

ROSEAU RIVER

WATERSHED PLAN



ROSEAU RIVER INTERNATIONAL WATERSHED

RURAL MUNICIPALITY OF PINEY

RURAL MUNICIPALITY OF STUARTBURN

RURAL MUNICIPALITY OF FRANKLIN

RURAL MUNICIPALITY OF MONTCALM

ROSEAU RIVER ANISHINABE FIRST NATION GOVERNMENT

APRIL 2007

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1.0 Roseau River International Watershed Purpose and Mission Statement

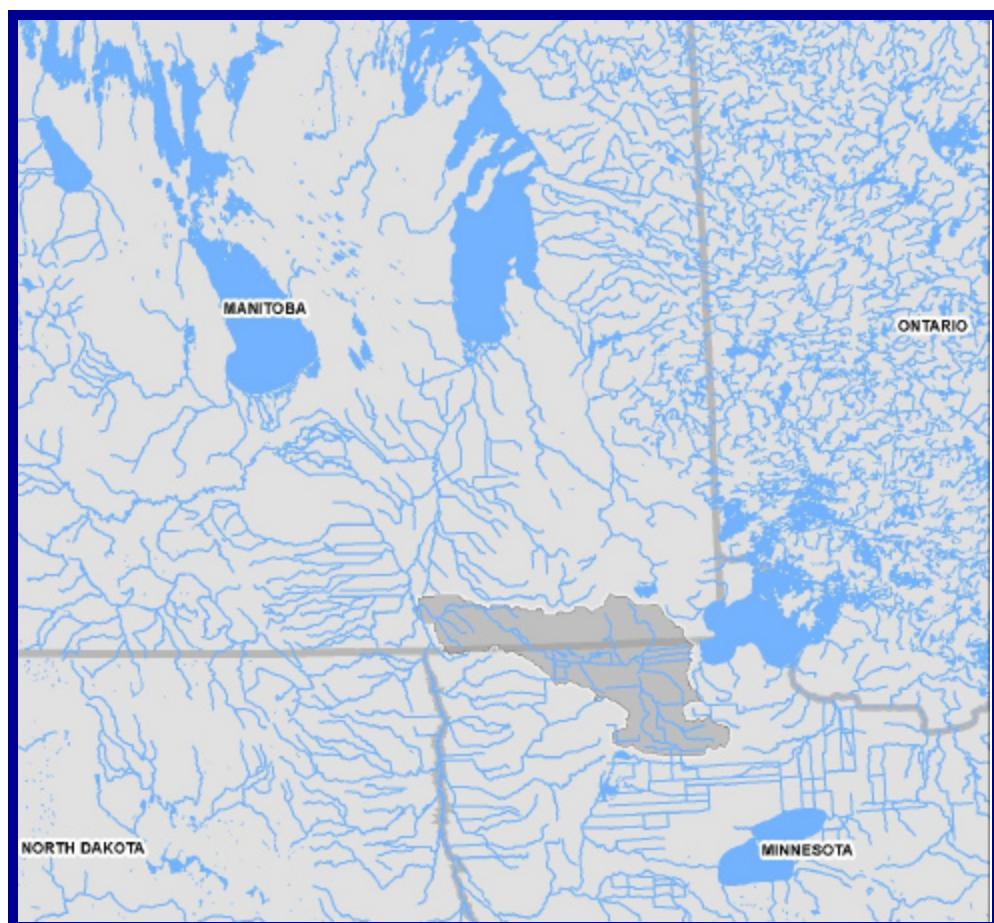
In August 1999, the forerunner of the Red River Basin Commission, The International Coalition for Land/Water Stewardship in the Red River Basin, proposed the formation of a Canada-United States water partnership. After a series of meetings, a unique transborder organization was formed on January 19, 2000, in Roseau, Minnesota. The Roseau River International Watershed (RRIW) is comprised of a board with five Canadian and five American representatives. The group's purposes are:

- To provide a forum for exchange of information of common interest to both jurisdictions on issues such as water quality and quantity.
- The ability to initiate flood alleviation and conservation projects on both sides of the border.
- To examine how to set up an international conservation district.

The Canadian portion of the RRIW is comprised of representatives from the Rural Municipalities of Piney, Stuartburn, Franklin and Montcalm, as well as the Roseau River Anishinabe First Nation. Representatives from the Red River Basin Commission, the Province of Manitoba (Manitoba Water Stewardship), and the Government of Canada (Agriculture and Agri-Food Canada) participate as Canadian ex-officio members. The Canadian and American delegations are each responsible for securing equal funding to be used for RRIW's administration and operations. This is also the case, on a proportional basis as agreed to by both sides, for construction projects and feasibility or hydrology studies.

Mission Statement

The mission statement of the RRIW is to promote, provide and conduct an international alliance between Manitoba and Minnesota which will work towards the proper management of the resources of the Roseau River Watershed, including flood control, economic, human and natural resources, and water quality and quantity.



2.0 Acknowledgment

The development of the Roseau River Watershed Plan (RRWP) was the result of the motivation, initiative, hard work, and collaboration of a number of individuals and groups.

The total budget for the project was \$135,244. Project funding was provided through a combination of local and agency sources and was coordinated by the Red River Basin Commission.

Local Funding:

- RM of Piney – \$15,000
- RM of Stuartburn – \$15,000
- RM of Franklin – \$15,000
- Roseau River Anishinabe First Nation Government – \$15,000
- RM of Montcalm – \$7,500

Agency Funding:

- Western Economic Diversification Canada – \$20,000
- Human Resources and Social Development Canada – \$15,000
- Manitoba Sustainable Development Innovations Fund – \$15,000
- Environmental Careers Organization of Canada – \$10,653
- Manitoba Hydro – \$5,000
- Manitoba Intergovernmental Affairs – \$1,331

The RRWP Steering Committee provided project oversight and key input from the local perspective. The Steering Committee consisted of representatives from each of the project partners and the Province of Manitoba and met monthly during the project time frame. Special thanks is due the RM of Stuartburn, who kindly provided regular use of their council chamber for these meetings. Steering Committee members and their affiliations included:

- Councillor Barb Zailo – Rural Municipality of Piney
- Reeve Wally Happychuk – Rural Municipality of Stuartburn
- Reeve Archie Hunter – Rural Municipality of Franklin
- Councillor Ghislain Dupuis – Rural Municipality of Montcalm
- Mr. Oliver Nelson / Councillor Lawrence Henry – Roseau River Anishinabe First Nation
- Mr. Henry Daniels – Manitoba Water Stewardship

RRWP Steering Committee alternates also participated in the project and were integral to retaining continuity in instances when Steering Committee members were unable to attend a meeting or provide input. Steering Committee alternates and their affiliations included:

- Councillor Alana Schoenbach – Rural Municipality of Piney
- Councillor Jim Swidersky – Rural Municipality of Stuartburn
- Councillor Duaine Riach – Rural Municipality of Franklin
- Reeve Roger Vermette – Rural Municipality of Montcalm
- Mr. Melvin Pierre – Roseau River Anishinabe First Nation
- Mr. Geoff Reimer – Manitoba Water Stewardship

A Technical Advisory Committee (TAC) was instrumental in gathering baseline data and providing the professional expertise that was essential to the foundation of the watershed plan. TAC members provided written briefs on their area of expertise and provided materials and guidance to Red River Basin Commission staff. Mr. Barry Oswald of Manitoba Water Stewardship served as TAC's Chairman and played a pivotal role coordinating this group. A list of TAC membership and the organizations they represented can be found in the Roseau River Watershed Resource Inventory that accompanies this Plan.

In addition, a TAC subcommittee was formed to deal specifically with issues related to creating maps for the watershed plan. The TAC Mapping Subcommittee included:

- Lindsay Donnelly – Manitoba Conservation
- Ron Lewis – Agriculture and Agri-Food Canada (PRFA Manitoba Region)
- Jarrett Powers – Agriculture and Agri-Food Canada (PRFA Manitoba Region)
- Bill Sawka – Manitoba Intergovernmental Affairs
- Dennis Schindler - Manitoba Agriculture, Food and Rural Initiatives
- Tim Swanson – Manitoba Conservation

Harold Taylor, former Deputy Executive Director of the Red River Basin Commission, provided project management for the first 12 months of the project and was instrumental in the fund-raising and initial development of the project. Mike Olczyk was the initial Watershed Planner on the project and was supported by other staff at the Red River Basin Commission including Lance Yohe (Executive Director), Ron Hempel (mapping), April Kiers North (watershed planning), Julie Goehring (Communications Coordinator) and Leigh-Anne Bailie (Administrative Assistant).

Executive Summary

The need for a comprehensive, integrated watershed plan for the Canadian portion of the Roseau River Watershed was identified by the Rural Municipalities (RMs) of Piney, Stuartburn, Franklin and Montcalm; the Roseau River Anishinabe First Nation Government; and the Red River Basin Commission. The goal of the Roseau River Watershed Plan (RRWP) is to address issues related to ensuring personal safety; reducing flood damage to infrastructure, farmland and property; providing adequate and safe water supply; and facilitating the involvement of government agencies for new economic development by utilizing the resources of the district.

This watershed plan encompasses the entire Canadian portion of the Roseau River Watershed, including the lower watershed area (i.e., Roseau River mainstem) and the upper watershed area (i.e., Pine and Sprague Creeks).

Over the past decade, residents living in the Roseau River Watershed have experienced an extremely wet period. In addition to regular springtime flooding, off-season flood events have resulted in extremely difficult and stressful times for landowners in the region. For instance, in the RM of Franklin, the situation has been so extreme that the municipality has been on disaster assistance eight out of the past 10 years. Overland and localized flooding is of particular concern in the RMs of Stuartburn and Piney and the Roseau River Anishinabe First Nation.

There are significant effects of chronic flooding in the lower reaches of the Roseau River, particularly in the “Lake Roseau” area just to the southeast of the community of St. Jean Baptiste. This includes the forced evacuations of dozens of farmsteads in a very rich agricultural area due to the backwater effect created by coinciding high levels on the Red River, surges on the Roseau River, and inadequate drainage to remove floodwaters once conditions have begun to recede. Recent improvements to drainage through St. Mary’s Road have helped the situation but further action is needed to ensure expedient drainage to help landowners in the area.

Water quality has deteriorated, likely due to a highly managed landscape (river channel modifications, land use practices that increase soil erosion, etc.) as well as long-term fertilizer and pesticide use throughout the watershed. Maintenance of water retention, drain and ditch infrastructure is a priority in all municipalities in the Roseau River Watershed. Erosion of the natural riverbank and riparian areas is problematic in several areas.

Many of the stakeholder issues and concerns (flooding, water quality, maintenance of infrastructure, etc.) were used to generate a series of goals and objectives for the Roseau River Watershed. Subsequently, strategies to achieve each objective were also identified.

Goal 1: Land and water resources are managed by Watershed boundaries rather than political boundaries.**OBJECTIVES:**

1. Develop and maintain partnerships between political jurisdictions.
2. Designate a mechanism for implementation and updating of the Roseau River Watershed Plan.
3. Improve stakeholder participation and awareness of land and water management issues.

Goal 2: Ensure the appropriate use and sustainability of surface and ground water.**OBJECTIVES:**

1. Maintain and improve water supplies for rural and town residents.
2. Plan for short-term and long-term water shortages due to drought.

Goal 3: Protect surface and groundwater from contamination, nutrient loading and sedimentation.**OBJECTIVES:**

1. Develop a source water protection plan.
2. Reduce erosion and sedimentation of ditches, streams and rivers.

Goal 4: Reduce the risk of flood damage for residents, property, infrastructure and the environment in the Roseau River Watershed.**OBJECTIVES:**

1. Implement flood mitigation measures in Roseau River Watershed Management Areas 2 & 3, in particular to deal with “Lake Roseau” and other local concerns.
2. Implement flood mitigation measures in Roseau River Watershed Management Area 1 that reduce risk locally and downstream.

Goal 5: Maintain drainage systems and water management infrastructure while minimizing impacts to downstream stakeholders.**OBJECTIVES:**

1. Manage drainage systems to protect agricultural productivity and local/regional infrastructure with consideration of downstream effects (i.e., flooding, water quality, erosion, fish habitat, etc.).
2. Manage dikes, floodways, etc., for human safety with consideration of downstream effects (i.e., flooding, water quality, erosion, fish habitat, etc.).

Goal 6: Preserve, protect and restore unique natural resource communities and other features in the watershed.**OBJECTIVES:**

1. Restore diversity and viability of native fish and wildlife populations and their habitats.
2. Enhance natural systems to improve fish passage, provide habitat, etc.
3. Promote management and protection of wetland and upland habitats to maximize wildlife productivity and minimize adverse effects to agricultural interests.
4. Promote the management of forestry practices and track reforestation efforts.

Goal 7. Enhance tourism and recreational opportunities to benefit the local economy while preserving the natural resources of the watershed.**OBJECTIVES:**

1. Promote the unique habitat and opportunities in the watershed to enhance economic development and the quality of life (e.g., promotion of canoe routes, the Manitoba Tall Grass Prairie Preserve).

3.0 Introduction

The goal of the Roseau River Watershed Plan (RRWP) is to address issues related to ensuring personal safety; reducing flood damage to infrastructure, farmland and property; providing adequate and safe water supply; and facilitating the involvement of government agencies for new economic development by utilizing the resources of the district. Due to the transboundary nature of the Roseau River Watershed, this Canadian watershed plan was developed with the intention to be linked to a similar plan already completed for the American portion of the watershed.¹ This Canadian watershed plan is a living document that will be updated and revised on a regular basis and will serve as a tool to aid rural municipalities, First Nations, businesses, farmers, landowners, and local residents with issues related to water and land management in southeastern Manitoba.

3.1 Description of the Watershed

A complete description of the Roseau River Watershed can be found in the technical background paper, *Roseau River Watershed Resource Inventory*, prepared as a supporting document to this watershed plan. It describes the region's economy, land uses, physical features, natural resources, surface water resources, drainage systems, water management structures, surface water quality, groundwater resources, licensed water uses, and inventories of public water supply and municipal wastewater treatment systems.

Location and Size

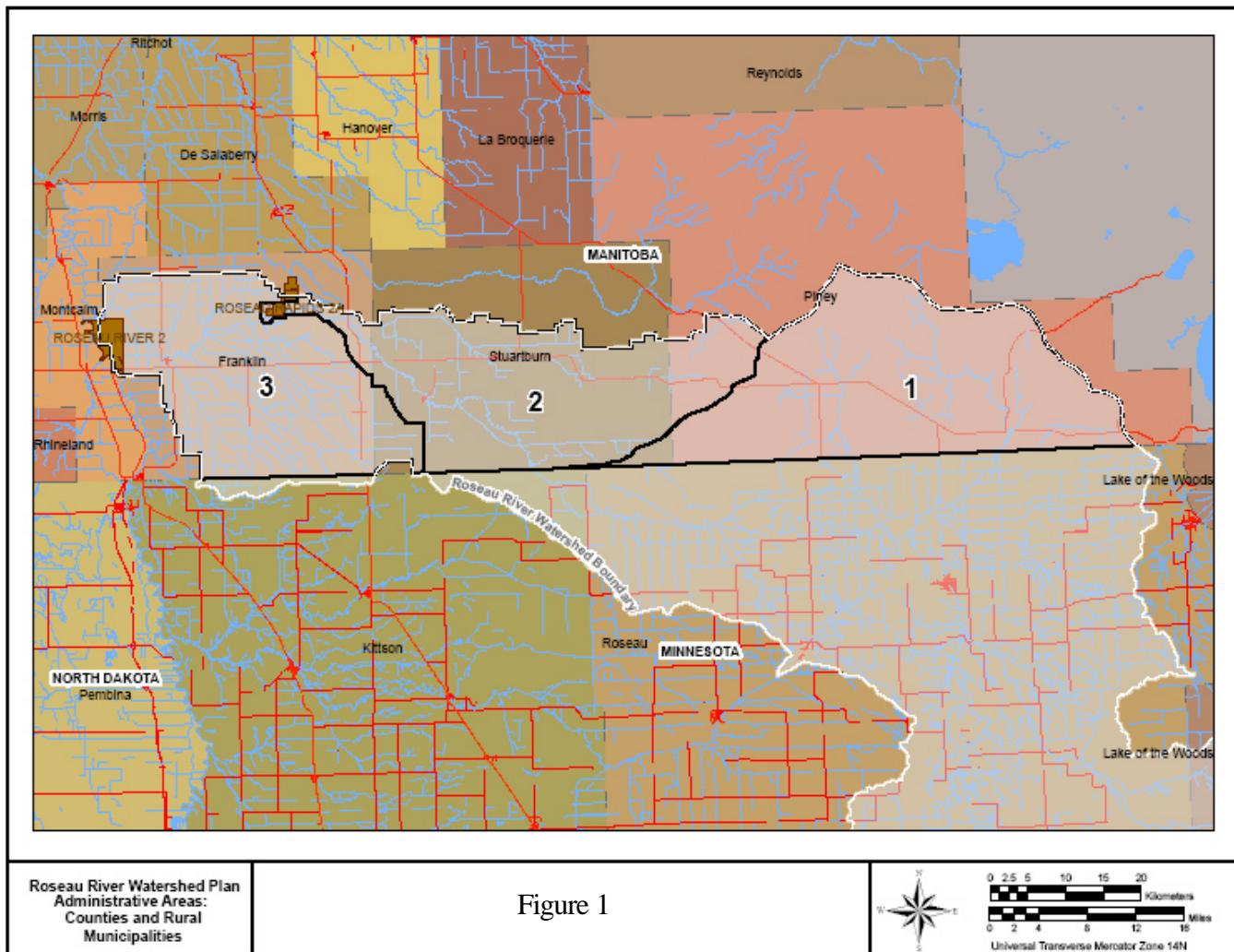
The Roseau River Watershed occupies significant portions of the Rural Municipalities of Piney, Stuartburn, and Franklin, as well as a small portion of the Rural Municipality of Montcalm (Figure 1). The Roseau River Watershed is located in southeastern Manitoba and northwestern Minnesota and encompasses a drainage area of approximately 5,818 square kilometers (2,246 square miles). The total drainage area for the Canadian portion of the Roseau River Watershed is approximately 2,584 km² (998 sq. mi.) or 44.4%; the United States portion is 3,234 km² (1,249 sq. mi.) or 55.6%. The Canadian part of the watershed is bounded on the north by the Rat River and Whitemouth River Watersheds, on the east by the Bird River/Whiteshell River Watershed, on the west by the Rivière Aux Marais/Plum River Watershed and on the south by the International Border.

The Roseau River Watershed is a small component of the much larger Red River Basin, which has a drainage area of approximately 116,550 km² (45,000 sq. mi.), excluding the drainage area covered by the Assiniboine River Basin. Flows entering the Red River move northward, draining into Lake Winnipeg, eventually making their way into Hudson Bay via the Nelson River system.

The upper tributary/headwater component of the Roseau River drainage area can be described as fan-shaped, while the remaining drainage area following the course of the river is generally long and narrow. The watershed is approximately 177 km (110 mi.) in total length and ranges from a minimum width of 18 to 27 km (11 to 17 mi.) in the lower reaches to 48 km (30 mi.) in the upper headwater reaches. The natural course of the Roseau River follows a meandering path in a principally northwestern direction over an approximate distance of 290 km (180 mi.) from source to mouth. The Roseau River crosses the Canada-U.S. border at roughly the midpoint of its course and enters the Red River approximately 15 km (9 mi.) from the International Border. A number of changes have altered the natural course of the Roseau River (i.e., diversions, channelization, blockages, etc.) on both sides of the International Border (Figure 2).

The average annual volume of water contributed by the Roseau River to the Red River is 416,210 cubic decameters (337,427 acre-feet). This contribution from the Roseau River represents 8.6% of the total average volume of flow for the Red River measured at Ste. Agathe (4,817,000 dam³ (3,905,205 acre-feet)) and 6.1% of the total average volume of flow for the Red River measured at Lockport (6,774,000 dam³ (5,491,771 acre-feet)). The percent

¹ See Roseau River Watershed District, 2004. Overall Plan for the Roseau River Watershed District.

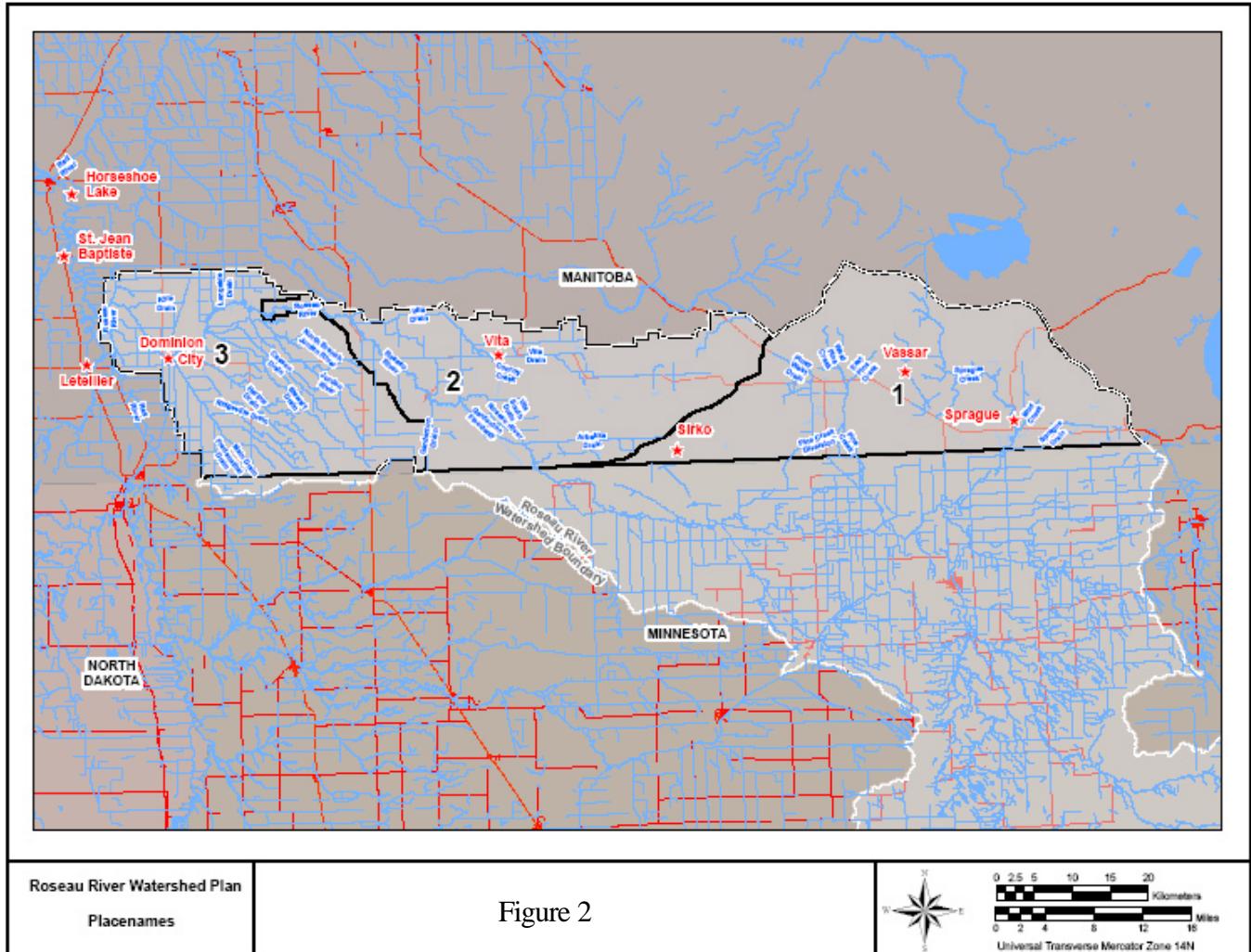


contribution of the Roseau River decreases at Lockport because the overall volume of flow in the Red River is increased with the addition of flow from the Assiniboine River.

Local Government (Political Units)

The Roseau River Watershed occupies significant portions of the Rural Municipalities of Piney, Stuartburn, and Franklin, as well as a small portion of the Rural Municipality of Montcalm. Each rural municipality (RM) has a reeve and council who are elected to serve four-year terms. The number of councillors varies between municipalities, ranging from four in Piney and Stuartburn to six in Montcalm and Franklin. Each municipality also employs a Chief Administrative Officer and other staff as required. In addition, the lands of the Roseau River Anishinabe First Nation fall within the boundaries of the watershed. Local government on the First Nation consists of a Chief and four councillors who are elected and serve two-year terms. Municipal profiles and population characteristics can be found in Appendix A.

The Roseau River drains portions of land in the state of Minnesota and the province of Manitoba. Due to its transboundary nature, the International Joint Commission (IJC) has a role in the Roseau River watershed. The IJC is an independent binational organization established by the *1909 Boundary Waters Treaty*. The purpose and mission of the IJC is to prevent and resolve disputes relating to the use and quality of boundary waters between the United States of America and Canada under the *1909 Boundary Waters Treaty* and to pursue the common good of both countries as an independent and objective advisor to the two governments on related questions. Duties of the



IJC include: ruling on applications for the approval of projects affecting boundary or transboundary waters and potentially regulating the operation of such projects, assisting the two countries in the protection of the transboundary environment and the improvement of transboundary air quality, and alerting both governments to emerging issues along the boundary that may give rise to bilateral disputes.¹

Water resource planning in the watershed is currently coordinated at the local level by Canadians and Americans through the Roseau River International Watershed (RRIW) via a Memorandum of Understanding that was formulated and ratified in 2000. As noted previously, the purpose of the group is to provide a forum for the exchange of information of interest to both jurisdictions on issues such as water quality and quantity and the ability to initiate flood alleviation and conservation projects on both sides of the border.

The primary local water management organization on the U.S. side of the watershed is the Roseau River Watershed District (RRWD). This formal organization is a governing body whose mission is “to manage the waters and related resources within the Watershed District in a reasonable and orderly manner to improve the general welfare and public health of the residents in the Watershed District.”² The Watershed District has been instrumental in carrying out projects throughout the watershed that have been aimed at flood damage reduction and natural resource enhancement.

¹ International Joint Commission Mission Statement. Retrieved May 31, 2006, from <http://www.ijc.org>.

² Roseau River Watershed District 2004. Overall Plan for the Roseau River Watershed District.

The formalized local water management organization in Manitoba is termed a Conservation District. “A Conservation District (CD) is a group of neighboring rural municipalities working in partnership with the Province of Manitoba to develop programs to effectively manage the natural resources of their area.”¹ A key to the CD Program is that a local organization is created to oversee management of soil and water resources in the watershed. Being an established program that provides a source for funding, the CD is the vehicle for implementing some of the actions outlined in a watershed management plan. “The ultimate goal is to manage the resources for our benefit today while ensuring that generations that follow will have the same resource management options that we enjoy today.”¹ At this time there is no CD formed in the Roseau River Watershed.

3.2 *Background and Purpose*

An agreement was made and entered into by and between the participating members of the Roseau River International Watershed (RRIW): the Rural Municipalities of Piney, Stuartburn, Franklin, and Montcalm; the Roseau River Anishinabe First Nation Government; and the Red River Basin Commission (RRBC), to develop a comprehensive, integrated watershed plan for the Canadian portion of the Roseau River Watershed. The goal of the Roseau River Watershed Plan (RRWP) is to address issues related to ensuring personal safety; reducing flood damage to infrastructure, farmland and property; providing adequate and safe water supply; and facilitating the involvement of government agencies for new economic development by utilizing the resources of the district. Due to the transboundary nature of the Roseau River Watershed, this Canadian watershed plan was developed with the intention to be linked to a similar plan already completed for the U.S. portion of the watershed.² This Canadian watershed plan is a living document that will be updated and revised on a regular basis and will serve as a tool to aid rural municipalities, First Nations, businesses, farmers, landowners, and local residents with issues related to water and land management in southeastern Manitoba.

This comprehensive, integrated watershed plan was developed in the Province of Manitoba in response to the declaration of the Manitoba Water Strategy by the Honourable Steve Ashton, Minister of Water Stewardship, in 2003. Watershed-based planning is a key action noted in the Strategy and is a key area of *The Water Protection Act*, which was proclaimed in June 2005 and came into force January 1, 2006. One of the integral purposes of watershed planning is to ensure that land and water resources are managed and protected for both current and future generations.

This watershed plan follows the completion of a hydrology study for the Roseau River by UMA Engineering Ltd. in 2002. The purpose of this hydrology study was to develop and calibrate a flood routing model capable of simulating the existing conditions on the Roseau River and using the calibrated model to evaluate various flood control options in the Canadian portion of the watershed. The study mandate specifically focused on the downstream portion of the watershed through which the Roseau River mainstem flows and did not include the upstream areas (Pine and Sprague Creek tributaries). A limited number of copies of the hydrology study are at the Red River Basin Commission office. Manitoba Water Stewardship has retained the modeling data.

This watershed plan focuses on the entire Canadian portion of the Roseau River Watershed, including the lower watershed area (i.e., Roseau River mainstem) and the upper watershed area (i.e., Pine and Sprague Creeks). The watershed boundary utilized throughout this plan was obtained from staff at Manitoba Conservation (Computer Graphics) and Agriculture and Agri-Food Canada (Prairie Farm Rehabilitation Administration) and is based on watershed boundary data as of April 2005. In April 2005, RRBC staff consulted with Manitoba Water Stewardship hydrology experts to divide the watershed into five separate management areas for planning purposes. The five management areas represented an amalgamation of many smaller sub-watershed divisions based on drainage hydrology.

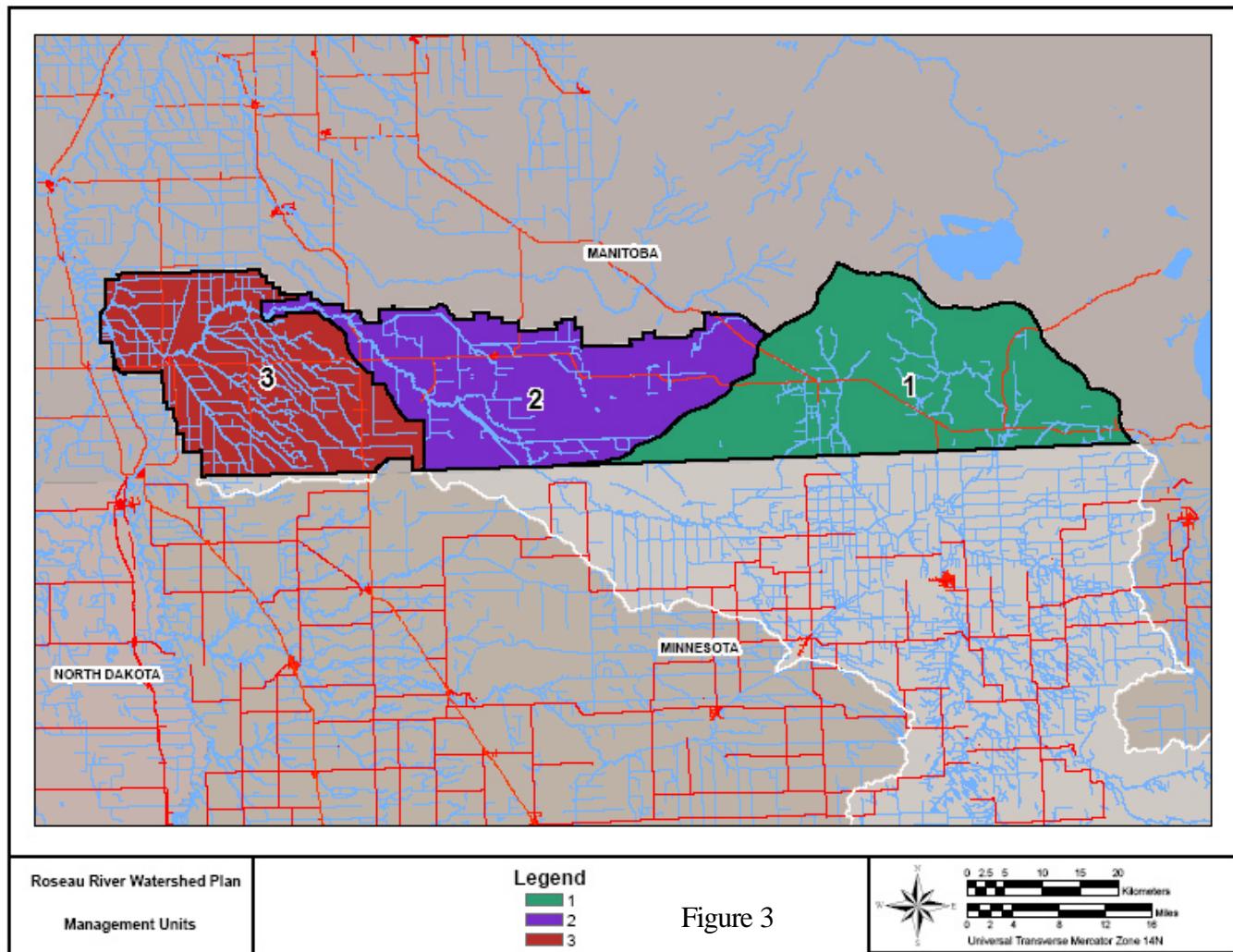
¹ Manitoba Water Stewardship - Planning and Coordination Branch. Retrieved July 27, 2005, from <http://www.gov.mb.ca/waterstewardship/mwsb/cd>.

² Roseau River Watershed District 2004. Overall Plan for the Roseau River Watershed District.

The five management areas were later merged into three management areas for clarity and to aid the planning process, based on discussions with the Steering Committee. If a Conservation District is formed in this watershed, these management areas will likely be designated as subdistricts. Figure 3, from east to west, depicts:

- Management Area 1 – Pine and Sprague Creeks and all of the lands draining herein.
- Management Area 2 – Roseau River mainstem from the Canada-U.S. border to Roseau Rapids Indian Reserve No. 2A and all of the lands draining herein.
- Management Area 3 – Roseau River mainstem from Roseau Rapids Indian Reserve No. 2A to its terminus at the Red River and all of the lands draining herein.

The Roseau River was the focus of one of the earliest references to the International Joint Commission in 1928 due to chronic flooding in Canada from land development and drainage works constructed in northern Minnesota between 1904 and 1918. Further channel improvements in Minnesota were proposed that had the potential to increase flood flows downstream in Canada. These proposals also raised environmental concerns with respect to erosion, water quality, and recreational potential. While the additional channel improvements were never carried out and such projects are no longer authorized in the U.S., high springtime flows in recent years (particularly 1996 and 1997), high off-season flows in November 2001, and record summer flows in June 2002 and June/July 2005 have increased pressure on agencies to address the issues of flood mitigation and watershed management. High water on the Roseau River and overland flooding have major impacts on valuable agricultural land in the region, with portions of the RMs of Montcalm, Franklin, and Stuartburn being affected regularly.



Over the past decade, residents living in the Roseau River Watershed have experienced an extremely wet period. In addition to regular springtime flooding, off-season flood events have resulted in extremely difficult and stressful times for landowners in the region. For instance, in the RM of Franklin the situation has been so extreme that the municipality has been on disaster assistance eight out of the past 10 years. The region experienced a devastating summer period in 2005, one of the worst on record for severe summer storms:

- On June 19, a severe storm passed through the region and produced wind speeds up to 140 kilometers per hour that uprooted trees and damaged buildings. This storm system also knocked down seven hydro transmission towers and blew 13 rail cars off the tracks near Letellier. The storm flooded basements and damaged roofs on the Roseau River Anishinabe First Nation, creating a significant health risk for some residents who had to be evacuated.
- On July 2, a severe storm hit the RM of Franklin and dropped 140 millimeters of rain on farmland that was already saturated from prior rainstorms. The storm and associated overland flooding caused road washouts or tree damage at 150 different sites and left a repair bill of roughly \$150,000.
- On July 3, funnel clouds were spotted near the Roseau River Anishinabe First Nation.
- On July 30-31, a severe thunderstorm tracked through the RM of Piney and caused significant damage as thousands of trees were knocked down.

There are significant effects of chronic flooding in the lower reaches of the Roseau River, particularly in the “Lake Roseau” area just to the southeast of the community of St. Jean Baptiste. This includes the forced evacuations of dozens of farmsteads in a very rich agricultural area due to the backwater effect created by coinciding high levels on the Red River, surges on the Roseau River, and inadequate drainage to remove floodwaters once conditions have begun to recede. Recent improvements to drainage through St. Mary’s Road have helped the situation, but further action is needed to ensure expedient drainage to help farmers in the area.

When both the Roseau and Red Rivers are at flood stage, the Roseau River Anishinabe First Nation, which is located immediately south of “Lake Roseau” and three miles east of Letellier, is also threatened. There was a complete and lengthy evacuation of the Reserve in 1997, which impacted daily life and completely eliminated economic activity both during and for a period after the flood. Recently, there was a slippage and failure of the ring dike surrounding the main Reserve on the northeast side. Due to repeated bank instability, this portion of the dike had to be relocated and repaired to maintain the overall integrity of this mitigation measure. Due to the high water table in the region, excessive moisture and basement flooding have caused recurrent mould problems that represent a significant risk to the health of residents living on the Reserve.

In the RM of Stuartburn, due to the significant age of the Gardenton Floodway, poor original construction materials, and a lack of regular maintenance, the structure’s dikes have deteriorated and are at greater risk for failure in the event of large-scale flooding. Emergency repairs on the floodway dikes were required during flooding in 2001 and concern exists at the local level that in a similar event, the potential for failure of the dikes is quite high. Horseshoe Lake, constructed by Ducks Unlimited Canada in the mid-1950s for waterfowl purposes, is another man-made structure in the region that represents concern at the local level. Maintenance issues and beaver problems have contributed to the perception that an unregulated blowout incident could create event-specific flood problems for nearby landowners. Alternatively, by focusing attention and resources on the area, the lake may present a potential opportunity for water retention and recreation that could benefit both local and downstream interests.

The RM of Piney experienced significant flooding in the town of Sprague in 2002 during an extreme rainfall event and remains vulnerable to similar extreme events. Problems have also arisen in this upper watershed area due to the extended wet period that has saturated much of the land over the past decade. Landowners in the Sirko area have experienced problems during this period as saturated pasture land and encroaching bogs have significantly affected their livelihood. In addition, due to an abundance of high quality groundwater in the Sandilands area, one of the most pertinent issues is source water protection for aquifer recharge areas to ensure this important water supply is maintained and protected for current and future generations.

4.0 Watershed Issues and Concerns

Public input for the Roseau River Watershed Plan was obtained during public meetings held throughout the watershed in the early stages of the project (spring 2005). In total, more than 150 watershed stakeholders attended these meetings and provided input to Red River Basin Commission (RRBC) staff. In addition, in late 2004 and early 2005, RRBC staff conducted separate meetings with the councils from each of the local governments involved in the project: Franklin, Montcalm, Piney, Stuartburn and Roseau River Anishinabe First Nation. To further supplement the public input process, RRBC staff also made several visits to watershed stakeholders to document issues and concerns on an individual basis. RRBC thanks all watershed stakeholders who participated and provided input to the process.

The following is a summary of information gathered at the public, council and individual stakeholder meetings. A detailed account of stakeholder concerns is found in Appendix B.

4.1 Water Quantity

Flooding was raised as an important issue by stakeholders. The Lake Roseau flooding problem near the confluence of the Roseau and Red Rivers is of particular concern for many individuals and communities. Several potential solutions for this problem were presented by stakeholders in Montcalm, Franklin and R.R. Anishinabe First Nation, including a floodway channel to help drain Lake Roseau faster, restoration of flows in the Marsh River, and upstream water retention. The Vita Drain was identified as problematic for downstream landowners in the RM of Franklin.

Other flooding problems were identified in the communities of Stuartburn and Sprague, the Sirko area, and other rural areas where overland flooding can be quite serious. There is concern that increased drainage of marginal farmland and wetlands in the last 30 years has contributed to flooding, and in the Sprague area, that culvert sizes and locations are inappropriate. The RM of Stuartburn expressed interest in a joint water retention structure between the Rat and Roseau River watersheds.

Drought was not consistently identified as a water quantity issue of concern due to the wet period that the region was experiencing.

4.2 Water Quality

Water quality in the Roseau River has become degraded, resulting in changes to the way that stakeholders use the river. Stakeholders expressed concern that swimming is no longer advisable, that water is no longer clear, and that water quality has declined due to a highly managed landscape (river channel modifications, land use practices that increase soil erosion, etc.), fertilizer and pesticide use, erosion and tree deadfall in riparian areas, and cattle wading into the river. There is evidence that crayfish and clams have disappeared from the river, indicative of poor water quality.



Source water protection was identified as a priority in the RM of Piney, as well water is the primary source of drinking water for residents, and the Sandilands Aquifer is an important groundwater resource.

4.3 Infrastructure & Erosion

Dike stability was identified as a concern in many areas, including the R.R. Anishinabe First Nation, Gardenton Floodway, Horseshoe Lake and others. Maintenance of drains, ditches and the natural river channel also was identified as a priority for the Vita Drain, Pine Creek Diversion and the natural Roseau River channel near the Gardenton Floodway.

Riparian restoration and enhancement is a priority to reduce erosion along the Roseau River streambanks. The Roseau Rapids area was identified as an area of concern, as the riverbank has been eroded significantly in this area. There was also a concern that DFO (Department of Fisheries and Oceans) regulations are preventing maintenance of riparian areas to reduce tree deadfall and log jams.

Stakeholders suggested that the Gardenton Floodway could be a multiuse structure if it were rehabilitated and expanded, possibly providing flood storage, waterfowl habitat and recreational access.

4.4 *Other Natural Resources*

Wildlife and Fisheries

Varying opinions were expressed regarding the abundance and health of fish in the Roseau River. Terrestrial species have been observed throughout the landscape with “natural” occurrence; whereas others such as beaver have reached nuisance level, and may be contributing to some of the flooding concerns in some areas.

Tourism and Recreation

There is a desire to improve access and awareness of the Roseau River’s canoeing capacity and also to develop additional potential for camping, tubing and other outdoor recreational pursuits.

Forestry

Stakeholders in the RM of Piney noted that fire suppression and lack of reforestation on private lands is an issue.

4.5 *Analysis of Issues and Concerns*

Lake Roseau (Roseau River to Red River Floodway Option)

The issue of a floodway channel from the Roseau River to the Red River needs to be examined further and findings communicated to the local community. Local stakeholders perceive that such a floodway would solve many of the problems associated with Lake Roseau in small to moderate sized floods by equalizing water levels on either side of St. Mary’s Road. Since Lake Roseau is caused primarily by conditions on the Red River, UMA Engineering recommended that this floodway option be examined in association with a complete model of the Red River and its floodplain. Given that mainstem modeling on the Red River has progressed since UMA Engineering completed its study on the Roseau River in 2002, the feasibility and potential effects of a Roseau River to Red River floodway should be revisited and analyzed in accordance with UMA’s recommendation – using the most recent modeling of the Red River and its floodplain. The province of Manitoba has completed pre-feasibility studies of the floodway; however, the project has not been approved to move forward.

Since the International Roseau River Engineering Board (1975) identified that the Lake Roseau problem is created by high discharges on the Red River and a resultant backwater effect on the Roseau River, it may be worthwhile to pursue the provincial and federal governments for assistance with a solution. Various examples exist where both the provincial and federal governments have become involved with infrastructure projects and assisted flood-prone communities along the Red River. A solution to the Lake Roseau problem is beyond the financial ability of the local governments to deal with on an individual basis.

Upstream Storage Options

There has been a great deal of discussion regarding the need for upstream storage in the Roseau River Watershed. While a few options were identified by UMA Engineering for the area near the Gardenton Floodway, feasibility studies are required to examine potential options in the upper watershed area (Management Area 1). The International

Roseau River Engineering Board identified potential options in 1975 – these options as well as new options need to be explored. One option identified was a dam on Sprague Creek and diversion channel into the Reed River Watershed; UMA Engineering's 2002 hydrology study also recommended this option be explored further. The RRIW conducted a field trip to the headwaters of the Reed River in winter 2005 to investigate the potential for water transfer or storage in this area. Preliminary observations and elevation estimates indicated that storage may not be feasible, but detailed elevation and engineering analysis is required to confirm or eliminate this option. During this field trip, storage in the Sprague Bog area was suggested. Again, elevation and feasibility studies are needed for this potential option. *Any flood retention projects on Sprague and Pine Creeks would have international benefits and as such, could represent an opportunity for Canada-U.S. collaboration and continued work with the American members of the RRIW.*

Other Storage Options

Various other storage options have been suggested for the Roseau River Watershed, but once again further studies are required to determine the feasibility of these options. The potential for a joint water retention structure between the Rat River Watershed and Roseau River Watershed was noted in a study on the Rat River by the KGS Group for the Southeast Water Management Association in 2001. UMA Engineering noted in their 2002 hydrology study that this option should be examined further due to the potential benefits in both watersheds. During the public involvement phase of this project, stakeholders also indicated they would like to see this option examined further. Such a project could present an opportunity for collaboration with the Seine-Rat River Conservation District. Other options suggested during the public involvement phase of this project included increased storage at Horseshoe Lake (see below) and potential storage along the old Morden-Sprague highway in the eastern part of the RM of Stuartburn.



Horseshoe Lake Storage Options

Stakeholders expressed concern regarding maintenance at Horseshoe Lake and also indicated that further development may provide an opportunity to enhance this site. Horseshoe Lake (i.e., the Sundown Duck Factory) is a wetland project currently under the responsibility of Ducks Unlimited Canada (DUC). DUC manages Horseshoe Lake using a minimum ecological approach where the full supply level is selected and the wetland is allowed to rise and fall with floods and droughts. While DUC carried out maintenance activities in 2005 to alleviate some of the problems noted by stakeholders, DUC representatives indicated that if another interest group would like to operate and manage Horseshoe Lake differently, a formal proposal should be submitted to DUC. The formal proposal would have to include a management plan detailing how the lake would be managed. If DUC was in agreement with the proposal, it would then become the responsibility and liability of the interest group to operate the lake and carry out all physical operations as outlined in the management plan. A formal agreement would need to be signed by all parties and absolve DUC of any future liabilities associated with the lake.

Gardenton Floodway Storage Options

The UMA Engineering hydrology study outlined three potential storage options at the Gardenton Floodway and recommended that a small reservoir option receive further investigation. The study indicated that flood peak reduction benefits were possible, but further site specific investigation was required with respect to available materials and foundation soil suitability. During the public involvement phase of this project, many stakeholders expressed concern with these options due to perceived potential effects on local residents. Any further consideration of this option must involve the potentially affected landowners and account for their concerns.

Gardenton Floodway Rehabilitation

RM of Stuartburn stakeholders raised the integrity of the Gardenton Floodway dikes as a major issue more than once. The UMA Engineering hydrology study provided a cost estimate for rehabilitating the Gardenton Floodway that included removing the current materials and adding clay material to the dikes, as well as a provision for armouring the dikes with riprap protection. A feasibility study should be conducted to examine restoring the integrity to Gardenton Floodway as it currently exists and also examine options for a restoration that would create additional flood retention capacity (e.g., relocate part of the west dike further west – Water Stewardship personnel in the Morris regional office are aware of such an option). As noted by UMA Engineering, caution needs to be exercised because any efforts that enhance the effectiveness of the floodway to convey flows will increase peak flows in the river downstream.

Stuartburn and Gardenton Dike Options

The UMA Engineering hydrology study recommended that further investigation was required to determine the feasibility of constructing dikes to protect the communities of Stuartburn and Gardenton from flooding. While discrepancies arose during the public involvement phase of this project, as some stakeholders would like to see these projects pursued further and others do not see the necessity for these projects, further investigation would be appropriate to determine the necessity and feasibility for dikes to protect these communities.

Sirko Area Landowners and the Roseau River Wildlife Management Area

As noted by watershed stakeholders at various meetings, the perceived issue of flooding in the Sirko area as a result of operation of the Roseau River Wildlife Management Area (RRWMA) pools was very important. At the time of writing, meetings were being held in the U.S. regarding potential improvements to the RRWMA. As part of this process, consideration is being given to a proposal from Sirko area landowners to construct a ditch to take local water from the Sirko area and have it drain into Pool #3 of the RRWMA. Through a request from the Roseau River Watershed District brought forward at a regular RRIW meeting, a local landowner from the Sirko area as well as a representative from Manitoba Water Stewardship were asked to attend these meetings to represent the Canadian perspective. Further detail and progress on these issues is available through the RRIW or the Roseau River Watershed District in Minnesota.

Status of the Vita Drain

Several stakeholders expressed concern about increased flows in the Vita Drain and related erosional problems along the drain contributing increased sediment into the Roseau River. A visual inspection of the drain illustrated significant erosion problems in the lower reach of the drain prior to its endpoint at the Roseau River. The UMA Engineering hydrology study recommended that flow monitoring be conducted on the Vita Drain to evaluate the true runoff conditions and interaction between the Rat River Watershed and Roseau River Watershed across the Caliento Bog. It was noted that in some areas the Vita Drain captures or blocks runoff that would have naturally flowed north into the Rat River Watershed from the Roseau River Watershed. Further efforts are required to monitor flow on the drain to understand the relationship between the Rat and Roseau River Watersheds and immediate efforts are needed to maintain and repair portions of the drain where erosion is having significant impacts.

First Nations – Waste Disposal and Housing Issues

Some serious environmental issues related to infrastructure are prevalent on the Roseau River First Nation and require immediate attention. The location of the sewage lagoon and garbage dump for the main Reserve outside the community ring dike and adjacent to the Roseau River is a serious problem. Due to its proximity to the Red River on the floodplain area, any time there is overland flooding on the Red and Roseau Rivers (frequent in recent years) the potential for contamination from the sewage lagoon and garbage dump is increased significantly. Planning is required to look at feasible options for either moving the lagoon and dump or for providing structural mitigation (e.g., diking) that will reduce the possibility for contamination.

The issue of housing on the Reserve is also a serious issue that needs to be addressed. While beyond the scope and responsibility of the RRIW, this plan presents another opportunity to express concern that there are serious recurring mould problems on the Roseau River Reserve. A project report funded by the Canada Mortgage and Housing Corporation in 1998 documented the seriousness of this problem and noted the significant negative health effects this recurring problem has for First Nations residents. As noted previously, while there are a variety of contributing factors to the recurring mould problems, the high water table and drainage limitations in this floodplain area are significant factors.

Fisheries and Riparian Health Related Issues

A riparian assessment is needed to explore and document the current status of the natural habitat along the Roseau River. In addition, a detailed fish inventory is necessary to document the current fish population numbers and overall health of the river environment. Part of this research should include an exploration of blockages in the Roseau River that may inhibit fish migration. The current effectiveness of the fish ladder constructed at the Dominion City Dam in 1992 to aid upstream fish migration is unknown. An investigation is needed to determine whether the system is functioning effectively and facilitating upstream fish migration.

Data Gap – Further Research in the Upper Watershed (Management Area 1)

One noticeable gap in the Roseau River Watershed is that most of the data available pertains to the lower watershed area, i.e., mainstem Roseau River (Management Areas 2 and 3). Less data appears to be available for the upper watershed area, i.e., Sprague and Pine Creeks (Management Area 1). Further research is needed to document and inventory the resources of the upper watershed to enhance the resource inventory for the entire watershed. Examples of research areas should include fisheries and wildlife resources, water quality, flow analyses, etc.

Mineral Resources Management

As stated in the technical background document, economically valuable sand and gravel deposits are located in the glaciofluvial deposits and beach ridges of the watershed. These deposits contain medium to high quality aggregate and are important commodities needed for local and provincial construction and infrastructure requirements. Consequently, important resource management issues are centered on: a) the need to protect high quality nonrenewable aggregate resources for future infrastructure requirements; b) the reclamation of depleted deposits; and c) the need to ensure that aggregate extraction is conducted in an environmentally sustainable manner.

Recreational Opportunities and Historical Designation

The Roseau River has not been designated a navigable river for canoeing, but many stakeholders noted that the river is an excellent canoe route. Efforts should be put toward exploring the process of having the Roseau River designated a navigable river for canoeing and examining what physical conditions or impediments may currently exist to achieving such a designation. Having the river designated a navigable river for canoeing may open further opportunities for advertising the recreational aspects of the region – e.g., a book about Manitoba canoe routes exists and future editions may present a chance to recognize the Roseau River.

Due to its proximity to a large population in Winnipeg and its excellent potential for river development, it may be worth exploring a large commercial tubing operation with



a campground. The possibility exists that the right development may be able to capture some of the local market and crowd that travels to Red Lake Falls in Minnesota on summer long weekends to utilize the campground and river tubing operation on the Red Lake River.

In addition, many stakeholders noted the historical relevance of the Roseau River and suggested attempts should be made to have the Roseau River designated a heritage river. Due to its historical importance for exploration, settlement, transportation, and economic development, the Roseau River may be a candidate for recognition. Various historical anecdotes regarding use of the Roseau River by settlers heading west to the Red River, the transport of timber from the region via the Roseau and Red Rivers to Winnipeg, and the ancient aboriginal stone fish weir at the Roseau River Rapids illustrate the historical importance of the river.

5.0 Roseau River Goals, Objectives and Strategies

Many of the stakeholder issues and concerns (flooding, water quality, infrastructure maintenance, etc.) were used to generate a series of goals and objectives for the Roseau River Watershed. Subsequently, strategies to achieve each objective were identified; i.e., specific activities that can be carried out by local governments in a watershed context. Goals, objectives and strategies were developed in consultation with the Roseau River Watershed Planning Steering Committee. It is anticipated that these will be continually updated and revised as needed.

Goal 1: Land and water resources are managed by Watershed boundaries rather than political boundaries.

OBJECTIVES:

1. Develop and maintain partnerships between political jurisdictions.
2. Designate a mechanism for implementation and updating of the Roseau River Watershed Plan.
3. Improve stakeholder participation and awareness of land and water management issues.

STRATEGIES:

Objective 1: Develop and maintain partnerships between political jurisdictions:

- a) Roseau River International Watershed: continue to meet monthly.
- b) RRIW will assess the implementation of the Canadian and American Watershed plans from an international perspective (by December 2007).
- c) Roseau River (Canada): Roseau River Watershed Plan Steering Committee will continue to meet until Objective 2 can be implemented.

Objective 2: Designate a mechanism for implementation and updating of the Roseau River Watershed Plan:

- a) Steering Committee to work with Manitoba Water Stewardship to define a Water Planning Authority, as defined by the Water Protection Act, for the Roseau River Watershed (by fall 2007).
- b) In the absence of a Water Planning Authority, the Steering Committee must pursue funding to implement projects outlined below.

Objective 3: Improve stakeholder participation and awareness of land and water management issues:

- a) Education and outreach: Public meetings will be held each fall to assess stakeholder engagement and identify issues (to provide information about the need to manage by watershed boundaries).
- b) Public meeting to be held in each RM and First Nation to provide information on this Plan, watershed boundaries, and to discuss progress under Objective 2 (above) (by fall 2007).

Goal 2: Ensure the appropriate use and sustainability of surface and ground water.**OBJECTIVES:**

1. Maintain and improve water supplies for rural and town residents.
2. Plan for short-term and long-term water shortages due to drought.

STRATEGIES:

- a) Complete a groundwater inventory and identify aquifer recharge areas within the watershed.
- b) Identify potential surface and groundwater sources of water to supplement or enhance drinking water supplies to rural and town residents.
- c) Develop a drought plan for the watershed.
- d) Develop emergency management plans for contamination, drought and flooding.

Goal 3: Protect surface and groundwater from contamination, nutrient loading and sedimentation.**OBJECTIVES:**

1. Develop a source water protection plan.
2. Reduce erosion and sedimentation of ditches, streams and rivers.

STRATEGIES:*Objective 1: Develop a source water protection plan:*

- a) Identify and protect groundwater recharge areas (see strategies identified for Goal 2).
- b) Well water testing and well capping programs; inventory abandoned wells.
- c) Monitor surface water quality, building on SPADA program.

Objective 2: Reduce erosion and sedimentation of ditches, streams and rivers:

- a) Encourage agricultural beneficial management practices (BMPs) to reduce soil erosion by wind and water. Provide information on cost sharing programs available to landowners (provincial and federal).
- b) Protect vulnerable stream bank areas through reestablishment of riparian vegetation and buffer zones
- c) Vita Drain and other vulnerable areas to be identified and monitored for sediment loads and other water quality impairments.

Goal 4: Reduce the risk of flood damage for residents, property, infrastructure and the environment in the Roseau River Watershed.

OBJECTIVES:

1. Implement flood mitigation measures in the Roseau River Watershed Management Areas 2 & 3, in particular to deal with “Lake Roseau” and other local concerns.
2. Implement flood mitigation measures in Roseau River Watershed Management Area 1 that reduce risk locally and downstream.

STRATEGIES:

Objective 1: Management Areas 2&3:

- a) Recommendations in the UMA report should be prioritized, including Lake Roseau diversion, Gardenton Floodway rehabilitation, and community diking programs (by April 2007).
- b) Develop proposals for cost-sharing by local, provincial and federal governments for priorities identified in Strategy 1 (by spring 2008).
- c) Identify potential water retention projects and funding sources e.g., Senkiw Dam, series of low-head dams identified a few years ago (i.e., PR 218 and east).
- d) Culverts through St. Mary’s Road in Montcalm/Franklin (from UMA report) completed in 2006/07 – to facilitate the drainage of Lake Roseau.

Objective 2: Management Area 1:

- a) Identify potential water retention projects in upper watershed areas (by summer 2008).
- b) Pursue funding for feasibility studies for water retention projects in upper watershed areas, for example, Horseshoe Lake management, Sprague Creek Dam (by summer 2008).

POTENTIAL PARTNERS: US – Canada joint funding & planning.

Goal 5: Maintain drainage systems and water management infrastructure while minimizing impacts to downstream stakeholders.

OBJECTIVES:

1. Manage drainage systems to protect agricultural productivity and local/regional infrastructure with consideration of downstream effects (i.e., flooding, water quality, erosion, fish habitat, etc.).
2. Manage dikes, floodways, etc., for human safety with consideration of downstream effects (i.e., flooding, water quality, erosion, fish habitat, etc.).

STRATEGIES:

Objective 1: Manage drainage systems to protect agricultural productivity and local/regional infrastructure with consideration of downstream effects:

- a) Dialogue required with the Province to address maintenance of drains, e.g., Vita Drain.
- b) Inventory culverts within the watershed.
- c) Dialogue with province to address culvert size, ditch slopes, etc.

Objective 2: Manage dikes, floodways, etc., for human safety with consideration of downstream effects:

- a) Pursue funding for rehabilitation of Gardenton Floodway dikes.

Goal 6: Preserve, protect and restore unique natural resource communities and other features in the watershed.**OBJECTIVES:**

1. Restore diversity and viability of native fish and wildlife populations and their habitats.
2. Enhance natural systems to improve fish passage, provide habitat, etc.
3. Promote management and protection of wetland and upland habitats to maximize wildlife productivity and minimize adverse effects to agricultural interests.
4. Promote the management of forestry practices and track reforestation efforts.

STRATEGIES:

- a) Fund a riparian assessment and fish inventory of the Roseau River that measures the effectiveness of the Dominion City Fish Ladder.
- b) Inventory wetlands in relation to aquifer recharge areas and wildlife habitat.
- c) Develop a partnership to manage the Roseau River Wildlife Management Area (RRWMA) in Minnesota to minimize downstream flooding while maximizing wildlife benefits.

Goal 7: Enhance tourism and recreational opportunities to benefit the local economy while preserving the natural resources of the watershed.**OBJECTIVES:**

1. Promote the unique habitat and opportunities in the watershed to enhance economic development and the quality of life (e.g., promotion of canoe routes, the Manitoba Tall Grass Prairie Preserve).

STRATEGIES:

- a) Explore the potential for a recreation facility/water retention structure at Senkiw.
- b) Examine the economic feasibility for establishing river tubing/campsite businesses.
- c) Designate the Roseau River as a Navigable River for Canoeing and/or Heritage River.

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Appendix A: Population Characteristics and Community Profiles

Since watershed boundaries do not follow political boundaries, it is difficult to provide population figures that are representative on a watershed scale. Consequently, the population figures provided in Table 1 are based on political divisions collected in the 1996 and 2001 Census of Canada by Statistics Canada.

It is necessary to note that although data is provided for the entire RM of Montcalm, only a small portion of the RM actually falls within the Roseau River Watershed area and as such, only a small number of these residents reside in the watershed area. Approximately half of the land area covered by the RM of Piney falls within the Roseau River Watershed and a significant proportion of the population resides in the watershed area. About two-thirds of the RM of Stuartburn falls within the drainage area of the Roseau River Watershed and a significant proportion of the population resides in this area. The majority of the RM of Franklin and its residents fall within the drainage area of the Roseau River Watershed. All of the land currently belonging to the Roseau River Anishinabe First Nation falls within the Roseau River Watershed and as such, all of the on-Reserve population resides in this area. *Note: more precise figures for the Roseau River Anishinabe First Nation are available from Indian and Northern Affairs Canada and are noted in the subsequent profile section for the First Nation.* Figures 1 and 2 display the political boundaries and communities in this region.

Table 1: Population Characteristics of Jurisdictions in the Roseau River Watershed

<u>Jurisdiction</u>	<u>2001</u>	<u>1996</u>	<u>1996 to 2001 Population Change</u>
RM of Piney	1,688	1,604	+5.2%
RM of Stuartburn	1,603	1,563	+2.6%
RM of Franklin	1,781	1,724	+3.3%
RM of Montcalm	1,400	1,567	-10.7%
Roseau River Reserve No. 2	569	467	+21.8%
Roseau Rapids Reserve No. 2A	92	76	+21.1%

Source: Statistics Canada (2001).

Rural Municipality of Piney

The RM of Piney is located in southeastern Manitoba roughly 175 km (109 mi.) from Winnipeg. Based on data gathered by Statistics Canada during the 2001 Census, the municipality covers a total land area of 2,434 km² (940 sq. mi.) and has 983 private dwellings with a total population of 1,688. When compared with the total population of 1,604 noted during the 1996 Census, the municipality experienced a total population growth of 5.2% from 1996 to 2001. English is the primary language spoken the region, but there are residents in the area who also speak French, German, Polish, and Ukrainian. The Sandilands Provincial Forest covers a large portion of the municipality and the Wampum Ecological Reserve is also found in the area. In addition, there are a number of low-lying swampland areas throughout the municipality.

Vassar and Sprague are two of the unincorporated urban centres in the municipality that fall within the boundaries of the Roseau River Watershed. Other communities within the watershed include Menisino, Badger, Piney, Wampum, South Junction, and Middlebro. Children in the municipality primarily attend schools in the Border Land and Seine River School Divisions. The Ross L. Gray School in Sprague provides education for the K-S4 levels. Health care services in the region are provided through the South Eastman Regional Health Authority. The closest hospital and personal care homes are located in Steinbach and Vita. There is a medical clinic in Sprague. The municipality has a memorandum of understanding with Roseau, Minnesota, to provide ambulance (user pay) and hospital services to Canadian residents using U.S. resources.

There is excellent quality potable groundwater available throughout the municipality and as such, most homes and businesses are serviced by wells. There is no public water or sewer system infrastructure in the municipality. There are five separate sites for waste disposal within the municipality and a private service for residential garbage pickup.

Recycling services are limited to a drop-off program at municipal waste disposal locations. Police protection for the community is provided by a Royal Canadian Mounted Police (RCMP) detachment located in Sprague, where there are four officers stationed. Fire protection is provided through volunteer services stationed out of Sprague and Piney. There is a small transborder airport located at the Piney/Pine Creek Canada-U.S. border crossing.

The municipality receives limited provincial and local radio stations, television signals via satellite dishes, Winnipeg and local area newspapers, and also has dial-up Internet access (high-speed Internet has recently been introduced in limited areas). There is very limited cell phone service throughout the municipality. Community facilities include a solar-heated pool and mini-golf course in Vassar, a paved tennis court in South Junction, and an indoor curling rink in Piney. The municipality is accessible by all-weather roads via Provincial Trunk Highway #12. The economic base consists of primarily forestry, agriculture and tourism.

Rural Municipality of Stuartburn



The RM of Stuartburn is located in southeastern Manitoba along the Canada-U.S. border approximately 120 km (75 mi.) from Winnipeg. Based on data gathered by Statistics Canada during the 2001 Census, the municipality covers a total land area of 1,162 km² (449 sq. mi.) and has 831 private dwellings with a total population of 1,603. When compared with the total population of 1,563 noted during the 1996 Census, the municipality experienced a total population growth of 2.6% from 1996 to 2001. The primary language spoken in the region is English. There is a strong Ukrainian heritage dating back to the homestead period of the late 1800's. Other languages spoken in the area include German, French, and Polish. The land in the municipality is flat in nature with sandy, rocky soils and a great deal of swampland in the lower areas. The Sandilands Provincial Forest reaches into the municipality in the northeastern corner and various tracts of land in the vicinity of Gardenton contain protected tall-grass prairie reserves. To preserve and protect this ecologically significant feature, the Nature Conservancy of Canada has purchased a considerable amount of land throughout the municipality. The Agassiz Interpretive Trail begins in this region and is located 1.6 km (1 mi.) from the junction of Provincial Roads #209 and #201.

Vita is the only unincorporated urban centre in the municipality that falls within the boundaries of the Roseau River Watershed. Other communities within the watershed area include Stuartburn, Gardenton, Arbakka, Caliento, and Sundown. Children in the municipality primarily attend schools in the Border Land School Division. The Shevchenko School in Vita provides education for the K-S4 levels. Health care services in the region are provided through the South Eastman Regional Health Authority and ambulance services are available to residents. The Vita and District Health Centre located in Vita is classified as a small rural hospital and has an attached personal care home. The facility also serves as a district health centre that includes doctors' clinics and provides community health services. Some residents also use health care facilities (i.e., hospitals, medical clinics, personal care homes) located in Steinbach and St. Pierre-Jolys.

There is good quality potable groundwater available throughout the municipality and as such, many homes and businesses are serviced by wells. There is no public water system in the municipality. The public sewer system for Vita consists of a sewage lagoon, but there is no other sewage infrastructure for the remainder of the municipality. There is a site for waste disposal within the municipality and residential garbage pickup is available. Municipal recycling services are limited to a drop-off program at the waste disposal site. There are no police detachments located in the municipality, but police protection is provided through the RCMP detachment located in Emerson (other nearby detachments include Steinbach, St. Pierre-Jolys, and Sprague). Local fire protection is provided by a volunteer fire service based out of Vita.

The municipality receives most provincial and local radio stations, most television signals via Winnipeg, local area and Winnipeg newspapers, and also has dial-up and high-speed Internet access. There are significant areas throughout the municipality where cell phone service is not available. Community facilities include an indoor curling rink and

hockey arena in Vita, as well as the Ukrainian Museum and Village in Gardenton. The municipality is accessible by all-weather roads via Provincial Trunk Highway #59 and Provincial Road #201. The economic base consists of primarily cattle farming and forage crop production.

Rural Municipality of Franklin

The RM of Franklin is located in south-central Manitoba along the Canada-U.S. border roughly 80 km (50 mi.) from Winnipeg. Based on data gathered by Statistics Canada during the 2001 Census, the municipality covers a total land area of 953 km² (368 sq. mi.) and has 710 private dwellings with a total population of 1,781. When compared with the total population of 1,724 noted during the 1996 Census, the municipality experienced a total population growth of 3.3% from 1996 to 2001. English is the primary language spoken the region, but there are residents in the area who also speak French, German, Ukrainian, Scottish, and Dutch. The land in the municipality is variable, transitioning from glacially deposited sandy, rocky soils in the eastern area to flat, clay-rich soils of the Red River Valley floodplain in the western area.

The largest urban centre in the municipality that falls within the boundaries of the Roseau River Watershed is Dominion City. Other communities within the watershed include Roseau River, Tolstoi, Woodmore, Green Ridge, Ridgeville, and Fredensthal. Children in the municipality primarily attend schools in the Border Land School Division. The Roseau Valley School in Dominion City provides education for the K-S4 levels. Health care services in the region are provided through the South Eastman Regional Health Authority and ambulance services are available to residents. The nearest health care facilities (i.e., hospitals, medical clinics, personal care homes) are located in Emerson, Morris, St. Pierre-Jolys, and Vita.

All areas in the municipality are serviced by a municipal water system. Water is supplied by the Pembina Valley Water Cooperative and also from community wells throughout the region. There is a public sewer system for Dominion City, but there is no other sewage infrastructure for the remainder of the municipality. There is a site for waste disposal within the municipality and garbage pickup is available for both residential and commercial properties. Recycling services for the municipality include a drop-off program at the waste disposal site, as well as a home pickup service in certain areas. There are no police detachments located within the municipality, but police protection is provided through the RCMP detachment in Emerson (other nearby detachments include Steinbach, St. Pierre-Jolys, and Sprague). Local fire and emergency medical services are provided by a volunteer fire department based in Dominion City. The community of Dominion City is surrounded by a ring dike for flood protection.

The municipality receives most provincial and local radio stations, most television signals via Winnipeg, local area and Winnipeg newspapers, and also has dial-up and high-speed Internet access. There are some areas throughout the municipality where cell phone service is not available. Community facilities include an indoor curling rink, hockey arena, and heated pool in Dominion City and skating rinks in Roseau River and Ridgeville. The Roseau River Park is located on Provincial Trunk Highway #59 at the community of Roseau River. The Franklin Museum in Dominion City and the Swinging Cable Bridge over the Roseau River near Dominion City provide examples of the rich historical attractions in this centennial community. The municipality is accessible by all-weather roads via Provincial Trunk Highways #59 and #75, as well as by various provincial roads. The economic base consists of primarily agricultural activities including grain and mixed farming, as well as various private sector and home-based businesses.



Rural Municipality of Montcalm

The RM of Montcalm is located in south-central Manitoba along the Canada-U.S. border roughly 60 km (37 mi.) from Winnipeg. Based on data gathered by Statistics Canada during the 2001 Census, the municipality covers a total land area of 469 km² (181 sq. mi.) and has 524 private dwellings with a total population of 1,400. When compared with the total population of 1,567 noted during the 1996 Census, the municipality experienced a total population decline of 10.7% from 1996 to 2001. French is the primary language spoken in the region, but many residents are bilingual and also speak English. There are also residents of German, Scottish, and British descent in the region. The municipality sits in the Red River Valley floodplain where the land is flat and consists of rich black soils that are extremely fertile and valuable for crop farming.

There are three urban centres in the municipality – Saint-Joseph, Saint-Jean-Baptiste, and Letellier – all of which are outside the boundaries of the Roseau River Watershed. Children in the municipality primarily attend schools in the Border Land School Division and Division Scolaire Franco-Manitobaine. École Letellier Immersion School provides K-8 education and École Régionale Saint-Jean-Baptiste provides K-S4 education. Health care services in the region are provided through the Regional Health Authority Central Manitoba Inc. and ambulance services are available to residents. There is a community health centre located in St. Jean-Baptiste and other nearby health care facilities (i.e., hospitals, medical clinics, personal care homes) utilized by residents are located in Emerson, Morris, and Altona.

All areas in the municipality are serviced by a municipal water system and water is supplied by the Pembina Valley Water Cooperative. There is a water treatment plant in Letellier through which water is delivered to rural areas and towns via a network of pipelines. There is a public sewer system for St. Joseph, St. Jean-Baptiste, and Letellier, but there is no other sewage infrastructure for the remainder of the municipality. There is a site for waste disposal in the municipality and garbage pickup is available for both residential and commercial properties. Recycling services for the municipality include a drop-off program at the waste disposal site, as well as a home pickup service in certain areas. There are no police detachments located within the municipality, but police protection is provided through RCMP detachments located in Emerson and Morris. Local fire protection is provided by volunteer fire services based out of St. Jean Baptiste and Letellier. The communities of Saint-Jean-Baptiste and Letellier are both surrounded by individual ring dikes for flood protection.

The municipality receives provincial and local radio stations, television signals via Winnipeg, local area and Winnipeg newspapers, and also has dial-up and high-speed Internet access. Cell phone service is available throughout most of the municipality. Community facilities include an indoor curling rink and hockey arena in St. Jean Baptiste and an arena in Letellier. The Saint-Joseph Museum exemplifies the rich agricultural history of the community. The municipality is accessible by all-weather road via Provincial Trunk Highway #75, which runs directly through the municipality. The economic base is primarily agriculturally focused with crop and seed farming, but there are cattle and hog productions, as well as dairy farms, throughout the municipality. Various private sector businesses operate in the municipality, with seed and special crop exporters being prominent. Miller Environmental Corporation operates a waste treatment and recycling facility in the municipality.

Roseau River Anishinabe First Nation

The Roseau River Anishinabe First Nation (RRAFN) occupies two areas of land in south-central Manitoba. The first area of land, located approximately 20 km (12 mi.) north of the Canada-U.S. border and 90 km (56 mi.) south of Winnipeg (just east of Letellier on Provincial Road #201), is designated as Roseau River Indian Reserve No. 2 and is the main community where the bulk of the Reserve population resides. The second area, designated as Roseau Rapids Indian Reserve No. 2A, is located approximately 30 km (19 mi.) east of the main reserve and has a much smaller population. According to population statistics provided by Indian and Northern Affairs Canada, as of 2006, the RRAFN has an on-Reserve population of 1,087 and an off-Reserve population of 975, as well as 19 other members (INAC, 2006). The total registered membership of the RRAFN is 2,081 and the native language spoken by the membership is Ojibway.

The total area covered by both reserves is 3,066 hectares (7,576 acres), with Roseau River Indian Reserve No. 2 covering 2,135 hectares (5,276 acres) and Roseau Rapids Indian Reserve No. 2A covering 931 hectares (2,300 acres). Based on provisions under the Treaty Land Entitlement, a land settlement payment was provided to the RRAFN in 1996 and the Roseau River Trust Fund was established. Part of the mandate of the trustees of this fund has been to purchase and acquire 2,372 hectares (5,861 acres) of new lands within 15 years of the 1996 settlement (RRAFN, n.d.). These newly acquired lands are held under a company titled RRFNT AKI Property Holdings Ltd. and currently all new lands are located within the RM of Franklin. Between 1998 and 2002 the RRAFN acquired 1,528 hectares (3,775 acres) of new land of which 1,046 hectares (2,585 acres) have been advanced to INAC for conversion to Reserve status (RRAFN, n.d.).

As noted in the *First Nation Community Profiles for the Manitoba Region (2004-05)* by Indian and Northern Affairs Canada, First Nation children attend the Ginew School, which is operated by the First Nation and provides K-S4 education. Some of the First Nation children also attend schools that are off-Reserve in nearby communities. Health care is provided through the Ginew Wellness Centre, which offers a variety of health and wellness programs and services in cooperation with the First Nations and Inuit Health Branch of Health Canada. There is a community health representative and registered nurse on-Reserve.

The main community (Roseau River Indian Reserve No. 2) is surrounded by a ring dike for flood protection. The main community is serviced by chlorinated running water delivered through the Letellier water system. The majority of houses on the Reserve receive piped water, although a small number either: a) receive water from community wells; b) receive water from individual wells; c) have water trucked in to fill cisterns; or d) have water trucked in to fill barrels. The community has a sewage lagoon outside of the ring dike for disposal. Within the community, the majority of houses have piped septic service, although some houses have individual septic fields and some have trucked septic service. The community has a landfill site located outside of the ring dike and garbage pickup and disposal services are provided to the residents. Police protection in the community is provided by the Dakota Ojibway Police Service (DOPS), which has four constables on-Reserve. The nearest RCMP detachment is located in Emerson. Fire protection in the community is provided by a volunteer fire department that is serviced by a single fire truck. The RRAFN has an agreement to purchase fire protection services from the RM of Franklin on an as needed basis.

The First Nation has its own radio station at 100.5 FM and receives most southern Manitoba radio stations, television feeds from Winnipeg, and also has dial-up and high-speed Internet access. Private telephone exchange is available on the Reserve and buried cable services have been extended to some of the newer homes. Community services and other on-Reserve facilities include an administration office, community hall, government office, an activity centre, indoor skating rink, baseball diamond, and a training centre. The Reserve is accessible by all-weather roads via Provincial Trunk Highway #75 and major bus lines provide service in nearby Letellier. The economic base consists of residential development, cattle grazing and agriculture, as well as commercial and business services within the community. The Roseau River Pow Wow is held every summer and is an extremely popular and important cultural event for the community.



References

- Indian and Northern Affairs Canada. (2005). First Nation Community Profiles for the Manitoba Region (2004-05).
- Indian and Northern Affairs Canada. (2006). Roseau River Anishinabe First Nation Government Profile. Retrieved May 31, 2006, from http://sdiprod2.inac.gc.ca/fnprofiles/FNProfiles_PrintForm.asp?BAND_NUMBER=273&BAND_NAME=Roseau+River+Anishinabe+First+Nation+Government&ES=CUS&Q=0
- International Joint Commission (IJC). (2006). International Joint Commission Mission Statement. Retrieved May 31, 2006, from http://www.ijc.org/en/home/main_accueil.htm
- Manitoba Intergovernmental Affairs. (2000a). RM of Piney Community Profile. Retrieved June 23, 2005, from <http://www.communityprofiles.mb.ca/cgi-bin/csd/index.cgi?id=4601039>
- Manitoba Intergovernmental Affairs. (2000b). RM of Stuartburn Community Profile. Retrieved June 24, 2005, from <http://www.communityprofiles.mb.ca/cgi-bin/csd/index.cgi?id=4601035>
- Manitoba Intergovernmental Affairs. (2000c). RM of Franklin Community Profile. Retrieved June 28, 2005, from <http://www.communityprofiles.mb.ca/cgi-bin/csd/index.cgi?id=4602025>
- Manitoba Intergovernmental Affairs. (2000d). R.M. of Montcalm Community Profile. Retrieved June 29, 2005, from <http://www.communityprofiles.mb.ca/cgi-bin/csd/index.cgi?id=4603030>
- Manitoba Water Stewardship. (n.d.). Planning and Coordination Branch Conservation Districts. Retrieved July 27, 2005, from <http://www.gov.mb.ca/waterstewardship/mwsb/cd/>
- Montcalm Community Development Corporation. (n.d.). Rural Municipality of Montcalm web site. Retrieved June 29, 2005, from <http://www.montcalmmanitoba.ca/english/index.html>
- Roseau River Anishinabe First Nation (RRAFN). (n.d.). Summary of RRAFN Trust Office. Retrieved May 31, 2006, from <http://www.rrafn.com/trust.html>
- Roseau River Watershed District (RRWD). 2004. Overall Plan for the Roseau River Watershed District.
- South Eastman Health. (2005). Programs and Services. Retrieved June 24, 2005, from http://www.sehealth.mb.ca/english/main_english.htm
- Statistics Canada. (2001). 2001 Census of Canada. Retrieved June 24, 2005, from <http://www12.statcan.ca/english/census01/home/index.cfm>

Appendix B - Stakeholder Issues and Concerns

Public input for the Roseau River Watershed Plan was obtained during public meetings held throughout the watershed in the early stages of the project. Public meetings were held on March 7, 2005, in the RM of Montcalm, March 16, 2005, in the RM of Stuartburn, April 4, 2005, in the RM of Piney, and June 27, 2005, at the Roseau River Anishinabe First Nation. In total, more than 150 watershed stakeholders attended these meetings and provided input to Red River Basin Commission (RRBC) staff. In addition, in late 2004 and early 2005, RRBC staff conducted 10 separate meetings with the councils from each of the local governments involved in the project (2 meetings were held with each of the 5 local governments) to explore issues and concerns at the council level. To further supplement the public input process, RRBC staff also made several visits to watershed stakeholders to document issues and concerns on an individual basis. The RRBC thanks all watershed stakeholders who participated and provided input to the process.

1.1 – Issues Raised by RM of Montcalm Stakeholders

Following is a summary of issues raised by stakeholders at a public meeting held in the RM of Montcalm, issues raised in several meetings with individual stakeholders, and issues raised in meetings with the RM of Montcalm council. Where possible, issues have been collated into subject areas that relate to the resource inventory sections. The RM of Montcalm falls within Management Area 3 of the Roseau River Watershed.

Water Quantity (Flood Related Issues)

The primary concern raised by RM of Montcalm residents and the municipal council was the issue of “Lake Roseau” and associated flooding in the area northwest of Dominion City. At the RM of Montcalm public meeting, Mr. Ted Sabourin, an RM of Montcalm resident who has been farming in the Lake Roseau area for more than 60 years, addressed the group and proposed that constructing a floodway channel from the Roseau River to the Red River (possibly located at Rural Lot #164 or #166 – the shortest distances between the Roseau and Red Rivers) would help alleviate some of the chronic flooding problems in this area. Mr. Sabourin explained how in smaller floods, a floodway channel would help decrease the overall size of Lake Roseau and accordingly, less farmland would be covered by floodwaters. Mr. Sabourin also noted that a floodway channel would help Lake Roseau drain quicker once the Red River has receded, allowing seeding operations to resume earlier and helping local farmers.

Additional benefits of a floodway noted by Mr. Sabourin would be less damage to roads in the area (St. Mary’s Road and PR #217), a reduction in road repair costs, and a reduction in the amount of time that access to homes is limited. Mr. Sabourin noted that when Lake Roseau forms, St. Mary’s Road is frequently overtopped and washed out by floodwaters, which has repeatedly required expensive repairs. In addition, when St. Mary’s Road is overtopped and/or washed out, homeowners are often unable to access their homes for extended periods. Mr. Sabourin indicated that a floodway channel would help prevent unequal water levels on either side of St. Mary’s Road (higher on the east than the west side) that contributes to these road washouts. A floodway channel would also help drain large rainfall events which have been problematic in recent years when Lake Roseau has formed in the summer period (e.g. July 2002, June-July 2005). It was noted that a cost-effective solution is needed since repeatedly paying substantial road repair costs, crop insurance claims, and disaster financial assistance claims is not sustainable. The perception is that a floodway channel would be a cost-effective solution by reducing the amount and regularity of these repair costs and agricultural losses.

Stakeholders at the public meeting and the municipal council would like to see a final decision made on the proposed floodway channel between the Roseau and Red Rivers. The project has been on record since 1975, when it was suggested as a protective work by the International Roseau River Engineering Board and has been desired in the area since 1950. Stakeholders noted that there has never been an answer provided as to why a floodway channel should or should not be built. Stakeholders feel the owner of the river lots would likely be willing to sell the required land because the area is continually wet and erosion has been significant. It is anticipated that a floodway would be

shallow and only used to aid in the quicker draining of Lake Roseau – the stakeholders understand that a floodway will not prevent the formation of Lake Roseau. As noted earlier, the key feature of a floodway channel is that it will drain Roseau River flows prior to a flood (potentially reducing the overall level of Lake Roseau) and then drain the land faster so that seeding can begin sooner. It was suggested such a channel be grassed so that no erosion or sediment is transferred to the Red River. The municipal council indicated that larger culverts have been installed through St. Mary's Road to help drain Lake Roseau faster.

Some stakeholders commented that in the past, the Marsh River to the north was the natural outlet that drained Lake Roseau. Restoration of the Marsh River was seen as a potential solution for helping to drain Lake Roseau, but the municipal council has no interest in being involved in such a project. One stakeholder commented that in 2004, the Marsh River was flowing significantly in the springtime and suggested that someone had cleaned out part of the channel. Prior to these observations the Marsh River had not been flowing and had been filled in by vegetation and restricted by beaver dam blockages. It is perceived that the raising of roads on the east and west sides of the Marsh River has acted to channel water and forced it to flow through the Marsh channel. Concerns were also raised that the natural divide that separates flow of the Marsh River from the north to the Rat River and south to the Roseau River has been dug out (the divide was approximately 1 mile north of Goertzen Road). The perceived result has been that local water that once flowed north into the Rat River system is moving south into the Roseau River system – adding to problems in flood times when Lake Roseau is slowly draining.

The municipal council would like to see the development of upstream water retention to hold back water in the upper watershed. It was noted that it would be helpful to release some water early prior to the flood peak's arrival and then hold off on releases until the flood has passed – a slow release so that landowners are not receiving upstream drainage when they are flooding.

Water Quality



Water quality was a minor issue with some stakeholders, who noted that, while the Roseau River was good for swimming when they were younger, they would not go in the river now. The opinion exists that the water quality is likely poorer now than in the past and increased fertilizer and pesticide use has degraded it. Stakeholders noted grass and bulrushes grow in the ditches with great abundance, which they attributed to increased fertilizer use. However, water in the Roseau River was described as much clearer than water in the Red River.

Natural Resources – Wildlife, Biodiversity, and Fisheries

One stakeholder described a unique species present along his riverbank property that was introduced to the area during the 1979 flood and has persisted since then. The stakeholder referred to the species as *Yellow Nutsedge* and noted that it is grasslike in nature, cannot be killed with Roundup, and tends to suffocate other plant species and restrict their growth. The plant can be found roughly ¾ of a mile east of St. Mary's Road. Stakeholders noted that it starts out like a peanut floating in the river and wherever it floats, it then grows afterwards. It can only be killed by frost and after drying is quite similar to quack grass – all of the energy is in the root. Stakeholders expressed that this species is becoming a real problem and it is perceived to be an issue primarily around flood times.

Stakeholders stated that fishing on the Roseau River seems to be fine – those at the public meeting who fished noted an abundance of fish for angling. With respect to wildlife, some stakeholders mentioned increased observations of bald eagles in the area and notation was made of a timberwolf, which had never been seen in the area before. Gopher and vole populations were cited as rare since few were seen during the winter of 2004/05.

1.2 – Issues Raised by RM of Franklin Stakeholders

The following section represents a summary of issues raised by stakeholders at a public meeting held in the RM of Stuartburn, issues raised in meetings with individual stakeholders, and issues raised in several meetings with the RM of Franklin council. Where possible, issues have been collated into subject areas that relate to the resource inventory sections. The RM of Franklin falls within Management Area 3 and part of Management Area 2 of the Roseau River Watershed.

Water Quantity (Flood Related Issues)

Council members would like to see the feasibility for a dam at Senkiw explored. It was noted that, depending on the size and type of dam, there could be a variety of potential uses including water supply, recreation and economic development, and small scale flood retention.

Council noted that restoration of regular flows in the Marsh River may allow water to drain from Lake Roseau sooner and reduce the impact on farmland. Council would like to see a solution arrived at to help landowners who are continually impacted by Lake Roseau.

General Issues – Infrastructure and Erosion

Council indicated that riparian areas along the Roseau River need to be restored and enhanced. It was noted that there are fewer trees left standing along the river and the once-abundant riparian corridor has been significantly reduced. One of the results of the degraded riparian areas has been a noticeable increase in erosion along the Roseau River channel and trees ending up in the river, causing serious log jams in some stretches of the river.

The Vita Drain is an important issue as the council feels that they are receiving too much water at inopportune times. Council members expressed concern that over the past 10 to 15 years, since the Vita Drain has been extended further east to Caliento and Sundown, the flow in the drain has been steady and continuous – there are times when the flow slows down but it never completely stops. Council members would like to have some of the drainage into the Vita Drain retained upstream and released slowly so that downstream landowners are not flooded out. There is a desire for upstream check dams for retention and to slow the flow. Stakeholders noted that there are major erosion problems along the Vita Drain that are likely contributing significant sediment loads to the Roseau River mainstem. It was noted that excess water in the Vita Drain has created swift, turbulent flows at certain times of the year and consequently, there is serious erosion along some parts of the drain. A stretch of the Vita Drain within a few miles of its endpoint at the Roseau River Village Park was specifically identified as a noteworthy and easily accessible area where the drain is cutting laterally and eroding private land. Council members noted that the Paradise Road bridge crossing located along this stretch of the Vita Drain is at risk from erosion caused by excessive flows in the drain. Council is concerned since at least 10 permanent residents utilize this bridge for road access to their homes.

Another important issue for council is replacement of the Langside Bridge – the original bridge was removed in 2004 to prevent it from collapsing and creating a blockage in the river. The council would like to explore the potential for rerouting the Roseau River channel to the north (creating an oxbow) in this area and constructing a new bridge in this location.

Tourism and Recreation Development

One stakeholder recommended removing the eight-foot-wide strip of stones that occur at the rapids stretches along the Roseau River so that canoeing can take place in times of low water. The stakeholder also suggested that establishing some sort of canoe conditions report in the news media would be beneficial for local and visiting canoe enthusiasts.

1.3 – Issues Raised by RM of Stuartburn Stakeholders

The following section represents a summary of issues raised by stakeholders at a public meeting held in the RM of Stuartburn, issues raised in several meetings with individual stakeholders, and issues raised in meetings with the RM of Stuartburn council. Where possible, issues have been collated into subject areas that relate to the resource inventory sections. The RM of Stuartburn falls within Management Area 2 and small parts of Management Areas 1 and 3 of the Roseau River Watershed.

General Issues – Infrastructure

The integrity of the Gardenton Floodway dikes was a very important issue raised by many stakeholders and by the municipal council – it was noted that the light soils and peat which the dikes are made of are saturated and water is seeping through the dikes. Landowners living both west and east of the floodway are concerned about potential blowouts and where the water will flow. The perception is that surrounding homes and farmland are at risk and Vita may be in danger and require emergency diking. It was suggested that the dikes be rebuilt higher and wider with stronger soil materials. Stakeholders stated that many letters had been sent to Manitoba Water Stewardship requesting that the dikes be repaired and expressing concern that in the next major flood there may be a catastrophic failure of the dikes.



Stakeholders stated that to their knowledge no action has been taken to solidify the dikes since a patch was made during the 2001 flood. One stakeholder noted that, in 2002, he could drive the entire length of the dikes on an ATV and now due to erosion, some spots are impassable and in one spot the dike is only 1 foot wide. Stakeholders noted that in 2001, when Manitoba Water Stewardship personnel were doing repairs and dug down in the area near the floodway, they found decent quality clay beneath the sandy soil that could be used for dike reconstruction. Stakeholders described the clay as hard pan and noted that they are using it from dugouts that are over 20 feet deep. Stakeholders stated that they have offered the Province this stronger clay soil to rebuild the Gardenton Floodway dikes, but have not yet received a response on the issue.

Stakeholders suggested that the Gardenton Floodway could be rehabilitated and expanded to serve as a water retention reservoir or lake (i.e., raise the height of the dikes to store more water in the channel area for flood protection). The perception is that this would have both downstream and upstream flood protection benefits. Stakeholders feel this may be feasible if: a) a control structure was built on the floodway outlet to regulate water release to the Roseau River; b) improvements were made to the Arbakka Dam; c) the dikes were rebuilt; and d) the original river channel was restored. It was also suggested that subdividing the land along a rehabilitated floodway would be useful to turn the area into a recreation or cottage area.

Another issue raised was the potential restoration of flow to the natural Roseau River channel around the Gardenton Floodway. Stakeholders feel this would provide some water storage capacity and would also reestablish fish habitat in this area. Over time, the channel has become overgrown with vegetation and beavers have created numerous blockages. Stakeholders expressed concern that due to the lack of flow, the water that does exist in the channel becomes stagnant at certain times of the year and the area has become a breeding ground for mosquitoes.

Stakeholders thought there are maintenance issues with Horseshoe Lake. It was noted that the dam is leaking and beavers have blocked up the area. Water is seeping through the side banks of the lake and stakeholders expect a blowout will occur in the near future. Stakeholders stated that Manitoba Water Stewardship has drains on the

municipal roads one-half mile north and south of PR #201 and noted that the south side drain takes flow out of Horseshoe Lake into the Sundown Bog and the north side drain takes flow into the Vita Drain. Stakeholders are concerned these man-made ditches are taking water south and transferring it into the Roseau River Watershed when they feel it would have naturally flowed north into the Rat River Watershed.

General Issues – Erosion

Stakeholders discussed how at the turn of the 20th Century, logs were floated down the Roseau River en route to Winnipeg via the Red River, but currently fallen trees jam up and block passage on the river. Stakeholders stated that they have tried to clean out the log jams and cut down the dead elm trees along the banks so they don't fall into the river, but DFO (Fisheries and Oceans Canada) threatened them with fines so they stopped any attempts to clean out the river or streambank areas. Stakeholders would like to see a streambank vegetation maintenance program or a river cleanup program established to deal with the problematic log jam issues.

Stakeholders noted that erosion in the Roseau River rapids area has been a significant problem over the past 30 years – it was estimated that in one area the riverbank has moved back 40 yards over this time period and the problem is worsening.

Water Quantity (Flood Related Issues)

Stakeholders expressed concern that the watershed has changed over the past 30 years. It was noted that in the 1960's, a hard rain did not produce the serious floods similar rainfall events do now. Stakeholders thought that due to the increase in land drainage in both the Canadian and U.S. portions of the watershed, water immediately drains to the river channel and is carried away. Stakeholders also recognized that part of the problem has been the significant amount of wetlands and swamplands that have been drained over the past 30 years. It was noted that 10 to 15 years ago, after a 2-3 inch rainfall event in the upstream areas, it would take about 3 to 4 days before there would be a noticeable rise in the Roseau River downstream, and now after a similar event, it only takes 1 to 2 days before there is a noticeable rise in the river downstream.

Stakeholders reiterated that one of the major problems in the watershed has been the draining of swamps and wetlands to create marginal farmland in the RMs of Franklin, Stuartburn, and Piney. Many stakeholders acknowledged the importance of wetlands and stated that they should not continue to be drained to create marginal farmland. Other stakeholders thought the wetlands are useless right now because they are full of water and could be better managed to help with flood control, i.e., cleaned out so they are better able to retain water during the spring melt period. One stakeholder suggested taking poor farmland out of agriculture and turning these areas into water storage locations – those who sell their marginal lands could purchase better farmland in other areas. It was suggested that a program similar to the Conservation Reserve Enhancement Program (CREP) in the U.S. would be useful in Canada to remove poor farmland from production and help protect riparian areas. Council would like to see some of the chronic problems explored. For example, convert marginal farmland that continually floods into water retention areas and provide appropriate compensation to the landowners in these areas.

Concern exists among some stakeholders about perceived activities in the watershed across the Canada-U.S. border at the Roseau River Wildlife Management Area (RRWMA). The perception exists that over the past 10-12 years, the RRWMA has been holding more water in the pools and as a result, water is backing up into Canada and flooding landowners in the Sirkо area. There was also concern about the timing of summer and late fall water releases from the pools that are perceived to worsen flooding in Canada. Stakeholders expressed a desire to establish a dialogue between the Americans and the Canadians to understand what is going on at the RRWMA. A proposed solution from the Canadians would be the construction of a dike and ditch along the border for approximately 4 miles in the RM of Piney and 2 miles in the RM of Stuartburn (east to west) that would turn south and empty into RRWMA Pool #3. The Canadian landowners indicated that: a) the ditch would take the local drainage which naturally flows south anyway and simply divert it into Pool #3, rather than having it flow through Pools #1 and #2, and b) the dike along the border will help prevent flooding from the U.S. side. The landowners stated that they would pay for the dike and

ditch construction themselves and are not asking for any financial assistance from any level of government. The key to such a project would be to get authorization from the U.S. to run the ditch into Pool #3 of the RRWMA.

Stakeholders noted that the beaver population in the area has increased significantly and many beaver dams are holding back water in the swamp areas. In Sundown, there are large beaver dams (approximately 7 or 8 dams) holding the water up so high that it is killing poplar trees in the area. Stakeholders are concerned because the swamps are traditionally spring storage areas that can no longer fill with water because they are maintained at a high level year round by the beavers. Stakeholders do not want to see all of the beavers killed, but agree population controls need to be put in place. A council representative noted that removal of beaver dams in some areas should be explored, but is difficult because local governments are responsible for beaver control but do not have the resources to deal with the problem. It was noted that the summer is too wet to get in and trap the beavers, so dam removal needs to be done in the winter. One stakeholder noted the process for trapping beavers is difficult because applying for a permit can be costly and cumbersome. On the other hand, it was noted that some beaver dams are beneficial because they are holding back water in areas which, if drained, would be problematic and cause flooding downstream.

Stakeholders raised the issue of water retention in areas other than the Gardenton Floodway and discussed various potential options. It was noted that the Nature Conservancy of Canada owns some marginal land in the municipality and stakeholders questioned whether they could be approached about storing water on these lands. The council would like to see a joint water retention structure built between the Rat River Watershed and the Roseau River Watershed that would benefit residents living in both watersheds. The KGS Group explored such an option in a 2001 study and the International Roseau River Engineering Board also made reference to water retention structures that would have joint benefits for the Rat River and Roseau River Watersheds. The municipal council would like to explore the potential for diking around the Caliento Bog to help prevent surrounding landowners from being flooded.

Stakeholders expressed reservations about the feasibility of the water retention proposals in the 2002 UMA Engineering hydrology study. Concerns were raised that more houses exist in the areas that would be affected by the proposed retention reservoirs near the Gardenton Floodway than the report stated. Stakeholders also noted that financial figures for buyouts in the area were not accurate and did not reflect infrastructure buyouts that would be required. It was stated that using the Community Pasture for water retention would not be feasible because the land would not dry out until the end of summer. It was noted that soil conditions are different in this area and spring meltwater often remains on the land until mid-July. Stakeholders noted there is a high water table and when the land is saturated, the top layer of sandy loam (above a layer of strong clay soil) will not dry out after holding water. Another reason stakeholders feel that water cannot be held on the pasture land is because the area is rolling and there are low dips that would not drain properly and the pasture would be ruined.

Stakeholders noted that in the past there have been issues with flooding in the community of Stuartburn and residents have been told to sandbag all the houses. It was noted that this is not continually feasible and a permanent solution is desired. Project suggestions from the 2002 UMA Engineering hydrology study were raised and some stakeholders questioned the feasibility of constructing linear dikes for the community of Stuartburn. Stakeholders noted that if a dike was constructed, it would need to be on both sides of the town and the ditch that runs along PR #201 would need to be cut off because even with linear dikes, the ditch would still flood the town. Stakeholders also questioned UMA's option for constructing linear dikes to protect Gardenton because they do not foresee water levels ever getting high enough to flood the community. On the other hand, the municipal council indicated that linear diking is needed to help protect the communities of Stuartburn and Gardenton.

Stakeholders expressed concern that the culverts draining through PR #201 are not sufficient, as water cannot pass under the highway quickly enough. It was stated that when the highway was constructed they tried to run the drains east-to-west and now they block the water. Water cannot drain naturally to the northwest and the area south of the community of Stuartburn cannot drain properly. The desire is to have the culverts south of Stuartburn modified or an extra one added.

Water Quantity (Drought)

There was minimal concern regarding impacts from drought in the region. Stakeholders who expressed an opinion on the issue indicated that they would rather deal with the current flood-related problems and if a dry period ever arrives, deal with it then. One stakeholder noted there are more livestock on the land now than there were during the last drought in the 1980's and as such, more effort needs to be put towards planning for a drought period in today's circumstances.

Water Quality

Stakeholders expressed concern about economic impacts if small villages along the river are required to change or upgrade existing sewage lagoons to meet new treatment requirements.

Natural Resources – Wildlife, Biodiversity, and Fisheries

Stakeholders stated that crayfish are an indicator species of the health of the river. While they used to be abundant, they have not been seen in a long time. The same observation was made regarding the number of clams in the river ecosystem.

There were conflicting opinions regarding the status of fishing on the Roseau River – some stakeholders felt that fish stocks have been declining, while others felt that population numbers are good since they have been catching an abundance of fish recently. It was noted that since changes were made to the Dominion City Dam, fish populations upstream have improved significantly. Overall, stakeholders stated that fish populations seem to depend on the year and the level of water in the river channel. It was noted that the fish species remain diverse, but the dominant species seem to have changed over the past five decades; species mentioned included northern pike, pickerel, carp, goldeye, and various others.



The municipal council noted there needs to be greater collaboration and communication between the Nature Conservancy of Canada (NCC) and the landowners in the area surrounding the protected lands. Concerns were raised that the NCC has purchased significant amounts of viable agricultural land in the RM of Stuartburn and questions were raised regarding the overall goals of the NCC and how much more land they plan on purchasing within the municipality. Some stakeholders expressed concern that at some point, the NCC may own most of the land in the municipality. Council members noted that many local farmers would like to have purchased some of land the NCC bought to increase the capability of their farm operations. Issues such as proper grazing and land management with respect to the encroachment of brush and bush on NCC lands were raised. Questions were also raised as to why in some cases the NCC purchased random parcels of land that were not connected to the larger adjacent networks of land they own.

Tourism and Recreation Development

The municipal council suggested that Horseshoe Lake may represent an opportunity for water retention and/or recreational projects. It was suggested that potentially the dikes could be reinforced and raised and the dam/outlet structure modified for water control purposes. It was noted that a study would be needed to determine the feasibility of any future development in the area and Ducks Unlimited Canada would need to be formally approached with potential ideas, as they are currently responsible for Horseshoe Lake.

Some stakeholders would like to see a tubing and recreation area created along the Roseau River that would be similar to an existing business on the Red Lake River in Minnesota. One stakeholder stated that he would like to start

a recreation business along the Roseau River and bought property in the RM of Franklin specifically for this purpose, but expressed concern because he has been unable to get required information on the river from the Province. Other stakeholders expressed concerns related to potential recreation developments including: a) an increase in garbage in the river from recreational activities; b) the status of the river's water quality to support any such venture; and c) the difficulties that would be created by water level fluctuations – i.e., in some years the river is too high and fast-flowing to safely have tubes on the river and in other years the river is too low; therefore, some sort of water flow regulation would be needed to create recreational benefits.

One stakeholder noted that subdividing the land and creating cottage developments is not a long-term solution to create sustainable communities. It was noted that a development plan is needed that will attract more people to the region, but also makes it clear that this land is based on agriculture and local residents. The stakeholder stated that while people who buy cottages will help the tax base and economic development, they don't contribute to the cultural fabric of the community, i.e., they don't live or buy food in the community, don't sit on community boards, etc. The stakeholder noted this area has a good quality of life that development plans need to recognize – i.e., retain the local agricultural community structure.



1.4 – Issues Raised by RM of Piney Stakeholders

The following section represents a summary of issues raised by stakeholders at a public meeting held in the RM of Piney, issues raised in meetings with individual stakeholders, and issues raised in meetings with the RM of Piney council. Where possible, issues have been collated into subject areas that relate to the resource inventory sections. The RM of Piney falls within Management Area 1 and part of Management Area 2 of the Roseau River Watershed.

Water Quantity (Flood Related Issues)

Municipal council members expressed concern regarding negative effects from high water in the Roseau River Wildlife Management Area (RRWMA) on landowners in the Sirko area. Similar to concerns raised at the RM of Stuartburn meeting, stakeholders noted there have been major flooding issues in the Sirko area for the past 10-12 years. There is the perception that projects have been undertaken in the U.S. that have worsened flooding in Canada. Stakeholders feel the problem comes in part from the Pine Creek Diversion – water that used to flow south into the U.S. is transferred west and flows into the U.S. to Pool #1 of the RRWMA and now the pools are backing water up into Canada. Stakeholders suggested that if the RRWMA burned off all the cattails in the marsh like they used to, it would be cleaned out and water could start flowing again, but they appear to have stopped doing this.

Stakeholders stated that flooding was not an issue for the area around Sprague until 2002. Problems were noted with the crossings on PTH #12 (north and south) and shallow culverts in this area – stakeholders thought an elevation study is required. It was suggested that culverts be installed near the Borderland Health Clinic. The rationale is that culverts in this location would help alleviate local flooding and would help Sprague as well. Stakeholders noted some culverts are too small and need to be expanded so there is proper flow at the proper time. Stakeholders expressed concern that in some areas where bridges were replaced with culverts, flows have been restricted and flooding exacerbated. The perception is that flow capacity has been decreased by installing these culverts and stakeholders

would like to see larger culverts installed or the bridges restored. It was suggested that this may be more cost-effective in the long run because costs associated with road washouts and repairs would be reduced.

Stakeholders expressed skepticism that water could be effectively stored in the region and noted that any storage would have minimal or no benefit to the local community. Stakeholders noted that elevation measurements and feasibility studies are needed to determine if storage is possible in the area. One stakeholder stated that if consideration is given to permanent reservoir facilities, issues such as timing of water retention, water levels, timing of water releases, and implications for farming and recreation in the area must be accounted for in the planning process. It was also suggested that when options for water retention are considered, potential recreation and economic developments such as cottages, boating, and fishing should be included in the proposals.

Stakeholders and council members raised the issue of a Reed River Diversion, originally discussed by the International Roseau River Engineering Board in 1975, as a potential project for flood control that may have benefits for both Canada and watershed neighbours in the U.S. Stakeholders stated that draining some flow from the Sprague Creek to the Reed River may be a potential solution to reduce peak flood flows. It was noted that a survey of the area would be required to determine elevations and a feasibility study would be needed.

The council would like to explore potential water transfers from the Rat River Watershed into the Roseau River Watershed. Council indicated that some transfer may occur from Horseshoe Lake via a drainage creek that runs into both watersheds during times of high water. A related issue discussed by council is exploration of the potential for a joint water storage structure between the Rat and the Roseau River watersheds. Potential water transfers from the St. Labre Bog and Whitemouth Watershed into the Roseau River Watershed are another area the council would like to see investigated.

Water Quantity (Drought)

Many stakeholders indicated that drought is not a concern due to the current wet period the region is experiencing. Many stakeholders noted that a drought is a positive event in this area because that is when they get their best use out of the land for cropping (e.g., the 1980's). One stakeholder thought this is due to the poor drainage network in the area – when there is a drought, this upstream area prospers because the water cannot escape. Another stakeholder noted that when conditions dry up, they will be able to mine all of the available peat moss. One stakeholder expressed concern about dirt storms that occur in dry times because of the sandy soils in the region and stated that strips of forest should be left on farmland as a preventative measure.

General Issues – Infrastructure

Some stakeholders are concerned about the large amount of drainage in place in the municipality and questions were raised as to whether all of the drains have been licensed. The perception exists that increased drainage in this area will contribute to increased water levels in Stuartburn and in the U.S. and as such, there is a need to ensure drainage is done properly.

Stakeholders and municipal council members noted that the banks on the Pine Creek Diversion have started to slump and erode and lack of maintenance is a major issue – erosion is restricting flow and the problem has worsened since the 2002 flood. It was noted that in the area near the start of the diversion, the dikes are too low and need to be raised because water breaks out and flows across the farmland – stakeholders indicated that this led to the community of Piney getting flooded in 2002. It was also noted that there are other areas which could be repaired that would prevent Piney from flooding. One stakeholder stated he has land in the area and his renters cannot farm the land near Piney because of the water breakouts continually causing problems. It was noted that the Pine Creek Diversion is classified as a 3rd Order Drain and Manitoba Water Stewardship is responsible for maintaining it – stakeholders stated they were told there is no funding available to deal with these chronic drain problems.

Water Quality

Water quality and source water protection is an important issue for the municipal council. Most landowners in the municipality are on well water and want their sources protected. High quality groundwater is abundant in the region and protection of the Sandilands aquifer is extremely important to council. Stakeholders stated there are no problems with wells in the area and it was noted that some wells have been in operation for 50 years and have tested quite good. Most wells are about 50 feet in depth and some artesian wells exist at 30 feet.

Stakeholders expressed concern regarding a proposal from the Pembina Valley Water Co-operative to draw water from the Sandilands aquifer and move it west to the Morris area through an underground pipeline. Although the proposal does not occur on land within the Roseau River Watershed (it occurs north of the watershed boundary), the proposed pipeline will tap into the Sandilands aquifer, which is the primary source of groundwater within the watershed. Stakeholders are concerned about potential effects the water drawn for this pipeline will have on local wells and want to be assured that their supply will not be negatively impacted.

Stakeholders noted that there have been a few incidents of cattle entering the river near and within the town of Sprague. It was noted that there is a program in place through the cattle producers group to prevent this, but it needs to be advertised in the area – stakeholders suggested that these people should be targeted and informed.



Stakeholders expressed concerns about water contamination from liquid livestock waste and stated that all steps possible should be taken to ensure the protection of water quality in the area.

Forestry

Stakeholders noted that fire suppression in the region could result in larger, more devastating fires in which towns could be lost or significantly damaged. As such, it was stated that there is a need for prescribed, controlled burns in the forested areas. It was also noted that communities need to be prepared and educated about the potential for smoke-related problems.

Stakeholders did not support water retention on forested lands. The perception is that the flooding of forest land is like clear cutting – it kills trees and does not help the watershed.

An issue was raised with respect to reforestation on private lands. Stakeholders stated that there are programs and regulations for reforestation on Crown lands but not for private lands, which depend on the individual landowner. Some stakeholders expressed concern that private landowners may be less inclined to reforest their lands and indicated this needs to be addressed.

Natural Resources – Wildlife, Biodiversity, and Fisheries

Stakeholders discussed peat moss resources in the area and noted that currently the peat moss being harvested in the region is outside of the Roseau River Watershed boundary. Stakeholders expressed concern that problems may arise if a private company enters into the Sundown bog and removes all of the peat moss. It was noted that

regulations need to be put in place before companies remove the peat. Stakeholders stated that much of peat moss in the Roseau River Watershed is not the type harvested for horticulture so other uses should be explored.

Stakeholders perceive that wildlife populations go in cycles and stated that there are too many deer, foxes, and beavers and no longer any wild turkeys in the area. Stakeholders would like to see a higher bounty for beaver pelts because beavers have been causing significant costs to the municipality for road washouts. One stakeholder mentioned that this area is a flyway and could be developed into an attractive stopover for migratory birds. Stakeholders noted that there are some jackfish and suckers present in Pine and Sprague Creeks, but overall there seem to be fewer fish in the rivers than there were in the past.

Many stakeholders expressed the opinion that there are significant problems with DFO (Fisheries and Oceans Canada) and discussed incidents where DFO representatives would not allow locals to clean up any dead trees or do any work around the river banks.

Tourism and Recreation Development

Stakeholders and the municipal council felt there may be potential for camping or recreation in the Horseshoe Lake area, but noted that there first needs to be some development in the area. Stakeholders stated that in the past there was a resident who wanted to build a cottage development in this area, but the Province gave him a hard time so he did not pursue the issue. It was noted that local residents have never been consulted with regard to water retention in the Horseshoe Lake area and some landowners would be affected by any further development. Currently the lake is dammed up by beavers and is quite high. One stakeholder living near the lake noted that the height of the water is causing him problems because the road directly north of the lake is saturated. It was noted that the lake is good for canoeing, contains primarily minnows, and is fed by a stream running in from the northeast. The lake drains south to the Roseau River and also north into the Rat River. Council stated that a feasibility study would be required to examine any potential development options for Horseshoe Lake.

The Wampum area was suggested for potential recreational development because there are cross-country ski trails and lots of hills in the area. Stakeholders noted that any further development in this area may conflict with the Snoman snowmobile trails. It was noted that this group has been grooming trails all across the region and any developers will have to work closely with them. Stakeholders noted that the key to development in any of these areas is that access roads are in poor condition and access is often limited during spring, summer, and fall. Any projects proposed in these areas will have to look at budgeting for the establishment of permanent roads and general road maintenance costs (e.g., snow plowing). Currently these areas are low use or unused and would require significant resources to develop them.

Stakeholders suggested steps be taken to have the Roseau River designated as a navigable canoe route. It was noted that authors are writing books about canoe routes and if the Roseau River can be added to these books, it may increase awareness of the river and draw tourists to visit the region. Stakeholders also made suggestions that local media outlets should provide canoe condition updates and problem areas in the river should be cleaned out (i.e., rocks and log jam blockages removed) so that canoe passage is possible in low flows.

1.5 – Issues Raised by Roseau River Anishinabe First Nation Stakeholders

The following section represents a summary of issues raised by stakeholders at a public meeting held at the Roseau River Anishinabe First Nation and issues raised in meetings with the Roseau River Anishinabe First Nation council. Where possible, issues have been collated into subject areas that relate to the resource inventory sections. The Roseau River Anishinabe First Nation falls within Management Area 3 and Management Area 2 of the Roseau River Watershed.

Water Quantity (Flood Related Issues)

The council would like to see water retention in the upstream watershed areas to delay the peak flows and to help in the reduction of flooding at the First Nation.

Council noted that there are problems with overland and road flooding in the Roseau Rapids area due to beaver dams and insufficient culverts (too small).

Water Quantity (Drought)

Stakeholders were not concerned about drought and did not feel it would create any difficulties for them. One stakeholder noted that there is an underground stream that runs through the Reserve below a marsh area where they are unable to build. It was suggested that the Reserve could tap into the stream if the region undergoes an extended dry period.

Water Quality

Water quality is of major concern for the council. Residents used to swim in and drink directly from the river and now it is too contaminated to do either. One stakeholder noted that when he was young, he used to drink straight from the Roseau River and now he wouldn't even consider swimming in the river because the water quality has deteriorated so much. Some stakeholders are concerned about the quality of water received from the Letellier water plant due to the amount of chlorine that is added. Some First Nations residents have also had dreams about animals asking them for help, signifying that the river's quality is deteriorating. The council would like to see an independent agency, rather than government, conduct water quality testing. The council is concerned about increased waste from growing livestock production (primarily hog waste) and manure being spread on the land and contaminating runoff from upstream areas.

Council members noted that the turbidity of the Roseau River has increased. Many stakeholders noted that in the past when they swam in the river, it was much clearer and the bottom was visible. Stakeholders noted that significant erosion has taken place at "the point" (where the Roseau River meets the Red River) and a large number of dead trees have fallen into the river downstream from the cemetery site.

The council stated the existing sewage lagoon and garbage dump for the main Reserve are located outside the community ring dike and are not diked or properly lined. Council would like to see improvements made to the existing lagoon and garbage dump or the feasibility for new facilities explored that addresses the existing problems. Concerns exist because these facilities are often submerged when there is overland flooding from the Red River.

General Issues – Infrastructure

Stakeholders are concerned about the weakness of the dike around the cemetery outside the main Reserve dike and the risk that the church and graveyard could flood. The council would like to reroute the mouth of the Roseau River a half-mile north to alleviate some of the problems they are having with the Reserve dike. Another option would be to make a cutoff channel so that some flow is maintained through the original mouth of the river to sustain the fishery.

General Issues – Erosion

Stakeholders and the council indicated that erosion and bank slippage is a major concern along the Roseau River, especially in the Roseau Rapids area. There are ceremonial grounds in the rapids area and the embankment is slowly slipping into the Roseau River. It was stated that approximately 20 feet of land has eroded since 1970, but a fair amount of land would still have to erode before the ceremonial grounds are in serious danger. Nonetheless,

stakeholders stated they would like to arrive at a solution before the problem worsens and it is too late to save the sacred ceremonial grounds.

General Issues – Housing and Health

The council noted that mould is significant health issue for the First Nation. Due to the high water table and poor drainage system, the council feels it is not prudent to build homes with basements in this area. It was noted that basement flooding has been a significant problem on the Reserve and is a serious health issue that contributes to mould problems in many houses. The council would like to see a building code put in place where homes are no longer allowed to be built with basements – they must be built up higher with only a crawl space below grade. This would improve the quality of life and health of the residents.

Natural Resources – Wildlife, Biodiversity, and Fisheries

The council expressed concerns about the fishery in the Roseau River. It was noted that in the past, fish were abundant and easily caught; now there are fewer fish and concerns exist about the safety of consuming them. Stakeholders noted very few fish are being caught near the cemetery (main Reserve), but good fish are being caught at “the point” (pickerel and suckers). Stakeholders also noted the amount of fish caught in the past was greater – their parents used to catch large numbers of sturgeon in the river and this is no longer possible. Some stakeholders feel that since the St. Andrews Lock and Dam was put into operation, area fish populations have decreased because they cannot make it upstream to spawn in the Roseau River.



One stakeholder noted that he does not hear a lot of birds in the area like he used to and no longer sees flying squirrels. Stakeholders noted that they see more eagles now than in the past, there was a timberwolf in the area all winter, and black bears have been spotted on a back road near Dominion City. Stakeholders think these observations may be a reflection of changing life-style patterns as people are not out on the land viewing the animals anymore.

One stakeholder noted that there used to be a lot of berries in the area (strawberries, saskatoons, blueberries, etc.), which are now gone for the most part. Stakeholders noted that traditional foods are important for their culture and many are no longer available because the land has been altered so much that they don't grow anymore (e.g., berries, hazelnuts, etc.). One stakeholder noted that the planting of foreign species has taken over the growing areas for traditional foods, which has created problems because many aborigines are diabetic.

Tourism and Recreation Development

Council noted that the Roseau Rapids area is an excellent location with lots of potential for future development and would like to explore recreation opportunities in the area.

