



## WATER MANAGEMENT OPTIONS FOR THE MILK RIVER

By Carrie Elliot

*In April 2006 the International St. Mary and Milk Rivers Administrative Measures Task Force released its draft report on the water-sharing agreement between Alberta and Montana for the St. Mary and Milk Rivers (see WLA June 2006). Commissioned by the International Joint Commission, the report focuses on the administration of the agreement and the apportionment of water between the two jurisdictions. In addition, the Task Force proposed a number of management options. In her Masters thesis from Simon Fraser University, Carrie Elliot examined five options. Below is her executive summary.*

Although Canada has an abundance of fresh water, significant regional and seasonal variations exist. Alberta experiences both of these characteristics. The north of the province receives the bulk of the water supply while the south produces the bulk of the demand. The Milk River Basin (MRB) is in the southeastern corner of the province and is subject to seasonal variation of water supply and demand.

The Milk River originates in western Montana, flows north from Montana through Alberta and then returns to Montana in the eastern half of that state. The water in this river comes from spring precipitation and runoff, and as a result, the water supply is highest between March and July while the demand for water, largely for irrigation purposes, occurs in late summer through early fall. The disparity between supply and demand is the basis of the policy problem discussed in my thesis: that there is too little management of the water resources of the Milk River.

Five additional factors contribute to this problem.

- First, Alberta has no storage facility on the Milk River that would allow the capture of water during the high supply season for use during the irrigation season.
- Second, the water allocation system in Alberta – known as first-in-time, first-in-right – puts priority on the seniority of the water licence and thus inhibits the efficient allocation of water.
- Third, although Alberta's recent water strategy calls for water management plans for each basin in the province, the MRB is currently not subject to such a plan. The lack of a water management plan highlights the fact that there is not a comprehensive



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*Arising in Montana, the north and south forks of the Milk River enter Alberta and join at the confluence shown here. The river flows into Montana further downstream.*

policy framework on water issues in the MRB.

- Fourth, because the river crosses the U.S.-Canada border, it is subject to the Boundary Waters Treaty signed between the two countries in 1909 and a subsequent Order signed in 1921. These agreements, under the purview of the International Joint Commission (IJC), apportion the water from the river to each country and thereby limit the action each country can and will take regarding the management of that water.
- Lastly, although there are many similarities between the Canadian and American portions of the MRB, there is very little interaction and coordination between water users on either side of the border, resulting in a paucity of cooperative arrangements on water issues.

Recent events have highlighted these factors. An IJC Task Force was convened in 2004 after the Governor of Montana requested that the IJC review whether each country was receiving its correct apportionment of the Milk River

water. This request may have been at least in part a result of Montana users being alerted to the fact that Alberta was conducting a preliminary feasibility study into storage options for the water of the Milk River.

The Task Force issued a report in 2006 that included administrative recommendations and a recommendation that particular water management policies outside of their mandate be studied. These policy options were water marketing, water banking, joint water management operations and infrastructure improvements/enhancements...

Water marketing refers to a new system of water allocation whereby holders of water licences obtained through the first-in-time, first-in-right system could choose to sell some or all of their water allocation, either permanently or temporarily, to other users. Water banking is a policy option involving a financial agreement between two jurisdictions with one signatory physically storing water for another to be released when needed.

The suggestion of joint operations stemmed from the IJC recognizing that the border can act as an impediment to efficient water administration and that working towards treating the basin as one instead of two could improve the situation. The infrastructure improvement options that I explore in my thesis are on-stream, meaning a dam and storage reservoir on the Milk River, and off-stream, meaning a diversion canal to a storage facility off the river. These two options are included because they were the focus of the recent feasibility study in Alberta.

In order to assess these policy options relative to political, economic, legal, environmental, effectiveness, and complexity criteria, I undertook a mixed methods approach. A survey of Canadian MRB residents was undertaken, eight key stakeholders were interviewed, case studies were analyzed to learn lessons about conditions for success, and relevant literature was reviewed. The analysis of the results revealed that some of these options are not feasible and that a combination is necessary to address the multiple factors contributing to the policy problem.

### Key Findings and Recommendations

- Water markets transfer water from low to high value uses and in Alberta can involve water conservation through the utilization of a 10 percent hold back of water and increased



*The Milk River Ridge, one of AWA's Areas of Concern, contains the Twin River Heritage Rangeland, where the north and south forks of the Milk River join. Montana diverts some of its portion of the St. Mary River into the south fork of the Milk River, resulting in higher summer flows than would normally be present.*

- efficiency of water practices. They should be put into practice in the MRB with educational campaigns for potential market participants and a website run by Alberta Environment with market information.
- The vast majority of survey respondents and all of the key stakeholders who were interviewed support the option of joint water

management operations through the creation of an IJC St. Mary – Milk River board and greater collaboration between water users. The case study also indicates that this option will improve the management of the water in the Milk River.

- The two storage options have been studied several times over the last 50 years and have the support of local Canadian residents. These options would be subject to numerous provincial and federal regulations and are currently not viable when weighed against economic, environmental, and political criteria.
- In order to allow water banking, the on-stream storage option would be required; therefore, this option faces the same obstacles as the on-stream option. However, it would have the added advantage of Alberta receiving financial recompense from Montana for the banking and release of their water.
- Other water management options worthy of consideration include an infrastructure option of a pipeline diverting water from the St. Mary River in Canada to the Milk River in Canada and the idea of Montana banking water for Alberta (in contrast to Alberta storing water for Montana).

*Carrie Elliot's thesis can be found on AWA's website under Issues and Areas/Milk River Ridge/Archives.*