

**Pembina River - Public Issues of Concern
October 2008**

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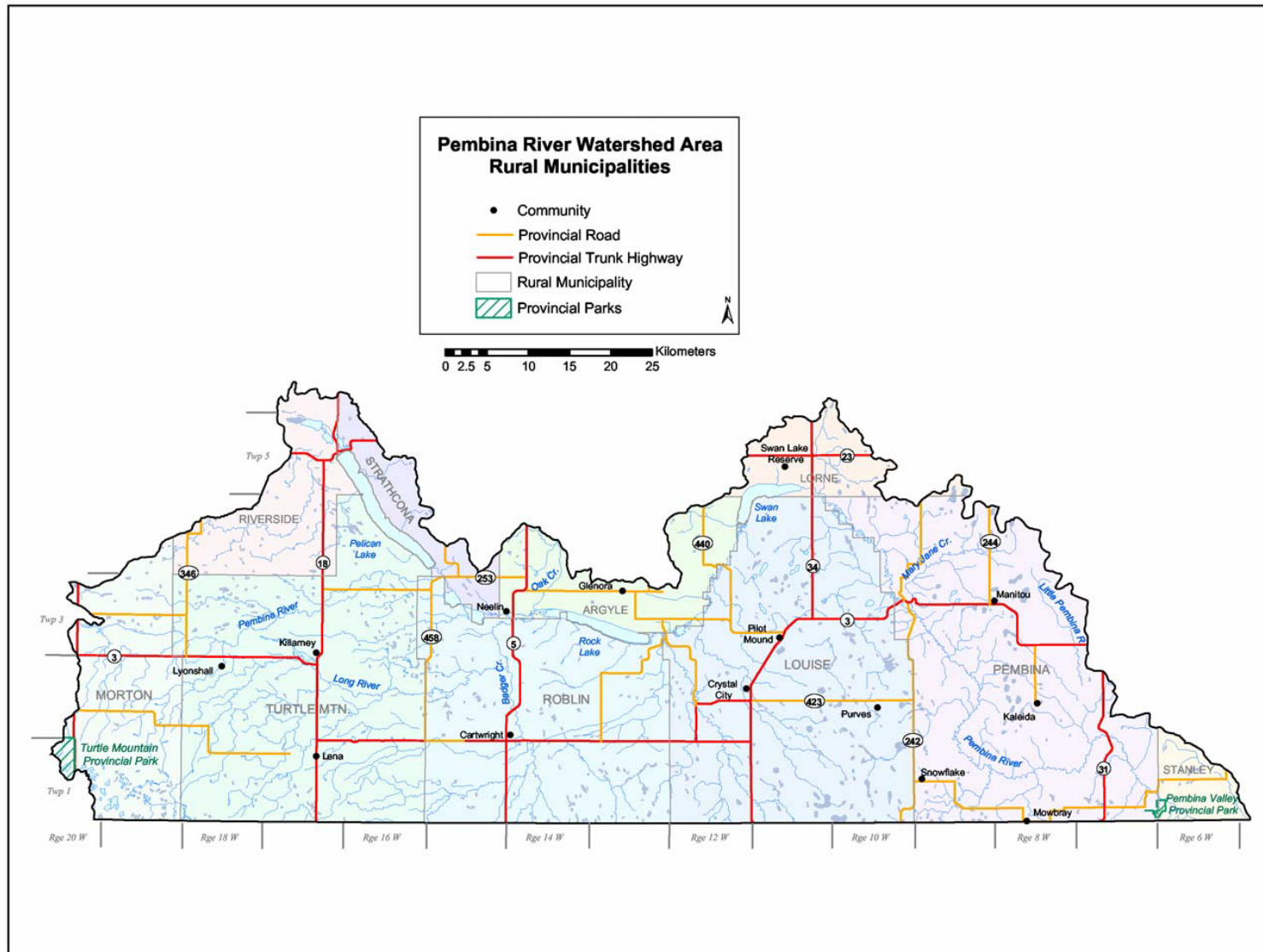


Figure 1. The Pembina River integrated watershed management planning area.

Introduction

In 2008 the Pembina Valley Conservation District (PVCD) was designated as the Watershed Planning Authority for watershed 050A and 050B by the Province of Manitoba. In order to undertake this planning process across the entire watershed, Pembina Valley Conservation District developed a partnership with Assiniboine Hills and Turtle Mountain Conservation Districts. One of the first steps in the development of the watershed plan was to hold public forums.

The Project Management Team organized three public forums. The meetings were held on October 17th, 18th, and 23rd in La Rivière, Killarney, and Cartwright, respectively.

At each of the public meetings the attendees were asked to fill out a **three** part worksheet. Outlined on all worksheets were the top five Pembina River watershed issues as outlined in the Pembina River Basin Watershed Management Plan – 2005:

- Flooding
 - Drinking Water Quality
 - Surface Water Quality
 - Soil/Erosion Loss
 - Drainage
-
- Step 1. Rank the top watershed issues individually.
 - Step 2. Work with a group to rank the top watershed concerns for the Pembina River Watershed. Develop a list of logical and attainable solutions.
 - Step 3. Provide specific locations on a map where issues and problems need to be addressed in the watershed.

The PMT members read through all comments and selected representative statements to include in this report. The map illustrated in Figure 4 outlines all the problem areas and associated descriptions identified in the public forums.

Appendix 1 contains a complete list of all the comments provided during the Pembina River Integrated Watershed Management Plan Public Meetings (2008).

Results of Public Consultation

As a way to represent all of the issues that residents identified, we analyzed and graphed the responses from each step. The results of this analysis are shown below.

Top priority issues – Summary of 97 **individual responses**:

- At 22 %, drinking water quality was ranked as the highest concern.
- At 20 %, surface water quality was ranked as the second highest concern.
- At 19.5 %, issues around drainage were ranked as the third highest concern.
- At 19 %, soil loss and erosion was ranked as the fourth highest concern.
- At 18.5 % flooding was ranked as the fifth highest concern.

Top priority issues – Summary of 18 **group responses**:

- At 25 %, drinking water quality was ranked as the highest concern.
- At 21 %, flooding was ranked as the second highest concern.
- At 20 %, issues around drainage were ranked as the third highest concern.
- At 18 %, surface water quality was ranked as the fourth highest concern.
- At 17 % soil loss and erosion was ranked as the fifth highest concern.

When asked what their number **one concern** was:

- 54 % of groups cited drinking water quality as their number one concern.
- 18 % of groups cited drainage issues as their number one concern.
- 18 % of groups cited soil loss and erosion as their number one concern.
- 9 % of groups cited flooding as their number one concern.
- 0 % of groups cited surface water quality as their number one concern.

Pembina River Watershed – Step One

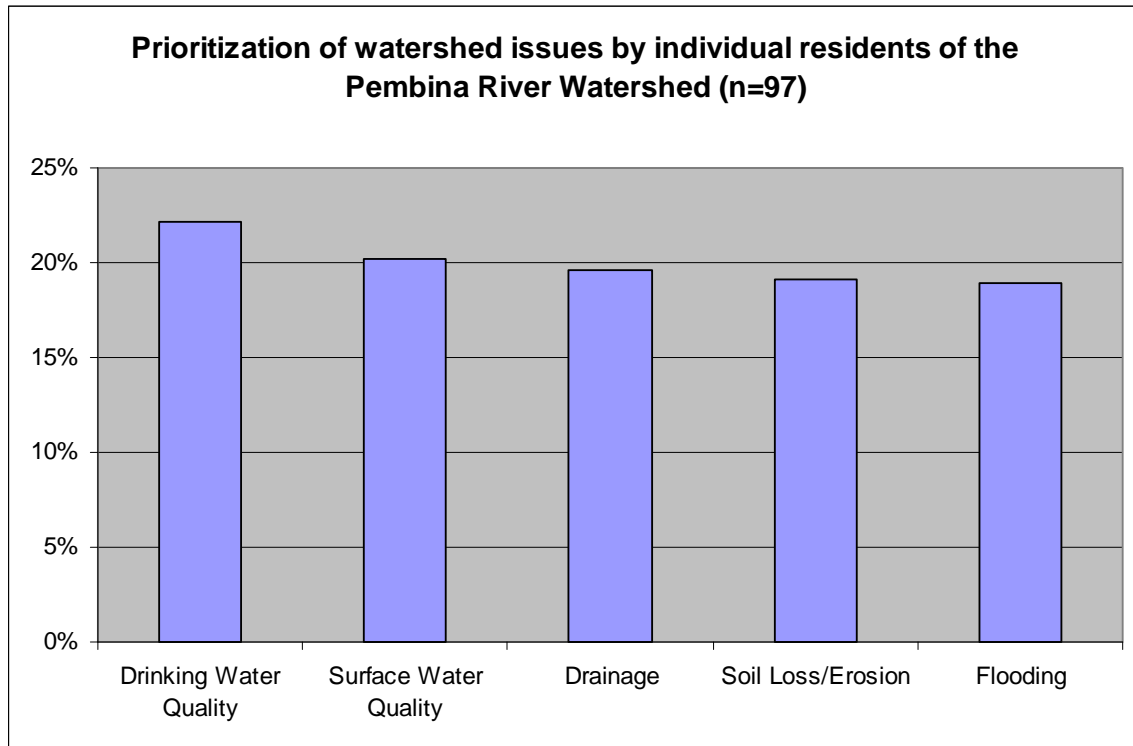


Figure 2. Prioritization of watershed issues by individual residents of the Pembina River Watershed (n=97).

Other issues that were identified in the Pembina river watershed public meetings:

- Water retention opportunities
- Recreation (swimming etc.)
- Environment
- Salinity
- Overdevelopment on lakes
- Water Level on Pelican Lake
- Wildlife Conservation
- Beaver
- Rights of property owners
- Incentive Programs
- Unscientific water regulation
- Biodiversity
- Rock Lake water depth
- Algae Control
- Fish Habitat
- Small retention dams
- Education
- Infrastructure (inadequate)
- Drainage should be supported by government in Pembina Valley the same as in the Red River Valley
- Recreational Pressure
- Groundwater Supply
- Livestock Operations on Creeks/Rivers
- Invasion of foreign aquatic species
- Livestock operations near Swan Lakes drinking water supply source

Question #1 - Where should we focus the majority of our efforts over the next ten years in your area?

Comments

- Water management/water quality/soil loss and erosion
- Water quality for recreation, fishing, and drinking
- Drinking water quality
- Incentive programs for farmers to hold back water
- Managing lake levels properly to avoid high river levels whenever possible.
- Don't flood and cover 200 acres of my prime Pembina Valley land with water and bog all summer.
- Replace old dam at Rock Lake in a new location
- Water Quality
- Surface Water Quality and Drinking Water Quality
- Controlled water drainage, clean silt out of lake outlets/streams (Rock Lake), treat algae
- Uncontrolled drainage
- Develop a comprehensive plan for water management. 2. Develop a plan for utilization of water resources (all types of uses)
- Drainage is the key to most aspects of the five points outlined in the brochure. Increased drainage and flows leads to downstream flooding, soil erosion, and poor water quality.
- Look after drinking water
- We need good relations. Not more water coming down the tributaries to the Pembina.
- Implementing a positive sustainable program which implements incentive programming and less regulation.
- Retaining water by paying for structure and water retention ponds.
- Making sure public drinking water supplies are meeting drinking water guidelines, standards, and objectives.
- Drinking water quality, surface water quality
- Drinking water quality, common sense drainage.
- Drainage of any type should be thought out very seriously. Buffer zones along streams and rivers.
- Conservation Tillage, habitat preservation, education, slowing land drainage in early spring to allow infiltration.
- Raise Rock Lake to 1330.6. Build up road so we can get to our cabins in floods. We can install compost toilets. Monitor the erosion of the shore as the lake bottom is filling in. New dam to let water out faster? What level is the shoreline in a flood situation?
- Develop sustainable plans that can be enforceable. Encourage governments to establish regulations through the various acts (i.e. Water Rights Act) that will hold commercial, Private and others along the watershed accountable for their actions.
- Farmers are doing an excellent job taking care of their land. They do not need white collar people (or environmentalists) telling them what to do.
- I'm concerned that the municipalities are digging ditches in road construction where water never supposed to flow.
- Free site assessment to individual landowners on how to improve/protect their portion of the river. Free or low cost assistance to the landowner to implement any suggestions made.
- No action is needed.
- Controls on water flow, preserving wetlands, possibly reinstating former wetlands through attractive and visible incentive programs.
- I live in the local urban district of Sawn Lake and believe this area is a great place to live and should be protected from pollution.
- Continue to educate people, help with the little problems and this will help with big problems, keep plugging away. Work on problems incentive, demonstration and education as opposed to regulation, i.e. Drainage cops, Bill 17.

Question #2 – Are there any additional comments or suggestions?

- Like to see retention dams on creeks and river flowing in the Pembina River.
- Fix the Sheffield Bridge to the proper size, to stop bottlenecking. Look at Ducks Unlimited dam to see if there is a problem with the structure or place it is located.
- We need a risk assessment regarding lake over development. A concern in general that the pamphlet in general unfairly points to agriculture as the only problem.
- Sometimes no matter what we try to put in place we get abnormal amount of rain snow or sudden melting. Things can seem really bad for a certain period of time and then things can change the other way.
- Controls on water flow, preserving wetlands. Through attractive and viable incentive programs.
- If you want to keep wetlands set up system like the ALUS to assist farmers to leave wetlands alone.
- Solutions need to have teeth, backed by law. Identify all drinking water sources and monitor and safeguard same on a regular basis. Why does Killarney lake still have green algae after so many years, can it be got rid of? how safe or unsafe is it? Determine the number of people that can be serviced by a drinking water source and limit that number. Sewage treatment must be the best available. Identify all sources of pollution and take measures to limit, eliminate, and prevent all water pollution. Getting drainage licenses seems to be a joke (way to easy). Ban licenses until each river is studied and a solution in place.
- We need some teeth in the drainage issue. The honour system that has been in place for the past 10 years is obviously not working. Drainage has its place, but it needs to be controlled.
- The province paid for all red river provincial drains. Why can the Provincial government not give the same importance to retaining water above the escarpment to the Saskatchewan border? The province needs to budget to help retain water with a program to compensate in a meaningful amount with a extended time line minimum 10 years better for 30 years.
- There has been a huge loss of wetlands and habitat for all kinds of wildlife and birds. This is of great concern as without sloughs there is no place for water to soak back into the aquifer.

Pembina River Watershed – Step Two

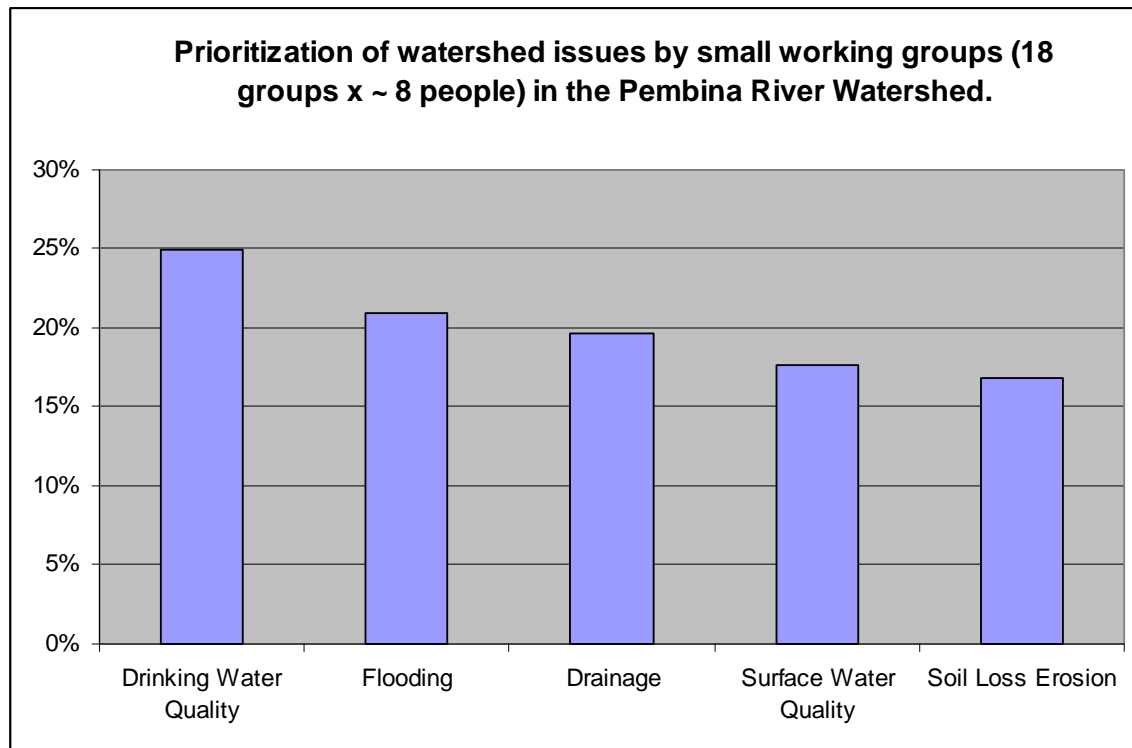


Figure 3. Prioritization of watershed issues by small working groups (18 groups x ~8 people) in the Pembina River Watershed.

Suggested solutions by the small working groups:

Flooding

- Water control structures on all major lakes to control flow. Allow coordinate release in the spring. Erect small dams on every major tributary for coordinated release.
- Incentives not to drain. Government should provide incentive money. Farmers should not have to pay for public benefits.
- Pay farmers for temporary water storage. Slow run-off with gauged pipes: 5-1-11 Broughton Slough Drain excellent example.
- Conduct a culvert inventory.
- More retention on the US side. Retention incentive to compensate for loss of income.

Drinking Water Quality

- No major problems.
- Sewage assimilation in treatment plants need to be maintained at high standard in rural area. More monitoring to identify problem areas and times. Water Quality should dictate treatment inputs).
- Monitor water quality with more enforcement. More monitoring of septic tanks/fields.
- Encourage abandoned well sealing/public education.
- Shock chlorination program is helpful.

Surface Water Quality

- Livestock facilities should be moved out of riparian zones. Some riparian zones should be restricted to protect species at risk.
- Too much green algae in lakes. Raise water levels in lakes to help solve the problem.
- Reduce level of nutrients in waterways. Farmers get a bad rap. Sewage lagoons/gold courses are also at fault. Encourage only fertilizing in spring only.
- Incentives for off-site watering. Implement modified (ALUS) program. Inspect sewage tanks at lakes and cottages.

Soil Loss/Erosion

- Prevent flooding. Flooding causes all major erosion problems.
- Soil loss has improved because of zero-tillage.
- Limit development where shale erosion will be caused. Require regulations.
- Soil loss erosion is not a major problem.

Drainage

- All major drainage was done 20 years ago. We need Water Resource Officers to live in the area. Officers tend to lack training and understanding of local issues.
- Need incentive programs to reverse problems of the past. Education is important.
- Drains need to be maintained! Make drainage licensing process more efficient. Controlled drainage (culvert sizing, structures) will result in fewer impacts downstream.
- Incentives are required to convince people to retain water on their land. Incentives are better than more regulation. Tile drainage could help with salinity problems.
- Pay farmers for wetlands. Drainage permitting needs to be a faster process. Education is required on proper drainage and conservation methods.
- The difference in government money spent on surveying and drainage in the Red River Valley vs. Pembina Valley is a great injustice.
- A \$/acre program to hold water back is required. 100-120% of crop incentives to hold water. US drainage relations need to be improved.
- More drain control structures considered? Perhaps on every major/minor tributary

Pembina River Watershed – Step Three

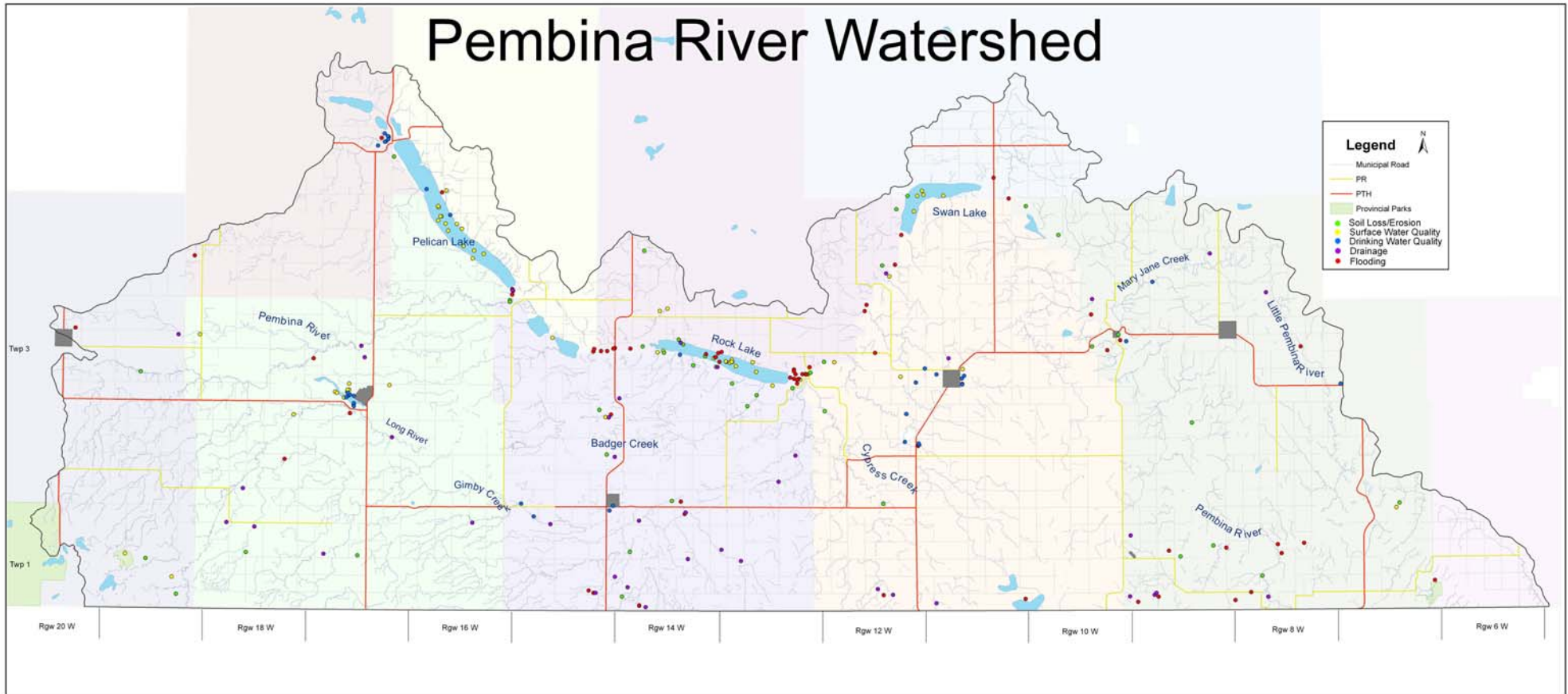


Figure 4. Problem areas as identified by the residents of the Pembina River Watershed.

Summary

The project management team has summarized the public responses in five **Pembina River Watershed Problem Statements** (see below). These statements provide greater clarity into how these problems are felt by residents in the Pembina River watershed.

- Flooding
 - The frequency and severity of spring and summer flooding is costing municipalities and landowners too much money in damaged infrastructure and loss of crops.
- Surface Water Quality
 - The rivers and lakes in the watershed are saturated with too much algae in the summer months resulting in poor recreation opportunities, and unhealthy water for residents and wildlife.
- Drinking Water Quality
 - There is a lack of confidence in the drinking water quality throughout the watershed.
- Soil Loss/Erosion
 - Lakes and rivers are becoming clogged by the large amount of shale and silt eroding into the Pembina river waterways.
- Drainage

This analysis was completed as a way of prioritizing the concerns of the public and identifying solutions so we can address the watershed needs in an appropriate manner. Now that the public has prioritized their main issues and suggested solutions we are sending requests to the remaining watershed stakeholders and people that can provide us with technical/scientific input. Through the technical input we will be able to establish appropriate actions to help address each of the public concerns.

Appendix 1.

Below is a complete list of all public comments received during the Pembina River Integrated Watershed Management Plan Public Meetings (2008).

List of issues facing the Pembina River watershed (in addition to the five main issues; drinking water quality, drainage, soil loss/erosion, surface water quality, flooding)

- Holding back water
- Recreation (Swimming etc.)
- Environment
- Salinity
- Overdevelopment on lakes
- Water level on Pelican Lake
- Wildlife conservation
- Beaver
- Rights of property owners
- Incentive programs
- Unscientific regulation
- Biodiversity
- Rock lake water depth
- Algae control
- Fish habitat
- Small retention dams
- Education (Manitobans re: farming)
- Infrastructure (Inadequate)
- Drainage should be supported by government in Pembina Valley the same as Red River Valley
- Recreational pressure
- Groundwater supply
- Livestock operations on creeks/rivers
- Invasion of foreign aquatic species
- Livestock operations near Swan Lake's drinking water supply source
- Rock Lake dam level
- Extreme lake level fluctuations

What has changed in the Pembina River Watershed over the last thirty year?

- Rock Lake has become a holding basin for water being drained from agricultural producers. The flood of 2005 has caused a lot of erosion which is quickly filling the bottom of the lake and causing algae issues which use oxygen which the fish habitat need.

- Only been involved for 12 years, but we keep seeing more and more on farm drainage going on in Canada and US. That all comes at once during a heavy run-off.
- Bush cleared, wetlands drained, natural soil fertility lost.
- The amount of runoff our streams and rivers need to handle during spring run-off and large rainfalls.
- Agricultural expansion through drainage. Development along lake (Pelican etc). Commercial run-off (Pig Barns)
- Dams slowing down current is filling up water channel with sediment.
- Farmers are doing zero tillage which has changed the water drainage off the land. The result no erosion.
- Too much draining causing severe erosion. Chemical entering creeks that enter the lakes.
- Drainage has increased greatly. No ponding, ditches and sloughs are drained. Bush around sloughs is being removed even though the land is marginal.
- More land has been cleared contributing to erosion and declining water quality.
- Drainage of wetlands. Clearing of trees.
- Contamination of water, soil, and air by hog barns.
- We believe that conservation tillage/zero tillage has lowered the soil loss/erosion. The ability to drain large pancake potholes is very concerning.
- Farmers for the most part have stopped summer fallowing and are tilling less so there is less soil erosion and run-off to the river.
- Severe increase in agricultural drainage, foreign species of wildlife not native to the area and what affect is having on our waterways and native fish species (carp, channel cats, drum, bullheads)
- I'm concerned that the farming community is becoming over regulated, which in turn will discourage the future of our farmers and their children.
- The diversion from Pelican Lake increases the water level in the Pembina River at flood times. Building codes should be changed to force owners to raise their cottages 2' to 3' feet so that they have more leeway before they let their water go into the diversion to the Pembina River.
- Chemical use on land and crops.
- Very little except the installation of flood gates at Pleasant Valley Pelican Lake. Development of Pelican Yacht Club.
- Water quality in the lakes feeds from the Pembina River (Ex. Pelican Lake).
- The rivers and streams are full of algae from many different sources of pollution. Not just hog manure.
- With increased drainage water moves into the Pembina River system much faster than it did 30 years ago. More frequent flooding as well as summer floods have caused significantly more bank erosion. Soil erosion through high drainage flows as well as bank erosion due to flooding is causing the lakes to fill in and channels to clog at a higher rate than natural.
- More drainage equals more erosion, water volume has drastically increased.
- Amount of algae in the lake during the summer.

Where should we focus the majority of our efforts over the next ten years (in your area)?

- Water Management/water quality/soil loss and erosion
- Water quality for recreation, fishing, and drinking
- Drinking Water Quality
- Intensive programs for farmers to hold back water
- Keeping fish in the lakes. Have the drainage system on an even scale.
- On land drainage, and water retention from farm chemicals and animal waste
- Controlling drainage, past and present. Help to control flooding on agricultural lands.
- Managing lake levels properly to avoid high river levels whenever possible.
- To set-up area programs for drainage
- Using the carrot approach with all residents to solve the problems
- flooding, drainage, water quality
- Don't flood and cover 200 acres of my prime Pembina Valley land with water and bog all summer.
- Replace old dam at Rock Lake in a new location
- Surface water and drainage
- water retention
- Developing a good drainage system
- Controlling the flow of water to prevent the flooding and erosion.
- Cleaning up water drainage so that all water is clean.
- Drainage - High price of grain has caused more drainage and trees cut in order to have more land to plant. Different fish life (carp).
- Severe increase in agricultural drainage. Foreign species of wild life (carp) not native to our area.
- Water Quality
- Ditching, on roads and private land
- Drainage Control
- Surface Water Quality and Drinking Water Quality
- Controlled water drainage, clean silt out of lake outlets/streams (rock lake), treat algae
- Uncontrolled drainage
- Water quality, both drinking and surface are probably the most important
- Flooding of valley floor. Keeping water where it is supposed to be in peak times.
- Flooding, drainage, drinking water quality
- 1. Develop a comprehensive plan for water management. 2. Develop a plan for utilization of water resources (all types of uses)
- Drainage is the key to most aspects of the 5 points lies above. Increased drainage and flows leads to downstream flooding, soil erosion, and poor water quality.
- Algae in the lakes
- Awareness and voluntary landowner programs
- Drainage/wetlands
- Looking after drinking water

- Drinking water sources need to be protected by law. Determine and limit how much development an area of land can take. Long term plans need to be in place (multi year).
- Drainage: soil loss and erosion. Water quality affecting fish and other wildlife.
- Water quality. Orderly drainage.
- Upstream drainage. Improving operation of Pelican Lake diversion.
- Lake water quality
- water quality
- Free planting of saline tolerant perennial on all saline patches. (Farmers cannot do it as individuals - do not have the time or equipment).
- We need good relations. Not more water coming down the tributaries to the Pembina.
- Ensure clean rivers and lakes
- Water quality and habitat protection
- Flooding and drainage
- Surface and drinking water quality
- Flooding the Pembina River. Drinking water quality. Surface water: keep it on the land as long as possible.
- Bank stabilization
- Restriction of water flow
- Drinking water/surface water quality
- Drainage and soil erosion
- Implementing a positive sustainable program which implements incentive programming and less regulatory.
- Retaining water by paying for structure and water retention ponds.
- Making sure public drinking water supplies are meeting drinking water guidelines, standards, and objectives.
- Drinking and surface water quality
- Drinking water quality, surface water quality
- Drinking water quality, soil erosion
- Drainage , soil loss and erosion
- Water management, controlled drainage. Water storage, water quality.
- Drinking water quality, common sense drainage.
- Drainage of any type should be thought out very seriously. Buffer zones along streams and rivers.
- Retain the flood waters. Hold back the extra water and let it flow later.
- Lake Minnewasta - Dead Horse Creek
- Managing the main catchment basin. Rock William, Lorne. Large area comes quick.
- Erosion, I believe should be the focus of the lake.
- Raise Rock Lake to 1330.6. Build up road so we can get to our cabins in floods. We can install compost toilets. Monitor the erosion of the shore as the lake bottom is filling in. New dam to let water out faster? What level is the shoreline in a flood situation?
- Conservation Tillage, habitat preservation, education, slowing land drainage in early spring to allow infiltration.

- Develop sustainable plans that can be enforceable. Encourage governments to establish regulations through the various acts (i.e. Water Rights Act) that will hold commercial, Private and others along the watershed accountable for their actions.
- Blow dams and let the water flow. Put in water gates.
- Farmers are doing an excellent job taking care of their land. They do not need white collar people (or environmentalists) telling them what to do.
- I'm concerned that the municipalities are digging ditches in road construction where water never supposed to flow.
- Enforcing the laws that are already in place. It is illegal to drain water on to your neighbor. It is also illegal to block a natural waterway.
- Drainage and flood control of the levels in the system.
- Restoring some wetlands by providing some incentives. Favorable tax incentive to keep forestry.
- New residents in the area not familiar with problems.
- Free site assessment to individual landowners on how to improve/protect their portion of the river. Free or low cost assistance to the landowner to implement any suggestions made.
- A framework to decrease the amount of pollution from bank site livestock operations. Possible regulation and financial assistance to correct problems. Possible regulation of "large" bodies of water and their drainage.
- Stop using fertilizers and sprays. Get rid of the pig barns and spreading the manure. Stop the cattle from going in lakes and rivers. Somebody to enforce livestock operations.
- No action is needed.
- Controls on water flow, preserving wetlands, possibly reinstating former wetlands through attractive and visible incentive programs.
- Water levels seem to be a concern. I would suggest a level that is satisfactory to the people living around the lake. Houses and cottages which are on the shores pay lots for taxes so their properties should be protected from high water levels.
- I live in the local urban district of Sawn Lake and believe this area is a great place to live and should be protected from pollution.
- I believe we need to find ways to slow and store the drainage water before it enters the river. This would provide a more consistent flow as well as letting the river system have time to handle the increased flow. Drainage should be allowed only if the drainage can be stored on site for a period of time (ditches, larger sloughs, dugouts).
- Continue to educate people, help with the little problems and this will help with big problems, keep plugging away. Work on problems incentive, demonstration and education as opposed to regulation, i.e. Drainage cops, bill 17.
- Improving the water quality, reduction of pesticides and pesticides entering the watershed from run-off. Proper drains to keep constant water level and have better control of water levels during spring run-off.

Comments, questions, missing pieces of information, program suggestions.

- Grey water programs?
- We need to have the rules we already have in place policed more. We need to have more rules against land drainage.
- Like to see retention dams on creeks and river flowing in the Pembina River. Fix the Sheffield Bridge to the prior size, to stop bottlenecking. Look at Ducks Unlimited dam to see if there is a problem with the structure or place it is located.
- Salinity is a problem. Drainage does help, some.
- We need a risk assessment regarding lake overdevelopment. A concern in general that the pamphlet in general unfairly points to agriculture as the only problem.
- With no surge capacity in Pelican or Rock Lake on spring floods, will it be that my use of my barn and loose housing become illegal as well? With cross Valley roads built higher and higher and the river full of silt.
- The full length of the Pembina River should be cleaned out.
- Beaver damage in most riparian areas and what is happening to different areas because of backlog of water.
- By holding the water back in areas along the river bed, would also provide more area for recreation, fishing, swimming, etc. Also the major flooding seems to have brought in a number of different species of fish in to Rock lake.
- Rock lake water quality and the algae that grows in it is a huge concern, and reflects the type of junk/chemicals that is draining into the lake. When there is less drainage there is "much" better water.
- Sometimes no matter what we try to put in place we get abnormal amount of rain snow or sudden melting. That thing can seem really bad for a certain period of time and then things can change the other way.
- Work with Americans and all concerned. Pay back Canadian farmers to hold back water.
- Controls on water flow, preserving wetlands. Through attractive and viable incentive programs.
- Any plan made should be going forward in time. Farmers should not be forced to undo work that was done previously.
- If you want to keep wetlands set up system like the ALUS to assist farmers to leave wetlands alone.
- Solutions need to have teeth, backed by law. Identify all drinking water sources and monitor and safeguard them on a regular basis. Why does Killarney lake still have green algae after so many years, can it be got rid of?, how safe or unsafe is it? Determine the number of people that can be serviced by a drinking water source and limit that number. Sewage treatment must be the best available. Identify all sources of pollution and take measures to limit, eliminate, and prevent all water pollution. Getting drainage licenses seems to be a joke (way to easy). Ban licenses until each river is studied and a solution in place.
- If you are going to do a comprehensive study and make things work you need all stake holders at the table including US side.

- The manner in which most of the "5" are looked after, will influence the quality of the "habitat" within watershed area. Riparian zones, river, creeks.
- We need some teeth in the drainage issue. The honour system that has been in place for the past 10 years is obviously not working. Drainage has its place, but it needs to be controlled.
- Slow response to water management concerns i.e. Slow turn around on licenses applications. For even simple water concerns like culvert replacement or low level crossings.
- Soil erosion, slow tributary streams down. Control the drainage.
- School has interest in partnering on water quality testing.
- Small dam payments for things such as buffer strips, abandoned yard sites, shelterbelts critical soil areas, water retention, filtration areas, sloughs, small dams etc.
- The province has paid for all red river provincial drains. Why cannot the Provincial government give the same importance to retaining water above the escarpment to the Saskatchewan border? The province needs to budget to help retain water with a program to compensate in a meaningful amount with a extended time line minimum 10 years, better for 30 years.
- Sewage assimilation is most likely the major pollution factor of surface and groundwater in southern Manitoba. Although not a "vote getter" this problem must be addressed.
- Need for monitoring over 10 years: water quality, biodiversity, habitat mapping. Then you can evaluate after 10 years how your implementation went.
- Could the dam on the Pembina planned in the 1960's ever be feasible today?
- Water management is a very important issue in the Pembina valley region. However it must go hand in hand with agricultural land use policies.
- There has been a huge loss of wetlands and habitat for all kinds of wildlife and birds. This is of great concern as without sloughs there is no place for water to soak back into the aquifer.
- Discussion of retention dams - west of Lake Minnewasta.