

# Minutes of Meeting

## Vermilion River Stewardship

Tuesday, 11 October 2011

5:30 pm – 7:00 pm

Beaver Lake Sports and Cultural Club

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**1. Presentation by Charles Ramcharan, Biology & Cooperative Freshwater Ecology Unit, Laurentian University**

**PowerPoint presentation: “Cyanobacteria in the Sudbury Area – McCharles Lake” - posted at <http://vermilionriverstewards.ca/concerns/alert/>**

- MOE took a water sample from the Vermilion River on September 30, 2011 and subsequently confirmed the presence of cyanobacteria, more commonly known as blue green algae.
- The analysis result for the Vermilion River sample was 0.56 parts per billion of microcystin, which is less than the current Ontario Drinking Water Quality Standard of 1.5 parts per billion. This is a guideline for short term toxicity. No recent studies have been done for the effects of long term exposure. Symptoms of ingestion of cyanobacteria can range from gastrointestinal distress to liver damage from very high levels.
- Blue green algae were also reported at Simon and McCharles Lakes on 6 October 2011, and subsequently confirmed on McCharles Lake on 10 October 2011.
- The algae appear as salt to pea sized bright green clots either floating on top of the water, or suspended in the water column (best seen in a clear jar held up to the light).
- Cyanobacteria will also rise to the surface overnight and be visible in the early morning as large loose mats or clots that disperse when touched.
- Winds can blow clots into the shoreline, and these accumulations pose the greatest danger to animals if they were to drink from the waterway at this point.
- Blooms can appear in August and could last until mid to late October if conditions are right (warm sunny days with low precipitation and river flow to dilute the nutrients). Blooming is curtailed when surface water temperatures significantly cool in late Fall, and rain water is introduced into the system to flush the river and increase flow.
- Blue green algae are naturally present in the water system, but when high levels of phosphorus and other nutrients are introduced into the Vermilion River Watershed through the effluent discharge of 9 waste water treatment plants, plus poorly maintained septic systems, fertilizer application, and reduced river water flow, then cyanobacteria can become abundant.
- Not all cyanobacteria species produce toxins but the ones confirmed on the Vermilion River and McCharles Lake were of the toxic variety, and are more prevalent when bloom mats persist for more than two weeks.

To combat the problem:

- Monitor your waterfront in the late summer (early morning is best) for signs (see above) and call the MOE (705-564-7168) if there are suspected blue green algae blooms.
- Filtration to 5 microns may be sufficient to remove the cyanobacteria. Passing through a pump does not harm the bacteria, so do not release their toxins. Alternately the water intake can be covered with a two layer felt sock available from a Co-Op.
- Boiling and exposure to UV lights kill the cyanobacteria which releases the toxins into the water; so this treatment is not recommended without filtration to 5 microns. That being said Health Canada at <http://www.hc-sc.gc.ca/ewh-semt/pubs/water-eau/cyanobacter-eng.php> reports “although results vary, treatment options are available for the homeowner. However, devices for household treatment can be very expensive. As well, it is difficult to assess the performance and ensure the quality of these household devices. More research in this area is needed and is under way.”

- Do not use contaminated river water in a steam bath or sauna as the toxin is released in the vapour and can be inhaled where it is more toxic than if ingested.
- Do not swim where there are accumulations of blue green algae that can cling to the skin.
- Do not drink water where blue green algae are present.
- Fish that have been exposed could have higher levels of the cyanobacteria toxin in their livers and kidneys, smaller amounts in their flesh. It takes about 2 months for the toxin to be expelled from the fish once blooming is finished. Avoid eating the liver and kidneys or wait the two months.
- Pump out your septic tanks every 2-5 years (depending on use) to keep nutrients out of the watershed and river system. Costs for a septic tank pump out will significantly increase in the new year when effluent will be hauled to the new Biosolids Plant.
- Phosphates have been removed from most household products, but remain vigilant and do not use products that contain phosphates.
- Ensure our Sudbury City Councillors all know how important it is to the citizens of Greater Sudbury, that tertiary treatment is an essential component of all City of Sudbury Waste Water Treatment Facilities.
- Support local stewardship groups whose mandates are to protect and maintain the health and integrity of the Vermilion River Watershed and its lakes and riverine ecosystems.

## **2. Agenda - deferred to 9 November 2011.**

### **Adoption of Minutes of Meeting - 13 September 2011**

#### **Reports**

- Executive
- Finance
- Website
- Biodiversity Committee
- Correspondence

#### **Business Arising from Previous Meeting**

- Dam Proposals Update
- Silt Core Sampling at base of Cascade Falls
- Walden/Lively Wastewater Treatment Facility
- Additional Board Members
- Grant Funding

#### **New Business**

- Cyanobacteria, Vermilion River, Simon Lake & McCharles Lake
- Wabagishik Public Information Center – 20 October
- EcoLeague Workshop – Learning for a Sustainable Future
  - Involving students in Environmental Issues

#### **Next Meeting – 9 November 2011**

# Vermilion River Stewardship

## Executive Report

11 October 2011

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### Report from Chair:

- **22 September 2011 - Attended Walden/Lively Wastewater Treatment Facility Public Meeting**
  - In Phase 3 now - Identify alternative design for preferred solution
  - Must increase capacity to address growing community and inflow
  - First priority is to decrease flows – by-law enforcement, inspector/by-law officer hired and extraneous flow reduction program
  - Eliminate the Lively WWTF and upgrade Walden WWTF
  - No by-passes from the Sudbury or Walden plants in last 2 years
  - Lower phosphorus levels are the goal – Proposing 2 Phases – 5 years & 10 years
    - Present objectives are 0.5 from Jun to Aug & 1.0 from Sept. to May
    - Proposed Phase I objectives are 0.38 to 0.55
    - Proposed Phase II objectives – 0.20 to 0.30
  - Upgraded Secondary Treatment by 2016
  - Tertiary Treatment would be implemented about 2021
  - Has not gone to Council yet, but VRS has promised support if tertiary treatment is included within 5 years
  - Disinfection – City currently uses chlorine but are considering going with ultraviolet due to significant environmental and safety advantages – 2016
  - In October they will decide on final preferred solution and prepare an Environmental Report
  - ER will be filed and public will have 30 day review and comment period
- **27 September 2011 – VRS sent letter to John Cannard requesting tertiary treatment within 5 years**
- **23 September 2011 - Contacted CEAA to request documentation for Wabagishik Rapids Proposal – Federal environmental process is totally transparent, so received several documents, including:**
  - Biological Scoping Minutes – 26 May 2011
  - Wabagishik Final Operating Plan
  - Letter of Concern from Citizen
- **30 September 2011 - Cyanobacteria noticed on the Vermilion River, and reported to Health Dept. and MOE on**
- **5 October 2011 – MOE confirmed Cyanobacteria on the Vermilion and a few other bacteria as well**
- **7 October 2011 - Went out to visit McCharles, Simon, Kelly and Mud Lakes to see if they also contained Cyanobacteria, and subsequently reported seeing it on McCharles and Simon Lakes**

- **Went to Centennial Park area to see if the Blue Green Algae might be coming from the Northern part of the Vermilion, however, the water looked relatively clear there**

**Finance:**

- Balance \$455.09

**Website:** Current.

**Correspondence:**

- **23 September 2011 – VRS to CEAA – Wabagishik Document Request**
- **27 September 2011 – VRS to John Cannard, JL Richard Consulting – Walden WWTF – Tertiary Treatment**

# Vermilion River Stewardship



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27 September 2011

John Cannard, P. Eng.  
J.L. Richards & Associates Limited  
217-469 Bouchard St.  
Sudbury, ON  
P3E 2K8

Dear Sir:

**Re: City of Greater Sudbury – Lively/Walden Wastewater Treatment System  
Schedule 'C' Class Environmental Assessment  
PIC No. 2 – September 22, 2011**

Thank you for your excellent presentation on September 22, 2011, regarding the Lively/Walden WWTS preferred design concept.

As Chair of the Vermilion River Stewardship, I was very happy to see Tertiary Treatment considered as a major component of the overall design concept, and it was very refreshing to know that your team is listening and responding to stakeholders concerns.

It is the timeline for Tertiary treatment that the Vermilion River Stewardship takes exception to. With Climate Change already resulting in record low water levels over these last two summers, reports of over ten lakes in the Sudbury District with cyanobacteria blooms, and the projections of warmer weather resulting in extreme drought conditions, it is imperative that the timeline of ten years for tertiary treatment be pushed up to a deadline of 2016.

When this plan is presented to Council for approval, the Vermilion River Stewardship will rally support within the City of Sudbury Lake Stewardship councils for a preferred design concept that includes Tertiary Treatment by 2016.

I would also like to take this opportunity to praise the City of Sudbury Wastewater Treatment staff for the excellent job they are doing in creating innovative and effective means of preventing sewage bypasses, and significantly improving treated outflows of effluent into our river systems.

Sincerely,

A handwritten signature in black ink, appearing to read "L. Heron", with a long horizontal flourish extending to the right.

Linda Heron, Chair  
Vermilion River Stewardship

Cc: Mayor Marianne Matichuk, [mayor@greatersudbury.ca](mailto:mayor@greatersudbury.ca)  
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