From: Tim Ross
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To: Living Water Smart ENV:EX
Subject: St. Mary's Prairie Irrigation District WAM submission
Attachments: WAM - St. Mary's Prairie Irrigation District - 29-04-10.pdf

Hello,

Please find attached a response to the questionaire located in the Water Act Modernization Discussion Paper from the St. Mary's Prairie Irrigation District, located in Wycliffe, BC.

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5.1 Objectives for protecting stream health and aquatic environments

In order to better protect stream health and aquatic environments the following objectives are proposed for a modernized *Water Act*:

1. Environmental flow needs are considered in all water allocation decisions to protect stream health
2. Watershed or aquifer-based water allocation plans include environmental flows and the water available for consumptive use
3. Habitat and riparian area protection provisions are enhanced

Indicate your level of support for the objectives proposed.

☐ STRONGLY SUPPORT ☐ SUPPORT ☐ NEUTRAL ☑ DISAGREE ☐ STRONGLY DISAGREE

5.2 Possible Solutions

The possible solutions for protecting stream health in this paper are based on how the *Water Act* can be more effective in protecting stream health, in particular by expressly requiring environmental flows to be considered in all new water licensing decisions.[4] Clarifying how environmental flows will be considered in decisions helps water users, potential investors and decision makers understand the water licence application process. Also included are proposals for habitat and riparian protection that aim to improve efficiency in habitat protection and streamline responses to some activities that may degrade stream health.

OBJECTIVE ONE

Environmental flows are considered in all water allocation decisions to protect stream health.

The methods to determine environmental flows can be divided into two groups, *standard setting* and *detailed assessments*. *Standard setting* methods provide an account of environmental flow needs and water availability over time. Although simpler and less resource intensive, they are not as ecologically defensible as *detailed assessments*. *Detailed assessments* are more specific to the stream and can be used to develop more confident flow recommendations. Experience elsewhere, and in BC, has shown that an effective approach is to use both kinds of assessment methods depending on the risk to stream health.

4 Although it is not in force, section 5 of the *Fish Protection Act* provides for the Comptroller or Regional Water Manager to consider fish and fish habitat in licensing decisions.

Options for including water allocation plans in the Water Act

Consideration must be given as to whether the development of water allocation plans could be optional or required, and determining the level of discretion decision makers have for the resulting plan's application.

A. The development of water allocation plans is **optional**

- Developed at the discretion of the Regional Water Manager and could be based on increasing water demand and decreasing water supplies, changing environmental conditions, conflicts among users, or at the request of a water user community.

OR

B. The development of water allocation plans is **required**

- Plans may be developed province-wide, *or*
- Criteria to determine priority areas may be developed, with priority areas requiring a plan, *or*
- Plans may be ordered by the Comptroller of Water Rights.

AND

C. The decision maker **must consider** the water allocation plan

- Once adopted, decision makers must consider plans. Although the decision maker is not bound by the plan they would be required to explain reasons for any decisions that do not follow the plan's recommendations.

OR

D. The decision maker **must follow** the water allocation plan

- Once adopted, the plan must be followed with no exceptions by the decision maker.

Which options do you prefer, and why? Are there others?

A + D

Under what conditions should a water allocation plan be developed and how should it be applied?

OBJECTIVE THREE

Habitat and riparian area protection provisions are enhanced.

The *Water Act* defines materials that someone may be ordered to stop introducing or not introduce (dumping) into a stream. Stream health and fish habitat would be better protected if the dumping of a wider range of materials into a stream was prohibited, and the authority for responding to dumping and requiring restoration was clear.

Options for protecting habitat and riparian areas

A. Maintain the requirement for an engineer's order to prohibit dumping of material into streams (reflects current situation).

OR

B. Amend the *Water Act* to include a prohibition against dumping of a wider range of debris and materials into streams, with a requirement for the person responsible for dumping to restore stream health.

Which option do you prefer, and why? Are there others?

A

the local level applying local expertise. Setting environmental standards and ıvironmental objectives should be consistent throughout the province. However, king actions to meet the standards and objectives at the local level would benefit om knowledge of the local context.

laking changes to water governance is complex and any proposals will need to ınsider the time and resources needed for any transition. Modernizing the *Water Act* ovides an opportunity to investigate governance arrangements, including new or isting institutions, roles and responsibilities for water management decisions.

hrough the Water Governance Project, British Columbians have been investigating atershed-based governance and discussing potential models. In 2008 a number of orkshops were held across the province with participation from a broad representa-ɔn of people living, working and investing in watersheds. Water governance consider-ions and possible approaches presented in this section are informed by these scussions and two reports: *Delegating Water Governance: Issues and Challenges in the C Context* by Nowlan and Bakker 2007; and *Setting a New Course in British Columbia Water Governance Reform Options and Opportunities* by Brandes and Curran 2009.

The Water Governance Project was a partnership between the BC Ministry of Environment, the Fraser Basin Council, Georgia Basin-Vancouver Island Living Rivers, and Fisheries and Oceans Canada.

1 Objectives for improving water governance

order to improve BC's water governance arrangements the following objectives e proposed for a modernized *Water Act*:

1. Governance roles and accountabilities are clarified in relation to the allocation of water and the protection of stream health
   This includes roles for First Nations, industry, local communities and non-government organizations in planning and decision making
2. Governance arrangements are flexible and responsive to future needs and values
3. Management is coordinated with neighbouring jurisdictions across all levels of government and those with a major interest in the watershed

Indicate your level of support for the objectives proposed.

☐ STRONGLY SUPPORT ☐ SUPPORT ☐ NEUTRAL ☑ DISAGREE ☐ STRONGLY DISAGREE

ith other jurisdictions and organizations on common issues, such as land use anning and development activities would form part of the chosen approach.

hich approach do your prefer, and why? Are there others?

A

hat scale of watershed is most appropriate for water planning and management ee *Resource 10.6*)?

MAJOR RIVERS

hat funding solutions might help to implement the approaches?

1/2 GOVERNMENT PENSIONS

What are the important considerations for accountability, transparency, and dispute resolution processes in any delegated or shared approach?

N/A

What are the benefits and implications of sharing roles for water stewardship?

N/A

nd sustain stream health. Consistency helps applicants and planners understand ıe expectations for water use and the amount of water available. Flexibility is also eeded to improve the ability of users and businesses to adapt to changing climate nd economies, water supplies, and public expectations. In future, allocation decisions nd water licence conditions should allow for responsiveness to watershed needs or nexpected conditions, encourage the use of up-to-date technology and help focus ater management efforts in priority areas.

here are three key ways in which the *Water Act* could be updated to address current ater allocation challenges. One is by improving the ability to review licence terms and nditions so they can be adjusted in response to new conditions. The second is to quire decision makers to consider the actual and potential impacts on the watershed a whole when making decisions under the *Water Act*. The third is to encourage ater users to maximize the use of their water and encourage the uptake of efficient ols, practices and infrastructure.

.1 Objectives for introducing more flexibility and efficiency in the water allocation system

order to introduce more flexibility and efficiency in the water allocation system the llowing objectives are proposed for a modernized *Water Act*:

1. The water allocation system emphasizes and encourages efficiencies in both water use and the administration of water as a natural resource
2. Water users and decision makers have flexibility to quickly adapt to changing environmental, economic and social conditions
3. The water allocation system integrates the management of groundwater and surface water resources where required in problem areas
4. Water users conserve water during drought or when stream health is threatened

Indicate your level of support for the objectives proposed.

☐ STRONGLY SUPPORT ☐ SUPPORT ☐ NEUTRAL ☐ DISAGREE ☑ STRONGLY DISAGREE

7.2 Possible Solutions

All of the options below relate to the allocation of water (where it is, or will be, regulated). For more on groundwater extraction and use see Goal Four. The

This includes improving the ability for users to transfer from one appurtenance to another, and for the extension of rights to other purposes. These measures may provide flexibility for users to transfer water from 'lower value' uses to 'higher value' uses for both short term and long term transfers of existing allocations within watersheds. Transfers could be enabled for both consumptive uses and stream health protection purposes. To implement this proposal government would provide guidance and audit transfers to ensure there are no increased impacts on the environment or other users.

Which options do you prefer, and why? Are there others?

DISAGREE
1ST IN TIME
1ST IN RIGHT

ıe administration of water refers to the time and resources required to plan, make cisions, and to regulate water activities. Low-risk amendments to licences and applitions for new licenses (for example, some licence apportionments and most licence plications for domestic use) normally have little impact on the watershed but are ocess intensive and slow down decision making. These applications are a major part government workload and are generally approved unless the stream is fully allocated other conflicts exist. Applicants, water users, and all levels of government would nefit from a simplified and streamlined allocation and transfer process for low-risk plications, some apportionments and transfers.

ıs for this reason WAM would consider whether some uses of water could be simply allowed to occur, rather than to licence them in accordance with particular requirements. These uses, which could be called a 'permitted use', could include reasonable domestic uses, stock watering, short-term uses below a threshold, and other small or low risk uses. Permitted uses could be applied to groundwater and surface water. This would then allow efforts and resources to be focused on higher risk decisions and activities in areas of water stress.

Permitted uses could also apply to existing users for domestic purposes without a right (groundwater or unrecorded surface water). Existing licensed users could be encouraged to transition their right to divert and use water to a permitted use, under specific circumstances. Consideration would have to be given to the status of the permitted use in terms of priority, whether based on purpose or dates, or whether such status protection would only be available for licences. To ensure sustainable levels of withdrawals from the resource, self-registration and reporting of the permitted use might be necessary. Any registration and reporting could be streamlined through an online system and would not necessarily require a decision.

NO!

Options to encourage administrative efficiency

E. Permitted uses would be defined and allowed under the Act in accordance with regulations applied in a **consistent** manner throughout the province.

OR

F. Permitted uses would be defined and allowed under the Act in accordance with regulations. Regulations might apply **differently** throughout the province based on risk or, if considered acceptable, defined and applied through a water allocation plan.

AND

G. Voluntary self-registration of the permitted use withdrawal. NO

OR

H. Required self-registration of the permitted use withdrawal.

Which options do you prefer, and why? Are there others?

H

What considerations would help determine which water uses and extraction rates could qualify as a permitted use (no water licence required)? What controls are needed? How should permitted use status be protected?

British Columbians expect water licence holders to use water efficiently and together with government, play a role in keeping our streams healthy. However, without accurate measuring and reporting of actual use it is hard to know the efficiency of water use or whether users comply with licence conditions. If water licence holders or applicants accurately measure and report actual use or well levels when demonstrating compliance, it would be easier to focus water management efforts where they are most needed.

Options to encourage administrative and water use efficiencies

To improve decision making times and enforcement, existing water licence holders and applicants may potentially be responsible for:

I. Providing more detailed information about the proposed use and efficiency measures for licence applications or changes;

J. Documenting potential environmental impacts and effects on other users in licence applications or changes;

K. Seeking consent from, or undertaking consultation with, affected parties for licence applications or changes;

L. Measuring and reporting actual water use when demonstrating compliance with licence conditions;

M. Reporting well levels for regulated groundwater users;

N. Self-registering wells, especially where groundwater is in direct hydraulic connection with surface water or in areas of known quantity concern; *or*

O. ANY combination of the above.

Which options do you prefer, and why? Are there others?

NONE

OBJECTIVE TWO

Flexibility is provided to water users and decision makers to quickly adapt to changing environmental, economic and social conditions.

The water resource needs to be more closely managed where there are pressures on the environment caused by a lack of water, or conflicts between users, or changing conditions in a watershed. The ability to review or revisit licence terms and conditions would be useful where information shows that this is warranted due to changing conditions. Consistent criteria to determine the areas of high priority or increased pressure on water resources would assist the transparency of any reviews undertaken. These reviews could occur on a watershed or aquifer basis rather than on a licence-by-licence basis as is currently allowed. Collaboration between government agencies and licence holders on these reviews could also reduce the consultation burden, processing time and costs. Addressing these issues through collaboration would promote community understanding and result in robust adaption outcomes.

If water licences have the same priority date on the same stream, the *Water Act* currently sets the following precedence (ordered highest to lowest): domestic, waterworks, mineral trading, irrigation, mining, industrial, power, hydraulicking, storage, conservation, conveying and land improvement purposes. Many jurisdictions have modified their FITFIR arrangements (during times of low flow). Manitoba, for example, gives priority to domestic then municipal, agricultural, industrial, irrigation, and other uses.

Which option do you prefer, and why? Are there others?

IRRIGATION
FOR CROP PRODUCTION

OBJECTIVE FOUR

Water users will be required to conserve water during drought or when stream health is threatened.

Sometimes there is not enough water to satisfy the total demand of all users and the needs of the environment. When these water shortages occur, tough decisions have to be made including under which circumstances, and how water should be shared. Transparent, simple and fair processes are required to address both temporary and long term scarcity. The options to address water scarcity are most effective when integrated with measuring and reporting of actual use, and an effective communication and response plan such as a drought management plan. Any groundwater user may also be required to conserve water in times of drought or where stream health is threatened.

Options to address temporary water scarcity

A. Discretional

- The decision-maker determines the approach on a case-by-case basis, balancing the effects on water users with the required environmental outcome (similar to section 9 of the *Fish Protection Act*).

B. Sharing

- All water users would reduce use on a proportional basis depending on the water supply forecast, for example, if the supply forecast shows less water than normal, then allocations would be reduced on a *pro rata* basis. This approach could be influenced by water use efficiency, creating an incentive to employ efficient practices.

C. Hierarchy of uses

- A hierarchy of uses guides how water use is reduced, for example, human and stock watering needs would be satisfied before landscape irrigation.

D. Priority date

- This approach follows FITFIR, as contemplated by the current requirements of sections 15 and 88 of the *Water Act* but could be expanded to include the protection of ecosystem values.

Which options do you prefer, and why? Are there others?

FITFIR

Addressing long term water scarcity will build on other changes proposed throughout this document. To be successful, solutions need to be guided by clear objectives and developed with full involvement of water users and responsible government agencies. Any reductions in water availability (whether by reduction of stream flows or water rights) may be perceived as a risk to property values, businesses or a way of life.

Long term scarcity can also be dealt with using non-regulatory tools as well as supply and demand management options, see Figure 3. Options should also build on drought management plans that individual licensees and communities may develop. Full or partial cancellation of water licences may occur if other options were applied and were unsuccessful. Planning tools such as the *Soft Path for Water* (Brandes and Brooks, 2007), *Water Balance Model and Irrigation Demand Modelling* provide opportunities to bring stakeholders together to find sustainable solutions.

Options to address long-term water scarcity

E. Through a mandatory Water Management Planning process

- In some cases the province may require a planning initiative to address long term water scarcity, such as a Water Management Plan provided for in Part 4 of the *Water Act*.

F. At the request of water users or communities

- Water licensees and other interested parties may develop a plan that addresses long term scarcity on a watershed basis and provides recommendations for supply and demand side changes to be made. Approved processes that include the wider community would need to be developed and followed.

Which option do you prefer, and why? Are there others?

F

Figure 3

Supply Side Options
- Increased storage
- Reservoir management
- Water rights transfers

Demand Side Options
- Improved infrastructure
- Water use efficiency improvements
- Water reclamation and reuse

between well owners and surface water licence holders as well as between humans and the environment. Recent conflicts among water users coupled with declining groundwater levels are resulting in increasing support for the regulation of groundwater use.

Regulating large groundwater extractions province-wide (e.g., water bottling plants, municipal users, large irrigators, and large industrial users) and introducing requirements for monitoring and reporting are Living Water Smart commitments. In critical areas or aquifers under stress, government is proposing to regulate the extraction and use of most groundwater withdrawals, not just large withdrawals. Individual domestic uses will be allowed in most situations.

The overall objective is that groundwater resources in BC are sustained in perpetuity. The Council of Canadian Academies' Expert Panel on Groundwater (2009), outline the goals for groundwater sustainability as the: protection of ecosystem health, protection of groundwater supplies from depletion, protection of groundwater quality from contamination, achievement of economic and social well-being, and application of good governance.

8.1 Objective for regulating groundwater extraction and use

In addition to the objectives outlined in Goal Three the following groundwater specific objective is proposed for a modernized *Water Act*:

1. Groundwater extraction and use is regulated in priority (critical) areas and for all large withdrawals.

Indicate your level of support for the objective proposed.

☐ STRONGLY SUPPORT ☐ SUPPORT ☐ NEUTRAL ☐ DISAGREE ☑ STRONGLY DISAGREE

8.2 Possible Solutions

Water, whether in a stream or in the ground, will be considered the same resource under the modernized *Water Act*. In addition to the possible solutions outlined Goal Three, any groundwater regulation would be designed so impacts on other water users and watershed health is considered before additional diversion and extraction of groundwater is approved.

groundwater is not abundant it may be designated as a priority area and be regulated from a lower threshold.

Which thresholds do you prefer, and why? Are there others?

A

Options for determining priority areas to regulate groundwater extraction and use

All groundwater users will be regulated in priority areas except for small scale extraction and use of groundwater for domestic purposes (for example 2-3m³/day).

A. **Heavy groundwater extraction and use** (rely on BC Aquifer Classification System);

B. **Area of known quantity concern** e.g., declining groundwater level, conflicts with other groundwater users, aquifers or water resources impacted by salt water intrusion;

C. **Groundwater in direct hydraulic connection** with surface water in areas of known quantity concern;

D. **Significant population that is reliant on groundwater** for drinking water;

E. **Trans-boundary aquifers**;

F. **Basins where surface water is at or near the allocation limit**; *or*

G. **ANY** combination of the above.

Priority areas may include the Okanagan Basin, the Lower Mainland, the Gulf Islands and the East Coast of Vancouver Island. The above criteria would allow for the identification of other basins such as in the southern interior of BC, where the availability of surface water is limited and tighter controls on the extraction and use of groundwater may be desirable to protect the security of existing licences and environmental flows.

Which options do you prefer, and why? Are there others?

A
