Thames River Clear Water Revival – Thames River Water Management Plan

Steering Committee Meeting Minutes

Tuesday, March 25, 2014, 1:00 pm – 4:00 pm
Upper Thames River Conservation Authority
1424 Clarke Road, London

Attendance:
Mary Alikakos, Chippewas of the Thames First Nation
Levi Antone, Oneida Nation of the Thames
Luca Cargnelli, Environment Canada *(remote)*
Tom Copeland, City of London
Pat Donnelly, City of London
Larry French, Chippewas of the Thames First Nation
Chris Harrington, Upper Thames River Conservation Authority *(chair)*
Eleanor Heagy, Upper Thames River Conservation Authority
Dean Jacobs, Walpole Island First Nation
James Jenkins, Walpole Island First Nation
Ian Kerr, Ministry of the Environment
Isabel Lewis, Caldwell First Nation
Dave Richards, Ministry of Natural Resources
Jenn Richards, Ministry of Natural Resources
Trevor Robak, Ministry of Agriculture and Food/Ministry of Rural Affairs
Rob Wallis, Ministry of Natural Resources
Jason Wintermute, Lower Thames Valley Conservation Authority

Guests:
Terry Chapman, UTRCA
Teresa Hollingsworth, UTRCA
David Lembcke, Lake Simcoe Region Conservation Authority
Mahmoud R. Pejam, UTRCA
Imtiaz Shah, UTRCA
Phil Simm, UTRCA

Regrets:
Ted Briggs, Ministry of the Environment
Chief Louise Hillier, Caldwell First Nation
Tina Jacobs, Delaware Nation - Moravian of the Thames
Justin Logan, Delaware Nation - Moravian of the Thames
Dan McDonald
Wilson Plain
Lareina Rising, Ministry of the Environment
Tara Tchir, Project Manager, Upper Thames River Conservation Authority

1. **Welcome**
   Chris Harrington welcomed everyone to the meeting and explained that Tara was home sick so he would be chairing the meeting in her absence. Everyone introduced themselves. There were no changes to the agenda.

2. **Minutes of September 17, 2013**
There were no changes to the minutes of the previous steering committee meeting. Chris did not have Tara's "outstanding action items" chart available.

3. **First Nation Participation**
Chris welcomed the participation by Caldwell First Nation and Aamjiwnaang First Nation in the TRWMP. He also explained that Tara will contact the First Nation people at the meeting to get mileage so they can be reimbursed.

4. **SWI Project Updates**
   a. **Low Impact Development (LID) as an Urban BMP *(ppt presentation)***
   Teresa Hollingsworth and Imtiaz Shah gave a presentation on the UTRCA's LID project. LIDs are natural techniques for stormwater management (SWM) where it falls, along the path, and before it reaches a watercourse ("treatment train" approach).

   Sustainable SWM starts at the lot level using practices such as disconnecting downspouts, rainwater harvesting and reuse, permeable pavement and bioretention planters. Examples of treatment along the path are bioswales and perforated pipes. Examples of treatment before it reaches a pond/lake are wetlands and wet ponds.

   Lot level and conveyance controls can achieve benefits not possible through end-of-pipe (EOP) measures and are a complement to EOP controls where they already exist. Integrated SWM distributes the burden (cost) and fosters partnerships. The concept is not new but its uptake has been hindered by misunderstandings and lack of local experience.

   The UTRCA received funding from MOE and EC to research and implement LID. The goal is to increase awareness of LID and motivate municipalities, developers, consultants and conservation authorities. The Credit Valley Conservation Authority has extensive experience with LID and has been extremely helpful. Our approach has been community-based social marketing, involving a literature review, survey and symposium. The UTRCA is planning to work with local municipalities and developers to install demonstration LID projects in Sebringville, Ingersoll, London and possibly St. Marys.

   The presentations from the symposium are posted on the UTRCA website at www.thamesriver.on.ca (go to downloads/publications). The session was also taped and the video will be posted soon.

   DISCUSSION
   - Tom C - There are many questions still about the long term capabilities and viability of LIDs.
   - Imtiaz - In the US, especially Seattle as well as some counties in Virginia and Maryland, there has been extensive research and implementation. There is not a lot of experience in SW Ontario yet, particularly when it comes to maintenance.
   - Ian K – For the MOE to change or develop policy, there needs to be a process. If there is enough support from municipalities, etc. to do so then they can push the ministries to get discussions moving.
   - Dean J – Any LID project should consider site restoration as part of the context.

- Tom C – LID is particularly appropriate for urban development/redevelopment or intensification. LID can be incorporated in boulevards, parking lots, etc.
- Pat D – LID includes vegetation too, so it also helps to mitigate climate change.
- Imtiaz – LID may reduce the footprint of conventional SWM by treating more stormwater at the source, but there will still be a need for end of pipe treatment.
- Pat D – There are several terms used interchangeably: green or sustainable infrastructure, low impact design or development.

b. **First Nations Academic Projects & Other Activities**

James reported on a partnership between two US professors and two Ontario professors, investigating strategies for working together with First Nations. The profs are Kyle White (Michigan State and member of the Potawatomi First Nation), Nick Rio (Dartmouth College, NH), Peggy Smith and Dan McGregor. They have developed eight principles for engagement, each with different strategies. This will be a toolbox that governments can use for engaging First Nations. There is a short article being written and the research report will be published in an ecology journal. James was interviewed as part of the project and referenced the TRCWR.

James reported that Nick Rio (Dartmouth College, NH) was successful in obtaining funding to study different co-management structures in the US (Boardman River, MI), Canada (WIFN) and New Zealand (indigenous tribe). They are looking at best practices for co-management. The researchers will be visiting the Thames River watershed in September 2014, so we need to think about what to do for their visit.

Dean reported on historical ecology studies. The goal is to create visual mapping tools for policy making and implementation that incorporate First Nation knowledge, ecology, history, land use, etc. The Moravian Diaries have been translated from the old German dialect in which they were written (1795-1830) and have proven to be an excellent source of information. Dean showed a rudimentary map that depicts the areas referenced in the diaries. The goal is to incorporate this information in to a GIS project. They are talking with the UTRCA GIS staff. Dean explained the value of this project to First Nations along the Thames, to remind them of their history and connections to the river. The information will be useful for restoration projects. Environment Canada provided financial support. They are also looking at Treaty #2, which is south of the Thames River.

Dean reported on a study funded by Green Electron Project, which is the gas plant that was relocated from Mississauga to near WIFN, as compensation for the plant's impact on natural heritage. The study will look at succession in the natural landscape.

Other updates:

- James and Dean gave a presentation on First Nation ecological knowledge at Six Nations, and also discussed engagement.
- WIFN is working with a professor from Western University, looking at land survey records to collect historic habitat records for future projects.
- Chatham-Kent planning department is incorporating historical ecological study results. The new Provincial Policy Statement, which comes into effect April 30, 2014, contains stronger language regarding consulting and engaging with First Nations. This municipality is leading the way in addressing this need.

- Sombra and Moore townships are involved with another pilot project looking at landscape mapping and pre-settlement vegetation.

c. WHISKI Water Quality Module (David Lembcke, Lake Simcoe Region Conservation Authority via conference call)

Dave provided an overview of the LSRCA's use of the WHISKI water quality module. They have been using this module for about eight years. They had considered developing something in house but preferred to purchase the software, partly because of the continual upgrades and support provided by WHISKI. Another reason was they wanted to move away from Excel or Access.

Calculating phosphorus loads into Lake Simcoe is very important, hence the need for a water quality module. Managing meta data is important, and this can be moved along with data. Formulae can be added as well. There is an "eco" component that can handle biologic data, such as benthos.

Sharing and distribution is limited as the software requires a license to access (data in or out). The Grand River CA is bringing in another add on that will make data sharing easier (web interoperability piece).

One question is always who is the custodian of the data. For example, the MOE is the custodian of the Barrie Pollution Control Plant data, and the MOE forwards the data to LSRCA to input.

Data can be downloaded from remote sites or manually. It was originally designed for continuous data sets at regular intervals, and it is good at that collection. Non equi-distant (irregular intervals) data collection is harder for the system.

Having all data in one place is key to WHISKI and trumps the other data software. There is also the ability to intermingle data and do analysis across data sets.

Training is important; you need to use software regularly to use it well. The best set up is to have a handful of users to manage the data.

There are about 10 conservation authorities in eastern Ontario using this software and they are getting a lot of interest from other agencies. They've done the ground work already so there is an opportunity to share scripts.

<u>DISCUSSION:</u>

- Tom C – Interested in costs, can the water quality module be added to water quantity stations? What are the staffing impacts?
- Dave – The software isn't cheap. It can be added to existing stations. The effort to enter existing data sets could be very large.
- Larry – What information is available about sampling from the Southfork WTP?
- Tom – The City of London has 40 years of water quality data. They test for phosphorus, heavy metals, *E. coli*. The data is all posted on the city's website.
- Jason – There are stream flow gauges downstream of the WTP and water quality sampling is undertaken once per month (not during winter) at some of these sites, too.

Environment Canada recently installed a continuous monitoring station at Thamesville. This station will automatically sample when triggered by flows.

ACTION: UTRCA will continue to investigate the WHISKI water quality module.

5. **SWI Project Updates**
   a. **3-D Surface Digital Elevation Model (DEM) and its Applications (Phil Simm, Terry Chapman)** ***(ppt presentation)***
   b. **Redefining the Floodplain – Urban Hydrology Modelling (Mahmoud R Pejam)**
6. **Other Business**

Dean said he has been appointed for a three year term on the Great Lakes Water Quality Commission board for Annex 4 (nutrients) for Lake Erie. He said there is also a First Nation representative on the science advisory board.

ACTION: inventory where the TRWMP is represented on the various GLWQC committees.

Due to time constraints, the rest of the agenda was deferred.