

**Fisheries and Oceans Canada Preliminary Comments on
the Province of BC Draft *Water Act Modernization Public Discussion Paper***

The DFO comments are organized into three sections:

1. Issues that the DFO would like to explore with the Province in a government to government forum.
2. Overall comments that apply to multiple sections of the document.
3. Specific comments or suggestions for wording.

Issues for Further Government Discussion

We look forward to more detailed discussions on:

1. Water management at an ecosystem integrity and watershed health level as opposed to managing every stream as an independent entity.

The majority of aquatic biota utilizes streams, rivers and lakes as genetically related *metapopulations* that simultaneously occupy more than just one spawning or rearing area. Consequently, management of water and associated habitat for sustainable outcomes depends as much upon what happens within a collection of streams and lake areas within a watershed, as it does upon conditions in just one location. DFO's *Wild Salmon Policy* recognizes this broader context for associations between water and sustainable biota. This issue has been raised with respect to defining instream flow needs in the *Okanagan Water Supply and Demand Project*.

2. The priority of water use, especially in times of scarcity. Under the current definition, conservation is a very low priority. We would hope that the new *Water Act* would be more in line with the federal *Fisheries Act* habitat requirements.
3. Regulating ground water, specifically how groundwater rights will be protected, potential restrictions on regulated groundwater withdrawals to achieve minimum surface flows necessary for protection of critical habitats and/or stream health in hydraulically connected systems, and proposed groundwater withdrawal thresholds.
4. Whether the Province will be addressing fish habitat recovery in the new *Water Act* or if the authorities will continue to rest in the *Fish Protection Act* (FPA). The current document contains no reference to recovery strategies to address in-stream flow limitations in systems that have been historically oversubscribed.

General Comments

1. *Water Act* modernization presents a significant opportunity to improve alignment of federal and provincial legislation, regulations, and policies to achieve greater efficiency and effectiveness in managing water to meet both human and natural system needs. There is very little mention of federal jurisdiction, legislation,

regulations, or policies. We suggest including more detail on the role of the federal government and federal legislation (e.g., *Fisheries Act*, *Species at Risk Act*, *Canadian Environmental Assessment Act*), and an emphasis on the need to align federal and provincial legislation, regulations, and policies.

2. DFO looks forward to further discussions with the Province regarding appropriate institutional arrangements to address conflicts between water for extractive and consumptive uses and conservation needs, such as instream values to fish and fish habitat. We anticipate that the most meaningful and cost effective way of managing water allocation will be within the broader context of a watershed.
3. In addressing stream health and aquatic environments, we would encourage an emphasis on considering not only current, but also future risks to instream resources. An option to address this topic could be a regional/provincial analysis that would: (a) classify or categorize stream health and flow risks (low, medium, high or unacceptable); and (b) determine where the flow risks are related to (or compounded by) past water allocation decisions. The risk analysis could be used to develop options to manage water to protect stream health and aquatic ecosystems.
4. We suggest replacing the term *stream health* with *aquatic ecosystem health*. This change in wording would encourage a more holistic approach, which would involve the management of multiple streams instead of single streams. Further, the use of the term *aquatic ecosystem health* allows for the consideration of wetlands, lakes and the associated biota that rely on the broader aquatic ecosystem to persist.
5. The DFO has significant expertise and experience in developing instream flow guidance for protection of fish and fish habitat. We look forward to continued collaboration with the Province in the development of instream flow guidance and best practices.
6. The DFO is very encouraged by the Province's intent to regulate both surface and groundwater as one resource; this is particularly important for proper management of fish and fish habitat. We suggest that section 8 might be improved by the inclusion of some details on the benefits of groundwater for aquatic species (e.g., groundwater recharge augments surface flow during the low flow portions of the hydrograph, and groundwater plays a critical role in stream temperature regulation).
7. The current groundwater priority areas for regulation map is not inclusive, for example the Nicola Basin is not on the map.¹ Additionally, we suggest that flow sensitive fish bearing systems should be candidates for provincial assessment and potential groundwater regulation.

¹ The Basin is drought prone, has significant groundwater extraction pressure, and often does not provide sufficient instream flows for fish and other aquatic resources during the summer period. Review of Ground Water/Surface Water Interactions within the City of Merritt. Report of Water Stewardship and Environmental Stewardship Divisions of MOE, Kamloops. June 2009

8. Based on the Department's experience with integrated planning processes, they are more successful if they are enabled through legislation and policy, adequately resourced, and consistently delivered across the Province.
9. Metering is proposed as a requirement for large water users, but the problems facing aquatic ecosystems are often the result of many small, cumulative and incremental withdrawals. How is it contemplated that the broader array of withdrawals will be monitored?
10. We suggest that the document elaborate on the importance of water to Aboriginal peoples and the need to ensure their social and cultural practices associated with water are recognised and protected. Additionally, we encourage you to consider the promotion of the use of traditional knowledge in water management.

Detailed Comments

1. On page 0, the last paragraph, we suggest changing "*There is a lot of investment in water that is core to our quality of life*" to "*We all have a lot invested in wise water management that is core to our quality of life.*" This would ensure that readers understand that you are referring to the broader sets of social, economic and ecological values, rather than strictly to capital or infrastructure.
2. On page 2, the 1st paragraph, we suggest adding, *Where possible, Water Act Modernization provisions may be amended so that the new Water Act exhibits improved alignment with overlapping elements of federal legislation, such as the Fisheries Act, Species at Risk Act, etc...* after the sentence, *Amendments to other (BC) laws may be made so they are not inconsistent or in conflict with the Water Act.*
3. On page 2, we suggest consideration of adding the strong public desire to maintain salmon stocks (including steelhead) as another benefit of modernizing the *BC Water Act*.
4. On page 4, Principle 4, we suggest either changing it to read, *Integration of water resource, legislation, policy, management tools, and planning, and decision-making processes across all levels of government*; or adding an additional principle that might read as, coherence and consistency with other relevant federal and provincial statutes for the management of water, water resources, or aquatic ecosystems.
5. On page 4, last paragraph, the document refers to *voluntary water conservation*. We suggest including data regarding the adequacy of voluntary water conservation in meeting other water use needs, such as instream flow requirements.
6. On page 5, 1st paragraph, the document refers to the use of water allocation plans on Vancouver Island. We suggest including information as to why these plans are only used on Vancouver Island.

7. On page 5, section 5.2, regarding the definition of stream health, we suggest that:
- Temperature be added to the footnote list of attributes used to measure stream or aquatic ecosystem health.
 - It is clarified that *designated uses and services*, includes ecological function.
 - A reference to sustaining natural populations of indigenous aquatic organisms, including Pacific salmon be added to the definition.
8. On page 5, for the options for the objective *Stream health is defined and considered in all water allocation decisions*, we recommend that you include a reference to the legal requirements for protecting fish and fish habitat and provide clarification of who might be “decision makers,” what constitutes “basic human needs,” and how discretion would be bounded.
9. Page 6, section 5.2.2, discusses watershed-based water allocation plans and refers to section 8 for more detail on land and water planning. Section 8 is only focused on regulating groundwater. Additionally, we suggest that:
- The “amount of water available” is clarified. For example, does amount available refer to either (a) the net volume of water available for consumptive uses after conservation needs, which may vary seasonally, have been met; or (b) the total volume in a stream or aquifer before any uses or stream conservation flows have been considered).
 - The scope of water use planning is broadened beyond determining instream flow needs at all times of the year and allocating the rest for extractive use. The process could be used to set goals for the watershed, allowing planners to be flexible and innovative in their approach how watersheds are managed in wet and dry years; this could provide benefits to both water users and aquatic ecosystems.
 - Water allocation plans be binding to ensure the process has value and stakeholders have an incentive to meaningfully participate.
 - A method to implement measures necessary to meet federal requirements and stated provincial objectives and goals be included in the process in the circumstances where an acceptable water allocation plan can not be developed.
 - A third option be considered that might read, (c.) ***Optional plans in areas where allocation objectives are readily being met, and required plans in areas where water is in heavy use relative to supply and management encounters difficulties in balancing allocation objectives.***
10. Page 7, section 5.2.3, provides options for developing a standardized method for setting instream flows needs. It would be challenging to accomplish this due to significant differences in characteristics of and desired states for ecosystems across BC. For example, the modified Tennant method only speaks to specific life stages of salmonids, and neither explicitly deals with other ecosystem components, nor issues like stream temperature. We suggest that this type of very technical detail should be

discussed in more detail in a different forum. At that time, we would also appreciate the opportunity to discuss who would be responsible for conducting assessments, and how the information would be incorporated into water allocation / adjudication decisions.

11. Page 8, section 6, explains the provincial authority for water management under Canada's Constitution. The role of the federal government through the *Fisheries Act*, *Species at Risk Act* (SARA), and other legislation should be added to this section.
12. On page 10, we suggest that you add *clarifying Aboriginal interests in water management* to the list of Provincial and Federal government responsibilities listed on the *Water Management Framework Table*.
13. Page 13, section 7, this section currently focuses on the benefits of increasing flexibility and efficiencies for consumptive purposes. We suggest that this section would be improved by adding a consideration of how flexibility and efficiency would help to meet all of the goals and objectives of a modernized *Act* (i.e., stream health and aquatic resource protection).
14. On page 14, section 7.2.1, the options for encouraging water use efficiency do not need to be mutually exclusive.
15. On page 15, 3rd paragraph, we suggest that *domestic use* needs further clarification. Domestic use in many large metropolitan areas relies on large storage reservoirs. The construction of these reservoirs has had significant impacts on aquatic ecosystems.
16. Page 16, section 7.2.2, is particularly important to aquatic ecosystems, especially in light of climate change, and in flow sensitive and drought prone streams. The DFO supports the review of licenses within the context of the basin or watershed rather than individual licenses. The Department also supports the need for clear criteria for and consistent application of definitions for "pressure" or "damage" when reviewing license terms and conditions. In addition, the DFO supports the development and monitoring of readily measured, meaningful and enforceable thresholds for these criteria to assist in adjudicating new applications for licenses to prevent cumulative damage and pressure.
17. Page 16, section 7.2.3., discusses the integration of management of groundwater and surface water resources. We suggest adding the rationale and analyses for selecting the proposed thresholds.
18. On page 16, section 7.2.3, we suggest the requirement of information on hydraulic connectivity in the form of impact assessments (i.e., short and long term and cumulative impacts) in systems where it is known (or expected) to exist. Cumulative impact assessments could be the responsibility of the managing authority.

19. Page 18, options for long-term scarcity, we suggest that you consider an option related to mandatory drought management plans (developed through a water planning process) on all low flow systems that are subject to withdrawals. In examining this option, you may want to consider the creation of something similar to the *Okanogan Watershed Fish and Water Management Tool*.
20. On page 19, the 1st paragraph, we suggest that you include the federal *Fisheries Act*, as groundwater flows often define the location and condition of low-flow condition, and cool-water refuges (critical habitat) used by many cold-water fish species.
21. On page 21, the DFO supports the objectives for *Monitoring, Reporting and Information Management*, as the collection of hydrometric, hydraulic and peisometric, licencing and land use data and maintenance of data management systems will be critical to the success implementation of the legislation.