

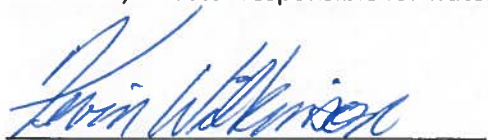
**Terms of Reference**  
**for an**  
**Approved Water Management Plan to be Developed for the Milk River Basin**  
**(Alberta)**  
**Phase One**

**March 15, 2016**

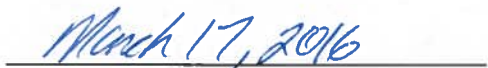


## Statement of Authorization

The terms of reference for the development of an Approved Water Management Plan for Milk River Basin (Alberta) outlines the objectives, process and structure that will be used for Phase One of the planning process. It meets the criteria set out for Water Management Planning, as outlined in the Framework for Water Management Planning under the *Water Act* and is consistent with Water for Life, Alberta's Strategy for Sustainability. These terms of reference are approved by the Alberta Environment and Parks, Director responsible for water management in the Milk River Basin.



Kevin Wilkinson, Regional Approvals Manager  
Alberta Environment and Parks



Date

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## 1.0 Introduction

The Milk River Basin is one of the hottest and driest in Alberta, with unique landscapes, rich biodiversity and historical significance. This basin is the only one in Canada that drains to the Gulf of Mexico. Only 11 per cent (%) of the entire 59,857 square kilometres (km<sup>2</sup>) basin is within Alberta, the majority of the basin (65%) is within the state of Montana and (24%) in the province of Saskatchewan. Milk River flows in the summer months are predominantly water diverted by the United States through an inter-basin transfer from the St. Mary River into the Milk River in Montana. Under the Boundary Waters Treaty (1909), water is apportioned equally for the Milk and St. Mary rivers as though they were one stream, allowing for more, or less, than half of either stream to be used. The 1921 Order of the International Joint Commission further specified the timing and monitoring of the shares of either stream.

The Battle, Lodge and Middle creeks, collectively known as the eastern tributaries, which originate in the Cypress Hills of Alberta and flow southeastward into Saskatchewan, are governed by the 1969 Master Agreement on Apportionment that is administered by the Prairie Provinces Water Board considering the requirements of the Boundary Waters Treaty between the U.S. and Canada. As such, Alberta and Saskatchewan share the Canadian portion of the tributaries. Since 1983 for the eastern tributaries, and 1986 for the portion of the basin contributing to the North Milk and Milk rivers, the Alberta portion of the basin has been under moratorium on the issuance of new licences, with some exceptions depending on which portion of the basin is under consideration.

In 2015, the Milk River Watershed Council Canada (MRWCC) completed the Milk River Integrated Watershed Management Plan (IWMP). The IWMP is a multi-stakeholder initiative utilizing a consensus-based collaborative approach that provides advice to decision-makers on the management of resources in the Milk River Basin. During the consultation process stakeholders raised concerns regarding their ability to secure reliable, quality water supplies to support economic development in the basin. The IWMP addresses a number of water-related issues, including some that lie within the scope of the *Water Act*. Specifically, the IWMP recommends that an approved water management plan be developed under the provincial *Water Act* that:

- a) Authorizes the Government of Alberta to consider applications for transfers of water allocations in the Milk River Basin; and,
- b) Specifies matters and factors that must be considered by the Government of Alberta when reviewing applications for transfers of water allocations.

An approved water management plan is a mechanism that provides direction to decision-makers regarding water allocation decisions under the *Water Act*, and provides assurance to Albertans that the three main goals of the Water For Life Strategy are being achieved, including:

- Safe, secure drinking water;
- Healthy aquatic ecosystems; and
- Reliable, quality water supplies for a sustainable economy.

The approved water management plan for the Milk River Basin will be developed in consultation with stakeholders and Aboriginal communities. The Framework for Water Management Planning will be followed for drafting the approved water management plan. Authorization of the approved water management plan rests with Cabinet through the Lieutenant Governor in Council.

## 2.0 Planning Process and Objectives

### 2.1 Planning Process

The planning process will be divided into two phases. Phase One will focus on water allocation transfers and considerations for new water allocations. The intended outcome of Phase One will be an approved water management plan, once authorized by Cabinet. Phase Two will focus on developing a strategy for the protection of the aquatic environment and recommendations on Water Conservation Objective(s) as required (see the glossary in this document for a description of terms). The intended outcomes of Phase Two will be recommendations to amend the approved water management plan as needed. Phase Two will have a separate terms of reference. The public, stakeholders and Aboriginal communities will be invited to provide input throughout the planning process as described in section 6.0 of this document.

### 2.2 Objectives

The objectives of the planning processes are outlined below:

#### Objectives of Phase One:

1. Establish Water Management Area(s) under the *Water Act* as required
2. Authorize the ability to transfer an allocation of water under a licence under the provisions of the *Water Act*
3. Specify matters and factors that must be considered by the Director designated under the *Water Act* in making decisions on applications for water allocation transfers, licences, preliminary certificates or approvals
4. Determine the need to either:
  - a. maintain or amend the current moratoriums in the basin; or
  - b. close the basin to new surface water allocations under the *Water Act*
5. Develop policy options for future water management and recommend a path forward in alignment with the goals of the Water for Life Strategy and the priorities of the region

#### Objectives of Phase Two:

1. Develop a strategy for the protection of the aquatic environment
2. Determine the need for and recommendations on Water Conservation Objective(s) as required
3. Recommend the amount of water to be withheld in Water Conservation Holdback(s) as required

## 3.0 Background Information

### 3.1 Geographic Description of the Planning Area

The Milk River Basin is the southern-most basin in Alberta with only a small portion (11 %) of the entire 59,857 km<sup>2</sup> basin within the provincial boundary. Most of the basin (65%) is within the state of Montana and a smaller portion (24%) in the province of Saskatchewan. Only the Alberta portion of the Milk River Basin will be included under this planning process (Figure 1).





The Milk River Basin is primarily rural (with 1054 people in 2012), but includes the small urban centres of the Town of Milk River (with 811 people in 2012), the Village of Coutts (with 277 people in 2012) and a portion of the Village of Warner (with 392 people in 2012). Overall population is on the decline, but at a higher rate in rural areas than in the urban centres. The Milk River Transboundary State of the Watershed Report cited the population in Alberta's portion at 2534 people in 2012, down by 9.1% from 2008. This trend is supported by the sale of small-scale farms to larger scale operations.

The primary landuse in the Milk River Basin is agriculture, predominantly grazing with some cropland use. This basin includes several parks and protected areas, such as Cypress Hills, Writing-on-Stone and the Twin River Heritage Rangeland Natural Area.

The Milk River Basin is the only one in Alberta that drains south to the United States. As such, the Milk River in Alberta contributes to the headwaters of the Mississippi-Gulf of Mexico drainage basin. Originating in the foothills of western Montana and flowing northeast into Alberta near Del Bonita, the Milk River flows due east for about 170 km across southern Alberta before re-entering Montana. Sharing of its waters, along with the water of the St. Mary River, is governed by Article VI of the Boundary Waters Treaty (1909), and the 1921 Order of the International Joint Commission. The Order further clarified the Treaty, and entitles Alberta to receive the following quantities of the natural flow of the Milk River as calculated at its eastern crossing of the International Boundary:

**Non-irrigation season (November 1 to March 31)**

- 50% of the natural flow

**Irrigation season (April 1 to October 31)**

- For natural flow rate up to 18.86 cubic meters per second (m<sup>3</sup>/s) (666 cubic feet per second (cfs))
  - 25% of the natural flow
- For natural flow rates in excess of 18.86 m<sup>3</sup>/s (666 cfs)
  - A prior allocation of 4.71 m<sup>3</sup>/s (166.5 cfs) plus 50% of the natural flow above 18.86 m<sup>3</sup>/s (666 cfs)

The natural flows are calculated according to the most current version of the Procedures for the Division of the Waters of the St. Mary and Milk Rivers prepared by the U.S. Geological Survey and the Water Survey of Canada.

For the eastern tributaries, Alberta is entitled to 25% of the natural flow of each of Battle, Lodge and Middle creeks crossing into Saskatchewan.

The apportionment specified in the Boundary Waters Treaty and the Order can not be altered by the development of an approved water management plan.

## **3.2 Current Conditions and Description of Issues**

The Milk River Basin is a water-limited area. The climate is amongst the hottest and driest in Alberta, and there is little natural runoff as evaporation typically exceeds precipitation. The Milk River is the smallest of the major river basins in Alberta, with an average annual natural volume of 167,000 cubic decameters (dam<sup>3</sup>) (135,389 acre feet)). Approximately 106,000 dam<sup>3</sup> (85,935 acre feet) of this natural volume come from the headwaters of the Milk River in Montana.

In 1917, the St. Mary River diversion was completed in Montana by the United States to divert a portion of the water from the St. Mary River into the Milk River through syphons and canals. This water is carried by the Milk River through Alberta then returned to eastern Montana, where it is used for irrigation. The Boundary Waters Treaty of 1909 is administered by the International Joint Commission. The 1921 Order of the International Joint Commission provided more specifics for the apportionment. In 1991, a Letter of Intent between Montana and Alberta was written (and revised in 2001) to allow more flexibility in the apportionment to meet spring and summer water needs.

The Milk River flows in Alberta are much greater than natural during the summer months when water from the St. Mary River in Montana is diverted into the Milk River. Alberta's average (1950 to 2002) annual entitlement has been 48,634 dam<sup>3</sup> (39,428 acre feet). Water use data gathered during the irrigation season through the Milk River Water Use Metering Pilot Project that operated from 2007 to 2012 had a range from 1820 dam<sup>3</sup> (2010) to 9052 dam<sup>3</sup> (2012) of water used for irrigation and municipal purposes (average of 5259 dam<sup>3</sup>). However, the natural flow of the Milk River in the winter is low and may approach zero in the downstream reaches, in times of drought or severe prolonged cold conditions. The seasonal variability of the river flow and the timing of diversion of St. Mary River water into the Milk River limits Alberta's ability to access water for irrigation use, particularly during the latter part of the growing season. The formal apportionment for the Milk River, done under the direction of the IJC, began in 1985.

For the eastern tributaries portion of the basin, the average entitlement available to Alberta from 1911 to 2013 was 6446 dam<sup>3</sup> (5226 acre feet). Since 1985, Alberta has accumulated five calculated deficits to Saskatchewan occurring in 1988, 1989, 1998, 2000 and 2008 on Middle Creek. In 2009, Alberta also had a deficit which was made up by volumes of water sent into Saskatchewan after the apportionment year ended in October.

Since the mid-1980s, the Alberta portion of the Milk River basin has been under moratorium on the issuance of new surface water licences, with some exceptions for certain water uses depending on which portion of the basin is under consideration. The moratoriums are described in more detail under section 3.3.

Presently, requests for water allocation transfers must be taken to the Lieutenant Governor in Council for approval because there is no approved water management plan for the basin. An approved water management plan for the Milk River Basin is needed to enable decisions on applications for water allocations transfers to be made at the regional level by the designated Director under the *Water Act*. The key point is that the flow in the Milk River which Alberta can access is limited and steps need to be taken to add flexibility to water management so the available water can be used as beneficially as possible. An approved water management plan is one mechanism to provide that flexibility.

Maintaining the water quality and the health of the aquatic ecosystem and riparian areas are also of concern. Erosion and sedimentation of the water course is prevalent during periods of increased flows intended to support irrigation. The impacts on the aquatic environment (e.g., sensitive fish species) as a result of the fluctuating flows and river bank erosion are recognized issues that need to be further assessed and addressed in the future. These issues highlight the need to develop a strategy for the



protection of the aquatic environment. The current condition of the Milk River Basin is described in more detail in the Milk River Transboundary State of the Watershed Report 2nd Edition (2013).

### **3.3 Current Water Allocations and Projected Water Demands in Alberta**

Alberta has licensed allocations of 31981 dam<sup>3</sup> (25927 acre feet) from the portion of the basin contributing directly to the North Milk and Milk rivers within Alberta, with allocations for irrigation purposes representing 77% of the total allocation volume. There is 18625 dam<sup>3</sup> (15099 acre feet) of licensed allocation withdrawing directly from the river, 78% of all allocations. Presently, set volumes of irrigation consumptive use per division period are used in apportionment computations and reporting by the Accredited Officers of the International Joint Commission, based on an evaluation done in 1986. This is currently under review and could change in the future.

Growth in allocations was fairly consistent from 1910 to 1990. Since 1986, the Alberta portion of the basin contributing to the North Milk and Milk rivers has been under moratorium on the issuance of new licences, with the exception of small agricultural projects or to meet municipal needs. In 2010, the total amount of water allocated was approximately 38% of the historical average estimated Canadian entitlement to the natural flow of the Milk River.

Note that allocations are not a direct measure of actual use; rather, they represent the maximum amount of water that can be used under the terms of licenses issued, when and if sufficient water is available in a given year. Licensees are required under the provisions of their licence terms and conditions to monitor and report their water use monthly and on an annual basis to the department's Water Use Reporting System. If licensees do not report their water use, their licenses may not be considered in "good standing" and therefore they are not allowed to transfer any or all of their allocation. Therefore water use reporting may also be addressed in the matters and factors section of the water management plan.

For the eastern tributaries portion of the basin, there is a total allocation of 8994.2 dam<sup>3</sup> (7292 acre-feet). This portion of the basin has been under moratorium since 1983 to issuance of any new licenses except small stockwatering projects not located on the mainstems of Battle, Lodge and Middle creeks. Allocations in this portion of the basin include minor diversion for irrigation and filling of reservoir storages.

## **4.0 Information Requirements**

Information compiled for the development of the Milk River State of the Watershed Report (2013) and the Milk River IWMP (2014) will be used to inform the development of the Approved Water Management Plan for the Milk River Basin (Alberta). The following information may also be required to support the development of the plan:

- Current and historic natural flow information
- Water allocation and use information

## 5.0 Legislative, Policy and Planning Context

The development of this plan occurs within both a provincial and regional context influenced by legislation, policy and regional planning. Information in this section was limited to legislation, policy and planning that directly influence the scope of this planning process.

### ***Alberta Land Stewardship Act***

The *Alberta Land Stewardship Act* sets out the legal basis for regional land use planning in Alberta. It requires decision-making and local government bodies to review their regulatory instruments then make any necessary changes to ensure these instruments comply with the regional plan. The Milk River Basin falls under the South Saskatchewan Regional Plan (SSRP), which came into effect in September, 2014.

### **Boundary Waters Treaty (1909), and the 1921 Order of the International Joint Commission**

In 2008 Alberta and Montana established a joint initiative team (JIT) of water administrators and water users 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. The JIT's Recommendations Report is expected to be presented to the jurisdictions in 2016.

### ***Water Act***

In 1999, the Government of Alberta gave Royal Assent to the *Water Act*. The objective was to ensure the province's water management legislation and policy could more effectively address current water management demands and challenges. The *Water Act* focuses on managing and protecting Alberta's water resources.

The following *Water Act* highlights are relevant to the Milk River planning process:

- Existing licences that are in good standing are protected (and will be respected in this process)
- A limited amount of water under a Traditional Agricultural Registration can be used on an owner's land base without licence, if the owner had legal ownership prior to 1999
- The importance of "household uses" of water are recognized and provided with a statutory right that has priority over all other uses
- The *Water Act* requires that a strategy for protection of the aquatic environment be part of the provincial water management planning framework
- Through the water allocation transfer mechanism, the Act allows for flexible water management – particularly in areas where all reliable water available is already allocated
- The *Water Act* enables Albertans the opportunity to provide advice on water management
- The *Water Act* requires that an Approved Water Management Plan will identify the matters and factors that must be considered in making decision on applications for water allocation transfers, licences, preliminary certificates or approvals.

The main difference between a **water management plan** and an **approved water management plan** is that the latter requires approval by the Lieutenant Governor in Council or by the minister if authorized by the Lieutenant Governor in Council. If an approved water management plan exists, then it must be considered when Alberta Environment and Parks makes decisions for that area under the *Water Act*.

An approved water management plan is required:

- for transfer applications under Section 82 of the *Water Act*, and
- when, during a transfer application, a Director decides under Section 83 of the *Water Act* to hold back up to 10% of the allocation.

The Framework for Water Management Planning provides direction for the development of water management plans to ensure the sustainable management of Alberta's water resources. The Milk River water management planning process will adhere to the principles and processes outlined in this framework.

### ***Municipal Government Act***

Landowners and managers, as determined in the provincial *Municipal Government Act*, administer the majority of land use practices within the basin. Only small parcels of land are administered as Public Lands, Protected Areas or Indian Reserves.

Under this Act, Municipalities may plan for the development and use of land, and maintain and improve the quality of the physical environment. They therefore have the responsibility of determining land use zoning, which can impact water quality.

### ***Public Lands Act***

The province of Alberta owns the bed and shore of all permanent and naturally occurring water bodies. Bed is defined as the land on which the water sits and the shore is defined as the part of the bed that is exposed when water levels are below their normal fullest level. Use or disturbance of the bed and shore requires prior authorization under this legislation.

### ***Environmental Protection and Enhancement Act***

This is provincial legislation that takes an integrated approach to the protection of Alberta's air, land and water. One of the Act's cornerstones is the opportunity for public participation in decisions affecting the environment. This public involvement includes increased access to information, participation in the Environmental Assessment and Approval Processes and the right, when directly affected, to appeal certain decisions.

### **Fisheries Legislation**

Alberta's fisheries are managed through the *Alberta Fisheries Act*, while fish habitat in Alberta is managed and protected through the federal *Fisheries Act* (Canada). Through these two pieces of legislation, the Fish Conservation Strategy guides the overall management and protection of the fisheries resource in Alberta. Its guiding principles include: no net loss of the productive capacity of fish habitat, and the biological diversity of fish fauna is to be maintained.

### **Wetland Policy**

- The goal of Alberta's Wetland Policy is to conserve, restore, protect, and manage Alberta's wetlands to sustain the benefits they provide to the environment, society, and economy.
- The Alberta Wetland Policy provides the strategic direction and tools required to make informed wetland management decisions in the long-term interest of Albertans.
- The policy will minimize the loss and degradation of wetlands, while allowing for continued growth and economic development in the province.

## 6.0 Consultation and Engagement Process

Consultation is an essential component of the water management planning process. The purpose of the consultation process is to provide an opportunity for stakeholders, Aboriginal communities and the public to understand and discuss current water management issues and interests in the Milk River Basin. Public meetings were held in community facilities within the Milk River Basin to gather input on recommendations for the draft terms of reference and input was incorporated in this final Terms of Reference. The same will be done for the draft plan. Written input will also be accepted within the timeframe of the planning process (see section 7.0). Input received from the community will be compiled and used to inform the development of an approved water management plan for the Milk River Basin (in Alberta). Feedback will be provided on how the input influenced decisions in the planning process. The roles and responsibilities of organizations and individuals coordinating the consultation process are described in section 8.0.

### 6.1. Public Consultation

Opportunities for public consultation on the development of the Milk River IWMP, which was completed in 2014, were provided by the MRWCC. The public consultation sessions for the Approved Water Management Plan for the Milk River Basin (Alberta) will be led by Alberta Environment and Parks in collaboration with the MRWCC with the intent to build on the information gathered during the Milk River IWMP consultation process.

### 6.2 Aboriginal Consultation and Engagement

Aboriginal communities will be invited to participate at all public meetings in addition to the opportunity to meet one-on-one. *The Government of Alberta's Policy on Consultation with First Nations on Land and Resource Management, 2013* and associated Guidelines will be followed when government decisions may adversely affect the continued exercise of constitutionally protected rights. The SSRP First Nations Sub-Table will be an additional opportunity to engage and inform on the process and gather feedback.

## 7.0 Work Plan for Phase One

Task	2015				2016				
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June
Draft Terms of Reference									
Consultation on the draft Terms of Reference									
Report on input received and update the Terms of Reference									
Approval of Terms of Reference									
Draft Water Management Plan									
Consultation on the draft Plan									
Report on input received and update the Plan									
Director Approval of the Plan									
Submit Plan for approval by Cabinet									

The process and timeline for Phase Two to be determined once Phase One has been completed.

## **8.0 Roles, Responsibilities and Accountabilities**

The planning process for developing the Approved Water Management Plan for the Milk River Basin (Alberta) will be led by Alberta Environment and Parks through the Planning Branch with support from the Operations Division and the Ministry of Indigenous Relations. The following outlines the main roles, responsibilities and accountabilities of participants involved in the coordination of the planning process:

### **Project Sponsor**

- Provide overall leadership and direction on the planning process

### **Project Manager**

- Coordinate the development and distribution of documents and information packages
- Report to the project sponsor on the progress of the planning process

### **Technical Advisors**

- Assist with the collection and compilation of technical information
- Provide input on the planning process and products as needed

### **Milk River Watershed Council Canada (MRWCC)**

- Provide advice and coordination support for the planning process to book venues, contact stakeholders, facilitate discussions and capture notes as needed

### **Indigenous Relations**

- Provide background information, contacts and advice for consulting with Aboriginal communities

## Glossary

**Allocation:** The volume, rate and timing of a diversion of water.

**Aquatic environment:** The components of the earth related to, living in, or located in or on water or the beds or shores of a water body, including but not limited to all organic and inorganic matter, living organisms and their habitat, including fish habitat, and their interacting natural systems.

**Basin:** The area that drains to a common water body such as a river, stream or lake . There are seven major river basins in Alberta, including the Milk River Basin. A basin is often referred to as a watershed.

**Natural flow:** A calculated flow that estimates the flow in rivers that would have occurred in the absence of man-made effects on, or regulation of, flow.

**Water allocation transfer:** Occurs when the holder of an existing water withdrawal licence, that is determined to be in good standing, agrees to sell all or part of the amount they are allocated to another person or organization or where the holder of the licence wishes to move all or part of their own licence and where there is a change in the point of diversion and/or point of use (appurtenance) of the licence. When this occurs, the allocation is separated from the original land, and a new licence, with the priority number of the transferred allocation, is issued and attached to the new location. The decision on a Water Allocation Transfer occurs under the provision of the Water Act for which Alberta Environment and Parks has jurisdiction. During a Transfer conditions may be placed on the new licence. Water allocation transfers may occur only if authorized under an approved water management plan, or by the Lieutenant Governor in Council.

**Water conservation holdback:** If the Director is of the opinion that withholding water is in the public interest to protect the aquatic environment or to implement a water conservation objective, and the ability to withhold water has been authorized in an applicable approved water management plan or order of the Lieutenant Governor in Council, the Director may withhold up to 10% of an allocation of water under a licence that is being transferred. The withholding occurs at the time the new licence created for the transferred allocation is issued (see section 83 of the *Water Act*).

**Water conservation objective:** The amount and quality of water set by a Director for the protection of a natural water body or its aquatic environment; the protection of tourism, recreational, transportation or waste assimilation uses of water; or the management of fish or wildlife, and may include water necessary for the rate of flow of water or water level requirements.

**Water licence:** Provides the authority for diverting and using surface water or groundwater. The licence identifies the water source, the location of the diversion site, an amount of water to be diverted and used from that source, the land or undertaking the licence is associated with, the priority of the "water right" established by the licence, and the conditions under which the diversion and use must take place.

**Watershed:** A watershed is often referred to as a basin (see definition for basin).