

**FINAL APPROVED MINUTES  
AS OF NOVEMBER 3<sup>R D</sup>, 2008****Meeting #5 – Monday, October 6<sup>th</sup>, 2008**

Oakbank United Church

Oakbank, Manitoba

9:00am – 12:00 pm

**1. Call to Order**

Meeting #5 of the Southeast Regional Groundwater Management Plan (SRGMP) Group was called to order at 9:05 am on Monday, October 6<sup>th</sup>, 2008 at the Oakbank United Church in Oakbank, Manitoba by Cornie Goertzen, Chair of the SRGMP.

**Present:**

<b>Last Name</b>	<b>First Name</b>	<b>Agency</b>
Ball	Garth	Manitoba Conservation
Barker	Corinne	Manitoba Water Stewardship
Barron	Gerry	Manitoba Public Utilities Board
Bodnaruk	Bob	RM of Springfield
Carriere	Les	Manitoba Metis Federation Inc.
Chapman	Paul	Town of Lac du Bonnet
Dugard	Mark	RM of Brokenhead
Evans	Laurie	RM of Ste. Anne
Fontaine	Ron	Sagkeeng First Nation
Gibson	Janine	Pansy Groundwater Committee
Goertzen	Cornie	Seine Rat River Conservation District
Gunning	Ed	RM of St. Clements
Heppner	Neil	RM of Tache
Holtmann	Henry	Dairy Farmers of Manitoba
Janzen	Ray	Observer - RM of Springfield
Kalyta	Phil	City of Steinbach
Kopelow	Sacha	Manitoba Eco-Network
Lucko	Ken	RM of Springfield
Martel	Gordon	Pembina Valley Water Cooperative
Martens	Herm	RM of Morris
Maynard	Gerry	RM of De Salaberry
McCulloch	Gabriele	Canadian Gold Beverages
Mihaychuk	Ron	RM of Franklin
Morris	Lawrence	RM of East St. Paul

**Present (continued):**

<b>Last Name</b>	<b>First Name</b>	<b>Agency</b>
Nedotiafko	Rob	Manitoba Water Stewardship
Oswald	Barry	Manitoba Water Stewardship
Peterson	Doug	Manitoba Floodway Authority
Rackham	Jay	Manitoba Conservation
Sadorski	Shane	Manitoba Cattle Producers Association
Sawka	Earl	RM of Piney
Schiabie	Frank	Holds industrial water bottling license
Seniw	Jane	Devils Creek Watershed Coalition
Stefaniuk	Bob	RM of Ritchot
Steinke	Glenn	Town of Beausejour
Stephens	Geoffrey	Manitoba Conservation
Stewart	Jennifer	Red River Basin Commission
Tenuta	Mario	University of Manitoba
Yosyk	Alvin	RM of Alexander
Young	Dave	RM of Reynolds

**Regrets:**

<b>Last Name</b>	<b>First Name</b>	<b>Agency</b>
Griffin	Duane	City of Winnipeg
Hinrichs	Albert	RM of Whitemouth
Kern	Gord	Brokenhead Ojibway Nation
Krozkin	Alex	Sky Blue Water Inc.
Swidersky	Jim	RM of Stuartburn
Teillet	Mike	Manitoba Pork Council

**2. Acceptance of Proposed Agenda of Meeting #5**

The proposed agenda was accepted.

Moved by Paul Chapman – Town of Lac du Bonnet.

Seconded by Alvin Yosyk – RM of Alexander

Carried.

### 3. Adoption of Minutes of Meeting #4

The preliminary minutes were accepted.

Moved by Herm Martens – RM of Morris

Seconded by Janine Gibson – Pansy Groundwater Committee

Carried.

Rob Nedotiafko addressed the following two action items that were raised at the April 21<sup>st</sup>, 2008 meeting:

#### a. City of Steinbach annual groundwater allocation

On page 3 of the April 21<sup>st</sup>, 2008 SRGMP meeting minutes, an action item was identified for the Coordinators to address regarding the City of Steinbach's annual groundwater allocation license. Rob confirmed that Phil Kalyta was correct and the current allocation for the City of Steinbach is 1,818 dam<sup>3</sup>, and not 2,989 dam<sup>3</sup>.

#### b. Confidentiality of manure management data

Rob addressed the action item identified on page 11 of the April 21<sup>st</sup>, 2008 SRGMP meeting minutes, regarding the confidentiality of manure management information throughout the study area. Rob introduced Geoffrey Stephens of Manitoba Conservation to address this item.

Geoffrey stated that Manitoba Conservation is currently at a standstill regarding this item. He noted that it may be possible to release manure management and nutrient concentration data on an RM-by-RM basis.

### 4. Coordinators Report

Barry Oswald addressed the group and welcomed everyone to the second winter planning season. Barry gave a short presentation titled "*Southeast Regional Groundwater Management Plan: 2008/2009 Planning Season*". The presentation included some previously viewed slides and stressed the following points:

- 1) The two most important aspects of a successful stakeholder planning process are:
  - i. Effective, broad stakeholder participation
  - ii. The final plan must be based in solid science
- 2) The importance of this planning process in Manitoba
  - i. It is the largest stakeholder-led planning process in Manitoba to date
- 3) The plan must be simple and short
- 4) The importance of asking questions of presenters and sharing opinions

- 5) Agencies need to maintain, if possible, the same agency representative throughout the process

The Chair thanked Barry for reminding the group of where we are in the planning process and what the goals of this process are.

Janine Gibson asked if the scientific resources are limited to what we have in Manitoba, or if it is possible to take advantage of what our neighbours have done (e.g. Minnesota). Barry replied that he feels our experts are extremely capable, but encouraged any suggestions that group members may have.

## 5. New Business

### a. Issues Identification: Agencies Submission Request

Rob Nedotiafko reminded the group of the request at the April 21<sup>st</sup>, 2008 meeting for agency submissions, which are meant to outline the issues that their agency feels the management plan should address.

Rob encouraged all group members to submit their issues on agency letterhead as soon as possible, either by mail or email to himself, Corinne Barker, or Barry Oswald. It was also mentioned that only two submissions have been received to date, from Manitoba Eco-Network, and the RM of Reynolds.

### b. Local Knowledge Presentations: 2008 / 2009 Fall-Winter Planning Session

Rob Nedotiafko brought the group's attention to the proposed planning process timeline handed out at the April 21<sup>st</sup>, 2008 meeting. Rob highlighted that we are in the 1<sup>st</sup> step of the process, which involves information gathering.

Rob stressed the importance of firming up the exact number of local knowledge presentations. A show of hands indicated that the Manitoba Metis Federation Inc., Pansy Groundwater Committee, Devils Creek Watershed Coalition, and Manitoba Eco-Network would be interested in presenting to the group. An appropriate length for the local knowledge presentations was decided to be approximately 30 to 45 minutes. A group member asked whether the presentations needed to take up the entire allotted time. Rob responded the presentation could be shorter if needed, and also

indicated that the presenter would be given at least a month to prepare for their presentation.

Dave Young asked the group if they felt a presentation regarding ongoing water quality research in the RM of Reynolds would be of interest. Dave indicated that the Whitemouth / Reynolds Soil and Water Conservation Committee was formed for this purpose, as they felt that they lacked access to consistent water quality data for their area. A show of hands indicated that the group would be interested in such a presentation.

A short group discussion followed, addressing the importance of surface water processes and surface water quality in relation to our current management process. It was suggested that in the interest of remaining on task, we should allow all the groundwater information to be brought to the table before exploring this topic. The group could then assess, based on the information given by the science experts, whether surface water / groundwater interaction is of concern. A show of hands indicated that the group will revisit this proposal for a presentation at a later date.

Geoffrey Stevens stated that due to the many concerns raised by the group regarding intensive livestock operations, members should consider reading the Clean Environment Commission's (CEC) report on the hog industry in Manitoba.

**c. Science Members Presentation:**

Dr. Mario Tenuta, Department of Soil Science, University of Manitoba gave a PowerPoint presentation titled "*Nutrients in Soil and Water*"

Before beginning his presentation, Mario addressed a few key points that he felt the group should consider;

- I) When studying environmental contamination, it is common to use indicators. Surface soil and surface waters should be regarded as potential indicators for groundwater quality.
- II) The Source – Pathway – Receptor model: A) Source - What is the source of contamination? B) Pathway – how is the contaminant getting there? (e.g. movement through soil, or is groundwater moving from outside area of interest) C) What is the receptor? In this case it would be groundwater.
- III) The University of Manitoba has prepared a report on the environmental impacts intensive livestock

operations in Manitoba, similar to the CEC report. Mario feels that while the CEC report lacks scientific information, the U of M report is much more extensive.

*Q (Slide 3, page 1): What is the Phosphorus (P) level in City of Winnipeg drinking water?*

A: Winnipeg drinking water P levels are 2 – 3 parts per million (ppm), while an example of normal groundwater levels is 0.1 ppm.

The Chair asked Phil Kalyta what the P levels are in the City of Steinbach's drinking water. Phil replied that it is hard to say what the levels are, as they use ortho-P, in order to keep minerals in suspension, and keep them from depositing on pipes. Janine Gibson then asked Phil Kalyta if P increases the turbidity of water, to which he replied that it does not.

*Q: (Slide 3, page 2): Why is the P level from agricultural waste higher than for municipal waste, if Winnipeg's drinking water has added P, and is higher in P to begin with?*

A: Wastewater treatment takes a large amount of P out of suspension, and it is left in the sludge and biosolids. More P will be taken out of city wastewater following the planned upgrade to the City of Winnipeg's treatment facilities.

*Q (Slide 3, page 3): Is it correct to assume that because petroleum products are heavy, contamination from these products are more likely to move down into the deeper groundwater?*

A: Some petroleum products are more of a concern, such as unrefined products that are used for asphaltting and tarring.

*Q: How are petroleum or oil products heavier than water? Even a carbon-40 compound is lighter than water.*

A: The contaminants of concern are a cocktail of products – think of black tar. They are much heavier.

*Q (Slide 3, page 6): Why are there drops on the graph where certain years have much less P removed by crops?*

A: During years of drought, many crops struggle and will not remove P as effectively as healthy plants.

*Q (Slide 1, page 7): If you store manure in a container and it is not exposed to the atmosphere, would you be better off?*

A: Yes, you would lose less nitrogen (N) to volatilization, but you would also want to inject it directly into the soil and have covers on manure lagoons.

(Slide 1, page 14) Comment from Janine Gibson that she is aware that only 1 -2% of manure management plans are monitored on a yearly basis. She also stated that in the RM of Hanover, some farms are receiving two to three times the recommended N levels. Mario responded that large producers (e.g. hog production) hire manure management experts to ensure that manure management plans are being followed, that records are being kept, and that application rates are based on soil sampling. He stated that these large producers have more to lose by not following regulations, and that he feels small producers are of more concern as they may require a lot of input from experts in this regard.

*Q: Is P lighter or heavier than water?*

A: P is dissolved in water. P should be applied to agricultural land in the spring, below the seed. Manure should not be applied in the winter.

*Q: Is there a maximum amount of P that water can absorb?*

A: Yes, but this level would never be reached under natural circumstances.

*Q: Is the P in water from organic or synthetic sources?*

A: It would be a mixture of mineral and organic P, depending on the conditions and the soil type.

*Q: During earlier presentations, the group has been told that the groundwater features in our study area have not been completely mapped. How does the group account for this when making a groundwater management plan?*

A: I believe it will be necessary to complete an accurate map in the future.

**\*\*Check regarding Slide 1, page 16: whether the word "groundwater" should be replaced by the words "surface water".**

*Q (Slide 1, page 18): Is it correct to assume that urine contains the majority of P in animal waste?*

A: No, the manure contains all of the P. There is no P in urine.

*Q (Slide 2, page 18): How did you extract the water for testing?*

A: The water was taken from ground water wells.

*Q (Slide 2, page 20): What information did the provincial government use to come up with their hog industry moratorium?*

A: Not certain. The U of M chose the La Broquerie research site due to the potential to see the movement of nutrients and pathogens through soil to groundwater. It would be foolish to say that this site is representative of the whole study area. I would like to refer you to the U of M's report on intensive livestock operations in Manitoba, and note that it is also important to consider that the CEC has more criteria to respond to than the U of M, as they are a political entity.

*Q: Is it possible that the surface water is carrying away the nutrients at the U of M's La Broquerie research site?*

A: There is a lot of P in the surface, but it is tied to the soil. An important part of the study was to examine if there are connections locally with groundwater and surface water in the spring. It

appears that the surface water was tied to the level of water in municipal drains. As the drain water levels dropped, the wells dropped also. Surface water movement at the site is minimal, and it is thought that water moves downwards through soil.

Alvin Yosyk stated that in the RM of Alexander, the bulrushes in the ditches grow profusely when chemical fertilizers are applied. Mario responded that it would be incorrect to make a direct connection between these two factors, as bulrushes will grow well in wetland situations without high N levels. It would be necessary to measure nutrient levels in the ditches on a regular basis before coming to a conclusion on this topic.

*Q: If one of the main factors affecting water movement is the type of soil, what are we looking at in our study area?*

A: A real hodge-podge of soil types, especially since the study area lies on the edge of the Canadian Shield:

- I) Clays in some areas from old lakes formed after glaciation. These soils have essentially very little downward movement of water, and lots of movement laterally. Clay deposits can vary in thickness
- II) Sands / sorted materials exist where there were rivers, or fast moving melt waters moving from within glacial ice. Water can move quickly through soils in these areas.
- III) Silt lenses exist in areas where water may have ponded in the past for a period of time. Silt lenses will determine the rate of transfer down, even if there are coarse materials below, as silt has the greatest resistance to water movement.

*Q: Do you look at what role oxygen plays? In some water treatment facilities they don't want anaerobic conditions, because P is then released.*

A: A potential future research topic would be; during times when water levels are high and there is a restriction of oxygen in soils, is P released from soils? Please reference a question to Bob Betcher in the April 21<sup>st</sup>, 2008 minutes in reference to nitrate levels in groundwater and anaerobic conditions. P is an environmental concern and not a health concern for humans.

*Q: P levels are increasing at the surface level at the LaBroquerie site – would the P build up to a level where the soils would become burnt out and non-productive?*

A: No, that level would be extremely high – much higher than regulation levels.

A group discussion followed regarding a Group member's question about whether there was a the connection between irrigation and high levels of soil salinity - with soil salinity as the possible cause of dead or dying vegetation in headlands, as noticed by the Group member, on regional agricultural lands. It was mentioned that you may see salinity issues around areas adjacent to bare ditches – not headlands - where ground waters have carried salts from the soil to the surface to form a visible, white salt precipitate at the soil surface.

#### **d. Other Business**

Rob Nedotiafko informed the Group that the SRGMP website has been approved, and will be developed within the following months. In the future, this website will be used as a portal for meeting minutes and other information.

## **6. Next Meeting**

- i. The Group agreed to have the next meeting on November 3<sup>rd</sup>, 2008. The meeting will start at 10:00 am, and the first choice for location is the 55-Plus Centre in Steinbach.
- ii. The Group also decided to book the following meeting date, due to busy schedules for December. A December 8<sup>th</sup>, 2008 meeting date was decided and the preferred location is at the Sun Gro Centre in Beausejour.

## **7. Adjournment**

The Chair thanked the group for attending and the meeting was adjourned at 12:05 pm.