

Red River Basin Planning

What are the characteristics of the Red River Basin?

Basin Size

The Red River Basin is approximately 116,500 km² or 45,000 mi². From this, 103,600 km²/ 40,000 mi² lies in the United States and 13,000 km²/ 5,000 mi² lies in Canada.

Landscape

The RRB is characterized by a very flat, north-south oriented “valley” surrounded by relatively steep escarpments to the east and west. This, coupled with the northward flow of the Red River, results in a naturally flood-prone river basin.

Climate and Hydrology

The variable nature of the basin’s water resources may result in floods or drought occurring within months of each other, or even simultaneously in different areas of the basin (Krenz and Leitch 1993). Climate influences water movement and management of our resources. Annual precipitation generally increases from northwest to southeast within the basin, influencing runoff rates and flow contributions of tributaries to the Red River. The spring thaw begins in the southern end of the basin and moves northward, often resulting in localized flooding due to ice jams as meltwater moves north into still-frozen reaches of the Red River. The potential effects of climate change in the Northern Hemisphere are uncertain, but include changes in snow melt patterns, runoff timing and volume, precipitation patterns, etc. (Gleick 2000). Changes in these features of the hydrologic cycle will have numerous impacts on flooding, water quality and watershed processes.

Land use

The productive soils of the RRB attracted early settlers to the area. The use of waterways as transportation corridors resulted in establishment of towns and homesteads near the Red River and its tributaries. With the development of drainage systems initiated in the 1880s, farmland became more valuable and productive, and formed the basis of the economy in the RRB.

Demographics

The current population of the RRB is approximately 1.3 million people. Of this 736,304 are from Manitoba, 302,806 are from North Dakota, 264,530 are from Minnesota, and 4,806 are from South Dakota. Several large cities are located along the mainstem Red River and continue to grow as the population shifts from rural to urban settings, creating a greater need for a reliable water supply for these cities. Urbanization and rural depopulation are trends observed not only in the RRB but in the rest of U.S. and Canada as well (Environmental Scan 2002).

Jurisdictions

The RRB is located in portions of southern Manitoba, northwestern Minnesota, eastern North Dakota, and northeastern South Dakota. Water policies differ in each jurisdiction, sometimes resulting in inconsistent water management in transboundary tributaries

(Pembina in North Dakota and Manitoba, Roseau in Minnesota and Manitoba, and the Wild Rice and Bois de Sioux watersheds in North Dakota and South Dakota).

Jurisdictions degree of involvement

Water Law

Superimposed on differences in water management institutions is the difference in water law and rights in the U.S. and Canada. Water law developed differently in the semi-arid west than in the water affluent east – resulting in differences, for example, in the way that North Dakota (Western water law) and Minnesota (Eastern water law) approach water rights. Water rights are based on “prior appropriation” in Manitoba and North Dakota – in other words, the first user of water has a continued right to the beneficial use of that water. In Minnesota, water rights are assigned according to the “riparian doctrine” – land ownership confers water use rights for those adjacent to surface water or above aquifers.

Who is organizing?

[Red River Basin Commission](#)

The RRBB’s 25-member Board of Directors represent local Basin cities, counties, rural municipalities, watershed boards, water resource districts, joint powers boards, First Nations, and other local interests. The Governors of North Dakota, Minnesota, and South Dakota, the Premier of the Province of Manitoba, and the two federal governments have also appointed members to the Board. Each of the Board Directors has an alternate who attends meetings on a regular basis and votes in the Director’s absence. RRBC 19 guiding principles are:

- Our first priority in evaluating projects is **human health and safety**.
- **Resolution of problems and issues** should be initiated at the appropriate local level, with all interested parties encouraged to participate.
- **Individual and societal needs** will be balanced in seeking resolution of basin resource issues and problems.
- Incentives are preferable to regulations in **developing solutions**.
- The Red River Basin Commission will **encourage regulations to be consistent** within and among jurisdictions.
- The Commission will keep people informed, welcome discussion and **provide opportunities for participation** in its debate and decisions.
- The Red River Basin Commission will seek **comprehensive solutions to resource issues** and problems.
- Water management that is intended to benefit a specific area will be designed to **minimize adverse effects on other areas**.
- The Red River Basin’s water quality will be maintained and improved by **proper water and land management**.
- All **development proposals that involve water use**, direct or indirect, will be reviewed for their impact on other existing and potential water uses, as well as their impact on the environment.
- **Conservation is a primary consideration** in meeting water supply needs identified in the Basin.

- The Commission will examine **all sources of water** to maintain and expand the supply available for future needs, both human and economic.
- To minimize flood damage, **water will be retained where practical** in agreement with local, watershed and Basin water management plans.
- All approaches to managing floods and minimizing flood damage will be evaluated for their possible **impact on the economy, community and environment**.
- **Land subject to flooding** should be developed only according to planning guidelines that prevent human suffering and property damage, limit public costs and liabilities, and address the impact on the environment.
- **River, lake, wetland and shoreline habitats** will be preserved, restored, improved and managed for the benefit of Basin residents, the region's economy and the overall environment.
- The Commission's approach to land use issues will balance parallel commitments to **maintaining a prosperous agricultural economy while conserving natural resources**.
- **Natural, cultural and heritage resources** will be conserved and managed to support diversity in the Basin.
- Projects intended to **enhance water quality and quantity** will be designed to maintain and improve the quality of the environment, as well as create economic benefits for the Basin.

(also, see work by Minnesota Pollution Control Agency, Red River Basin Board
[MPCA - Red River Basin - Water Quality Basin Planning](#)

Stakeholders?

Local basin cities, counties, rural municipalities, watershed boards, water resource districts, joint powers boards, First Nations, North Dakota, Minnesota, and South Dakota, and the Province of Manitoba

How have they organized themselves?

As part of the planning process, nine inventory work teams were assigned the task of assessing the current status of the basin's land and water management problems, issues, and opportunities in the following areas: Water Law; Water Institutions; Hydrology; Water Supply; Water Quality; Drainage; Flood Damage Reduction; Conservation; Fish, Wildlife, and Outdoor Recreation. The nine inventory teams also helped develop goals and objectives based on information gathered during the inventory process and, from the teams' perspectives, the expectations of the basin's residents. Inventory team membership included representatives from state and federal agencies, local city and county governments, and local interest groups. All nine Inventory Reports are available on the RRBB website (www.redriverbasinboard.org).

How involved are the stakeholders?

Basin residents, community leaders, and other experts were actively involved in the development of Appendix A (RRBC's mission statement, vision, and a set of guiding principles to lead to a framework for decision-making and future initiatives) and Appendix B (the "Two-Path" approach to water management planning). Although general in

nature, these documents provide the foundation for development of basin-wide water management goals and objectives through the RRBB's planning process.

The RRBB asked Basin residents to help develop the Water Management Goals and Objectives, which were adopted by the RRBB on April 6, 2001. Basin residents provided comments and opinions to the Board through the RRBB's website; eight public meetings; and during the 18th annual Red River Basin Land and Water International Summit Conference, January 16-18, 2001, sponsored by The International Coalition for Land and Water Stewardship, with participation of the RRBB. The feedback received from this public review process was used to modify the Water Management Goals and Objectives. Periodically, the goals and objectives will be publicly reviewed to ensure they continue to reflect the needs of basin residents.

How did they produce the plan – what was the plan implementation process?

How did they monitor the plans' production?

What was the planning time frame/duration?

What detail have they included/ what is in the plan?

What are their long term policy objectives? (low detail – no projects)

What is the current status?

Completed:

- Goals and Objectives
- [Red River Basin Natural Resources Framework Plan \(May 2005\)](#)
 - To contribute in developing a *unified voice* for the basin, while achieving the RRBC's vision statement. It will aid in achieving a basin-wide approach to integrated natural resource management, and provides a framework for overcoming political barriers.
 - It outlines ways in which projects, programs and activities will enable RRBC vision of basin-wide watershed stewardship and management. There are other tools that also help create a unified voice for the residents of the Red River basin, such as public education, the RRBC Annual Land and Water Conference, facilitation and mediation.

Was there funding for the plan? Acceptance? Commitment?

What is the expected life of plan and the means of redoing/updating the plan?

Sources

RRBC website

<http://www.redriverbasincommission.org>

<http://www.redriverbasincommission.org/Reports/reports.html>

[http://www.redriverbasincommission.org/Goals/RRBB Water management Goals and Objectives.doc](http://www.redriverbasincommission.org/Goals/RRBB%20Water%20management%20Goals%20and%20Objectives.doc)