

5. Goals, Objectives and Actions

While many issues were identified during the planning process, the Water Planning Authority and the Watershed Planning Advisory Team, through necessity, have chosen to focus on six issues and concerns categories in this watershed plan. These issues, along with the associated goals and objectives are summarized in Table 1 below. On the following pages, actions for addressing each of these issues, along with time-lines and an indication of the parties responsible for implementing the actions are presented.

Table 1: A Summary of Issues, Goals and Objectives

Watershed Issues and Goals	Objectives
<p style="text-align: center;">SURFACE WATER MANAGEMENT</p> <p style="text-align: center;">Goal:</p> <p>Manage the land drainage network to provide benefits to the residential and agricultural community while minimizing impacts to downstream landowners.</p>	<ul style="list-style-type: none"> - Implement water management strategies throughout the watershed to minimize downstream flood damage to residential areas and infrastructure. - Ensure that the provincial waterways network is maintained effectively.
<p style="text-align: center;">SURFACE WATER QUALITY</p> <p style="text-align: center;">Goal:</p> <p>Improve and maintain the surface water quality in the Seine River Watershed.</p>	<ul style="list-style-type: none"> - Obtain a better understanding of the current water quality and nutrient source inputs in the Seine River Watershed. - Reduce the number of events where the water quality parameters exceed the Manitoba guidelines for nutrients.
<p style="text-align: center;">GROUNDWATER</p> <p style="text-align: center;">Goal:</p> <p>Ensure the protection and sustainability of all drinking water sources.</p>	<ul style="list-style-type: none"> - Protect drinking water sources from contamination. - Expand the groundwater database to gain a better understanding of the groundwater resources in the watershed.
<p style="text-align: center;">MANAGEMENT OF THE SEINE RIVER</p> <p style="text-align: center;">Goal:</p> <p>Improve the riparian health and aesthetics of the Seine River so that it becomes an attraction and valuable asset to the local community.</p>	<ul style="list-style-type: none"> - Implement river management projects to improve flow, biodiversity and aesthetics. - Remove all garbage and excess debris from the Seine River.
<p style="text-align: center;">LAND USE PLANNING</p> <p style="text-align: center;">Goal:</p> <p>Ensure that all development is environmentally responsible and sustainable.</p>	<ul style="list-style-type: none"> - Continue to improve the way development and land use occurs by involving relevant stakeholders, enforcing and reviewing existing legislation, and implementing new policy and technologies.
<p style="text-align: center;">WATERSHED AWARENESS</p> <p style="text-align: center;">Goal:</p> <p>To make all watershed residents aware of the importance of protecting their watershed and working together to enhance it for future generations.</p>	<ul style="list-style-type: none"> - Provide the public with opportunities to become aware of the importance of healthy watersheds.

Each action described on the following pages is defined with a proposed timeframe, and lists lead and partner organizations.

Action timeframes:

- Short-term indicates that the action is planned to begin and end within the next 3 years.
- Long-term indicates that the action is planned to begin as soon as possible and to continue over the next 10 years.
- On-going indicates actions that are already underway and will continue over the next 10 years.

The 10-year time-line is a reflection of the effective life of this plan, in that is to be reviewed and redeveloped in 10 years. Actions considered in this plan as long-term or on-going may well be continued into the next edition of the plan.

Some of the actions required to address certain issues are outside of the mandate, or beyond the capabilities, of the Seine-Rat River Conservation District, but the Water Planning Authority wishes to draw attention to them. Accordingly, actions related to these issues are presented at the end of each section – referred to as Suggested Actions for Other Authorities - in the hope that the appropriate agency/organization will take action in that regard.

In addition to the actions to be taken by the Seine-Rat River Conservation District and its partners, individuals also have a role to play in improving the health of the watershed. See Appendix C for a list of actions you, as an individual, can take to become involved.

5.1 Surface Water Management

Goal: Manage the land drainage network to provide benefits to the residential and agricultural community while minimizing impacts to downstream landowners.

Objective: *Implement water management strategies throughout the watershed to minimize downstream flood damage to residential areas and infrastructure.*

	Action	Timeframe	Lead (Partners)
A	Develop water storage/retention projects in the upstream headwater areas and on Crown land.	On-going	SRRCD (<i>Landowners, Manitoba Conservation and Manitoba Water Stewardship</i>)

The Seine-Rat River Conservation District will work with landowners, Manitoba Conservation and Manitoba Water Stewardship to develop suitable water storage / retention projects within the Seine River watershed headwater areas as well as on Crown Lands. The map of potential water storage and retention areas (Figure 3) will be updated as more information becomes available and will help the SRRCD identify potential water storage/retention projects.

	Action	Timeframe	Lead (Partners)
B	Continue with the rationalization of the land drainage network.	On-going	SRRCD (<i>Local RMs, Manitoba Water Stewardship, Landowners</i>)

The SRRCD will continue to evaluate the purpose and need of man-made drains throughout the watershed and will work with municipalities, landowners, and Manitoba Water Stewardship to develop creative water management solutions.

Potential Water Retention in the Seine River Watershed

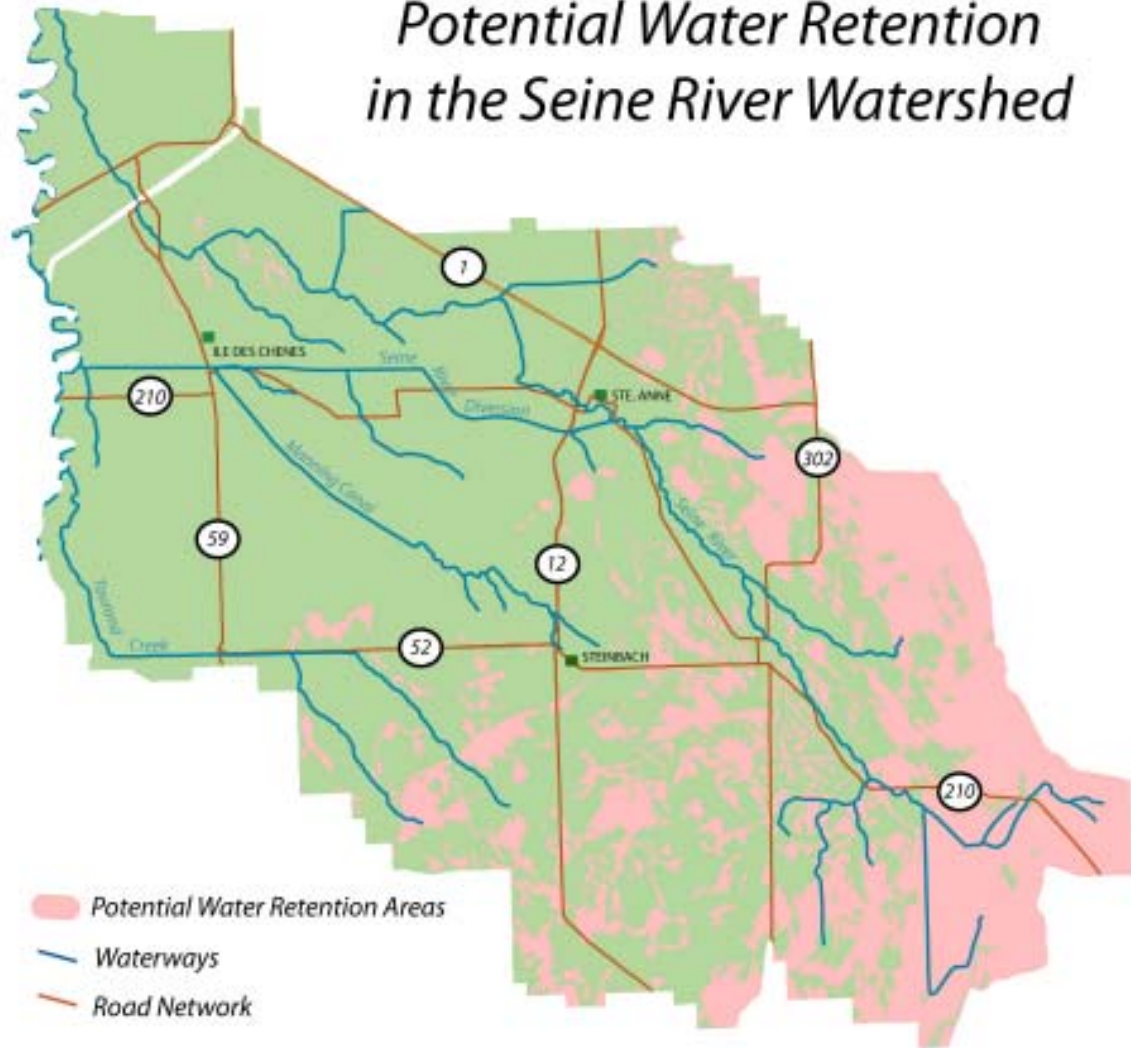


Figure 3: Potential Water Retention in the Seine River Watershed.

	Action	Timeframe	Lead (Partners)
C	Continue to offer a rain garden program.	On-going	SRRCD (Property owners)

The Seine-Rat River Conservation District will continue to offer the rain garden program, targeted primarily at urban residential areas. The rain garden program is designed to provide a natural way to reduce run-off from roof tops, lawns and driveways, while also removing pollutants from storm water and restoring natural infiltration.

Objective: *Ensure that the provincial waterway network is maintained effectively.*

	Action	Timeframe	Lead (Partners)
D	Establish and implement a maintenance schedule for the provincial waterways within the Seine River Watershed.	Long-term	Manitoba Infrastructure and Transportation (Manitoba Water Stewardship - Water Control System Management, SRRCD, Local RMs)

Manitoba Infrastructure and Transportation will establish and implement an annual maintenance schedule for the Provincial waterways within the boundaries of the SRRCD. This will be accomplished through winter meetings with the SRRCD sub-district chairs and member municipalities in order to prioritize works on a watershed basis.

Suggested Actions for Other Authorities

- Place a moratorium on new drainage projects unless they are justified within a watershed based management plan.
- Make it a requirement that all drainage licensing and surface water management projects are forwarded to the SRRCD and local municipalities for review and comment.
- Improve the effectiveness of enforcing illegal and unplanned drainage.

5.2 Surface Water Quality

Goal: Improve and maintain the surface water quality in the Seine River Watershed.

Objective: *Obtain a better understanding of the current water quality and nutrient source inputs in the Seine River Watershed.*

	Action	Timeframe	Lead (Partners)
A	Install an additional long-term surface water quality monitoring station on the Seine River Diversion.	Long-term	Manitoba Water Stewardship - Water Science and Management

One long-term surface water quality monitoring station exists at the downstream end of the Seine River. Manitoba Water Stewardship will install an additional station on the downstream end of the Seine River Diversion. The station will provide additional data to assist with long-term water quality analysis in the watershed.

Objective: *Reduce the number of events where the water quality parameters exceed the Manitoba guidelines for nutrients.*

Action		Timeframe	Lead (Partners)
B	Continue to offer a riparian management program.	On-going	SRRCD

The Seine-Rat River Conservation District will continue to provide technical and financial assistance toward riparian fencing, off-site watering and riparian area rehabilitation projects as part of its riparian management program. The SRRCD will also strive to foster good working relationships and partnerships with Manitoba Conservation, Manitoba Agriculture, Food and Rural Initiatives and Agriculture and Agri-Food Canada – Prairie Farm Rehabilitation Administration.

Action		Timeframe	Lead (Partners)
C	Take actions to reduce silt and sediment from erosion on drains from entering the Seine River.	Long-term	Local RMs (SRRCD, Manitoba Infrastructure and Transportation)

There are sites along the river where erosion has become a very serious concern and has damaged, or is currently threatening the safety of municipal infrastructure. A lot of drains into the river have no erosion control materials in place resulting in significant continual degradation and material loss following any rainfall event. The local rural municipalities will work with the SRRCD and Manitoba Infrastructure and Transportation to develop projects at specific problem sites.



Suggested Actions for Other Authorities

- Enforce private sewage disposal standards and regulations.
- Develop an inventory of all septic systems within the watershed.
- Encourage participation in environmental farm planning by offering financial incentives and assistance for farmers to adopt beneficial management practices within their operations.
- Improve the way that lagoons, raw sewage, septic systems and livestock manure are managed and discharged throughout the watershed.
- Start a discussion on a long-term financing program to address the deteriorating municipal wastewater lagoons and the need to build municipal wastewater treatment plants.
- Investigate the feasibility of building municipal wastewater treatment plants at the larger communities within the watershed, starting with Steinbach.
- Investigate the feasibility of removing nitrogen and phosphorus from wastewater discharges.
- Work with and encourage golf courses along waterways to adopt nutrient alternatives to conventional fertilization.
- Local municipalities should conduct public education programs related to water quality.

5.3 Groundwater

Goal: Ensure the protection and sustainability of all drinking water sources.

Objective: *Protect drinking water sources from contamination*

	Action	Timeframe	Lead (Partners)
A	Continue the abandoned well sealing program.	On-going	SRRCD

The Seine-Rat River Conservation District will continue to offer the abandoned well sealing program to all residents of the Seine River Watershed at no cost to the landowner.



	Action	Timeframe	Lead (Partners)
B	Establish and maintain a Source Water Protection Committee.	Long-term	SRRCD, Local RMs (<i>Manitoba Water Stewardship - Water Science and Management, Manitoba Health</i>)

As identified in the Source Assessment process, municipal drinking water supply systems and source water management zones are illustrated on the facing page in Figure 4 - Municipal Drinking Water Supply Systems and Source Water Management Zones.

The Seine-Rat River Conservation District will establish a Source Water Protection Committee of key stakeholders to identify and address all potential threats to drinking water sources within the watershed. The Committee will strive to develop source water protection plans over the next two years. Significant partnership efforts are required to address this very important issue.

	Action	Timeframe	Lead (Partners)
C	Provide on-going outreach and educational opportunities to all watershed residents on how to minimize or eliminate risks of contamination to groundwater.	On-going	SRRCD (<i>Manitoba Water Stewardship - Groundwater Management, Manitoba Conservation</i>)

Manitoba Water Stewardship will assist the Seine-Rat River Conservation District in developing literature related to reducing and eliminating potential threats to groundwater. The Seine-Rat River Conservation District will produce and distribute the literature to all watershed residents and municipal offices.

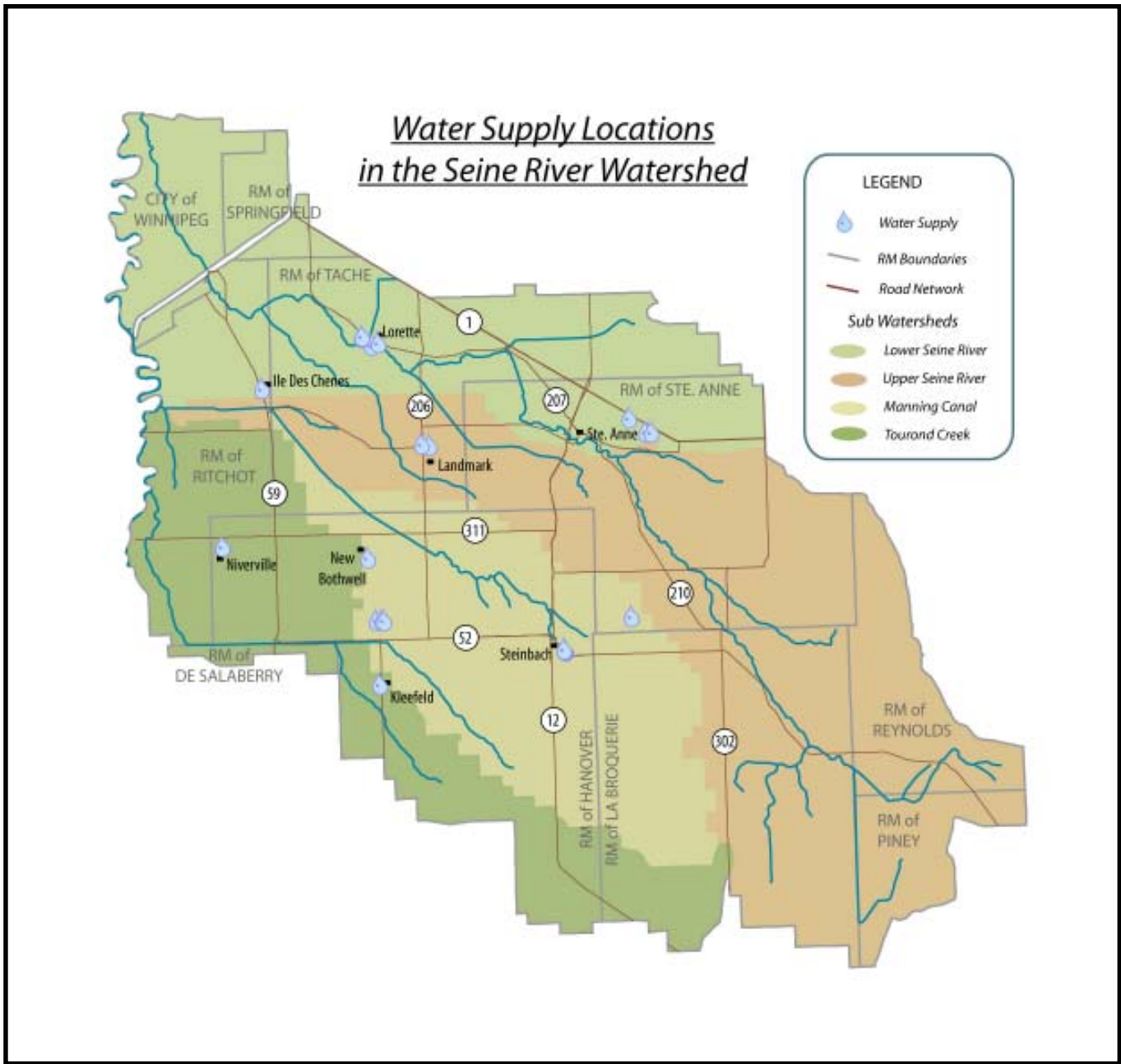


Figure 4: Municipal Drinking Water Supply Systems and Source Water Management Zones.

Action		Timeframe	Lead (Partners)
D	Develop contingency plans for drought and water supply contamination.	Long-term	City of Steinbach, RM Ritchot, (Manitoba Water Stewardship - Groundwater Management, Manitoba Health, Manitoba Emergency Measures Organization)

In partnership with Manitoba Water Stewardship, Manitoba Health and Manitoba Emergency Measures Organization, the City of Steinbach and the Rural Municipality of Ritchot are each responsible for developing emergency preparedness plans in the case of drought or water supply contamination.

Objective: *Expand the groundwater database to gain a better understanding of the groundwater resources in the watershed.*

Action		Timeframe	Lead (Partners)
E	Initiate a Well Inventory and Groundwater Sampling project.	Long-term	SRRCD (Manitoba Water Stewardship - Groundwater Management)

The Seine-Rat River Conservation District, in partnership with Manitoba Water Stewardship – Groundwater Management, will initiate a Well Inventory and Groundwater Sampling project. The project will identify the status and location of private wells within the watershed. The well locations will be collected with a global positioning system (GPS) and will be entered into a geographic information system (GIS) database. The Seine-Rat River Conservation District will sign a project Memorandum of Understanding with Manitoba Water Stewardship in spring of 2008.

Action		Timeframe	Lead (Partners)
F	Participate in Southeast Regional Groundwater Management Plan.	Short-term	Manitoba Water Stewardship (SRRCD, local RMs, other stakeholder groups)

The Southeast Regional Groundwater Management Plan is being developed to address the issues of groundwater use and development in the region. Participation in this initiative by the SRRCD and local municipalities will help ensure watershed concerns are being considered.

Suggested Actions for Other Authorities

- Continue to offer the provincially subsidized well water-testing program for bacterial content.
- Continue to monitor groundwater levels and water quality in aquifers throughout the watershed.
- Design and implement a monitoring program with indicators to benchmark groundwater quality and identify trends.
- Produce groundwater maps of interconnected aquifers and flowing wells.
- Develop a comprehensive water use monitoring system.
- Improve the way boil water advisory information is provided to watershed residents.

5.4 Management of the Seine River

Goal: Improve the riparian health and aesthetics of the Seine River so that it becomes an attraction and valuable asset to the local community.

Objective: *Implement river management projects to improve flow, biodiversity and aesthetics.*

Action		Timeframe	Lead (Partners)
A	Develop an operational plan for the Seine River Diversion water control structure that considers the in-stream flow needs of the Seine River.	Long-term	Manitoba Infrastructure and Transportation (<i>Manitoba Water Stewardship - Water Control System Management, Town of Ste. Anne, RM of Ste. Anne, SRRCD</i>)

A plan must be devised to permit the Seine River Diversion gate to be managed so as to maintain minimum in-stream flow through the Seine River. This must be managed in conjunction with flood control considerations and municipal lagoon discharge into the Diversion.

Action		Timeframe	Lead (Partners)
B	Continue to conduct projects at the rehabilitation sites identified in the Seine River study.	On-going	SRRCD (<i>Landowners, Manitoba Water Stewardship - Fisheries</i>)

The SRRCD will continue to investigate and develop projects at all of the rehabilitation sites identified within the "Seine River Survey and Restoration Planning Project".

Action		Timeframe	Lead (Partners)
C	Undertake riverbank rehabilitation and reclamation demonstration projects.	Short-term	Local RMs (<i>SRRCD, Manitoba Water Stewardship, Federal Government</i>)

The purpose of this action would be to demonstrate to landowners, municipalities and others effective measures in dealing with riverbank erosion and slumping. The establishment of partnerships between local municipalities and the conservation district and the appropriate agencies of the federal and provincial governments will be required to achieve success.



Objective: *Remove all garbage and excess debris from the Seine River.*

	Action	Timeframe	Lead (Partners)
D	Continue to conduct river clean-up projects in partnership with the local community and the federal and provincial governments.	On-going	SRRCD (Save Our Seine, Local RMs, Landowners, Manitoba Water Stewardship, Department of Fisheries and Oceans)

The Seine-Rat River Conservation District will partner with landowners, youth groups, Save Our Seine, Department of Fisheries and Oceans and other organizations to complete as many river clean-up projects as possible each year.

As part of this action, the Seine-Rat River Conservation District will also:

- 1) Create and maintain a map showing areas in need of river clean-up and completed project sites, and
- 2) Identify and reward landowners involved in self-initiated stewardship and rehabilitation projects along the Seine River with appreciation events and good news stories in local newspapers



5.5 Land Use Planning

Goal: Ensure that all development is environmentally responsible and sustainable.

Objective: *Continue to improve the way development and land use occurs by involving relevant stakeholders, enforcing and reviewing existing legislation, and implementing new policy and technologies.*

	Action	Timeframe	Lead (Partners)
A	Manage the development of new or expanded livestock facilities to ensure environmental sustainability.	Long-term	Local RMs (Manitoba Conservation, SRRCD)

When developing a policy for reviewing the establishment of new, or expansion of existing livestock operations, the conservation district board or municipal council shall take into account:

- a) Soils
- b) Size of livestock operation, based on the number of animal units
- c) Proximity to surface water bodies such as lakes, rivers and wetlands
- d) Flood risk (hazard) areas as identified by the Province
- e) Groundwater vulnerability (water table)
- f) Existing land uses in the area

New livestock operations should not be permitted on soils with a Canada Land Inventory classification of Class 6 or 7 or on unimproved organic soils, as determined by a soil survey acceptable to the Province, with a scale of 1:50,000 or better.

The Seine-Rat River Conservation District should be involved in municipal decisions regarding the establishment or expansion of intensive livestock operations with input into technical review reports.

	Action	Timeframe	Lead (Partners)
B	Ensure rural residential and subdivision development adheres to the appropriate land use planning guidelines.	Long-term	Local RMs (<i>Manitoba Intergovernmental Affairs, SRRCD</i>)

Land subject to significant flooding, erosion or bank instability should be left in its natural state or developed only for low intensity uses such as open space recreation, grazing, cropping, forestry and wildlife habitat. More intensive development may be considered if the risk can be eliminated, satisfactorily reduced or if the use would be compatible with the risk. If structures or other higher intensity uses are necessary, such as in urban centers, they should be carefully planned and constructed so that they are protected against significant flooding, erosion or bank instability, are made compatible with any residual risk and do not contribute to risks on other land. If there is significant risk, the following criteria should be applied:

- a) Development shall not adversely alter, obstruct or increase water flow, flow velocities or flood levels. Development should be allowed only if the cumulative effect of all foreseeable development in the flood prone area is within water flow, flow velocity, or flood level limits that may be specified in regulations or by-laws for the area;
- b) Activities such as dumping, excavation and clearing, which accelerate or promote damage due to causes such as erosion or bank instability, shall be prohibited; and
- c) Natural tree and vegetative cover shall be preserved to reduce erosion and assist in maintaining bank stability.

The Seine-Rat River Conservation District should be involved in providing comments on subdivision applications and municipal development plans.

	Action	Timeframe	Lead (Partners)
C	Create a map showing "hazard areas unsuitable for development".	Long-term	Manitoba Intergovernmental Affairs (<i>Manitoba Water Stewardship, Local RMs, SRRCD</i>)

Manitoba Intergovernmental Affairs will create this map to help municipalities, landowners and the Seine-Rat River Conservation District with long-term planning and to reduce catastrophic and potentially avoidable incidents.

	Action	Timeframe	Lead (Partners)
D	Develop standards for new rural residential sewage systems.	Long-term	Manitoba Conservation (<i>Manitoba Water Stewardship - Groundwater Management</i>)

Standards for sewage systems on new rural residential lots shall be established to ensure environmentally sound sewage disposal to protect aquifers and surface water from contamination.

Suggested Actions for Other Authorities

- All applications for Crown land sales, lease renewals and new lease agreements within the watershed should be forwarded to the Seine-Rat River Conservation District and local municipalities for review and comment.

5.6 Watershed Awareness

Goal: To make all watershed residents aware of the importance of protecting their watershed and working together to enhance it for future generations.

Objective: *Provide the public with opportunities to become aware of the importance of healthy watersheds.*

	Action	Timeframe	Lead (Partners)
A	Provide youth with opportunities to participate in educational activities related to watershed management.	Long-term	SRRCD (Local schools)

Through partnerships with local schools, the Seine-Rat River Conservation District will work to develop and offer watershed management educational opportunities. Discussions should be initiated with school divisions in the watershed about developing a module on watershed awareness to fit into the existing curriculum, which may include on-site presentations, simple water sampling demonstrations and similar activities. In addition, activities such as river clean-up and tree planting days may be organized with schools and youth organizations.



	Action	Timeframe	Lead (Partners)
B	Maintain an open and positive relationship with local municipal governments.	On-going	SRRCD (Local RMs)

To keep the local municipal councils informed of the programs and activities being conducted within the district, staff will be available for special meetings and presentations. In addition, the Seine-Rat River Conservation District will provide all municipal partners with minutes from all Board and sub-district meetings, and an annual report.

	Action	Timeframe	Lead (Partners)
C	Provide watershed awareness and education opportunities and encourage local participation.	On-going	SRRCD (Manitoba Agriculture, Food and Rural Initiatives, Local RMs)

The Seine-Rat River Conservation District will:

- prepare and distribute fact sheets and an annual newsletter to all watershed residents,
- prepare information on a 'placemat' format for distribution to restaurants and coffee shops in the watershed,
- submit watershed management and awareness articles to the local newspapers,
- host workshops, field tours and demo days on various topics, including the promotion of beneficial management practices, and
- provide government an opportunity to present research related to watershed resources to the residents.

6.0 Implementation

There is little value in developing any plan in isolation and with no clear implementation strategy or “business plan”. An effective watershed management plan needs to include a realistic, manageable and effective implementation plan. With consideration for all the time, effort and money devoted to the planning process, the implementation plan is ultimately the most important part of the overall watershed management plan. The implementation plan must state well-defined objectives and prioritized remedial and protective actions, specifying how these actions can be carried out by various organizations, through partnerships, and within municipal development plans. Without a solid implementation plan for a watershed, a plan is simply a plan.

The most significant hurdle with implementing a watershed management plan is the fact that landowners are not going to do things that don't suit their economic needs. Another major hurdle is that watershed residents are not going to change their activity if they personally don't believe that there is any harm in what they are doing, or there is any benefit to changing what they're doing. Projects and incentive programs designed by local (sub-district) representatives of the Seine-Rat River Conservation District, and offered by the conservation district, are generally very easy for landowners to participate in, causing minimal disruption in their daily routines and established land and water uses. Efforts are being made to inform local residents of the benefits, to themselves as well as the watershed as a whole, in participating in these programs.

Support for implementation must involve all stakeholder groups, watershed residents, and provincial and federal governments. The support must be sustainable, physical, technical and financial. When stakeholders decide to become involved in the planning process, they generally know what watershed issues and concerns are affecting them already, and want to have a say in how these issues may be addressed and resolved. They also need to see some results from their planning efforts through the implementation of their plan.

Manitoba Water Stewardship, through the Conservation Districts Program, provides an annual grant to the Seine-Rat River Conservation District (2007-08: \$325K). The funds are provided to deliver land and water management incentive programs and to implement the actions identified within the watershed management plan. To boost their annual budget, the conservation district also receives financial support of over \$115K from its' municipal partners, and because of its' non-profit charitable status, is able to apply to a variety of funding programs.

Without a solid implementation plan for a watershed, a plan is simply a plan.

7.0 Measuring Success

7.1 Current Success

Not all of the success experienced throughout the integrated watershed management planning process is measurable. Throughout the process and with the completion of the watershed management plan, watershed residents have gained, or are now more able to gain a better understanding of the current health of the Seine River Watershed and the impacts that all people have within their watershed. Local people have been involved in identifying watershed issues and proposing solutions to address those issues. They have also become more aware of which provincial departments and staff is involved in maintaining infrastructure, approving and licensing projects, and protecting and managing natural resources.

7.2 Performance Measures

The Water Planning Authority is responsible for providing an annual measure of success related to the stated objectives within Section 5.0. As stated previously, the success of the plan lies largely with the collaborative efforts of stakeholder groups, watershed residents, and the provincial and federal governments, and will also require their annual input on progress made in relation to the stated objectives and actions. See Table 2: Performance Measures on the facing page that illustrates how performance will be measured.

A Watershed report Card would allow fair comparisons of watershed health to other watersheds and within an individual watershed over time.

7.3 Measuring Watershed Health – Report Card

It is the intention of Manitoba Water Stewardship to develop a Watershed Report Card for all watersheds in rural Manitoba. The report card would include a standardized set of indicators determined and measured by the scientific community. This reporting method would allow fair comparisons of watershed health to other watersheds and within an individual watershed over time. Once the reporting method and format is approved, Manitoba Water Stewardship will work with each Water Planning Authority to develop a report card. Considering the cost, involvement of technical experts, necessity related to measurable change, and urgency, the interval at which a Watershed Report Card will be provided to the general public requires further discussion.

7.4 Plan Review

As described in the Terms of Reference for the development of the Seine River Integrated Watershed Management Plan, the Water Planning Authority is responsible for a full review and re-development of the plan starting in March 2018. Although the composition on the Seine-Rat River Conservation District Board of Directors will change over the next ten years, the Water Planning Authority designation along with specific roles and responsibilities will remain in place.

Table 2: Performance Measures

Objective	Performance Measure	Reporting Authority
Implement water management strategies throughout the watershed to minimize downstream flood damage to residential areas and infrastructure.	1) Number of Crop Insurance claims 2) Number of EMO claims 3) Number of claims and repair projects by municipalities	1) Manitoba Crop Insurance 2) Manitoba Emergency Measures Organization (EMO) 3) Local municipalities
Ensure that the provincial waterways network is maintained effectively.	1) Kilometres of provincial waterways maintained/reconstructed 2) Number of crossings maintained/replaced	Manitoba Infrastructure and Transportation
Obtain a better understanding of the current water quality and nutrient source inputs in the Seine River Watershed.	1) Number of water quality samples obtained from throughout the watershed	SRRCD
Reduce the number of events where the water quality parameters exceed the Manitoba guidelines for nutrients.	1) Water quality parameters (total Nitrogen and total Phosphorus)	Manitoba Water Stewardship - Water Science and Management
Protect drinking water sources from contamination.	1) Number of abandoned wells sealed 2) Establishment of Source Water Protection Committee 3) Number of Source Water Protection projects completed	1) SRRCD, Manitoba Water Stewardship - Groundwater Management 2) SRRCD 3) SRRCD, Manitoba Water Stewardship - Groundwater
Expand the groundwater database to gain a better understanding of the groundwater resources in the watershed.	1) Number of groundwater samples collected	Manitoba Water Stewardship - Groundwater Management
Implement river management projects to improve flow, biodiversity and aesthetics.	1) Number of river management projects completed	SRRCD
Remove all garbage and excess debris from the Seine River.	1) Length (Metres) of river cleaned up 2) Completion of river clean-up inventory project	SRRCD
Continue to improve the way development and land use occurs by involving relevant stakeholders, enforcing and reviewing existing legislation, and implementing new policy and technologies.	1) Number of municipalities incorporating the watershed management plan recommendations into their municipal development plans 2) Number of environmental farm plans completed in the watershed	Manitoba Intergovernmental Affairs - Community Planning Services
Provide the public with opportunities to become aware of the importance of healthy watersheds.	1) Number of school-aged children involved in workshops and watershed education presentations 2) Number of watershed education documents produced and distributed to public	SRRCD

Appendix A: List of Organizations/Agencies invited to participate

1. Agriculture and Agri-Food Canada-Prairie Farm Rehabilitation Administration*
2. Canadian Wildlife Service*
3. City of Steinbach*
4. City of Winnipeg*
5. Cooks Creek Conservation District*
6. Dairy Farmers of Manitoba*
7. Environment Canada*
8. Fisheries and Oceans Canada*
9. Hanover School Division
10. Louis Riel School Division
11. Macdonald-Ritchot Planning District
12. Manitoba Cattle Producers Association*
13. Manitoba Egg Producers
14. Manitoba Habitat Heritage Corporation*
15. Manitoba Lodge and Outfitters Assoc.
16. Manitoba Water Services Board
17. Manitoba Wildlife Federation*
18. MB Agriculture, Food and Rural Initiatives*
19. MB Conservation*
20. MB Industry, Economic Development and Mines*
21. MB Infrastructure and Transportation*
22. MB Intergovernmental Affairs & Trade*
23. MB Water Stewardship*
24. Nature Conservancy of Canada*
25. Pinewood Pure Springs
26. Premier Horticulture Ltd.
27. Red River Valley School Division
28. Rural Municipality of De Salaberry*
29. Rural Municipality of Hanover*
30. Rural Municipality of La Broquerie
31. Rural Municipality of Piney
32. Rural Municipality of Reynolds*
33. Rural Municipality of Ritchot*
34. Rural Municipality of Springfield*
35. Rural Municipality of Ste. Anne*
36. Rural Municipality of Taché
37. Save Our Seine River Environment Inc.*
38. Seine River School Division
39. Seine River Wildlife Association*
40. Seine-Rat River Conservation District*
41. Seven Oaks Game and Fish Club*
42. Snow Raiders Snowmobile Club
43. South East Soil Conservation Organization*
44. Steinbach Game and Fish Club
45. The Manitoba Sheep Association*
46. Town of Niverville
47. Town of Ste. Anne*
48. U of M, Clayton H. Riddell - Faculty of Environ. Earth & Resources
49. University of Winnipeg*
50. Village of St. Pierre-Jolys*

* Indicates member of the Watershed Planning Advisory Team

Appendix B: Other Watershed Issues

In addition to concerns expressed by watershed residents regarding the six major issues discussed in this plan, several other issues were raised.

- Provide compensation for landowners participating in water retention projects.
- Control drainage discharges from peat moss operations.
- Promote wildlife management.
- Water conservation.
- Increase appropriate beaver control.
- Crop input plans should address water quality.
- Need more efficient nutrient management of raw sewage and manure.
- Increase enforcement of the Environment Act related to manure.
- Better management of fuel tanks, especially in aggregate operations.
- Increase soil conservation and more grassed waterways.
- Need to regulate the clearing of marginal land for agriculture.
- Treat the Seine River and Seine River Diversion as separate waterways.
- Reseed the banks of the Seine River Diversion to reduce erosion and runoff.
- Improve Seine River for recreation.
- Improve the Seine River siphon to allow for better fish passage.
- Redirect Fish Creek into Center Line Drain (Floodway) to reduce flooding on Seine River.
- Investigate Prairie Grove Drain Plan.
- Increase the cooperation of industries in water protection.
- Reduce flood effects on septic fields and wells.
- Reduce number and duration of boil water advisories.
- Develop Emergency Flood plan.

Appendix C: You can improve the health of the Seine River Watershed

Watershed health is a shared responsibility! All watershed residents can participate towards protecting, enhancing and improving the Seine River Watershed. It is truly impossible to complete a comprehensive watershed management plan because of the overwhelming complexity of known and unknown interactions and associations within a watershed, but the vision of the Water Planning Authority is that all watershed residents will do their part in securing the sustainability of the natural resources and environment that they depend on and enjoy.

Here are some suggestions on how you can do your part:

Surface Water Management

- Assist the Conservation District in identifying suitable water retention sites.
- Control drainage from your property to reduce potentially negative impacts to downstream neighbors.
- Maintain permanent cover (forage, grass, stubble) and establish shelterbelts as a way of catching snow and slowing the snow-melt in the spring.
- Value wetlands and marshland! They play a vital role in storing and purifying water and providing a diversity of habitat for fish and wildlife.
- Maintain vegetated and healthy buffers along waterways. Rivers and riverbanks are not static systems and require maintenance and rehabilitation.

Surface Water Quality

- Ensure that your septic system operates properly and is serviced regularly.
- Use phosphate-free detergents, soaps and household cleaners.
- Fence livestock from waterways and establish off-site watering systems.
- Maintain vegetated and healthy riparian buffers along waterways.
- Don't use fertilizers (chemical or natural) close to waterways.
- Conduct annual soil testing to guide your decisions regarding the level of nutrients that are applied to the land.

Groundwater

- Call the Seine-Rat River Conservation District if you have an abandoned well that needs to be sealed/decommissioned.
- If you have your own rural well, get the well water tested annually.
- Inspect your well annually to eliminate any chances of contaminated water entering your well casing.

Management of the Seine River

- Remove unnecessary man-made obstructions and debris from the Seine River.
- Don't throw your lawn clippings or any garbage into the river or on the river bank.
- Initiate a local river clean-up group with your neighbors or hold an annual river clean-up day each fall.
- Maintain a natural vegetation buffer of trees and shrubs along the river.

Land Use Planning

- Contact your municipal office to find out more about your municipal development plan.
- Make your local municipal councilors aware of concerns with land use development plans.

Watershed Awareness

- Volunteer or participate in group activities with the Seine-Rat River Conservation District.
- Encourage your children to respect the environment and understand the importance of protecting our valuable water resources.