

Thames River Clear Water Revival (TRCWR) Initiative
Steering Committee Meeting # 19
Tuesday, August 12, 2015
Walpole Island First Nation Naaknigewgamig Governance Building
DRAFT MINUTES

IN ATTENDANCE:

Aimee Johnson, Walpole Island First Nation
Cherlene Vieira, Ministry of Environment and Climate Change
Chief Louise Hillier, Caldwell First Nation
Dan McDonald, Ministry of the Environment and Climate Change (Chair)
Eleanor Heagy, Upper Thames River Conservation Authority
George Henry, Chippewa of the Thames First Nation
Jason Wintermute, Lower Thames Valley Conservation Authority
Jenn Richards, Ministry of Natural Resources and Forestry
Larry French, Chippewa of the Thames First Nation
Luca Cargnelli, Environment Canada (via teleconference)
Pat Donnelly, City of London
Sharilyn Johnston, Aamjiwnaang First Nation
Tara Tchir, Project Manager, Upper Thames River Conservation Authority

Guests:

- Jody McKenna, Environment Canada
- Sue Humphrey, Environment Canada
- Mirek Tybinkowski
- Madhu Malhotra
- Kennon Johnson, Walpole Island First Nation

REGRETS:

Cam Mccauley, Ministry of Natural Resources and Forestry
Rob Wallis, Ministry of Natural Resources and Forestry
Tom Copeland, City of London
Trevor Robak, Ministry of Agriculture, Food and Rural Affairs

PURPOSE OF MEETING

- Recommendations for the Water Management Plan
- Understand nutrient targets and impact of these on the Thames River Water Management Plan

1. WELCOME AND REVIEW OF AGENDA AND PAST MINUTES

- a. Introductions
- b. Last minute additions to August 12, 2015 agenda
 - i. Tara and Pat said the official opening of the Mesocosm facility (Adam Yates, UWO) will take place at a pollution control plant in London on September 17. The TRCWR supported Adam's efforts to establish this facility. Sharilyn asked Tara to send the invitation to the City of Sarnia also.
- c. Errors or omissions to minutes of June 16, 2015
There were no errors or omissions to the minutes. The following action updates were provided:
 - i. Thamesville station update – Luca said that negotiations are underway regarding maintaining the GLNI stations. The question is whether there will be a lapse after September 2015 until monitoring resumes. There may be a brief lapse but the equipment will not be removed. Luca has made everyone aware that there is local interest and ability to help keep the station going through that lapse.
 - ii. OMAFRA – Dan said a representative will be here at next meeting.



2. UPDATES

- a. First Nation Youth Stewardship Project - Antler River Guardians from the 4 Directions (Aimee)
The project has received funding from MOECC and support from four First Nations, MNRF and UTRCA. Two leaders and four youth were hired, and have called themselves Antler River Guardians from the Four Directions (ARGFT4D). The youth gave a presentation on their activities to Aamjiwnaang First Nation Chief and Council on August 5. It was an excellent presentation; the Chief and Council are very interested in supporting the program again next year. Ideally, we expand the program to include all eight First Nations. The Guardians are currently in Chatham, working with Turtle Island Conservation group. George said he hopes to have them on the agenda for COTTFN Council on August 25. The Guardians were interviewed by a Wallaceburg radio station in early August. A reporter and photographer from the London Free Press covered the launch for their first canoe trip, and it was a front page story (<http://www.lfpress.com/2015/08/05/first-nations-teens-accept-the-responsibility-of-leadership-as-they-traverse-the-thames-river>). The Tides Canada Dragonfly Fund also provided funding for wetland work. Sharilyn said they wrote the application with the premise that the wetland enhancement will help with the goal of phosphorus reduction.
- b. Ontario Regional Chief's call to implement a Water Declaration for Great Lakes (George)
<http://www.chiefs-of-ontario.org/node/76>
George Henry is the traditional knowledge advisor for the Chiefs of Ontario. He has provided the climate change declaration to Tara. He also said the Water Walkers came through Ontario.
- c. Draft Water Management Plan (Tara)
Tara has compiled a very rough draft of information, mainly from the Watershed Characterization Report (Source Water Protection), and emailed the document to the committee. She also emailed out a summary of work done with the SWI funding. The UTRCA and LTVCA contributing information about flooding, flows, etc. We need input from others on the committee. The goal is to have recommendations that come out of the SWI work feed into the objectives from the phosphorus reduction strategy.
- d. Dan said there may be information in the media about municipalities providing timely information about combined sewer overflows.

3. ENVIRONMENT CANADA PRESENTATION: RECOMMENDED BINATIONAL PHOSPHORUS REDUCTION TARGETS FOR LAKE ERIE

Sue Humphrey, Environment Canada (EC), gave a presentation about the phosphorus reduction targets. She said that EC consultations are ongoing to the end of September, in conjunction with MNRF, MOECC and, to a lesser extent, MNRF. There are parallel consultations going on in the USA. The goals of the GLWQA are very similar to the TRCWR goals.

- Question - Who is on the GLWQA Annex committees from the First Nations, other than Dean Jacobs?
Answer - There are two seats for First Nations and Metis for each of the 10 annexes, but Sue didn't know who else is there.
ACTION: Jodi will find out and report back.
- Sharilyn – Will there be any implementation of action plans prior to 2018?
Answer - Many activities are already underway (e.g., Great Lakes Agricultural Stewardship Initiative) and there will likely be more starting before 2018. COA has additional details.
- Chief Hillier – What task team looks at septic systems?
Answer – That issue is in both the agricultural programs and the urban and rural municipal programs task teams.
- Sue - 80% of water in Lake Erie is from upper Great Lakes, 10% is precipitation, 10% is tributaries.
- George – How much science do we have about groundwater recharge into Lake Erie?
Answer – The groundwater annex subcommittee has produced a draft report. They are looking at sources of phosphorus into groundwater, and the sources of groundwater into the Great Lakes.



- George - Traditional knowledge discusses circulation of groundwater through the Great Lakes. The Chippewas of the Thames First Nation uses groundwater for drinking water. George would like a copy of the report.
- Jenn – Is the Thames considered part of the Lake Huron corridor contribution to Lake Erie?
Answer - Yes, it's captured in the 80% coming from the upper Great Lakes.
- Aimee – Please explain the reference on slide 18 to reducing blue-green algae in the Western Basin to non-severe levels nine years out of 10.
Answer – This refers to the proposed target of 40% reduction in spring total and soluble reactive phosphorus loads from the Maumee River. 2012 was a mild bloom according to scientists. They want to have a bloom that is not larger than that, nine years out of 10. The problem is wet springs and summers that are taking phosphorus off the land into the lakes. The challenge is how to account for the climate change impact, and link the amount of water in the tributaries with concentrations of phosphorus in those tributaries.
- Sharilyn – Maumee has spring P loadings information; do we have that in Canada?
Answer – We have less information in Canada. The Thamesville station can measure loads and determine concentrations; it collects data continually and the data can be linked with hydrographs. Only a limited number of stations collect information that enables us to link loads and flows.
- Sharilyn – What are the definitions of nearshore and offshore?
Answer - We've defined nearshore as "localized areas." In the case of the Thames, you see a nearshore bloom at the mouth of the Thames into Lake St. Clair. The same thing occurs with the Leamington tributaries. These two Canadian watersheds have been identified as having localized algae problems.
- Tara – Do we know what triggers the release of toxins from algae?
Answer - No, we don't yet know the specific triggers that are turning on the production of toxins. In the meantime, we want to reduce the size of blooms figuring that will reduce the risk.
- George – Is there research into recycling phosphorus? There is higher acidity from rains, this affects aquatic species.
Answer – We are looking at phosphorus recycling through invasives such as mussels. There are also concerns about phosphorus being stored in sediment behind dams and then released in spring flows.
- Jenn – Have the Leamington tributaries been monitored to be sure that they are the source of the algae problems there?
Answer - Yes. We don't know about the groundwater contribution, though. The Leamington problem is coming mainly from greenhouses. The greenhouse sector does a good job of recycling water but, at some point, the nutrients in the water are out of balance with what the plants need and the water is then discharged as waste. There is ongoing research into applying it to crops.
ACTION: Cheriene will bring a presentation to this group about this.
- Chief Hillier – Bait fish can't be released in waterways. How can greenhouses be permitted to discharge like that? Why are there more approvals being given for greenhouses?
Answer – There has been a huge expansion in greenhouses in the past 8-10 years, especially tomato growers. There is a regulatory gap, as its both agriculture and environment, and there is a municipal role as well. We are now addressing the gap. Primarily it's an economic benefit to greenhouse operations to be able to discharge wastewater. Greenhouses can now get approval to apply the water to crops. Greenhouses are looking at a variety of BMPs and research, with the goal of the water quality being acceptable before it's applied or discharged or whatever.
- Pat – Greenhouses also creating stormwater management issues.
- Kennon – Why is there no focus on the Sydenham River?
Answer – Our information suggests that the Thames loadings are leading to the development of the algae bloom. That being said, in order to meet the reductions we want, we'll need to make reductions



across the board in other tributaries also. However, the Leamington tributaries and the Thames are contributing the most directly to the harmful algae blooms.

- Kennon – Mitchell’s Bay shuts down almost every year due to algae issues. The plume from the Channel Ecarte into the bay is visible most of the year. He participated in a fish assessment in Goose Lake, which is at the south end of the delta. The initial assessment three weeks ago found only a handful of fish in two days and there was 100% algae coverage. A more recent survey found thousands of fish and the bloom has completely disappeared.
- Aimee – Is there a consultation mechanism in the approvals process for greenhouses?
Answer – Most of these facilities use more than 50000 L/day of water, which requires a Permit to Take Water. There is usually an opportunity for input on the PTTW. There may also be a municipal input opportunity.

ACTION: *Cherlene will find out how many PTTW there are for the Leamington greenhouses.*

- Jason – Leamington Area Drip Irrigation System is a consortium of greenhouses that put in a pipeline to take water from the lake. It is primarily for field tomato growers, but includes some greenhouses.
- Sue – The phosphorus reduction targets will be finalized by February 2016.
- Aimee – We would like to coordinate the First Nation response by the end of August. We need a First Nation Engagement Committee meeting.
- Madhu – There is a variety of early actions from the Province and States. The Collaborative Agreement is in the Western basin, with Ohio, Michigan and Ontario. The Lake Erie Nutrients Task Group has developed an interim Joint Action Plan, with Ohio, Michigan, Pennsylvania, New York and Ontario. We will also be developing a Domestic Action Plan.

ACTION: *Madhu will share these agreements with the committee.*

- Sue – We have been looking at the science to develop the plan but there has also been parallel consultation on potential implications. Early engagement important, to help identify what the problem is and how to deal with it. There will be opportunities to coordinate and share.

ACTION: *Cherlene will come to this committee to find out who to talk to, what groups to deal with, etc.*

4. **NEXT MEETING:** The next Steering Committee meeting will be in early October. Tara will send out portions of the WMP to the committee for comment/input.

