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On Looking into the Future of Apportionment of the Waters of the St. Mary and Milk Rivers

It appears to be well accepted that the Glaciers in the Park are receding. The long term impact of this may be that runoff will peak more rapidly and sharply and that annual flows will decrease. Concern over these trends is already putting pressure on those whose agricultural livelihood depends on these waters.

The question in my mind is whether the mandate of the IJC will permit it to respond in some significant way to these trends: and if so, how!

If the members of the IJC believe that its mandate is too limited to make adjustments to the status quo, then perhaps it is time to propose a broader mandate from your respective governments.

One approach could be to seek a win/win basis by marrying "first in use is first in right", with "beneficial use". Adjustments to the current apportionment policies may be resisted, especially if some see any change as a win/lose situation. Is there potential for making adjustments which all the affected parties will see as beneficial?

For example, what if the IJC was to look into a program that would bear some resemblance to Alberta's, California's (and others) recent legislation which permits owners of water rights to sell all or a portion of their water right to someone else for a specific period of time. The owner of the right would still maintain control.

This idea would meet with great resistance in principle from Canadians and possibly Americans - now. We Canadians have frequently gone on record against selling any water to anyone else. Call this a political mind set. (Recall the admonition of Ric Casson MP to keep politics out of the apportionment discussion.)

If the IJC mandate includes looking into the future for options, especially in addressing the likely diminishing water supply, it will undoubtedly be hoping, and indeed encouraging the respective stake holders to continue to improve their efficiencies. Increased efficiency suggests improved technology AND long term objectives.

If the stake holders could agree to keep in mind alternative long term goals, this could influence their short term development strategies.

The key words for a feasible set of goals are “risk-return” and “benefit cost”.

Many “what if” questions will surface along the way. For example; what if a reservoir was built on the Milk River? What if the St Mary to Milk River canal was upgraded? What if the affected irrigation districts could jointly agree on adjusting the timing of the release of the water based on a risk-return analysis which was optimally sensitive to flow rates and production schedules? What if snow surveys were done more intensively?

Computer simulation of alternatives would be a useful tool in examining the effect of these, and other “what if” possibilities. Sensitivity analysis can display their relative impacts. Sets of strategies can each be displayed graphically in Net Return vs Probability of Achieving Net Return space. The steeper the curve, the riskier that option set.

This strategy addresses the uncertainty issue and could be updated as additional data, i.e. weather patterns, agricultural technology, environmental issues, social acceptance trends are identified.

All this is focused on the idea of creating, with IJC encouragement, more interaction, especially long term goal setting between the stake holders. Initial resistance may surface from fears of hidden agendas and where to get the funds to progress toward goals. But the adversarial attitudes which reappeared in the recent public meetings will continue to surface and likely grow more intense unless mutually acceptable strategies are developed for addressing long term goals under uncertainty.

I believe that, considering the long and successful experience of the IJC in dealing with international water issues, you are in a unique position to provide leadership in this. If you could find funds to prime the pump, at some point, stake holders might jointly agree to provide the analytical and data collection resources needed for developing both short, and long term goals in a win/win atmosphere.

Very truly yours



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