

Strategic Plan

Winter 2006

A Precious Resource

The waters of the Mackenzie River Basin are a precious resource and they present unique challenges to water resource managers. A multi-jurisdictional agreement creates the Mackenzie River Basin Board to implement a set of principles and accomplish a vision for water management in the Basin. This Strategic Plan identifies the Board's goals for water management in the Basin. It identifies the things the Board can do to achieve its goals and the key issues that will direct the Board's activities and business plans for the next five years.

The Mackenzie River Basin

The Mackenzie River Basin has cultural, political, geographic and environmental characteristics, which are unique and significant by world standards. The basin is huge at 1.8 million km², over one-fifth the area of Canada, but has only a small population of 400,000 people. Yet everyone in some way depends on the rivers, lakes, deltas and waterways for their livelihood and way of life. The population is very diverse in lifestyle and heritage with members of the various Aboriginal peoples speaking eleven different languages.





The basin connects us all

In the language of the Dogrib aboriginal people of the Northwest Territories, the word for “land” – Dè – includes the understanding that all things have life and spirit, and that all things are interconnected. For the purposes of regional planning and management, this concept is expressed by the use of the term “drainage basin” (or watershed). By seeing the entire Mackenzie Basin as a whole, we see the need to take care of the land, water and all its life forms, while addressing the unique needs of each sub-basin.

The basin is divided roughly in half by the sixtieth parallel, yet close to 88 per cent of the population lives in twelve major communities in British Columbia and Alberta. Most people make their living in the forestry, oil and gas, agriculture and hydroelectric power generation industries which use water in their operating processes. Although this area has a predominately modern industrial economy, some Aboriginal people still follow a traditional hunting and gathering lifestyle.

By contrast, most residents north of 60, and in the Saskatchewan portion of the Basin, are Aboriginal.

Many live a primarily traditional lifestyle involving hunting, fishing, trapping and the use of waterways for transportation. There are eight larger and 21 smaller communities where these people live on a full or part-time basis. Consequently, the way water is used, and how that use affects the water resource, varies considerably between the northern and southern areas.

Challenges in the Basin

The Mackenzie River Basin is different from most other large river basins in the world. Its population and industrial development is concentrated in upstream areas and the effects of that development on the water and people are felt downstream where fewer people live. Yet those people depend on a relatively pristine quality and quantity of water in order to be able to continue to drink the water and eat the fish as part of their livelihood and lifestyle. By contrast, most other great river basins are characterized by a large port city at the mouth with fewer people, and less and less economic activity further upstream.

The variety of political jurisdictions with legislated authority over water management is also unique. British Columbia, Alberta, Saskatchewan and Yukon have the majority of legislative authority over water management within their respective boundaries. In the Northwest Territories, however, authority over water is primarily the responsibility of the federal Department of Indian Affairs and Northern Development. The federal government also has responsibilities in all parts of the basin under the Fisheries Act and Navigable Waters Protection Act. In addition, some groups of Aboriginal people

who live in the Basin have settled, or are negotiating land claims and/or self-government agreements which may set out authority and management roles with respect to water and rights to water.

Because the Basin contains several large rivers that flow across political boundaries, management actions taken in one jurisdiction may affect the water resources in one or more neighbouring jurisdictions downstream. Sound water management in the Basin requires the cooperation of all jurisdictions to coordinate their respective activities.

Therefore, the central intergovernmental water resource issue in the Basin is: ***how should the water resources of the vast river system be managed and shared among jurisdictions in a fair and equitable manner, while recognizing the legitimate interests and needs of each jurisdiction, and preserving the integrity of the aquatic ecosystem?***

The Agreement

In order to address this fundamental issue of water management cooperation, the governments of Canada, British Columbia, Alberta, Saskatchewan, the Northwest Territories and Yukon signed the Mackenzie River Basin Transboundary Waters Master Agreement. It came into effect on July 24, 1997.

The purpose of the Agreement is “to establish common principles for the cooperative management of the aquatic ecosystem of the Mackenzie River Basin, to establish an administrative mechanism to facilitate application of these principles, and to make provisions for Bilateral Water Management Agreements.”



The Mackenzie Delta

The Mackenzie River Basin Board

The Agreement establishes the Mackenzie River Basin Board with the responsibility to implement the terms of the Agreement and to serve as a forum where all governments can cooperate in an effort to maintain the ecological integrity of the Basin's aquatic ecosystem. A staff arm for the Board, called the Secretariat, was also set-up to carry out the programs, basic administrative duties and any investigations required by the Board.

The Board has 13 members, three representing the Government of Canada and two from each province and territory. One of the two provincial and territorial members has been appointed to represent Aboriginal organizations in each jurisdiction.

The Board is unique because of this interjurisdictional partnership, the presence of members representing Aboriginal interests alongside representatives of the governments, and the commitment by all parties to maintain the ecological integrity of the aquatic ecosystem.

Goals

The Board has identified six important goals for the Mackenzie River Basin.

The Board's Vision for the Mackenzie River Basin

A healthy and diverse aquatic ecosystem for the benefit of present and future generations.

The Board's Guiding Principles

The Agreement commits the parties to the following principles in carrying out their responsibilities in the Basin:

- Manage the water resources in a manner consistent with the maintenance of the ecological integrity of the aquatic ecosystem.
- Manage the use of the water resources in a sustainable manner for present and future generations.
- Allow each party to the Agreement to use or manage the use of water resources within its jurisdiction provided such use does not unreasonably harm the ecological integrity of the aquatic ecosystem in any other jurisdiction.
- Provide for early and effective consultation, notification and sharing of information on developments and activities that might affect the ecological integrity of the aquatic ecosystem in another jurisdiction.
- Resolve issues in a co-operative and harmonious manner.



Giant Mine in Yellowknife, NWT

Ensure Human Health and Safety

Human health and safety issues take two forms. The first is the potential for illness that could arise from drinking contaminated water or eating contaminated species taken from the rivers and lakes. The second issue is that of property damage and health concerns caused by flooding.

Ensure Healthy, Abundant and Diverse Aquatic Species and Habitat

Having healthy, abundant and diverse aquatic species and habitat is tied directly to the quality and quantity of the water. The river Basin should have, now and in the future, healthy and abundant fish stocks, healthy habitats for waterfowl and fur-bearing aquatic species, and healthy riparian habitats. It will be important to establish baseline information to measure diversity and any reductions in diversity due to negative impacts.

Improve Water Quality

Water quality is the key issue for the entire river system. Many other elements related to maintenance of the ecological integrity of the



Break-up near Arctic Red River

aquatic system rely on good water quality. As well, water quality impacts every other goal. Achieving this goal involves assessing threats to water quality, whether water or air-borne and whether originating from inside or outside the Basin, such as through the long-range transport of air pollutants.

Ensure Sufficient Water Quantity

Ensuring sufficient water quantity is critical to many elements of the river Basin including maintaining a sufficient flow regime to allow for suitable river transportation, maintaining ecological integrity, maintaining recreational and traditional

uses and providing for community and industrial water uses.

Ensure that Water Uses are Sustainable

Managing the use of the water resources of the Basin in a sustainable manner for present and future generations requires a balance between environmental factors, social conditions and economic circumstances. It is important to look at the cumulative effects of development in relation to the river Basin and how that balance may be achieved. This goal focuses on use of the water by: various aquatic species and habitats; traditional users; recreational users; and for aesthetic values.

Ensure a Knowledgeable and Involved Public

Board members believe it is important to better understand people's views of critical water issues. They also believe it is important that citizens become more knowledgeable about the characteristics of the Basin and management of the water resources. Obtaining better information and public involvement through consultation will help the Board do a more ef-



Slave River rapids

Roles of the Board

There are many agencies and levels of government involved in water management in the Mackenzie River Basin. The Board plays a specific part in this management. It does not have legal authority to regulate, plan or manage resource use. It is not a regulatory or licensing board. These powers remain solely with the jurisdictions. The Board's role is to advocate for the entire Basin and ensure cooperation between jurisdictions.

The following actions define the Board's role in water management in the Basin and support the achievement of the Board's goals. These actions may focus on local, regional, whole basin, national and international issues. Smaller scale issues at the local and regional levels are generally best handled by individual jurisdictions. It is the larger scale issues that affect the entire Basin or cross boundaries between jurisdictions that require the advocacy and cooperative focus of the Board.

- The Board will **Evaluate** the ecological health of the whole Basin.

The Board will periodically evaluate the well-being and ecological integrity of the entire Mackenzie River Basin. Every five years the Board prepares a State of the Aquatic Ecosystem Report. The first report was published in 2004. These reports provide an overview of the Basin and identify areas of concern. These reports may be systematic reviews of indicators of environmental health in all parts of the Basin. They may focus on specific issues of basin wide concern. Observations and advice concerning key issues within the Basin are provided to the public and to the Ministers responsible for water management in each of the jurisdictions.

- The Board will **Investigate** matters concerning the ecological health of the whole Basin.

The Board may choose to conduct or sponsor investigations into issues of basin wide concern. For example, the Board has commissioned the development of a hydrological model that can predict water flow in various reaches of the system and compare observed and predicted flows with and without regulation. The Board may also participate in independent investigations taking place in the Basin.

- The Board will **Advocate** for the maintenance and improvement of the ecological health of the whole Basin.

The Board is a co-operative body that may appear as "a friend of the tribunal" to advocate for the principles contained in the Master Agreement in the various decision-making processes in the Basin. The Board may intervene to advocate for the maintenance of the ecological integrity of the entire watershed in federal, provincial and territorial regulatory hearings. The Board may also influence decisions made in pre or post-regulatory processes, such as planning, cumulative environmental impact assessments, or ministerial reviews of sensitive decisions.

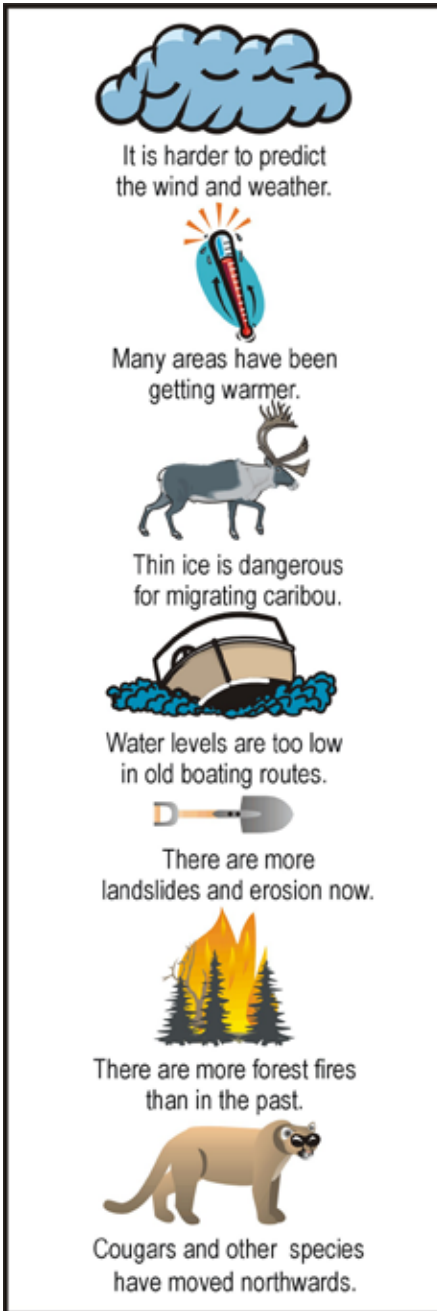
- The Board will learn from others, share information and **Educate** the public about matters concerning the ecological health of the whole Basin.

The Board has developed a protocol for prior notification that assures that a potentially effected jurisdiction is informed in advance of any development or issue taking place in another jurisdiction. The Board believes in helping the public to be informed and involved in the business of water management in the Basin. The Board produces informative and educational materials that develop the image of the entire Basin and public awareness of the issues of concern within the Basin. The Board maintains a website that provides a portal to water news, issues and concerns about water in the Basin.

- The Board will encourage and **Facilitate** the development of **Bilateral Water Management Agreements**.

The Master Agreement makes provision for the negotiation of seven Bilateral Water Management Agreements between neighbouring jurisdictions. These include the Department of Indian Affairs and Northern Development where the Northwest Territories is a party to an agreement. When signed, the bilateral agreements will be attached as schedules to the Master Agreement. The bilateral agreements will contain specific conditions regarding water quality, quantity, flow and ecological integrity that the neighbouring jurisdictions commit themselves to achieve in order to maintain a healthy aquatic ecosystem. To date one of the seven bi-lateral agreements has been completed.

Board members have agreed that the preparation and adaptation of the remaining bi-lateral agreements is critical and should be a priority for each jurisdiction. The Board encourages neighbouring jurisdictions to complete and sign the agreements within five years.



fective job of meeting its goals. Disseminating information, including traditional knowledge, to the public and between jurisdictions will assist individuals and groups to become more involved in water management programs, and take responsibility for the integrity of the aquatic ecosystem.

Five Year Strategic Focus

Every five years, the Board is required to submit to the Ministers a report on the state of the aquatic ecosystem. In 2004 the Board published the *Mackenzie River Basin State of the Aquatic Ecosystem Report 2003*. The most encouraging finding of the Board's report is that aquatic ecosystems in the Mackenzie River Basin are "generally healthy". Yet, the report raises concerns about environmental trends, information gaps, and certain management practices. These are the whole basin and trans-boundary issues that will focus and direct the Board's annual business plans for the next five years.

Improving Knowledge

Programs to monitor contaminants, assess health risks, and distribute consumption advisories for country foods vary widely across the Basin. Information about the safety of these foods is critical to people who consume them as part of their cultural lifestyle.

Different jurisdictions report on water quality in different ways, making it difficult to describe water quality conditions across the Basin in a consistent fashion. Improved monitoring programs and compatible data systems are needed to support better water management decisions throughout the Basin.

Understanding the hydrology of the Mackenzie River System forms the foundation of understanding all other aspects of the Basin. Developing this understanding is a priority.

Including Traditional Ecological Knowledge

A substantial amount of information about the state of the Basin

in the historic past and the observed changes in the recent past is known by the people who have lived in the basin for generations. The use of Traditional Knowledge in decision-making provides a long term holistic perspective. It is important to learn how to use this Traditional Knowledge to assist in making today's water management decisions.

Responding to Climate Change

Climate change has brought a major warming trend and altered precipitation across the Basin, affecting river flows, lake levels, habitats, pollutant concentrations, and transportation routes and subsistence lifestyles. Aquatic ecosystems in all parts of the basin are responding to these changes. It is important to understand the changes that are taking place and to take steps to adapt to these changes.

Understanding Contaminants in Drinking Water and Country Foods

Surface water quality is generally good enough for it to be treated and used as a source of drinking water. Very little is known about groundwater in the Basin, however, some Basin residents rely on groundwater for domestic and industrial uses. Waters of the Basin are generally capable of supporting all of the Basin's native aquatic plants and animals. Many Basin residents consume local fish and waterfowl as part of their daily diet. Since the 1980s, the quality of treated effluents discharged from industries and communities within the Basin has greatly improved. Concerns remain including: nutrient loadings from pulp mills, oil sands tailings,

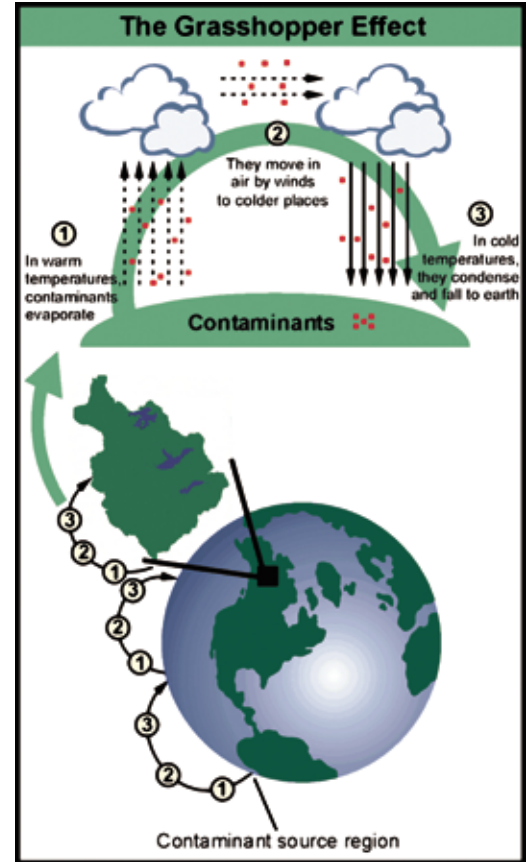


Athabasca Oil Sands Development near Fort McMurray

abandoned uranium mines around Lake Athabasca, Yellowknife's underground arsenic storage sites and other abandoned metal mines in the Northwest Territories. Airborne pollutants including mercury and PCBs from far away are also a threat to the quality of water and country foods. It is necessary to understand these threats and to respond to them effectively.

Developing a Watershed Approach

A watershed approach to river basin planning and management links land use practices with the health of aquatic ecosystems. Every jurisdiction is moving in this direction



and the Board will encourage all partners, industries and Basin residents to support this integrated approach.

Protecting Aquatic Ecosystem Biodiversity

The biodiversity of aquatic ecosystems in the Basin appears generally good. However, as the demands to use water increase, so will the need for water quality and quantity guidelines designed to protect diverse, well-functioning aquatic ecosystems. Traditional and scientific knowledge assessments agree that changes are occurring in the ecological health of the basin's three great river deltas; the Peace-Athabasca; the Slave; and the Mackenzie. Impacts from altered flow regimes, contaminants and climate change are among the factors needing further attention.



Aklavik Flood Spring 2006

BOARD COMMITTEES

In order to accomplish its goals, the Board has created four working committees. With members of the Board and staff representatives from the various governments, each committee will address the following specific responsibilities.

For more information about the Board and its initiatives, or to obtain a copy of the Mackenzie River Basin Transboundary Waters Master Agreement, please contact:

Mackenzie River Basin Board Secretariat
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Operations Committee

- Prepare and review by-laws
- Prepare and review budget
- Establish policies and procedures
- Provide encouragement for the development and signing of the Bilateral Water Agreement
- Review the annual report
- Manage the dispute resolution process

State of the Aquatic Ecosystem Report (SOAER) Committee

- Information management
- Determine options for format of SOAER Report
- Establish process for preparation and subsequent updates
- Determine recommendations for content of report
- Prepare and review SOAER reports

Communication Committee

- Develop a communication strategy
- Prepare the annual report
- Arrange public forums as required
- Prepare press releases
- Prepare presentation materials and literature for public consumption

Technical Committee

- Undertake investigations
- Information management
- Assess existing data
- Prepare study reports for consideration by the Board