

# Montana – Alberta: St Mary & Milk Rivers Water Management Initiative

Joint Initiative Team Meeting #5, Lethbridge Lodge Hotel  
May 4-5, 2009, Lethbridge, Alberta

Montana	Alberta
John Tubbs – Department of Natural Resources and Conservation (co-Chair)	Robert Harrison – Alberta Environment (co-Chair)
Dustin de Yong - Office of the Lt. Governor	Brent Paterson – Alberta Agriculture RD
Randy Reed – Milk River irrigator	Ken Miller – Milk River
Paul Azevedo – DNRC (secretariat)	Tom Gilchrist – Milk River
Don Wilson – Blackfeet Tribe	Gerry Perry – Oldman River
Harold "Jiggs" Main – Ft. Belknap Tribe	Duncan Lloyd – Oldman River
	Tim Toth – AB Environment (secretariat)
Larry Dolan – DNRC Technical Team	Sal Figliuzzi – AB Env't Tech. Team

**Regrets** – Dave Peterson

**Observer** – Larry Mires (executive director, St. Mary Rehabilitation Working Group), John Sanders (DNRC - St. Mary Canal rehabilitation engineer, Day 1 and morning, Day 2)

## Purpose of Phase 2 Joint Initiative Team

To explore and evaluate options for improving both Montana's and Alberta's access to the shared water of the St. Mary and Milk Rivers, and to make joint recommendation(s) on preferred options to both governments for their consideration and approval.

## Meeting Objective

This meeting is dedicated to understanding the Alberta upper St. Mary River water management infrastructure, and to clarifying jurisdictional interests, evaluation criteria and starting to develop a common set of water management options.

### Day 1 – May 4 – 10:45 a.m. – 6:00 p.m.

Tour of St. Mary River basin head works and irrigation infrastructure.

### Day 2 – May 5 – 8:15 a.m. – 3:00 p.m., Anton's ballroom

#### 1. **Welcome and member Introductions** -- Robert

Robert welcomed the Joint Initiative Team. Dave Peterson is unable to attend. After some discussion, the Team agreed to change the order of the agenda: review the Treaty instruments and modelling first, then spend the remainder of the day on options, interests and criteria.

#### 2. **Review Action items – April 6-7 meeting #4** – Tim/Paul

Updates and Action Items from April 6-7, 2009 meeting: review of the Notes and the Communications Plan was deferred until after lunch.

- Draft Notes, JIT #4, April 6-7, 2009 – **Action items** – All action items were completed except for two:
  - Sal and Larry will deliver a trial run of a water management model

- Sal and Larry will propose a base case scenario against which the relative benefits of other water management alternatives can be evaluated

Information on these two actions appears in Sal and Larry's presentation today under Agenda item #6 – Water management model development.

- Draft Notes, JIT #4 – **Notes** – The Notes were **approved** with the following changes:
  - P. 3: bullet #3, revised to read ...St. Mary Irrigation ~~District~~ Project...
  - P. 6: remove sub-bullets “a”-“d” under Part 3 – Water Management Options item #4

The secretariat will send final copy of JIT #4 meeting Notes with the changes.

Communications Plan – John briefly reviewed the purpose of the plan and the people/groups to which it is aimed. The Communications Plan is being implemented as written and there have been no issues with it to date.

The JIT **adopted** draft 4.4 as the Approved Communications Plan.

Joint Status Report – The Joint Status Report must be prepared promptly after each meeting to ensure the Team has common messages. The JIT should advise the Secretariat whether the Joint Status Report meets their communication needs so that it can be continuously improved.

### 3. **Review of St. Mary River basin tour** – Robert

Comments: it was good to meet some local operators and see how ‘water science’ is applied to irrigate Southern Alberta. Tour participants from S. Alberta learned more about the Initiative and seemed assured that the JIT was working toward making access to water better for AB irrigators.

Topics that were highlighted included:

- adding hydro power generation that is financed by irrigators,
- local fragmentation of the landscape with wind power generation,
- in water short years, irrigation districts without storage have to choose which crops to irrigate,
- differences between Provincial and District ownership of infrastructure

Basins closed to further allocations have generated water markets – if water rights can be found for sale – and water is sometimes leased to users during water short years. The tour of the St. Mary River Irrigation Project raised questions about irrigation in other districts in other watersheds. The JIT would like an overview of other irrigation in Alberta and Montana, to provide some context to what was seen today.

**ACTION:** Secretariat to create two 15-20 min. presentations that provide an overview/summary of irrigated agriculture in Montana and Alberta.

**ACTION:** AB Secretariat is to get copy of the book about the history of St. Mary Irrigation development to John Tubbs and Dave Peterson.

### 4. **Communications** – John

Montana – MT is keeping their website up to date.

Alberta – Milk River Watershed Council Canada (MRWCC), annual general meeting  
JIT members Tom Gilchrist, Ken Miller, Duncan Lloyd and Brent Paterson attended the meeting on April 9<sup>th</sup>. Brent apprised the meeting of this initiative. Alberta's Environment Minister attended and gave a short speech. John Sanders gave a presentation on the St. Mary Canal rehabilitation project.

#### Joint Initiative Presentation Master

It was **agreed** that a master presentation was needed for any Team member to use. It was **agreed** that Brent's presentation would be a good starting point from which to build it.

**ACTION:** Secretariat will jointly create a presentation for use by the JIT.

#### Final Technical Background Information Report

The contract for compiling the technical background document has been started. The Contractor has been instructed to present the technical background information in a format understandable to the average informed user; each section will have highlighted main message(s). Larry and Sal are the 'clients' for technical accuracy and will jointly evaluate the first 2-3 sections drafted. The first draft of the document should be completed for the end of June. The JIT will ultimately sign off on document as a joint document.

**ACTION:** The JIT wants to review the first 2-3 sections of the Technical Background Report at the June meeting.

There are three products from this initiative: (1) the technical background report, (2) the water management model and the base hydrology owned by both MT and AB; and (3) an evaluation/recommendations document.

The Burton K. Wheeler Center will be hosting a conference on May 13-14 in Great Falls, MT, titled, "Montana and Canada: Reaching Across the 49th Parallel". Larry Mires will be giving a presentation on the St. Mary Rehabilitation Project.

#### Glacier Contribution Section

Larry gave the handout: **Section 11.8 Glacial Contributions to St. Mary River Flows** and described the information provided.

### **5. Review Treaty instruments – Sal/Larry**

Sal gave handout/presentation dated: May 4-5, 2009 Presentation: **Section 5 Boundary Waters Treaty -- 1921 Order of IJC, Administration of Agreement**. Sal and Larry presented the information contained.

The presentation covered the wording and interpretation of the Treaty, the wording and interpretation of the 1921 Order, the Administrative Procedures used to calculate the natural flows and determine apportionment shares, and the purpose and implementation of the 2001 Letter of Intent. The JIT had an extended discussion to address many question to ensure all Team members understood the current Treaty instruments.

The JIT agreed that future options will be assessed by how much closer each jurisdiction is able to move towards the “Theoretical Share” as defined by the current Treaty and the 1921 Order. The “Theoretical Share” is each jurisdiction’s full entitlement under the Treaty instruments.

**ACTION:** The Technical Team will calculate the “Theoretical Share” for both MT and AB for both rivers, and the annual total, and total for every apportionment period (twice per month), for the period 1959 to 2003 inclusive.

## 6. **Water management model development – Sal/Larry**

Sal reviewed the schematic of AB’s Water Resources Management Model (WRMM). It has been expanded from its original to include the watersheds in MT from the headwaters to the confluence of the Milk River with the Missouri R. Larry reviewed the expansion of WRMM in Montana, noting three differences:

- MT irrigation has substantial irrigation return flow component that the model must account for. This includes the groundwater return flows which return to the river over a period of months following irrigation.
- An accounting for evapotranspiration by riparian vegetation and habitat has been added as a consumptive use.

Sal and Larry presented the hydrological simulation period that will be used to assess water management scenarios. Larry and Sal believe the simulation period 1959 – 2003 has enough wet-dry cycles to reasonably represent the long-term system, and will produce reasonable results. Modeling the natural flow for this period will provide the hydrologic foundation for evaluating options when they are developed.

The JIT **approved** the use of the 1959 to 2003 (inclusive) hydrologic period as the foundation for use in this Initiative.

John and Robert, in consultation with Sal and Larry, suggested that the base case model scenario should be a simulation of “Existing (2009) Base Case”, with current infrastructure (a 650 cfs St. Mary canal), current operations, and current demands on the system (noting that water demand, especially below Fresno Reservoir, is less well-known than supply). This base case scenario will calculate the water that each jurisdiction would have received over each year from 1959 to 2003 if the existing (2009) conditions had existed then.

The JIT **approved** using the “Existing (2009) Base Case” as the base case scenario for evaluation.

For each water management option evaluated, the Technical Team will determine the volume of water each jurisdiction is able to access under the option. This volume will be compared to the “Theoretical Share” to which each jurisdiction is entitled. This will allow the JIT to determine whether that option improved upon the current situation (the “Base Case”) and whether the jurisdiction is getting closer to its full entitlement (the “Theoretical Share”). These volumes will be calculated for each river at the international boundary and for the combined total volumes of the two rivers.

By the June meeting, the JIT would like to see the “Theoretical Share” evaluated and the results of the “Existing (2009) Base Case” model run. During the June meeting, the JIT will develop the list of options that are to be modelled. Then, during the July-August period, those model runs can be

completed by the Technical Team. Those results would then be reviewed by the JIT at its fall meeting.

**ACTION:** The Technical Team is to run the “Existing (2009) Base Case” base case and provide results to the JIT at the June meeting.

**7. Finalize jurisdictional interests – Robert**

The goal for the end of June meeting: (1) develop the physical description of each **Option**, (2) identify the type of jurisdictional interests that will be addressed by that Option, and (3) select the options that are to be evaluated.

Due to the time remaining it was decided to start reviewing and describing the Options. In fully describing an option, then, specific jurisdictional interests that would be addressed by the option will be identified.

**8. Finalize evaluation criteria – Robert**

Addressed above, under item #7.

**9. Understand options – Robert**

See attached.... Appendix 1: Initial Options development

**10. Meeting review and plan for next meeting – Robert/John**

Summary of Action items – review and confirm

1. Secretariat to create two 15-20 min. presentations on other irrigated applications.
2. AB Secretariat is to get copy of the book about the history of St. Mary Irrigation development to John Tubbs and Dave Peterson.
3. Secretariat will jointly create a presentation for use by the JIT.
4. The JIT wants to review the first 2-3 sections of the Technical Background Report at the June meeting.
5. The Technical Team will calculate the “Theoretical Share” for both MT and AB for both rivers, and the annual total, and total for every apportionment period (twice per month), for the period 1959 to 2003 inclusive.
6. The Technical Team is to run the “Existing (2009) Base Case” base case and provide results to the JIT at the June meeting.
7. Secretariat will find information on dams and reservoirs in Canada and the U.S. that are jointly operated by the U.S. and Canadian federal governments.

Summary of agreements, approvals, adoptions

1. The JIT **approved** notes from April 6-7 meeting with changes.
2. The JIT **adopted** draft 4.4 as the Approved Communications Plan.
3. It was **agreed** that a master presentation was needed for any Team member to use.
4. It was **agreed** that Brent’s presentation would be a good starting point from which to build it.
5. The JIT **agreed** that the foundation for analysis of future options is the “Theoretical Share” as defined by the current Treaty, 1921 Order and Administrative Measures.
6. The JIT **approved** the use of the 1959 to 2003 (inclusive) hydrologic period as the foundation for use in this Initiative.

7. The JIT **approved** using the “Existing (2009) Base Case” as the base case scenario for evaluation.

Confirm next meeting – date, field tour, logistics

Next meeting is proposed to be three days, June 8-10 (Monday – Wednesday) in Glacier National Park. The JIT should plan to arrive to be able to start work at about 9:30-10:00 a.m. June 8<sup>th</sup>. Paul Azevedo and Don Wilson offered to arrange local transportation for the field tour.

Objective(s) of next meeting

(1) Tour – learn about the St. Mary River system headwaters that arise in MT.

(2) Meeting – develop the list of options that are to be modelled.

This will allow the Technical Team to model those options over the July-August period.

Additional information – International Boundaries week

John and Dustin noted the 100<sup>th</sup> anniversary of the Boundary Waters Treaty will be held in Niagara Falls on June 12-13. They advised that this would be an opportunity to highlight this Initiative and the Team’s cooperative work. John may attend and Robert will determine AENV’s attendance. Some of the IJC Commissioners will attend. The new U.S. Commissioners will be appointed soon.

Joint Status Report messages

- Tour of St. Mary River Dam, irrigation and water management infrastructure
- Clarify details of Treaty, Order and LOI
- Update on model development and data to be used
- Started review of Options and the Interests and Evaluation Criteria that would be addressed

The meeting was adjourned at 3:15 p.m.