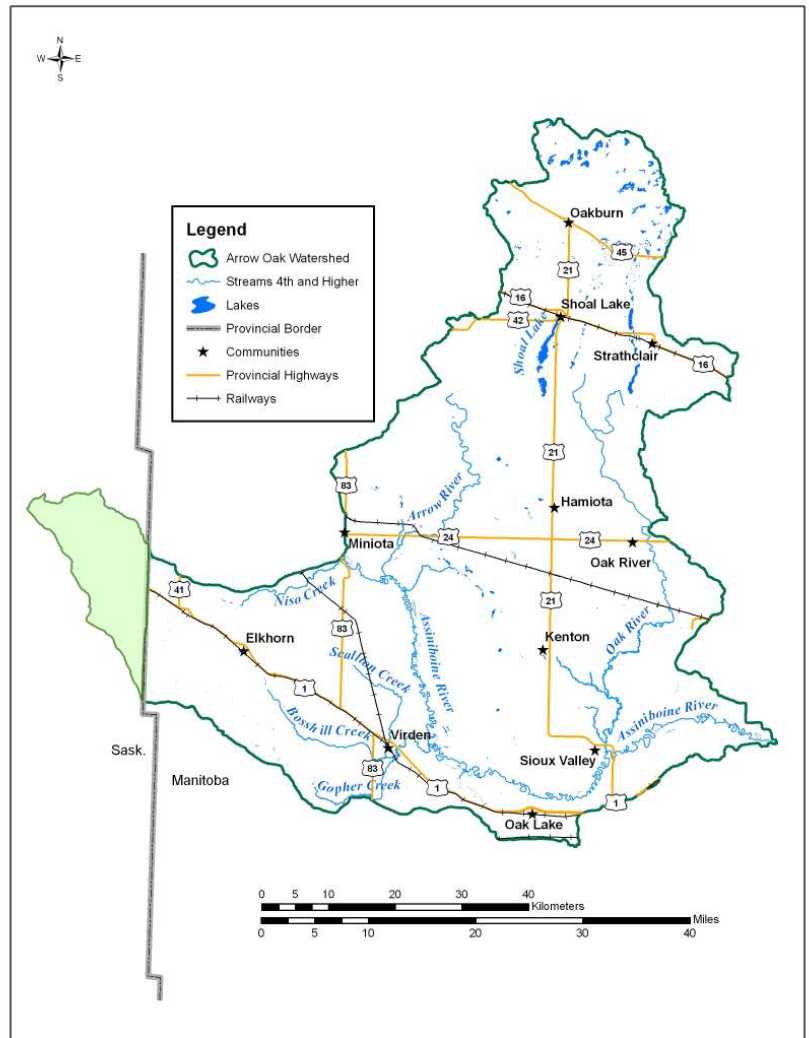


## Arrow-Oak Watershed (05MG) – Public Concerns

In January 2006 the Little Saskatchewan River Conservation District (LSRCD) & Upper Assiniboine River Conservation District (UARCD) were jointly designated as the Watershed Planning Authority (WPA) for watershed 05MG (Figure 1) by the Province of Manitoba. This watershed plan was initiated as part of a larger planning initiative for the Assiniboine River which also included the Shell River-05MD, Assiniboine-Birdtail-05ME, and Little Saskatchewan River-05MF. Following the collection of data and the compilation of a State of the Watershed (SOW) Report, a Project Management Team (PMT) was created specifically for each of the four watersheds in order to provide more local input and guidance on planning for each of the individual watersheds.



**Figure 0: Arrow-Oak Watershed**

The next step in the development of the IWMP was to hold public forums to explore the water concerns of local residents and other stakeholders within the watershed. The issues identified at these public forums will provide direction to the Arrow-Oak PMT on the direction and focus of the Integrated Watershed Management Plan. Nine meetings were held across the watershed with the goal of engaging residents and soliciting a range of public issues. The meetings were held in July 2008 at: Oakburn, Strathclair, and Shoal Lake (July 28); Oak Lake, Kenton, and Hamiota (July 29); and Miniota, Elkhorn, and Virden (July 30).



At each of the public meetings the attendees were asked to provide their top three concerns related to water within the Arrow-Oak watershed. Attendees were also asked to contribute ideas on how their issues could be resolved and, if the issue was successfully resolved what that success would look like in 25 years. Participants at each of these public open houses were also asked to form groups, discuss the issues in the watershed and form a collective list of issues and solutions for the watershed. This was done to allow for discussions on issues and to obtain more general concerns within the watershed as opposed to very site specific issues garnered through individual responses. All of the individual and group responses were collected and compiled in a digital format, word for word, by members of the PMT. The complete list of public and group concerns is available on the Assiniboine IWMP website at [www.uarcd.com/IWMP](http://www.uarcd.com/IWMP)

In order to analyze the individual and group responses, the public responses were categorized into a primary issue category (e.g. surface water quality), a sub-category if enough information was provided (e.g. Nutrients), and a target location if provided (e.g. Shoal Lake). This methodology required some subjectivity in the categorization process but concerted efforts were made to capture the essence of the issues. In the event that several concerns were addressed in one issue statement, the first issue mentioned was taken as the category, or the issue for which solutions were provided was taken as the dominant concern.

The following is a summary of what 44 watershed residents told us.

### ***Main Categorization of Issues***

Top priority issues – Individual responses (n=55):

- 19 people, representing 43% of respondents, cited surface water management (i.e. drainage) as their number one concern
- 10 people, representing 23% of respondents, cited surface water quality as their number one concern
- 7 people, representing 16% of respondents, cited ground water quality as their number one concern
- 5 people, representing 11% of respondents, cited natural areas (i.e. wetlands, riparian zones and wildlife) as their number one concern
- 3 people, representing about 1% of respondents, cited groundwater quantity as their number one concern

Top priority issues – Group responses (n=9):

- 4 groups, representing 44% of responses, cited surface water management as their number one concern
- 2 groups, representing 22% of responses, cited surface water quality as their number one concern
- 2 groups, representing 22% of responses, cited groundwater quality as their number one concern



- 1 group, representing 11% of responses, cited natural areas as their number one concern

In order to better incorporate all of the public input and priorities, a weighting system was used which provides more relative importance (weight) to first and second priority issues (i.e. 1<sup>st</sup> priority = 3 points, 2<sup>nd</sup> priority = 2 points, 3<sup>rd</sup> priority = 1 point). Figure 1 shows the results from the individual input based on this weighting system and Figure 2 shows the results from the group input based on the same weighting system.

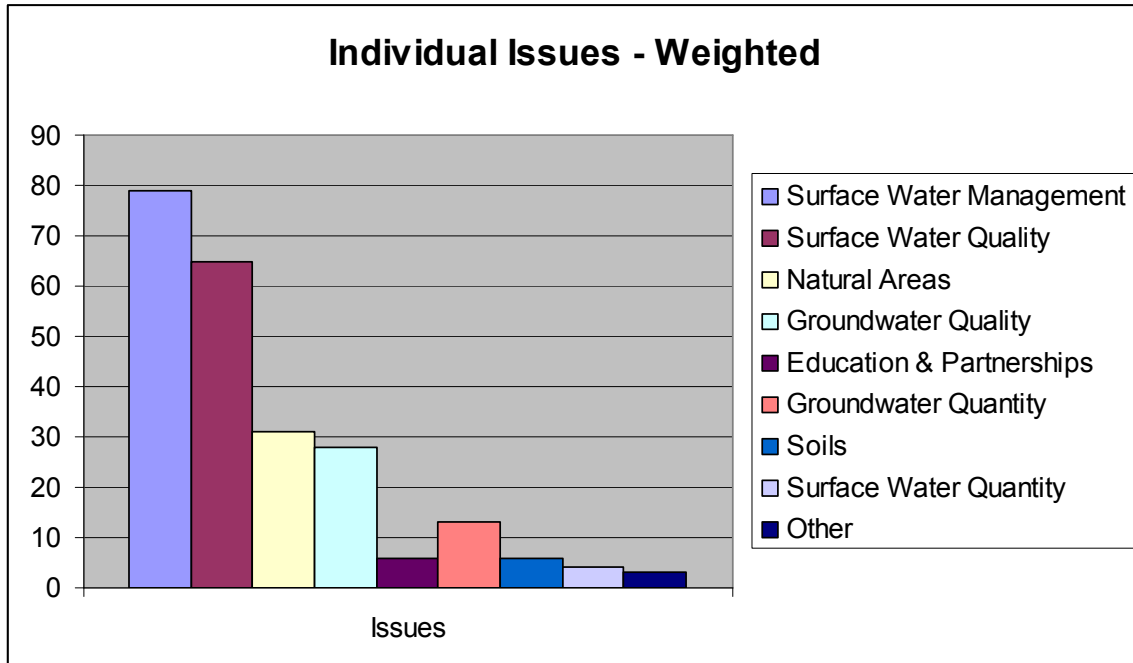


Figure 0: Weighted ranking of individual issues based on priority level

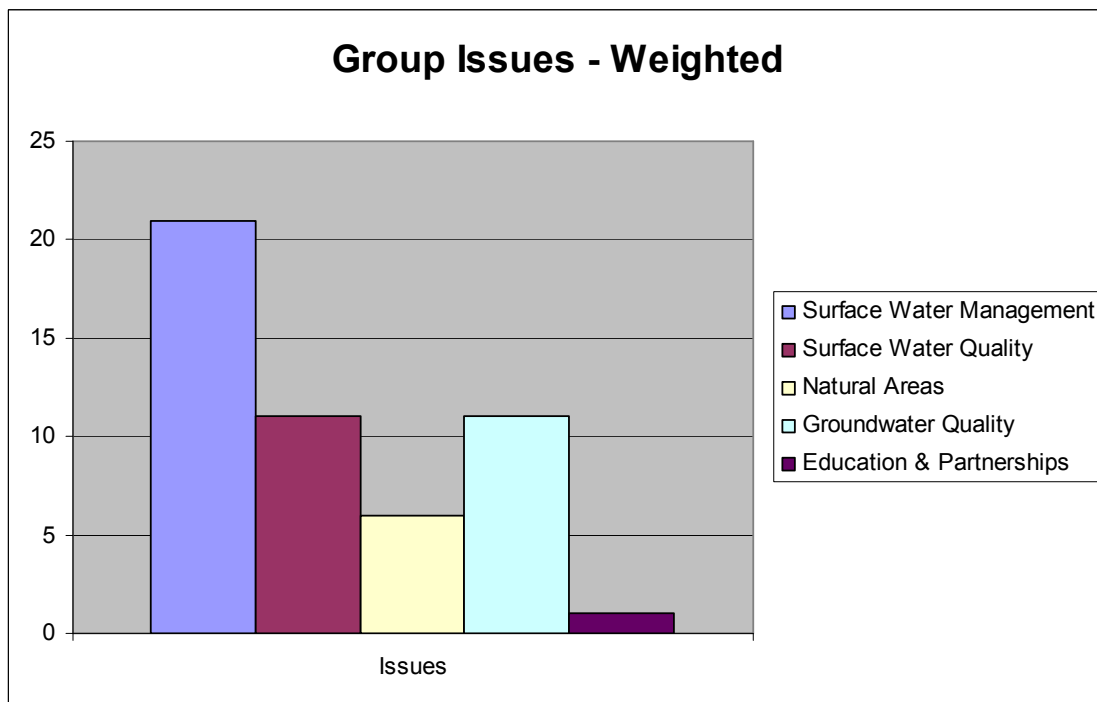


Figure 0: Weighted ranking of group issues based on priority level

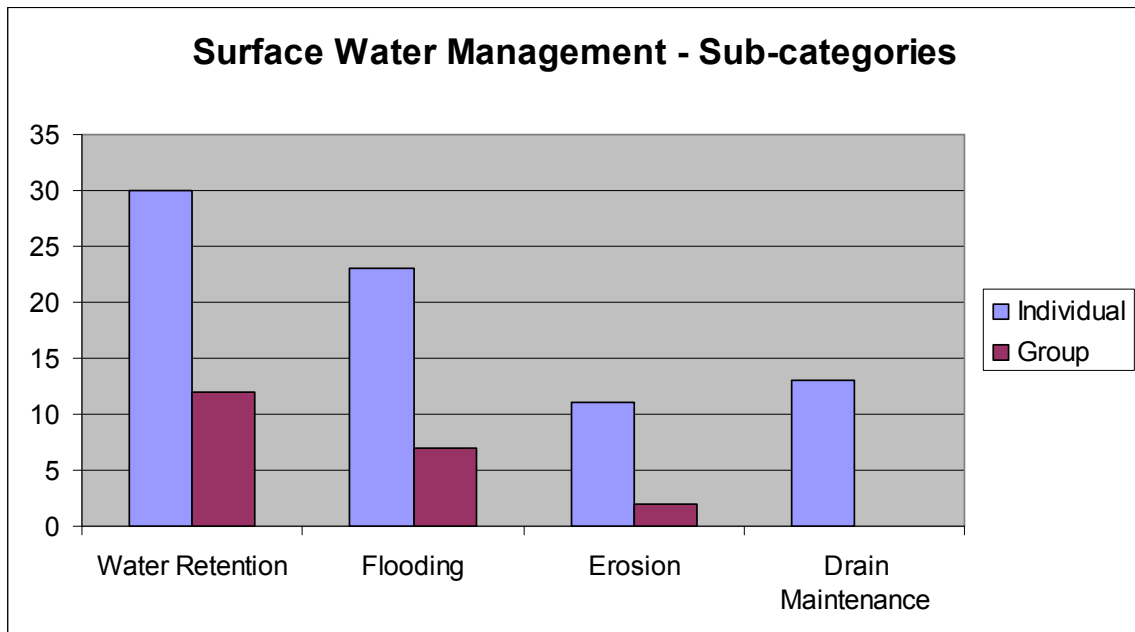


The results from the individual and group results are similar, clearly placing Surface Water Management as the most important issue to local residents. The top four local priorities were surface water management, surface water quality, groundwater quality, and natural areas; these four issues received 86% of the weighted support from individuals and 98% of the weighted support from groups.

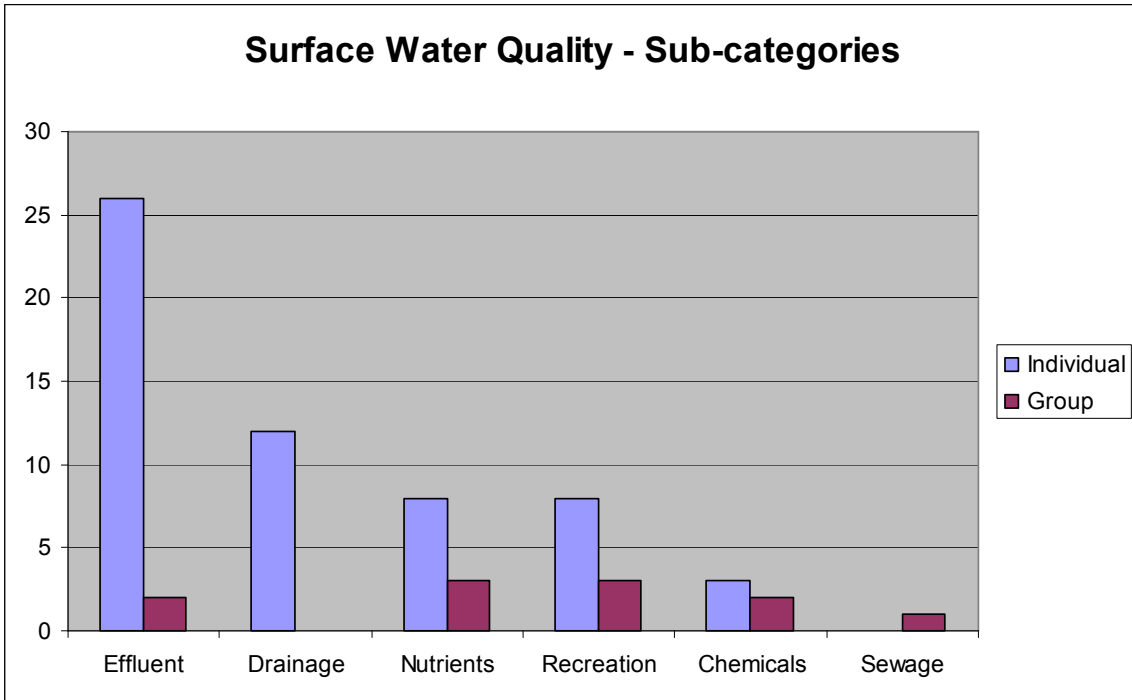
- Public Priorities:**
- 1. Surface water Management**
  - 2. Surface water Quality**
  - 3. Groundwater Quality**
  - 4. Natural areas**

### ***Sub-Categorization of Issues***

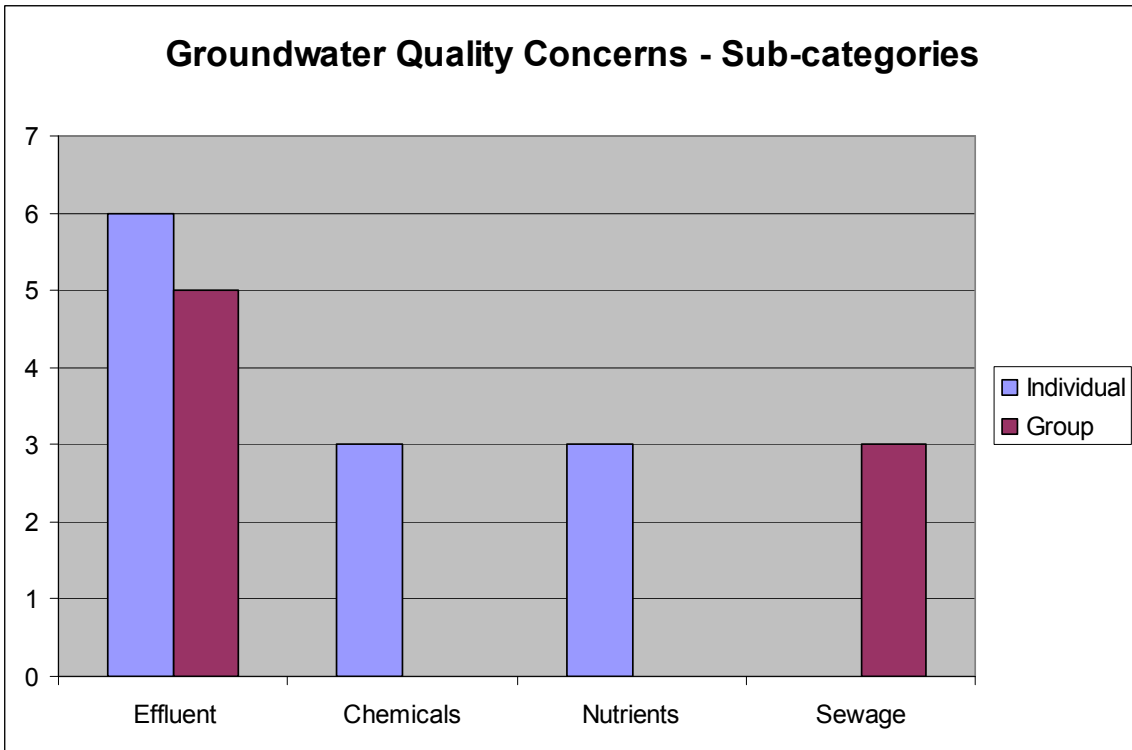
In order to provide more specific direction for the integrated watershed management plan the four highest priority areas of concern were further broken down into sub-categories. These sub-categories are outlined here in order to allow for a better understanding of the nature of the concerns and will, therefore, assist in the design of better and more relevant solutions. A glossary, explaining each of the sub-categories can be found at the end of this document.



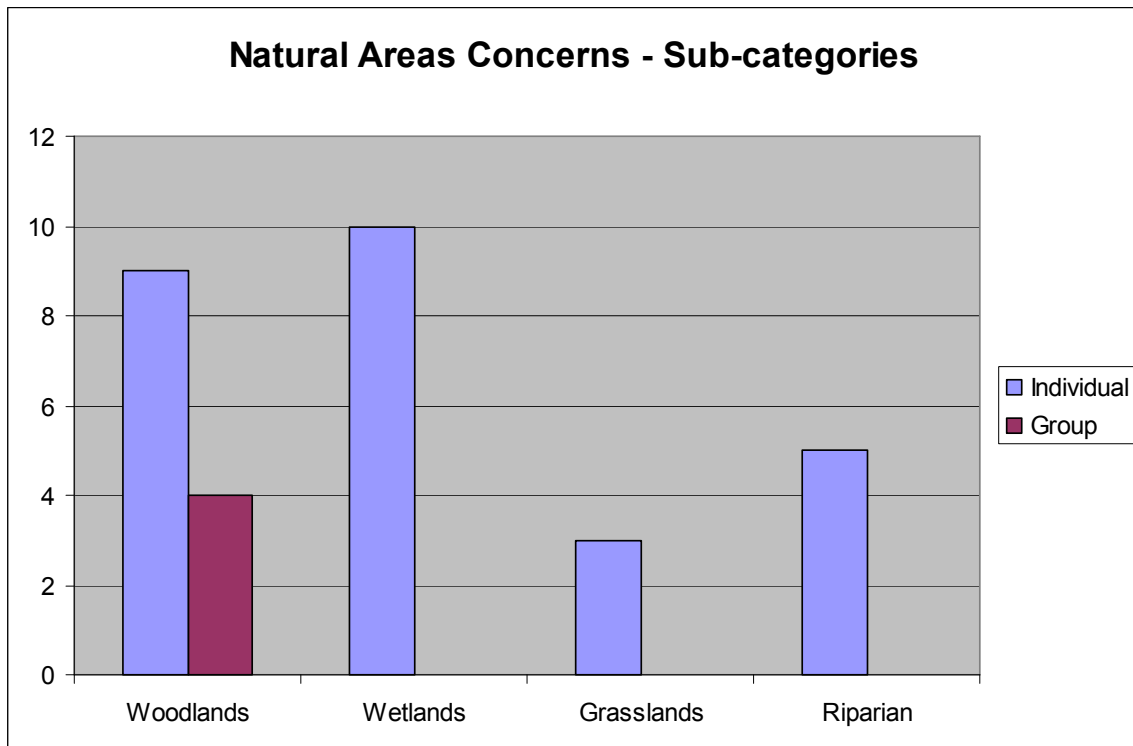
**Figure 0: Sub-category issues related to surface water management (i.e. drainage)**



**Figure 0: Sub-category issues related to surface water quality**



**Figure 0: Sub-category issues related to groundwater quality**



**Figure 0: Sub-category issues related to natural areas**

## ***Target Locations***

### **Surface Water Management**

There were a number of key areas identified for surface water management concerns. These included: flooding and water retention on the Six Mile Slough (N of Hamiota), Erosion on the Assiniboine River, Flooding on portions of the Arrow River, Flooding and erosion on Shoal Lake, and flooding the NW area of the watershed.

### **Surface Water Quality**

Key areas identified for surface water quality concerns included: Effluent on Shoal Lake, the recreational importance of Salt Lakes and concerns over effluent inputs, and concern over nutrients in source water zones.

### **Natural Areas**

Road allowances were identified as an important natural area. Numerous respondents called for the preservation of natural habitat on undeveloped road allowances, and the restoration of road allowances which have been developed or cleared by neighbouring landowners back into natural habitat states.



## **Groundwater Quality**

The key target area for groundwater quality identified by respondents was source water zones as mapped in the drinking water section of the State of the Watershed report.

## **Summary**

This document was prepared for the benefit of the PMT, all watershed stakeholders, and the public at large in order to provide an overview of the concerns voiced by residents of the Arrow-Oak watershed. The four key issues in the Arrow-Oak watershed, as identified by the public, are: surface water management, surface water quality, natural areas, and groundwater quality. The breakdown and analysis of the public input will be used by the PMT, in conjunction with the technical and scientific input, in the preparation of the Arrow-Oak IWMP.

## **Glossary**

### **Main Categories**

Main categories were established based on the statements provided to the PMT by the public. The PMT used the following definitions when categorizing comments into main categories.

Surface water quality – The health of any water body on the surface of the land including water runoff, creeks, rivers, wetlands and lakes.

Surface water quantity – The volume of water in areas of pooled surface water.

Surface water management – The control of surface water, primarily runoff, through the drainage network.

Groundwater quality – The health of water found under the Earth's surface. Mainly refers to drinking water sourced from aquifers.

Ground water quantity – The volume of water that is typically accessible from aquifers.

Natural areas – A generic term referring to wetlands, riparian areas, woodlands, wildlife habitat and parks. This term does not necessarily refer to water but may refer to areas that are typically seen as beneficial to water quality.

Education and Partnerships – This category refers to a lack of public knowledge and/or a need for relationships amongst stakeholder groups.

Soil – The impact of soil on waterways and lakes which primarily refers to soil and shoreline erosion.

### **Sub-Categories**

Sub-categories were established based on the statements provided to the PMT by the public. The PMT used the following definitions when categorizing comments into sub-categories.



Chemicals – Primarily refers to agricultural chemicals including herbicides, pesticides and insecticides

Drain Maintenance – The general up-keep and cleaning of drains to allow swift flow of water

Effluent – The waste derived from domesticated animals

Flooding – Excess water found on the land for extended periods of time

Infrastructure – Large public work operations such as the installation of a sewage treatment plant

Nutrients – Primarily refers to the agricultural use of fertilizers such as nitrogen and phosphorous

Recreation – Human activities done for pleasure such as boating, swimming, fishing and the use of ATVs

Sewage – The waste derived from humans

Urban Development – The expansion of communities due to urban growth and/or sprawl

Water Retention – An area of land designated to be a water holding area, this can include but is not limited to wetlands

*Note: If you would like more information on the procedure we used or have further questions please feel free to contact Ryan Canart, UARCD Manager at (204) 567-3554 or Colleen Cuvelier, LSRCD Manager at (204) 566-2270.*