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## Thames – Sydenham and Region Source Protection Committee

# Meeting Notice

Please be advised that a meeting of the Thames-Sydenham and Region source Protection Committee has been called for the following time. If you are unable to attend please contact Deb Kirk at 519-245-3710 ext 46.

**Meeting Date:** April 3, 2009

**Meeting Time:** 9:00 a.m to 2:30 pm

**Meeting Location:** St. Clair Conservation Authority Board Room

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### Proposed Agenda

Item	Time
1. Chair's Welcome	9:00
2. Adoption of the Agenda	
3. Delegations	
4. Minutes From the Previous Meeting	
5. Declaration of Conflict of Interest	
6. Business arising from the minutes	9:10
a. ODWSP Program Review consultation (verbal)	
b. Issues Identification	
c. IPZ-3/Extreme Event (verbal)	
d. Terms of Reference Update	
7. Business	10:15
a. HVAs (presentation)	
b. St. Mary's GUDI Vulnerability (presentation)	
c. Meeting schedule	
8. Information	11:30
a. ODWSP zones (IPZ1, WHPA-B) approvals update (verbal)	
b. Communications update (verbal)	
c. First Nations update (verbal)	
d. Tier 2 Water Budget (verbal)	
e. Perth OFA meeting (verbal)	
Lunch	12:00
f. Perth Vulnerability Assessment (consultant presentation)	12:30
9. In Camera Session	
10. Other business	
11. MOE Liaison report	1:45
12. Members reports	
13. Adjournment	2:30

## Meeting Materials

	<b>Agenda Item</b>	<b>Description</b>
Discussion Papers	2009.04.6b	<ul style="list-style-type: none"><li>• Process flow chart</li><li>• Discussion paper</li></ul>
	2009.04.7c	<ul style="list-style-type: none"><li>• Meeting Schedule</li></ul>
Other Materials	Presentations from previous meeting	
	ODWSP Summary Letter/package to Ministry	<ul style="list-style-type: none"><li>• Letter to Ian Smith summarizing the open forum results</li><li>• Meeting notes from each forum</li></ul>
	Previous meeting minutes	<ul style="list-style-type: none"><li>•</li></ul>

SPC MEETING MINUTES  
FRIDAY APRIL 3, 2009  
Meeting #13

Bob Bedggood, Chair of the Source Protection Committee called the meeting to order at 9:00 a.m. on Friday, April 3, 2009 at the St. Clair Conservation Authority Board Room. The following members and staff were in attendance:

**Members:**

Bob Bedggood	Earl Morwood
Dean Edwardson	Murray Blackie
Paul Hymus	Joe Salter
Carl Kennes	Valerie M'Garry
Joe Kerr	Patrick Feryn
Doug McGee	Sheldon Parsons
Charles Sharina	Jim Maudsley
John Van Dorp	Jim Reffle
Brent Clutterbuck	Teresa McLellan (Provincial Liaison).
Marg Misek-Evans	

**Regrets:**

Pat Donnelly  
Don McCabe  
Richard Philp  
Darrell Randell  
Joe VanOverberghe  
Pat Sobeski

**Others in attendance:**

Robert Olivier, First Nations technical rep  
Steve Evans, Middlesex County  
Sharon Wadley, Schlumberger Consulting  
Amanda Sills, Schlumberger Consulting

**Staff:**

Bonnie Carey	Ian Wilcox
Chitra Gowda	Joel Fraleigh
Chris Tasker	Steve Clark
Deb Kirk	Teresa Hollingsworth
Derekica Snake	Mark Helsten
Ralph Coe	Chris Harrington
Brian McDougall	Linda Nicks

1) Chair's Welcome

Bob Bedggood welcomed the committee and introduced a guest Steve Evans, of the County of Middlesex and two of the new SWP staff Joel Fraleigh, Water Resources Engineer and Steve Clark, Data Technician.

2) Adoption of the Agenda

A motion to approve the agenda was requested.

moved by Jim Maudsley -seconded by Dean Edwardson

*“Resolved that the agenda circulated be approved with an additional item under business to re-establish the committee’s vice chair and secretary of in-camera meetings, positions.”*

*CARRIED.*

3) Delegations

None

4) Minutes from the Previous Meeting

moved by Brent Clutterbuck–seconded by Marg Misk-Evans

*“Resolved that the minutes be approved as circulated to include the noted amendments.”*

*CARRIED.*

Joe Kerr voiced his concerns with the new restrictions being imposed relating to drains. This item was addressed in #6.c Business arising from the minutes.

Amendments to the minutes include Page 9 first paragraph, last sentence, SGCA will be changed to SGRA and HVAs and as discussed at the previous SPC meeting, the revised Technical Work Review and Acceptance Process flowchart will be distributed to the committee.

5) Declaration of Conflict of Interest

No conflict of interest was identified.

6) Business arising from the minutes

a) ODWSP Program Review consultation

The Thames Sydenham and Region held four meetings to review the ODWSP to determine how its purpose can be filled beyond 2009. Considerations were reviewed as to how the program should evolve through the source protection planning process. Broad spectrums of people from various organizations were involved including people from industry, agriculture, business owners, recreation and academics. A letter was sent to Ian Smith of the Ministry of Environment summarizing the comments..

b) Issues Identification (Discussion paper 2009.04.6b1)

A revised discussion paper was circulated. Water quality issues evaluation methodology was discussed at the previous SPC meeting. The proposed issues evaluation methodology was reviewed in the attached flowchart outlining the two step process of screening and issues identification. The preliminary screening process will rely heavily on existing water quality review and operating authority opinions. If a parameter is flagged, a further detailed investigation will be completed involving plotting the trends. Both raw and treated water data will be looked at. Water quality issues may be naturally occurring or anthropogenic. If there is an issue and it is anthropogenic the threats will be identified (or a work plan will be developed to identify the threats) and policies will be developed to deal with the threats. Prescribed and other activities (as defined in Technical Rules 118 and 119) contributing to issues are deemed significant threats.

The proposed issues evaluation methodology including a detailed discussion paper and the flow chart will be sent to municipal technical contacts and consultants to obtain their feedback and it will be reviewed again at the June SPC meeting.

c) IPZ-3/Extreme Event

A concern was brought forth regarding the new standards recently imposed on new drains. It was noted this is not in relation to the Clean Water Act or Source Protection. IPZ-3s have not been delineated and policies have not been developed. Rather the new standards are related to a compensating factor the Department of Fisheries and Oceans is asking for, for drains being reconstructed. (Section 78 -Maintenance regulation on drain improvement). If the drain is being re-constructed, there are guidelines to follow around buffer strips. Section 28 of the Drainage Act makes allowances putting a value to the land at the going rate, for any land lost to the landowner to re-construct or put in a new drain. Buffer strips have been part of better farming practices for some time now but the concern raised was landowners not being compensated for such work. The Source Protection mandate is to protect water in Well Head Protection Areas (WHPAs), Intake Protection Zones (IPZs), Highly Vulnerable Aquifers (HVAs) and Significant Groundwater Recharge Areas (SGRAs) and are not responsible for issues related to drains. Sheldon Parsons offered to take these concerns and questions to the drainage superintendents of Chatham-Kent and it was noted there is an appeal process one can utilize to deal with concerns.

An extreme event will be determined by working with the consultants and neighboring source protection areas to develop a matrix of events, as directed. An update will be provided at the next SPC meeting.

#### d) Terms of Reference Update

The Ministry's final recommendation of approval to the Terms of Reference should be in next week. A teleconference is scheduled on April 6<sup>th</sup> to finalize it. Teresa McClellan reported the Thames, Sydenham and Region's wording in the compensation section is being adopted by other SPC's. This section was reported to be well written, outlining the concerns and considered the regulations and legalities around this issue.

### 7) Business

The Vice-Chair and In-Camera secretary terms outlined in the SPC policies are a one year term. Bob proposed to the committee to re-instate Marg Misk-Evans as Vice-Chair and Earl Morwood as the Recording Secretary for In-Camera meetings. The committee agreed to this reinstatement and both members agree to accept the reinstatement.

moved by Jim Maudsley—seconded by Doug McGee

*“Resolved that for the position of Vice Chair, Marg Misk-Evans and for the position of In-Camera Secretary, Earl Morwood be re-instated for another year term.”*

*CARRIED.*

#### a) HVAs (Highly Vulnerable Aquifers)

Linda Nicks, Hydrogeologist from the Upper Thames River Conservation Authority gave a presentation on Highly Vulnerable Aquifer Delineation. The goals of the project were reviewed, technical rules, what ISI is, past work and challenges, methodology and the next steps.

When ISI (intrinsic susceptibility index) work is being updated it will be done regionally, however, the consultants working on the WHPA studies have reviewed the areas around WHPAs in detail and may have made improvements through their work. The work that is being completed by staff is focused on developing a consistent and seamless ISI across the region. It will be used in the vulnerability scoring within Significant Groundwater Recharge Areas once they are delineated, through the water budget process and to delineate Highly Vulnerable Aquifers (HVA). This would not be used in WHPAs.

Terry Chapman a GIS Specialist from Upper Thames gave an overview of the Edge Matching Groundwater Study. He outlined the challenges with the ISI matching between county studies. The goal of the project is to collect and merge well data using the score value from original studies and krig (interpolate) a new surface of ISI values.

The methodologies use the geo-portal and will be reviewed by Dillon Consulting. A geo-portal site has been developed that includes air photography, surficial geology, sand and

gravel, well location and lithology and ISI values. The next steps in the process are to complete quality control review, document work in a report, produce final mapping products, and have the work peer reviewed through the Vulnerability Assessment Peer Review Committee.

Discussion/Key points:

- Is dispersion being considered? ISI is a relative index which does not incorporate dispersion. Some of the other methods for assessing vulnerability consider advection.
- A question was asked of what advection means? This is when groundwater passes through the materials. An example used to describe advection was a paper towel being dipped into water and the water travelling up the towel. The important element is the time it takes the water to get from the surface to the well. You have to have good information on the flow and path of the water to be able to calculate this and this level of information is not available across the region. The SWAT method has been applied in some areas.
- This methodology does not take into consideration the horizontal flow.
- A highly vulnerable aquifer is defined as an area identified as an area of high groundwater vulnerability with an ISI less than 30 and is used as drinking water source. The first significant aquifer is being assessed.
- The K factor is determined by assigning a k factor based on the type of material identified in well driller records. This is then multiplied by the thickness of the material.
- It was noted the SGRAs when defined, will be assigned a vulnerability score of 6, 4 or 2 based on the ISI score.
- Activities within a SGRAs and HVAs will not be significant unless they are contributing to an issue.

## b) St. Mary's GUDI Vulnerability

Chris Harrington, Coordinator of Research and Planning and Mark Helsten, Senior Water Resources Engineer of the Upper Thames River Conservation Authority gave a presentation on St. Mary's GUDI Vulnerability Study. The presentation outlined additional WHPAs for GUDI systems - WHPA-E and F's, when they are required and the vulnerability scoring of these areas. St. Mary's was used as an example to show what these areas look like.

Discussion/Key points:

- The area draining into and including Wildwood Lake is considered in IPZ3 (WHPA-F). Water has a long residence time in the lake, with a long term average of 47 days.
- It was noted that to estimate water course widths and depths road crossings were used and there is a potential for them to not reflect average conditions due to bridge scour. It was explained approximate depths were considered in this

manner and that ortho photography was used to estimate widths. The overall goal is to estimate stream velocity at bank-full flow, and how far upstream the two hour time of travel goes from the potential zone of interaction.

- Does the mapping presented include surface and sub surface drainage? Both are included. Transport pathways such as in tile drainage will be considered.
- What is the relationship between well locations and GUDI potential Zone of Interaction? This area was established by the groundwater consultant (SWS). The bedrock is very shallow in this area. The level of the bedrock aquifer relative to the surface water feature suggests where they interact. Where the river is higher than the aquifer the flow could be from the river to the well. The area where this is possible was delineated by the consultant. The rules allow us to estimate time of travel from the point of interaction or nearest point in the waterbody to the well if the point of interaction is not known.
- It was noted that there is no IPZ1 associated with GUDI WHPA's. Although WHPA-E is based on IPZ-2 and WHPA-F is based on IPZ-3
- A challenge identified was vulnerability scores are being set for intakes -Type C (inland rivers) in the case of St Marys or Type D (river affected by an impoundment), there nothing taking into account this is not an intake but a GUDI is considerably less vulnerable than a pipe right from the river. As a result the vulnerability scoring may be higher than necessary.
- Consultation with the municipalities will need to occur. A question will be raised as to whether parcels connected by tile drainage will be included in either WHPA-E or F.

### c) Meeting Schedule

A SPC meeting schedule was circulated for approval outlining the dates for meetings from April to December 2009. The meetings are scheduled the second Friday of each month with the exception of October 2, 2009 due to the holiday. A tour is planned for July.

moved by Doug McGee—seconded by Pat Feryn

*“Resolved that the committee approve the distributed SPC committee meeting schedule.”*

*CARRIED*



## 8) Information

### a) ODWSP zones (IPZ1, WHPA-B) approvals update

Approvals for eligible ODWSP zones have been coming in. Chris Tasker attended a stakeholder meeting in Perth County and Brian McDougall and Chitra Gowda attended a council meeting in Chatham-Kent where this program was discussed. In areas where the zones are approved, work will proceed to promote these programs.

### b) Communications Update

Bonnie Carey gave a communications update. The four focus meetings for the ODWSP were noted as per agenda item 6.a. The communications staff attended a meeting in Black Creek Village for an overview of SP Province wide. Meetings are scheduled to begin planning for the Assessment Report consultation and with the stewardship staff.

### c) First Nations update

Derekica Snake gave an update on the meetings she has attended including a First Nations Health Fair to educate people on where their water comes from. A twenty thousand dollar grant fund was given for education and outreach and for some of the technical work to begin. An elders and youth mini water festival is scheduled in Leamington, August 12-16<sup>th</sup>. Many more activities are planned for the summer.

The London Districts Chief's Council has brought forth three names to be considered to be representatives on the committee. This decision is not official at this time.

### d) Tier 2 Water Budget

Proposals were submitted by several consultants to complete the Tier 2 Water Budget. Schlumberger Water Services was the successful consultant. Although the Tier 1 Water Budget is not completed yet, work will begin on Tier 2. Areas needing Tier 2 have been identified in the Tier 1 work. The watersheds of interest are in the Upper Thames.

### e) Perth OFA Meeting

Pat Feryn gave a report on the recent meeting held by Perth County OFA held on March 13, 2009. An invitation was extended to the public through an ad in the local newspaper. Pat noted there were approximately fifty people who attended. A key issue brought forward is private wells not being included in the Source Water Protection process. There was less discussion about compensation and more about protecting water. The meeting was similar to a meeting held by Oxford County OFA last year.

## f) Perth Vulnerability Assessment

Amanda Sills and Sharon Wadley of Schlumberger Water Services gave a presentation on the Perth Vulnerability Assessment. An overview of the project, methodology, and overview of the models being used was given.

### Overview:

Groundwater studies were completed in County of Perth including Township of Perth South, Township of Perth East, Municipality of West Perth, City of Stratford and Town of St. Mary's. The study was to develop an improved understanding of local groundwater conditions within the context of larger regional groundwater flow systems. More work is required to integrate the results of the studies into broader Source Protection initiatives as a result of the rules release late last year. In 2006, the capture zones were updated and surface to well advection times for municipal supply systems within the county were delineated. The objectives of the project includes the completion of wellhead protection area mapping for Milverton, Mitchell, Sebringville, Shakespeare, St. Mary's, St. Paul's and Stratford. The groundwater intrinsic susceptibility and vulnerability scoring will be accessed within those areas, assessing risk within the WHPAs and a potential contaminant source inventory will be completed within a threats database.

The methodology involved building a 3D numerical model which will simulate groundwater flow near the municipal wells. An overview of the threats database was also given as well as an overview of the work remaining.

### Questions/key points during the presentation included:

- Household wells are included in MOE's well records.
- Measurement of static level at the time of drilling is included in the record
- Vulnerability numbers shown in the presentation are multiplied by two. A vulnerability level of five will be ten. .
- Ariel photograph review is a proposed task and has not been used to date. Windshield surveys were completed that identified 204 threats.
- It was noted that although the majority of the threats identified in the wellhead protections areas are related to agricultural, most will have lower vulnerability scores and will not be a significant threat.

## 9) In Camera Session

None

## 10) Other Business

None

## 11) MOE Liaison Report

Teresa McLellan gave a ministry update. A teleconference is scheduled for Monday, April 6<sup>th</sup>, 2009 to finalize the approval of the Terms of Reference.

Consultation/Stewardship funding announcement occurred last week. A more thorough review will be completed and more funds will be made available in the future. MOE would like to get a handle on the Assessment Report deadline pressures people are facing, asking for a summary of key points on this. A Threats/Issues Training session is scheduled for the second and third week in April. Planners are also going to meet.

## 12) Members Reports

Bob asked the members to submit any changes in their Curriculum Vitae to Deb Kirk to ensure their website profiles are up to date.

Marg Misk-Evans- reported Oxford County being the recipient of funding for ODWSP. Some of the funding will go to the Oxford Children's Ground Water Festival being held May 25-28<sup>th</sup>. A nitrate management strategy study is also being completed for the City of Woodstock by University of Waterloo and Guelph, as well as two tenant farmers. This is a two year project and the results will be shared with the committee.

Joe Kerr- attended a meeting concerning bio-energy, looking at replacing coal with bio-mass. There was some discussion around looking at this as a potential fuel source.

Dean Edwardson- gave a presentation at the Ausable-Bayfield SPC. There have been concerns of the commercial and industrial sectors not being represented. More meetings may be required to get this information out.

John Van Dorp- OFA will be participating in the Oxford Water Festival. Funding allotted for one hundred and seventy five copies of information on farmers "Real Dirt on Farmers" to educate youth on farming and where their water comes from.

Charles Sharina- noted the importance of communicating to the public on Source Water Protection and what the committee is doing. Bonnie Carey reported some of the messages are getting to the public through the consultation process at the recent meetings. The Public Service Announcements have been recently run again and print media will be part of the communications efforts.

## 13) Adjournment

There being no further business, the meeting was adjourned at 1:30 p.m. The next committee meeting will be held June 12, 2009. There will not be a meeting held in May.