City of Greater Sudbury
Ville du Grand Sudbury

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200 BRADY STREET
SUDBURY ON P3A 5P3

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200, RUE BRADY
SUDBURY ON P3A 5P3

Greater | Grand Sudbury
www.greatersudbury.ca

# Public Service Announcement

For Immediate Release Wednesday, May 17, 2017

## Junction Creek Subwatershed Study and Master Plan Open House

The City of Greater Sudbury invites residents to the second of a series of public consultation sessions for the Junction Creek subwatershed study.

Wednesday, May 24 from 4 to 6 p.m.
Naughton Community Centre, Municipal Road 55, Naughton

Thursday, May 25 from 4 to 6 p.m.
Garson Community Centre/ Arena, 100 Church Street, Garson

Water resources are an important aspect of daily living in our community. From drinking water for our residents and animals, to the support of habitat for our plants and wildlife, and great recreation opportunities for residents, protecting our watersheds is a priority outlined in the City of Greater Sudbury Official Plan.

This second consultation session will provide a summary of research and field work completed to date, which provide direction for the watershed Master Plan and management measures to achieve the identified objectives.

Can't make the meeting? Submit your feedback online at www.greatersudbury.ca/watershedstudy2016. Feedback will be accepted until Thursday, June 1, at 4:30 p.m.

-30-

Media Contact:

Shannon Dowling, Corporate Communications
City of Greater Sudbury 705-674-4455 ext. 2539
Facebook: www.facebook.com/greatersudbury
Twitter: @greatersudbury

**NOTICE OF PUBLIC MEETING #2**
**Junction Creek Subwatershed Study and Stormwater Master Plan**

The City of Greater Sudbury wants to share information and hear from you regarding how best to protect and enhance the Junction Creek Subwatershed. There will be 5 public meetings held over 2017 – this is the second of these meetings.

Join us to learn more and tell us what you think at the first public meetings on:

| | | |
|---|---|---|
| **Wednesday, May 24, 2017**<br>between 3:00 and 6:00 pm<br>at Naughton Community Centre<br>Municipal Road 55, Naughton | ***OR*** | **Thursday, May 25, 2017**<br>between 3:00 and 6:00 pm<br>at Garson Community Centre / Arena<br>100 Church Street, Garson |

***Unable to attend in person?*** Visit the website to learn more about the study, view information shared at the public meeting, and share your thoughts.

www.greatersudbury.ca/watershedstudy2016

## Background

The City of Greater Sudbury recognizes the importance of water resources to life, hence protecting watersheds has been identified as a priority. The City has received a $2.3 Million grant from the Ontario Government to complete several subwatershed studies and develop plans to protect its water resources. The Junction Creek Subwatershed Study and Master Plan is one of nine of these studies that will be carried out over the next two years. The City has retained Amec Foster Wheeler Environment & Infrastructure (Amec Foster Wheeler) to undertake the Junction Creek Subwatershed Study and Master Plan.

The Junction Creek Subwatershed encompasses a significant portion of the City of Greater Sudbury and includes many unique environmental and geological features. The primary intent of the study is to develop management strategies to protect, maintain and enhance surface water and groundwater quality and quantity control through environmentally sound policy and plans. The Subwatershed Study and Stormwater Master Plan will provide guidance for development activities and provide recommendations for strategies to minimize the degradation of water quality, flood risks, erosion, and other potential impacts to natural systems. The Subwatershed Study and Master Plan will provide clear implementation guidance on priorities, timing, proponency, process, monitoring and future study needs.

This Stage 2 public meeting will share information related to the proposed management objectives and targets, which provide direction for the Master Plan and management measures to achieve the identified objectives. The Study Team will also be sharing a summary of the information gathered as well as identified information gaps and steps to fill these gaps.

## Contacts

If you have questions or comments related to this study, please contact:


**Paul Javor, MASc, P.Eng.**
**Drainage Engineer**
City of Greater Sudbury
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Sudbury, ON P3A 5P3
Tel: 705.674.4455 x 3691

E-mail: Paul.Javor@greatersudbury.ca

**Tim McBride, B.Sc, P.Geo.**
**Consultant Project Manager**
Amec Foster Wheeler Environment & Infrastructure
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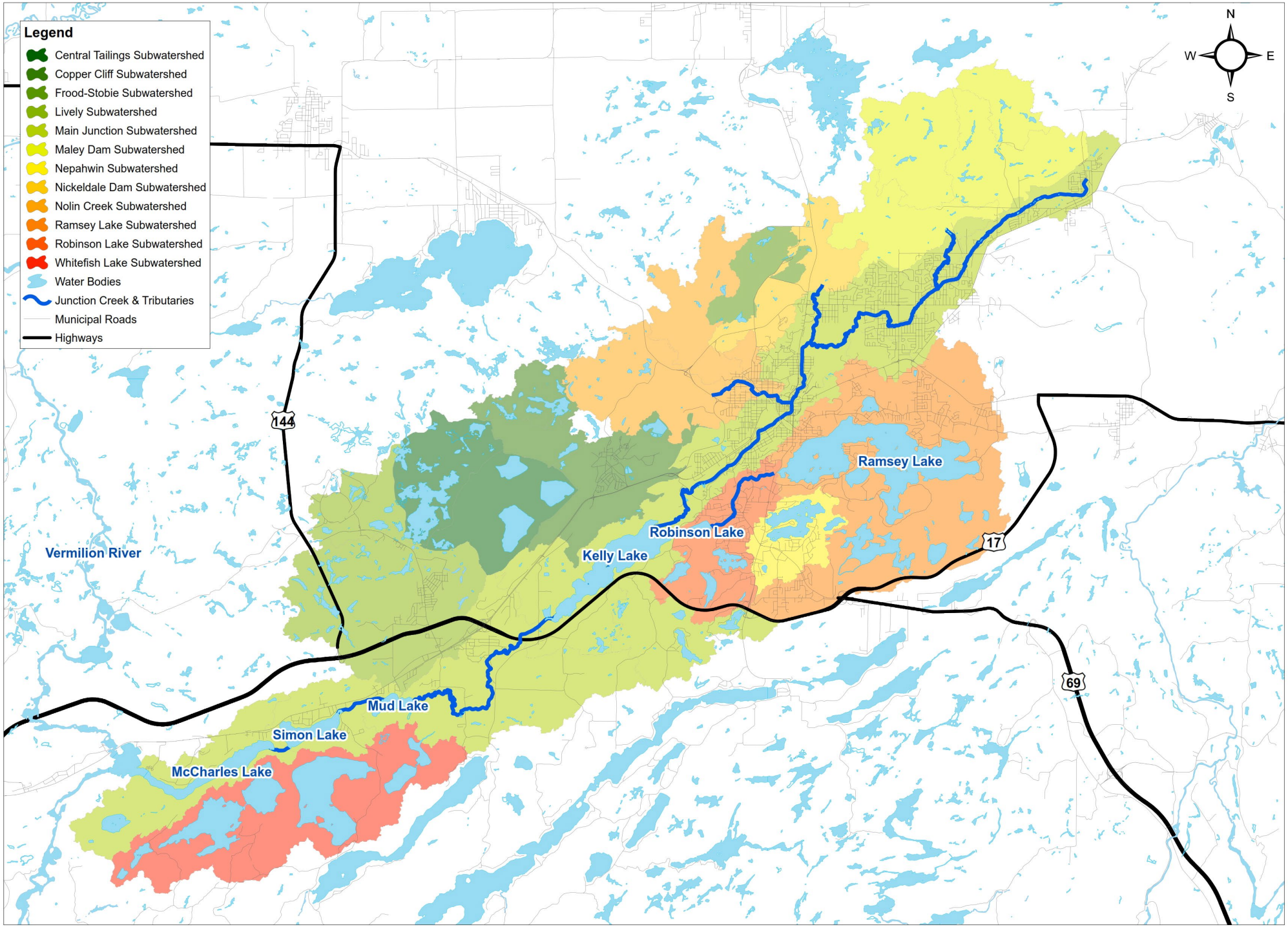
Tel : 705.682.2632
Fax : 705.682.2260
E-mail : tim.mcbride@amecfw.com


*Information will be collected in accordance with the Freedom of Information and Protection of Privacy Act. With the exception of personal information, all comments will become part of the public record.*




**Junction Creek Watershed Map**

## Stokke, Samantha

**From:** Shelley Ahmed <Shelley.Ahmed@greatersudbury.ca>
**Sent:** Thursday, May 18, 2017 12:07 PM
**To:** Shelley Ahmed
**Subject:** Junction Creek Subwatershed Study and Master Plan Open House/Séances portes ouvertes Étude du sous-bassin hydrographique et plan directeur du ruisseau Junction

Junction Creek Subwatershed Study and Master Plan Open House

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-30-
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Shannon Dowling, Corporate Communications
City of Greater Sudbury 705-674-4455 ext. 2539
Facebook: www.facebook.com/greatersudbury
Twitter: @greatersudbury
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Séances portes ouvertes
Étude du sous-bassin hydrographique et plan directeur du ruisseau Junction

La Ville du Grand Sudbury invite les résidents à la deuxième séance de consultation concernant l'Étude du sous-bassin hydrographique du ruisseau Junction.

Mercredi 24 mai, de 16 h à 18 h
Centre communautaire de Naughton, route municipale 55, Naughton

Jeudi 25 mai, de 16 h à 18 h
Centre communautaire / Aréna de Garson, 100, rue Church, Garson

Nos ressources en eau sont un aspect important de la vie quotidienne dans notre collectivité. Qu'il s'agisse de l'eau potable pour les résidents et les animaux ou du soutien de l'habitat des plantes et de la faune en passant par de merveilleuses possibilités récréatives pour les résidents, la protection des bassins hydrographiques constitue une priorité du Plan officiel de la Ville du Grand Sudbury.

Lors de la séance, on présentera un résumé de la recherche et des travaux sur le terrain réalisés à ce jour, qui guident le Plan directeur des bassins hydrographiques et les mesures de gestion afin de réaliser les objectifs cernés.

Vous ne pouvez participer à la séance? Vous pouvez transmettre vos commentaires en ligne à www.grandsudbury.ca/etude2016bassinshydrographiques, jusqu'au jeudi 1er juin à 16 h 30.

-30-
Personne-ressource pour les médias :

Shannon Dowling, Communications corporatives
Ville du Grand Sudbury 705-674-4455, poste 2539
Facebook : www.facebook.com/greatersudbury
Twitter : @greatersudbury

# Junction Creek Subwatershed Study and Stormwater Master Plan

## Establish Targets and Objectives

## Public Meeting No. 2

## May 24 and 25, 2017

# 1. Introduction and Meeting Goals

- Public Meeting No. 1 – held February 15 and 16, 2017:
  - Provided an opportunity to introduce the Study and its goals
  - Provided a high-level overview of the Study Area's existing conditions
- The goal of this 2nd Public Meeting is to:
  - Confirm the Study process
  - Outline / summarize background information received
  - Describe Management Objectives and Targets
  - Provide an update on deliverables
  - Provide information regarding the next steps
  - Provide an opportunity for the public to offer feedback on the Study, specific to Management Objectives and Targets

***What is a watershed?***

An area of land that collects water from rain and snow and drains through surface waterways (wetlands, stream, rivers, lakes) or seeps beneath the surface to groundwater. The area of land is defined by the shape and height (elevation) of the ground surface.

# 2. Subwatershed Study and Stormwater Master Plan Purpose and Objectives

| | Subwatershed Study and Stormwater Master Plan |
|---|---|
| **Purpose:** | • Develop a long-term plan that will provide policy and management actions to protect, maintain and enhance the surface water, groundwater and natural resources of Junction Creek and its tributaries |
| **Objectives:** | **Water Quality**<br>• Improve sediment, surface water and groundwater quality<br>• Minimize pollutant loadings to groundwater and surface water<br>• Improved aesthetics of Junction Creek and its tributaries<br><br>**Water Quantity**<br>• Preserve and re-establish the natural hydrologic process to protect, restore and replenish surface water and groundwater resources<br>• Reduce the impacts of erosion on aquatic and terrestrial habitats and property<br>• Minimize the threats to life and property from flooding<br><br>**Natural Environment**<br>• Protect, enhance and restore natural features and functions such as wetlands, riparian and ecological corridors<br>• Improve warmwater and coldwater fisheries if appropriate |

# 3. Municipal Class Environmental Assessment Process

- Many municipal projects are similar in nature, carried out routinely and have predictable and environmental effects that can be effectively managed – these projects are examined according to the Municipal Engineers Association "Municipal Class Environmental Assessment," (October 2007, 2011 and 2015)
- Master Plans are completed at the broad level of assessment and require more detailed investigations at the project-specific level. They have distinguishing features that set them apart from project-specific studies
    - Master Plans are broad in scope and focus on the analysis of a system for the purpose of outlining a framework for the provision of future works and developments
    - Master Plans provide recommendations for specific projects that are part of a larger management system and are distributed geographically throughout the study area
- The Stormwater Management Master Plan will follow the Class EA process for Master Plans and will satisfy Phases 1 and 2 of the process

***The Class EA defines a Master Plan as*:**
"A Long Range Plan which integrates infrastructure requirements for existing and future land use with environmental planning principles. These Plans examine the whole infrastructure system or group of related projects, in order to outline a framework for planning subsequent projects and/or developments."

# 4. Study Process and Schedule

**Subwatershed Study Stage 1**
- Existing conditions review
- Identify problem/opportunity

PIC No.1

**Subwatershed Study Stage 2**
- Identify opportunities and constraints
- Confirm problem/opportunity
- Establish objectives and targets

PIC No.2

Class EA Phase 1

We are here!

**Subwatershed Study Stage 3**
- Develop alternative solutions
- Evaluate alternative solutions

PIC No.3

**Subwatershed Study Stage 4**
- Identify preferred solution
- Develop implementation, monitoring, adaptive management and reporting plans

PIC No.4

Class EA Phase 2

**Subwatershed Study Stage 5**
- Finalize Subwatershed Plan and Master Plan
- Implement

PIC No.5

Ongoing Public and Community Outreach with Public Meetings

# 5. Summary of Background Information

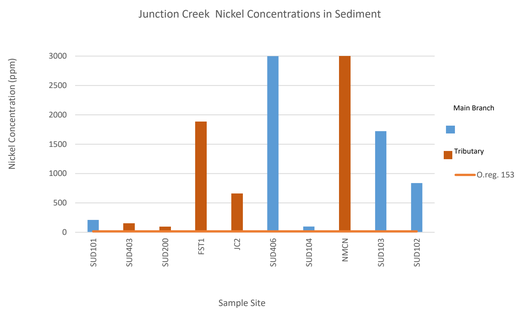
| Background Information | Data Gaps | Method to Close Data Gaps |
|---|---|---|
| **Rainfall and Surface Water Flow Data** | | |
| • Historic data for 11 stations | • Unclear location for several stations | • Follow up with data provided |
| **Water Quality** | | |
| • Approximately 10 stations with data collected monthly between 2004 and 2016<br>• PWQO exceedances in metals across the subwatershed | • Lack of specific information on thermal regime for the Junction Creek main branch and inflowing tributaries | • During the field surveys the project team may collect temperature measurements |
| **Hydrologic Modelling** | | |
| • Hydrological characteristics for each subwatershed: area, shape, slope, soil and land cover conditions<br>• 32 major storm sewer systems located on the main branch of Junction Creek | • Information for 14 storm sewer systems are inaccurate | • Reviewing gap filling methods with the City to verify the information |
| **Stream Morphology** | | |
| • Identified locations of shoreline and bank erosion<br>• Compiled physical information of the creek geometry and substrates in several locations | • Information is not sufficiently systematic for use in establishing physical observations | • Stratigraphy information and water table depths data will be extracted from past projects<br>• Systematic geomorphological observations are currently being gathered at reach scale at local students |

# 6. Summary of Background Information

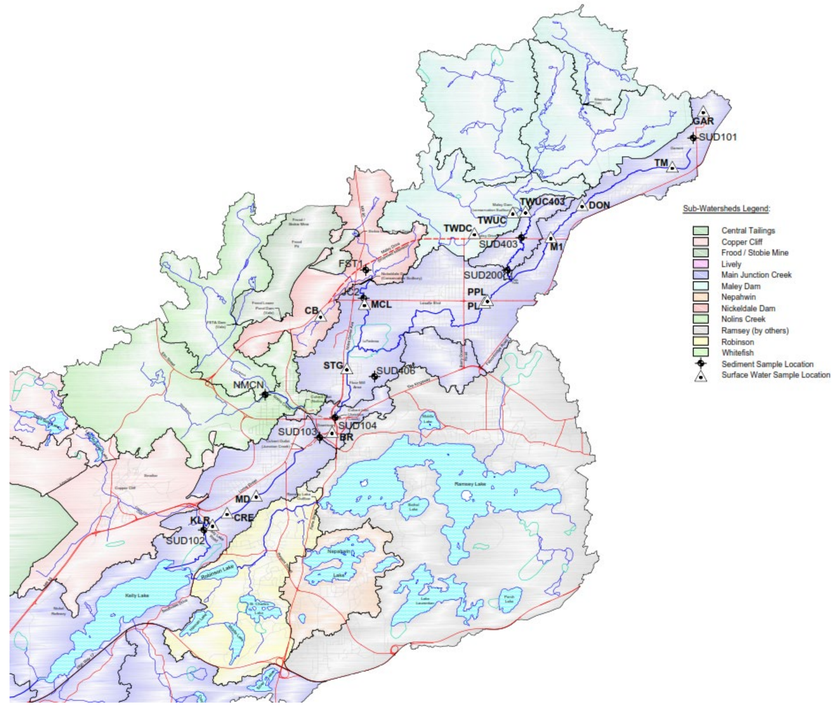
| Background Information | Data Gaps | Method to Close Data Gaps |
|---|---|---|
| **Terrestrial Habitat** | | |
| • Amphibians and Reptiles<br>  • Approximately 25 species<br>  • 3 Provincially tracked<br>  • 2 Species At Risk (SAR)<br>• Birds:<br>  • Approximately 152 species<br>  • 8 Provincially tracked<br>  • 6 SAR<br>• Mammals:<br>  • Approximately 46 species<br>  • 2 SAR<br>• Insects:<br>  • 52 species of butterflies, 3 Provincially tracked<br>  • 16 species of dragonflies and damselflies | • Available data for several groups are relatively limited for the Study Area<br>• Mammal species data within the Study Area was generally historic | • The project team will consult the MNRF to pursue additional local data sets.<br>• The project team is reviewing site specific data collected by the City to support other projects within the study area to supplement this data. |
| **Aquatic Habitat** | | |
| • Fish Community:<br>  • Approximately 32 species<br>• Benthic Invertebrate Community | • Limited information on water quality, fish and benthic macroinvertebrate<br>• Habitat data are lacking downstream of Kelly Lake | • Additional information regarding aquatic habitat will be collected as part of the fluvial geomorphology field surveys |

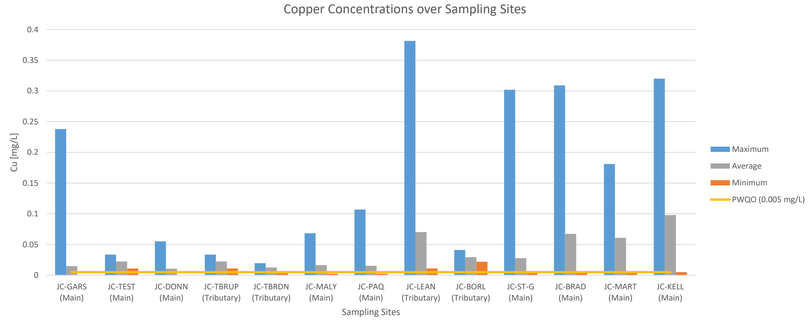


# 7. Summary of Background Information

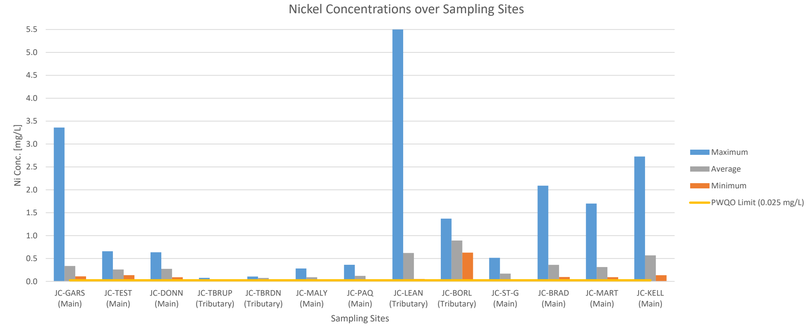


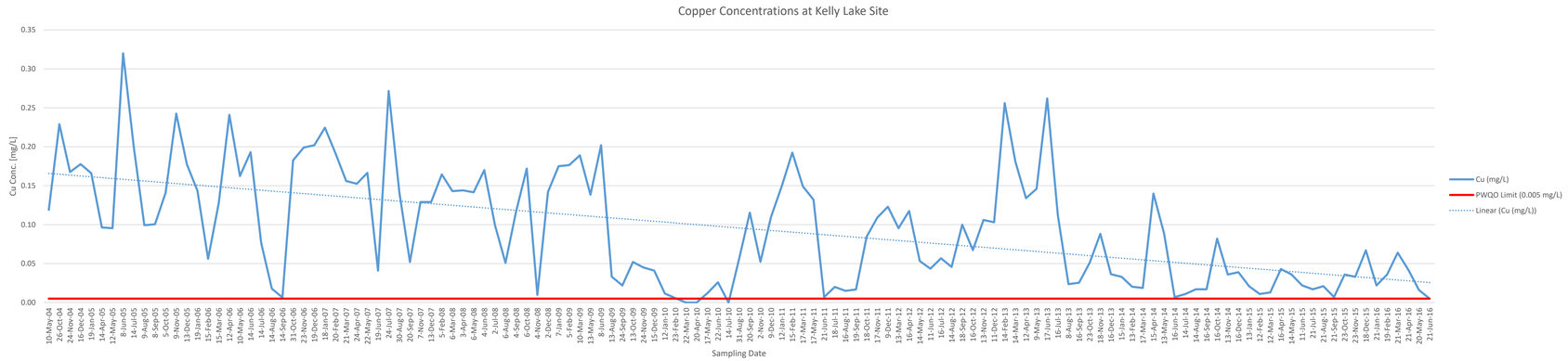

Nickel concentrations in Junction Creek sediment reveal that lower concentrations occur from Garson downstream to where several tributaries connect with the main branch of Junction Creek. All concentrations exceed the Ontario Regulation 153 Sediment Standards of 16 ppm.




Copper and nickel concentrations in surface water in Junction Creek reveal that higher concentrations occur near the upstream (Garson) end and decline through New Sudbury. They increase downstream due to input from tributaries connecting from the north. Concentrations exceed the Provincial Water Quality standards.




Copper concentrations in surface water at Kelly Lake reveal that water quality is improving over time; however, concentrations continue to exceed the Provincial Water Quality standards.



Greater Sudbury www.greatersudbury.ca

amec foster wheeler

# 9. Water Quality

## Objectives

- Identify sources of pollution and trends in water quality
- Identify ways to address and improve water quality issues

## Targets

- At a minimum meet current Provincial criteria for any new development or re-development based on existing habitat Classification (i.e. ‘Enhanced’ Treatment – MOECC Design Manual)
- Consider emerging ‘draft’ Provincial criteria in development projects
- Address thermal targets related to any aquatic species of concern

# 10. Surface Water

**Objectives**

- Characterize surface water features (flooding and erosion susceptibility)
- Identify flood hazards, sites of erosion and capacity constraints

**Targets**

- Any new development or re-development is to manage flood risk to pre-development levels at minimum
- Where system hydraulic capacity is less than Municipal or Provincial criteria, consider ‘over’ control for urbanizing or re-development areas
- Minor system (storm sewers) to convey 5-year event without surcharge
- Major system (overland network) to safely convey 100-year event on public lands
- Manage erosion flow regime to within 5% of existing conditions


# 11. Stream Morphology

**Objectives**

- To characterize the watercourses within the watershed with regards to morphology or form, function, and sensitivity; to identify and quantify erosion-related hazards

**Targets**

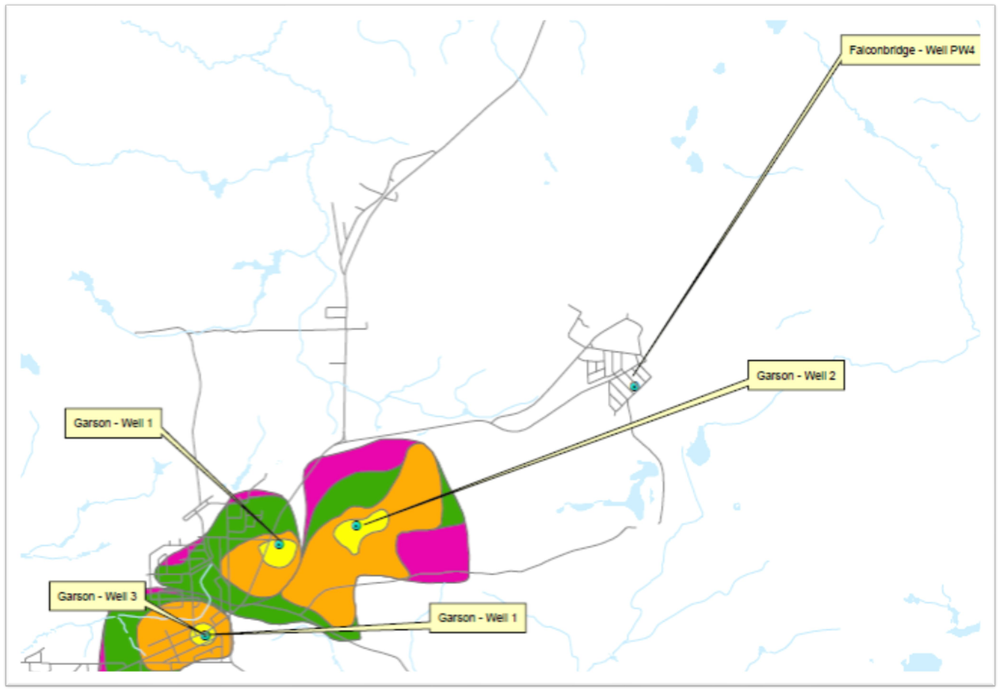
- Discourage any new development and re-development within the meander belt or erosion hazard of the Junction Creek and its tributaries
- Per Surface Water criteria, manage erosion potential of flow regime to within 5% of existing conditions


These historical assessments illustrate past channel straightening; this limits the channel's ability to adjust to changes in flow and sediment regime

# 12. Groundwater

## Objectives

- Characterize groundwater conditions ( water levels, water quality, significant recharge areas, ecological connection)
- Identify components that may be sensitive to future land use changes
- Identify opportunities to mitigate long-term groundwater quantity and quality impacts




## Targets

- For any new development or re-development promote a water balance post-development
- Maintain natural recharge quality and quantity, where practical, through “Best Management Practices”

# 13. Aquatic Resources (fish, invertebrates and their habitat)

**Objectives**

- Identify aquatic resources that are sensitive or of high importance to aquatic communities
- Identify need for additional assessment and monitoring of aquatic resources
- Identify opportunities to preserve, enhance or restore aquatic habitats

**Targets**

- Remove barriers to fish movement
- Establish setbacks from watercourses based on sensitivity classification and in accordance with Provincial criteria
- Improve and manage water quality through stormwater management and retrofits to existing facilities
- Improve water temperatures through creation of stormwater management, retrofits and restoration projects

# 14. Terrestrial Resources (land-based animals and their habitat)

**Objectives**

- Identify terrestrial resources and evaluate their sensitivity
- Identify natural heritage system protection areas
- Identify habitat enhancement / restoration and management opportunities
- Assess areas that may be potentially impacted by proposed mitigation or enhancement activities throughout the watershed

**Targets**

- Protect important natural areas by establishing buffers in accordance with Municipal and Provincial criteria
- Address water balance for new and existing developments to protect and maintain wetlands

# 15. Next Steps

- Ongoing geomorphology field investigation
- Gather additional data for storm sewers
- Complete numerical modelling of stormwater system (major/minor network)
- Prepare Background Characterization report
- Develop and evaluate alternative solutions
- Identify preferred solutions
- Finalize Subwatershed Study and Master Plan

# 16. How Can You Get Involved?

- Join our Project Mailing List for timely, relevant updates by adding your name to the sign-in sheet
- Review information shared at this Stage 2 public meeting
- Attend 1 of the 3 upcoming public meetings:
  - Stage 3: Alternative Solutions & Assessment
  - Stage 4: Recommended Preferred Solution
  - Stage 5: Subwatershed Study Completion
- Provide input on your observations regarding:
  - priorities and interests
  - opportunities to enhance the health of the ecosystem
  - constraints that may be sensitive to disruption

## WAYS TO PROVIDE YOUR INPUT

- City's website: greatersudbury.ca/watershedstudy2016
- Comment form:
  - Paper copy
  - Online
- Speak with one of the Study Team members:
  - **Paul Javor**, MASc, P.Eng.
    City of Greater Sudbury
    Phone: 705-674-4455 ext. 3691
    Fax: 705-560-6109
    Email: Paul.Javor@greatersudbury.ca
  - **Tim McBride**, B.Sc, P.Geo.
    Amec Foster Wheeler
    Phone: 705-682-2632
    Fax: 705-682-2260
    E-mail: tim.mcbride@amecfw.com

# #1

COMPLETE

| | |
|---|---|
| **Collector:** | Web Link 1 (Web Link) |
| **Started:** | Thursday, June 01, 2017 2:04:10 PM |
| **Last Modified:** | Thursday, June 01, 2017 2:28:04 PM |
| **Time Spent:** | 00:23:53 |
| **IP Address:** | 204.40.194.136 |

Page 1

## **Q1** Address

| | |
|---|---|
| Name/nom | **Ed Snucins** |
| Address/ addresse | **199 Larch St.** |
| Email Address/courriel | **Ed.Snucins@ontario.ca** |
| Phone Number/ Numéro de téléphone | **705-564-3245** |

## **Q2** Comments/commentaires

Missing the major water quality issue of excess nutrients.
Missing characterization of the lakes (Kelly, Mud, Simon, McCharles).

Coalition for a Liveable Sudbury

Making connections. Working toward sustainability.

June 27, 2017

## Coalition for a Liveable Sudbury
## Written submission – Junction Creek Subwatershed Study and Stormwater Master Plan (PIC 2)

Thank you for the opportunity to provide feedback on the Study's Objectives and Targets.

In addition to the excellent objectives listed, we respectfully submit that the following objectives are also very important to include:
- Protect and enhance natural ecosystem function
- Increase resilience to climate change
- Identify the most significant challenges for each individual subwatershed and identify opportunities to address them
- Identify opportunities and challenges for Low Impact Development and green infrastructure given existing conditions in the watershed. Identify specific locations for LID and green infrastructure in the Stormwater Master Plan.
- Support implementation of watershed policies in the Official Plan. Specifically, identify sensitive water features, sensitive groundwater features, wetlands, sensitivity of individual wetlands, and environmental constraints within subwatersheds.
- Improve the recreational and educational value of the Junction Creek Waterway Park as a natural park and a linear park

Overall, we would like to see more ecological targets, as there is a focus on targets related to 'grey' stormwater management. Also, we would like to see more quantitative targets. Some specific examples include:
- Implement opportunities to preserve, enhance or restore aquatic habitats
- Implement habitat enhancement/restoration and management opportunities
- Increase aquatic and terrestrial biodiversity and ecological health
- Address aquatic and terrestrial invasive species
- Increase high quality vegetative cover to 40% or higher within subwatersheds
- Decrease impermeable surfaces to 10% or less within subwatersheds

In addition, we hope to see recognition of the 'big picture.' For example, when looking at contaminants, interactions and cumulative impacts must be considered. Similarly, the interaction between the terrestrial and aquatic environment and the impacts on water quality and quantity are fundamental.

Therefore, targets for water quality and quantity objectives should include targets for vegetative cover and preservation of natural areas within the subwatershed.

We are very pleased to see an objective to "Identify natural heritage system protection areas," with a target to "Protect important natural areas by establishing buffers in accordance with Municipal and Provincial criteria." Please note that new municipal policies will be needed to protect natural heritage systems and locally significant natural features and functions.

We look forward to seeing the options presented, which we trust will include ecosystem management and green infrastructure approaches.

We would like to suggest improvements for engagement with stakeholders such as the Junction Creek Stewardship Committee, Watershed Advisory Panel, Conservation Sudbury, and Living with Lakes. The stakeholder meeting should start with a presentation of the material, followed by discussion around the table for a productive exchange of ideas, expertise and questions. Written material should be available for review prior to the meeting. Engagement with stakeholder should be an on-going conversation. We are concerned that lack of productive engagement opportunities with local expertise has resulted in exclusion of existing data, loss of opportunity for in-depth input, and may contribute to lack of local confidence in the results.

We look forward to further opportunities to provide input.

Regards,
Naomi Grant
Co-Chair, Coalition for a Liveable Sudbury
grant_naomi@hotmail.com