposed regulated extractions to a public notice and uses, a web-based system for notifications. Make certain applications, for example large extraction projects in priority basins subject to receipt of public comments, and provide mechanisms for application decisions appealable to the existing environmental appeals board or a similar water resources appeals board;
9. Determine what types of groundwater uses to regulate. Ultimately, all uses except for private domestic wells and a small amount of groundwater reserved for small-scale agriculture should be regulated to the extent that a permit must be obtained and reports submitted. The only mandatory regulation for private domestic wells would be registration (i.e. submit well log to province within a certain timeframe following drilling); protect private domestic wells as a high priority; however, such protection must require submission of well logs and accurate well location information;
10. Mandatory submission of well logs must be undertaken. However drillers should have the right to retain detailed well log information until they are paid for the well. The well "Drilling Report" is the only leverage available to the contractor in collecting a debt. Alternately, the MOE could place a hold on the posting of Drillers Report on the WELLS data base until notified by the driller that the well owner has paid for the well drilling service;
11. Determine what constitutes well alteration for the purpose of reporting. For example, well deepening and hydro-fracturing of a well should be considered a "Well Alterations" for the purpose of reporting;
12. Ensure groundwater regulation works in harmony with environmental protection regulations that may apply where wells are drilled. Riparian and recharge areas must be protected and substantial penalties and consequences for violations created and upheld;
13. Those basins already fully recorded with respect to surface water rights should be closed to further groundwater development, except in cases where the fully recorded status is seasonal and it can be adequately demonstrated by qualified professionals that seasonal groundwater pumping will not affect existing licences and in-stream flows;

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14. Wells drilled into unconfined aquifers proven to be in direct hydraulic connection with nearby surface waters, should be subjected to at least the same level of regulation as surface water diversions;
15. In areas where groundwater decline is or could be an issue, use the basin plan process to define a statutory level or rate of groundwater decline based upon observation well hydrographs. If this statutory rate of decline is documented, then the associated surface water-groundwater catchment should be considered for possible closure of further licences and permits. The province and/or regional districts need to expand their respective observation well networks;
16. Recover costs of modernized groundwater regulation through collection of fees on drilling authorizations and permit applications, and licence fees paid by the land owner or well user;
17. All regulated groundwater uses must have mandatory measurement and reporting of water levels in the well (pumping and non-pumping) and actual versus allocated use, with monitoring frequencies determined in the basin rules, at a minimum, annual reporting must be implemented and maintained in a publicly-accessible database;
18. There will need to be system of grand-parenting existing groundwater users and incentives built in to the new system to encourage high levels of compliance with respect to monitoring and reporting of use within this group;
19. Move towards the abandonment of the first-in-time, first-in-right (FITFIR) concept in general. FITFIR should not apply to groundwater licensing. Protection and sustainability of the groundwater resource should rule. This judgement should be science-based and be administered by the Minister of Environment (or the designated water authority) with input from industry and groundwater (user/proponent) organizations;
20. Consideration should be given to realistic regulation and management of aquifers directly connected to surface water bodies, (lakes, ponds, rivers, streams etc.). In known areas of adverse impact of well extraction on nearby surface waters these areas should be regulated. The area limit and conditions in the regulations must be science-based and not arbitrary or fixed set backs from all surface waters.

[Ex.: Wells of a depth of less than 15m and a distance from a defined surface water source such as 100 m, could be established for required investigations by a "qualified professional" into groundwater extraction impact before a permit to withdraw is issued by the province or designated authority];

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21. Wellhead protection planning should be mandatory for all groundwater extraction beyond single family domestic wells (examples: agricultural and golf course irrigation, industrial and open-loop geothermal wells);
22. In deeper confined aquifers and some fractured bedrock aquifers, certain hydraulic responses during a pumping test (for example, incomplete recovery) may show evidence of probable groundwater mining or depletion. If a regulated ("large") use is contemplated for such situations, it should be based upon the best available science based methods and information;
23. Groundwater and surface water resources must be valued in terms dollars. Expanded and regulated use of metering in large extractions and community water supplies must be implemented. The public must be made aware of the value of their resource and a deterrent in place to wasting this resource. Graduated well use permit costs for all wells should be considered. The fees collected must be used for surface and ground water related activities of the Ministry and not allocated to general revenue.
24. A single provincial government agency should be established to regulate water resources overall, including surface and groundwater with respect to water extraction and quality;

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